SCIENCE JOKES Version 7.14.1 Time-stamp: "September 3, 1999" Science jokes collected by Joachim Verhagen (jcdverha@xs4all.nl) Includes collection by Lars Olofsson (larso@cs.chalmers.se) of April 1994 Includes math jokes collection by Michael Cook (mlc@iberia.cca.rockwell.com) of June 1994 Includes collection by Chris Bradfield (ph2008@bris.ac.uk) of October 1994 Includes collection by Richard D. LeBreton (S5100101@nickel.laurentian.ca) of Februari 1995 Includes collection by Philip Clarke <clar0318@flinders.edu.au> of 1998 Codes for subjects: M mathematics ; P physics ; C chemistry ; B biology ; E engineering A computer science. * New entry since last time posted (August 28, 1999) & Changed entry since last time posted "Blessed are they who can laugh at themselves, for they shall never cease to be amused." This is a collection of more than 1500 scientific jokes from Usenet, or mailed or told to me. You are free to read and use them on the net or in conversation. Please keep the original author and sender when you use them; mentioning this list is optional. The latest version is available from FTP and WWW: WWW: http://www.xs4all.nl/~jcdverha/scijokes/ WWW: http://www.xs4all.nl/~jcdverha/scijokes/sjhtml.zip (html-format, about 900k) WWW: http://www.xs4all.nl/~jcdverha/scijokes/scijokes.zip (ASCII format, about 600k) FTP: ftp://ftp.in.umist.ac.uk/pub/Text/scijokes.zip (about 700k) Send comments and contributions (especially contributions) to: jcdverha@xs4all.nl (Joachim Verhagen). If you have a science humor webpage you can add it to the science humor webring at http://www.xs4all.nl/~jcdverha/scihum/webring.html . CONTENTS =1. mathematics proofs =1.1 =1.2 statistics and statisticians =1.3 mathematicians =1.4 mathematics poetry =1.5 mathematics quotes =1.6 mathematic puns =1.7 mathematical terms =1.8 mathematical exams =1.9 learning mathematics =1.10 mathematical tests to take =1.11 mathematical formula's =1.12 topology

=1.13 numbers

=1.14 =1.15 =2. =2.1 =2.2 =2.3 =2.4 =2.5 =2.6 =2.7 =2.8 =2.9 =2.10 =2.11	<pre>set theory functions physics physics poetry physics quotes physics puns pseudo physics (cat physics, cartoon physics) new physical theories learning physics not learning physics (featuring Heavy Boots) physical proofs physical one-liners quantum mechanics (starring Schroedingers cat!) relativity</pre>
=2.12	measure the height of a building with help of a barometer
=2.13	physicists
=2.14	astronomy
=2.15	electrons
=2.16	electro-magnetism and light
=2.17	Newtons's laws and classical dynamics
=2.18	thermodynamics
=2.19	in the lab
=2.20	strange but real findings
=3.	chemistry
=3.1	chemistry poetry
=3.2	chemistry quotes
=3.3	chemical puns
=3.4	in the lab
=3.5	chemical dictionary
=3.6	chemists
=3.7	elements
=3.8	H20
=4.	biology
=4.1	biology poetry
=4.2	biology quotes
=4.3	biology puns
=4.4	cloning
=4.5	biochemistry
=4.6 =4.7 =4.8	evolution mice and rats cell biology bacteria
=1.9 =5. =6. =6.1	earth sciences the mathematician, the physicist and the engineer (and others) the locked room and the tin can
=6.2 =7. =7.1 =7.2	<pre>combined sciences combined sciences poetry compare scientists (using lions, elephants, primes etc.)</pre>
=7.3	remarkable scientific sayings from school children and students
=8.	academic life
=8.1	rules for research
=8.2	rules for writing an article
=8.3	academic life poetry
=8.4	research quotes
=8.5	publish and explanation quotes
=8.6	In the classroom

=8.7 graduate students =8.8 exams =9. miscellany =9.1 poetry =9.2 Einstein quotes =9.3 other quotes =9.4 terms and definitions =9.5 The Nerd test and other tests. =9.6 Murphy's law =9.7 proof methods =10. anecdotes about famous scientists =11. mnemonics =11.1 mnemonics =11.2 mathematics =11.3 computer science =11.4 physics =11.5 chemistry biology and medicine =11.6 =11.7 miscellany =12. pranks =12.1 mathematics =12.2 burning metals =13. sources of science humor on and off the net =13.1 mathematics =13.2 physics =13.3 chemistry =13.4 biology and medicin =13.5 earth sciences =13.6 scientists Enjoy!!! -- Joachim Verhagen + =1. MATHEMATICS М From Susan Stepney (stepneys@logica.com) I always love the "Doc Smith" approach to mathematics, where Our Hero glances at an equation (sorry, "formula"), and instantly says "of course...!" My experience is usually more like "I don't know what on earth that means" ... scribble, scribble, scribble ... "Oh, yes, but what a weird way of writing it" ... scribble, scribble ... "now *this* should be a much clearer way" ... scribble, scribble, scribble ... "oh, it's identical to what I started with. But *now* I understand it." I can't *read* maths, I can only write it :-) A colleague of mine put it better: "mathematics is not a spectator sport". М

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From the "Cow" collection at
http://www.brandonu.ca/~ennsnr/Cows/part1.html
(Found in Michael Cook's (mlcook@afdsb.cca.rockwell.com)
Canonical List of Math Jokes)
             (___)
            ( 00 )
    /----\/
     | x=a(b)||
     ||----||
  Mathematical Cow
   (developer of
     cow-culus)
М
From: jkelber@gladstone.uoregon.edu (Judah Kelber)
Advanced math
Seen the week before finals on the chalkboard right after a Math 233
(Discrete Math) class at the University of Oregon:
59 + 34 + 2 + 37 + 97 = some number
And here I thought math classes were hard....
М
              "Ami=Friend" <mayer@sprint.ca>
From:
prof : how much 7 x 24 = ?
student : it's 168.
prof : prove it.
student: 16 + 8 = 24
prof : and 7 x 27 + ?
student : 189 prove 18+9 = 27
prof : and 21 x 7 = ?
student : 147 prove 14 + 7 = 21
prof: and 18 \times 7 = ?
student : 126 prove 12 + 6 = 18
etc.._
Μ_
From:
              RickT <taylor@wrex.u-net.com>
Q: What happens when you don't divide one by anything?
A: You divide one by nothing and get a divide by zero error.
M_
              ljames@unlgrad1.unl.edu (larry james)
From:
There really are only two types of people in the world, those that DON'T
do MATH, and those that take care of them.
Μ_
From: pardo@cs.washington.edu
From: hbaker@netcom.com (Henry G. Baker)
from: Yucks Digest V7 #7 (shorts)
Customer: "How much is a large order of Fibonaccos?"
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Cashier: "It's the price of a small order plus the price of a medium order." [Extra credit question: Which Fibonaccos size is the worst rip-off? [Extra credit answer: The smallest; it costs as much as the next larger size... -psl] M______

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From: caj@baker.math.niu.edu (Xcott Craver)
    "Paper or plastic?"
"Not 'Not paper AND not plastic!!'"
    -Augustus DeMorgan in a grocery store
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M__

From: Anthony Peck <anpeck@interact.net.au>
Q: Divide 14 sugar cubes into 3 cups of coffee so that each
cup has an odd number of sugar cubes.
A: 1,1,12
Riposte: 12 isn't odd!
A: It's an odd number of cubes to put in a cup of coffee (groan)

From: Tord Kallqvist Romstad <tordro@delling.ifi.uio.no> This joke reminds me of an excercise actually given in the exam in a course on combinatorics and discrete mathematics here at the University of Oslo last year:

Calculate the number of ways 30 identical objects can be distributed among 5 numbered containers with all containers nonempty in such a way that containers 1, 3 and 5 contains an odd number of objects, and containers 2 and 4 contains an even numbers.

Incredible, isn't it? I later heard that the number 30 was a typo. It should have been an odd number. $\ensuremath{\mathbb{M}}$

From: Mark David Biesiada <mb246395@oak.cats.ohiou.edu>
never say "N factorial", simply scream "N" at the top of your lungs.
M

From: Volker Moell <moell@mathematik.uni-kl.de>
a funny, but true story:

a friend of mine (2.5 years hasn't heard anything about mathematics) saw in his first semester at university the following equation (taylor):

 $f(x) = \frac{f(0)}{0!} + \frac{f'(0)}{1!}$

after reading the first ("0") he thought: "what's about the exclamation mark? oh, i see: you can't divide by zero. attention!" but after reading the second term ("1!") he wonders: "hey-oh, you *can* divide by one!! what's this?!" and after thinking a long time about the problem he comes to the real meaning... ;-) really, it's true!!!

From: Ian Ellis <ian@iglou.com> Philosophy is a game with objectives and no rules. Mathematics is a game with rules and no objectives. M

Zenophobia: the irrational fear of convergent sequences. $\ensuremath{\mathtt{M}}$

From: Michael A. Stueben (mstueben@pen.kl2.va.us) Michael is a high school math/C.S. teacher, so he should know.

Q:What do you get when you add 2 apples to 3 apples? A:Answer: An American senior high school math problem.

From: John <jbgrosh@lancnews.infi.net>
Q. Where did the answer, "six puppies", come from?
A. The math teacher for these students.

Μ_

From: guest@se.alcbel.be: rafy@cairo.anu.edu.au (Rafy Marootians): Logic is a systematic method for getting the wrong conclusion... with confidence.

Surely _statistics_ is a systematic method for getting the wrong conclusion... with 95% confidence.

From: phk@data.fls.dk (Poul-Henning Kamp/P-HK)
Mathematics is the systematic misuse of a nomenclature developed for that
specific purpose.
M

From: hammond@cs.utk.edu (James Michael Hammond) When Mathematicians Go Bad

"Psst, c'mere," said the shifty-eyed man wearing a long black trenchcoat, as he beckoned me off the rainy street into a damp dark alley. I followed.

"What are you selling?" I asked.

"Geometrical algebra drugs."

"Huh!?"

"Geometry drugs. Ya got your uppers, your downers, your sidewaysers, your inside-outers..."

"Stop right there," I interrupted. "I've never heard of insideouters."

"Oh, man, you'll love 'em. Makes you feel like M.C. ever-lovin'

Escher on a particularly weird day."

"Go on..."

"OK, your inside-outers, your arbitrary bilinear mappers, and here, heh, here are the best ones," he said, pulling out a large clear bottle of orange pills.

"What are those, then?" I asked.

"Givens transformers. They'll rotate you about more planes than you even knew existed."

"Sounds gross. What about those bilinear mappers?"

"There's a whole variety of them. Here's one you'll love -- they call it 'One Over Z' on the street. Take one of these little bad boys and you'll be on speaking terms with the Point at Infinity." M

Complete the next two terms of this sequence: O T T F F S S E (A. N T - Nine Ten) Likewise here: 3 3 5 4 4 3 5 5 (A. 4 3 -number of letters in the words "nine" and "ten"). M

The four branches of arithmetic - ambition, distraction, uglification and derision. (Lewis Caroll: "Alice in Wonderland") ME

The first law of Engineering Mathematics: All infinite series converge, and moreover converge to the first term. $\ensuremath{\mathsf{M}}$

This one can better be told in a pub. First three points on the table:

а

С

b

On a lies a beermat and on c stands a glass. The mathematican has to move the c to a. He takes the glas and puts it on the beermat. Now the glas is put on point b and the mathematican has to move it to a. The mathematican takes the glas and puts it on c - the problem has been reduced to one already solved. M

Algebraic symbols are used when you do not know what you are talking about. $\ensuremath{\mathsf{M}}$

A guy decided to go to the brain transplant clinic to refreshen his supply of brains. The secretary informed him that they had three kinds of brains available at that time. Doctors' brains were going for \$20 per ounce and lawyers' brains were getting \$30 per ounce. And then there were mathematicians' brains which were currently fetching \$1000 per ounce.

"1000 dollars an ounce!" he cried. "Why are they so expensive?"

It takes more mathematicians to get an ounce of brains," she explained. $\underline{\mathsf{M}}$

There are three kinds of people in the world: those who can count and those who can't.

And the related:

There are two groups of people in the world; those who believe that the world can be divided into two groups of people, and those who don't. M_____

We use epsilons and deltas in mathematics because mathematicians tend to make errors. M

A mathematician decides he wants to learn more about practical problems. He sees a seminar with a nice title: "The Theory of Gears." So he goes. The speaker stands up and begins, "The theory of gears with a real number of teeth is well known ..." M

Godel can't prove he was here.

Descartes though he was here. $\ensuremath{\mathsf{M}}$

From: surd@apollo.hanyang.ac.kr (ps park (Seoul Univ.))
From: chrisman@ucdmath.ucdavis.edu (Mark Chrisman) (many additions)
HOW TO PUT AN ELEPHANT INTO A REFRIGERATOR:

Analysis:
1) Differentiate it and put into the refrig. Then integrate it in the refrig.
2) Redefine the measure on the referigerator (or the elephant).
3) Apply the Banach-Tarsky theorem.

Number theory:
1) First factorize, second multiply.
2) Use induction. You can always squeeze a bit more in.
Algebra:
1) Step 1. Show that the parts of it can be put into the refrig. Step 2. Show that the refrig. is closed under the addition.

2) Take the appropriate universal refrigerator and get a surjection from refrigerator to elephant. Topology: 1) Have it swallow the refrig. and turn inside out. 2) Make a refrig. with the Klein bottle. The elephant is homeomorphic to a smaller elephant. 3) 4) The elephant is compact, so it can be put into a finite collection of refrigerators. That's usually good enough. 5) The property of being inside the referigerator is hereditary. So, take the elephant's mother, cremate it, and show that the ashes fit inside the refrigerator. 6) For those who object to method 3 because it's cruel to animals. Put the elephant's BABY in the refrigerator. Algebraic topology: Replace the interior of the refrigerator by its universal cover, R^3. Linear algebra: 1) Put just its basis and span it in the refrig. Show that 1% of the elephant will fit inside the refrigerator. 2) By linearity, x% will fit for any x. Affine geometry: There is an affine transformation putting the elephant into the refrigerator. Set theory: 1) It's very easy! refrigerator = { elephant } 2) The elephant and the interior of the refrigerator both have cardinality c. Geometry: Declare the following: Axiom 1. An elephant can be put into a refrigerator. Complex analysis: Put the refrig. at the origin and the elephant outside the unit circle. Then get the image under the inversion. Numerical analysis: 1) Put just its trunk and refer the rest to the error term. 2) Work it out using the Pentium. Statistics: 1) bright statistician. Put its tail as a sample and say "Done." 2) dull statistician. Repeat the experiment pushing the elephant to the refrig. Our NEW study shows that you CAN'T put the elephant 3) in the refrigerator. М

Why did the calculus student have so much trouble making Kool-Aid? Because he couldn't figure out how to get a quart of water into the

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little package.
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М

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From: sm@wf-hh.sh.sub.de (Stefan Mohr)
The shortest mathematic joke:
BEGIN -->"Epsilon less than zero"<-- END
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The law of the excluded middle either rules or does not rule, O.K.? $\ensuremath{\mathtt{M}}$

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Q:Why did the chicken cross the road?
a:Pierre de Fermat: I just don't have room here to give the full
explanation.
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From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines)
Math is the language God used to write the universe.
M_____

The History of 2 + 2 = 5 by Houston Euler

"First and above all he was a logician. At least thirty-five years of the half-century or so of his existence had been devoted exclusively to proving that two and two always equal four, except in unusual cases, where they equal three or five, as the case may be."

-- Jacques Futrelle, "The Problem of Cell 13"

Most mathematicians are familiar with -- or have at least seen references in the literature to -- the equation 2 + 2 = 4. However, the less well known equation 2 + 2 = 5 also has a rich, complex history behind it. Like any other complex quantitiy, this history has a real part and an imaginary

part; we shall deal exclusively with the latter here.

Many cultures, in their early mathematical development, discovered the equation 2 + 2 = 5. For example, consider the Bolb tribe, descended from the Incas of South America. The Bolbs counted by tying knots in ropes. They quickly realized that when a 2-knot rope is put together with another 2-knot rope, a 5-knot rope results.

Recent findings indicate that the Pythagorean Brotherhood discovered a proof that 2 + 2 = 5, but the proof never got written up. Contrary to what one might expect, the proof's nonappearance was not caused by a cover-up such as the Pythagoreans attempted with the irrationality of the square root of two. Rather, they simply could not pay for the necessary scribe service. They had lost their grant money due to the protests of an oxen-rights activist who objected to the Brotherhood's method of celebrating the discovery of theorems. Thus it was that only the equation 2 + 2 = 4 was used in Euclid's "Elements," and nothing more was heard of 2
+
2 = 5 for several centuries.

Around A.D. 1200 Leonardo of Pisa (Fibonacci) discovered that a few weeks after putting 2 male rabbits plus 2 female rabbits in the same cage, he ended up with considerably more than 4 rabbits. Fearing that too strong a challenge to the value 4 given in Euclid would meet with opposition, Leonardo conservatively stated, "2 + 2 is more like 5 than 4." Even this cautious rendition of his data was roundly condemned and earned Leonardo the nickname "Blockhead." By the way, his practice of underestimating the number of rabbits persisted; his celebrated model of rabbit populations had each birth consisting of only two babies, a gross underestimate if ever there was one. Some 400 years later, the thread was picked up once more, this time by the French mathematicians. Descartes announced, "I think 2 + 2 = 5; therefore it does." However, others objected that his argument was somewhat less than totally rigorous. Apparently, Fermat had a more rigorous proof which was to appear as part of a book, but it and other material were cut by the editor so that the book could be printed with wider margins. Between the fact that no definitive proof of 2 + 2 = 5 was available and

the excitement of the development of calculus, by 1700 mathematicians had again lost interest in the equation. In fact, the only known 18th-century reference to 2 + 2 = 5 is due to the philosopher Bishop Berkeley who, upon

discovering it in an old manuscript, wryly commented, "Well, now I know where all the departed quantities went to -- the right-hand side of this equation." That witticism so impressed California intellectuals that they named a university town after him.

But in the early to middle 1800's, 2 + 2 began to take on great significance. Riemann developed an arithmetic in which 2 + 2 = 5, paralleling the Euclidean 2 + 2 = 4 arithmetic. Moreover, during this period Gauss produced an arithmetic in which 2 + 2 = 3. Naturally, there ensued decades of great confusion as to the actual value of 2 + 2. Because of changing opinions on this topic, Kempe's proof in 1880 of the 4-color theorem was deemed 11 years later to yield, instead, the 5-color theorem. Dedekind entered the debate with an article entitled "Was ist und was soll 2 + 2?"

Frege thought he had settled the question while preparing a condensed version of his "Begriffsschrift." This condensation, entitled "Die Kleine Begriffsschrift (The Short Schrift)," contained what he considered to be a definitive proof of 2 + 2 = 5. But then Frege received a letter from Bertrand Russell, reminding him that in "Grundbeefen der Mathematik" Frege had proved that 2 + 2 = 4. This contradiction so discouraged Frege that he abandoned mathematics altogether and went into university administration. Faced with this profound and bewildering foundational question of the value of 2 + 2, mathematicians followed the reasonable course of action: they just ignored the whole thing. And so everyone reverted to 2 + 2 = 4 with nothing being done with its rival equation during the 20th century. There had been rumors that Bourbaki was planning to devote a volume to 2 + 2 =5 (the first forty pages taken up by the symbolic expression for the number five), but those rumor remained unconfirmed. Recently, though, there have been reported computer-assisted proofs that 2 + 2 = 5, typically involving computers belonging to utility companies. Perhaps the 21st century will see yet another revival of this historic equation. M_

THE STORY OF BABEL:

In the beginning there was only one kind of Mathematician, created by the Great Mathematical Spirit form the Book: the Topologist. And they grew to large numbers and prospered.

One day they looked up in the heavens and desired to reach up as far as the eye could see. So they set out in building a Mathematical edifice that was to reach up as far as "up" went. Further and further up they went ... until one night the edifice collapsed under the weight of paradox.

The following morning saw only rubble where there once was a huge structure reaching to the heavens. One by one, the Mathematicians climbed out from under the rubble. It was a miracle that nobody was killed; but when they began to speak to one another, SUPRISE of all surprises! they could not understand each other. They all spoke different languages. They all fought amongst themselves and each went about their own way. To this day the Topologists remain the original Mathematicians.

- adapted from an American Indian legend of the Mound Of Babel

Μ_

From: kovarik@mcmail.cis.mcmaster.ca (Zdislav V. Kovarik)
(From a cartoon by J. Effel): In the Garden of Eden, God is giving Adam a
geometry lesson: "Two parallel lines intersect at infinity. It can't be
proved but I've been there."
M______

"What's one and one?" "I don't know" said Alice. "I lost count." "She can't do addition." said the Red Queen.

- Lewis Carrol, "Through the lookingglass"

Μ_

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From: fc3a501@math.uni-hamburg.de (Hauke Reddmann)
Vectors...
Did you know that...
most vectors are pointing vectors, but the Poynting vector is NO
pointing vector (cross product E x B, so it has a screw sense)?
the Killing fields are not made out of Killing vectors?
Manfred Eigen didn't invent the eigenvector?
From: adh@cx.dnv.no (Arne Dehli Halvorsen)
Isn't it also a fact that Wilder knots are a particularly bad class of
wild
knots?
And Moore chaos is more chaotic than oridinary chaos?
(iterated system that emulates a Turing machine...)
Μ_
From: dmcq@dsbc.icl.co.uk (Dave McQuillan)
Maths Teacher: Now suppose the number of sheep is x...
Student: Yes sir, but what happens if the number of sheep is not x?
Μ
ANAGRAMS
        A DECIMAL POINT = I'm a dot in place.
        ONE PLUS TWELVE = Two plus eleven.
        APPLIED MATHEMATICS = Is mad, pathetic - ample?
        INTEGRAL CALCULUS = Calculating rules.
М
From: centaur@nai.net (Dave Wright)
 Math problems? Call 1-800-[(10x)(13i)^2]-[sin(xy)/2.362x]. --Unknown
Μ_
From: Ian Ellis <ian@iglou.com>
If parallel lines meet at infinity - infinity must be a very noisy
place with all those lines
crashing together!
М
From: pduffau@ix.netcom.com (Paul Duffau)
I understand that the Tennessee Waltz is Tipper's favorite algorithm?
М
From: Michael Cook <mlc@iberia.cca.rockwell.com>
Q: What does (x-a)(x-b)(x-c)...(x-z) equal?
A: [Hint: check out the 24th factor].
М
From: Richard <owowo@lstnet.net>
Infinity joke of the week
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A very large mathematical convention was held in Las Vegas. The

conventioneers filled two hotels, each with an infinite number of rooms. The hotels were across the street from each other and were owned by brothers. One evening, while everyone was out at a bar-b-que, one of the hotels burned to the ground. The brothers got together and worked out a plan. In the remaining hotel, they moved all guests to twice their room number -- room 101 moved to 202, room 1234 moved to room 2468, etc. Then all the odd number rooms were empty, and there were an infinite number of odd rooms. So the guests from the other hotel moved into them. M

From: Melanie Aultman <afn10453@afn.org> 4 3 a a Will you do me a favor? If it's within my power.... M

From: Ian Ellis <ian@iglou.com>
WHEN I TAUGHT tenth-grade mathematics at Senator Gershaw School in Bow
Island, Alberta, there was only one occasion I was at a loss for words.
As
we were reviewing geometry problems, one student raised her
hand. "Mr. Chipman," she asked, "how do you circumcise a circle?"
 --Contributed to "Tales Out of School" by Ken Chipman
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M

From: mlc@iberia.cca.rockwell.com (Michael Cook, Canonical list of Math Jokes) Collage 292 HumourNet 4 SEP 96

On a mailing list this size, not every Collage is going to appeal to every subscriber. But the ones that seem to appeal to the fewest people are my "geek humor" Collages. (Even political humor probably enjoys a broader appeal.) Nevertheless, they are so thoroughly loved by the geeks in the audience that they've become a mainstay of HumourNet. Alas, the moderator has no choice but to accommodate the vocal minority ...

("And your moderator, being such a happy geek, is a piece of cake.")

And when I say "minority," I mean *MINORITY*. There are painfully few people out there who really understand geekdom -- especially geek employment. It's so bad that smart geeks know better than to even *discuss* their jobs, for fear of having to perform emergency resuscitation on anyone within earshot.

Not a problem, though -- the *creative* ones simply make up other, more interesting lines of work. Ideally, these lines of work are tailored to the audience. For example, there's no sense in trying to explain the fundamentals of foliage-penetrating radar to members of the college field-hockey team. No, it's much better, in that particular case, to be a gynecologist for the FBI.

(You're probably starting to see how I get myself into trouble....)

Well, I'm not the only one who gets creative when the field hockey team (or gymnastics team or what have you) shows up at the local bar. And, to illustrate this, Jon in Rockford, Illinois, sent me the following excerpt from a thread that surfaced on a graphic-design list to which he subscribes; since the conversation evolves in a nice, simple fashion, I'll just label the speakers A, B, and C:

A: When in conversation with a stranger, how do you explain what you A: do in a single sentence?

B: It takes so long for me to really describe all the aspects of my
B: work [that] I can even bore myself sometimes.
B: I usually reply, "I sing in a band."
B: The conversation gets much funnier that way.
C: I know that one. I've built up a repertoire of such answers:
C: I'm an Elvis impersonator.
C: I'm an otter trainer.
C: I rob gas stations, liquor stores, that sort of thing.
C: I'm between jobs.

C: Well right now, I'm the dictator of a small South American C: country, but soon I'll control all of Latin America and then the C: Western hemisphere and then -- I'LL RULE THE WORLD! [maniacal C: laughter]

C: (Just the ones I use most often.)

Note how it's easier to develop a more-or-less normal conversation as the maniacal dictator of a small South American (or Latin American) country than it is to explain that you're a graphic designer (or engineer or, for that gymnastics team, really anything that requires at least a two-year degree) (not that I'm not being critical, mind you -- they still look awfully cute as they bounce across the floor). In other words, Manuel Noriega probably has an easier time meeting members of the field-hockey team than, say, the average mechanical-engineering major. And Noriega's serving 40 years for drug trafficking. (Come to think of it, he probably has a *much* easier time of it.)

OTOH, it's a well-established fact that MEs have very underdeveloped conversational skills ... ;-)

BTW, my own personal favorite out of that list is "otter trainer"; not because it's the one I use most often, but because I think it's the only one I *haven't* used [yet].

There are very good reasons why we need to do this -- probably the single most convincing is that, quite simply, no one is interested in geek employment. As "B" noted, above, it's so boring, even *we're* not interested.

But that's not the worst of it. No, the worst is *geek humor*. Boring jobs aside, your standard geek (yes, that'd be ANSI standard) can't resist an opportunity to make a comment that only another geek would understand -- much less find *amusing*. Among geeks, it's more than just sport; it's religion.

And, hence, the geek-humor Collages. And the follow-up comments that they [unfortunately ;-)] generate ...

Collage 279 (the most recent "Geeks!" Collage) contained the following piece:

... Engineers like to solve problems. If there are no problems handily available, they will create their own problems. Normal people don't understand this concept; they believe that if it ain't broke, don't fix it. Engineers believe that if it ain't broke, it doesn't have enough features yet.

Marc (in Maryland) felt compelled to clarify this a little:

Actually, if it ain't broke, we need to take it apart to find out why.

Which, of course, also applies to things that *are* broken -- hence, the engineer's proclivity for disassembling virtually everything in sight. It's genetic -- *geek* genetics.

And so, we come to probably the single geekiest of all the geek-humor Collages I've ever produced -- and all with thanks to:

Richard in Phoenix, Arizona, for "Math Riots Prove Fun Incalculable";

Jerry in Bellevue, Washington, for "A Modest Proposal";

and Umid in Wilkes-Barre, Pennsylvania, for "Career Choices," "Engineers, Scientists, and Mathematicians, Take One," and "... Take Two."

Huge thanks to all the guilty parties. Here's one for the geek history books ...

Enjoy! (But if you do, don't admit it to anyone. ;-)

- Vince Sabio HumourNet Moderator HumourNet@telephonet.com

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SUBJ: Math Riots Prove Fun Incalculable By Eric Zorn

(The following column appeared in the Chicago Tribune/DuPage County edition, Tuesday June 29 1993 page 2-1)

News Item (June 23) -- Mathematicians worldwide were excited and pleased today by the announcement that Princeton University

professor Andrew Wiles had finally proved Fermat's Last Theorem, a 365-year-old problem said to be the most famous in the field.

Admittedly, there was rioting and vandalism last week during the celebration. A few bookstores had windows smashed and shelves stripped, and vacant lots glowed with burning piles of old dissertations. But overall we can feel relief that it was nothing -- nothing -- compared to the outbreak of exuberant thuggery that occurred in 1984 after Louis DeBranges finally proved the Bieberbach Conjecture.

"Math hooligans are the worst," said a Chicago Police Department spokesman. "But the city learned from the Bieberbach riots. We were ready for them this time."

When word hit Wednesday that Fermat's Last Theorem had fallen, a massive show of force from law enforcement at universities all around the country headed off a repeat of the festive looting sprees that have become the traditional accompaniment to triumphant breakthroughs in higher mathematics.

Mounted police throughout Hyde Park kept crowds of delirious wizards at the University of Chicago from tipping over cars on the midway as they first did in 1976 when Wolfgang Haken and Kenneth Appel cracked the long-vexing Four-Color Problem. Incidents of textbook-throwing and citizens being pulled from their cars and humiliated with difficult story problems last week were described by the university's math department chairman Bob Zimmer as "isolated."

Zimmer said, "Most of the celebrations were orderly and peaceful. But there will always be a few -- usually graduate students -- who use any excuse to cause trouble and steal. These are not true fans of Andrew Wiles."

Wiles himself pleaded for calm even as he offered up the proof that there is no solution to the equation $x^n + y^n = z^n$ when n is a whole number greater than two, as Pierre de Fermat first proposed in the 17th Century. "Party hard but party safe," he said, echoing the phrase he had repeated often in interviews with scholarly journals as he came closer and closer to completing his proof.

Some authorities tried to blame the disorder on the provocative taunting of Japanese mathematician Yoichi Miyaoka. Miyaoka thought he had proved Fermat's Last Theorem in 1988, but his claims did not bear up under the scrutiny of professional referees, leading some to suspect that the fix was in. And ever since, as Wiles chipped away steadily at the Fermat problem, Miyaoka scoffed that there would be no reason to board up windows near universities any time soon; that God wanted Miyaoka to prove it.

In a peculiar sidelight, Miyaoka recently took the trouble to secure a U.S. trademark on the equation $"x^n + y^n = z^n "$ as well as the now-ubiquitous expression "Take that, Fermat!" Ironically, in defeat, he stands to make a good deal of money on cap and T-shirt sales.

This was no walk-in-the-park proof for Wiles. He was dogged, in the

early going, by sniping publicity that claimed he was seen puttering late one night doing set theory in a New Jersey library when he either should have been sleeping, critics said, or focusing on arithmetic algebraic geometry for the proving work ahead.

"Set theory is my hobby, it helps me relax," was his angry explanation. The next night, he channeled his fury and came up with five critical steps in his proof. Not a record, but close.

There was talk that he thought he could do it all by himself, especially when he candidly referred to University of California mathematician Kenneth Ribet as part of his "supporting cast," when most people in the field knew that without Ribet's 1986 proof definitively linking the Taniyama Conjecture to Fermat's Last Theorem, Wiles would be just another frustrated guy in a tweed jacket teaching calculus to freshmen.

His travails made the ultimate victory that much more explosive for math buffs. When the news arrived, many were already wired from caffeine consumed at daily colloquial teas, and they took to the streets en masse shouting, "Obvious! Yessss! It was obvious!"

The law cannot hope to stop such enthusiasm, only to control it. Still, one has to wonder what the connection is between wanton pillaging and a mathematical proof, no matter how long-awaited and subtle.

The Victory Over Fermat rally, held on a cloudless day in front of a crowd of 30,000 (police estimate: 150,000) was pleasantly peaceful. Signs unfurled in the audience proclaimed Wiles the greatest mathematician of all time, though partisans of Euclid, Descartes, Newton, and C.F. Gauss and others argued the point vehemently.

A warm-up act, The Supertheorists, delighted the crowd with a ragged song, "It Was Never Less Than Probable, My Friend," which included such gloating, barbed verses as --- "I had a proof all ready / But then I did a choke-a / Made liberal assumptions / Hi! I'm Yoichi Miyaoka."

In the speeches from the stage, there was talk of a dynasty, specifically that next year Wiles will crack the great unproven Riemann Hypothesis ("Rie-peat! Rie-peat!" the crowd cried), and that after the Prime-Pair Problem, the Goldbach Conjecture ("Minimum Goldbach," said one T-shirt) and so on.

They couldn't just let him enjoy his proof. Not even for one day. Math people. Go figure 'em.

[Editor's Note: I shudder to think of the day that the Unified Field Theory finally coalesces ... $<\!/vs\!>$]

SUBJ: A Modest Proposal By Shannon Weston, University of Washington (Reprinted on HumourNet with [indirect] permission) [Editor's Note: According to Jerry, who is a faculty member at UW, Shannon is a real student, and actually submitted this letter to his teaching assistant. Jerry and the TA agreed that Shannon should probably be in the marketing program. Heh. And they said that *I* should be in the English Department. Of course, it was only the *engineering* professors who were saying that.... ;-) </vs>]

Dear Sir,

I am presently enrolled in three math courses, one of which is your linear algebra class. Naturally, the generous helpings of weighty concepts presented thrice weekly occupy much of my thoughts -- a fact which, owing to several recent close calls at pedestrian crossings, seemed to be something of a mixed blessing. That is, until last weekend. At about 10 o'clock Sunday evening, as I was struggling to smear a facade of rigor over my EE235 homework, it suddenly occurred to me how many names are attached to the familiar methods, functions, etc. of college mathematics.

By "names" of course I do not mean technical designations in general, but actual human names. Consider for a moment the fact that mundane mathematical methods of the sort that are ladled out daily in high school are rarely, if ever, named. The common man, it seems, would not tolerate the obstruction incurred by lugging around five-syllable German family names for simple functions -- thus we have the "sine" and not the "Hohenhelmwohler function". However, once that unsuspecting citizen enters the halls of academe, shielded from the prying eyes and tender sensibilities of the public, a continuous acclimating process works on him with every math course he takes until, only two years later, he is regularly exposed to and blandly accepts from mathematicians brazen self-promotion of a degree unheard of outside the rap music industry.

It is NOT my purpose to pronounce ethical judgments on my betters, particularly when they are intellectuals of Gauss' or Dirac's standing. Even geniuses are bound by the constraints of the flesh -- they must eat, and in order to do so they must be able to market their product. Therefore Gauss' name appears in my text for much the same reason that Kalvin Klein's appears on the rumps of anorexic models. It IS my purpose to call your attention to a significant difference between the two gentlemen: Klein is alive and Gauss is dead. He is dead and, to the best of my knowledge, neither he nor his estate hold any legal claim to his functions, processes, proofs, etc. Moreover, not only is Gauss dead, but so is Dirac, Fourier and the rest -- all of the mathematical geniuses of our race have been culled by the brutal hand of natural selection at traffic crossings and the like, and all them before they had the chance to secure a solid legal claim to so much as a hyperbolic trig function.

Sir, I submit to you that we are sitting on a gold mine. The commercial opportunities at hand beggar the imagination. At any given time tens of thousands of our nation's youth are obliged to study mathematics. These are generally well financed, perhaps a touch naive, and, to put it gently, more study math than want to. We know their demographics and what they are inclined to buy. A captive audience, more ripe for exploitation would be hard to imagine. Picture the typical student, bent over his text for hours at a time. Imagine the results if, instead of the old math, he was staring at (your product here):

BEFORE	AFTER
Gassian elimination	Guiness Stout Elimination(tm)
eigenvalues	Fritovalues(tm)
Wronskian determinants	Shaquillian Determinants(tm)
L'Hopital's rule	Honda Rules(tm)
improper integrals	Victoria's Secret Integrals(tm)
Laplace transform	Lifestyles transform(tm)
Nortan equivalent	No-Doz Equivalent(tm)

... and so on. Of course this is just the tip of the iceberg. How much do you think McDonald's would pony up to get theta replaced with the golden arches? If we make too much money, we can always plow some of the math back as a tax shelter:

Y = sin (official function of the '96 Olympics) X

I'm sure you are every bit as intrigued as I am. Think it over ...

[Editor's Note: Unconfirmed, unsubstantiated, and unreliable (and, nevertheless, quoted here) rumor has it that this student failed the math course, but passed the business course -- and later went on to found a large software corporation somewhere in the northwestern U.S...;-) </vs>]

SUBJ: Career Choices

The graduate with a physics degree asks, "Why does it work?" The graduate with an engineering degree asks, "How does it work?" The graduate with an accounting degree asks, "How much will it cost?" The graduate with a liberal arts degree asks, "Do you want fries with that?"

-----<HUMOURNET>-----

SUBJ: Engineers, Scientists, and Mathematicians, Take One

Engineers think that equations approximate the real world. Physicists think that the real world approximates equations. Mathematicians are unable to make the connection ...

SUBJ: Engineers, Scientists, and Mathematicians, Take Two

An engineer, a physicist, and a mathematician are shown a pasture with a herd of sheep, and told to put them inside the smallest possible amount of fence.

The engineer is first. He herds the sheep into a circle and then puts the fence around them, declaring, "A circle will use the least fence for a given area, so this is the best solution." The physicist is next. He creates a circular fence of infinite radius around the sheep, and then draws the fence tight around the herd, declaring, "This will give the smallest circular fence around the herd."

The mathematician is last. After giving the problem a little thought, he puts a small fence around himself and then declares, "I define myself to be on the outside."

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</collage292> M

From: mlc@iberia.cca.rockwell.com (Michael Cook, Canonical list of Math Jokes) This comes from a quote by Cambridge mathematician Tom Korner. Q: How do you tell that you are in the hands of the Mathematical Mafia? A: They make you an offer that you can't understand. Μ_ Your Cult Leader <kpawa@intergate.ca> From: MATHEMATICAL THESIS Here are a few relatively unexplored areas of mathematics which you may want to use as the subject of your dissertation or thesis: 1.) To impose a new integer between 5 and 6 (which would of course be called 'fix'). We'll have to go through all of algebra, trig., calculus, and other areas of mathematics to make them consistent (you could say we will be putting in the fix). 2.) You know how they say that you can't compare apples and oranges? Well now you can now (sort of). I've done extensive investigating in this area and here's what I've come up with: $Apples = K(0) * (1/8)Int[tan(0^2) + xsqrt(0) + 1) + (1/4)exp(J)]$ Where J is the juice-ocity factor and O is the dependant variable Oranges. Now I'm fairly certain everything in the equation is right but I don't know what K(0) is -- this is the function of 0 we still have to work out. 3.) The ancient Pythagoreans left one big puzzle unsolved. They like any learned people since the earliest days of Western civilization sought to quantify human experience and knowledge in precise mathematical terms. Here's what they were able to put in numbers: Justice=4, Marriage=7. I have also discovered that Women=Sqrt(2) (completely irrational), The meaning of life=42, and Pure Evil=17. Still unknown are the numbers for Sex, Anger, Polygamy, Dignity, Pain, Ice Cream, Bastards, Farts, and just about everything else. If you have any others just mail them to kpawa@intergate.ca ++=1.1 PROOFS Μ_

PROOFS THAT P

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(attributed to Hartry Field)
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Davidson's proof that p: Let us make the following bold conjecture: p

Wallace's proof that p: Davidson has made the following bold conjecture: p

Grunbaum: As I have asserted again and again in previous publications, p.

Morgenbesser: If not p, what? q maybe?

Putnam: Some philosophers have argued that not-p, on the grounds that q. It would be an interesting exercise to count all the fallacies in this "argument". (It's really awful, isn't it?) Therefore p.

Rawls: It would be a nice to have a deductive argument that p from self-evident premises. Unfortunately, I am unable to provide one. So I will have to rest content with the following intuitive considerations in its support: p.

Unger: Suppose it were the case that not-p. It would follow from this that someone knows that q. But on my view, no one knows anything whatsoever. Therefore p. (Unger believes that the louder you say this argument the more persuasive it becomes.)

Katz: I have seventeen arguments for the claim that p, and I know of only four for the claim that not-p. Therefore p.

Lewis: Most people find the claim that not p completely obvious and when I assert p they give me an incredulous stare. But the fact that they find not-p obvious is no argument that it is true; and I do not know how to refute an incredulous stare. Therefore p.

Fodor: My argument for p is based on three premises:
(1) q
(2) r
and
(3) p
>From these, the claim that p deductively follows.

Some people may find the third premise controversial, but it is clear that if we replaced that premise by any other reasonable premise, the argument would go through just as well.

Sellars's proof that p: Unfortunately, limitations of space prevent it from being included here, but important parts of the proof can be found in each of the articles in the attached bibliography.

Earman: There are solutions to the field equations of general relativity in which space-time has the structure of a four-dimensional klein bottle and in which there is no matter. In each such space-time, the claim that not-p is false. Therefore p.

Kripke:

OUTLINE OF A "PROOF" THAT P [footnote]

Saul Kripke

Some philosophers have argued that not-p. But none of them seems to me to have made a convincing argument against the intuitive view that this is not the case. Therefore, p.

[footnote]. This outline was prepared hastily--at the editor's insistence --- from a taped transcript of a lecture. Since I was not even given the opportunity to revise the first draft before publication, I cannot be held responsible for any lacunae in the (published version of the) argument, or for any fallacious or garbled inferences resulting from faulty preparation of the typescript. Also, the argument now seems to me to have problems which I did not know when I wrote it, but which I can't discuss here, and which are completely unrelated to any criticisms that have appeared in the literature (or that I have seen in manuscript); all such criticisms misconstrue the argument. It will be noted that the present version of the argument seems to presuppose the (intuitionistically unacceptable) law of double negation. But the argument can easily be reformulated in a way that avoids employing such an inference rule. I hope to expand on these matters further in a separate monograph.

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Routley and Meyer: If (q \& not-q) is true, then there is a model for p. Therefore p. M
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Theorem : All numbers are equal to zero.

Proof: Suppose that a=b. Then

a = b

a^2 = ab

a^2 = ab - b^2

(a + b)(a - b) = b(a - b)

a + b = b

a = 0

From: Chris Trevino <fred.trevino@worldnet.att.net>

And Furthermore if a + b = b, and a = b, then b + b = b, and 2b = b,

which mean that

2 = 1
```

Μ_

```
From: Michael_Ketzlick@h2.maus.de (Michael Ketzlick)
Theorem : 3=4
Proof:
Suppose:
            +
                b
                     =
        а
                           C
This can also be written as:
     4a - 3a + 4b - 3b = 4c - 3c
After reorganising:
     4a + 4b - 4c = 3a + 3b - 3c
Take the constants out of the brackets:
     4 * (a+b-c) = 3 * (a+b-c)
Remove the same term left and right:
            4 = 3
М
From: Benjamin.J.Tilly@dartmouth.edu (Benjamin J. Tilly)
Theorem: 1\$ = 1c.
Proof:
And another that gives you a sense of money disappearing ...
1\$ = 100c
   = (10c)^2
   = (0.1\$)^2
   = 0.01$
   = 1c
Here $ means dollars and c means cents. This one is scary in that I
have seen PhD's in math who were unable to see what was wrong with this
one. Actually I am crossposting this to sci.physics because I think
that the latter makes a very nice introduction to the importance of
```

```
keeping track of your dimensions...
```

```
From: "Brijesh " <birjoo@mailcity.com>
Theorem: 1$ = 10 cent
Proof:
we know that
  $ 1 = 100 cents
divide both sides by 100
  $ 1/100 = 100/100 cents
=> $ 1/100 = 1 cent
  take square root both side
=> squr($1/100) = squr (1 cent)
=> $ 1/10 = 1 cent
  multiply both side by 10
=> $1 = 10 cent
```

```
Μ_
```

```
From: clubok@physics11 (Kenneth S. Clubok)
Theorem: 1 = -1.
Proof:
1 -1
-- = --
-1
     1
      1
                    -1
sqrt[ -- ] = sqrt[ -- ]
      -1
                     1
sqrt[1] sqrt[-1]
----- = ------
sqrt[-1] sqrt[1]
1=-1 (by cross-multiplication)
And here's my personal favorite:
Use integration by parts to find the anti-derivative of 1/x. One
can get the amusing result that 0=1. (Until you realize you have to put
in the limits.)
М
From: jreimer@aol.com (JReimer)
Theorem: 1 = -1
Proof:
1 = sqrt(1) = sqrt(-1 * -1) = sqrt(-1) * sqrt(-1) = 1^{-1}
Also one can disprove the axiom that things equal to the same thing
are equal to each other.
1 = sqrt(1)
-1 = sqrt(1)
therefore 1 = -1
Μ_
From:waaben <nissa@bouldernews.infi.net>
Theorem: 1 = -1
Proof:
x=1
x^2=x
x^2-1=x-1
(x+1)(x-1) = (x-1)
(x+1) = (x-1) / (x-1)
x+1=1
x=0
0 = 1
=> 0/0=1/1=1
would you like for me to produced another rabbit :)
М
```

From: kdq@marsupial.jpl.nasa.gov (Kevin D. Quitt)

```
Theorem: 4 = 5

Proof:

-20 = -20

16 - 36 = 25 - 45

4^2 - 9*4 = 5^2 - 9*5

4^2 - 9*4 + 81/4 = 5^2 - 9*5 + 81/4

(4 - 9/2)^2 = (5 - 9/2)^2

4 - 9/2 = 5 - 9/2

4 = 5

M_
```

```
From: baez@guitar.ucr.edu (john baez)

Theorem: 1 + 1 = 2

Proof:

n(2n - 2) = n(2n - 2)

n(2n - 2) - n(2n - 2) = 0

(n - n)(2n - 2) = 0

2n(n - n) - 2(n - n) = 0

2n - 2 = 0

2n = 2

n + n = 2

or setting n = 1

1 + 1 = 2

M_______
```

From: magidin@uclink.berkeley.edu (Arturo Viso Magidin) Theorem: In any finite set of women, if one has blue eyes then they all have blue eyes.

Proof. Induction on the number of elements.

if n= or n=1 it is immediate.

Assume it is true for k

Consider a group with k+1 women, and without loss of generality assume the first one has blue eyes. I will represent one with blue eyes with a '*' and one with unknown eye color as @.

You have the set of women:

 $\{*,@,\ldots,@\}$ with k+1 elements. Consider the subset made up of the first k. This subset is a set of k women, of which one has blue eyes. By the induction hypothesis, all of them have blue eyes. We have then:

 $\{*, \ldots, *, @\}$, with k+1 elements. Now consider the subset of the last k women. This is a set of k women, of which one has blue eyes (the next-to-last element of the set), hence they all have blue eyes, in particular the k+1-th woman has blue eyes.

Hence all k+1 women have blue eyes.

By induction, it follows that in any finite set of women, if one has blue eyes they all have blue eyes. QED $\ensuremath{\mathsf{M}}$

From: Zorro Theorem: All positive integers are interesting. Proof: Assume the contrary. Then there is a lowest non-interesting positive integer. But, hey, that's pretty interesting! A contradiction. QED I heard this one from G. B. Thomas, but I don't know whether it is due to him. М From: Jeff Erickson <jeffe@cs.duke.edu> Theorem: All numbers are boring. Proof (by contradiction): Suppose x is the first non-boring number. Who cares? Μ_ From: daniel@hagar.ph.utexas.edu (James Daniel) Aren't multi-valued functions fun? Once you realize what's going on, though, you can make them into silly proofs pretty much without thinking. Here's one I just made up: Object: to prove that i < 0 (that is, sqrt(-1) < 0) Well, $(.5 + \text{sqrt}(3/4)*i)^3 = (-1)^3$ (most would assert this to be a false statement -- mostly cuz they'll get the math wrong. It's a true statement. It's the next statement that is false.) which means that .5 + sqrt(3/4)*i = -1So then 1 + sqrt(3)*i = -2sqrt(3)*i = -1 i = -1/sqrt(3)Therefore i is a negative number. QED. Μ___ From: julison@cco.caltech.edu (Julian C. Jamison) Theorem: All numbers are equal. Proof: Choose arbitrary a and b, and let t = a + b. Then a + b = t (a + b)(a - b) = t(a - b) $a^2 - b^2 = ta - tb$ $a^2 - ta = b^2 - tb$ $a^2 - ta + (t^2)/4 = b^2 - tb + (t^2)/4$ $(a - t/2)^2 = (b - t/2)^2$ a - t/2 = b - t/2a = b

```
So all numbers are the same, and math is pointless.
Μ
From: pfc@math.ufl.edu (P. Fritz Cronheim)
This one is from Jerry King's _Art of Mathematics_
16/64=1/4 by cancelling the 6's. Here the result is true, but the method
is not. Do the ends justify the means? :)_
From: ejones@hooked.net (Earle Jones)
Try 19 / 95 -- just cancel the nines!
М
From: Wei Kiet Soo <ahleksoo@nw.com.au>
This reminds me of my maths teacher's demonstration last yr:
sin x = 6n
canceling out the ns, six = 6 ...:)
M____
Theorem: n=n+1
Proof:
(n+1)^2 = n^2 + 2*n + 1
Bring 2n+1 to the left:
(n+1)^2 - (2n+1) = n^2
Substract n(2n+1) from both sides and factoring, we have:
(n+1)^2 - (n+1)(2n+1) = n^2 - n(2n+1)
Adding 1/4(2n+1)^2 to both sides yields:
(n+1)^2 - (n+1)(2n+1) + 1/4(2n+1)^2 = n^2 - n(2n+1) + 1/4(2n+1)^2
This may be written:
[(n+1) - 1/2(2n+1)]^2 = [n - 1/2(2n+1)]^2
Taking the square roots of both sides:
(n+1) - 1/2(2n+1) = n - 1/2(2n+1)
Add 1/2(2n+1) to both sides:
n+1 = n
М
Theorem: log(-1) = 0
Proof:
a) \log[(-1)^2] = 2 * \log(-1)
On the other hand:
b) \log[(-1)^2] = \log(1) = 0
Combining a) and b) gives:
2* \log(-1) = 0
Divide both sides by 2:
\log(-1) = 0
Μ_
```

Theorem: ln(2) = 0 Proof:

```
Consider the series equivalent of ln 2:

ln 2 = 1 - 1/2 + 1/3 - 1/4 + 1/5 - 1/6 \dots

Rearange the terms:

ln 2 = (1 + 1/3 + 1/5 + 1/7 \dots) - (1/2 + 1/4 + 1/6 + 1/8 \dots)

Thus:

ln 2 = (1 + 1/3 + 1/5 + 1/7 \dots) + (1/2 + 1/4 + 1/6 + 1/8 \dots) - 2 * (1/2 + 1/4 + 1/6 + 1/8 \dots)

Combine the first to series:

ln 2 = (1 + 1/2 + 1/3 + 1/4 + 1/5 \dots) - (1 + 1/2 + 1/3 + 1/4 + 1/5 \dots)

Therefore:

ln 2 = 0

M
```

```
Theorem: 1 = 0 = -1/2
Proof:
Consider the infinite series: 1 - 1 + 1 - 1 + 1 - 1 + 1 - 1 + 1 \dots
Pair the terms:
a) (1 - 1) + (1 - 1) + (1 - 1) + \ldots = 0
Pair the terms differently:
b) 1 - (1 - 1) + (1 - 1) + (1 - 1) + \ldots = 1
Combine a) and b):
1 = 0
From: ad@dcs.st-and.ac.uk (Tony Davie)
c) -S = -1 + 1 - 1 + 1 - ...
    = 1 + S
So 2S = -1 and S = -1/2
combine with a) and b):
1 = 0 = -1/2
М
```

```
From: Andreas Jung <ajung@informatik.uni-rostock.de>
Theorem: e=1
Proof:
```

```
1
2 pi i ------ 1
------ 2 pi i ------
1 2 pi i [2 pi i] 2 pi i
e = e = e = [e] = 1 = 1
```

```
М
```

```
From: The Human Neutrino <sirius@wam.umd.edu>
Theorem: e=1
Proof:
    2*e = f
    2^(2*pi*i)e^(2*pi*i) = f^(2*pi*i)
    e^(2*pi*i) = 1
so:
    2^(2*pi*i) = f^(2*pi*i)
    2=f
thus:
    e=1
```

M_

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From: Math Department American Collegiate Institute
Theorem: 1 = 1/2:
Proof:
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Theorem: It is possible to square the circle.

Proof: No mathematician has squared the circle.

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Therefore: No one who has squared the circle is a mathematician. Therefore: All who have squared the circle are nonmathematicians. Therefore: Some nonmathematician has squared the circle. Therefore: It is possible to square to circle. [QED]

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From: ad@dcs.st-and.ac.uk (Tony Davie)
B) Every triangle is isosceles (and hence equilateral)
.....A.*
...../
.....
.....
.....
.....
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......
.....
.....
...../.../*Y
.....
.....P/.....
.....
......
..../.--....
.../--...
B*----*C
     Х
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Proof: Consider triangle ABC. Let the bisector of angle A and the perpendicular bisector of BC meet at P. Drop perpendiculars from P onto AB meeting it at Z and on AC meeting it at Y. Join PB and PC.

Triangles APZ and APY are congruent (2 angles and corresponding side) so AZ=AY and ZP=YP. Triangles PXB and PXC are congruent (2 sides and included angle) so PB=PC Hence triangles ZPB and YPC are congruent (right angle, hypotenuse and side) So BZ=CY So BZ+ZA=CY+YA OED C) Consider the sentence S = "If this sentence is true then God exists". This could be written S = (S > G) (in the absence of an ASCII hook) Suppose S is true. From this, we can use Modus Ponens to show that God exists. Thus S |- G. So |-(S > G)|So |- S QED Corrolory: G -- God exists [But also, of course, God doesn't exist, the Moon is made of Green Cheese, . . .] Hope these are interesting. The geometry diagram took me ages !!! М Methods of Mathematical Proof This is from _A Random Walk in Science_, R.L. Weber and E. Mendoza (ed.)(by Joel E. Cohen?): To illustrate the various methods of proof we give an example of a logical system. THE PEJORATIVE CALCULUS Lemma 1. All horses are the same colour. (Proof by induction) Proof. It is obvious that one horse is the same colour. Let us assume the proposition P(k) that k horses are the same colour and use this to imply that k+1 horses are the same colour. Given the set of k+1 horses, we remove one horse; then the remaining k horses are the same colour, by hypothesis. We remove another horse and replace the first; the k horses, by hypothesis, are again the same colour. We repeat this until by exhaustion the k+1 sets of k horses have been shown to be the same

colour. It follows that since every horse is the same colour as every

other horse, P(k) entails P(k+1). But since we have shown P(1) to be true, P is true for all succeeding values of k, that is, all horses are the same colour.

Theorem 1. Every horse has an infinite number of legs. (Proof by intimidation.)

Proof. Horses have an even number of legs. Behind they have two legs and in front they have fore legs. This makes six legs, which is certainly an odd number of legs for a horse. But the only number that is both odd and even is infinity. Therefore horses have an infinite number of legs. Now to show that this is general, suppose that somewhere there is a horse with a finite number of legs. But that is a horse of another colour, and by the lemma that does not exist.

Corollary 1. Everything is the same colour.

Proof. The proof of lemma 1 does not depend at all on the nature of the object under consideration. The predicate of the antecedent of the universally-quantified conditional 'For all x, if x is a horse, then x is the same colour,' namely 'is a horse' may be generalized to 'is anything' without affecting the validity of the proof; hence, 'for all x, if x is anything, x is the same colour.'

Corollary 2. Everything is white.

Proof. If a sentential formula in x is logically true, then any particular substitution instance of it is a true sentence. In particular then: 'for all x, if x is an elephant, then x is the same colour' is true. Now it is manifestly axiomatic that white elephants exist (for proof by blatant assertion consult Mark Twain 'The Stolen White Elephant'). Therefore all elephants are white. By corollary 1 everything is white.

Theorem 2. Alexander the Great did not exist and he had an infinite number of limbs.

Proof. We prove this theorem in two parts. First we note the obvious fact that historians always tell the truth (for historians always take a stand, and therefore they cannot lie). Hence we have the historically true sentence, 'If Alexander the Great existed, then he rode a black horse Bucephalus.' But we know by corollary 2 everything is white; hence Alexander could not have ridden a black horse. Since the consequent of the conditional is false, in order for the whole statement to be true the antecedent must be false. Hence Alexander the Great did not exist.

We have also the historically true statement that Alexander was warned by an oracle that he would meet death if he crossed a certain river. He had two legs; and 'forewarned is four-armed.' This gives him six limbs, an even number, which is certainly an odd number of limbs for a man. Now the only number which is even and odd is infinity; hence Alexander had an infinite number of limbs. We have thus proved that Alexander the Great did not exist and that he had an infinite number of limbs. M_______

Theorem: a cat has nine tails. Proof: No cat has eight tails. A cat has one tail more than no cat. Therefore, a cat has nine tails. From: rmaimon@husc9.Harvard.EDU (Ron Maimon) Theorem: All dogs have nine legs. Proof: would you agree that no dog has five legs? would you agree that _a_ dog has four legs more then _no_ dog? 4 + 5 = ?Μ_ From: sld1n@cc.usu.edu Prove that the crocodile is longer than it is wide. Lemma 1. The crocodile is longer than it is green: Let's look at the crocodile. It is long on the top and on the bottom, but it is green only on the top. Therefore, the crocodile is longer than it is green. Lemma 2. The crocodile is greener than it is wide: Let's look at the crocodile. It is green along its length and width, but it is wide only along its width. Therefore, the crocodile is greener than it is wide. From Lemma 1 and Lemma 2 we conclude that the crocodile is longer than it is wide. М From: "feldmann" <feldmann@bsi.fr> This was posted to sci.math , by James Patrick Ferry, a few days ago; in case you didn't noticed it :-) Those of you who have been working on a proof of Fermat's Last Theorem, you may cease your labors. I have produced a proof whose simplicity cannot be surpassed. _____ Statement: For any integer $n \ge 3$, there do not exist non-zero integers x, y and z such that $x^n + y^n = z^n$. Proof: _____ That's right! My proof is . . . the null proof! This proof has many advantages over the proofs offered by others: When one correctly appreciates Fermat's sense of humor, one 1) sees that this is the proof he had in mind. The margin too small? Hah! It was in the margin the whole time, but mathematicians, not being able to free themselves of their entrenched notions of "proof," were simply unable to see it.

2) It is concise.

3) It is my one and only, first and final version.

4) There are no gaping holes of reasoning.

5) There are no bizarre, non-mathematical definitions.

Jealous mathematicians have naturally questioned my proof. But none of their counter-arguments pass muster:

> That's not a proof. That's just stupid.

That's not a counter-argument. That's just histrionics. Until someone either produces a counter-example or points out the *specific* place in my proof where it fails, I shall consider my proof valid. Your emotionalism is no substitute for logic.

> Umm, what makes this a proof of FLT rather than, well, any > other theorem you might care to mention? Why not say you've

What makes *any* proof a proof of what it proves rather than of something else? The fact that it proves it. Duh.

> just silly. It is hard even to talk about. A proof has to > prove something. A proof is a series of statements which > establish a result. Proofs necessarily have semantic content. > Even nonsense proofs have syntactic content. Your "proof" is > no more a proof of FLT than is a lump of tuna (which, BTW, is

A lump of tuna? Again, histrionics. Again, a mathematician who insists it isn't fair unless you play by his rules. Have you produced a counter-example? Have you found a *specific* place in my proof where it fails? Then shut up.

It's bad enough that close-minded mathematical community won't recognize my brilliance. But to heap insult and abuse on top of that . . . well, I shouldn't be surprised. It's the same old story: the noble and intelligent hounded by the vicious and ignorant. Sigh. Again I say, sigh.

From: ajs@fc.hp.nospam.com (Alan Silverstein)
Hello, this is probably 438-9012, yes, the house of the famous
statistician. I'm probably not at home, or not wanting to answer the
phone, most probably the latter, according to my latest calculations.
Supposing that the universe doesn't end in the next 30 seconds, the odds
of
which I'm still trying to calculate, you can leave your name, phone
number,
and message, and I'll probably phone you back. So far the probability of
that is about 0.645. Have a nice day.

Did you hear the one about the statistician? Probably.... М It is proven that the celebration of birthdays is healthy. Statistics show that those people who celebrate the most birthdays become the oldest. -- S. den Hartog, Ph D. Thesis Universitty of Groningen. Μ_ From: Keith Sullivan (KSullivan@worldnet.att.net) THE WONDERFUL WORLD OF STATISTICS * Ten percent of all car thieves are left-handed All polar bears are left-handed * If your car is stolen, there's a 10 percent chance it was nicked by a Polar bear * 39 percent of unemployed men wear spectacles * 80 percent of employed men wear spectacles * Work stuffs up your eyesight * All dogs are animals * All cats are animals * Therefore, all dogs are cats * A total of 4000 cans are opened around the world every second * Ten babies are conceived around the world every second * Each time you open a can, you stand a 1 in 400 chance of falling pregnant Johan <joe@alpha.terranet.co.za> Infinite Joke List <jokes@infinite.ihub.com> М From: Greg Jednaszewski <gt0598a@prism.gatech.edu> "According to a recent poll, 51% of all Americans are in the majority." -k.n. Μ_ From Joachim Verhagen From a Dilbert cartoon: The pointy-haired boss: "40% of the sick leaves are on a monday or friday. This must change" Μ_ From: Ronan M Conroy (rconroy@rcsi.ie) I'm not an outlier; I just haven't found my distribution yet Μ_ |eghorn@pou|try.com (Marty) From: Clem asks Abner, "Ain't statistics wonderful?" "How so?" says Abner. "Well, according to statistics, there's 42 million alligator

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eggs laid every year. Of those only about half get hatched. Of those that hatch, three-fourths of them get eaten by predators in the first 36 days. And of the rest, only 5 percent get to be a year old because of one thing or another. Ain't statistics wonderful?" Abner asks, "What's so wonderful about statistics?" "Why, if it wasn't for statistics, we'd be up to our asses in baby alligators!" M______

From: "Jerome Schroeder" <Jerrys@spamnot.wolfenet.com> In my last stats course I was amazed to hear my teacher announce that If we did not like our results, all we needed to do was change our levels of confidence. In short fib. This time to ourselves. M

From: "S. A. Maas" <smaas@concentric.net> Two statisticians were travelling in an airplane from LA to New York. About an hour into the flight, the pilot announced that they had lost an engine, but don't worry, there are three left. However, instead of 5 hours it would take 7 hours to get to New York. A little later, he announced that a second engine failed, and they still had two left, but it would take 10 hours to get to New York. Somewhat later, the pilot again came on the intercom and announced that a third engine had died. Never fear, he announced, because the plane could fly on a single engine. However, it would now take 18 hours to get to new York. At this point, one statistician turned to the other and said, "Gee, I hope we don't lose that last engine, or we'll be up here forever!" М

From: fc3a501@AMRISC01.math.uni-hamburg.de (Hauke Reddmann) AVOIDING ACCIDENTS

Statistics means never having to say you're certain. [With apologies to Erich Segal] M

In earlier times, they had no statistics, and so they had to fall back on lies. - STEPHEN LEACOCK М "The group was alarmed to find that if you are a labourer, cleaner or dock worker, you are twice as likely to die than a member of the professional classes" [The Sunday Times 31st August 1980] Μ_ From: ph2008@mail.bris.ac.uk (CJ. Bradfield) Statistics is the art of never having to say you're wrong. Variance is what any two staticticians are at. (Not that I particularly dislike statisticians... I hate all mathematicians!!) [sorry mum!] M From: gcramsey@rs6000.cmp.ilstu.edu (Gary C. Ramseyer) Gary Ramseyer's First Internet Gallery of Statistics Jokes http://www.ilstu.edu/~gcramsey Meaning of some statistical terms: Homogeneous elasticity betweeen different sizes Homoscedasticity of rubber bands. Interpolate Breeding a statistician with a clergyman to produce the much sought "honest statistician". Standard normal deviates A comparison group of sociopaths who were formally normal people. М 97.3% of all statistics are made up. М it's like the tale of the roadside merchant who was asked to explain how he could sell rabbit sandwiches so cheap. "Well" he explained, "I have to put some horse-meat in too. But I mix them 50:50. One horse, one rabbit." [DARREL HUFF, How to lie with statistics] Μ_ Are statisticians normal? Μ_ From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines) Smoking is a leading cause of statistics. -- Fletcher Knebel I could prove God statistically. -- George Gallup 43% of all statistics are worthless. "There are lies, damned lies, and statistics." -- Attributed by Mark Twain to Benjamin Disraeli. From: shap.wolf@*spamguard*.asu.edu (Shapard Wolf) In the original (Benjamin Disraeli, quoted in George Seldes "The Great Quotations," says: "There are lies, damned lies, and

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church statistics."

In the computer industry, there are three kinds of lies: Lies, damn lies, and benchmarks. 3 out of 4 Americans make up 75% of the population. Death is 99 per cent fatal to laboratory rats. Μ Did you know that the great majority of people have more than the average number of legs? [It's obvious really; amongst the 57 million people in Britain there are probably 5,000 people who have only got one leg. Therefore the average number of legs is (5000 * 1) + (56,995,000 * 2)----- = 1.9999123..... 57,000,000 Since most people have 2 legs.....] Μ_ A statistician is a person who draws a mathematically precise line from an unwarranted asumption to a foregone conclusion. Μ_ A statistician can have his head in an oven and his feet in ice, and he will say that on the average he feels fine. М From: Catherine Shenoy <cshenoy@ukans.edu> A fellow with his head in the sauna and his heet in the snow will feel pretty good, on average. М From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection From: rgep@pmms.cam.ac.uk (Richard Pinch) Statisticians do it continuously but discretely. Statisticians do it when it counts. Statisticians do it with 95% confidence. Statisticians do it with large numbers. Statisticians do it with only a 5% chance of being rejected. Statisticians do it with two-tail T tests. Statisticians do it. After all, it's only normal. Statisticians probably do it. Statisticians do it with significance. Probabilists do it on random walks. Probabilists do it stochastically. Statisticians do all the standard deviations. М From: gcramsey@rs6000.cmp.ilstu.edu (Gary C. Ramseyer)

Gary Ramseyer's First Internet Gallery of Statistics Jokes http://www.ilstu.edu/~gcramsey

The Top Ten Reasons why statisticians are misunderstood

1: They speak only the Greek language.

- 2: They usually have long threatening names such as Bonferonni, Tchebycheff, Schatzoff, Hotelling, and Godambe. Where are the statisticians with names such as Smith, Brown, or Johnson?
- 3: They are fond of all snakes and typically own as a pet a large South American snake called an ANOCOVA.
- 4: For perverse reasons, rather than view a matrix right side up they prefer to invert it.

5: Rather than moonlighting by holding Amway parties they earn a few extra

bucks by holding pocket-protector parties.

6: They are frequently seen in their back yards on clear nights gazing through powerful amateur telescopes looking for distant star constellations called ANOVA's.

7: They are 99% confident that sleep can not be induced in an introductory statistics class by lecturing on z-scores.

- 8: Their idea of a scenic and exotic trip is traveling three standard deviations above the mean in a normal distribution.
- 9: They manifest many psychological disorders because as young statisticians many of their statistical hypotheses were rejected.
- 10:They express a deap-seated fear that society will someday construct tests that will enable everyone to make the same score. Without variation or individual differences the field of statistics has no real function and a statistician becomes a penniless ward of the state.

From: Mathematics Magazine, December 1990. Subject: Statisticians

(Excerpted from "Quotes, Damned Quotes" by John Bibby)

If there is a 50-50 chance that something can go wrong, then 9 times out of ten it will. (Paul Harvey News, 1979)

``Give us a copper Guv'' said the beggar to the Treasury statistician, when he waylaid him in Parliament square. ``I haven't eaten for three days.'' ``Ah,'' said the statistician, ``and how does that compare with the same period last year?'' (Russell Lewis)

``I gather, young man, that you wish to be a Member of Parliament. The first lesson that you must learn is, when I call for statistics about the rate of infant mortality, what I want is proof that fewer babies died when I was Prime Minister than when anyone else was Prime Minister. That is a political statistic.'' (Winston Churchill)

``You haven't told me yet,'' said Lady Nuttal, ``what it is your fiance does for a living.'' `He's a statistician,'' replied Lamia, with an annoying sense of being on the defensive. Lady Nuttal was obviously taken aback. It had not occurred to her that statisticians entered into normal social relationships. The species, she would have surmised, was perpetuated in some collateral manner, like mules. `But Aunt Sara, it's a very interesting profession,'' said Lamia warmly. ``I don't doubt it,'' said her aunt, who obviously doubted it very much. ``To express anything important in mere figures is so plainly impossible that there must be endless scope for well-paid advice on the how to do it. But don't you think that life with a statistician would be rather, shall we say, humdrum?'' Lamia was silent. She felt reluctant to discuss the surprising depth of emotional possibility which she had discovered below Edward's numerical veneer. ``It's not the figures themselves,'' she said finally. ``It's what you do with them that matters.'' (K.A.C. Manderville, The undoing of Lamia Gurdleneck) Μ_

People who do very unusual jobs: the man who counts then number of people at public gatherings.

You've probably seen his headlines, "Two million flock to see Pope.", "200 arrested as police find ounce of cannabis.", "Britain #3 billion in debt". You probably wondered who was responsible for producing such well rounded-up figures. What you didn't know was that it was all the work of one man, Rounder-Up to the media, John Wheeler. But how is he able to go on turning out such spot-on statistics? How can he be so accurate all the time? "We can't" admits Wheeler blithely. "Frankly, after the first million we stop counting, and round it up to the next million. I don't know if you've ever counted a papal flock, but, not only do they look a bit the same, they also don't keep still, what with all the bowing and crossing

themselves."

"The only way you could do it accurately is by taking an aerial photograph of the crowd and handing it to the computer to work out. But then you'd get a headline saying "1,678,163 [sic] flock to see Pope, not including 35,467 who couldn't see him", and, believe me, nobody wants that sort of headline."

The art of big figures, avers Wheeler, lies in psychology, not statistics. The public like a figure it can admire. It likes millionaires, and million-sellers, and centuries at cricket, so Wheeler's international agency gives them the figures it wants, which involves not only rounding up but rounding down. "In the old days people used to deal with crowds on the Isle of Wight principle -- you know, they'd say that every day the population of the world increased by the number of people who could stand upright on the Isle of Wight, or the rain-forests were being decreased by an area the size of Rutland. This meant nothing. Most people had never been to the Isle of Wight for a start, and even if they had, they only had a vision of lots of Chinese standing in the grounds of the Cowes Yacht Club. And the Rutland comparison was so useless that they were driven to abolish Rutland to get rid of it.

"No, what people want is a few good millions. A hundred million, if possible. One of our inventions was street value, for instance. In the old days they used to say that police had discovered drugs in a quantity large enough to get all of Rutland stoned for a fortnight. *We* started saying that the drugs had a street value of #10 million. Absolutely meaningless, but people understand it better."

Sometimes they do get the figures spot on. "250,000 flock to see Royal two", was one of his recent headlines, and although the 250,000 was a rounded-up figure, the two was quite correct. in his palatial office he sits surrounded by relics of past headlines - a million-year-old fossil, a #500,000 Manet, a photograph of the Sultan of Brunei's #10,000,000 house

but pride of place goes to a pair of shoes framed on the wall.

"Why the shoes? Because they cost me #39.99. They serve as a reminder of mankind's other great urge, to have stupid odd figures. Strange, isn't it? They want mass demos of exactly half a million, but they also want their gramophone records to go round at thirty-three-and-a-third, forty-five and seventy-eight rpm. We have stayed in business by remembering that below a certain level people want oddity. They don't a rocket costing #299 million and 99p, and they don't want a radio costing exactly #50."

How does he explain the times when the figures clash - when, for example, the organisers of a demo claim 250,000 but the police put it nearer 100,000?

"We provide both sets of figures; the figures the organisers want, and the figures the police want. The public believe both. If we gave the true figure, about 167,890, nobody would believe it because it doesn't sound believable."

John Wheeler's name has never become well-known, as he is a shy figure, but his firm has an annual turnover of #3 million and his eye for the right figure has made him a rich man. His greatest pleasure, however, comes from the people he meets in the counting game.

"Exactly two billion, to be precise." MILES KINGTON writing in The Observer, 3 November 1986 М From: goble@infonaut.com (Clark Goble) You know how dumb the average guy is? Well, by definition, half of them are even dumber than that. -- J.R. "Bob" Dobbs Μ_ From: larryc@teleport.com (Larry Caldwell) Half the population is below median intelligence. Well over half the population is above average. This is due to the fact that there is a limit to human intelligence, but no limit to human stupidity. М From: Kirk Lindberg (kalindberg@mmm.com) Q: What is the definition of a statistician? A: Someone who doesn't have the personality to be an accountant. Μ_ Did you hear about the Statistician that couldn't get laid? He decided a simulation was good enough. М From: rogers@sasuga.Hi.COM (Andrew Rogers) "She was only the statistician's daughter, but she knew all the standard deviations." М From: en4bmhd@bs47c.staffs.ac.uk (Hendrik De Vloed) All probabilities are 50% ... either something happens, or it doesn't! From: brc2@Lehigh.EDU Correction... My doctor told me I only have a 50% chance of making it- but he said there's only a 15% of even that. М From: ahilditc@awadi.com.au & ts@uwasa.fi (Timo Salmi) & Juhani Heino <juhani.heino@hel.fi> A:I'll bet that 99% of people who read the question don't! T:That's a mean thing to say. J:Yes, it was. I guess that person is too regressed. As a matter of fact, I'm 75.4 % sure about that. T:Incidentally, did you know that using non-linear regression in research is currently out of line. М From: jlevine@rd.hydro.on.ca (Jody Levine) 80% of all statistics quoted to prove a point are made up on the spot. М

From: Helmut.Richter@lrz-muenchen.de (Helmut Richter) Did you know that 87.166253% of all statistics claim a precision of results that is not justified by the method employed? M

From: bchrist@mercury.interpath.net (Brian Sherwood Christiansen) According to recent surveys, 51% of the people are in the majority. M

From: The Lone Locust of The Apocalypse <petdoc@osuunx.ucc.okstate.edu> A new government 10 year survey cost 3,000,000,000 revealed that 3/4 of the people in America make up 75% of the population. M

From: troyt@sun.com (troy trimble) According to a recent survey, 33 of the people say they participate in surveys.

According to a recent survey, a number of people said they despise participating in surveys. Accurate figures are not yet available as several of the surveyors remain in intensive care and are not available for comment. A recent survey of their boss indicated that 100% of bosses have openings available for future surveyors.

From: NDGP21A@prodigy.com (Tony Colle)
Your question reminds me of when I was in undergraduate school in a
large,
unnamed State University Center along the Southern Tier of New York
State, somewhere between Syracuse and Scranton.

We took a survey about apathy on campus. Of the surveys sent out, only 2% were returned and the overwhelming majority of the respondents said they didn't care if there was apathy on campus. M

From: Sunita Saini <ez017842@peseta.ucdavis.edu>

A stats major was completely hung over the day of his final exam. It was a True/False test, so he decided to flip a coin for the answers. The stats professor watched the student the entire two hours as he was flipping the coin...writing the answer...flipping the coin...writing the answer. At the end of the two hours, everyone else had left the final except for the one student. The professor walks up to his desk and interrupts the student, saying:

"Listen, I have seen that you did not study for this statistics test, you didn't even open the exam. If you are just flipping a coin for your answer, what is taking you so long?

The student replies bitterly (as he is still flipping the coin):

" Shhh! I am checking my answers!" M

Μ_

From: quee0076@sable.ox.ac.uk (Marky Mark) There was this statistics student who, when driving his car, would always accelerate hard before coming to any junction, whizz straight over it ,

then slow down again once he'd got over it. One day, he took a passenger, who was understandably unnerved by his driving style, and asked him why he went so fast over junctions. The statistics student replied, "Well, statistically speaking, you are far more likely to have an accident at a junction, so I just make sure that I spend less time there." Μ_ From: pclarke@waite.adelaide.edu.au (Philip Clarke) A famous statistician would never travel by airplane, because he had studied air travel and estimated the probability of there being a bomb on any given flight was 1 in a million, and he was not prepared to accept these odds. One day a colleague met him at a conference far from home. "How did you get here, by train?" "No, I flew" "What about your the possibiltiy of a bomb?" Well, I began thinking that if the odds of one bomb are 1:million, then the odds of TWO bombs are (1/1,000,000) x (1/1,000,000). This is a very, very small probability, which I can accept. So, now I bring my own bomb along!" Μ_ From: pclarke@waite.adelaide.edu.au (Philip Clarke) The average Australian has one testical and one breast and less that two legs! М From: adam@crl.com (Stuart A. Bronstein) The average statistician is just plain mean. М From: mikehf@ix.netcom.com (Mike Forslof) I always find that statistics are hard to swallow and impossible to digest. The only one I can ever remember is that if all the people who go to sleep in church were laid end to end they would be a lot more comfortable. - Mrs. Robert A. Taft From the _Concise Columbia Dictionary of Quotations_. No source for Mrs. Taft's statement is given, so I assume it was made in conversation: М

From: mcrsoft@aimnet.com (Barry Fetter)
IDEA SAVING BANK (http://www.hooked.net/users/mcrsoft/mcr_home.html)
Statistics are like alienists - they will testify for either side.

- Fiorello H. La Guardia (1882-1947) Fate laughs at probabilities. - Bulwer-Lytton (1803-1873) Eugene Aram Torture the data long enough and they will confess to anything. Μ From: Madeleine and/or Frederick <burkds@intersource.com> Just try explaining the value of statistical summaries to the widow of the man who drowned crossing a stream with an average depth of four feet. Anonymous Figures won't lie, but liars can figure. Fletcher Knebel (1911-) American author and journalist There are no facts, only interpretations. Frederick Nietzsche (1844-1900) German philosopher How far would have Moses gone if he had taken a poll in Egypt? Harry S. Truman (1884-1972) 33rd president of the United States. There are two kinds of statistics, the kind you look up, and the kind you make up. Rex Stout (1886-1975) American mystery writer. A single death is a tragedy, a million deaths is a statistic. Joseph Stalin (1879-1953) The weaker the data available upon which to base one's conclusion, the greater the precision which should be quoted in order to give the data authenticity. Norman R. Augustine (1935-) American author and chairman, Martin Marietta Corporation. A theory has only the alternative of being wrong. A model has a third possibility - it might be right but irrelevant. Manfred Eigen (1927-) German Chemist Μ_ From: steve@minerva.u-net.com (Steve B) I am one of the unpraised, unrewarded millions without whom statistics would be a bankrupt science. It is we who are born, who marry, who die, in constant ratio.

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- Logan Pearsall Smith
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Statistics are like a bikini - what they reveal is suggestive, but
what they conceal is vital.
        - Aaron Levenstein
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Statistics in the hands of an engineer are like a lamppost to a drunk--they're used more for support than illumination. -- Bill Sangster, Dean of Engineering, Georgia Tech From: kriman@acsu.buffalo.edu (Alfred M. Kriman) With all due respect to the dean, the ``more for support than illumination'' lampost line was used by the poet, classicist, and hilarious curmudgeon A. E. Housman. He used it in the introduction to the first volume of his critical edition of Manilius, published around 1910 +/- 10. (He used the metaphor to characterize the work of earlier editors.) Peter Stewart Lively (pslively@mit.edu) From: "He uses statistics as a drunken man uses lamp-posts' for support rather than illumination." -Andrew Lang (1844-1912) Μ_ From: Lucas Aranha <lcosta@ime.usp.br> The statistics on sanity are that one out of every four Americans is suffering from some form of mental illness. Think of your three best friends. If they're okay, then it's you. Rita Mae Brown Statistics show that we lose more fools on this day than on all other days of the year put together. This proves, by the numbers left in stock, that one Fourth of July per year is now inadequate, the country has grown so. Mark Twain (1835-1910) Facts are stubborn, but statistics are more pliable. Mark Twain (1835-1910) Statistics show that of those who contract the habit of eating, very few survive. Wallace Irwin (1875-1959) The government [is] extremely fond of amassing great quantities of statistics. These are raised to the nth degree, the cube roots are

extracted, and the results are arranged into elaborate and impressive displays. What must be kept ever in mind, however, is that in every case, the figures are first put down by a village watchman, and he puts down anything he damn well pleases. Sir Josiah Stamp

Like other occult techniques of divination, the statistical method has a private jargon deliberately contrived to obscure its methods from non-practitioners. G. O. Ashley

UNKNOWN Sources ::

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- -- Numbers are like people; torture them enough and they'll tell you anything.
- -- 50% of the citizens of this country have a below average understanding of statistics.
- -- Statistical Analysis: Mysterious, sometimes bizarre, manipulations performed upon the collected data of an experiment in order to obscure the fact that the results have no generalizable meaning for humanity. Commonly, computers are used, lending an additional aura of unreality to the proceedings.

Μ_

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From: kovarik@mcmail.cis.McMaster.CA (Zdislav V. Kovarik) A researcher tried jalapenos on a stomach ulcer patient, and the ulcer went away. The researcher published an article "Jalapenos Cure Stomach Ulcers." The next patient subjected to the same treatment died. The researcher published a follow-up article "More Detailed Study Reveals That Jalapenos Cure 50% Of Stomach Ulcers".

From: kovarik@mcmail.cis.McMaster.CA (Zdislav V. Kovarik) At a conference, I asked a professor who chaired a statistics session about the upcoming topic. He told me that he was actually not a statistician, he just happened to chair the session. "So at least you're unbiased," I unsuspectingly remarked. M

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From: adh@cx.dnv.no (Arne D Halvorsen)
Actual fact: A Norwegian professor of statistics bears the name of
Just Gjessing. Very close to being very fitting....
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A shoeseller meets a mathematician and complains that he does not know what size shoes to buy. "No problem," says the mathematician, "there is a simple equation for that," and he shows him the Gaussian normal distribution. The shoeseller stares some time at het equation and asks, "What is that symbol?" "That is the Greek letter pi." "What is pi?" "That is the ratio between the circumference and the diameter of a circle." Upon this the shoeseller cries out: "What does a circle have to do with shoes?!"

From: "Ken Stevenson" <kenstevo@zip.com.au>

A student's lament If I had only one day left to live, I would live it in my statistics class: it would seem so much longer. Allegedly (urban myth?) found scrawled in the inside cover of a statistics textbook. Quoted in Sanders, DH; Murph, AF; Eng, RJ Statistics - A Fresh Approach, McGraw Hill, New York, 1980, p xv М From: bruce.whiteNOSPAM@usa.net (Bruce White) The rest of these are jokes I wrote and delivered to a group of statisticians. I don't ask for cash--credit is fine. ;-) (Caveat--frequently, my aim in telling a joke is not laughter, but groans.) _____ What do you call a statistician on drugs? A high flyer. _____ How many statisticians does it take to change a lightbulb? 1-3, alpha = .05 _____ There is no truth to the allegation that statisticians are mean. They are just your standard normal deviates. Did you hear about the statistician who invented a device to measure the weight of trees? It's referred to as the log scale. _____ Did you hear about the statistician who took the Dale Carnegie course? He improved his confidence from .95 to .99. _____ Why don't statisticians like to model new clothes? Lack of fit. Did you hear about the statistician who was thrown in jail? He now has zero degrees of freedom. _____ Statisticians must stay away from children's toys because they regress so easily. _____ -----The only time a pie chart is appropriate is at a baker's convention. Never show a bar chart at an AA meeting. _____ The last few available graves in a cemetary are called residual plots. _____ Old statisticians never die, they just undergo a transformation. _____ How do you tell one bathroom full of statisticians from another? Check the p-value. _____

Did you hear about the statistician who made a career change and became an surgeon specializing in ob/gyn? His specialty was histerectograms. _____ The most important statistic for car manufacturers is autocorrelation. _____ Some statisticians don't drink because they are t-test totalers. Others drink the hard stuff as evidenced by the proliferation of box-and-whiskey plots. _____ Underwater ship builders are concerned with sub-optimization. _____ The Lipton Company is big on statistics--especially t-tests. _____ A husband and wife, both statisticians, had the misfortune of passing awav within a day of one another. They had always planned to be buried side by side. Unfortunately, the funeral home got them mixed up with another husband and wife with similar wishes. This became known as the first case of split-plot confounding. + =1.3 MATHEMATICIANS

Μ____

From: Dmitry Cheryasov <dch@engacad.samara.su> A question is asked to CS department students. The question is: What is the value of `2*2'?

(1st year student): says `4', without any thinking.

(2nd year student): says `4, exactly', after a moment of thinking.

(3rd year student): takes a pocket calculator, presses some buttons and says `4'.

(4th year student): writes a program of about 100 lines, debugs it, runs it and says: `4.0e+00'.

(5th year student): designs a new programming language that perfectly fits for solving such problems, implemets it, writes a program, and answers: `It says "4", but I doubt if I really fixed that ugly bug last night...'

(student just before the final graduation exams): cries in desperation: `Why, why do you think I must know all that bloody constants by heart?!' M_____

From: schaker@scubed.scubed.com (Stefan Chakerian)

A mathematician is showing a new proof he came up with to a large group of peers. After he's gone through most of it, one of the mathematicians says,

"Wait! That's not true. I have a counter-example!" He replies, "That's okay. I have two proofs." М From: wthedford@aol.com (Wthedford) One of my professors who primarially taught grad students was teaching factorials to a freshman algebra class. He was overheard saying, with great frustration in his voice, "My god class, its just a restriction of the gamma function." М Q: What does a mathematicians answer, when you ask him/her if (s)he wants the window open or closed? A: Yes. Μ_ From: "Pierre Abbat" <phma@trellis.net> Le math, maticien est all, au lit pour faire des sommes. Μ_ From: Dave Boll <dboll@mail.omn.com> I was email-chatting with a friend, and he made a comment on my .sig that really cracked me up. I included it below so that you can be cracked up also. _ _ _ Home page: http://www.frii.com/~dboll/ Stop by for a visit! Lots of stuff on Recreational Mathematics, Amateur Astronomy, etc. >Yeah, I used to think it was just recreational... then I started >doin' it during the week... you know, simple stuff: differentiation, >kinematics. Then I got into integration by parts... I started doin' >it every night: path integrals, holomorphic functions. Now I'm >on diophantine equations and sinking deeper into transfinite >analysis. Don't let them tell you it's just recreational. >Just say {}. ROTFL! Fortunately, I can quit any time I want. Μ___ From: Bert Tagge <tagge@erols.com> I will never forget the day in statistics when, the Professor, who had all of the traditional looks of one (white hair, tweed jacket with leather elbow patches) was writing on the board X sub i Y sub j; when one of the students asked, "Don't you mean X sub j Y sub i?" The Prof looked at the board a bit, then erased the marks with his sleeve, and said; "yes, you are Quite often I will say one thing, write another, and be correct. thinking a third. What I am thinking is correct, and you will be tested on."

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a third. What I am thinking is correct, and you will be tested on.'
Every
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jaw in the classroom hit the floor! $\ensuremath{\mathsf{M}}$

From: Hugh Robinson <hmr@coventry.ac.uk> Okay, here's mine. I am told that it's true, but... A certain well-known pure mathematician had a wife who, while intelligent, was not into mathematics. However, by continued practice, she learnt to distinguish between the conversations of algebraists and analysts. So when he had guests to dinner who were talking about mathematics, if they were analysts, she would introduce at a suitable pause in the conversation: "But what happens at the boundary?" Whereas, if they were algebraists, she would say: "But do the roots lie in the field?" By this means she was always able to impress his visitors by her knowledge of mathematics. (No, don't write and ask for the punchline. That's all.) M____ From: stephen@sp2n17-t.missouri.edu (Stephen Montgomery-Smith) Reading the last joke made me think of something: My wife was at one of the math parties, getting rather bored. A friend of mind explained to her that there was one conversation line that always worked with professors. Just say "Standards are falling." Another professor overheard this, and turned around to say that this was absolutely true, and we spent the next half hour complaining about how standards are falling. Μ Three men are in a hot-air balloon. Soon, they find themselves lost

Three men are in a not-air balloon. Soon, they find themselves lost in a canyon somewhere. One of the three men says, "I've got an idea. We can call for help in this canyon and the echo will carry our voices far."

So he leans over the basket and yells out, "Helllloooooo! Where are we?" (They hear the echo several times.)

15 minutes later, they hear this echoing voice: "Helllloooooo! You're lost!!"

One of the men says, "That must have been a mathematician."

Puzzled, one of the other men asks, "Why do you say that?"

The reply: "For three reasons. (1) he took a long time to answer, (2) he was absolutely correct, and (3) his answer was absolutely useless." M

A small, 14-seat plane is circling for a landing in Atlanta. It's totally fogged in, zero visibility, and suddenly there's a small electrical fire in the cockpit which disables all of the instruments and the radio. The pilot continues circling, totally lost, when suddenly he finds himself flying next to a tall office building.

He rolls down the window (this particular airplane happens to have roll-down windows) and yells to a person inside the building, "Where are we?"

The person responds "In an airplane!"

The pilot then banks sharply to the right, circles twice, and makes a perfect landing at Atlanta International.

As the passengers emerge, shaken but unhurt, one of them says to the pilot, "I'm certainly glad you were able to land safely, but I don't understand how the response you got was any use."

"Simple," responded the pilot. "I got an answer that was completely accurate and totally irrelevant to my problem, so I knew it had to be the IBM building." $\ensuremath{\underline{M}}$

Mathematicians are like Frenchmen: whatever you say to them they translate into their own language and forthwith it is something entirely different. (Johann Wolfgang von Goethe) M

Old mathematicians never die; they just lose some of their functions. From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just) OLD MATH TEACHERS never die, they just reduce to lowest terms OLD MATHEMATICIANS never die, they just disintegrate OLD MATHEMATICIANS never die, they just go off on a tangent OLD NUMERICAL ANALYSTS never die, they just get disarrayed OLD TRIGONOMETRY TEACHERS never die, they just lose their identities From: jeroen@orthos.math.rulimburg.nl (Jeroen vi Rutten) Old mathematicians never die, they tend to zero. From: pml <plavietes@nh.ultranet.com> Old mathematicians never die...they just become angles. From: Dena Schanzer <schanzer@compmore.net> I have always been told that old statisticians do not fade away, but rather are "broken down by age and sex". From: The Professor (franbo@globalnet.co.uk) Old mathematicians never die, they just lose their functions. М

From: banghar4@studentb.msu.edu (Rick Banghart)
Two math professors are in a restaurant. One argues that the average
person
does not know any math beyond high school. The other argues that the
average person knows some more advanced math. Just then, the first one
gets
up to use the rest room. The second professor calls over his waitress and
says, "When you bring our food, I'm going to ask you a mathematical
question. I want you to answer, 'One third x cubed.' Can you do that?"
The waitress says, "I don't know if I can remember that. One thurr...
um..."
 "One third x cubed," says the prof.
 "One thir dex cue?," asks the waitress.
 "One"
 "One"

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"Third"
   "Third"
   "X"
   "X"
   "Cubed"
   "Cubed"
   "One third X cubed"
   "One third X cubed"
The waitress leaves, and the other professor comes back. They resume
their
conversation until a few minutes later when the waitress brings their
food.
The professor says to the waitress, "Say, do you mind if I ask you
something?"
   "Not at all"
   "Can you tell me what the integral of x squared dx is?"
   The waitress pauses, then says, "One third x cubed."
   As she walks away, she stops, turns, and adds, "Plus a constant!"
Μ_
From: Oscar Lanzi III (o13@webtv.net)
Two mathematicians walk into a restaurant for lunch. One challenges the
other to a wager, loser pays fthe tab:
Said the challenger: "The waitperson will not know the correct formula
for (a+b)^2."
"You're on!" was the reply.
They place their order and the waitpersoin is asked the formula for
(a+b)<sup>2</sup>. The waitperson replied:
"Obviously, (a+b)^2 = a^2 + b^2."
"Provided, of course, that a and b are anticommutative!"
Μ____
How many mathematicians does it take to screw in a lightbulb?
 One, who gives it to six Californians, thereby reducing it to an
   earlier riddle.
   -- from a button I bought at Nancy Lebowitz's table at Boskone
From: rrcraig@eos.ncsu.edu (Ralph Ray Craig)
Q: How many numerical analysts does it take to screw in a light bulb?
A: 0.9973 after the first three iterations.
Q: How many topologists does it take to change a light bulb?
    It really doesn't matter, since they'd rather knot.
A:
From:BRIAN6@VAXC.MDX.AC.UK (canonical lightbulb collection)
Q: How many mathematicians does it take to screw in a lightbulb?
A: None. It's left to the reader as an exercise.
A: Just one, once you've managed to present the problem in terms he/she
    is familiar with.
    In earlier work, Wiener [1] has shown that one mathematician
    can change a light bulb.
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If k mathematicians can change a light bulb, and if one more simply watches them do it, then k+1 mathematicians will have changed the light bulb. Therefore, by induction, for all n in the positive integers, n mathematicians can change a light bulb. Bibliography: [1] Weiner, Matthew P., <11485@ucbvax>, "Re: YALBJ", 1986 Q: How many statisticians does it take to change a lightbulb ? A: This should be determined using a nonparametric procedure, since statisticians are NOT NORMAL. Walt Pirie to hold the bulb and one psychologist, one economist, A: one sociologist and one anthroplogist to pull away the ladder. One -- plus or minus three (small sample size). A: (Notes: Someone has been asking this as a bonus question on statistics exam papers for quite a while. Judging from some of his own students' exam answers, it depends on whether the lightbulb is negatively or positively screwed.) Q: How many light bulbs does it take to change a light bulb? A: One, if it knows its own Goedel number. (Has to do with Goedel's incompleteness theorem) М "A mathematician is a device for turning coffee into theorems" -- P. Erdos (Hungarian mathematician, 1913-1996) М From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection rgep@pmms.cam.ac.uk (Richard Pinch), jeffs@math.bu.edu (Jeff Suzuki) Joao Batista(fbatista@cc.fc.ul.pt), wft@math.canterbury.ac.nz (Bill Taylor), Andrew Smith <A.J.Smith@reading.ac.uk>, The Professor (franbo@globalnet.co.uk) Algebraists do it by symbolic manipulation. Algebraic geometers do it for variety. Algebraic geometers do it on the cubic three-fold. Algebraists do it in a ring. Algebraists do it in fields. Algebraists do it in groups. Algebraists do it with multiple roots. Analysts do it continuously. Analysts do it smoothly. Analytic number theorists do it in the critical strip. Analytic number theorists do it on the critical line. Applied mathematicians do it by computer simulation. Banach spacers do it completely. Bayesians do it with improper priors. Catastrophe theorists do it falling off part of a sheet. Chaoticians do it with sensitive dependence Class field theorists do it by capitulation. Classical geometers do it on the Euler line.

Classical geometers do it on the nine-point circle. Combinatorialists do it discretely. Commutative algebraists do it regularly. Complex analysts do it between the sheets Complex analysts do it under a universal cover. Constructivists do it without excluding the middle. Decision theorists do it optimally. Differential analysts do it in a degenerate case. Functional analysts do it with compact support. Functional analysts do it with degenerate colonels. Galois theorists do it in a field. Game theorists do it by dominance or saddle points. Geometers do it with involutions. Graph theorists do it discretely. Graph theorists do it in four colours. Group theorists do it simply. Group theorists do it with the Monster. Hilbert spacers do it orthogonally. Large cardinals do it inaccessibly. Linear programmers do it with nearest neighbors. Logicians do it by choice. Logicians do it consistently and completely. Logicians do it incompletely or inconsistently. Logicians do it with Jensen's device. (Logicians do it) or [not (logicians do it)]. Mathematicians do it associatively. Mathematicians do it by numbers. Mathematicians do it commutatively. Mathematicians do it constantly. Mathematicians do it continuously. Mathematicians do it discretely. Mathematicians do it exponentially. Mathematicians do it forever if they can do one and can do one more. Mathematicians do it functionally. Mathematicians do it homologically. Mathematicians do it in fields. Mathematicians do it in groups. Mathematicians do it in imaginary planes. Mathematicians do it in n dimensions. Mathematicians do it in numbers. Mathematicians do it in theory. Mathematicians do it on smooth contours. Mathematicians do it over and under the curves. Mathematicians do it parallel and perpendicular. Mathematicians do it partially. Mathematicians do it rationally. Mathematicians do it reflexively. Mathematicians do it symmetrically. Mathematicians do it to prove themselves. Mathematicians do it to their limits. Mathematicians do it totally. Mathematicians do it transcendentally. Mathematicians do it transitively. Mathematicians do it variably. Mathematicians do it with a Minkowski sausage. Mathematicians do it with imaginary parts. Mathematicians do it with linear pairs.

Mathematicians do it with Nobel's wife. Mathematicians do it with odd functions. Mathematicians do it with prime roots. Mathematicians do it with relations. Mathematicians do it with rings. Mathematicians do it with their real parts. Mathematicians do it without limit. Mathematicians do over an open unmeasurable interval. Mathematicians have to prove they did it. Mathmaticians do it ad infinitum. Mathematicians do it at the right angle. Measure theorists do it almost everywhere. Measure theorists do it almost nowhere. Moebius always does it on the same side. Number theorists do it perfectly. Number theorists do it rationally. Number theorists do it in the critical strip. Pure mathematicians do it rigorously. Real analysts do it almost everywhere Real analysts do it uniformly. Ring theorists do it non-commutatively. Set theorists do it in a morass. Set theorists do it with cardinals. Topologists do it in multiply connected domains Topologists do it on rubber sheets. Topos theorists do it pointlessly. М

A mathematician is a person who says that, when 3 people are supposed to be in a room but 5 came out, 2 have to go in so the room gets empty... M

My geometry teacher was sometimes acute, and sometimes obtuse, but always, he was right. MP_____

From: lyon@netcom.com (Lyman Lyon) Physics professor is walking across campus, runs into Math Professor. Physics professor has been doing an experiment, and has worked out an emphirical equation that seems to explain his data, and asks the Math professor to look at it.

A week later, they meet again, and the Math professor says the equation is invalid. By then, the Physics professor has used his equation to predict the results of further experiments, and he is getting excellent results, so he askes the Math professor to look again.

Another week goes by, and they meet once more. The Math professor tells the Physics professor the equation does work, "But only in the trivial case where the numbers are real and positive." ${\tt M}$

From: gw@molly.informatik.Uni-Koeln.DE (Georg Wambach) What is the difference between an applied mathematician and a pure mathematician? Suppose a mathematician parks his car, locks it with his key and walks away. After walking about 50 yards the mathematician realizes that he has dropped his key somewhere along the way. What does he do? If he is an applied mathematician he walks back to the car along the path he has previously traveled looking for his key. If he is a pure mathematician he walks to the other end of the parking lot where there is better light and looks for his key there.

I told this joke to my brother (he is a "pure"). He answers: "But we have not dropped our keys!" Hence, I suggest a slight modification:

Suppose a _tax_payer_ parks his car, locks it with his key and walks away. After walking about 50 yards the tax payer realizes that he has dropped his key somewhere along the way. He asked a mathematician to help him. What does the mathematician do? (...)

From: "John Derrico" <derrico@pixel.Kodak.COM> The famous professor of mathematics was in town for a conference. Since he had some free time, he was approached to give a seminar for the undergraduate mathematics students at the local college.

After covering several blackboards with densely packed computations and expressions filled with Bessel functions and more, the professor remembered that there were many undergraduate students in the room. Feeling just a twinge of remorse that perhaps he was talking above the heads of some of the students in his audience, he turned around and asked the audience if there were any students who had never seen a Bessel function. The audience was silent for a moment. Finally, one intrepid student raised his hand to admit that he had never seen Bessel functions. The professor nodded with apparent comprehension. Without hesitation, he turned around and pointed at the blackboard, while saying "well, there's one now" and continued his talk. M

From: Steven Sinnott <steveisi@vt.edu> When a mathematician dies, does he get disfigured, dissolved, or disintegrated?

From: ikat@msg.ti.com (KatC)
If mathematicians are neutered, they can't multiply.
M

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Μ

From: seanr@fs-gate.uchicago.edu (Sean Roberts)
If a mathematician writes a fantasy novel, would the pages have imaginary
numbers?
From: jboots@pacifier.com (John Boots)
If Fibonacci wrote the book, they would be numbered 1,1,2,3,5,8,13,21...
M______

From: Mike Banulescu <misu@dartmouth.edu>
Since I'm studying for a math final tomorrow:

do mathematiciens go to the beach looking for a tan?and while on a plane, do they try to figure out its equation?

- wherever they are, mathematicians just can't seem to integrate into the real world...

Μ_

Μ_

М

During an oral examination by the Polish Mathematician M. Kac, a student was asked the behaviour of the Rieman zeta function zeta(s) in s=1. When the student had no idea, Kac gave the hit:"Think of me." The anser came immediately :"Aah, it has a simple pole."

From: Henry Cate's Life collection 3.6 Just to throw in my two cents worth in to the Intuitively Obvious bucket, when I was a math student at Towson State University we were given a final exam that involved proving that two N dimensional matrices were related in a given way. I started with the first matrix and used every theorem that I could remember trying to reach the second, but I got stuck halfway through. Working feverishly on a piece of scrap paper, I started on the second matrix, but couldn't work it back to the first. In a flash of inspiration, I set the two intermediate results equal to each other and copied the second set of equations backwards onto the tail of the first. When I got the paper back, there was a C which was crossed out and replaced by an A, the midpoint of my equations was underlined, with a note saying - At first I doubted that this step was intuitively obvious, but after thinking about it for several hours, I decided that it was. Μ

From: Henry Cate's Life collection 3.6

All right, you asked for it. A (possibly apocryphal) story related to me by a graduate student who had come from a large midwest (Wisconsin?) univ. Seems that one of his classes was taught by the department emeritus Prof who was very old (in his 80's) and sometimes a bit vague, but at other times incredibly sharp. One day in lecture he was explaining something abstruse and paused to look at the board for a moment. Thereupon he wrote down a result and said, eyes twinkling, "And this is intuitively obvious..". Whereupon he smiled, looked out over the class, saw the rows of blank stares, and turned back to the board to contemplate the statement written there. This went on for about a minute, at the end of which time he started to wander, rather deeply in thought, across the stage. This went on for a minute or two, after which the Prof. drifted out into the hall and was heard walking back and forth. People started to, well, look at each other and smile. A scout was sent out who reported the old boy was pacing around and muttering to himself. The class, incredibly, remained reasonably calm.

About five minutes after the scout had returned, there was a happy shout from the hallway, and the again bright-eyed Prof. scuttled back in, pointed to the intuitively obvious result written on the blackboard, turned to the class and said, all aglow, "Yes, yes, it IS intuitively obvious". Same source, different Prof. This one happened to not like students coming in late to the math class he taught..so much so that he would do any of the following to the offender: lock them out, yell at them abusively, throw chalk at them. One day, the Prof. was late. Five minutes went by. Silently, one of the students went down and started passing up to the audience all the chalk pieces and erasers. The Prof. came rushing in at last, gave no excuse, and began to lecture. After about a minute, he needed the chalk, and asked "Has anyone seen the chalk?". The entire class stood up and bombarded him with chalk and erasers. The professor was said never to have abused a student for lateness again....

Μ_

From: mlc@iberia.cca.rockwell.com (Michael Cook, Canonical list of Math
Jokes)

This actually happened about 15 years ago, when -- as a young lecturer -- ${\rm I}$

was asked to give a course on Foundations of Analysis. I was sure at the time that the students already know the subject matter and they will be wasting their time listening to me. I was quite surprised, when I entered

the classroom for the first lecture, to find a room packed with students. I was going to suggest that those who know the subject matter leave the course, so as not to waste time and energy. I therefore asked the following question: "Has any one of you, by chance, read the book of Landau: Foundations of Analysis?"

The class suddenly became very quiet, until a student from the last row said: "I did not read the book, but I saw the movie."

Weeks later we were laughing, trying to imagine to ourselves how a movie on Foundation of Analysis could look like. M

A "small college story" going around here (at least three people have told me this story, each one claiming it was them):

A student, working on a rather long math homework assignment, discovered that one problem was fairly easy to solve, except that it required about three pages of fairly simple proof after the one or two difficult steps. It being rather late at night, he did the difficult steps and left the proof undone, along with a note:

"This proof is left as an exercise for the grader."

Next week, he received his homework back. He noted that several extra pages had been stapled to the back of it. Examining the extra pages, he was surprised to find the entire proof written down step-by step. At the end, in red pen, the grader had written:

"I made a minor math error. Minus 2." M

From: reg@pinet.aip.org (Dr. Richard Glass) While taking a psych. course in college, the teacher had a habit of putting the following questions on an exam: "Ask yourself a question and answer it"

Being a math major, I asked myself "Solve the following differential equation [* equation deleted *] under the following conditions [* conditions deleted *]"

and proceeded to solve it.

М

М

The next day I stopped by the math office to see one of the profs. He told me "Go away, I'm stuck grading your stupid psych. exam".

I got full credit, and the psych prof. never put that question on an exam again.

From: neufeld@aurora.physics.utoronto.ca (Christopher Neufeld) Well, I've got a favorite story from my Math-Phys course in undergrad. I figure the statute of limitations on the marks has expired now, so here goes.

The typical problem, show <expr> is equal to <much simpler expr>. The math was pretty nasty, and half-way through it looked like I'd need a clue to getting to the answer, so I went to the result and tried to work it back to the intermediate result (typical test/homework trick). They didn't meet. I had two expressions which I knew were equal from plugging into the calculator, but I couldn't show it algebraically. So, I used another familiar trick, between the two lines I wrote: ICBS (it can be shown) and stuck it between the two pieces I couldn't connect.

Now, somebody else in the class did the same thing, exactly, and got stuck in exactly the same place. He wrote: TAMO (then a miracle occurs) in the same place.

I got full marks, he lost marks and got a sarcastic comment from the corrector.

"The reason that every major university maintains a department of mathematics is that it is cheaper to do this than to institutionalize all those people." $\ensuremath{\mathsf{M}}$

From: Mike Deeth <mad@ashland.baysat.net>
Why did Cantor get fired from the M&M factory?
He kept throughing away the W's.
On his way out of the building he was heard muttering,
"Doesn't the idiot realize that there are an infinite amount
of w's? Throughing away a few w's won't change the number
of w's that remain. ...Oh!.. Pardon me Mr. Tree. How are
your leaves today?"
M

From: Michael Stueben
Q: How can you tell an extroverted mathematician?
A: He stares at YOUR shoes while talking to you.

++ =1.4 MATHEMATICS POETRY М From: Keith Sullivan (KSullivan@worldnet.att.net) THE MAGIC OF STATISTICS The statistician spends his days, In figuring out the many ways, In which a standard error can, Enclose by bars the average man. And having thus imprisoned him, Perhaps at some researcher's whim, Can with the same chicanery, Enlarge the bars and set him free. Or better yet, within the sample, Locate some points with girth so ample, That if by "choice" they were discarded, Man and hypothesis are safeguarded. Joe Mole <JOEMOLE@USCN.BITNET> Μ____ From: Hugh Janus <Hugh_Janus@HotMail.Dot.Com> The mathematician Von Blecks Derived the equation for sex. He found a good fuck Isn't patience or luck But a function of Y over X. М From PeterW (PeterW@lims.demon.uk) Remember school math(s)? Remember quadratic equations? Right! Read:- 'a2' below as "a squared" 'b2' below as "b squared" etc. If a = b (so I say) [a = b] And we multiply both sides by a Then we'll see that a2 [a2 = ab]When with ab compared Are the same. Remove b2. OK? [a2-b2 = ab-b2]Both sides we will factorize. See? Now each side contains a - b. [(a+b)(a-b) = b(a-b)]We'll divide through by a Minus b and olé a + b = b. Oh whoopee! [a+b = b] But since I said a = bb + b = b you'll agree? [b+b = b]So if b = 1Then this sum I have done [1+1 = 1]Proves that 2 = 1. Q.E.D.

Μ_

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OK, I cribbed them from the collection "Fantasia Mathematica," edited by Clifton Fadiman, recently reprinted I think, which is full of stuff you might be able to use... M_____
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From: Prashant Upadhyaya <pupadhyaya@hss.hns.com>
Here's a limerick ! It's called A complex PJ (Poor Joke)
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Do you want to hear a complex PJ !
Yes ? Ok, P + iJ !
Where is the Joke, do you ask with a start ?
So listen up, it's in the imaginary part !!!
M______
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From: dpbsmith@world.std.com (Daniel P. B. Smith)
And then of course, there's always the cheer:
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Sine! Cosine! Cosine! Sine!
Three point one four one five nine!
Phi! Psi! Omega! Chi!
Cube root of Y cubed equals Y!
        --circulated among nerdish high school students circa 1960
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Μ_

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From: Moshe Zadka <moshez@math.huji.ac.il>
Using only a chalk and a board
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A mathematician once showed That two plus two equals five Just to keep math alive And the audience sure wasn't bored! М From: Ian Ellis <ian@iglou.com> This poem was written by Eve Andersson. There once was a number named pi Who frequently liked to get high. All he did every day Was sit in his room and play With his imaginary friend named i. There once was a number named e Who took way too much LSD. She thought she was great. But that fact we must debate; We know she wasn't greater than 3. There once was a log named Lynn Whose life was devoted to sin. She came from a tree Whose base was shaped like an e. She's the most natural log I've seen. found at http://www.math.tamu.edu/~Jiang.Chuan/projectC.html#1 М From: "Zozo" <nnobandl@csir.co.za> CALCULUS If only I could get to the derivative of you, To navigate your slope just like I used to do, Your sine curve so smooth, so well elevated, Just waiting for me to come and make it integrated. Remember how during our second differentiation, I'd derivate and agitate until I'd reach acceleration? My little pet parabola whom I so much adore, Why can't we have a functional relationship once more? By: Ken Feinstein (kenf1234@hotmail.com) M_ From: chrisman@ucdmath.ucdavis.edu (Mark Chrisman) "Aleph-0 bottles of beer on the wall, Aleph-0 bottles of beer; Take one down, pass it around,

From: Steve Davis <"sdsd@userid"@west.net> Googolplex bottles of beer on the wall,

Aleph-0 bottles of beer on the wall! Aleph-0 bottles of beer on the wall..."

Μ_

Googolplex bottles of beer; Take one down, pass it around, Um...ah....oops. M

From: fc3a501@math.uni-hamburg.de (Hauke Reddmann)
One bottle of beer on the wall
One bottle of beer on the wall
if this bottle MAY fall
there is a half bottle of beer on the wall
(assuming equiprobability, of course)
M

From: fc3a501@GEO.math.uni-hamburg.de (Hauke Reddmann)
One bottle of beer on the wall
If one bottle should fall
there are zero bottles of beer on the wall
Zero bottles of beer on the wall
If one bottle should fall
there are minus one bottles of beer on the wall
Minus one bottles of beer on the wall
If one bottle should fall
there are i bottles of beer on the wall
Whoops? Must be root beer.
M

One and one make two, But if one and one should marry, Isn't it queer-Within a year There's two and one to carry. M

Geometry keeps you in shape. Decimals make a point. Einstein was ahead of his time. Lobachevski was out of line. M

"IF" (School Maths version)

If you can solve a literal equation And rationalise denominator surds, Do grouping factors (with a transformation) And state the factor theorem in words; If you can plot the graph of any function And do a long division (with gaps), Or square binomials without compunction Or work cube roos with logs without mishaps. If you possess a sound and clear-cut notion Of interest sums with P and I unknown; If you can find the speed of trains in motion, Given some lengths and "passing-times" alone; If you can play with R (both big and little) And feel at home with 1 (or h) and Pi, And learn by cancellation how to whittle

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Your fractions down till they delight the eye.
If you can recognise the segment angles
  Both at the centre and circumference;
If you can spot equivalent triangles
  And Friend Pythagoras (his power's immmense);
If you can see that equiangularity
  And congruence are two things and not one,
You may pick up a mark or two in charity
  And, what is more, you may squeeze through, my son.
[Times Educational Supplement 19th July 1947]
М
This poem was written by Jon Saxton (an author of math textbooks).
((12 + 144 + 20 + (3 * 4^{(1/2)})) / 7) + (5 * 11) = 9^{2} + 0
Or for those who have trouble with the poem:
A Dozen, a Gross and a Score,
plus three times the square root of four,
divided by seven,
plus five times eleven,
equals nine squared and not a bit more.
Μ_
        'Tis a favorite project of mine
        A new value of pi to assign.
            I would fix it at 3
            For it's simpler, you see,
        Than 3 point 1 4 1 5 9.
("The Lure of the Limerick" by W.S. Baring-Gould, p.5. Attributed to
Harvey L. Carter).
М
If inside a circle a line
Hits the center and goes spine to spine
And the line's length is "d"
the circumference will be
d times 3.14159
М
If (1+x) (real close to 1)
Is raised to the power of 1
Over x, you will find
Here's the value defined:
2.718281...
Μ_
Here's a limerick I picked up off the net a few years back - looks better
on paper.
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| 2 3 X pi 3_

3_ \/3

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| z dz X cos(-----) = ln (\backslash/e)
                         9
      /
       1
Which, of course, translates to:
Integral z-squared dz
from 1 to the cube root of 3
times the cosine
of three pi over 9
equals log of the cube root of 'e'.
And it's correct, too.
Μ_
Not a joke, but a humorous ditty I heard from some guys in an
engineering fraternity (to the best of my recollection):
I'll do it phonetically:
ee to the ex dee ex,
ee to the why dee why,
sine x, cosine x,
natural log of y,
derivative on the left
derivative on the right
integrate, integrate,
fight! fight! fight!
M
Other cheers:
E to the x dx dy
radical transcendental pi
secant cosine tangent sine
3.14159
2.71828
come on folks let's integrate!!
M
E to the i dx dy
E to y dy
cosine secant log of pi
disintegrate em RPI !!!
Μ_
square root, tangent
hyperbolic sine,
3.14159
e to the x, dy, dx,
sliderule, slipstick, TECH TECH TECH!
Μ_
e to the u, du/dx
e to the x dx
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cosine, secant, tangent, sine,
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3.14159
integral, radical, u dv,
slipstick, slide rule, MIT!
М
E to the X
D-Y, D-X
E to the X
D-X.
Cosine, Secant, Tangent, Sine
3.14159
E-I, Radical, Pi
Fight'em, Fight'em, WPI!
Go Worcester Polytechnic Institute !!!!!!
Μ_
Hiawatha Designs an Experiment
Hiawatha, mighty hunter,
He could shoot ten arrows upward,
Shoot them with such strength and swiftness
That the last had left the bow-string
Ere the first to earth descended.
This was commonly regarded
As a feat of skill and cunning.
Several sarcastic spirits
Pointed out to him, however,
That it might be much more useful
If he sometimes hit the target.
"Why not shoot a little straighter
And employ a smaller sample?"
Hiawatha, who at college
Majored in applied statistics,
Consequently felt entitled
To instruct his fellow man
In any subject whatsoever,
Waxed exceedingly indignant,
Talked about the law of errors,
Talked about truncated normals,
Talked of loss of information,
Talked about his lack of bias,
Pointed out that (in the long run)
Independent observations,
Even though they missed the target,
Had an average point of impact
Very near the spot he aimed at,
With the possible exception
of a set of measure zero.
"This," they said, "was rather doubtful;
Anyway it didn't matter.
What resulted in the long run:
Either he must hit the target
Much more often than at present,
Or himself would have to pay for
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All the arrows he had wasted."

Hiawatha, in a temper, Quoted parts of R. A. Fisher, Quoted Yates and quoted Finney, Quoted reams of Oscar Kempthorne, Quoted Anderson and Bancroft (practically in extenso) Trying to impress upon them That what actually mattered Was to estimate the error.

Several of them admitted: "Such a thing might have its uses; Still," they said, "he would do better If he shot a little straighter."

Hiawatha, to convince them, Organized a shooting contest. Laid out in the proper manner Of designs experimental Recommended in the textbooks, Mainly used for tasting tea (but sometimes used in other cases) Used factorial arrangements And the theory of Galois, Got a nicely balanced layout And successfully confounded Second order interactions.

All the other tribal marksmen, Ignorant benighted creatures Of experimental setups, Used their time of preparation Putting in a lot of practice Merely shooting at the target.

Thus it happened in the contest That their scores were most impressive With one solitary exception. This, I hate to have to say it, Was the score of Hiawatha, Who as usual shot his arrows, Shot them with great strength and swiftness, Managing to be unbiased, Not however with a salvo Managing to hit the target.

"There!" they said to Hiawatha, "That is what we all expected." Hiawatha, nothing daunted, Called for pen and called for paper. But analysis of variance Finally produced the figures Showing beyond all peradventure, Everybody else was biased. And the variance components Did not differ from each other's, Or from Hiawatha's. (This last point it might be mentioned, Would have been much more convincing If he hadn't been compelled to Estimate his own components From experimental plots on Which the values all were missing.)

Still they couldn't understand it, So they couldn't raise objections. (Which is what so often happens with analysis of variance.) All the same his fellow tribesmen, Ignorant benighted heathens, Took away his bow and arrows, Said that though my Hiawatha Was a brilliant statistician, He was useless as a bowman. As for variance components Several of the more outspoken Make primeval observations Hurtful of the finer feelings Even of the statistician.

In a corner of the forest Sits alone my Hiawatha Permanently cogitating On the normal law of errors. Wondering in idle moments If perhaps increased precision Might perhaps be sometimes better Even at the cost of bias, If one could thereby now and then Register upon a target.

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W. E. Mientka, "Professor Leo Moser -- Reflections of a Visit"
American Mathematical Monthly, Vol. 79, Number 6 (June-July, 1972)
M_____
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A mathematician named Klein Thought the Mobius Band was divine. Said he, "If you glue The edges of two You get a weird bottle like mine." M_____

A challenge for many long ages Had baffled the savants and sages. Yet at last came the light: Seems old Fermat was right--To the margin add 200 pages. -- Paul Chernoff

Μ_

There Once Was a Breathy Baboon by Sir Arthur Eddington

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There once was a breathy baboon
     Who always breathed down a bassoon,
        For he said, "It appears
        That in billions of years
     I shall certainly hit on a tune."
Μ
From: blc@solomon.technet.sg (Brian Cohen)
A mathematician named Hall
had a hexahedronical ball.
The cube of its weight,
times his pecker plus eight
is his phonenumber. Give him a call!
M
              Melanie Aultman <afn10453@afn.org>
From:
A mathematician named Bath
Let X equal half that he hath.
  He gave away y
  Then sat down to pi
And choked. What a sad aftermath.
М
From: The Professor (franbo@globalnet.co.uk)
One or two from the archives, but I've included them because they
inspired
the others.
A mathematician called Bird,
Had students who thought him absurd.
 There were cries of derision
 When he said long division,
Meant one into one made a third.
A mathematician called Rumbold,
One day, quite by accident, stumbled
 On the Meaning of Life,
 Then went on, for his wife,
To find out why all her apple pies crumbled.
A mathematician called Strong,
Got all his conclusions quite wrong.
 His value for pi
 Was put much too high,
As the average length of his dong.
A mathematician called Babbit
Put some quite simple sums to a rabbit.
 The rabbit replied
 "I must learn to divide,
With me multiplication's a habit."
A mathematician called called Dick
Tried to measure the size of his prick.
 But he was enraged
 When he found that he gauged
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It, not quite the short side of a brick. A mathematician called Week, Has geometry which is unique. If A equals B And B equals C ABC is his lower left cheek. A mathematician called Day, Who was anxious to have it away, Said the value of X Turned his thinking to sex, X times Y was the price he would pay. A mathematician called Power, Calculated his lust in the shower, But he was nonplussed When the force of his thrust, Stopped the water for over an hour. A mathematician called Hall, Had a hexahedronical ball, And the cube of its weight, Times his pecker, plus eight, Was four fifths of five eighths of sod all. A mathematician called Rubik, Has a very strange area pubic. His balls are both conical, They look very comical, With a penis described best as cubic. A mathematician called Able, Made love to a young girl called Mabel, They hadn't a bed, So made use instead, Of an old mathematical table. A mathematician called Cross, Fell in love with the wife of his boss. The boss's reaction, Suggested subtraction, He said, "Take her away, she's no loss." A mathematician called Hill, Had a wife who was not on the Pill. Though he missed no occasion, To try multiplication, The product produced was just nil. A mathematician called Plumb, Was engrossed in a difficult sum, And even in bed, It stayed in his head Till his wife said, "For God's sake, Plumb, come." A mathematician called Hyde,
Took a busload of girls for a ride. And in preparation, For multiplication, Each girl forced her legs to divide. A mathematician called Dewar Whose maths were incredibly pure, Clamped his penile device In an engineer's vice, Then in microns he measured his skewer. The was a young lady called Hatch Who had a rectangular snatch. So she practised coition With a mathematician, Whose square root was just made to match. Marlene (mlewis@missionx.com) From: Mathematics: of sciences, queen Has more rules than I've ever seen. There are no exceptions, Just number deceptions. On calculators, I am quite keen. --ML {Toastpoint first line -- with help from Croc} Μ_

> FOUNDATIONS OF ARITHMETIC By J.A. Lindon

One day when Mugg the Missing Link was prowling through the woods, In search of wives and mammoth-meat and other usefull goods, Whom should he see, on pushing out from deep arboreal shade, But Ogg, the Paleolithic Man, cross-legged in a glade.

This Ogg had made a neat array of pebbles on the ground, In number they were twenty-one, the most that could be found, And Ogg, with one red-hairy hand pressed to his bony brow, Was staring at hese pebbles like a ruminating cow.

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Thought Mugg - for he was Primitive - I should be very dull To lose this opportunity of busting in his skull; My club weighs half a hundredweigh, he doesn't wear a hat (And here he wondered) Yes, but what the devil is he at?

For Ogg was touching pebbles and then prodding at his digits, Until the weirdness of it all afflicted Mugg with fidgets: "Invented any goodish wheels just recently?" he hollered, And doubled up in merriments, his face raw-beefy coloured.

Ogg looked at him in pity, then he drummed upon his chest: "I've don a Think!" he bellowed "Monkey Mugg. I've done a think! And I would write it down, but no one's yet invented ink." Mugg moved a little closer, and his eyes and mouth were round, And stared in trepidation at those pebbles on the ground. Ogg pointed with a nailed red-hairy sausage at the rows And said, "Three people's hand-plus-two is hand-plus-feet-plus-nose."

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0		0		0									
0		0		0									

"And this is hand-plus-two of people's three-for-each-by-name, So three times hand-plus-two and hand-plus-to time three's the same!" Mugg scratched his matted hairy head, not knowing what to say. Said Ogg, "It's all made clear by this rectangular array."

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									0	0	0
0	0	0	0	0	0	0			0	0	0
0	0	0	0	0	0	0	:	=	0	0	0
0	0	0	0	0	0	0			0	0	0
									0	0	0
									0	0	0

"Three rows of hand-plus-two and hand-plus-two short rows of three are just the same according to which way you look, you see? In brief, a tripe heptad is the same as seven trebles, And may quite possibly be true of other things than pebbles."

Mugg viewed it from all angles, then he gave a raucous belch And trod on a Batrachian that perished with a sqelch. He growled, "I do not understand these arithmetic quirks, But maybe we should try to discover if it works."

So home they went to get their wives and drag them by the hair, For Mugg had feet-plus-hand-plus-four, while Ogg had just a pair; But what with all their screeching and their running every way, At first they would not form a neat rectangular array.

So Ogg he then positioned each by holding of her down While Mugg with mighty club in hand, just dinted in her crown; And when they had them all in place, like pebbles, they could see That three times hand-plus-two in wives was hand-plus-two times three!

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Then Ogg he roared in high delight, cartwheeling to and fro (Carts had not been invented, but he did it just to show!), And Mugg he grinned a shaggy grin and slapped a hairy thigh And said, "It's true, as sure as Pterodactyls learned to fly!" And then they feasted on their wives in unuxorious zest, Exept for one whose skull was rather thicker than the rest, And she was sent to dig a pit and bury every bone, While Mugg and Ogg went off to find a flat unsullied stone. Then Ogg he sharpened up a flint and scratched upon the rock: First Arithmetic Theorem - by Ogg the son of Mok. He drew his little diagram, and proved, with QED, That three times hand-plus-two of x is hand-plus-two times three. But Mugg the Missing Link grew bored, and left him there alone, Still scratching with his silly flint upon his silly stone; And belching, plunged back in the woods on feet toe's simple fives, In search of wives and mammoth-meat, particularly wives! М Each wive of Fibonacci, Eating nothing that wasn't starchy, Weighted as much as the two before her. His fifth was some signora! - J.A. Lindon М Hues Are what mathematicians use (While hungry patches gobble 'em) For the 4-colour problem. - J.A. Lindon 'A Clerihew' М The method of Diophantus May cease to enchant us After a life spent trying to gear 'em To Fermat's Last theorem. - J.A. Lindon 'A Clerihew' M Points Have no parts or joints How then can they combine To form a line? - J.A. Lindon М THE KISS PRECISE For pairs of lips to kiss maybe Involves no trigonometry. 'T is not so when for circles kiss Each one the other three. To bring this off the four must be: As three in one or one in three. If one in three, beyond a doubt Each gets three kisses from without. If three in one, then is that one Thrice kissed internally.

Four circles to the kissing come. The smaller are the benter. The bend is just the inverse of The distance form the center. Though their intrigue left Euclid dumb There's now no need for rule of thumb. Since zero's bend's a dead straight line And concave bends have minus sign, The sum of the squares of all four bends Is half the square of their sum.

To spy out spherical affairs An oscular surveyor Might find the task laborious, And now besides the pair of pairs A fifth spere in the kissing shares. Yet, signs and zero as before, For each to kiss the other four The quare of the sum of all five bends Is thrice the sum of their squares.

- Frederick Soddy

And let us not confine our cares To simple circles, planes and spheres, But rise to hyper flats and bends Where kissing multiple appears. In n-ic space the kissing pairs Are hyperspheres, and Truth declares-As n + 2 such osculate Each with an n + 1-fold mate. The square of the sum of all the bends Is n times the sum of their squares. - Thorold Gosset

M

A graduate student at Trinity Computed the square of infinity. But it gave him the fidgets To put down the digits, So he dropped math and took up divinity. M______ Pi vs e

Pi goes on and on and on ... And e is just as cursed. I wonder: Which is larger When their digits are reversed? M

A rose-red city half as old as Time. One billion years ago the city's age Was just two-fifths of what Time's age will be A billion years from now. Can you compute How old the crimson city is today? M

A burleycue dancer, a pip Named Virginia, could peel in a zip; But she read science fiction and died of constriction Attempting a Moebius strip. - Cyril Kornbluth М A mathematician confided That a Moebius strip is one-sided. You' get quite a laugh If you cut it in half, For it stay in one piece when divided. Μ From: mini-AIR 1995-07-04 Inevitably, Limericks We hesitantly announce a new research project: The AIRhead Science Limerick Compendium. The first entry is from reader Peter Olsen. Olsen used as it the entire answer to a final examination question: "Describe what you have learned in this course." In Arctic and Tropical Climes, The Integers, addition, and times, Taken (mod p) will yield, A full finite field, As p ranges over the primes. М From: 'PIGDOG' Eric Struckhoff <ericcs@u.washington.edu> If n in a Taylor series goes 2 to 11 by threes for x = 1convergence is done 'twixt zero and two, I believe. М From: mcripps@computan.on.ca (Mervyn Cripps) I used to think math was no fun, 'Cause I couldn't see how it was done. Now Euler's my hero, for I now see why 0 i^(pi)= e + 1. M From: Stephen Nesbitt <sci-smn@jcu.edu.au> I was wondering what would happen if a group of uni mathematics dropouts formed a death metal band. I came up with a list of possible song tracks for their debut CD. (remember to read the titles in a typical DEATH vocal). Band Name: REGRESSION CD Title: Linearly Separable 1. Derivatives of Death 2. Transcendental Terrors 3. Sin 4. Normalisation of Murder 5. Exponential Tendencies 6. Square Bloody Roots

Abel, Niels H. (1802 - 1829) [Norwegian Mathematician] [About Gauss' mathematical writing style] He is like the fox, who effaces his tracks in the sand with his tail. In G. F. Simmons, Calculus Gems, New York: Mcgraw Hill, Inc., 1992, p. 177. [Karl F. Gauss (1777-1855), German mathematician] М From: http://math.furman.edu/~mwoodard/mquot.html D'Alembert, Jean Le Rond (1717-1783) [French mathematician and encyclopedist] The mathematician may be compared to a designer of garments, who is utterly oblivious of the creatures whom his garments may fit. To be sure, his art originated in the necessity for clothing such creatures, but this was long ago; to this day a shape will occasionally appear which will fit into the garment as if the garment had been made for it. Then there is no end of surprise and delight. Μ From: rww <richardw+@pitt.edu> "Like other occult techniques of divination, the statistical method has a private jargon deliberately contrived to obscure its methods from non-practitioners." --G. O. Ashley М "The good Christian should beware of mathematicians and all those who make empty prophecies. The danger already exists that mathematicians have made a covenant with the devil to darken the spirit and confine man in the bonds of Hell." -- St. Augustine (354-430) P.S. Augustine did really say that, but in his time there was no difference between mathematicans and astrologists. Astrologists told the future, which was diabolic.

М

If I am given a formula, and I am ignorant of its meaning, it cannot teach me anything, but if I already know it what does the formula teach me? - St. Augustine De Magistro ch X, 23.

Μ_

```
The cowboys have a way of trussing up a steer or a pugnacious bronce
which
fixes the brute so that it can neither move nor think. This is the
hog-tie, and it is what Euclid did to geometry. -- Eric Temple Bell
Μ_
From:
              scotth9999@aol.com (ScottH9999)
"Our paper became a monograph. When we had completed the details, we
rewrote everything so that no one could tell how we came upon our ideas
or
why. This is the standard in mathematics." --David Berlinski, "Black
Mischief" (1988).
М
A mathematician's reputation rests on the number of bad proofs he has
given. - A.S. Besicovich, A Mathematicians miscellany, 1953
Μ_
"A person who can, within a year, solve x^2 - 92y^2 = 1 is a
mathematician."
   -- Brahmagupta
Μ_
From: http://math.furman.edu/~mwoodard/mquot.html
Copernicus, Nicholaus (1473-1543)
Mathematics is written for mathematicians.
М
From: ph2008@mail.bris.ac.uk (CJ. Bradfield)philosophy:
"A mathematician is a blind man in a dark room looking for a black cat
which isn't there" - Charles R. Darwin (1809-1182) [English biologist]
М
From: "Havard Fosseng" <havardf@usit.uio.no>
@A: R. Drabek
@Q: Math is like love -- a simple idea but it can get complicated.
М
As far as the laws of mathematics refer to reality, they are not
certain, and as far as they are certain, they do not refer to reality.
                -- Albert Einstein (1879-1955) [German physicist]
M
I've heard that the government wants to put a tax on the mathematically
ignorant. Funny, I thought that's what the lottery was!
                    -- Gallagher
M_
From: rww <richardw+@pitt.edu>
"The laws of probability, so true in general, so fallacious in
particular."
 -- Edward Gibbon (1737-1794) [British historian]
М
From: "Havard Fosseng" <havardf@usit.uio.no>
```

@Q: All the limitative Theorems of metamathematics and the theory of computation suggest that once the ability to represent your own structure has reached a certain critical point, that is the kiss of death: it guarantees that you can never represent yourself totally. Godel's Incompleteness Theorem, Church's Undecidability Theorem, Turing's Halting Problem, Turski's Truth Theorem-- all have the flavour of some ancient fairy tale which warns you that `To seek self-knowledge is to embark on a journey which . . . will always be incomplete, cannot be charted on a map, will never halt, cannot be described.
@A: Douglas R. Hofstadter

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The power of dealing with numbers is a kind of "detached lever"
arrangement
, which may be put into a mighty poor watch. I suppose it is as common as
the power of moving ears voluntarily, which is a moderately rare
endowment.
-- Oliver Wendell Holmes (1809-1894) [US writer]
M______
```

Thomas Godfrey, a self-taught mathematician, great in his way . . . knew little out of his way, and was not a pleasing companion; as, like most great mathematicians I have met with, he expected universal precision in everything said, or was forever denying or distinguishing upon trifles, to

```
the disturbance of all conversation.
-- Benjamin Franklin (1706-1790), Autobiography
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Μ_

Μ_

From: http://math.furman.edu/~mwoodard/mquot.html Gauss, when asked how soon he expected to reach certain mathematical conclusions, that he had them long ago, all he was worrying about was how to reach them! [Karl F. Gauss (1777-1855), German mathematician] M

```
From: kjwest4@shore.net (ken)
"To avoid the clamor of the Boetians".
C.F. Gauss, on why he did not immediately reveal his discovery of
non-euclidean geometry.
[Karl F. Gauss (1777-1855), German mathematician]
M
```

Mathematics is a game played according to certain simple rules with meaningless marks on paper. $\ensuremath{\mathsf{M}}$

From: scotth9999@aol.com (ScottH9999)

"Mathematics: A tentative agreement that two and two make four." --Elbert Hubbard М From: "Ed C" <zendam@snet.net> Landau, E. [Asked for a testimony to the effect that Emmy Noether was a great woman mathematician, he said:] I can testify that she is a great mathematician, but that she is a woman, Т cannot swear. М From: dylanh@minerva.cis.yale.edu (Dylan Howard) Stand firm in your refusal to remain conscious during algebra. In real life, I assure you, there is no such thing as algebra" -Fran Leibowitz Μ___ From: Don Olivier <don@hsph.harvard.edu> Sweet Analytics, 'tis thou hast ravished me. -- Doctor Faustus according to Christopher Marlowe (British dramatist, 1564-1593) Μ_ From: Don Olivier <don@hsph.harvard.edu> Fast cars, fast women, fast algorithms... what more could a man want? -- Joe Mattis М From Science Week (http://scienceweek.com) Mathematicians my flatter themselves that they possess new ideas which mere human language is as yet unable to express. Let them make the effort to express these ideas in appropriate words without the aid of symbols, and if they succeed they will not only lay us laymen under a lasting obligation, but, we venture to say, they will find themselves very much enlightened during the process, and will even be doubtful whether the ideas as expressed in symbols had ever quite found their way out of the equations into their minds. -- James Clerk Maxwell (1831-1879) [Scottish physicist] М Mathematics contains much that will neither hurt one if one does not know it nor help one if one does know it. - J.B. Mencken From: T.Moore@massey.ac.nz (Terry Moore) Imagine a person with a gift of ridicule [He might say] First that a negative quantity has no logarithm; secondly that a negative quantity has no square root; thirdly that the first non-existent is to the second as the circumference of a circle is to the diameter. - Augustus de Morgan Μ

From: Hans de Vreught (J.P.M.deVreught@cs.tudelft.nl)

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Young man, in mathematics you don't understand things,
you just get used to them. -- John von Neumann (1903-1957) [Hungarian/US
mathematician and scientist]
М
From: Don Olivier <don@hsph.harvard.edu>
Mathematics is like checkers in being suitable for the young, not too
difficult, amusing, and without peril to the state.
 -- Plato (c.428-347 B.C) [Greek philosopher]
Μ_
From: hcheng@gpu5.srv.ualberta.ca (Howard Cheng)
Mathematics is the art of giving the same name to different things.
 -- Jules Henri Poincare (1854-1912) [French mathematician]
Μ_
From: "Ken Stevenson" <kenstevo@zip.com.au>
If I feel unhappy, I do mathematics to become happy. If I am happy, I do
mathematics to keep happy.
P. Turan, "The Work of Alfred Renyi", Matematikai Lapok 21, 1970, pp 199-
210
Μ_
From: "Havard Fosseng" <havardf@usit.uio.no>
@A: M. C. Reed.
@Q: Sex is the mathematics urge sublimated.
М
From: Bill Thomas <liblancl@nic.cerf.net>
As long as algebra is taught in school, there will be prayer in school.
 - Cokie Roberts
М
Bertrand (Arthur William) Russell (1872-1970) [British philopher and
mathematician]:
Mathematics may be defined as the subject in which we never know what we
are talking about, nor whether what we are saying is true
 -- Bertrand Russell (Mysticism and Logic and Other Essays, 1918)
From: jr3000@aol.com (JR3000)
Mathematics may be defined as the subject in which we never know
what we are talking about, nor whether what we are saying is true.
-Bertrand Russell, _Mysticism and Logic and Other Essays_, 1918
As, for example:
We may lay it down that, if there were no universe, _all_
general propositions would be true;
for the contradictory of a general proposition is a proposition asserting
existence, and would therefore always be false if no universe existed.
-Bertrand Russell, _An Introduction to Mathematical Philosophy_, 1919
I have come to believe, though very reluctantly, that it [mathematics]
consists of tautologies. I fear that to a mind of sufficient intellectual
power, the whole of mathematics would appear trivial ...
I cannot any longer find any mystical satisfaction in the contemplation
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of mathematical truth. -Bertrand Russell, My Philosophical Development, 1959 М It is a pleasant surprise to him [the pure mathematician] and an added problem if he finds that the arts can use his calculations, or that the senses can verify them, much as if a composer found that the sailors could heave better when singing his songs -- George Santayana (1863-1952) [US philosopher] Μ_ The summer '87 issue (#55) of The Whole Earth Review contains an article called "Let's Eliminate math From The Schools" by Roger Schank. "Many very smart people are lousy at mathematics and never quite get over their failure at something so important". - R. Schank MP_ From: http://math.furman.edu/~mwoodard/mquot.html De Sua, F. (1956) Suppose we loosely define a religion as any discipline whose foundations rest on an element of faith, irrespective of any element of reason which may be present. Quantum mechanics for example would be a religion under this definition. But mathematics would hold the unique position of being the only branch of theology possessing a rigorous demonstration of the fact that it should be so classified. In H. Eves, In Mathematical Circles, Boston: Prindle, Weber and Schmidt, 1969. Μ_ From: anthem@virginia.edu (dark star = Scott Herman) "Math was always my bad subject. I couldn't convince my teachers that many of my answers were meant ironically." -- writer Calvin Trillin М From: Haim Guivon <guivon@netvision.net.il> "God made the whole (natural) numbers. The others, were man-made" (approximate translation from German, from memory). Great German mathematician Weierstrass (1815-1897) said: Accroding to Stephen Montgomery-Smith <stephen@showme.missouri.edu> this is due to Kronecker. Can anybody resolve this in a reliable way? From: Martin Winkler <e9325827@student.tuwien.ac.at> In Analysis I by Heuser, Kronecker is quoted to have said that. М

It is a safe rule to apply that, when a mathematical or philosophical author writes with a misty profundity, he is talking nonsense. -- Alfred North Whitehead, An Introduction to Mathematics, 1948. Μ_

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From: "Havard Fosseng" <havardf@usit.uio.no>
@Q: I will not go so far as to say that to construct a history
    of thought without profound study of the mathematical ideas of
    successive epochs is like omitting Hamlet from the play which is
    named after him. . . But it is certainly analogous to cutting out
    the part of Ophelia. This simile is singularly exact. For Ophelia
    is quite essential to the play, she is very charming-- and a
    little mad.
@A: Alfred North Whitehead (1861-1947) [English philosopher and
mathematician]
М
From: "Richard I. Pelletier" <bitbucket@home.com>
"There are only two kinds of math books. Those you cannot read beyond
the first sentence, and those you cannot read beyond the first page."
   C.N. Yang, about 1980 I think. (Nobel Prize in Physics, 1957.)
++
=1.6 MATHEMATIC PUNS
М
From: Mariano Cecowski <MCecowski@sif.com.ar>
Big party; every possible function is having fun, chatting and drinking
this evening.
In an n-dimensional corner e<sup>x</sup> stands bitter and alone. Near the lonely
one there's a small group of exponential functions, and 2^{\star}x within them
turns to see e'x on it's corner.
- Hey, e^x, come-on, integrate yourself - Said 2^x pointing to the group.
- What for - whispers e^x - it makes no difference.
М
From: Larry Bavly <bavly@rci.rutgers.edu>
Some of my freshman math students are so clueless. They think General
Calculus was a famous war hero!
Here is a follow up:
If General Calculus actually did exist, he probably knew how to
integrate his troops together and differentiate between his enemies and
his allies.
M
From: rp241@cam.ac.uk (Risto A. Paju)
To all these poor guys who ran into differentiation operators
I know this one bloke who managed to avoid these nasty operators. Until
he
met the creature Del, which was on the same day he received his first
degree. The result: the guy is a grad.
Μ
```

From: S Nelson <snibbler@my.forest> Date: 1999/04/13, 1999/03/14
Random entries from Nelson's Dictionary of Mathematical Terms:

Calculus - what a dentist scrapes from teeth. Center of Mass - the Priest. Centroid - a 100 year old nerd. Chaos - Kmart. Chord - a pile of wood. Circle - the longest distance between any two points. Circumference - a circuitous inference. Coefficient - two heads are better than one. Cylinder - Budweiser.

D

С

Discrete number - a digit that won't talk out of class Divisor - what you wear on da head to protect from da sun. Disjoint - what I am about to smoke in dis moment. Denominator - one who nominates da candidate Decagon - what termites can do to a wooden ship Deduct - to butcher a waterfowl Differential - to show great respect

From: Pierre Abbat <phma@pop.trellis.net>
Parabolas - two balls connected by a rope, and another one like it
Rectangle - a twisted mess
Scalar - mountain climber
Abelian - a tousand melian
Number - less sensitive
M

```
From: "Martin Gillstedt" <m_gillstedt@hotmail.com>
One time the famous mathematician Kurt Gödel was to a restaurant, and
when one of the waitresses went by, he started slapping her ass. Then she
told him to stop it, and then he said: Don't worry, I'm just checking the
consistency.
```

```
From Fabio Rojas (aaprana@mazel.spc.uchicago.edu)
Q- What do you call a student who goes to campus, tries to go
home but doesn't arrive in the same place he started?
A - A non-commuting student.
M
```

```
From: Luka Crnkovic (e98_tcr@e.kth.se)
What does the math student say when he steps on a spider?
-R3->R2!
What does he call the spider?
-Orthogonal projection!
M
```

From: Quiplash (quiplash@aol.comnojunk)
For a good prime call: 555.793.7319

Μ_

From: Diogenes@kear.tdsnet.com wrote: What is the square root of 69? 8 something ("Ate something") From: tam@questl.questconsult.com (Timothy Melton) What about sqrt(-69)? I 8 something From: deborah apple <debvolt@sirius.com> Q:and what about 68? A: do me and i'll owe you 1. M

From: Michael Rothgery <detroit@mci2000.com> Before Al Gore became vice president of the United States, he worked briefly as a drummer for a little known night club act. Some people say that during that time he came up with the best most mathmatically precise rhythms ever known to man. They are now called appropriately enough:

Al Gore Rhythms.

[author unknown] M_____

М

From: The Professor (franbo@globalnet.co.uk) She was only a mathematicians daughter, but she knew how to multiply. M

From: gseep@iname.com (Quantum Seep)
My mother is a mathematician, so she knows how to induce good
behavior. "If I've told you n times, I've told you n+1 times...."
M

From: madore@news.ens.fr (David Madore) Q. What is grey and huge and has integer coefficients? A. An elephantine equation. M______

From: madore@news.ens.fr (David Madore)
Q. What is locally like a ring and very evil?
A. A devilish scheme.
M

From: Larry Bavly <bavly@rci.rutgers.edu>
Graphing rational functions is a pain in the asymptote.
M

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From: Larry Bavly <bavly@rci.rutgers.edu>
Q: Why did the identity sin(2r) = 2sin(r) get turned down for a loan?
A: Because it needed a cos(r). (co-signer)
M
```

From: Larry Bavly <bavly@rci.rutgers.edu>
Q: Why would defeating the Chicago Bulls in the playoffs be like solving
a system of linear equations?

A: Because one would accomplish a Krause-Jordan elimination. - (Bulls GM Jerry Krause, Bulls player Michael Jordan)

For non-americans: The Chicago Bulls belong to the National Basketball Association (USA) and their superstar player is Michael Jordan. M

From: ijf16@math.canterbury.ac.nz (Isaac Freeman)

This one's original. That is to say, I made it up myself, and I've never met anyone else who claims to have invented it.

There was once a factory that specialised in armour. They made leather jerkins, full plate suits, greaves, helmets, anything that would stop an arrow or a sword.

One day, an order arrived from a foreign kingdom. It was a big contract, to outfit an entire army with chain-mail leggings. The factory owner was delighted, and immediately took the design specifications down to the factory floor to begin production.

Several days later, a second message arrived. Due to various circumstances, the design of the leggings had changed. The new standardised national military uniform required that the hems be lowered by several centimetres.

The factory owner grumbled about the loss of time and money involved in changing the design, but there was nothing he could do. He took the new plans down to the foreman.

Several days later, another new design arrived. The nation's uniform requirements had changed again, and the hems must be raised, even higher than the original design.

This went on for several weeks. Every few days, there was a change of plan, and the leggings had to be changed. Sometimes the hems went up, sometimes they went down, but every change meant a loss of money. Finally one day, the factory owner called the foreman up to his office, and asked him if there was any way to stop the appalling wastage.

"Well," said the foreman "it might be that the changes are gradually settling down, and will eventually lead to a stable set of leggings. If so, we could extrapolate from what we already know to find the ultimate design, and start producing it now, knowing that it's what they'll eventually ask for."

The factory owner agreed this was a good plan.

"On the other hand," continued the foreman, "it might be that the changes will never settle down to any final form, in which case there's nothing much we can do."

This prospect depressed the owner, and he demanded to know whether there was any way to tell which situation they faced.

"Oh, certainly." said the foreman, "There's a simple way to tell."

He paused.

Μ_

"It's called the Wire Trousers Hem Test for Uniform Convergence."

This was, of course, made up during an Analysis lecture.

From: "Pierre Abbat" <phma@pop.trellis.net> Tabby and Calico are sitting on two tables, the addition table and the multiplication table, and were playing with a string. They are still holding it, one at each end, though it is now dangling motionless between them. What is the shape of the string?

A catenary.

```
From: amconn01@homer.louisville.edu (Andrew Connor)
A better math joke might have been the one about the Neanderthal child
who
rode to school with a boy from Hamilton. When his mother found out she
said, "What did I tell you? If you commute with a Hamiltonian you'll
never
evolve!"
M_____
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From: kovarik@mcmail.cis.McMaster.CA (Zdislav V. Kovarik)
Expand (a+b)^n.
```

etc. M

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From: Tpotter@voyager.cris.com (Tom_Potter)
Tom Potter: Life is complex. It has real and imaginary components.
M______
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From: Erland.Gadde@sm.luth.se (Erland Gadde) Trigonometry for farmers: swine and cowswine. Μ From: mstueben@pen.kl2.va.us (Michael A. Stueben) I liked the PI-ous one best. Μ_ From: rja093@nwu.edu (Rajan Jain) mathematician's PICK UP LINE Hey baby, How would you like to join me in some math? We'll add you and me, subtract our clothes, divide your legs, and multiply! Of course, we'll be entirely discrete. Μ_ From: achiever@mcs.net (Steve Warrington) How do you teach mathematics to a woman Look for the tan line subtract her pants stack her on the bed divide her legs calculate the distance arc her back add a length function properly provide constant movement give her a square root turn her over for a reverse polish notion gradiently increase the integer round the remainder fill the pi hope she doesn't multiply log the event sine on the dotted line get her to cosine profit from the experience base the result on an exponent Μ UR 2 Good 2 Me 2 Be 4 Got == 10 "You are too good to me to be forgotten" М From: A Friend to Society <freya@ccwf.cc.utexas.edu> 2 Cute 2 Good 2 Young +2 Be +2 Be +4 That _____ _____ _____ 4 Gotten 4 Gotten 6 Pack М

A lazy dog is a slow pup. A slope up is an inclined plane. An ink-lined plane is a sheet of writing-paper. Therefore lazy dog is a sheet of writing-paper. M

Μ_

Patageometry, n.: The study of those mathematical properties that are invariant under brain transplants.

From:kcarver@fox.nstn.ns.ca (Kevin Carver)
I know most of you people who are "into" math have heard the pun (over
and
over and over ...) about knowing the difference between your "asymptote
and
a hole in the graph" but here's one you may not have heard. IT'S A TRUE
STORY!

A student at our high school a few years back, having had his fill with drawing graph after graph in senior high math class, told his teacher: Mrs. ____, I'll do algebra, I'll do trig, and I'll even do statistics, but graphing is where I draw the line! M

A bunch of Polish scientists decided to flee their repressive government by hijacking an airliner and forcing the pilot to fly them to a western country. They drove to the airport, forced their way on board a large passenger jet, and found there was no pilot on board. Terrified, they listened as the sirens got louder. Finally, one of the scientists suggested that since he was an experimentalist, he would try to fly the aircraft.

He sat down at the controls and tried to figure them out. The sirens got louder and louder. Armed men surrounded the jet. The would be pilot's friends cried out, "Please, please take off now!!! Hurry!!!!!!"

The experimentalist calmly replied, "Have patience. I'm just a simple pole in a complex plane." M

A group of Polish tourists is flying on a small airplane through the Grand Canyon on a sightseeing tour. The tour guide announces: "On the right of the airplane, you can see the famous Bright Angle Falls." The tourists leap out of their seats and crowd to the windows on the right side. This causes a dynamic imbalance, and the plane violently rolls to the side and crashes into the canyon wall. All aboard are lost. The moral to this episode is: always keep your poles off the right side of the plane.

Caveat: While this joke mentions Polish people, it is not, in my opinion, in the category of the infamous Polish jokes. I hope no one is offended but only humored. M

Three standard Peter Lax jokes (heard in his lectures) :

 What's the contour integral around Western Europe? Answer: Zero, because all the Poles are in Eastern Europe! Addendum: Actually, there ARE some Poles in Western Europe, but they are removable!
 An English mathematician (I forgot who) was asked by his very religious colleague: Do you believe in one God? Answer: Yes, up to isomorphism!
 What is a compact city? It's a city that can be guarded by finitely many near-sighted policemen!

М

Asked how his pet parrot died, the mathematician answered "Polynomial. Polygon."

Μ_

Lumberjacks make good musicians because of their natural logarithms. $\ensuremath{\mathsf{M}}$

Statement: pi * r^2 Reaction: Pie are not square. Pie are round. Cornbread are square. M_____

From: RVFT60@email.sps.mot.com (Mike Scott) A Cherokee indian chief had three wives, each of whom was pregnant.

The first squaw gave birth to a boy, and the chief was so elated he built her a teepee made of buffalo hide. A few days later, the second squaw gave birth, and also had a boy. The chief was extremely happy; he built her a teepee made of antelope hide. The third squaw gave birth a few days later, but the chief kept the birth details a secret. He built the woman a teepee out of hippopotamus hide, and challenged the people in the tribe to guess the most recent birth details, the correct guesser receiving a fine prize. Several of his people tried, but were unsuccessful in their guesses. Finally, a young brave came forth and declared that the third wife had delivered twin boys. "Correct"!, cried the chief. "How did you know"? "It's simple", replied the warrior. "The value of the squaw of the hippopotamus is equal to the sons of the squaws of the other two hides." M

A tribe of Native Americans generally referred to their woman by the animal hide with which they made their blanket. Thus, one woman might be known as Squaw of Buffalo Hide, while another might be known as Squaw of Deer Hide. This tribe had a particularly large and strong woman, with a very unique (for North America anyway) animal hide for her blanket. This woman was known as Squaw of Hippopotamus hide, and she was as large and powerful as the animal from which her blanket was made.

Year after year, this woman entered the tribal wrestling tournament, and easily defeated all challengers; male or female. As the men of the tribe admired her strength and power, this made many of the other woman of the tribe extremely jealous. One year, two of the squaws petitioned the Chief to allow them to enter their sons together as a wrestling tandem in order to wrestle Squaw of the Hippopotamus hide as a team. In this way, they hoped to see that she would no longer be champion wrestler of the tribe.

As the luck of the draw would have it, the two sons who were wrestling as a tandem met the squaw in the final and championship round of the wrestling contest. As the match began, it became clear that the squaw had finally met an opponent that was her equal. The two sons wrestled and struggled vigorously and were clearly on an equal footing with the powerful squaw. Their match lasted for hours without a clear victor. Finally the chief intervened and declared that, in the interests of the health and safety of the wrestlers, the match was to be terminated and that he would declare a winner.

The chief retired to his teepee and contemplated the great struggle he had witnessed, and found it extremely difficult to decide a winner. While the two young men had clearly outmatched the squaw, he found it difficult to force the squaw to relinquish her tribal championship. After all, it had taken two young men to finally provide her with a decent match. Finally, after much deliberation, the chief came out from his teepee, and announced his decision. He said...

"The Squaw of the Hippopotamus hide is equal to the sons of the squaws of the other two hides" $\ensuremath{\mathsf{M}}$

What follows is a "quiz" a student of mine once showed me (which she'd gotten from a previous teacher, etc...). It's multiple choice, and if you sort the letters (with upper and lower case disjoint) questions and answers will come out next to each other. Enjoy...

s.	What the acorn said when he grew up							
Ν.		bisects						
u.	A dead parrot							
g.		center						
F.	What you should do when it rains							
R.		hypotenuse						
m.	A geometer who has been to the beach							
н.		coincide						
h.	The set of cards is missing							
v.	5	polvgon						
A.	The boy has a speech defect	1 - 15 -						
t.		secant						
к.	How they schedule gym class							
n		tangent						
p. h	What he did when his mother-in-law wanted to go home	- cangene						
л. П	what he are when hip mother in rew wanted to go how	ellinge						
0.	The tall kettle boiling on the store	CITTDRC						
U.	The tail Rectie boiling on the stove	acomotat						
ν.	The the signal descents over a 4 minute mile	geometry						
r.	why the girl doesn't run a 4-minute mile	7						
J.		aecagon						
4								

1. That which Noah built.

____ 2. An article for serving ice cream.

3. What a bloodhound does in chasing a woman. 4. An expression to represent the loss of a parrot. 5. An appropriate title for a knight named Koal. 6. A sunburned man. 7. A tall coffee pot perking. 8. What one does when it rains. 9. A dog sitting in a refrigerator. ___ 10. What a boy does on the lake when his motor won't run. ___ 11. What you call a person who writes for an inn. ____ 12. What the captain said when the boat was bombed. 13. What a little acorn says when he grows up. ____ 14. What one does to trees that are in the way. ____ 15. What you do if you have yarn and needles. ____ 16. Can George Washington turn into a country? A. hypotenuse I. circle J. axiom B. polygon K. cone C. inscribe D. geometry L. coincide E. unit M. cosecant N. tangent F. center 0. hero G. decagone H. arc P. perpendicular М

There was once a very smart horse. Anything that was shown it, it mastered easily, until one day, its teachers tried to teach it about rectangular coordinates and it couldn't understand them. All the horse's acquaintances and friends tried to figure out what was the matter and couldn't. Then a new guy (what the heck, a computer engineer) looked at the problem and said,

"Of course he can't do it. Why, you're putting Descartes before the horse!"

M___

From: Tim Hagman <hagmanti@pilot.msu.edu> Remember, never put Horace before Descartes... M

-

Mrs. Johnson the elementary school math teacher was having children do problems on the blackboard that day.

``Who would like to do the first problem, addition?''

No one raised their hand. She called on Tommy, and with some help he finally got it right.

``Who would like to do the second problem, subtraction?''

Students hid their faces. She called on Mark, who got the problem but there was some suspicion his girlfriend Lisa whispered it to him.

``Who would like to do the third problem, division?''

Now a low collective groan could be heard as everyone looked at

nothing in particular. The teacher called on Suzy, who got it right (she has been known to hold back sometimes in front of her friends).

``Who would like to do the last problem, multiplication?''

Tim's hand shot up, surprising everyone in the room. Mrs. Johnson finally gained her composure in the stunned silence. ``Why the enthusiasm, Tim?''

``God said to go forth and multiply!''

Μ_

Μ_

In the bayous of Louisiana, there is a small river called the Dirac. Many wealthy people have their mansions near its mouth. One of the social leaders decided to have a grand ball. Being a cousin of the Governor, she arranged for a detachment of the state militia to serve as guards and traffic directors for the big doings. A captain was sent over with a small company; naturally he asked if there was enough room for him and his unit. The social leader replied, "But of course, Captain! It is well known that the Dirac delta function has unit area."

Russell to Whitehead: "My Godel is killing me!" $\underline{\mathsf{M}}$

One attractive young businesswoman to another, over lunch: My life is all math. I am trying to add to my income, subtract from my weight, divide my time, and avoid multiplying. M

What keeps a square from moving ? why, square roots of course. How many square roots does it have ? why, 2 obviously. $\rm M$

How can you tell that Harvard was layed out by a mathematician? The div school [divinity school] is right next to the grad school... M

Mathematical Sex

Wherein it is related how that Polygon of Womanly Virtue, your Polly Nomial (our heroine) is accosted by that Notorious Villain Curly Pi, and factored (oh, horror).

Once upon a time (1/T), Pretty Polly Nomial was strolling across a field of vectors when she came to the boundary of a singularly large matrix. Now Polly was convergent and her mother had made it an absolute condition that she never enter such an array without her brackets on. Polly, however, who had changed her variables that morning and was feeling

particularly badly behaved, ignored this condition on the basis that it was

insufficient, and made her way amongst the complex elements. Rows and columns closed in from all sides. Tangents approached her surface. She became tensor and tensor. Quite suddenly, two branches of a hyperbola

touched her at a single point. She oscillated violently, lost all sense of directrix, and went completely divergent. As she reached a turning point, she tripped over a square root that was protruding from the erf and plunged headlong down a steep gradient. When she rounded off once more, she found herself inverted, apparently alone, in a non-Euclidian space. She was being watched, however. That smooth operator, Curly Pi, was lurking innerproduct. As his eyes devoured her curvilinear coordinates, a singular expression crossed his face. He wondered, was she still convergent? He decided to integrate improperly at once. Hearing a common fraction behind her, Polly rotated and saw Curly Pi approaching with his power series extrapolated. She could see at once by his degenerate conic and dissipative terms that he was bent on no good. "Arcsinh," she gasped. "Ho, ho," he said. "What a symmetric little asymptote you have. I can see your angles have a lot of secs." "Oh, sir," she protested, "keep away from me. I haven't got my brackets on." "Calm yourself, My Dear," said our Suave Operator. "Your fears are purely imaginary." "I, I," she thought, "perhaps he's not normal but homologous." "What order are you?" the Brute demanded. "Seventeen," replied Polly. Curly leered. "I suppose you've never been operated on." "Of course not," Polly replied quite properly. "I'm absolutely convergent." "Come, come," said Curly, "Let's off to a decimal place I know and I'11 take you to the limit." "Never," gasped Polly. "Abscissa," he swore, using the vilest oath he knew. His patience was gone. Coshing her over the coefficient with a log until she was powerless, Curly removed her discontinuities. He stared at her significant places, and began smoothing out her points of inflection. Poor Polly. The algorithmic method was now her only hope. She felt his hand tending to her asymptotic limit. Her convergence would soon be gone forever. There was no mercy, for Curly was a heavyside operator. Curly's radius squared itself; Polly's loci quivered. He integrated by parts. He integrated by partial fractions. After he cofactored, he performed rungecutta on her. The complex beast even went all the way around and did contour integration. Curly went on operating until he had satisfied her hypothesis, then he exponentiated and became completely orthogonal. When Polly got home that night, her mother noticed that she was no longer piecewise continuous, but had been truncated in several places. But is was too late to differentiate now. As the months went by, Polly's denominator increased monotonically. Finally, she went to the L'Hopital and generated a small but pathological function which left surds all over the He thinks he's really smooth, but he's only C^1. He's always going off on a tangent.

M

From: <U42157@uicvm.uic.edu> Jim Slepicka

After the earth dries out, Noah tells all the animals to 'go forth and multiply'. However, two snakes, adders to be specific, complain to Noah that this is one thing they have never been able to do, hard as they have tried. Undaunted, Noah instructs the snakes to go into the woods, make tables from the trunks of fallen trees and give it a try on the tabletops. The snakes respond that they don't understand how this will help them to procreate whereupon Noah explains: "Well, even adders can multiply using log tables!"

M_

A man camped in a national park, and noticed Mr. Snake and Mrs. Snake slithering by. "Where are all the little snakes?" he asked. Mr. Snake replied, "We are adders, so we cannot multiply."

The following year, the man returned to the same camping spot. This time there were a whole batch of little snakes. "I thought you said you could not multiply," he said to Mr. Snake. "Well, the park ranger came by and built a log table, so now we can multiply by adding!" M

Math and Alcohol don't mix, so...

PLEASE DON'T DRINK AND DERIVE

Then there's every parent's scream when their child walks into the room dazed and staggering:

OH NO...YOU'VE BEEN TAKING DERIVATIVES!! M

From: jwalradt@rmci.net (John R. Walradt)
Q: Where do mathematicians go shopping?
a: At the decimall.

From: dhobus@YESnet.yk.ca (Dave and Sandy Hobus) And when they park, they put their money in the decimeter.

From: Intech <intech@imperium.net> Let's keep adding a few puns here, but don't let them divide us. The denominating factor that will determine if your pun is worthy or not will depend on if you can produce a good product or not.

From: "Les Stewart" <lesstew1@mail.pernet.net>

The mall was flooded, I tried to go by U-boat but I couldn't get any sub-traction. From: shelleyd@interport.net (Shelley Levine) I'm sure the puns will multiply, and a fraction of them might even be good. From: "J.A. McCulloch" <xxxxx@concentric.net> Why are mathematicians so negative? Because they are nonplussed. Why are there so many mathematicians? Because they let nothing subtract from their multiplying. From: Melanie Aultman <afn10453@afn.org> There was a girl who took her math book to the gym because she needed to reduce her fractions.... From: "Les Stewart" <lesstew1@mail.pernet.net> I am a dark, well-dressed man who would like join the fun. sined, From: Steve P. <stevep@interport.net> I heard you had to borrow a lot of money to buy those new clothes. Did vou have a co-siner for your loan? the tangent From: "Les Stewart" <lesstew1@mail.pernet.net> Fractaly my dear, I don't give a damn! From: Adnan <nldc@worldnet.att.net> Couldn't we try seeing this from a different angle? From: LoRdGoOsE <bear4876@capital.net> How could you be so obtuse? From: fc3a501@GEO.math.uni-hamburg.de (Hauke Reddmann) How can you factor a rhesus, when he belongs to the primates? From: Adnan (nldc@worldnet.att.net) PI the way who is keeping the log? From: LoRdGoOsE <bear4876@capital.net> I'm not sure, but this log is NOT natural at all, need i enumerate the probabilities? And by the way, in genetics, I think that the guys at the lab have to do their reporting per mutation, just to keep it straight From: "Pierre Abbat" <phma@trellis.net> Q: What fish commutes? A: An abelian grouper. М

From: just kiddin (Elisabeth) <maelmill@EUnet.at>

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Q: What is 8 divided in two parts?
A: Vertically it is 3,
   horizontally it is 0.
М
From: "Mark Chatterton" <chatt000@mail.genmills.com>
Q: Can an english major learn math?
A: Cosecant!
Μ_
From: mstueben@pen.k12.va.us (Michael A. Stueben)
Q: What is a backwards written integral sign?
A: an impropral integral.
Q:What is a proof?
A: One-half percent of alcohol.
Q:Can you prove LaGranges's Identity?
A: Are you kidding? It's really hard to prove the identity of someone
who's been dead for over 150 years!
М
From: markrot@Glue.umd.edu (Mark Peter Rothlisberger)
Q: What is black and white ivory and fills space?
A: A piano curve
Μ
Q: What's purple and commutes?
A: An abelian grape.
Q: What's purple, commutes, and is worshiped by a limited number
   of people?
A: A finitely venerated abelian grape.
From: bs@st-andrews.ac.uk (Ben Soares)
Q: What's green, dangerous and commutative?
A: An abelian grape with a machine gun.
(and that one's just plain silly).
From: Al Gerheim <gerheim@sonalysts.com>
Q: What's an Abelian group under addition, is closed, associative,
distributive, and bears a curse?
A: The ring of the Nibelung.
Q: Why did the mathematician name his dog "Cauchy"?
A: Because he left a residue at every pole.
Q: Why is it that the more accuracy you demand from an interpolation
   function, the more expensive it becomes to compute?
A: That's the Law of Spline Demand.
Q: What do a mathematician and a physicist [or engineer, or musician,
   or whatever the profession of the person addressed] have in common?
A: They are both stupid, with the exception of the mathematician.
Q: What do you call a teapot of boiling water on top of mount everest?
A: A high-pot-in-use
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Q: What do you call a broken record? A: A Decca-gone Q: What do you get when you cross 50 female pigs and 50 male deer? A: One hundred sows-and-bucks Q: Why did the chicken cross the Moebius strip? A: To get to the other ... er, um ... Q: What is the world's longest song? A: "Aleph-nought Bottles of Beer on the Wall." Q: What does a mathematician do when he's constipated? A1: He works it out with a pencil. From: jackson@dstc.edu.au (David Jackson) A2:(S)he tried to work it out with a pencil, but in the end (s)he had to use logs. From: saconn@iol.ie (Stephen Connolly) A3: He worked it out with a computer/calculator A4: he got one of his students to work it out for him Q: What's yellow and equivalent to the Axiom of Choice. A: Zorn's Lemon. Q: What do you get if you cross an elephant with a zebra. A: Elephant zebra sin theta. Q: What do you get when you cross an elephant and a grape? A: Elephant-grape-sin(theta) Q: What do you get if you cross an elephant with a mountain climber. A: You can't do that. A mountain climber is a scalar. Q: What do you get when you cross an elephant with a banana? A: Elephant banana sine theta in a direction mutually perpendicular to the two as determined by the right hand rule. Q: What do you get when you cross a tsetse with a mountain climber? A: Nothing, you can't cross a vector with a scalar. Q: What do you get when you cross a mountain goat and a mountain climber? A: Nothing. You cant cross two scalars. Q: To what question is the answer "9W." A: "Dr. Wiener, do you spell your name with a V?" Q: What's non-orientable and lives in the sea? A: Mobius Dick. Q: What do you get when you put a spinning flywheel in a casket and turn a corner? A: A funeral precession Q: What's big, grey, and proves the uncountability of the reals?

A: Cantor's Diagonal Elephant! Q: What do you call a young eigensheep? A: A lamb, duh!!! Q: What goes "Pieces of seven! Pieces of seven!"? A: A parroty error!! Q: What did the circle say to the tangent line? A: "Stop touching me!" From: Jos van Kan <j.vankan@math.tudelft.nl> Q: What's yellow, linear, normed and complete? A: A Bananach space. From: dmc@sjfc.edu (Dan Cass) Q: What's polite and works for the phone company? A: A deferential operator. From: bs@st-andrews.ac.uk (Ben Soares) Q: What is linear and sounds a bit like a Nectar Race? A: A vector space. (it is irrelevant what a nectar race is) Q: How do you make one burn? A: Differentiate a log fire. (that one is subtle) М From: jhd@radix.net (Joseph Davidson) Q:Mathematical Name for a Toilet Seat A:An ass-toroid М Q: What does an analytic number theoriest say when he is drowning? A: Log-log, log-log, log-log, . . . М From: v090nlb4@ubvms.cc.buffalo.edu (Mark J. VanDerwater) halloween math Q: Wadaya get when you take the circumference of your jack-o-lantern and divide it by its diameter? A: Pumpkin Pi Μ_ From: Melanie Aultman <afn10453@afn.org> Q: What kind of insect is good at math? A: The account-ant Μ_ From: bwhite@oucsace.cs.ohiou.edu (Bill White) Q: What's a polar bear? A: A rectangular bear after a coordinate transform. Μ_

From: lmmill@ix.netcom.com(LOUIS MILLER)
Q: What is 710 inverted?

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A: Think: OILed up you brains
M
       What quantity is represented by this ?
    Q:
    A: 9, tree + tree + tree
       A dust storm blows through, now how much do you have ?
    Q:
        99, dirty tree + dirty tree + dirty tree
    A:
        Some birds go flying by and leave their droppings,
    Q:
        one per tree, how many is that ?
    A: 100, dirty tree and a turd + dirty tree and a turd
               + dirty tree and a turd
Μ_
Q:After a big meal together, ask someone: What is the square root of -
1/64?
A:I overate (or i/8)
М
       What's the title of this picture ?
    Q:
                  . .
                \===/======\\==
                   (
                          )
                      ( \
                      ))
                    //||\\
    A: Hypotenuse
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М

From: S Aggarwal <saggarwa@direct.ca>

From: kovarik@mcmail.cis.McMaster.CA (Zdislav V. Kovarik)
Math charity: improving Lipschitz conditions in New York slums.
Math injuries: Dedekind cuts and bruises
Math politics: The radical is the intersection of all maximal left
ideals.

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Is the square root of ab absurd? M_____
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Μ

Algebra is x-sighting. Vectors can be 'arrowing. I'm partial to fractions. I like angles ... to a degree. I could go on and on about sequences. Translations are shifty. Complex numbers are unreal. I feel positive about integers. On average, people are mean. M

From:mstueben@pen.kl2.va.us (Michael A. Stueben) Puns on Theorems The Royal Chain Mail Factory had received a large order for battle uniforms. Each uniform consisted of a toga and a pair of short pants. Their only problem was how long to make the pants: too short and a soldier could be exposed; too long and a uniform would be excessively heavy. So they called in a mathematician. He had a uniform made and tested. The hem on the pants proved to be too short, so he increased it a little bit, then a little more, and then a little bit more, and so on until finally he was able to derive an exact trousers-length depending on the leg-length of the soldier. The chief tailor was curious. "How did you determine this ratio?" he asked? "Easy," said the mathematician. "I just used the Wire-trousers Hem Test of Uniform Convergence." This is a pun on the "Weierstrauss M-test of uniform convergence," where M[k] is a convergent series of positive real numbers. (It was sent to me by Andrius Tamulis.) I wonder why M and not, say, N (numeric) or S (sum). M stands for . . .? From: bdillon@admin.aurora.edu (Bob Dillon) The following is from the January 23, 1995 issue of Chemical and Engineering News.

М

From: mstueben@pen.kl2.va.us (Michael A. Stueben) THIRTEEN MISUNDERSTANDINGS IN THE HISTORY OF MATHEMATICS In the interest of historical accuracy let it be known that 1) Fibonacci's daughter was not named "Bunny." 2) Michael Rolle was not Danish, and did not call his daughter "Tootsie." 3) William Horner was not called "Little-Jack" by his friends. 4) The "G" in G. Peano does not stand for "grand." 5) Rene Descartes' middle name is not "push." 6) Isaac Barrow's middle name is not "wheel." 7) There is no such place as the University of Wis-cosine, and if there was, the motto of their mathematics department would not be "Secant ye shall find." 8) Although Euler is pronounced oil-er, it does not follow that Euclid is pronounced oi-clid. 9) Franklin D. Roosevelt never said "The only thing we have to sphere is sphere itself." 10) Fibonacci is not a shortened form of the Italian name that is actually spelled: F i bb ooo nnnnn aaaaaaaa ccccccccccccccccccccccccccccccccccccc 11) It is true that August Mobius was a difficult and opinionated man. But he was not so rigid that he could only see one side to every question. 12) It is true that Johannes Kepler had an uphill struggle in explaining his theory of elliptical orbits to the other astronomers of his time. And it is also true that his first attempt was a failure. But it is not true that after his lecture the first three questions he was asked were "What is elliptical?" What is an orbit?" and "What is a planet? 13) It is true that primitive societies use only rough approximations for the known constants of mathematics. For example, the northern tribes of Alaska consider the ratio of the circumference to the diameter of a circle to be 3. But it is not true that the value of 3 is called Eskimo pi. Incidentally, the survival of these tribes is dependent upon government assistance, which is not always forthcoming. For example, the Canadian firm of Tait and Sons sold a stock of defective compasses to the government at half-price, and the government passed them onto the northern natives. Hence the saying among these peoples:

"He who has a Tait's is lost."

М

From: immortal@wam.umd.edu (Immortal = Justin Wyss-Gallifent) Q: Why can't you grow wheat in Z/6Z ? A: Because it's not a field.

M

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From: kovarik@mcmail.cis.mcmaster.ca (Zdislav V. Kovarik)
A retired mathematician took up gardening, and is now growing carrots
with square roots.
Μ_
From: G.P. <GPopper@Hotmail.Com>
Q: What happens to plants that live in a math class room?
A: They grow square roots
Μ_
From:
              brian@brisk.demon.co.uk (Brian Skinner)
The retired mathematicians house was called aftermath.
М
From: wft@math.canterbury.ac.nz (Bill Taylor)
Some say the pope is the greatest cardinal.
But others insist this cannot be so, as every pope has a successor.
Μ_
From: you@somehost.somedomain (Your Name Here)
Mathematician's Bakery: House of Pi
M
From: Ralph Craig <rrcraig>
Q: Why didn't Newton discover group theory?
A: Because he wasn't Abel.
М
From: fc3a501@math.uni-hamburg.de (Hauke Reddmann)
Does a politician* exists who does nothing at all?
Yes, because they form a Lie group.
* optionally replace with your favorite hate group
Μ_
In this branch of mathematics it is very difficult to be sure of water-
proof tights.
Μ_
From: centaur@nai.net (Dave Wright)
Mermaid mathematicians wear algaebras.
M
From: centaur@nai.net (Dave Wright)
Aftermath: The horrible headache you have when you've finished the
algebra
             test. --"Funky Winkerbean" strip by Tom Batiuk
Μ_
From: Larry Bavly <bavly@rci.rutgers.edu>
Two mathematicians are looking at a convergent series.
The first one says, "Do you realize that the series converges even when
all
the terms are made positive?"
The second asks, "Are you sure about that?"
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The first replies "Absolutely!"
М
From: Melanie Aultman <afn10453@afn.org>
"It's a plane figure," Tom said flatly.
"99 is almost 100," said Tom roughly.
"1,3,5,7," Tom said oddly.
"Space is an infinite set of points," Tom said distantly.
"They are mirror images," reflected Tom.
Μ_
   /
     1
    ----- = log cabin
   cabin
 /
М
   /
     1
    ----- = log cabin + C = houseboat
    cabin
 /
Μ_
From: cfaerber@muc.de (Claus Faerber)
Q: Why's 6 afraid of 7
A: cos 789
М
"The world is everywhere dense with idiots."
                                                             - LFS
М
From: Richard Carr <carr@math.columbia.edu>
Apologies in advance:
A new PhD in algebra gets a temporary position at a university for a
year. He bumps into one of the faculty and, having the cockiness and
arrogance of youth, says to him, "I have heard it said that all
logicians go insane. Why then did you decide to study Model Theory?"
"My dear doctor, very few logicians go insane but the entire algebra
faculty is seeing the psychiatrist," replied the logician.
Thusly tempered, the young man replies uncertainly, "The entire faculty?"
"Yes, they're all in group therapy."
M_
        Scot Nelson <scot.nelson@gte.net>
From:
M_{\rm Y} math teacher has an negative arithmetic mean streak and a high
coefficient of variation. I think he's only a few numbers > [] whose
days
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outside of a sanitarium are numbered.

=1.7 MATHEMATIC TERMS

М

Definitions of Terms Commonly Used in Higher Math

The following is a guide to the weary student of mathematics who is often confronted with terms which are commonly used but rarely defined. In the search for proper definitions for these terms we found no authoritative, nor even recognized, source. Thus, we followed the advice of mathematicians handed down from time immortal: "Wing It."

CLEARLY: I don't want to write down all the "in- between" steps.

TRIVIAL: If I have to show you how to do this, you're in the wrong class.

OBVIOUSLY: I hope you weren't sleeping when we discussed this earlier, because I refuse to repeat it.

RECALL: I shouldn't have to tell you this, but for those of you who erase your memory tapes after every test...

WLOG (Without Loss Of Generality): I'm not about to do all the possible cases, so I'll do one and let you figure out the rest.

IT CAN EASILY BE SHOWN: Even you, in your finite wisdom, should be able to prove this without me holding your hand.

CHECK or CHECK FOR YOURSELF: This is the boring part of the proof, so you can do it on your own time.

SKETCH OF A PROOF: I couldn't verify all the details, so I'll break it down into the parts I couldn't prove.

HINT: The hardest of several possible ways to do a proof.

BRUTE FORCE (AND IGNORANCE): Four special cases, three counting arguments, two long inductions, "and a partridge in a pair tree."

SOFT PROOF: One third less filling (of the page) than your regular proof, but it requires two extra years of course work just to understand the terms.

ELEGANT PROOF: Requires no previous knowledge of the subject matter and is less than ten lines long.

SIMILARLY: At least one line of the proof of this case is the same as before.

CANONICAL FORM: 4 out of 5 mathematicians surveyed recommended this as the final form for their students who choose to finish.

TFAE (The Following Are Equivalent): If I say this it means that, and if I say that it means the other thing, and if I say the other thing...

BY A PREVIOUS THEOREM: I don't remember how it goes (come to think of it I'm not really sure we did this at all), but if I stated it right (or at all), then the rest of this follows.

TWO LINE PROOF: I'll leave out everything but the conclusion, you can't question 'em if you can't see 'em.

BRIEFLY: I'm running out of time, so I'll just write and talk faster.

LET'S TALK THROUGH IT: I don't want to write it on the board lest I make a mistake.

PROCEED FORMALLY: Manipulate symbols by the rules without any hint of their true meaning (popular in pure math courses).

QUANTIFY: I can't find anything wrong with your proof except that it won't work if x is a moon of Jupiter (Popular in applied math courses).

PROOF OMITTED: Trust me, It's true.

From: ncbauers@ndsuvax.UUCP (Michael Bauers)

Note: This entry was inspired by something I once read in NUTWORKS (The Computer Humor Magazine.)

This is a guide to translating the language of math textbooks and professors.

1) It can be proven...

This may take upwards of a year, and no shorter than four hours, and may require something like 5 reams of scratch paper, 100 pencils, or 100 refills (For those who use machanical pencils). If you are only an undergraduate, you need not bother attempting the proof as it will be impossible for you.

2) It can be shown...

Usually this would take the teacher about one hour of blackboard work, so he/she avoids doing it. Another possibility of course is that the instructor doesn't understand the proof himself/herself.

3) It is obvious...

Only to PhD's who specialize in that field, or to instructors who have taught the course 100 times.

4) It is easily derived...

Meaning that the teacher figures that even the student could derive it. The

dedicated student who wishes to do this will waste the next weekend in the attempt. Also possible that the teacher read this somewhere, and wants to sound like he/she really has it together. 5) It is obvious... Only to the Author of the textbook, or Carl Gauss. More likely only Carl Gauss. Last time I saw this was as a step in a proof of Fermat's last theorem. 6) The proof is beyond the scope of this text. Obviously this is a plot. The reader will never find any text with the proof in it. The Proof doesn't exist. The theorem just turned out to be usefull to the author. 7) The proof is left up to the reader. ... sure let us do all the work. Does the author think that we have nothing better to do than sit around with THEIR textbook, and do the work that THEY should have done? 8) Sample Proof: . 4.7 At this point we assume that x is an element of the set S, and therefore...We know this according to L. Krueger[pg. 71] Question...has anyone ever bothered to see if these type of references exist. Come on...we all know what happens when we are writing a freshman english composition and run out of sources...how better to prove your thesis with a little blurb from some obscure, and nonexistant source Μ From: ptwahl@aol.com (Patrick T. Wahl) More recently, I learned another useful term: "modulo errors." This is used, for example, as "Q.E.D., modulo errors." One fellow often applied this to his blackboard proofs, meaning: "This is a representative of an equivalence class of proofs, one of which is correct and all of which look sort of like this one. At least one such proof is correct, but it might not be the one I wrote down." I don't mean to be critical here; the lectures were quite good. The point is, a proof "modulo errors" presents the important ideas, and we have better things to do today than criticize the details. For example, many of us who have lectured know the sinking feeling, "ten
or fifteen minutes ago and two blackboards back, I should have called that variable something besides 'm', because now I'm stuck calling two things by the same name." One can rewrite the whole thing, or insert hokey primes or subscripts. Or, one can take pity on the students, who after all are paying \$20 an hour to see the show. In the latter case, just say "modulo errors," and move on. М From: mstueben@pen.k12.va.us (Michael A. Stueben) WHAT'S OUT AND WHAT'S IN FOR MATHEMATICAL TERMS by Michael Stueben (November 7, 1994) Today it is considered an egregious faux pas to speak or write in the crude antedated terms of our grandfathers. To assist the isolated student and the less sophisticated teacher, I have prepared the following list of currently fashionable mathematical terms in academia. I pass this list on to the general public as a matter of charity and in the hope that it will lead to more refined elucidation from young scholars. OUT IN thinking: hypothesizing. proof by contradiction or indirect proof: reductio ad absurdum. mistake: non sequitur. starting place: handle. with corresponding changes: mutatis mutandis. counterexample: pathological exception. consequently: ipso facto. swallowing results: digesting proofs. therefore: ergo. has an easy-to-understand, but hard-to-find solution: obvious. has two easy-to-understand, but hard-to-find solutions: trivial. truth: tautology. empty: vacuous. drill problems: plug-and-chug work. criteria: rubric. example: substantive instantiation. similar structure: homomorphic. very similar structure: isomorphic. same area: isometric. number theory. arithmetic: count: enumerate. one: unity. generally/specifically: globally/locally. constant: invariant. bonus result: corollary. distance: metric measure. several: a plurality. function/argument: operator/operand.

separation/joining: bifurcation/confluence. fourth power or quartic: biquadratic. stochastic. random: unique condition: a singularity. uniqueness: unicity. tends to zero: vanishes. tip-top point: apex. half-closed: half-open. concave: non-convex. rectangular prisms: parallelepipeds. perpendicular (adj.): orthogonal. perpendicular (n.): normal. Euclid: Descartes. Fermat: Wiles. path: trajectory. shift: rectilinear translation. similar: homologous. very similar: congruent. whopper-jawed: skew or oblique. change direction: perturb. join: concatenate. approximate to two or more places: accurate. geometry of the Euclidean high school geometry or plane geometry: plane under the Pythagorean metric. clever scheme: algorithm. initialize to zero: zeroize. * : splat. { : squiggle. decimal: denary. alphabetical order: lexical order. a divide-and-conquer method: an algorithm of logarithmic order. student ID numbers: witty passwords. that bitch secretary in the math dept: the witch of Agnesi numerology and number sophistry: descriptive statistics Special thanks to Peter Braxton who got me started writing this stuff and who contributed five of the items above. М

From: mini-air 1999-01-10

Questionable Math

Mathematicians, as well as their opposite numbers, have responded eagerly -- and repetitively -- to our essay question "Why is it only mathematicians who say 'Why is this obvious?'"

More than 80% of the respondents said, "Because." When respondents answered anything with other than "Because," it usually "Why not?" Several of the other answers stood out, for various reasons:

"Because mathematics is the only profession in which the practitioners are intelligent enough to realize that every person on the planet is, basically, an idiot, and therefore might need some time in order to comprehend the perfectly obvious."

-- Investigator J.C. Jamison "The assertion is patently false. Why is this obvious?" -- Investigator B. Kallick "Given that the abstract algebra professor has red hair, and teaches ring theory, then this is clearly a red hair ring." -- Investigator L. Sherman "Missing comma. The quote should have been: "Why, is this obvious?" Much more in line with a mathematical professor's image." -- Investigator Felix Finch "Because math is the only subject where anything is *allowed* to be obvious. In any other science, you have to get a grant, run an experiment, write an excruciatingly equivocated research article, and have it peer-reviewed and published and cited in at least 3 literature overviews. THEN it's obvious." -- Investigator David Lantz "Q: Why is this obvious? That depends on what your definition of 'is' is." A: -- Investigator T. Rose "I could tell you why and it would thrill you. I could tell you why and it would chill you. "Please tell me why, O will you, will you?" I could tell you why but I'd have to kill you." -- Investigator Ray Orrange _____ 1999-01-11 Classic Obviousness Obviously, there is a rich history to this matter of mathematicians and the obvious. It is necessary and sufficient to present three examples: This is a certifiably non-original story I tell to all math majors

I encounter: One mathematician was showing his new theorem to another. The colleague pointed at the chalkboard and asked how the theorem went from one step to the next. The first mathematician said, "That's obvious." The second went to a second blackboard, spent an hour filling it up with complex calculations, then stepped back and said, "You're right, it IS obvious." -- Patrick Lenon

It's worth recalling the story of the very famous mathematician G.H. Hardy, who in a lecture said about some detail in a proof: "This is obvious." After a pause, he went on: "Hmm, is it really obvious?" After another pause he left the room to consider the point, returning 20 minutes later with the verdict: "Yes, I was right, it is obvious."

-- J.R. Partington

М

From: "Simon" <spook@earthcorp.com> Gauteng Province (Johannesburg) - New Maths Exam

Please all read instructions carefully:

Please write all answers between the lines. No part of the answer book may be rolled and smoked. No children of students are allowed to participate. Please leave firearm in possession of parole offices. Bribes will be accepted at a minimum of R100. If this exam does not match the one you have bought in advance, please notify the examiner.

QUESTION 1

Philemon has an AK47 with 2 magazines taped together, each holding 30 rounds. If he misses 8 out of 10 shots, how many drive-by taxi shootings can he attend before having to reload?

QUESTION 2

Phineas has a 12 seater minibus, but to avoid discomfort he never carries more than 23 people. Assuming each passenger weighs 85 kg and piles 35 kg of luggage on the roof, he drives 140 km/h and that his brakes are 25% efficient, what would his stopping distance be? a) 300m b) 600m c) 10m as there is another passenger to pick up.

QUESTION 3

Jacob is employed as a garden boy for one day a week for 5 households. Assuming that he can make a lawn mower last 3 months, how many lawn mowers will the household have to buy in a period of 2 years.

QUESTION 4

In standard 6, Jackson has made 4 girls pregnant and another 6 from other classes. How many girls will he have got pregnant before he leaves school if he matriculates on his 20th birthday?

QUESTION 5

Samuel and his friends, altogether 6 of them, can each drink 35 bottles per day of Castle Lager before falling over. How many SAB trucks do they need to hijack per year to remain permanently pissed? M______

From: Satyre

Μ_

MID-TERM MATH EXAM

EBONICS VERSION

Directions: Make sho yo be putting yo name on the upper rite hand comer. Don't be axin' no dumbass questions an keep yo shifty mothafuckin' eyes on yo own sorryass papers.

Number 1 (25%) Elon and Tyrell bot want to meet fo lunch. Elon's home be 5 mile north of Tyrell. If Elon leave at 10:30 bookin bout 3 mile per hour while Tyrell, who have one coolass bike, ain't not departin' till I 1:00 zoomin bout 20 mile per hour, what time be Elon axin' Tyrell for a bite of fiied chicken?

Number 2 (25%) Yolanda, she be 11 year older than her daughter Carinda. Carinda have a bitch Carmel who haf her age. In how many years be Carmel haf as old as that uglyass ho Yolanda?

Number 3 (40%) If Leroy axes Marvin fo 10 gram of 60% coke an Marvin ain't not got nothing but 8 gram of 80% and some ol 20% shit, how much of the cheap stuff be Marvin mixing up so Leroy can go off the hizzie?

Number 4 (10%) Lenwood and Keshawn jus lifted one gross of basketballs offa Kmart. If studly Lenwood can dunk fo mo balls per minute than Keshawn, how long be these bros slammin and jammin fo they be needin suh mo balls to play wif?

Extra Credit (5 points) Which number, A or B be bigger? Make sho you shows all yo work.

A. The total number of hos Wilt Chamberlain and B.B. King be sleeping wif.

B. The number of yard OJ done ran fo in his best season timeses the number a cuts he be putting in that nogood honkey bitch Nicole afta catchin her wif a guy what ain't got no goddam mothafuckin rights be ridin roun wif OJs car.

Los Angeles High School Math Exam

1. Johnny has an AK47 with a 40 round clip. If he misses 6 out of 10 shots and shoots 15 times each drive by, how many drive by shootings must he conduct before he shoots 50 people? 2. Paul has 2 ounces of cocaine and he sells 10 grams to Jackson for \$820, and 2 grams to Billy for \$85 per gram. What is the street value of the balance of the cocaine if he doesn't cut it? 3. Willie gets \$200 for stealing a BMW, \$50 for a Chevy and \$100 for a 4x4. If he has stolen two BMWs and three 4x4s, how many Chevys will he have to steal to make \$800? 4. If the contents of an average can of spray paint covers 22 square feet and the average letter is eight square feet, how many letters can a teenager spray with eight cans of paint? 5. Hector got six girls in his gang pregnant. There are 27 girls in the gang. What percentage of girls in the gang has Hector knocked up? 6. Kathy gets \$125 for sneaking an illegal alien across the border from Mexico. She sneaked three illegals over the border every night for six davs but then one of them ripped her off for \$500. How much money does she have left? 7. Byron can trade \$150 worth of food stamps for two tickets to a Lakers regular season game. If a play-off game costs 20 percent more, how many play-off tickets can he get for \$500 in food stamps? From: From: jdmcmine@coop2.b11.ingr.com (Jeff) Answers to City of Los Angeles High School Math Proficiency Exam 1. Johnny has an AK47 with a 40 round clip. If he misses 6 out of 10 shots and shoots 15 times each drive by, how many drive by shootings must he conduct before he shoots 50 people? Johnny hits 15*(4/10) people per drive by, which means that he will have to participate in 9 drive bys to shoot 50 people. However, he will have completed two drive-by shootings and be just starting the third when he has to reload. Since he only stole a single clip, he'll only have shot 16 people when the

2. Pony has 2 ounces of cocaine and he sells an 8 ball to Jackson for \$320 and 2 grams to Billy for \$85 per gram. What is the street value of the balance of the cocaine if he doesn't cut it?

homeboys with the UZIs' make Swiss cheese out of him.

At 454 grams per pound, 2oz of the rock = 56.75 grams. An "8 ball" is 8 grams, so pony has sold 10 grams total and has 46.75 grams left. If he keeps selling 8-balls, he can sell 5 more (for a total of 5*\$320=\$1,600) and have 6.75 grams for his own nose. If he sells 2 gram packs, he can sell (46/2-23) packs at \$85 apiece = (23*\$85)=\$1,955. However, he could divide it into small parts, bake it up into crack and sell the rocks for an even larger profit. This problem is really more suited for the Gang Multi-Variable Economics Test.

3. Ron is pimping for 3 girls. If the price is \$65 for each trick, how many tricks will each have to turn so Ron can pay for his \$800 per day crack habit.

800/\$64=12 tricks plus a dance. Also, Ron should consider making a deal with Pony from Question #2.

4. Susan wants to cut her 1/2 pound of heroin to make 20% more profit. How many ounces of cut will she need?

If she sells the cut heroin at the same price per unit volume, she will need 20% more volume. 20% of 1/2 pound (=8oz) is 1.6oz. So, Susan will need 1.6oz of cut to add to the 8 oz of heroin to get 20% more volume. She will want a cut which looks similar to raw heroin and has approximately the same melting point. Plain sugar or laundry detergent are suggested. Laundry detergent has the added benefit of removing the possibility of customer complaints, but will sharply limit repeat business.

5. Blade gets \$200 for stealing a BMW, \$50 for a Chevy, and \$100 for a 4x4. If he has already stolen 2BMW's and 3 4x4's, how many Chevy's will he have to steal to make \$800?

Blade has made 2*\$200 + 3*\$100=\$700 dollars from his theft so far. He needs \$100 more, so he needs to steal \$100/\$50=2 more Chevy's. However, he will probably want to steal 4 Chevy's so he can take the extra two and make a really def low-rider.

6. Little Willy is in prison for 6 years for murder. He got \$25,000 for the hit. If his common law wife is spending \$250 per month, how much money will be left when he gets out of prison and how many years will he get for killing the bitch that spent his money?

6 years*12 months/year*\$250/month=\$18,000. Little Willy will have \$25,000 - \$18,000 = \$7,000 left when he gets out of prison. If Little Willy kills her in the USA, he should expect to get 6 years. However, if he takes her down to Mexico and buries her scrawny, track-marked butt in the desert, he can get off scott free.

7. If the average can of spray paint covers 22 square feet, and the average letter is 4 square feet, how many letters can a tagger spray with 3 cans of paint?

3 cans of paint will cover 3*22=66 square feet. 66/4=16 letters with a little paint left over to spray in the eyes of the cop who's comin' after you. Or the tagger could do 15 letters and a bitchin' skull.

8. Hector knocked up 6 girls in his gang. There are 27 girls in the gang. What percentage of the girls in the gang has Hector knocked up?

6/27=22% of the girls. However, 2 of them are lying because they've been sleeping with Pedro, Hector's lieutenant. So, in actuality, Hector only knocked up 4/27 or 14.8%.

9. Rosie's sole source of income is shoplifting. If she gets 10 cents on the dollar from her fence, how much merchandise must she shoplift each week to make \$250.

Solve X/10=250 for X, X=\$2,500.

10. Mike carjacked a Chevy Camaro for his date Saturday night with his young 14 year old girlfriend. He was arrested that night while making his girlfriend in the backseat. How much prison time is he looking for for the carjacking and for statutory rape, even though the girl looked legal? Assume no prior convictions in arriving at your answer.

Mike is only 12 so he will serve no time and will be making his girlfriend in the lot in someone else's car next Saturday. M

From: Kurt Jaeger <jaegerk@cae.wisc.edu> One of my undergrad professors was asked what kind of of problems would be on the final. His answer: "Just study the old tests. The problems will be be the same, just the numbers will be different. But not all the numbers will be different. Pi will be the same. Planck's constant will be the same... "

Another professor, when asked how many problems there would be on the final, turned to the student and replied, "I think you will have lots of problems on the final." ${\tt M}$

From: Peter Taylor <P.A.Taylor@open.ac.uk> This isn't really a joke, it supposedly happened in a UK GCSE exam some years ago, but it may amuse you:

question: how many times can you subtract 7 from 83, and what is left afterwards? answer: I can subtract it as many times as I want, and it leaves 76 every time. M

From: Jonathan W. Hoyle <jhoylel@rochester.rr.com> I don't know of that one. But when I was an undergrad, one of my professors told me that when he was a student, and he had trouble with a proof trying to get past step n to step n+1, he would always start with "Clearly ..." Although, he said, he'd get a few points off for "needing more detail at this step", his professor thought that he knew what he had to do, so he'd largely get away with it.

He also informed us that because he knew the trick, he was not likely to be fooled if we tried to pull that stunt. :-) \underline{M}

From: William L. Bahn <bahn@bfe.com>
I think the one you might be referring to shows a proof that starts at
the
beginning and goes partway. It then picks up again and proceeds to the
end.

In the middle between the two parts is a something like, => Then a miracle occurs => The professor, looking at the proof, comments, "You need to be a little more explicit here in step two." Once, when I was grading an exam, I got a paper that had the right answer to four sig figs. But the problem had been set up incorrectly from the very first line. I was therefore all geared up to ream this student a new one for cheating - or for the very least for employing "magical methods" which is quite common when the answers to a problem are in the back of the book. As I worked through this student's work, it turned out that they had made three separate errors - they had set the problem up completely wrong. Thev had taken a quantity from one side of the equation to the other and didn't flip the sign and they had added to fractions over different denominators bv simply adding the denominators. The last two math blunders are common mistakes (and I firmly believe that the level of skill necessary to walk the correct answer back to the initial work and tie it in through the use of these devices was way beyond this student's reach). But, it turned out that that the combination of the three unrelated errors just happen to yield the right answer to four sig figs. While I found this very intriguing and interesting, I graded the problem just as though the answer had only been close. But I did layout this peculiar coincidence to the entire class. I was surprised by the number of students that truly felt that the guy should have received full credit for the problem since, "Why should it matter HOW the answer is arrived at, as long as it's correct." BTW: The guy whose paper it was agreed that the answer deserved no more credit than any incorrect result. The guy that was the most vocal about how unfair this was wouldn't let it go, so I asked him, "Let's say you went to a doctor with a certain ailment and he gave you a prescription and you took it and got better. You then found out that he had misdiagnosed your ailment completely. He looked up the treatment in the Physician's Desk Reference, but read the wrong line from the index and so turned to yet another ailment in the book. When writing the prescription he then transposed some numbers in the dosage. The end result, purely by coincidence, it that you got a prescription for the right medicine

in the right dosage and everything worked. Would you be eager to give that doctor full credit and go back to him again? Or would you say, "I'm sure happy that you got lucky, but your license to practice should be yanked immediately." M

From: Daniel Giaimo <dgiaimo@nospam.ix.netcom.com>
 Another version I've heard is that when the student gets the paper
back he
sees a -1 on that problem which has been crossed out. A note on the back
explains that the grader at first didn't think that this step was
obvious, but
after thinking about it for an hour, decided that it was.
M______

Μ_ TOP TEN EXCUSES FOR NOT DOING THE MATH HOMEWORK I accidentally divided by zero and my paper burst into flames. 1. Isaac Newton's birthday. 2. 3. I could only get arbitrarily close to my textbook. I couldn't actually reach it. 4. I have the proof, but there isn't room to write it in this margin. 5. I was watching the World Series and got tied up trying to prove that it converged. 6. I have a solar powered calculator and it was cloudy. 7. I locked the paper in my trunk but a four-dimensional dog got in and ate it. 8. I couldn't figure out whether i am the square of negative one or i is the square root of negative one. 9. I took time out to snack on a doughnut and a cup of coffee. I spent the rest of the night trying to figure which one to dunk. 10. I could have sworn I put the homework inside a Klein bottle, but this morning I couldn't find it.

Μ_

From: Leon@MOR.com (Leo & Mary)

Date: Wed, 06 May 1998 20:19:41 PDT
(I am not sure if this advertisement is for real, but it is certainly
worthwhile for this list - JV)

Dear fellow parent!

This message is for you and the children around you.

What is more valuable for you and your child: a lollypop, a bagful of plastic stuff in a party favor, a box of mints or a meaningful and enjoyable half-hour with your loved one? Either one will cost you about the same - one dollar.

Are you aware of the depressing statistics of recent international science contests for school children? Do you know that American children regularly score very poorly (to say the least) in basic quizzes, failing to provide adequate answers to simple questions like "When does your mom put more pressure on the floor: when she wears high and thin heels or low and thick ones?" Does it concern you?

If your answer is yes, you might be interested in further reading. If no - pass this message on to someone who might care about the subject.

We are a happy family with three children who enjoy an untraditional way of learning math, logic and basic physics.

We put together problems on the basis of our children's school curriculum for practice and as a quality pastime with the children. In fact we have written a book of these problems, hoping that it might be a good idea to publish it later on.

Please take at least a scanning look through the problems below.

MATH'O'RIDDLES

 Two groups of 12 Lower Division kids came to a Zoo for a field trip. The class gathered around a cage with 15 lazy tigers. Watching those healthy looking children the tigers got real hungry, escaped from the cage and ate some of the kids.

How many scared kids survived if each tiger's tummy can hold only 1 child?

2. 40 old ladies came to an old man's birthday party. Each and every one of

those joyful ladies brought 2 combs as a gift for the old man.

How many combs did this entirely bald old man get for his birthday?

3. After a Water Conservation lecture most of the Lower Division students decided not to run the water. One half of the Lower Division came to school with dirty hands, and the other half with dirty faces.

How many students are there in the Lower Division if 190 boys and 146 qirls came to school with dirty faces? 4. One rainy morning elephant Gary in a local Zoo got 35 buckets of drinking water with ice. By 3 o'clock in the afternoon he had finished the 21st bucket and decided to use the rest of the buckets to water the Zoo manager. How much water did Gary use to please the Zoo manager on that cold and windy day? 5. Students of the 2nd grade have 44 ears. Their math teacher has 42 ears less. How many ears are there in the classroom? 6. Suzan made 11 spelling errors in her test. Bobbie (who was peeking into her paper and copied everything) made 29 errors. How many of his own errors did Bobbie make? 7. How many holes did Andy's mom find in the tablecloth after Andy pierced it 12 times with a 4-tooth fork? 8. A family with 2 well-behaved sisters is having a Friday night dinner at home. Their little brother is under the table: he is busy cutting one of the table's legs with a band saw. The tireless boy is working at the speed of 1/2 inch of the table's leg per minute. How long will the dinner last if the table's leg is 3 inches thick? 9. 12 very strict teachers set up a special meeting with the purpose of scolding one troublemaker from the 2nd grade. Each teacher took 15 minutes worth of scolding the student. How long did this unpleasant meeting last? 10. An Olympic hotdog is 75 centimeters long. How long it will take for a gold medallist to finish the dog if he eats at the speed of 25 centimeters a minute? What about the silver and bronze medallists? They eat dogs at the speed of 15 and 10 centimeters a minute respectively. 11. Stacey's mother had a few very expensive pieces of jewelry. Stacey just learned at school that airplanes can fly. She threw half of her mom's jewelry out in a window to see if jewelry can fly and swim in the pond below.

How many pieces of jewelry flew out of the window and struggled in the water if 3 rings and 2 necklaces was all her mommy had left after the experiment? 12. Mr. Black proposed to Ms. White to marry him. She promised to think about it. She thought for 15 years and refused. Mr. Black proposed again. Ms. White was thinking 6 years longer than the first time and agreed to marry him. How many years did Mr. Black spend hoping to get Ms. White for his wife? Got an idea? If you are still interested, please continue. Problems can easily be arranged per level, topic or any other criteria. We believe that Math'O'Riddles will help your child develop logical yet out-of-the-box thinking and have fun in the process. We also believe it may help parents spend more time with their children ... Publishing the book may or may not be a good idea. How about a Web page? Do you think we will have any subscribers? Please take a moment and fill out a little questionnaire. -----Please highlight the text from here to "Ideas?", "Cut" and "Paste" into a "New Message", fill out and send to MathORiddle@mailcity.com. Please DO NOT USE THE "REPLY" FUNCTION OF YOUR E-MAIL SOFTWARE: we are not yet equipped to receive your reply this way. I like your Math'O'Riddles I really don't care because ... I think a Web page is a good idea I don't think it's a good idea because I have a better name for it: I'm interested in getting involved in the project and I can: ____ Offer illustrations and sketches ____ Suggest more Math'O'Riddles ____ Help create the Web page _____ Help with graphics ____ Help promote your page ____ Help with publishing ____ Help financially ____ Any other comments? Suggestions? Ideas?

If you like the project please help us pull it off the ground by donating a dollar (\$1, or more if you'd like) to enable us to cover part of our

initial investment and expenses.

Please:

 E-mail the questionnaire to MathORiddle@mailcity.com so we can send you more Math'O'Riddles 2. Put your cash or check along with any additional comments you may have in an envelope (make sure the cash does not show through) and mail to:

Leo & Mary PO Box 2187 Tampa, FL 33601-2187

3. As a "Thank you!" note we will e-mail to you another dozen of Math'O'Riddles within a few days upon receipt of your donation.

Thank you for your time and consideration.

Leo & Mary M

From: Michael Cook <mlc@iberia.cca.rockwell.com> The following is from a Calvin and Hobbes cartoon dated 3/6/91.

Calvin: You know, I don't think math is a science, I think it's a religion.

Hobbes: A religion?

Calvin: Yeah. All these equations are like miracles. You take two numbers and when you add them, they magically become one NEW number! No one can say how it happens. You either believe it or you don't. [Pointing at his math book] This whole book is full of things that have to be accepted on faith! It's a religion!

Hobbes: And in the public schools no less. Call a lawyer.

Calvin: [Looking at his homework] As a math atheist, I should be excused from this.

From: TwistedLst (twisted_list@coollist.com)

A ten year old boy was failing math. His parents tried everything from tutors to hypnosis, but to no avail. Finally, at the insistence of a family friend, they decided to enroll their son in a private Catholic school.

After the first day, the boy's parents were surprised when he walked in after school with a stern, focused and very determined expression on his face, and went right past them straight to his room, where he quietly closed the door.

For nearly two hours he toiled away in his room - with math books strewn

about his desk and the surrounding floor. He emerged long enough to eat, and after quickly cleaning his plate, went straight back to his room, closed the door, and worked feverishly at his studies until bedtime.

This pattern continued ceaselessly until it was time for the first

quarter report card. The boy walked in with his report card -- unopened -- laid it on the dinner table and went straight to his room. Cautiously, his mother opened it, and to her amazement, she saw a bright red "A" under the subject of MATH. Overjoyed, she and her husband rushed into their son's room, thrilled at his remarkable progress. "Was it the nuns that did it?", the father asked. The boy only shook his head and said, "No." "Was it the one-on-one tutoring? The peer-mentoring?" "No." "The textbooks? The teachers? The curriculum?" "Nope," said the son. "On that first day, when I walked in the front door and saw that guy they nailed to the 'plus sign,' I just knew they meant business!" Μ_

Boy's Life, May 1973:

Ralph: Dad, will you do my math for me tonight? Dad: No, son, it wouldn't be right. Ralph: Well, you could try.

М

From: Very Nice Guy <ngsophus@pacific.net.sg>

Friends, Countrymen, fellow Netizens lend me your eyes:

season's greetings, peace and prosperity to all

Today in this TK session, i shall talk about something which is dear to our hearts, nostrils and intestines - namely the elusive true secret to success in Mathematics, which is a grave concern of all students, parents, principals, teachers, aunties and pet hamsters alike. Without further ado, by your leave, allow me to share with you

THE TRUE SECRET TO SUCCESS IN MATHEMATICS

Once upon a time in a remote island far, far away in the deep recesses of Hilbert Space, there lived a boy called BoyBoy who was having a long history of problems with mathematics in school. He also had a low self-esteem and just was not interested. As a concerned parent, his mother, called MaMa, tried all sorts of ways to encourage, coax, threaten, cajole him into performing in mathematics. This included caning, buying him expensive toys, nagging, buying him his favourite computer games, more nagging, bringing him to all the places he longed to visit, even more nagging ... etc. And all these to no avail. BoyBoy's mother even went up to the school to talk to the school maths teacher Pierre Simon Lagrange XXIV, a recent 'A'-level graduate substitute

teacher with absolutely no teaching experience at all, and asked : "What is the true secret of success in mathematics, O Wise and Erudite Teacher?". And thus spake the inexperienced relief-teacher: "Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times." Upon hearing this BoyBoy's mother was shocked and disillusioned. She was disappointed at the school authorities for hiring an untrained teacher who uttered such utter nonsense. BoyBoy's mother decided to engage the services of a tutor. So she called a tuition agency, who recommended a tutor called Issac Galois XIII. This part-time tutor is an engineering graduate with some experience in teaching and charged 10 cents per month. Of course, 5 cents commission was due to the agency, at the expense of the tutor. BoyBoy's mother asked the tutor: "What is the true secret of success in mathematics, O Wise and Erudite Teacher?". And thus spake the part-time tutor: "Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times." Upon hearing this BoyBoy's mother was infuriated and summarily sacked the engineer. She still had to pay the 10 cents, of which 5 cents goes to the agency. Frustrated, BoyBoy's mother thought to herself: "I shan't trust these agencies anymore. I shall look for a tutor myself." So she scoured the newspapers and soon found a tutor by the name of Stephen Gauss IX, a mathematics graduate with 1 year experience in teaching. This tutor charged \$10 per month for a minimum of 12 months. A year and \$120 later, BoyBoy still had no progress in mathematics and BoyBoy's mother began to feel a little panicky. So she asked the tutor: "What is the true secret of success in mathematics, O Wise and Erudite Teacher?". And thus spake the part-time tutor: "Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times." Upon hearing this BoyBoy's mother experienced deja VIJ and decided to discontinue this tutor's services. Now BoyBoy's mother was disappointed but she did not give up. She asked among her friends for a recommendation and was soon referred to Leonhard Archimedes V, a trained full-time tutor, graduate of the world-famous Camford University with 10 years' teaching experience, charging \$1000 per month for a minimum of 5 years. This tutor gave ВоуВоу copious amounts of notes, summaries, tips, homework, past-year examination papers from the top schools for practice, more homework, hands-on model making, more homework, Internet explorations with Java-powered animations and 3D-VRML live demonstrations, field trips to Mathematical places, creative visualisations, mind bending exercises, IQ stretching exercises,

more homework and vast array of demonstrations with exotic gadgets, curious contraptions and other paraphernalia.... This really impressed BoyBoy's mother a lot. However at the end of the 5 years, there was only marginal progress. And BoyBoy's mother began to feel rather panicky and began to wonder if this tutor was holding back any secrets. So she confronted this tutor asking: "What is the true secret of success in mathematics, O Wise and Erudite Teacher?". And thus spake the Camford-graduate tutor: "Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times." Upon hearing this BoyBoy's mother was experienced cognitive dissonance. However, since the tutor was from Camford and was charging \$1000 per month, he must know something, so reasoned BoyBoy's mother. Consequently she decided to give this tutor the benefit of the doubt and try out his advice. The next day after making BoyBoy eat the garlic and onions and recite the 'I love Maths' slogan as prescribed (much to BoyBoy's protest), BoyBoy's mother bundled him to school. Then everybody avoided BoyBoy, even his girl-friend of 9 years dumped him. The experience left him utterly miserable. BoyBoy, now in his late adolescent years, felt that enough was enough and decided to assert his independence. He plucked up enough courage to speak to his mother, saying "MaMa, I think I do not need you to look for tutors for me anymore. I know the importance of being good at maths. You need not worry about me. I shall look for Carl Hawking I, the Ultimate Tutor myself." Incidentally Boyboy had learned about the Carl Hawking I, the Ultimate Tutor from his web page in the Internet. A double PhD from Stanvard University, three time Field's Medallist (mathematical equivalent of Nobel Prize), the Ultimate Tutor had 100 years' experience in teaching and had solved the Remand Hypothesis, Goldmine Conjecture and proved the Quasi-contravariant K-27-Hyperbundle Global Chromatic Embedding Theorem, all before the age of 12. Now he is meditating in some remote mountain in the upper reaches of the Continuum. Of course BoyBoy's mother was touched. On the other hand she was worried as the journey into the Continuum was long and arduous and fraught with dangers. However BoyBoy insisted on going. Boyboy's mother wanting the best for her son, was faced with Hobson's choice. She packed lots of water and rations, instant noodles, a portable stove, herbs, tonics and ginseng before tearfully sending him away. After crossing several oceans, traversing a few deserts, cutting through a multitude of thick jungles, trekking along meandering rivers one after another and trudging along through fields upon fields of snow, ВоуВоу arrived at the foot of the Continuum. Then he began his mile-long vertical ascent of the Continuum. After reaching the summit, BoyBoy still had to spend six months locating Carl Hawking I, the Ultimate Tutor's, by which time BoyBoy was extremely exhausted, hungry, thirsty, bruised and scarred. He plodded his way to greet the Ultimate Tutor, saying : "O Master,

Ultimate Tutor, I have long sought for thee and at last I have found thee. I pray thee, tell me, what is the true secret of success in mathematics, 0 Wise and Erudite Teacher?". The Master with a mile-long white beard, though slightly annoyed by the interruption, was impressed by BoyBoy's sincerity. And thus spake Carl Hawking I, the Ultimate Tutor: "My son, my dear son, the time is not ripe for thee to receive the answer, for thine heart is not yet purified. Go thou, wash my beard every day for ten years.". Boyboy's heart sank but he did as he was told. Daily for the next ten years Boyboy washed the Master's mile-long white beard, which was often littered with yak excrement. Yet Boyboy endured the stench, being so delighted to have found wisdom and true meaning in life. He also noted that as he washed nearer the Master, there was another kind of smell that somehow neutralised the odour of the yak excrement, but could not figure out what it was. Also occasionally, BoyBoy overheard the Master mumbling something from afar as he washed, but could not make out what it was. All these added to the intrigue and stoked the flames of curiosity burning in the young man's breast. And at the end of ten long years, BoyBoy, a man by now, could not hide his urgency when he asked: "O Master, Ultimate Tutor, Т have religiously cleaned your beard for ten years daily without fail and have purified my heart. Now I beseech thee, tell me, what is the true secret of success in mathematics, O Wise and Erudite Teacher?". And thus spake the Ultimate Tutor: "Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times." Upon hearing this BoyBoy felt betrayed, and protested : "But, O Master, that was what all my earlier tutors said.". And thus replied the Ultimate Tutor : "If I said that in the beginning, vou wouldn't have believed me, would you?". The Moral of the Story is: Every day eat one hundred bulbs of garlic and one hundred bulbs of onions, look in the mirror and repeat the phrase 'I love Maths' one hundred times AND FOR GOODNESS SAKE COVER YOUR MOUTH! [Disclaimer: All names mentioned herein have been inversed to protect the guilty. Any semblance to real persons or parties is purely collinear.] Μ_ From: "Mr Funny Bone International" <funnybone@lineone.net> Little Johnny was busy doing his homework. As his

mother approached she heard:
 "One and one, the son-of-a-bitch is two."
 "Two and two, the son-of-a-bitch is four."
 "Three and three... "
His mother interrupted, asking where he had learned
this way of doing math. Johnny remarked that his
teacher Ms. Clara Jones taught him.

His mother was rather upset and told him to stop the homework. The next day she approached Ms. Jones and told her what happened. The teacher was flabbergasted. She said that she couldn't understand why Johnny had said what he did. Then suddenly, Ms Jones exclaimed, "Oh, I know... here in school we say, one and one, the sum-of-which is two." M______

A somewhat advanced society has figured how to package basic knowledge in pill form.

A student, needing some learning, goes to the pharmacy and asks what kind of knowledge pills are available. The pharmacist says "Here's a pill for English literature." The student takes the pill and swallows it and has new knowledge about English literature!

"What else do you have?" asks the student.

"Well, I have pills for art history, biology, and world history," replies the pharmacist.

The student asks for these, and swallows them and has new knowledge about those subjects.

Then the student asks, "Do you have a pill for math?"

The pharmacist says "Wait just a moment", and goes back into the storeroom and brings back a whopper of a pill and plunks it on the counter.

"I have to take that huge pill for math?" inquires the student.

The pharmacist replied "Well, you know math always was a little hard to swallow." M

From: Knut Lorenzen <lorenzen@p-net.de> The following story is true, I was a personal witness. A math-prof (his nickname was "Lord Number") was talking quite a while on "n-dimensional manifolds". He was *far* off comprehension of most of the listeners and finally adressed his audience: "So what do you think is the volume of an infinite-dimensional unit-sphere ?"

Silence. After a while a voice from the backrows: "42 !" That did it.

P.S.: Actually, this volume is zero (!). It is inverse proportional to a Gammafunction depending on n. \underline{M}

From: RickT <taylor@wrex.u-net.com> Quotes from Maths Lessons:

Student: What have I done wrong here? [puzzled] Teacher: You have cancelled 4/9 to get 1/3 Student: Yeah... Teacher: Which is well - wrong. Hold on, I think I have just spelt that number wrong..... Yeah, that's it 0.4661 should be spelt 0.4116.....That's better. M

A commentary on the teaching of mathematics, sent in by James Jackson of Carlisle, Ind., appeared in "Echoes" (winter 1994), published by Rose-Hulman Institute of Technology, Terre Haute, Ind. "Echoes" took it from the 1993-94 issue of "21st Century" (not otherwise identified). The commentary takes the form of a series of story problems:

In 1960: A logger sells a truckload of lumber for \$100. His cost of production is four-fifths of this price. What is his profit?

In 1970: A logger sells a truckload of lumber for \$100. His cost of production is four-fifths of this price, or \$80. What is his profit?

In 1970 (new math): A logger exchanges a set L of lumber for a set M of money. The cardinality of set M is 100, and each element is worth \$1.00. Make 100 dots representing the elements of the set M. The set C of the costs of production contains 20 fewer points than set M. Represent the set C as a subset of M, and answer the following question: What is the cardinality of the set P of points?

In 1980: A logger sells a truckload of wood for \$100. His cost of production is \$80, and his profit is \$20. Your assignment: underline the number 20.

In 1990 (outcome-based education): By cutting down beautiful forest trees, a logger makes \$20. What do you think of this way of making a living? (Topic for class participation: How did the forest birds and squirrels feel?)

From: Mark Mihalasky <mjm@geol.uottawa.ca>
In 1997 (profit-driven education): By laying off %40 of the its loggers,
a
company improves its stock price from \$80 to \$100. How much capital gain
per share does the CEO make by exercising his stock options at \$80?
Assume
capital gains are no longer taxed, because Republicans feel this
encourages
investment.
M

From: brum@ix.netcom.com (Edward Brumgnach) The Evolution of Teaching Math

Up to the 1960's A peasant sells a bag of potatoes for \$10. His costs amount to 4/5 of his selling price. What is his profit?

In the early 1970 s

A farmer sells a bag of potatoes for \$10. His costs amount to 4/5 of his selling price, i.e., \$8. What is his profit? 1970's (new math) A farmer exchanges a set P of potatoes with a set M of money. The cardinality of the set M is equal to \$10 and each element of M is worth \$1. Draw 10 big dots representing the elements of M. The set of production cost is comprised of 2 big dots less then the set Μ. Represent C as a subset of M and give the answer to the question: What is the cardinality of the set of profits? 1980 s A farmer sells a bag of potatoes for \$10. His production costs are \$8 and his profit is \$2. Underline, the word "potatoes" and discuss with our classmates. 1980's (alternative math) A kapitalist pigg undjustlee akires \$2 on a sak of patatos. Analiz this tekst and sertch for erors in speling, contens, grandmar and ponctuassion, and than ekspress your vioos regardeng this metid of geting ritch. 1990's A farmer sells a bag of potatoes for \$10.00. His production costs are 0.80 of his revenue. On your calculator graph revenue versus costs. Run the "POTATO" program on your computer to determine the profit. Discuss the result with the other students in your group. Write a brief essay that analyzes how this example relates to the real world of economics. From: Markus Schäfer <markus@infra.de> Waldorfschool: Paint a potato while singing a song М From: avi-g@usa.net Teaching Math Teaching Math in 1950: A logger sells a truckload of lumber for \$100. His cost of production is 4/5 of the price. What is his profit? Teaching Math in 1960: A logger sells a truckload of lumber for His cost of production is 4/5 of the price, or \$80. What is his profit? Teaching Math in 1970: A logger exchanges a set "L" of lumber for a set "M" of money. The cardinality of set "M" is 100. Each element is worth one dollar. Make 100 dots representing the elements of the set "M".

The set "C", the cost of production, contains 20 fewer points than set "M." Represent the set "C" as a subset of set "M" and answer the following question: What is the cardinality of the set "P" for profits? Teaching Math in 1980: A logger sells a truckload of lumber for \$100. Her cost of production is \$80 and her profit is \$20. Your assignment: Underline the number 20. Teaching Math in 1990: By cutting down beautiful forest trees, the logger makes \$20. What do you think of this way of making a living? Topic for class participation after answering the question: How did the forest birds and squirrels feel as the logger cut down the trees? There are no wrong answers. Teaching Math in 1996: By laying off 40% of its loggers, a company improves its stock price from \$80 to \$100. How much capital gain per share does the CEO make by exercising his stock options at \$80? Assume capital gains are no longer taxed, because this encourages investment. Teaching Math in 1997: A company out-sources all of its loggers. The firm saves on benefits, and when demand for its product is down, the logging work force can easily be cut back. The average logger employed by the company earned \$50,000, had three weeks vacation, a nice retirement plan and medical insurance. The contracted logger charges \$50 an hour. Was out-sourcing a good move? Teaching Math in 1998: A laid-off logger with four kids at home and a ridiculous alimony from his first failed marriage comes into the logging company's corporate offices and goes postal, mowing down 16 executives and a couple of secretaries, and gets lucky when he nails a politician on the premises collecting his kickback. Was outsourcing the loggers a good move for the company? Teaching Math in 1999: A laid-off logger serving time in Folsom for blowing away several people is being trained as a COBOL programmer in order to work on Y2K projects. What is the probability that the automatic cell doors will open on their own as of 00:01, 01/01/00?

Μ_

From: MLCOOK@CCA.ROCKWELL.COM What is (15 minus three times five) plus (20 minus four times five) plus (36 minus nine times four) plus (72 minus nine times eight) plus (98
minus
eight times twelve) plus (56 minus seven times eight)
[... and on and on ...]?
A lot of work for nothing.
-- as told to me by my daughter Amy
+++
=1.10 MATHEMATICAL TESTS TO TAKE

Μ_

This was made by Mike Bender and Sarah Herr:

MATHEMATICS PURITY TEST

Count the number of yes's, subtract from 60, and divide by 0.6.

The Basics

1) Have you ever been excited about math? 2) Had an exciting dream about math? 3) Made a mathematical calculation? 4) Manipulated the numerator of an equation? 5) Manipulated the denominator of an equation? 6) On your first problem set? 7) Worked on a problem set past 3:00 a.m.? 8) Worked on a problem set all night? 9) Had a hard problem? 10) Worked on a problem continuously for more than 30 minutes? 11) Worked on a problem continuously for more than four hours? 12) Done more than one problem set on the same night (i.e. both started and finished them)? 13) Done more than three problem sets on the same night? 14) Taken a math course for a full year? 15) Taken two different math courses at the same time? 16) Done at least one problem set a week for more than four months? 17) Done at least one problem set a night for more than one month (weekends excluded)? 18) Done a problem set alone? 19) Done a problem set in a group of three or more? 20) Done a problem set in a group of 15 or more? 21) Was it mixed company? 22) Have you ever inadvertently walked in upon people doing a problem set? 23) And joined in afterwards? 24) Have you ever used food doing a problem set? 25) Did you eat it all? 26) Have you ever had a domesticated pet or animal walk over you while you were doing a problem set? 27) Done a problem set in a public place where you might be discovered? 28) Been discovered while doing a problem set?

ky Stuff

29) Have you ever applied your math to a hard science? 30) Applied your math to a soft science? 31) Done an integration by parts? 32) Done two integration by parts in a single problem? 33) Bounded the domain and range of your function? 34) Used the domination test for improper integrals? 35) Done Newton's Method? 36) Done the Method of Frobenius? 37) Used the Sandwich Theorem? 38) Used the Mean Value Theorem? 39) Used a Gaussian surface? 40) Used a foreign object on a math problem (eg: calculator)? 41) Used a program to improve your mathematical technique (eg: MACSYMA)? 42) Not used brackets when you should have? 43) Integrated a function over its full period? 44) Done a calculation in three-dimensional space? 45) Done a calculation in n-dimensional space? 46) Done a change of bases? 47) Done a change of bases specifically in order to magnify your vector? 48) Worked through four complete bases in a single night (eg: using the Graham-Schmidt method)? 49) Inserted a number into an equation? 50) Calculated the residue of a pole? 51) Scored perfectly on a math test? 52) Swallowed everything your professor gave you? 53) Used explicit notation in your problem set? 54) Purposefully omitted important steps in your problem set? 55) Padded your own problem set? 56) Been blown away on a test? 57) Blown away your professor on a test? 58) Have you ever multiplied 23 by 3? 59) Have you ever bounded your Bessel function so that the membrane did not shoot to infinity? 60) Have you ever understood the following quote: "The relationship between Z^0 to C_0, B_0, and H_0 $\,$ is an example of a general principle which we have encountered: the kernel of the adjoint of a linear transformation is both the annihilator space of the image of the transformation and also the dual space of the quotient of the space of which the image is a subspace by the image subspace." (Shlomo & Bamberg's _A "Course" in Mathematics for Students of Physics_) ++=1.11 MATHEMATICAL FORMULA'S M_ 8 5 If $\lim - = 00$ (infinity), then what does $\lim - = ?$ x->0 x x->0 x

```
answer: (write 5 on it's side)
And the following variation:
From: Omar Lakkis <omar@sam.math.ethz.ch>
Since one has
     \lim (8/n) = 00,
        n->0
then for each Z, one has
     \lim (Z/n) = N.
       n->0
M
I saw the following scrawled on a math office blackboard in college:
       1 + 1 = 3, for large values of 1
Μ___
     lim
             ____
     8-->9 \/ 8 = 3
Μ_
"The integral of e to the x is equal to f of the quantity
u to the n."
     / x n
     | e = f(u)
Μ_
Fuller's Law of Cosmic Irreversability:
               1 pot T --> 1 pot P
but
               1 pot P -/-> 1 pot T
M
     lim
             sin(x)
   n --> oo ----- = 6
                n
Proof: cancel the n in the numerator and denominator.
M____
From: "RepliconKing none" <repliconking@hotmail.com>
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here's a variation of the sin(x)/n = 6 formula :
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```
sec(x)
lim ------ = "infinite sex"
c --> 0 c^2
```

М

From: matsb@elixir.e.kth.se (Mats Bengtsson)

lim 3 = 8
omega->infinity

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(Or for native LaTex speakers: $$\lim_{\omega \to \infty} 3 = 8$$)
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M_

M_

A topologist is a man who doesn't know the difference between a coffee up and a doughnut. M_____

From: david_gonda@qm.yale.edu

A student was doing miserably on his oral final exam in General Toplogy (yes, this guy _really_ did give oral finals in topology). Exasperated by the student's abysmal performance up to that point, the professor asked the student "So, what _do_ you know about topology?" The student replied, "I know the definition of a topologist." The professor asked him to state the definition, expecting to get the old saw about someone who can't tell the difference between a coffee cup and a doughnut. Instead, the student replied: "A topologist is someone who can't tell the difference between his ass and a hole in the ground, but who can tell the difference between his ass and _two_ holes in the ground."

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The student passed. M_____
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From: clprasad@watson.ibm.com (prasad)
Klein bottle for rent -- inquire within.
M______

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From: jusinkko@mail.freenet.hut.fi (jukka sinkko)
In the topologic hell the beer is packed in Klein's bottles.
M______
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From: wilson@condor.cs.jhu.edu (Dwight Wilson) I saw the following in "The Knot Book" by Colin Adams (a very readable introduction to Knot Theory). The joke is attributed to Joel Haas. A woman walks into a bar accompanied by a dog and a cow. The bartender says, "Hey, no animals are allowed in here." The woman replies, "These are very special animals." "How so?" "They're knot theorists." The bartender raises his eyebrows and says, "I've met a number of knot theorists who I thought were animals, but never an animal that was a knot theorist." "Well, I'll prove it to you. Ask them them anything you like." So the bartender asks the dog, "Name a knot invariant." "Arf, arf" barks the dog. The bartender scowls and turns to the cow asking, "Name a topological invariant." The cow says, "Mu, mu." At this point the bartender turns to the woman, says, "Just what are you trying to pull" and throws them out of the bar. Outside, the dog turns to the woman and asks, "Do you think I should have said the Jones polynomial?"

From: caj@baker.math.niu.edu (Xcott Craver)
Here's a new one, tell me what you think.

Μ_

М

A topologist comes home from work to find his wife and daughter wailing and sobbing buckets. A police officer, who was trying to console them, greeted the topologist with a somber expression. "I have terrible news for you," he said. "While at school, your son Dave was hit by a steamroller and squashed flat. We tried to contact you immediately, but you had left your office before we could reach you."

The mathematician spent a few minutes in horrified disbelief. "Did he ... did he die instantly? Was he taken to the hospital?"

"He died within the few seconds it took for the vehicle to run him over," the officer said. "He was in pain, but only for a short time. We need you to come down to the morgue."

So together they went to the city morgue. The officer watched as the mathematician was shown the body, a broken and flattened wreck. "Can you identify him as your son?" the police officer asked.

"No," said the topologist, "but I think I can identify a pair of antipodal points."

Needs work? Okay, needs work.

A topologist walks into a bar and orders a drink. The bartender, being a number theorist, says, "I'm sorry, but we don't serve topologists here."

The disgruntled topologist walks outside, but then gets an idea and performs Dahn surgery upon herself. She walks into the bar, and the bartender, who does not recognize her since she is now a different manifold, serves her a drink. However, the bartender thinks she looks familiar, or at least locally similar, and asks, "Aren't you that topologist that just came in here?"

To which she responds, "No, I'm a frayed knot."

From: jfunk@adams.net (jim funk)

М

A piece of string walked into a small town on a hot, dusty day. He was thirsty, so he sauntered into the first establishment he encountered and asked the waiter for a glass of water.

"Sorry", said the waiter, "we don't serve strings here."

Discouraged, the string walked out. A little further down the street, he met a stranger.

"You look hot," said the stranger. "Why don't you go into that cafe and get a drink of water?"

"I tried that," said the string, "but the waiter wouldn't serve me anything because I'm just a string."

"No problem" said the stranger. "I'll fix you up." He grabbed the string, tied him in a bowline and frayed his ends. "Now try it."

The string slipped back into the cafe and asked the waiter for a glass of water. "Hey," said the waiter, "aren't you the piece of string that was just in here?"

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"Nope," retorted the string, "I'm a frayed knot." \rm M\_
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From: Bill Taylor (mathwft@math.canterbury.ac.nz)
Mobius strip no-wear belt drive! (Please see other side for warranty
details.)
M
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Μ_

From: Eike Michaelis (E.Michaelis@gmx.de)
When a mathematician writes a Fantasy book, wil the page numbers be
imaginary
numbers?
M

From: a94petbe@ida.his.se (Peter Bengtsson)

Netherlands....

It must be intentional; an older version had the usual definition. $\ensuremath{\mathtt{M}}$

Once upon a time, when I was training to be a mathematician, a group of us bright young students taking number theory discovered the names of the smaller prime numbers.

2: The Odd Prime --It's the only even prime, therefore is odd. QED.
3: The True Prime --Lewis Carroll: "If I tell you three times, it's true."
31: The Arbitrary Prime -Determined by unanimous unvote. We needed an arbitrary prime in case the prof asked for one, and so had an election. 91 received the most votes (well, it *looks* prime) and 3+4i the next most. However, 31 was the only candidate to receive none at all.

Since the composite numbers are formed from primes, their qualities are derived from those primes. So, for instance, the number 6 is "odd but true", while the powers of 2 are all extremely odd numbers.

From: Alan Craig <Alan.Craig@durham.ac.uk> Mathematicians have announced the existence of a new whole number which lies between 27 and 28. "We don't know why it's there or what it does," says Cambridge mathematician, Dr. Hilliard Haliard, "we only know that it doesn't behave properly when put into equations, and that it is divisible by six, though only once."

From: chrisman@ucdmath.ucdavis.edu (Mark Chrisman)
 "The number you have dialed is imaginary.
 Please rotate your phone 90 degrees and try again."
M

Numb, adj., devoid of sensation...

Number, comparative of numb. [Webster's Third New international Dictionary] М From: ejones@hooked.net (Earle Jones) In Alaska, where it gets very cold, pi is only 3.00. As you know, everything shrinks in the cold. They call it Eskimo pi. М From:Bill Taylor (wft@math.canterbury.ac.nz) And God said "Let there be numbers", and there were numbers. Odd and even created he them, and he said unto them be fruitful and multiply; and he commanded them to keep the laws of induction. ++=1.14 SET THEORY Μ_ From: Dr. David Batchelor batchelor@nssdca.gsfc.nasa.gov: Theorem: Consider the set of all sets that have never been considered. Hey! They're all gone!! Oh, well, never mind... М The world is divided into two classes: people who say "The world is divided into two classes", and people who say The world is divided into two classes: people who say: "The world is divided into two classes", and people who say: The world is divided into two classes: people who say ... Μ From: kfoster@rainbow.rmii.com (Kurt Foster)

Μ_

The guy gets on a bus and starts threatening everybody: "I'll integrate you! I'll differentiate you!!!" So everybody gets scared and runs away. Only one person stays. The guy comes up to him and says: "Aren't you scared, I'll integrate you, I'll differentiate you!!!" And the other guy says; "No, I am not scared, I am e^x." M

A mathematician went insane and believed that he was the differentiation operator. His friends had him placed in a mental hospital until he got better. All day he would go around frightening the other patients by staring at them and saying "I differentiate you!"

One day he met a new patient; and true to form he stared at him and said "I differentiate you!", but for once, his victim's expression didn't change. Surprised, the mathematician marshalled his energies, stared fiercely at the new patient and said loudly "I differentiate you!", but still the other man had no reaction. Finally, in frustration, the mathematician screamed out "I DIFFERENTIATE YOU!" -at which point the new patient calmly looked up and said, "You can differentiate me all you like: I'm e to the x." М A function and a differentiation operator meet somewhere in Hilbert space. The differentation operator: Make place or I differentiate you. Function: Forget it buster, I am e^x. The differentation operator: Well, I am d/dy. Μ_ From: Joe English (jenglish@flightlab.com) Then there was the crackpot category theoretician who thought he was a catamorphism operation. He'd walk around the psych ward with a pair of bananas, which he'd hold up around the other patients and giggle maniacally. Once he did this to the resident hypochondriac (who was convinced he was in the final stages of inoperable brain cancer), but it didn't seem to bother him. "What are you doing?" he asked. "I'm constructing a unique arrow," said the crackpot, "with YOU as its target!" "So what's the big deal about that?" said the hypochondriac. "I'm terminal." (Of course, this joke is only funny if the mental hospital is Cartesian Closed...) М From: Jasper Stein <stein@fys.ruu.nl> A constant function and e^x are walking on Broadway. Then suddenly the constant function sees a differential operator approaching and runs away. so e to-the x follows him and asks why the hurry. "Well, you see, there's this diff.operator coming this way, and when we meet, he'll differentiate me and nothing will be left of me...!" "Ah," says e^x, "he won't bother ME, I'm e to-the x!" and he walks on. Of course he meets the differential operator after a short distance. e^x : "Hi, I'm e^x" diff.op. : "Hi, I'm d/dy" Μ

First of all let me make it clear that I have nothing against contravariant functors. Some of my best friends are cohomology

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theories! But now you aren't supposed to call them contravariant
anymore. It's Algebraically Correct to call them 'differently
arrowed'!!
In the same way that transcendental numbers are polynomially
challenged?
Manifolds are personifolds (humanifolds).
Neighborhoods are neighbor victims of society.
It's the Asian Remainder Theorem.
It isn't PC to use "singularity" - the function is "convergently
challenged" there.
Μ_
If God is perfect, why did He create discontinuous functions?
Μ_
From mrm@ama.caltech.edu Fri Apr 28 07:37:02 1995
 (visual joke)
Person A) "What is this?" as she rubs her hand over an invisible level
  flat surface
Person B) "I dunno"
Person A) "It's the Fourier Transform of this" as she gives him The
Finger
++
=2. PHYSICS
*P
From: "João Batista" <jbatista@mail.pt>
Some time ago a piece of paper was posted around here where I study
saying
something like this: "Theory is when you know how it works but it still
doesn't. Practice is when it works but you don't know why. In this
Department [Physics], theory and practice are joined together: nothing
works and no one knows why!"
P_
From: BT Tymnet
Q: What is the definition of a tachyon?
A: It's a gluon that's not completely dry.
P_
From robxxviii@aol.com Tue Jun 22 23:04:00 1999
Matter is fundamentally lazy:- It always takes the path of least effort
Matter is fundamentally stupid:- It tries every other path first.
That is the heart of physics - The rest is details.
Robert
Ρ_
                          AN ANNOTATED THERMOMETER
60F 15C 289K
Californians put on sweaters (if they can find one in their wardrobe)
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140
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50F 10C 283K Miami residents turn on the heat (if they have a heating system) 40F 4C 277K * You can see your breath * Californians shiver uncontrollably * Minnesotans go swimming 35F 2C 275K Italian cars don't start 32F 0C 273K Water freezes 30F -1C 272K * You plan your vacation to Australia * Minnesotans put on T-shirts * Politicians begin to worry about the homeless * British cars don't start * Your boogers freeze 25F -4C 269K * Boston water freezes * Californians weep pitiably * Minnesotans eat ice cream * Canadians go swimming 20F -7C 266K * You can hear your breath * Politicians begin to talk about the homeless * New York City water freezes * Miami residents plan vacation further south 15F -9C 264K * French cars don't start * You plan a vacation in Mexico * Cat insists on sleeping in bed with you 10F -12C 261K * Too cold to ski * You need jumper cables to get the car going 5F -15C 258K * You plan your vacation in Houston * American cars don't start 0F -18C 255K * Alaskans put on T-shirts * Too cold to skate -10F -23C 250K * German cars don't start * Eyes freeze shut when you blink -15F -26C 247K * You can cut your breath and use it to build an igloo

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* Arkansas stick tongue on metal objects
  * Miami residents cease to exist
-20F -29C 244K
  * Cat insists on sleeping in your pajamas with you
  * Politicians actually do something about the homeless
  * Minnesotans shovel snow off roof
  * Japanese cars don't start
-25F -32C 241K
  * Too cold to think
  * You need jumper cables to get the driver going
-30F -34C 239K
  * You plan a two week hot bath
  * The Mighty Mongahela freezes
  * Sweedish cars don't start
-40F -40C 233K
  * Californians disappear
  * Minnesotan button top button
  * Canadians put on sweaters
  * Your car helps you plan your trip South
-50F -46C 237K
  * Congressional hot air freezes
  * Alaskans close the bathroom window
-80F -62C 211K
  * Hell freezes over
  * Polar bears move south
Ρ
From: jebush@ridgecrest.ca.us (John Bush)
If M = 1 centimeter
What is W?
Ans:
W = 1 \text{ erg.}
(i.e. 1 dyne-cm)
Ρ
On the heater lies a tile.
The teacher asks: "Why does the the tile warmer at the side that lies at
the far side of the heater?".
The student stammers :"Eh, maybe because of the heat conduction and so?"
Teacher: "No, because I just turned it around."
P_
From: schmid@isi.ee.ethz.ch (Hanspeter Schmid)
At the physics exam:
'Describe the universe (max. 200 words) and give three examples.'
From: garyg@warren.mentorg.com (Gary Gendel)
Sometimes real life is stranger than fiction. My physics final came at
the time when there was a debate whether to allow calculators in the
exams.
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The Physics department was the first to decide in favor of allowing them, the 3 hour exam had one question:

Describe the universe, if Planck's constant were equal to 1.

A promising PhD candidate was presenting his thesis at his final examination. He proceeded with a derivation and ended up with something like:

F = -MA

He was embarrassed, his supervising professor was embarrassed, and the rest of the committee was embarrassed. The student coughed nervously and said "I seem to have made a slight error back there somewhere."

One of the mathematicians on the committee replied dryly, "Either that or an odd number of them!" P_____

A Physicist is explaining a picture: "Of course, these are false colours, the red is really yellow, the green is really blue and the white is really brown."

Ρ_

 P_{-}

The study of non-linear physics is like the study of non-elephant biology. (From: "Craig W. Reynolds" <cwr@red.com> : I found several pages that identify the author as Stanislaw Ulam, often via Gleick's 1987 book Chaos. I don't know for sure.) P

From tellen@mtg.mt.com Thu Nov 24 15:19:01 1994
From: "Jean-Maurice Tellenbach" <tellen@mtg.mt.com>
The second world war is the best demonstration of relativity...

The high energy density variations of vacuum are mainly produced within brains.

The Physicist : "The positron will be dramatically modified by meeting an electron" The President : "You said ... position and ... election ??" P_____

Why did the chicken cross the road? Zeno of Elea: To prove it could never reach the other side.

Werner Heisenberg: We are not sure which side of the road the chicken was on, but it was moving very fast.

Newton:

- 1) Chickens at rest tend to stay at rest. Chickens in motion tend to cross the road.
- 2) It was pushed on the road.
- 3) It was pushed on the road by another chicken, which went away from

the road. 4) It was attracted to a chicken on the other side of the road. Wolfgang Pauli: There already was a chicken on this side of the road. From: aaron@falcon.cc.ukans.edu (Aaron Hoyt) Q: Why did the tachyon cross the road? A: Because it was on the other side. Ρ Law of Selective Gravity: An object will fall so as to do the most damage. Jenning's Corollary: The chance of the bread falling with the buttered side down is directly proportional to the cost of the carpet. Ρ_ From:ozbrown@sage.cc.purdue.edu (Paul Raymond "OZZY" Brown) Spell Checked and reformatted by Nathan Mates (nathan@cco.caltech.edu) As scientists and concerned citizens, we applaud the recent trend towards legislation which requires the prominent placing of warnings on products that present hazards to the general public. Yet we must also offer the cautionary thought that such warnings, however well-intentioned, merely scratch the surface of what is really necessary in this important area. This is especially true in light of the findings of 20th century physics. We are therefore proposing that, as responsible scientists, we join together in an intensive push for new laws that will mandate the conspicuous placement of suitably informative warnings on the packaging of every product offered for sale in the United States of America. Our suggested list of warnings appears below. WARNING: This Product Warps Space and Time in Its Vicinity. WARNING: This Product Attracts Every Other Piece of Matter in the Universe, Including the Products of Other Manufacturers, with a Force Proportional to the Product of the Masses and Inversely Proportional to the Distance Between Them. CAUTION: The Mass of This Product Contains the Energy Equivalent of 85 Million Tons of TNT per Net Ounce of Weight. HANDLE WITH EXTREME CARE: This Product Contains Minute Electrically Charged Particles Moving at Velocities in Excess of Five Hundred Million Miles Per Hour. CONSUMER NOTICE: Because of the "Uncertainty Principle," It Is Impossible for the Consumer to Find Out at the Same Time Both Precisely Where This Product Is and How Fast It Is Moving. (Note: This one is optional on the
grounds that Heisenburg was never quite sure that his principle was correct) ADVISORY: There is an Extremely Small but Nonzero Chance That, Through a Process Know as "Tunneling," This Product May Spontaneously Disappear from Its Present Location and Reappear at Any Random Place in the Universe, Including Your Neighbor's Domicile. The Manufacturer Will Not Be Responsible for Any Damages or Inconvenience That May Result. READ THIS BEFORE OPENING PACKAGE: According to Certain Suggested Versions of the Grand Unified Theory, the Primary Particles Constituting this Product May Decay to Nothingness Within the Next Four Hundred Million Years. THIS IS A 100% MATTER PRODUCT: In the Unlikely Event That This Merchandise Should Contact Antimatter in Any Form, a Catastrophic Explosion Will Result. PUBLIC NOTICE AS REQUIRED BY LAW: Any Use of This Product, in Any Manner Whatsoever, Will Increase the Amount of Disorder in the Universe. Although No Liability Is Implied Herein, the Consumer Is Warned That This Process Will Ultimately Lead to the Heat Death of the Universe. NOTE: The Most Fundamental Particles in This Product Are Held Together by "Gluing" Force About Which Little is Currently Known and Whose Adhesive Power Can Therefore Not Be Permanently Guaranteed. ATTENTION: Despite Any Other Listing of Product Contents Found Hereon, the Consumer is Advised That, in Actuality, This Product Consists Of 99.9999999998 Empty Space. NEW GRAND UNIFIED THEORY DISCLAIMER: The Manufacturer May Technically Be Entitled to Claim That This Product Is Ten-Dimensional. However, the Consumer Is Reminded That This Confers No Legal Rights Above and Beyond Those Applicable to Three-Dimensional Objects, Since the Seven New Dimensions Are "Rolled Up" into Such a Small "Area" That They Cannot Be Detected. PLEASE NOTE: Some Quantum Physics Theories Suggest That When the Consumer Is Not Directly Observing This Product, It May Cease to Exist or Will Exist Only in a Vague and Undetermined State. COMPONENT EQUIVALENCY NOTICE: The Subatomic Particles (Electrons, Protons, etc.) Comprising This Product Are Exactly the Same in Every Measurable

Respect as Those Used in the Products of Other Manufacturers, and No Claim to the Contrary May Legitimately Be Expressed or Implied. HEALTH WARNING: Care Should Be Taken When Lifting This Product, Since Its Mass, and Thus Its Weight, Is Dependent on Its Velocity Relative to the User. IMPORTANT NOTICE TO PURCHASERS: The Entire Physical Universe, Including This Product, May One Day Collapse Back into an Infinitesimally Small Space. Should Another Universe Subsequently Re-emerge, the Existence of This Product in That Universe Cannot Be Guaranteed. (The above is from Volume 36, Number 1 of The Journal of Irreproducible Results. Copyright 1991 Blackwell Scientific Publications Inc.) Ρ_ From: James W Walden <jw63+@andrew.cmu.edu> "Truth decays into beauty, while beauty soon becomes merely charm. Charm ends up as strangeness, and even that doesn't last, but up and down are forever." - The Laws of Physics P_ From: Doug Morgan <dmorgs@pacbell.net> Date: 1999/04/26 Cold Fusion Let me tell you a story. When I was a senior (UG) at the University of Houston, I had a class with Ernest Henley. Ernest and John Seader collaborated on the text which dealt with simulation of separations. When P & F announced their findings, Henley made a point of contacint John (head of the CHE department at Utah.) John told him that P & F, among others, had been working on CF for vears. P&F had been fired from Utah but had been brought back on. "So why the suuport - all of a sudden?" Henley asked. According to Henley, P&F left their experiment on one weekend on the fourth floor of a building only to find it in the basement on Monday. (It melted thru 4 concerete floors.) Believe it if you need it but believe it if you will. Its the God honests truth. Richard Schultz <schultr@gefen.cc.biu.ac.il> From: I (alone of the s.p.f. regulars, AFAIK) was actually at the University of Utah Department of Chemistry in 1989 (and in fact attended P&F's

first press conference). Jim Carr is right -- it's just a story.

: >John told him that P & F, among others, had been working on CF for years.

: >P&F had been fired from Utah but had been brought back on.

Fleischmann was never a faculty member at Utah. He was considered "adjunct"

but AFAIK did not even have an office at Utah -- his home base was in England. Pons was not fired (it's tough to fire someone with tenure). The semester after the big announcement, Pons did not show up to teach his class, and sent a fax explaining that he was on leave. Not teaching your classes is just about the only thing you *can* be fired for, but the department allowed him a graceful way out by making him a "research" professor and (IIRC) eventually accepting his resignation.

By the way, the head of the department at the time was John Simons, but he is universally known as "Jack" Simons.

:> According to Henley, P&F left their experiment on one weekend on the :> fourth floor of a building only to find it in the basement on Monday. :> (It melted thru 4 concerete floors.)

From: kovarik@mcmail.cis.mcmaster.ca (Zdislav V. Kovarik) A math&physics student was hit by a brick falling from a house. He fainted, but came to after a while and started smiling. The onlookers were worried, so they asked him why the smile. "I just realized how lucky I am because the kinetic energy is only half m v squared." P

From: Robert M Chittister <rc5x+@andrew.cmu.edu> CRAZED PHYSICS TEST ANSWER

1] A shotgun shooting 12 pellets of 00 Buckshot weighing 4g leave the barrel at 1125 fps. Assuming the average infant will absorb 127.3 f/lbs before disintegrating, how many babies will the average blast cut through (rounding off to the nearest whole number)?

eight.

2] A 100 kg man is being swung by his entrails in a circle 16'in radius at the rate of 1600 radians/sec. Find the tension in the man's entrails (ignoring the effects of gravity).

65,024 Newtons.

3] A pagan priest attempts to vaporize a young virgin by placing her in a

flaming pit. Assuming the woman, weighing 120 lbs, is completely composed of water, how much energy will he have to use to completely vaporize her?

130,000 BTU

4] An infant has a tensile strength of 400 psi and has a cross sectional area of 23.4 sq. inches. Assuming it is 23" long and has an elongation percentage of .0036%/120psi at roomtemperature, how long will the baby be before it is dismembered?

about 26.45 inches.

5] A 12 year old blind orphan girl is shot from a cannon at the speed of 1200 fps at a solid brick wall. Calculate the force of impact given that the brick wall is 3 feet away from the barrel.

if she weighs 50 lbs, and all of her sticks to the wall, 3.3 million Newtons.

6] A large plane weighing 12.7 M tons carrying 12 tons of nuns and orphans travelling at 724.46 kph and at an altitude of 40,000 meters suffers explosive decompression above the center of a 30km diameter population. Assuming that one passenger is sucked out every second, how many passengers will land within the population center?

about (give or take a torso or leg) 12.

7] A 1000 lb car is moving at 130 mph and two poodles whose combined weight is 82 lbs are thrown out the back at 3 mph. Calculate the velocity of the car.

140.91 happy mph.

8] Farmer Brown is selling apples for 12 cents a dozen in a room where a torch has a brightness of 120 candela is 12 ft froma 14.36 sq meter surface.Assuming a light bulb 17.3 cubits fromthe surface has a brightness of 129 candlepower and gives offheat of 1.27 BTU and the room is 423 degrees Kelvin; assuming thethe pressure in the room is 1100 millibar; assuming the lightbulb is rotating at 4 pi radians per half minute, with the power source of the bulb a battery giving off energy at a rate of 12000000 terajoules per exasecond; assuming the coefficient offriction at the base of the rotating lightbulb is 1.679 E9;assuming the room is being launched at 50 times escape velocity;assuming it collides with the moon in a perfectly elastic collision, when the room returns to the earth 6 days 4 hours 20 minutes 35 seconds and 12 nanoseconds later, how much does Farmer Brown sell one apple for?

still one cent, but all thats left is well-done applesaus, P

From: Edward Ruden <ruden@plk.af.mil>
A Princeton plasma physicist is at the beach when he discovers a ancient

looking oil lantern sticking out of the sand. He rubs the sand off with a towel and a genie pops out. The genie offers to grant him one wish. The physicist retrieves a map of the world from his car an circles the Middle East and tells the genie, "I wish you to bring peace in this region". After 10 long minutes of deliberation, the genie replies, "Gee, there are lots of problems there with Lebanon, Iraq, Israel, and all those other places. This is awfully embarrassing. I've never had to do this before, but I'm just going to have to ask you for another wish. This one is just too much for me". Taken aback, the physicist thinks a bit and asks, "I wish that the Princeton tokamak would achieve scientific fusion energy break-even." After another deliberation the genie asks, "Could I see that map again?" P___ From: johncobb@uts.cc.utexas.edu (John W. Cobb) I had a professor who said that "physicists have a knack for jumping into mathematical cesspools and coming out smelling like a rose" P_ From: fc3a501@rzaixsrv1.uni-hamburg.de (Hauke Reddmann) Editors (=my) note: This is a classical joke that appeared in "Die Naturwissenschaften" somewhere in the 30's. Eddington numerology was hip, and the Editor must have slept, so this stuff went through. In the next issue the sour-faced retraction followed. I have freely translated the stuff, luckily the central pun carries over unharmed. "This is an attempt to explain the value of the absolute zero temperature. To reach it, all degrees of freedom must be frozen. Now, due to Eddington, proton and electron have both 1/alpha degrees of freedom. But even at absolute zero, their circulating around each other can't stop. Summing up, this means absolute zero is at minus (2/alpha-1) degrees. With a value of 1/alpha=137.08, this makes -273.16 degrees, which is surprisingly close to the known value." Now, if you take more than 10 seconds to ROTFL, you should better "out" yourself to Doraemon... ;-) Ρ_ From: marnow@wwa.com (Murray Arnow) K.K. Darrow in a colloqium that recounted some of his rememberances told this story about a European physicist. About 75 years ago the physicist was visiting the Harvard Library and couldn't find the Natural Philosophy section. He asked the librarian for help. She showed him to the proper section and said "We call it Physics." Ρ_ From: kanti@cs.brandeis.edu (kanti bansal): A physics book seems to be a mathematican's worst nightmare. Ρ

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From: jonathan@zeta.org.au (Jonathan Jermey) This is from a Project Gutenberg Etext of 'Literary Blunders', by Henry Wheatley. I thought that this section in particular deserved a wider audience.

ACOUSTICS, LIGHT AND HEAT PAPER (1880) Science and Art Department.

The following are specimens of answers given by candidates at recent examinations in Acoustics, Light and Heat, held in connection with the Science and Art Department, South Kensington. The answers have not of course all been selected from the same paper, neither have they all been chosen for the same reason.

Question I.--State the relations existing between the pressure, temperature, and density of a given gas. How is it proved that when a gas expands its temperature is diminished?

Answer.--Now the answer to the first part of this question is, that the square root of the pressure increases, the square root of the density decreases, and the absolute temperature remains about the same; but as to the last part of the question about a gas expanding when its temperature is diminished, I expect I am intended to say I don't believe a word of it, for a bladder in front of a fire expands, but its temperature is not at all diminished.

Question 2.--If you walk on a dry path between two walls a few feet apart, you hear a musical note or ``ring'' at each footstep. Whence comes this?

Answer.--This is similar to phosphorescent paint. Once any sound gets between two parallel reflectors or walls, it bounds from one to the other and never stops for a long time. Hence it is persistent, and when you walk between the walls you hear the sounds made by those who walked there before you. By following a muffin man down the passage within a short time you can hear most distinctly a musical note, or, as it is more properly termed in the question, a ``ring'' at every (other) step.

Question 3.--What is the reason that the hammers which strike the strings of a pianoforte are made not to strike the middle of the strings? Why are the bass strings loaded with coils of wire?

Answer.--Because the tint of the clang would be bad. Because to jockey them heavily.

Question 4.--Explain how to determine the time of vibration of a given tuning-fork, and state what apparatus you would require for the purpose.

Answer.--For this determination I should require an accurate watch beating seconds, and a sensitive ear. I mount the fork on a suitable stand, and then, as the second hand of my watch passes the figure 60 on the dial, I draw the bow neatly across one of its prongs. I wait. I listen intently. The throbbing air particles are receiving the pulsations; the beating prongs are giving up their original force; and slowly yet surely the sound dies away. Still I can hear it, but faintly and with close attention; and now only by pressing the bones of my head against its prongs. Finally the last trace disappears. I look at the time and leave the room, having determined the time of vibration of the common ``pitch'' fork. This process deteriorates the fork considerably, hence a different operation must be performed on a fork which is only lent.

Question 6.--What is the difference between a ``real'' and a ``virtual'' image? Give a drawing showing the formation of one of each kind.

Answer.--You see a real image every morning when you shave. You do not see virtual images at all. The only people who see virtual images are those people who are not quite right, like Mrs. A. Virtual images are things which don't exist. I can't give you a reliable drawing of a virtual image, because I never saw one.

Question 8.--How would you disprove, experimentally, the assertion that white light passing through a piece of coloured glass acquires colour from the glass? What is it that really happens?

Answer.--To disprove the assertion (so repeatedly made) that ``white light passing through a piece of coloured glass acquires colour from the glass,'' I would ask the gentleman to observe that the glass has just as much colour after the light has gone through it as it had before. That is what would really happen.

Question 11.--Explain why, in order to cook food by boiling, at the top of a high mountain, you must employ a different method from that used at the sea level.

Answer.--It is easy to cook food at the sea level by boiling it, but once you get above the sea level the only plan is to fry it in its own fat. It is, in fact, impossible to boil water above the sea level by any amount of heat. A different method, therefore, would have to be employed to boil food at the top of a high mountain, but what that method is has not yet been discovered. The future may reveal it to a daring experimentalist.

Question 12.--State what are the conditions favourable for the formation of dew. Describe an instrument for determining the dew point, and the method of using it.

Answer.--This is easily proved from question 1. A body of gas as it ascendsexpands, cools, and deposits moisture; so if you walk up a hill the body of gas inside you expands, gives its heat to you, and deposits its moisture in the form of dew or common sweat. Hence these are the favourable conditions; and moreover it explains why you get warm by ascending a hill, in opposition to the well-known law of the Conservation of Energy.

Question 13.--On freezing water in a glass tube, the tube sometimes breaks. Why is this? An iceberg floats with 1,000,000 tons of ice above the water line. About how many tons are below the water line?

Answer.--The water breaks the tube because of capallarity. The iceberg floats on the top because it is lighter, hence no tons are below the water line. Another reason is that an iceberg cannot exceed 1,000,000 tons in weight: hence if this much is above water, none is below. Ice is exceptional to all other bodies except bismuth. All other bodies have 1090 feet below the surface and 2 feet extra for every degree centigrade. If it were not for this, all fish would die, and the earth be held in an iron grip.

P.S.--When I say 1090 feet, I mean 1090 feet per second.

Question 14.--If you were to pour a pound of molten lead and a pound of molten iron, each at the temperature of its melting point, upon two blocks of ice, which would melt the most ice, and why?

Answer.--This question relates to diathermancy. Iron is said to be a diathermanous body (from _dia_, through, and _thermo_, I heat), meaning that it gets heated through and through, and accordingly contains a large quantity of real heat. Lead is said to be an athermanous body (from _a_, privative, and _thermo_, I heat), meaning that it gets heated secretly or in a latent manner. Hence the answer to this question depends on which will get the best of it, the real heat of the iron or the latent heat of the lead. Probably the iron will smite furthest into the ice, as molten iron is white and glowing, while melted lead is dull.

Question 21.--A hollow indiarubber ball full of air is suspended on one arm of a balance and weighed in air. The whole is then covered by the receiver of an air pump. Explain what will happen as the air in the receiver is exhausted.

Answer.--The ball would expand and entirely fill the vessell, driving out all before it. The balance being of greater density than the rest would be the last to go, but in the end its inertia would be overcome and all would be expelled, and there would be a perfect vacuum. The ball would then burst, but you would not be aware of the fact on account of the loudness of a sound varying with the density of the place in which it is generated, and not on that in which it is heard.

Question 27.--Account for the delicate shades of colour sometimes seen on the inside of an oyster shell. State and explain the appearance presented when a beam of light falls upon a sheet of glass on which very fine equi-distant parallel lines have been scratched very close to one another.

Answer.--The delicate shades are due to putrefaction; the colours always show best when the oyster has been a bad one. Hence they are considered a defect and are called chromatic aberration.

The scratches on the glass will arrange themselves in rings round the light, as any one may see at night in a tram car.

Question 29.--Show how the hypothenuse face of a right-angled prism may be used as a reflector. What connection is there between the refractive index of a medium and the angle at which an emergent ray is totally reflected? Answer.--Any face of any prism may be used as a reflector. The connexion between the refractive index of a medium and the angle at which an emergent ray does not emerge but is totally reflected is remarkable and not generally known.

Question 32.--Why do the inhabitants of cold climates eat fat? How would you find experimentally the relative quantities of heat given off when equal weights of sulphur, phosphorus, and carbon are thoroughly burned?

Answer.--An inhabitant of cold climates (called Frigid Zoans) eats fat principally because he can't get no lean, also because he wants to rise is temperature. But if equal weights of sulphur phosphorus and carbon are burned in his neighbourhood he will give off eating quite so much. The relative quantities of eat given off will depend upon how much sulphur etc. is burnt and how near it is burned to him. If I knew these facts it would be an easy sum to find the answer.

1881.

Question 1.--Sound is said to travel about four times as fast in water as in air. How has this been proved? State your reasons for thinking whether sound travels faster or slower in oil than in water.

Answer(_a_).--Mr. Colladon, a gentleman who happened to have a boat, wrote to a friend called Mr. Sturm to borrow another boat and row out on the other side of the lake, first providing himself with a large ear-trumpet. Mr. Colladon took a large bell weighing some tons which he put under water and hit furiously. Every time he hit the bell he lit a fusee, and Mr. Sturm looked at his watch. In this way it was found out as in the question.

It was also done by Mr. Byott who sang at one end of the water pipes of Paris, and a friend at the other end (on whom he could rely) heard the song as if it were a chorus, part coming through the water and part through the air.

(_b_) This is done by one person going into a hall (? a well) and making a noise, and another person stays outside and listens where the sound comes from. When Miss Beckwith saves life from drowning, her brother makes a noise under water, and she hearing the sound some time after can calculate where he is and dives for him; and what Miss Beckwith can do under water, of course a mathematician can do on dry land. Hence this is how it is done.

If oil is poured on the water it checks the sound-waves and puts you out.

Question 2.--What would happen if two sound-waves exactly alike were to meet one another in the open air, moving in opposite directions?

Answer.--If the sound-waves which meet in the open air had not come from the same source they would not recognise each others existence, but if they had they would embrace and mutually hold fast, in other words, interfere with and destroy each other. Question 9.--Describe any way in which the velocity of light has been measured.

Answer (_a_).--A distinguished but Heathen philosopher, Homer, was the first to discover this. He was standing one day at one side of the earth looking at Jupiter when he conjectured that he would take 16 minutes to get to the other side. This conjecture he then verified by careful experiment. Now the whole way across the earth is 3,072,000 miles, and dividing this by 16 we get the velocity 192,000 miles a second. This is so great that it would take an express train 40 years to do it, and the bullet from a canon over 5000 years.

P.S.--I think the gentlemans name was Romer not Homer, but anyway he was 20% wrong and Mr. Fahrenheit and Mr. Celsius afterwards made more careful determinations.

(_b_) An Atheistic Scientist (falsely so called) tried experiments on the Satellites of Jupiter. He found that he could delay the eclipse 16 minutes by going to the other side of the earths orbit; in fact he found he could make the eclipse happen when he liked by simply shifting his position. Finding that credit was given him for determining the velocity of light by this means he repeated it so often that the calendar began to get seriously wrong and there were riots, and Pope Gregory had to set things right.

Question 10.--Explain why water pipes burst in cold weather.

Answer.--People who have not studied Acoustics think that Thor bursts the pipes, but we know that it is nothing of the kind for Professor Tyndall has burst the mythologies and has taught us that it is the natural behaviour of water (and bismuth) without which all fish would die and the earth be held in an iron grip. P_____

From: lbsys@aol.com (LBsys) (Tim Joseph) Furgeson and the Unified Field Theory

In the beginning there was Aristotle And objects at rest tended to remain at rest And objects in motion tended to come to rest And God saw that it was boring, although very restful.

Then God created Newton And objects at rest tended to remain at rest And objects in motion tended to remain in motion And energy was conserved, and momentum was conserved, And matter was conserved And God saw that it was conservative.

Then God created Einstein And everything was relative And fast things became short And straight things became curved And the universe was filled with inertial frames And God saw that it was relatively general but some of it was especially relative. Then God created Bohr And there was the principle And the principle was quantum And all things were quantified But some things were still relative And God saw that it was confusing. Then God was going to create Furgeson And Furgeson would have unified And he would have fielded a theory And all would have been one. But it was the seventh day And God rested And objects at rest tend to remain at rest. Ρ_ From: Joao Batista <fbatista@cc.fc.ul.pt> IN CASE YOU THOUGHT THAT WE KNEW EVERYTHING AND THE REST WAS JUST DETAILS 1. In the beginning there was nothing, then something went wrong.[Murphy's Law] 2. The empty set contains and is contained within all other sets.[Fibonacci's Rule] 3. Universe has no plural. 4. Space is nothing. 5. Time is an abstraction. 6. Energy is the opposite of mass. 7. Energy is not effected by gravity. 8. In order for two points to exist, a third point must exist between them. 9. Less than enough is not sufficient, more than enough is not necessary. 10. Enough is a finite quantity. 11. That which has been done is not impossible. 12.Pythagoras trisected an angle. 13. Mathematics is a set of languages providing different ways to describe reality. 14.Statistical norms are not real integers even when they are whole numbers. 15.A line representing a continuous function contains no discrete elements. 16.A "Field" is a continuous static structure extending to infinity. 17. "Field Lines" are mathmatical constructs having no existence. 18.Reality is what it is irrespective of description. 19.Ptolomy was believed because his math was correct and it worked. 20. The "Plane of the Elliptic" is perpendicular to and centered upon the Barycenter of the Solar System (or any other system). 21.All orbits are planes of ecliptic. 22. The eccentricity of an orbit is proportional to the deviation from the perpendicular to the path of the center of mass. [Kepler's 4th Law] 23. The Earth does not revolve around the Sun, the Sun and the Earth revolve around the center of mass. 24. There is no error in the orbit of Mercury. 25.A measured value is the sum of its contributing elements.

26. The specific computed values of the elements do not change the measured sum. 27. The measured gravity of the Sun was the same after Einstein as before. 28. The bending of light observed near a star is thermal reflection, a mirage. 29. Velocity is measured at two different times, not on two different objects. 30.A zero based measurement is required to know the value of measured variables. 31. The "Aberration of Light" is the same in a column of water as it is in а column of air. 32. The velocity of light is constant in all media. 33. The aberration of light is a measure of the Earth's absolute velocity. 34. Light is a spherical wave containing no particles. 35. The outside of a wave has more degrees of freedom than the middle, the inside has fewer. 36. As a wave expands outward from its' source, it expands outward from its' middle, a red shift. 37. The further away it is, the greater the red shift, coming or going. 38. The energy required to operate a mechanism increases with velocity while the available energy decreases. 39. There is nothing new here, it's all old stuff. You must get the old stuff right before you can benefit from the new. D.MURPHY - HCEZJCIA Ρ Researchers in Fairbanks Alaska announced last week that they have discovered a superconductor which will operate at room temperature. Ρ Cold Fusion: Looney Theory of the Week "Hey Mike?" "Yeah, Gabe?" "We got a problem down on Earth. In Utah." "I thought you fixed that last century!" "No, no, not that. Someone's found a loophole in the physics program. They're getting energy out of nowhere." "Blessit! Lemme check... "< tappity clickity tappity> "Hey, I thought I fixed that! All right, let me find my terminal."< tappity clickity tap... save... compile>

"There, that ought to patch it." P_____

156

TIME TRAVEL SEMINAR To whom it may concern, There will be a seminar given on the subject of time travel in the 21st century. It will be held on Thursday, January 1, 1920 at 12:00:01AM. Please to have marked your calendars. P

From: Philip Clarke <clar0318@flinders.edu.au>
Q: What's the difference between a mass spectrometer and an electric
guitar?
A: You can tune a mass spectrometer.
P

From: din@bellcore.bellcore.com

HUMATRANS - A TRANSPORTATION DEVICE FOR HOMO SAPIENS

This is an original article by me and M.S.Moni, my colleague when I was a graduate student in India. I have slightly edited the text, but most of it is intact. Moni is still at IIT and has no objection to the dissemination of this article.

There is some interesting background story, but I will leave it out, unless someone wants to know.

HUMATRANS

(A Transportation Device for Homo Sapiens)

Dinesh Nettar- and M.S.Moni= Regional Sophisticated Instrumentation Centre, Indian Institute of Technology, Madras 600 036, India

Abstract

This device principally operates on the transmission of mechanical energy delivered from the payload to circular rotators that enable positive displacement of the operating system. The linear motion of the payload energy source is converted to circular motion in the device.

1. COMPONENTS AND OPERATION

1.1 FRAMEWORK

The device is built around a triangular framework, to ensure structural stability[1]. Its tubular construction enables reduced gravitational load[2] without sacrificing mechanical integrity. All the remaining components are mounted on this structure.

1.2 BRANCHED COUPLERS

On this framework, two rotators are mounted through a pair of branched couplers. The aft coupler is linear, while the forward coupler is semi-parabolic[3]. Its non-radial orientation ensures automatic return to default theta setting on normal operating surfaces. Its non-linearity provides partial attenuation of low

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- = To whom no questions should be addressed.

- 2 -

frequency oscillations. The forward coupler is coincident with the theta control.

1.3 ROTATORS

Each of the rotators has a cylindrical axial support at which place the coupler is joined. The grooved peripheral structure is connected to the axial support by a set of pre-stressed offradial connectors. These connectors ensure relatively evenly distributed load. The peripheral structure carries an annular cover made of isoprene polymer duly processed with sulfur. The interstice between the cover and the peripheral structure is charged with a gaseous mixture of nitrogen, oxygen and other rare gases[4]. The gas mixture is prevented from leakage by a gas retainer.

1.4 GROOVED LAMINAS

Semi-circular grooved laminas are mounted in proximity to both rotators. These prevent a slurry of SiO2, Fe2O3 and H2O from contaminating the energy source and operator from the operating surface. These usually terminate in isoprene polymer extenders.

1.5 DECELERATION CONTROL

In operation, the rotators can be rapidly decelerated in the case of necessity. This is accomplished by depressing either or both the deceleration control bars on the theta control. These apply instantaneous large mechanical loads on the rotators by depressing isoprene polymer pads on the grooved peripheral devices.

1.6 ENERGY RECEIVERS AND TRANSMITTERS

The aft rotator carries several circular energy receivers. These receivers have finite discontinuities on their circumference. The receivers are ordered in increasing radii. Each is concentric with the aft axial support. A discrete endless coupled energy transfer device connects any one of these receivers to one of the two energy transmitters of similar structure. These energy transmitter devices are mounted at the lower apex of the main triangular framework. The transmitters can be set in motion by imparting angular momentum via an orthogonal radial shaft. This shaft carries a perpendicular extension. The planarity of the extension is necessitated for positioning the operator's energy output source. This extension is pivoted to eliminate torsion of the energy source.

- 3 -

1.7 DECOUPLING MECHANISM

There is an ingeneous decoupling mechanism in the energy transfer device. While positive angular momenta are transferred from the energy transmitter to the receiver, the positive angular momenta of the receiver are not transmitted to the transmitter. This permits the energy source to be stressless during gravitationally favorable transportation environments.

1.8 THETA CONTROL

Orientation mobility is ensured by a theta control. This is connected to the forward rotator coupler. This has a short arm symmetrically orthogonal to its main axis. It can be used to set theta from -pi/2 to pi/2 radians continuously and it defaults to zero on normal operating surfaces. The theta control usually carries additional controls that select combinations of the energy transmitters and receivers. These selections enable nearly continuous variation of angular momentum ratios between the energy source and the rotators.

1.9 POLYMER BASE

A polymer base is securely mounted at the rear apex of the triangular framework. This supports the operator during operation. It is usually buffered by metallic helices[5] to minimize the transmission of low frequency oscillations from the operating surface to the operator.

2. ACCESSORIES (Only on some models)

2.1 ENERGY CONVERSION DEVICE

An energy conversion device is used to convert mechanical energy into electrical energy by electromechanical induction[6]. The electrical flux generates a stream of photons by resistance[7] flow through a conductor enclosed in vacuum[8]. The photon stream enables optical feedback to improve when the ambient radiation characteristics are below optimum.

2.2 AUDIO-FREQUENCY SYNTHESIZER

An audio-frequency synthesizer for generating approach signals is used to transmit early warning messages to surrounding areas to avert a possible momentum transfer.

- 4 -

2.3 EXTRA PAYLOAD SUPPORT

Extra payload can be transported by a support device. This is mounted vertically above the aft rotator and is connected to the aft axial coupler.

3. GENERAL REMARKS

The device is ecologically excellent since it is totally noncontaminating. It is relatively very inexpensive, very easy to maintain[9] and often portable. Its reduced width requirements and height make it ideal for almost any kind of operating surface. It also provides much-needed muscular training to the users, besides agreeable diversement.

However, it is not self-propelled and so tends to deplete the energy source during prolonged operations. It is a low-priority device on most operating surfaces since it does not reach high linear velocities. Due to its reduced gravitational stability, the operator must be cautious not to provide a cushion[10] for the internal combustion driven devices.

It cannot be computerized.

- 5 -

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Ρ_

From: bacherb@physics.orst.edu ACME PHYSICS SUPPLY SHOPPE _____ Frictionless Surfaces only \$4.95 per square meter! only \$1.99 per meter! Inextensible Massless Rope Point Masses only \$1.39 per kilogram! Massless, Zero-Volume Paint *** SOLD OUT *** --Perfect for labeling those pesky electrons so you can keep them straight! Frictionless Pulleys only \$2.00 ea. Massless Pulleys only \$4.49 ea. Frictionless, Massless Pulleys regularly \$10.00, now only \$7.49 ! \$.75 and up Ideal Springs Ideal Gas \$5.00 per liter * -monatomic -diatomic \$7.50 per liter * -triatomic \$10.00 per liter * * plus deposit on container. All gases delivered at STP. Magnetic Monopoles \$1.25 ea. --Great Party Jokes! Thousands of Possibilities! Annoy that theoretician in your family! Perfect Voltmeter only \$99.99 Perfect Ammeter only \$159.99 Special Sale: Buy Ammeter, get Voltmeter for half price! 700 W Perfect Refrigerator only \$899.99 Zero-Resistance Wire --Various guages available, inquire as to price and/or availability An original idea by B. Bacher, with a bit of help from a few friends... From: Børge Berg-Olsen <azoth@dod.no> Y'ALL KEWL BOMB DOODZ (from Jon Singer and Michael Butler) (taken from Pyro Joe's Hot Flashes, pp 137-151) Now, kids, it's tahm ta talk about dee-layed gratification.

. . . .

Here's one that'll tickle ya pink! (Also black & blue if ya stand around it too long. Take a hint from ol' Joe.)

'menny	Whut is it	Where d'ya git it
1	1 inch cube of 90% Palladium with 10% Titanium	any good hardware store should have it
1	4 inch length of gold wahr	steal from yore sister's earrin's
5 gallons	heavy water, with 10% DTO (th' "Jolt" version, heh heh.)	steal frum Navy base or borry frum naybors.
1 cup	Lithium Lye, with Deuterium, USGummint #3039924057394XD	war surplus store
1	1 to 3 volt, 30 amp pahr splah	hell, bild it, use pappy's arc welder, or whutever.
1	special currint reggalater (figger 3, end of chapter)	bild it.
1 it's	Kickass(tm) 8 week timer or equiv'lint	ain'tchoo gotta hardware bin? Call up Bud's Scientific Splah. Don't let on whut for
10.5		101.
1	big moonshahn crock, with lid.	c'mon, ya gotta know where ta git basics!

Plus th' usual wahr an' stuff, as requahred.

How d'ya do it, Joe?

Wal, ya find a ol' shack on a hill somewheres that still got pahr goin' to it. (Elsewise, ya gots ta use a whole lotta ol' truck batt'ries, which is tuff ta hump around.) Put th' crock in th' shack, and pour th' Jolt water inta it. Stir in th' Lithium Lye, slow an' careful. Don't splash none, an' don't add th' stuff too quick, now. Cover it real taht, so's ya don't lose too much. Y'all don't wanna hafta sneak inta th' navybase again, do ya? Them guys got guns & stuff and they ain't afraid ta use it.

So, ennyway, see, ya bild the pahr splah, an' ya bild th' currint reggalater in figger 3 at th' end of th' chapter, the one with the special shunt cirkit fer changin' the currint. Thet's whar th' Kickass tahmer goes. Test it ta be sure that th' current starts at about 30 amps and goes down ta 10 or 15 when th' tahmer goes off.

Bild th' other stuff lahk in figger 2. Cart th' whole mess down ta th'

shack, and put th' bizniz end inta the Jolt water. Don't leave th' lid off too long, now. Cover it up good, an' duck tape it, specially th' place wher the wahrs come out. Ah got me some motorcycle ground strap, which is read'ly avail'ble an' flat, so it don't queer up the fit o' the lid. Bolt the straps down real secure, an' put vaseline on th' bolts.

Now, set th' Kickass tahmer fer 8 weeks, plug th' pahr splah in, make sure ya got 30 amps, an' take a hike.

'Member, neutrons ain't yer frens. Keep ol' Blue away from th' shack unless ya want two-headed puppies runnin' around eatin' too much, probly worrit yore mom no end, an' if ya gotta go in ther ta check, don't stay long. Ya want ol' Joe's advice, after around 7 weeks, don't go in ther atall.

This hear makes a real 'hot flash', an' in fact, it's whut this book is named fer. Y'all kin see th' flash from a couple mahls away, raht through th' av'ridge wall, so don't go bildin' it in yer basemit. Got thet? No need ta keep it too close ta home, raht? Ya kin get caught with it if it's too close. Besides, ya don't want yer sister fahndin' out wher her earrin's got off ta. She probly woont lahk it, an' she'll make ya cut her in on the deal. 'Course, thet maht not be too bad, if she's good with a soldrin' ahrn. Probly bilds good pahr splahs, an that's importunt ta this 'hot flash'.

Ah got trouble, Joe. Now whut?

Whut happen Whut ta do
ya hair falls out
in hanks Dummy! I tol' ya not ta stan' aroun' up
close-lahk! Thow away yer clothin', an'
take lots o' shahrs. Eat some vitamin E,
an' call th' doc ef'n it don't stop in
a spell.
red skin & funny spots same thing.

juice won't drop to shunt circuit screwed up, or ya bought a cheap 10-15 amps tahmer. Don't bah you no cheap tahmers!

no flash after 8 th' Authority mebbe cut yer pahr. Wait 2 more weeks is gone bah weeks an' then check fer pahr at the wall sockit.

> Ef thet don't work, check the pahr splah. Ah tol' ya yer sister probly bild it better then you, ya shoulda listened. Also check th' tahmer. 'Member whut ah sed about cheap ones!

- Big wet spot ya crock leak? If no leaks, check the roof. If the roof leaks, don't worrit yerself. If th' crock leaks, fix it quick.
- 'lectrode turns brown probly yer Lithium Lye is contaminatid. Ya can give it up, or start over.

runs hot only happins once in a whahl. Swipe Grampa's ol' still-tubin', an' make lahk a li'l still coil with it. Jes' run th' outlet back inta the crock. Duck tape the whole mess real good. If thet ain't enuf, use a truck radiater. Don't drink the stuff, neither! Taste lahk hell, take it from one that knows.

Y'all have fun, now. Ef ya hit the sweet spot, th' hill will glow fer munths. Thet means you done real good! Set up a "myst'ry spot" sahn, an' charge th' city folks a dollar a look.

Yore Frend,

Joe P___

From: Paula Defensor <defensor@philonline.com>

THE LAWYER INTERPRETS THE PHYSICIST... JOKES (an all-original composition by Paula D.(lawyer) and Stephen K. (physicist) Reprints with acknowledgments allowed. (a lawyer from the Pacific and a physicist from Europe team-up for the Science Humor Ring)

1. Conservation of Energy - the total energy (i.e. the sum of potential and kinetic energy) of a closed system doesnt change under the influence of conservative forces. Closed means that the system doesnt exchange matter with its environment.

<A lawyer should never transform potential to kinetic energy without the appropriate safeguards for payment of attorney's fees. The law firm is a closed system too, determined by conservative forces in that - in a law firm you NEVER change the established rule that :"Once the client sits down</p>

in front of you, the clock starts ticking and so does billing time." Try changing that and YOU GET FIRED !>

2. Conservation of Momentum - momentum is the product of mass and velocity. As energy is related to time, momentum is to space.

<Mass and velocity - the more cases you have, the faster you must work or you lose all of them, including your job. Energy is related to time in that you have more energy before your court hearings in the morning, and depletion usually occurs in the afternoon or when the coffeemaker suddenly churns out decaf.>

3. Newton's First Law - a body on which no forces are acting will continue in its state of motion. This means it will stay at rest, if it has been resting initially, or will move in a straight line at constant speed. Moving straight or being at rest is physically equivalent. <If a Partner is not watching, lawyers will continue chit-chatting or just stay idle behind their desks. But once a Partner appears, they start walking in a straight line, at constant speed back to their rooms.....>

4. Heinsenberg's uncertainty principle - the more precise you measure where a thing is, the smaller is your knowledge about its velocity and vice-versa

<a criminal can defy all laws of gravity, in fact, his flight can be
faster
than the speed of light.... you switch on the light, and he suddenly
disappears...and he was there awhile ago !!! no physicist would want to
measure his velocity...wanna get killed while measuring ???>

5. Quantum Zenon effect - you can keep a system from changing by repeatedly measuring the state of the system

<if you keep annoying the judge, you are liable to be cited for contempt. But UNLIKE quantum zenon effect, the system can REALLY change....you can end up in jail and no amount of physics will save you, better post bail, honey>

6. Theory of Relativity - E= mc²

<in legal terms it just means ---> Energy = mass of clients (squared, or the more the merrier...the more energy you have :) OR

Energy = mass of money of clients, squared or otherwise.

7. Principle of General Relativity - one cannot distinguish between gravity and acceleration....so for example in a case of free fall, you feel weightless because the effects of gravity and downward acceleration just cancel.

<sometimes you want to stand up, but when you see your calendar of deadlines, you sit down again (gravity)...then when the Partner calls you to report on the status of the case at the upper floor, it seems the elevator just wont move and seems to want to stay at your floor...then voila ! it happens... the great theory of general relativity - if you havent done your assignments on time, you fall into irreparable embarrassment, you just fall....fall....fall....deeper and deeper...your status in the law firm cant accelerate any faster...you just go with gravity - down, down, down...

This gravity thing should be repealed ! LOL

-End-

=2.1 PHYSICS POETRY

P___

From: "Brian Redmile" <bredmile@iafrica.com>

Came across this at school, early 1950s. Funny how some things stick!

ARCHIMEDES' PRINCIPLE

Students of physics are frequently told Of experiments performed by great physicists of old Like Boyles and Charles -- but greatest of these Was the Principle discovered by Archimedes.

The Sicilian King, Archimedes was told, Ordered a crown from a large lump of gold, And though the weight of the gold was completely correct, The goldsmith's eye made the King suspect That he'd made up the weight with some cheaper metal And stolen some gold, that his debts he might settle. His problem was then of outstanding immensity As he had no idea, whatsoever, of density.

Climbing into a bath he received a surprise When he noticed the water beginning to rise. He suddenly snapped, and let out a scream, As he realised, with joy, his long-wished-for dream.

He found the upthrust, produced on a body's base*, To be equal in weight to the water displaced, And soon volumes and weights would make it quite plain What various metals the crown could contain, And so he could easily show to his Royalty The absolute proof of the goldsmith's disloyalty.

Leaping out of the bath at remarkable rate, He made for the palace by doorway and gate --But the men in the street were completely confounded To see a naked man shout "Eureka! I've found it!"

* Is this the only error? The upthrust is not on the base, but at the Centre of Pressure.
P_____

From: Hello i'm an Alien (TiddyOgg@half.co.ck)

For tradition I have great respect, And Sod's Law I'd never suspect But you can be tricked, When these two conflict: Which one can you say is correct?

Now a cat always lands on its feet, So tradition says. And I repeat Toast, when golden brown, Lands butter side down, Or Professor's Sod's law will be beat.

I needed to find the truth, So I took the cat up to the roof -All fourteen floors, Though it scratched with its claws And bit, but I must have the proof.

To its back strapped I one slice of bread, With butter 'twas liberally spread; In the interests of science, Despite his defiance, To the parapet's edge I did tread.

I tossed the cat over the rail; It spat, yowled, and gave me one baleful glare as it fell, It wished me in hell... But that's not the end of my tail.

A truck passing by in the street, It's load covered by canvas sheet, By the moggie was caught, And it gallantly fought, To cling to the side with its feet.

So now with my news I've regaled You, but my schemings all failed. I've still no evidence Of which law takes precedence, And probably soon I'll be jailed.

Tiddy Ogg.

Sod's Law, in case anyone does not know states: if it can go wrong, it will. This was discovered by Britain's Professor Sod, but, like so many other things, the Merkins claim credit for their Dr. Murphy. P

From: archie (archive@iinet.net.au)
Of toast I soon had had my fill
A slice tied onto my cat, Rill.
When dropped from a height
She's in severe fright Rill's suspended - spinning there still!

Archie - All I have to do now is to attach a system of shafts and cogs and - whoopee - a perpetual motion machine!!!! For newcomers - cats always land on their feet, Toast always lands butter side down. Sod discovered this and Murphy replicated the experiments, thus confirming them! Thank you Murphy or Sod or whoever (Wasn't it actually a Russian who discovered those laws first?)

H <aitch@norfolk.infi.net> From: Tid, all those professors who rate A parchment for predicting fate Quantumly know That soon as you throw: Such cat's in an up *and* down state. -=H=- My ol' buddy Schrodinger tried the toast-cat-butter-ducttape experiment several times, but he could never bear to observe the results (meekly claiming that the act of observation itself would affect the outcome), and indeed never opened the boxes in which I returned his cats. Ρ_ Einsteinium by Susan Lowe Radio-active Einsteinium Has the atomic number nine-ninium. It was found in the ash Of a hydrogen blast. As is its chemical signium. So few really know of Einsteinium, It really is one of a kindium. It doesn't seem fair To have to compare, It just doesn't have any timium. Ρ A corpuscle once did oscillate so quickly to and fro, He always raised disturbances wherever he did go. He struggles hard for freedom against a powerful foe --An atom -- who would not let him go. The aether trembled at his agitations

Ρ_

In a manner so familiar that I only need to say, In accordance with Clerk Maxwell's six equations, It tickled people's optics far away.

The corpuscle radiated until he had conceived A plan by which his freedom might easily be achieved; I'll not go into details for I might not be believed, Indeed, I'm sure I should not be believed. However, there was one decisive action. The atom and the corpuscle each made a single charge, But the atom could not hold him in subjection, Though something like a thousand times as large.

The corpuscle won the day, And in freedom went away, And became a cathode ray. But his life was rather gay, And he went at such a rate That he ran against a plate;

```
When the aether saw his fate
   Its pulse did palpitate.
   -- From Post-Prandial Proceedings of the Cavendish Society,
Cambridge, England.
P_
                  THE QUANTUM'S PLIGHT
A lively little quantum went darting through the air,
Just as energetic quanta go speeding everywhere.
He had traveled far -- this quantum -- urged as if by some far
call,
When he saw a lonely atom with no signs of pep at all,
And he started for that atom in the highest of elation,
Said he: "Here's where I show the world a trick of transmutation.
I'm going to hit that atom such an awful, awful whack,
That I'll knock out its electrons so far they can't get back."
So he gave that peaceful atom such an energetic shove,
That its outermost electrons soared to levels far above.
Then the atom got excited, and it held the quantum fast,
Until the last electron came tumbling back at last.
Then the quantum was released again, and fled in degradation,
While the atom got the credit for a lot of radiation.
-- E.H. Johnson
Ρ_
A certain PHYS REV referee
Considers all papers with glee:
"What's new is not true,
And what's true is not new,
Unless it was written by me."
Ρ_
From: Ian Ellis <ian@iglou.com>
Here is a limerick goldmine for you from the American Physical Society
contest: http://www.aps.org/apsnews/limericks.html
Examples: (there are many more submissions in the archives)
Doin' its Own Thing
by Edward H. Green
The first law of Newton I sing
My voice has a relevant ring:
"An object left free
Of hassles will be
Engrossed in just doing its thing."
May the Force Be With You
by David Morin, Eric Zaslow, E'beth Haley, John Golden, and Nathan
Salwen
On a merry-go-round in the night,
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169
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Coriolis was shaken with fright. Despite how he walked, 'Twas like he was stalked, By some fiend always pushing him right. _ _ Condensed Story of Ms Farad by A. P. French Miss Farad was pretty and sensual And charged to a reckless potential; But a rascal named Ohm Conducted her home -Her decline was, alas, exponential. Wish I Were a Fly on the Wall by Robert D. Cowan There once was a fly on the wall I wonder why didn't it fall Because its feet stuck Or was it just luck Or does gravity miss things so small? A Brief History of Gravity by Bruce Elliot It filled Galileo with mirth To watch his two rocks fall to Earth. He gladly proclaimed, "Their rates are the same, And quite independent of girth!" Then Newton announced in due course His own law of gravity's force: "It goes, I declare, As the inverted square Of the distance from object to source." But remarkably, Einstein's equation Succeeds to describe gravitation As spacetime that's curved, And it's this that will serve As the planets' unique motivation. Yet the end of the story's not written; By a new way of thinking we're smitten. We twist and we turn, Attempting to learn The Superstring Theory of Witten! Ρ

From: Ted Shoemaker <shoematr@uwec.edu>
From way down in my cranium
This prediction I will make:

That if you eat uranium, You'll get atomic ache. P

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From: slw1@ellis.uchicago.edu (SluT)
There was a young fellow named Fisk
Whose stroke was exceedingly brisk
By relative action
The Lorenz contraction
Had reduced his dong to a disk.
P_____
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From: jim.henry@ftl.mese.com (Jim Henry)
A quantum mechanic's vacation
Had his colleagues in dire consternation.
For while studies had shown
That his speed was well known,
His position was pure speculation.

(Not sure who wrote that one.)

I saw an old fellow of Sirius, I thought I was merely delirious. But he ate me with zeal, I'm convinced he was real That zealous old gourmand of Sirius.

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(I wrote that one.) P_____
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Ρ_

From: Sam Hobbs <samh@gdsassoc.com>

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There was an old man who observed,
"I confess I am somewhat unnerved.
I had never before
Seen the truth of the lore
That, where matter is, space must be curved!
P_____
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From: rrcraig@eos.ncsu.edu (Ralph Ray Craig)
There was a young couple named Bright
Whose fucking was faster than light
They went at it one day
In a relative way
And came on the previous night.
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Ρ_
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From: robertk@xmission.com (robertk)
There once was a fellow named Blight
Whose speed was much faster than light.
He sat off one day
In a relative way
and returned on the previous night.
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We've heard of that fellow named Blight,
And his trip on that fabulous night,
But his increasing mass
Would have soon proved so vast
He'd have been a most *singular* sight!
P______
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Relativity
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Said Einstein, "I have an equation,"
"Which some might call Rabelaisian:"
"Let P be viginity,"
"Approaching infinity,"
"And let U be a constant, persuasion."
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"Now, if P over U be inverted,"
"And the squareroot of U be inserted,"
"X times over P,"
"The result, Q.E.D."
"Is a relative." Einstein asserted.
P
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From: Sam Hobbs <samh@gdsassoc.com>
Said a pupil of Einstein, "It's rotten
To find I'd completely forgotten
That by living so fast,
All my future's my past,
And I buried before I'm begotten.
P_______
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From: Sam Hobbs <samh@gdsassoc.com>
Steven Hawking can prove with a plot
Whether we will or will not
    Expand without limit
    Or end in an intimate
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Space which is all in one spot.

Source: Larry Dahl

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite)
There's a wonderful family named Stein,
There's Ep, there's Gert, and there's Ein.
Ep's statues are junk,
Gert's poems are bunk,
And nobody understands Ein.

Twinkle, twinkle little star, I don't wonder what you are For by the spectroscopic ken I know that you are hydrogen

Big whirls have little whirls That feed on their velocity; And little whirls have lesser whirls, and so on to viscosity. -Lewis Fry Richardson

P__

P_

Ρ_

From: sdnaik@iastate.edu
Nature and nature's laws lay hid in night,
God said, "Let Newton be," and all was light. -- Alexander Pope
It did not last; the devil howling "Ho!
Let Einstein be!" restored the status quo. -- Sir John Collings Squire
P

When Newton saw an apple fall, he found ... a mode of proving that the earth turn'd round in a most natural whirl, called gravitation; and thus is the sole mortal who could grapple since Adam, with a fall or with an apple -- Byron. P_____

From: wcw@math.psu.edu (William C Waterhouse) There's a little version of "Comin' through the rye" that James Clerk Maxwell wrote for a friend and that has made its way into some anthologies of light verse:

(Rigid Body sings:)
Gin a body meet a body
Flyin' through the air,
Gin a body hit a body,
Will it fly? and where?
Ilka impact has its measure,
Ne'er a ane hae I,
Yet a' the lads they measure me,

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Or, at least, they try.
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Ρ_
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From: crystalc@cpcug.digex.net (Edward Cooper) Possible, probable, my black hen She lays eggs in the relative when She doesn't lay eggs in the positive now Because she's unable to postulate how - Frederick Winsor "The Space Child's Mother Goose",1958 P_ From: dave.coble@equinox.org (Dave Coble) Her voice is so high it's absurd It's so shrill that you can't hear a word When she's something to say She starts running away So the pitch drops enough to be heard P_ There once was a man who said: 'Damn! I can't possibly be in this tram For how can I know Both how fast that I go And also the place where I am.' Ρ_ Gar manches rechnet Erwin schon mit seiner Wellenfunktion nur wissen moechte man gerne wohl was man sich dabei vorstell'n soll. From: Physics Today, 1976 Ρ_ From: schornj@way.com (jay m. schornstein) SPACE by James Wieghart The Orphan Entity The entity, we'll call it S, differed in every way. While some spun left and some spun right, S would merely stay. S was neither left nor right nor up nor down, but rather in the middle. Lacking color and charm and other traits that made its neighbors notable, S resolved to leave this place and find a spot more suitable. A quiet place that a colorless, measureless waif would find hospitable. A spot where an entity without mass, or motion, would not be likely to cause commotion. After giving much thought to the matter, and energy too, S arrived at a solution which it felt would do. "Empty space is just the place for an orphan entity to spend infinity," S thought. Alas, although the universe is far and wide, there is no empty space inside. So S went beyond into a black void and found.... nothing. "Perfect," it said, "but let there be light." Ρ_ From: mini-AIR

The offering by Kevin Ahern:

A violation of Sir Isaac was found

By Megan hurtling fast toward the ground She's not in smithereens Because on trampolines What goes down, must go up, then go down. Can be rewritten into limerick form, saving the excellent last line (with a minor violation in the lack of true rhyme), as: The laws of Sir Isaac were found To bring Megan so fast toward the ground Yet she's not smithereens Since on all trampolines What goes down, must go up, then go down. -- Jay M. Pasachoff [Here is a limerick about I paper I submitted to "Physics Review E" entitled "Novel soliton solutions in Rowland ghost gaps:"] In a periodic grating structure, I claim Rowland ghosts should occur, They have wriggles and bumps, And travel over humps, But the reviewer has yet to concur. --Neil B. The "Novel soliton solutions in Rowland ghost gaps" is far from a limerick. A corresponding limerick might read A grating can lead to a blur When its lines cause some ghosts to occur. I showed wriggles and bumps And then also some lumps, But reviewers have yet to concur. -- Jay M. Pasachoff [My astronomy PhD thesis in limerick form:] High-velocity clouds are found, In disk galaxies to abound. And although superbubbles, Have given great troubles, The fountain model is sound. --Eric Schulman Rewriting this example, with the minor deviation in the leadin that is often allowed, could give: High-velocity clouds can be found And in galaxies' disks they abound. Now although superbubbles Have given great troubles The model called "fountain" is sound. -- Jay M. Pasachoff In Boulder, where often it snows, NIST/JILA staff got high from lows. A great celebration: at last! condensation according to Einstein and Bose!

Ρ

The Meaning of Life Song

Just remember that your standing on a planet. That's evolving and revolving at 900 miles an hour. It's orbiting at 90 miles a second, so it's wrecked. A sun that is the source of all our power. The sun and you and me, and all the starts that we can see. Are moving at a million miles a day. In an outer-spiral arm at 40 thousand miles an hour. Of the galaxy we call the Milky Way.

Our galaxy itself, contains a hundred billion stars. It's a hundred thousand light years side to side. It bulges in the middle, 16 thousand light years thick. But out by us, it's just 3 thousand light years wide. Were 30 thousand light years from galactic central point, We go around every 200 million years. And our galaxy is only one of millions of billions. In this amazing and expanding universe.

The universe itself keeps on expanding and expanding. In all of the directions it can whiz. As fast as it can go -- the speed of light you know. 12 million miles a minute. And that's the fastest speed there is. So remember when your feeling very small and insecure. How amazingly unlikely is your birth. And pray that there's intelligent life somewhere up in space. Cause there's buggers-off down here on earth. P

From: Ken Smith Limerick page http://www.teleport.com/~klsmith/limerick.shtml An astronomiss happily sang, "I've been screwed by the telescope gang, They all had a bit o' me, For I'm the epitome Of the grandly impressive Big Bang."

Ρ_

From: Ken Smith Limerick page
http://www.teleport.com/~klsmith/limerick.shtml
From the world, his discovery brought cheers;

Source: Isaac Asimov

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From his wife, it drew nothing but tears.
   "For you see, " said Ms. Halley,
   He used to come daily;
Now it's once every 76 years!"
                                           Source: Rowdy Jack
Ρ
From: Ken Smith Limerick page
http://www.teleport.com/~klsmith/limerick.shtml
A wonderful tube is the Hubble,
Peering out from its space-platform bubble.
   Through billions of years,
   The telescope peers,
Turning creationist stuff into rubble!
                                          Source: Bert
P___
From: Ken Smith Limerick page
http://www.teleport.com/~klsmith/limerick.shtml
We cannot know where in the sky
A signal is lurking, or why.
   We will search even though
   The chances are low.
The payoff is well worth a try.
Ρ
From: Sam Hobbs <samh@gdsassoc.com>
  The Einstein and the Eddington
The sun was setting on the links,
The moon looked down serene,
The caddies all had gone to bed,
But still there could be seen
Two players lingering by the trap
That guards the thirteenth green.
The Einstein and the Eddington
Were counting up their score;
The Einstein's card showed ninety-eight
And Eddington's was more.
And both lay bunkered in the trap
And both stood there and swore.
I hate to see, the Einstein said;
Such quantities of sand;
Just why they placed a bunker here
I cannot understand.
If one could smooth this landscape out,
I think it would be grand.
If seven maids with seven mops
Would sweep the fairway clean
I'm sure that I could make this hole
In less than seventeen.
I doubt it, said the Eddington,
Your slice is pretty mean.
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Then all the little golf balls came To see what they were at, And some of them were tall and thin And some were short and fat, A few of them were round and smooth, But most of them were flat.

The time has come, said Eddington, To talk of many things: Of cubes and clocks and meter-sticks And why a pendulum swings. And how far space is out of plumb, And whether time has wings.

I learned at school the apple's fall To gravity was due, But now you tell me that the cause Is merely G_mu-nu, I cannot bring myself to think That this is really true.

You say that gravitation's force Is clearly not a pull. That space is mostly emptiness, While time is nearly full; And though I hate to doubt your word, It sounds like a bit of bull.

And space, it has dimensions four, Instead of only three. The square of the hypotenuse Ain't what it used to be. It grieves me sore, the things you've done To plane geometry.

You hold that time is badly warped, That even light is bent: I think I get the idea there, If this is what you meant: The mail the postman brings today, Tomorrow will be sent.

If I should go Timbuctoo With twice the speed of light, And leave this afternoon at four, I'd get back home last night. You've got it now, the Einstein said, That is precisely right.

But if the planet Mercury In going round the sun, Never returns to where it was Until its course is run, The things we started out to do Were better not begun. And if before the past is through, The future intervenes; Then what's the use of anything; Of cabbages or queens? Pray tell me what's the bally use Of Presidents and Deans.

The shortest line, Einstein replied, Is not the one that's straight; It curves around upon itself, Much like a figure eight, And if you go too rapidly You will arrive too late.

But Easter day is Christmas time And far away is near, And two and two is more than four And over there is here. You may be right, said Eddington, It seems a trifle queer.

But thank you very, very much, For troubling to explain; I hope you will forgive my tears, My head begins to pain; I feel the symptoms coming on Of softening of the brain.

@A: W. H. Williams @R: ``The Einstein and the Eddington'', from G. J. Whitrow (ed.), _Records of R. A. S. Club 1925-1953_, p. xxiv-xxvii, quoted in S. Chandrasekhar, _Truth and Beauty : Aesthetics and Motivation in Science_, University of Chicago Press, 1987, p. 124-127. @%: Dr. Williams (who shared an office with Eddington) prepared this verse for a faculty club dinner on the eve of Eddington's departure from Berkeley in 1924 For people who do not know their classic: This poem is based on "The Walrus and the Carpenter" in Lewis Carols "Through the looking-glass" P

From: Greg Roelofs (newt@uchicago.edu) Physics Theoretical BY JOHN A. BARRETT

(This is one of Greg's favorite poems, for obvious reasons. He thinks it was probably first published in Physics Today sometime between 1987 and 1991, but since he is unable to find the proper issue...oh well.)

I've studied all the sciences in order alphabetical, My judgment is, which some of you may find to be heretical, The field that's really quite abstruse, The field where all the screws come loose, The field that's famous for its spoofs, is physics theoretical.

I've taken undergraduate work whose content is forgettable;

WHY THE SKY IS BLUE

by John Ciardi

I don't suppose you happen to know Why the sky is blue? It's because the snow Takes out the white. That leaves it clean For the trees and grass to take out the green. Then pears and bananas start to mellow, And bit by bit they take out the yellow. The sunsets, of course, take out the red And pour it into the ocean bed Or behind the mountains in the west. You take all that out and the rest Couldn't be anything else but blue. Look for yourself. You can see it's true. P

APS News

March 1997 Edition

LIMERICK CONTEST FINALISTS & WINNERS

A total of 190 limericks were received since the contest was announced in the December issue of APS News. Although most entrants sent in one or two limericks, one sent in 22 and a 'team' from Harvard sent a record 37. Schr"dinger's cat, which was the favorite subject, has reason to feel paranoid; reviewers for Phys Rev came in a close second. The longest poem,

a finalist, had 13 limerick-form stanzas.

A note on the selection process: The editor collected opinions from members of the March and April meeting program committees, APS visitors and staff members. They had diverse tastes, to say the least, and many limericks not included among the finalists below had ardent admirers. The final selection was mine (as is the blame for most of the titles). Some are acknowledged 'groaners' - but punsters have to live too; some don't scan so well, but had other redeeming qualities. As promised, each author will receive a
dunking bird; the winners will receive a flock (3). Most submissions (except for a few) may be viewed on the APS website at: http://www.aps.org/apsnews/limericks.html. Enjoy.

Barrie Ripin, APS News Editor

CLASSICAL _____ Doin' its own Thing by Edward H. Green The first law of Newton I sing My voice has a relevant ring: "An object left free Of hassles will be Engrossed in just doing its thing." May the Force Be With You by David Morin, Eric Zaslow, E'beth Haley, John Golden, and Nathan Salwen On a merry-go-round in the night, Coriolis was shaken with fright. Despite how he walked, 'Twas like he was stalked, By some fiend always pushing him right. [WINNER!]Condensed Story of Ms Farad by A. P. French Miss Farad was pretty and sensual And charged to a reckless potential; But a rascal named Ohm Conducted her home -Her decline was, alas, exponential. Wish I Were a Fly on the Wall by Robert D. Cowan There once was a fly on the wall I wonder why didn't it fall Because its feet stuck Or was it just luck Or does gravity miss things so small? A Brief History of Gravity by Bruce Elliot It filled Galileo with mirth To watch his two rocks fall to Earth. He gladly proclaimed, "Their rates are the same, And quite independent of girth!"

Then Newton announced in due course His own law of gravity's force:

"It goes, I declare, As the inverted square Of the distance from object to source."

But remarkably, Einstein's equation Succeeds to describe gravitation As spacetime that's curved, And it's this that will serve As the planets' unique motivation.

Yet the end of the story's not written; By a new way of thinking we're smitten. We twist and we turn, Attempting to learn The Superstring Theory of Witten!

Limerico di Galileo© [13 stanzas] by Martin J. Murphy

While watching a cannonball's motion, Galileo conceived of the notion That natural laws, Not a mystical Cause, Ruled the physical world's locomotion.

Though its own view was mostly confused, The Church was not greatly amused With this flaunting of Deo By old Galileo And ordered it quickly defused.

So the Pope sent some priests who inquired If it wouldn't be best he retired? "Undoubtedly you know What we did for Bruno; Do you also wish to be fired?"

He asked an old Cardina;'s opinion: "Pray tell me, Your Grace, if you will then, Does this mean what I think? That henceforth I must shrink From discussing my clever perception?"

Said Bellarmine, "No, it is not a ban; If you want to keep teaching of course you can. They merely have said To take care where you tread And smile when you say thing Copernican."

Unbeknownst to our venerable dissident The records said something quite different. When the Pope saw the note The inquisitors wrote He lost what remained of his temperament.

The message the Vatican sent Was blunt in its stated intent "Recant all this heresy Quick or we'll harass thee, Now until your life has been spent."

In facing the dread inquisition, Few men could defend their position; So it shouldn't surprise When we are apprised Of old Galileo's decision.

"Explaining celestial motion Needs more than just faith and devotion. But to save my poor head I'll recant what I've said (Though I'll secretly keep to my notion)".

So our friend the illustrious Florentine Spent his last years in Vatican quarantine, Locked up in his home By the prelates of Rome For being a cosmical libertine.

The Church caused a major imbroglio By correcting Copernicus' folio Yet it couldn't discern The abuse it would earn In forbidding the whole Dialogo?

By killing Sidereus Nuncius For the news that their views were defunctus, The renaissance ended And darkness descended Upon the Dominican dunces.

In spite of the Vatican's dissuasion Galileo still rose to the occasion. Though once deemed heretical, He proved more prophetical Than those of a clerical persuasion.

> Cole's Lost Soul by A. P. French

There was a young fellow named Cole Who ventured too near a black hole. His dv by dt Was quite wondrous to see But now all that's left is his soul.

> On Liquor Production by David M. Smith

A friend who's in liquor production Owns a still of astounding construction. The alcohol boils Through old magnet coils; She says that it's "proof by induction." Goodnight Irene Author unknown, submitted by Ken Kiger

There once was a girl named Irene, who lived on distilled kerosene. But she started absorbin' A new hydrocarbon, And since then has never benzene!

> Cool Cruel Test by Kay R. Devicci©

The thermo exam was quite near-o, And he thought everything was quite clear-o; "Why study this junk I'm sure I won't flunk," But they gave him an Absolute Zero.

Modern

The Bose-Einstein Story (Condensed) by Jonathan P. Dowling

A couple of young guys in Boulder, Cooled their gas cloud down colder and colder. Then with much exhortation, They hit Bose Condensation, And beat out their rivals (much older).

> Relatively Good Advice by Edward H. Green

Dear S': I note with distress The length of your yardstick is less And please wind your clock To make it tick-tock More briskly. Your faithful friend, S.

> Proton Decay by David Halliday

A proton once said, "I'll fulfill My long-term belief in free will. Though theorists (may) say That I ought to decay I'm damned if I think that I will."

> And Then There Were Photons by William Rolnick

An electron, while trav'ling in space, Met a positron there "face-to-face." The electron then sighed, At the sight of his bride And they "died" in a loving embrace. [WINNER!]Einstein, Podolsky and Rosen by David Halliday Two photons, close-coupled at start, Flew several parsecs apart. Said one, in distress, "What you're forced to express Removes any choice on my part." Fussy Electrons by David Morin, Eric Zaslow, E'beth Haley, John Golden, and Nathan Salwen An electron is sure hard to please. When spread out, it sometimes will freeze. Though agoraphobic, It's still claustrophobic, And runs off when put in a squeeze. The Cat in the Tree by Peter Price Another great Dane has made free With a question of Be or Not be. Now might Schroedinger's puss, In descending by Schuss, Leave one track on each side of a tree? Protecting Schrödinger's Cat by Devlin Gualtieri PETA was out in full force, But not for a dog or a horse. At Schroedinger's place They pleaded their case For the sake of his cat, of course Classical _____ Desperately Surfing for Science by David Morin, Eric Zaslow, E'beth Haley, John Golden, and Nathan Salwen Who needs the balance and check? Screw peer review -what the heck! Send all of your crap To the internet -zap! Who cares if it's nothing but dreck! [WINNER!]On What's New and True author unknown A certain Phys Rev referee Considers all papers with glee: "What's new is not true,

And what's true is not new, Unless it was written by me." [Editor's Note: Several variants on this theme were submitted.]

The Past Isn't What it Used To Be by Bruce Elliott

A professor of Physics named May Complains of the classroom today, "The problem, you know, Is that they're too slow. We were far better students than they."

His friend, a professor named Beecham, Said "It's true, you don't seem to reach 'em. But they're not to blame, For they haven't the same Class of teachers that we had, to teach 'em!"

> See You at Work by Steve Langer

The chairman of AT&T Said, "Your graduate physics degree Is not worth a - penny, Of your kind we've too many. Perhaps you can program in C?"

> Great Lies by Beall Flower

There are several Great Lies that we know. One is "I'll love you tomorrow." Here's another false word That we've recently heard, "With less money your research will grow!"

> Quark-Dork Symmetry Group by Kay R. Devicci©

When we physicists talk about quarks, And "sleptons," "sneutronos," and "squarks," We shouldn't be stunned When the Congress won't fund Our big projects - they think that we're dorks!

> A Physicist from Nantucket by Michael Van Leeuwen

There once was a man from Nantucket Who... ...oops...just got a life.

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newsletter provided that attribution to the source is noted and the materials are not truncated or changed. $\ensuremath{\mathtt{P}}$

From: Erik Nelson <rknlsn@tiac.net>

Here is something I found that you should know about if you don't already, which I found in an anthology of nonsense verse.

Where can I find "real" literature discussing the same thing, seeing as how this verse is apparently an effort to paraphrase something someone studied in a real math and-or physics course, but I do not know how to make sense of it. Does anyone know who the Dr. Ball is, who is mentioned in the last verse? If you know the answer to these questions, please e-mail me: rknlsn@tiac.net (Erik Nelson)

from "A Nonsense Anthology", Collected by Carolyn Wells. Dover, 1958 reprint of first edition published by Scribner in 1902. Page 33.

Song of the Screw

A moving form or rigid mass, Under whate'er conditions Along successive screws must pass Between each two positions. It turns around and slides along--This is the burden of my song.

The pitch of screw, if multiplied By angle of rotation, Will give the distance it must glide In motion of translation. Infinite pitch means pure translation, And zero pitch means pure rotation.

Two motions on two given screws, With amplitudes at pleasure, Into a third screw-motion fuse; Whose amplitude we measure By parallelogram construction (A very obvious deduction.)

Its axis cuts the nodal line Which to both screws is normal, And generates a form divine, Whose name, in language formal, Is "surface-ruled of third degree." Cylindroid is the name for me.

Rotation round a given line Is like a force along. If to say couple you incline, You're clearly in the wrong. 'T is obvious, upon reflection, A line is not a mere direction. So couples with translations too In all respects agree; And thus there centres in the screw A wondrous harmony Of Kinematics and of statics,--The sweetest thing in mathematics.

The forces on one given screw, With motion on a second, In general some work will do, Whose magnitude is reckoned By angle, force and what we call The coefficent virtual.

Rotation now to force convert, And force into rotation; Unchanged the work, we can assert, In spite of transformation. And if two screws no work can claim, Reciprocal will be their name.

Five numbers will a screw define, A screwing motion, six; For four will give the axial line, One more the pitch will fix; And hence we always can contrive One screw reciprocal to five.

Screws-- two, three, or four combined (No question here of six), Yield other screws which are combined Within one screw complex. Thus we obtain the clearest notion Of freedom and constraint of motion.

In complex III., three several screws
 At every point you find,
Or if you one direction choose,
 One screw is to your mind;
And complexes of order III.
Their own reciprocals may be.

In IV., wherever you arrive, You find of screws a cone, On every line in complex V. There is precisely one; At each point of this complex rich, A plane of screws have given pitch.

--Anonymous. ++ =2.2 PHYSICS QUOTES Ρ_ p.austin@info.curtin.edu.au (Peter Austin) "Very strange people, physicists - in my experience the ones who aren't dead are in some way very ill" -Mr Standish "The Long Dark Tea-Time Of The Soul" by Douglas Adams PEIt is not uncommon for engineers to accept the reality of phenomena that are not yet understood, as it is very common for physicists to disbelieve the reality of phenomena that seem to contradict contemporary beliefs of physics - H. Bauer P__ From: Ian Ellis <ian@iglou.com> Newton sat in an orchard, and an apple, plumping down on his head, started a train of thought which opened the heavens to us. Had it been in California, the size of the apples there would have saved him the trouble of much thinking thereafter, perhaps, opening the heavens to him, and not to us. [clipped from "TheCourier-Journal," Louisville, KY] Henry Ward Beecher (1813-1887), American clergyman --Ρ_ No concealed parameters can be introduced with the help of which the indeterministic description could be transformed into a deterministic one. Hence if a future theory should be deterministic, it cannot be a modification of the present one but must be essentially different. -- M. Born (1949) In 1952 the impossible was done. -- John S. Bell, Referring to the Bohmian mechanics(Speakable and unspeakable in quantum mechanics, 1987) MP_ ... it would be better for the true physics if there were no mathematicians on earth. - Daniel (no, not Daniel or Jakob) Bernoulli P_ From: fcbaer@shentel.net (FRANK) FRANK's Quotations for October 7 from Niels Bohr Foraging Quote: When it comes to atoms, language can be used only as in poetry. The poet, too, is not nearly so concerned with describing facts as with creating images. Reflecting quote: There are some things so serious you have to laugh at them. Adopting quote:

It is wrong to think that the task of physics is to find out how Nature is. Physics concerns what we say about Nature. Nurturing Quote: An expert is a man who has made all the mistakes which can be made in a very narrow field. % Niels Bohr (1885-1962) born on October 7 Danish physicist; He was the major contributor for 50 years to developing quantum physics and established the Bohr theory of the atom. (More from Bohr in the miscellany section) P_ The electron is not as simple as it looks. -- (William) Lawrence Bragg, British Physicist(1890-1971) From: Susan K <texdove@onr.com> I know that this defies the law of gravity, but, you see, I never studied law. -Bugs Bunny Ρ_ All science is either physics or stamp collecting. -- Ernest Rutherford, New Zealand physicist (1871-1937) Winner Nobel prize chemistry !! (1908) Source given is JB Birks "Rutherford at Manchester," 1962. More Rutherford in Miscellany section Ρ On a paper submitted by a physicist colleague: "This isn't right. This isn't even wrong." -- Wolfgang Pauli, Austrian physicist (1900-1958) Ρ "One thing they don't tell you about doing experimental physics is that sometimes you must work under adverse conditions ... like a state of sheer terror." -- W. K. Hartmann Ρ "I am afraid the knockabout comedy of modern atomic physics is not very tender towards our aesthetic ideals. The stately drama of stellar evolution turns out to be more like the hair-breadth escapades in the films. The music of the spheres has a painful suggestion of -- jazz." -- Arthur S. Eddington, Stars and Atoms, 1926. P___ From: aephraim@physics5 (Aephraim M. Steinberg) To this day, lab directors keep a physics lecture on hand [to disperse rabble-rousers]. Let us pray we never need to use it." -- Lederman Ρ From: sichase@csa5.lbl.gov (SCOTT I CHASE) Physics is not a religion. If it were, we'd have a much easier time raising money. - Leon Lederman

Ρ_

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From: aephraim@physics5 (Aephraim M. Steinberg)
WHY must I treat the measuring device classically?? What will happen
to me if I don't?? - Wigner, Eugene Paul. Hungarian/US physicist (1902-
1995)
P_
From: clprasad@watson.ibm.com (prasad)
What is mind? No matter.
What is matter? Never mind. - Thomas Hewitt Key, 1799-1875
Punch Vol 29, 19 (1855)
P_
Fermi was asked what characteristics physics Nobelists had in common.
He answered, "I cannot think of a single one, not even intelligence."
Enrico Fermi, Italian physicist, 1901-1954 (Phys Today, Oct 1994, pg70)
P_
Physics is not diffucult, it is just weird - Vincent Icke "The Force of
symmetry" (1994)
P_
From: cdhiv@aol.com (CDH IV = C. Dodd Harris IV)
"The next question was - what makes planets go around the sun? At the
time
of Kepler some people answered this problem by saying that there were
angels behind them beating their wings and pushing the planets around an
orbit. As you will see, the answer is not very far from the truth. The
only difference is that the angels sit in a different direction and their
wings push inward."
                     -Richard Feynman _Character Of Physical Law_, p. 8
MP_
I love only nature, and I hate mathematicians. - Richard Feynman (1918-
1988)
Ρ
From: kriman@acsu.buffalo.edu (Alfred M. Kriman)
@A: Feynman, Richard P. (1918-1988)
@Q:Physicists like to think that all you have to do is say, these are
   the conditions, now what happens next?
Ρ_
What I am going to tell you about is what we teach our physics students
in
the third or fourth year of graduate school... It is my task to convince
you not to turn away because you don't understand it. You see my physics
students don't understand it... That is because I don't understand it.
Nobody does.
Feynman, Richard P. (1918-1988) b. Far Rockaway, New York
Richard P. Feynman, QED, The Strange Theory of Light and Matter, Penguin
Books, London, 1990, p 9. (1)
Ρ
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Physics is like sex: sure, it may give some practical results, but that's
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not why we do it. --Richard Feynman.

From: "Keith E. Sullivan" <KSullivan@worldnet.att.net> INCOMPREHENSIBLE NATURE

"This is the third of four lectures on a rather difficult subject -- the theory of quantum electrodynamics -- and since there are obviously more people here tonight than there were before, some of you haven't heard the other two lectures and will find this lecture almost incomprehensible. Those of you who *have* heard the other two lectures will also find this lecture incomprehensible, but you know that that's all right: as I explained in the first lecture, the way we have to describe Nature is generally incomprehensible to us." --Richard Feynman, from a lecture published in the book QED

Ofer Inbar <cos@cs.brandeis.edu> Quote of the Day <qotd-request@ensu.ucalgary.ca> P_____

From: mmcirvin@world.std.com (Matt McIrvin)
Near the end of "QED: The Strange Theory of Light and Matter.", Feynman
is
demonstrating how all of the other interactions in the Standard Model are
analogous to the QED interaction (both QCD and weak interactions), and he
jokes that it's because:

"physicists can only think the same damn thing over and over."

(Of course, really, they thought some pretty remarkably different things for a while, before the evidence for the astounding parallels started coming in. 1960s literature on strong interactions is a baffling swamp of bizarre theories.)

Incidentally, "QED" is an *excellent* popular book on modern physics, one of the very best ever written. Also, it's short.
P

Carlyle has somewhere said something like this: " Nothing but facts are of importance. John Lackland passed by here. Here is something that is admirable. Here is a reality for which I would give all the theories in the world." Carlyle was a fellow countryman of Bacon; but Bacon would not have said that. That is the language of the historian. The physicist would say rather: "John Lackland passed by here; that makes no difference to me, for he will never pass this way again." -- Henri Poincare P______

From: kriman@acsu.buffalo.edu (Alfred M. Kriman)
@A: Dyson, Freeman J.
@Q: We have learned that matter is weird stuff. It is weird enough, so that it does not limit God's freedom to make it do what he pleases.
@R: Ch. 1, p. 8, _Infinite in All Directions: Gifford lectures given at Aberdeen, Scotland, April-November 1985_; edited by the author (Harper &

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Row, New York, 1988).
P_
@A: Murray Gell-Mann
@Q: Niels Bohr brainwashed a whole generation of physicists into
believing that the problem [of the interpretation of quantum mechanics]
had been solved fifty years ago.
@R: Acceptance speech Noble Price (1976)
P_
From: moloch@starbase.neosoft.com (Anne Voelkel)
The rules of clockwork might apply to familiar objects such as
snookerballs, but when it comes to atoms, the rules are those of
roulette.
---Paul Davies _God and the New Physics_
Ρ_
"My goal is simple. It is complete understanding of the universe, why it
as
it is and why it exists at all."
Stephen Hawking
P_
From: eclayton@trincoll.edu (Edward Clayton)
 "Heavier-than-air flying machines are impossible."
       Lord Kelvin, president, Royal Society, 1895.
Ρ
X-rays will prove to be a hoax.
       Lord Kelvin, while president of the Royal Society
Ρ
From: Dennis Parker <dparker@onr.com>
Probability has turned modern science into a truth casino.
 --Bart Kosko in Fuzzy Thinking (The New Science of Fuzzy Logic)
P___
From: eclayton@trincoll.edu (Edward Clayton)
"Professor Goddard does not know the relation between action and reaction
and the need to have something better than a vacuum against which to
react.
He seems to lack the basic knowledge ladled out daily in high schools."
          1921 New York Times editorial about Robert Goddard's
revolutionary
       rocket work.
From: John Beaderstadt <beady@together.org> Date:
                                                       1999/04/13
"Correction: It is now definitely established that a rocket can function
in a vaccuum. The 'Times' regrets the error." NY times, July 1969.
Ρ_
From: eclayton@trincoll.edu (Edward Clayton)
Man will never reach the moon regardless of all future scientific
advances.
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-- Dr. Lee De Forest, inventor of the vacuum tube and father of television.

Ρ_

From the remark of Sherlock Holmes "It's a capital mistake to theorize before you have all the evidence" if follows that astronomers are bad detectives. -- Nick Schutgens, Phd thesis P

P___

From: "Dr. Mark W. Lund" <mlund@moxtek.com> Q: What did one photon say to the other photon? A: I'm sick and tired of your interference. P_____

From: SCIENCTRIX@aol.com
My sibling was asking me about the orbits of planets and the amount of
area
swept in any given time. I had to ask him, "Am I my brother's Kepler?"
P______

From: Stan Kegel <kegel@fea.net> A physics professor at a state university in Michigan was famous for his animated lectures. He was short and thin with wild white hair and an excited expression. In lecture he would through himself from the top of desks and throw frisbees to students in the back row to illustrate various principles.

One day in class he was spinning on an office chair holding weights in each hand when he lost his balance and tumbled into the first row. He apologized to his class for going off on a tangent.

From: "Profusions of Puns, Gaggles of Groaners"
*P_____

From: Stan Kegel <kegel@fea.net>

Sir Isaac Newton had a theory of how to get the best outcomes in a courtroom. He suggested to lawyers that they should drag their arguments into the late afternoon hours. The English judges of his day would never abandon their 4 o'clock tea time, and therefore would always bring down their hammer and enter a hasty, positive decision so they could retire to their chambers for a cup of Earl Grey.

This tactic used by the British lawyers is still recalled as Newton's Law of Gavel Tea. (By Guy Ben Moshe) *P______

From: Stan Kegel <kegel@fea.net> Albert Einstein married his cousin. He had tried to date outside his family circle, but he never found any women appealing - especially in the boob department - that weren't within his familial group. He postulated that there is a special attraction to women in one's own family in his Theory of Relative Titty. (By Guy Ben Moshe) *P

From: Stan Kegel <kegel@fea.net> A high school physics teacher had a summer job as a beach lifeguard. He noted that the best tanned babes flirted the most throughout the summer, though they never found steady boyfriends. He theorized that: A body in lotion trends to stray emotion. (By Guy Ben Moshe) From: "Profusions of Puns, Gaggles of Groaners" P_ From: Hauke Reddmann (fc3a501@AMRISC01.math.uni-hamburg.de) OK, here are some Physics Song Titles to guess. Solution after spoiler. Followups over my dead body. 1. zzzzzz>400nm 2. E>>0 3. L 4. t=0 1. I dream in Infrared (Accept??) 2. High Energy (?) 3. Action (The Sweet) 4. Time's Up! (Living Colour) From: Monk Jack (Monk_Jack@biosys.net) 4b Surely t=0 is an initial condition, which reminds me of 'In the beginning', 'We've only just begun', 'Begin again', 'Start all over' etc. oh and you've missed off the most obvious: 5. E=mc^2 A. E=mc² (Big Audio Dynamite) PC_ From: "Pierre Abbat" <phma@trellis.net> Maybe Schrödinger isn't the best choice, but here it is: Q: What is Schoedinger's parakeet called? A: Ein Teilchensittich. (Kekul, of course, has an orthokeet... as long as the hoop snake didn't get to it.) Explanation German. Sittich is German for parrot Wellensittich is German for parakeet Welle is German for wave. Teilchen is German for particle. There is no Sittich. There is, though, a Wellensittich, which by wave-particle duality becomes a Teilchensittich. Ρ

"Absolute zero is cool." Ρ From: Omer Ahmad <ahmad@vif.com> In a class on Modeling and analysis of physical systems.... Potential Sources: There not sources, but they could be. Ρ A neutron walks into a bar. "I'd like a beer" he says. The bartender promptly serves up a beer. "How much will that be?" asks the neutron. "For you?" replies the bartender, "no charge" P__ benker@cae.wisc.edu Two atoms were walking down the street. One turns to the other and says, "Oh, no! I think I'm an ion!" The other responds, "Are you sure?!?" "Yes, I'm positive!' From: Mountain Man <prfbrown@magna.com.au> So the 2nd atom aks: "Quantum well - what are ya gunnadoo abootit? and the 1st atom, after having a few, replies: "In principle, I am uncertain about getting charged, maybe its gone off on the great cosmic wave train, or eloped with a stray alpha particle. Maybe I'm just losing my attraction? Maybe I've taken one too many hits from the lab. Maybe I should just decay right here in this bar." At that moment, a delightful little e- flies through the aether of the inter-atomic realms and settles in a mutually comfortable 1920's eigenstatechair near the virtuous pair, and says to the two atoms: "Hope you guys are not molecular" So the 1st atom perks up and says: "Naa: just been surfin' and think I lost an electron" The 2nd atom finishes his drink and leaves, saying: "Gunna split. Gotta DNA contract this evenin'" And as the sun sets slowly in the west, and the crescent moon rises only just a little faster over the eastern ridges of the atomic horizon, the atom and the electron take a stroll under the emergent stars, and know with a growing certaintly that they are not just some loose charges looking for a little physical action, but in fact the beginning of a newly created completeness in the midst of the cosmic harmony - if only for

a picosecond.

Albert puts down his stopwatch and smiles, despite the reception of his theory. P____

A hydrogen atom came running into a police station asking for help....

Hydrogen atom: Someone just stole my electron!! Policeman: Are you sure? Hydrogen atom: Yes, I'm positive From: freya@ccwf.cc.utexas.edu (Smile) policeman: Oh, I thought you were just being negative again. P______

From: dsmillie@superior.carleton.ca (David Smillie)
Two sodium atoms are flying around a cyclotron. Suddenly the first atom
said to the second, `Hey, I think I've just lost an electron.'
`Are you sure?' asked the second atom.
`Yeah,' said the first, `I'm positive.'

Of course, the _real_ joke is that neither sodium atom could have been flying around the cyclotron in the first place, unless they were _already_ ionized. (collapses to the floor, gasping for breath and chuckling hysterically while everyone else in the room edges nervously away) P_

From: harper@kauri.vuw.ac.nz (John Harper)
every couple has its moment, especially
P_____

Ivan Ivanovich, great russian Scientist does an experiment. He wants to know how fast a thermometer falls down. He takes a thermometer and a light, a candle light. He drops both from the 3rd floor and recognices that they are reaching the ground at the same time. Ivan Ivanovich, great russian scientific writes in his book: A theomometer falls with the speed of light.

Why did the cat fall off the roof? Because he lost his mu. (mew=sound cats make, mu=coeff of friction) P_____

Brownian motion = Jogging girl scout P_____

Ρ_

Bob Terry's sigline urges us to "Join the Brownian Movement!" At the time (in Los Angeles) I had a magnetic sign on my car saying REPEAL OHM'S LAW with my telephone number, I got a call from someone urging me to join the Brownian Movement. When I asked him what folks did in the Brownian Movement, he told me they just got together to mill around. - Allan Hjer3pe P

Years ago, when I lived in Topanga, California (near LA) I had a magnetic

sign on my car saying REPEAL OHM'S LAW with my phone number. As a result Т received a number of interesting calls. One was from a physics professor at UCLA. He said he was all in favor of repealing Ohm's Law, but requested that I wait until the end of the quarter so he wouldn't have to rewrite his lecture notes. Allan wrote that he was "on the committee to revoke Ohm's Law". Let me guess: Ohm's Law: is that the one about sitting crosslegged and chanting "Ohm! Ohm! Ohm!" ? Watt is Ohm's law and who volted it into existence? Has it met with any resistance in its application? Please respond quickly because my hair is on end and my emotional life has become static while awaiting an answer. Gus Seligmann Ohm's Law was good enough in its time, but that time is past. It is a rankly discriminatory piece of legislation and should be repealed or severely amended. Current should be directly proportional to BOTH voltage and resistance, or inversely proportional to both, or proportional to neither. P_ The Stanford Linear Accelerator Center was known as SLAC, until the big earthquake, when it became known as SPLAC. SPLAC? Stanford Piecewise Linear Accelerator. Ρ Anything that doesn't matter has no mass. Ρ From: s5100101@nickel.laurentian.ca Q: What is a tachyon? Α: A sub-atomic particle devoid of good taste. Ρ From: s5100101@nickel.laurentian.ca Albert Einstein had been working on his theory of relativity a lot and he was just about finished. He was almost ready to publish his work. However, he was under a lot of stress so he thought he would go on vacation to Mexico. Albert had a glorious two week vacation and was having the time of his life. On the last night he was staying there he decided to take a walk along the beach and watch the sunset. As he watched the sun go down he thought of the light of the sun and then the speed of light. You see, he had been using the speed of light in a lot of his calculations but he didn't decided on what symbol to use for it.

Greek had been so overused.

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Just at that moment Senior Wensez was also walking along the
beach in
the opposite direction. Albert caught him out of the corner of his eye
and
remarked suddenly, "Do you not zink zat zee speed of light is very fast?"
        Senior Wensez paused for a moment and replied, "Si."
P_
Polymer physicists are into chains.
P__
Two electron convicts are sitting in a jail cell together.
The first one says, "What are you in for?"
The second one says, "For attempting a forbidden transition."
P__
Gravity brings me down
Neutrinos have bad breadth (J.F. FreemanIII, Raleigh, N.C.)
P_
Q: What do physicist enjoy doing the most at baseball games?
A: The 'wave'.
Ρ_
Q: What is uttered by a sick duck?
A: Quark!
Ρ_
Q: What is an astronomical unit?
A: One helluva big apartment
P_
From: an216284@anon.penet.fi (YUMMYYAMS)
Overheard after a student failed a physics test miserably:
Nuclear, Hydrogen, Atomic, My test- They can all be bombs.
Ρ
From: rhi@festival.ed.ac.uk (Rhiannon Macfie)
The particle physicist was tired of his work - he'd been trying to
discover
the loveton (the hypothetical particle that carries the force of
attraction
between two people) and he was getting nowhere. `What I need,' he said to
himself, `is a good long holiday doing somthing completely different.'So
he
went to his travel agent and got some holiday brochures and looked
through
them, trying to decide what to do. Skiing in the Alps? No - too near
CERN.
Scuba diving on the barrier reef? No - he'd forever be trying to
calculate
the pressure he was under at any particular depth. At last, just as he
was
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about to give up and go back to his collider, he spotted a small ad in the classified section that appeard to be just the thing. `SAILING HOLIDAYS', it declared. `Come and be part of the crew of a sailing vessel. Get away from it all.' Well, this looked like just the thing, so he picked up the phone and dialled the number. A voice answered. `Yes?' 'Uhmmm, well, I saw your advertisement, and I was wondering if I might book a place on one of your sailing holidays ..? ' `Ah, well, you'd have to speak to the Captain of the ship about that. Hang on, and I'll get him for you.' A long pause. Finally, a deep gruff voice came on. `Captain Higgs speaking. You want to go on the sailing trip?' `Yes,' answered the physicist. `Well, you're only just in time. We leave next week, and there's only two places left. Would you rather be the cook or the bo'sun?' The physicist thought for a minute. `I'd rather be the bo'sun, I think,' he said at last. `Good.. ' replied the captain, and then went on to give details of where when the ship was leaving. Next week, the physicist was sailing for foreign shores. He had a wonderful time on the ship, and came back to his work refreshed and ready to go (though he never did discover the loveton). He never did forget the trip, or the holiday he spent as Higg's Bo'sun. Ρ From: "Caleb B." <calebb@u.washington.edu> Got mole problems? Call Avogadro at 602-1023. Ρ From: aaron@falcon.cc.ukans.edu (Aaron Hoyt) Prof: Some people have proposed using Krypton gas in scintillator detectors. Grad Student: Won't that scare away the superstrings? Ρ From: Giorgio Torrieri <orie0064@sable.ox.ac.uk> What is a quantum particle?

The dreams that stuff is made of! -- David Moser

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From: Giorgio Torrieri <orie0064@sable.ox.ac.uk>
What is JJ coupling?
JP Thompson's conception
P_
From: Aliquotes iv.i (journal) (rogerb@microsoft.com)
Did you hear about the French post-doc who went to work at the Fermi Lab,
but never went in because the sign over the door always said it was
closed.
P_
From: mdecaire@eagle.wbm.ca (Marc Guy DeCaire)
Q: What do you call it when atomic scientists grab their rods and gather
   around the old watering hole?
A: Nuclear fishin'
P_
From: jsalmon@sapcmail.jsc.nasa.gov (jsalmon)
Are vacuum thermoses formed using a Dewar die?
P_
From: Keith Stein <sthbrum@sthbrum.demon.co.uk>
It is said that the "J", also know as the "psi particle", has zero
charm ".
I'm sure that's not true ! ( when you get to know it :-)
Ρ
From: Ian Ellis <ian@iglou.com>
FRESHMEN in the general-science class at Mark Twain Middle School in Mar
Vista, Calif., were studying astronomy. "What do we call a group of stars
that makes an imaginary picture in the sky?" the teacher asked.
"A consternation," one student replied.
   --Contributed to "Tales Out of School" by Ralph E. Hedges
   © 1996 The Reader's Digest Association, Inc. All rights reserved.
P_
From: rod2410@iperbole.bologna.it (Jim Cregan)
Q:What do you call a nun who's had a sex change?
A:A Trans-sister
Ρ_
A Simpleton's Guide to Science (stolen from UK magazine)
Relativity : Family get-togethers at Christmas
Gravity : Strength of a glass of beer
Time travel : Throwing the alarm clock at the wall
Black holes : What you get in black socks
Critical mass: A gaggle of film reviewers
Hyperspace : Where you park at the superstore
Ρ_
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From: rod2410@iperbole.bologna.it (Jim Cregan)
Q:What is horsepower?

Ρ

A: The power it takes to drag a horse a given distance in a given amount of time. P_ From: rboland@eden.com ()
 Q:Does light have mass? A:Of course not. It's not even Catholic!!! Ρ From: Suzanne Sarlette/Gerald Pearson <suegerry@mut1.muscanet.com> Q: What do you call the sum of the diagonal elements of the tensor of inertia? A: The spur of the moment. P_ From: mgiles@onramp.net (Kristen Giles) An engineer friend of mine told me of a group of scientists that were nominated for a Nobel prize. Using dental tools, they were able to sort out the smallest particles that mankind has yet discovered. The group became known as " the Graders of the Flossed Quark." ++=2.4 PSEUDO PHYSICS (CAT PHYSICS, CARTOON PHYSICS) Ρ_ From: ftp.cco.caltech.edu, maintained by Nathan Mates (nathan@cco.caltech.edu) From: Philip Clarke <clar0318@flinders.edu.au> Cartoon Laws of Physics Cartoon Law I Any body suspended in space will remain in space until made aware of its situation. Daffy Duck steps off a cliff, expecting further pastureland. He loiters in midair, soliloquizing flippantly, until he chances to look down. At this point, the familiar principle of 32 feet per second per second takes over. Cartoon Law II Any body in motion will tend to remain in motion until solid matter intervenes suddenly. Whether shot from a cannon or in hot pursuit on foot, cartoon characters are so absolute in their momentum that only a telephone pole or an outsize boulder retards their forward motion absolutely. Sir Isaac Newton called this sudden termination of motion the stooge's surcease. Cartoon Law III Any body passing through solid matter will leave a perforation conforming to its perimeter. Also called the silhouette of passage, this phenomenon is the speciality of victims of directed-pressure explosions and of reckless cowards who are so eager to escape that they exit directly through the wall of a

house, leaving a cookie-cutout-perfect hole. The threat of skunks or

matrimony often catalyses this reaction.

Cartoon Law IV The time required for an object to fall twenty stories is greater than or equal to the time it takes for whoever knocked it off the ledge to spiral down twenty flights to attempt to capture it unbroken.

Such an object is inevitably priceless, the attempt to capture it inevitably unsuccessful.

Cartoon Law V All principles of gravity are negated by fear.

Psychic forces are sufficient in most bodies for a shock to propel them directly away from the earth's surface. A spooky noise or an adversary's signature sound will induce motion upward, usually to the cradle of a chandelier, a treetop, or the crest of a flagpole. The feet of a character who is running or the wheels of a speeding auto need never touch the ground, especially when in flight.

Cartoon Law VI As speed increases, objects can be in several places at once.

This is particularly true of tooth-and-claw fights, in which a character's head may be glimpsed emerging from the cloud of altercation at several places simultaneously. This effect is common as well among bodies that are spinning or being throttled. A `wacky' character has the option of self-replication only at manic high speeds and may ricochet off walls to achieve the velocity required.

Cartoon Law VII Certain bodies can pass through solid walls painted to resemble tunnel entrances; others cannot.

This trompe l'oeil inconsistency has baffled generations, but at least it is known that whoever paints an entrance on a wall's surface to trick an opponent will be unable to pursue him into this theoretical space. The painter is flattened against the wall when he attempts to follow into the painting. This is ultimately a problem of art, not of science.

Cartoon Law VIII Any violent rearrangement of feline matter is impermanent.

Cartoon cats possess even more deaths than the traditional nine lives might comfortably afford. They can be decimated, spliced, splayed, accordion-pleated, spindled, or disassembled, but they cannot be destroyed. After a few moments of blinking self pity, they reinflate, elongate, snap back, or solidify.

Corollary: A cat will assume the shape of its container.

Cartoon Law IX Everything falls faster than an anvil.

From: Isoperimetrosity <sjd100@york.ac.uk>
Cartoon Law X
For every vengeance there is an equal and opposite revengeance.

This is the one law of animated cartoon motion that also applies to the physical world at large. For that reason, we need the relief of watching it happen to a duck instead. Cartoon Law Amendment A A sharp object will always propel a character upward. When poked (usually in the buttocks) with a sharp object (usually a pin), а character will defy gravity by shooting straight up, with great velocity. Cartoon Law Amendment B The laws of object permanence are nullified for "cool" characters. Characters who are intended to be "cool" can make previously nonexistent objects appear from behind their backs at will. For instance, the Road Runner can materialize signs to express himself without speaking. Cartoon Law Amendment C Explosive weapons cannot cause fatal injuries. They merely turn characters temporarily black and smoky. Cartoon Law Amendment D Gravity is transmitted by slow-moving waves of large wavelengths. Their operation can be wittnessed by observing the behavior of a canine suspended over a large vertical drop. Its feet will begin to fall first, causing its legs to stretch. As the wave reaches its torso, that part will begin to fall, causing the neck to strech. As the head begins to fall, tension is released and the canine will resume its regular proportions until such time as it strikes the ground. Cartoon Law Amendment E Dynamite is spontaneously generated in "C-spaces" (spaces in which cartoon laws hold). The process is analogous to steady-state theories of the universe which postulated that the tensions involved in maintianing a space would cause the creation of hydrogen from nothing. Dynamite quanta are quite large (stick sized) and unstable (lit). Such quanta are attracted to psychic forces generated by feelings of distress in "cool" characters (see Amendment B, which may be a special case of this law), who are able to use said quanta to their advantage. One may imagine C-spaces where all matter and energy result from primal masses of dynamite exploding. A big bang indeed. Ρ

From: Heather (z950257@oats.farm.niu.edu) FELINE PHYSICS

Law of Cat Inertia

A cat at rest will tend to remain at rest, unless acted upon by some outside force - such as the opening of cat food, or a nearby scurrying mouse.

Law of Cat Motion

A cat will move in a straight line, unless there is a really good reason to change direction.

Law of Cat Magnetism

All blue blazers and black sweaters attract cat hair in direct proportion to the darkness of the fabric.

Law of Cat Thermodynamics

Heat flows from a warmer to a cooler body, except in the case of a cat, in which case all heat flows to the cat.

Law of Cat Stretching

A cat will stretch to a distance proportional to the length of the nap just taken.

Law of Cat Sleeping

All cats must sleep with people whenever possible, in a position as uncomfortable for the people involved, and as comfortable as possible for the cat.

Law of Cat Elongation

A cat can make her body long enough to reach just about any counter top that has anything remotely interesting on it.

Law of Cat Obstruction

A cat must lay on the floor in such a position to obstruct the maximum amount of human foot traffic.

Law of Cat Acceleration

A cat will accelerate at a constant rate, until he gets good and ready to stop.

Law of Dinner Table Attendance

Cats must attend all meals when anything good is served.

Law of Rug Configuration

No rug may remain in its naturally flat state for very long.

Law of Obedience Resistance

A cat's resistance varies in proportion to a human's desire for

her to do something.

First Law of Energy Conservation

Cats know that energy can neither be created nor destroyed and will, therefore, use as little energy as possible.

Second Law of Energy Conservation

Cats also know that energy can only be stored by a lot of napping.

Law of Refrigerator Observation

If a cat watches a refrigerator long enough, someone will come along and take out something good to eat.

Law of Electric Blanket Attraction

Turn on an electric blanket and a cat will jump into bed at the speed of light.

Law of Random Comfort Seeking

A cat will always seek, and usually take over, the most comfortable spot in any given room.

Law of Bag/Box Occupancy

All bags and boxes in a given room must contain a cat within the earliest possible nanosecond.

Law of Cat Embarrassment

A cat's irritation rises in direct proportion to her embarrassment times the amount of human laughter.

Law of Milk Consumption

A cat will drink his weight in milk, squared, just to show you he can.

Law of Furniture Replacement

A cat's desire to scratch furniture is directly proportional to the cost of the furniture.

Law of Cat Landing

A cat will always land in the softest place possible; often the mid-section of an unsuspecting, reclining human.

Law of Fluid Displacement

A cat immersed in milk will displace her own volume, minus the amount of milk consumed.

Law of Cat Disinterest

A cat's interest level will vary in inverse proportion to the amount of effort a human expends in trying to interest him.

Law of Pill Rejection

Any pill given to a cat has the potential energy to reach escape velocity.

Law of Cat Composition

A cat is composed of Matter + Anti-Matter + It Doesn't Matter.

Ρ_

From: Andrew Ray <aray@emory.edu> THE LAWS OF AUTOMOTIVE PHYSICS:

1. As automotive particles move through space, they travel along various energy states. Areas with few particles tend to have only 2 or maybe 3 energy states, while congested areas can have up to 6 or 7 energy states. Counterparticles move through space in the opposite direction, but always with the same number of energy states available. Some areas are composed of antimatter (see Nippobritish matter below) exclusively.

2. Each auto is composed of several flavors - most autos are made of 4 or 6 flavors, but a fair number have 8 and a few smaller auto particles have three. The number of flavors determines both the size of the particle (from compact to limo) and the acceleration of the particle through space. Faster acceleration and subsequent higher velocities allow the particles to move into higher energy states, arbitrarily called left lanes. 3. There are three states to automotive particle matter - European, American, and Mexicaribbean. European matter is the most ordered, with particles staying in their lowest energy states except when accelerated to speeds faster than nearby particles. American matter is somewhat ordered. with some particles maintaining their lowest states. However, some particles, particularly older ones, tend to randomly drift into higher energy states without the speed needed to maintain that state. This creates bottlenecks and can increase the viscosity of American matter until it moves at the speed of molasses. The most chaotic form is Mexicaribbean matter (MC). MC matter consists of poorly defined, meandering energy states. Particles move at random angles in all directions, arbitrarily bouncing into various energy states. Accelerations tend to be rapid and velocities high, resulting in frequent collisions between particles and their counterparticles, and rapid changes between highly viscous, slow-moving matter and high-velocity, fast-flowing matter.

 $4. \$ American matter has been successfully reduced in temperature to a state

of near absolute zero - the point where acceleration and velocity are both near or at zero. Automotive physicists, being quirky, named this low-temp. state "Rush Hour".

5. American matter also behaves in odd, yet predictable ways. For instance, it is a well known fact that as the number of available energy states expands, the number of slow-moving particles expands to match the number of available energy states. The result is that some slow-moving particles will move into all the higher energy states available, creating the molasses effect whether there are 2 or 6 energy states. These particles come in many different varieties, named "idiot", "imbecile", "moron", etc. The slowest particles have much more offensive names, and can occasionally result in other particles firing small, yet powerful microparticles at the slow particles - ending in the destruction of the slow particle.

6. American matter is also unpredictable in some ways, particularly with regards to its reactivity with other substances. Ethyl alcohol, for instance, can cause particles to become frozen and clogged due to collisions with particles in the same energy state, or can make the particles reverse spin and jump into an inverse energy state, where they can be annihilated in collisions with their counterparticles. However, the

alcohol-treated particle tends to escape destruction more often than the untreated particle. Treating American matter with cannabinoids tends to slow down the particles to a crawl, and impart a glassy look to them.

7. American matter is increasingly being affected by electromagnetic radiation in the "cellphone" bandwidth. It tends to cause the particles affected by it to move more randomly, especially moving into and out of different energy states. It also causes increased numbers of particle collisions. However, it can facilitate the decay of particles that collided, to keep the molasses effect from being too great.

8. There is a peculiar species of antimatter, called Nippobritish matter. It moves in energy states completely opposite of European and American matter, and most Mexicaribbean matter.

Any automotive physicists who are experts on European matter or MC matter are welcome to share their insights into these forms of matter.

Prof. Andrew Ray Wishing the slow particles would move out of the way

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From: Steffen Knack (sknack@vaxff1.mpi-stuttgart.mpg.de)

Quantumtheory of Politics by Steffen Knack Abstract :

An introductory summary about failed attempts to employ quantitative methods to social and political sciences is given. A new and hopefully successful attempt will be presented by using theories and methods derived from modern quantum physics. Introduction It has long been seen as a major weakness of the social and political sciences that they lack the mathematical precision, which has been the key to the great successes of the natural sciences. As a consequence great expectations [1] have been set in almost every new mathematical theory of the last decades, e.g. catastrophe theory and chaos theory. Yet, while it is from a intuitive point of view logical to try to adopt catastrophe or chaos theory to politics, experience has shown that only the names but not the mathematical substance of these theories are well suited for this task [2].

Catastrophe theory deals with the structural stability and instability of potentials. While no-one can deny that there are many instabilities in world politics, the existence of a structure is by no means evident. Indeed the failure of this theory gives prove of the total absence of any structure whatsoever.

A first view at chaos theory, which deals with very complex systems, again suggests a successful application in political science. A closer look however reveals that chaos theory is only applicable to the so-called determined chaos, which evolves out of a set of well defined rules. Anyone who wants to try to establish a set of rules in politics, clearly lacks any sense of reality. This means that chaos theory will turn out - and indeed has already done so - to be a again a complete failure.

In this grim situation there might nevertheless be hope coming from a direction the least expected : quantum physics. In the following we will give a rough outline of the basic features of quantum theory. The main part of this work consists of practical applications which show a first glimpse of future triumphs in this field.

Theory of Quantum Physics

The overwhelming success of quantum theory stems from the fact that from the very beginning it is concerned with probabilities rather than certainties. These probabilities are mathematically represented by wave-functions which are vectors of an abstract Hilbertspace or in the case functions is given by Schroedinger's equation

i/h * d/dt(Psi) = H(t) * Psi

where H(t) is the so-called Hamiltionian of the system. Of the many results

which can be deduced using this seemingly simple equation we will make mostly use of Heisenberg's Uncertainty Principle which states

dX * dP > h/2 or dE * dt > h/2

This shall suffice as a short introduction to the most important concepts of quantum physics and we will proceed with the more interesting part of applications in politics.

Application of Quantum Physics in Politics

The System of German Democracy

As it is always best to use specific examples for illustration, we will start out with describing the German Democracy in terms of quantum theory. The first step is to choose a irreducible base of our system, which

is given by |CDU>, |SPD>, |FDP>, |Greens>, |PDS>. Let us assume for sake of

simplicity that Germany is a closed system, i.e. we will at first neglect the impact of foreign policy. A rather simple calculation then yields the astonishing result that Kohl is an eigenvalue of German Democracy (unfortunately the 1998 national elections have taken place meanwhile,

contradicting this and the following statements [3]. Yet, recognizing the clarity and logic of the reasoning we prefer theory to reality). Given an eigenvalue and the corresponding eigenfunction, which here evidently is the

 $\left| \text{CDU} \right| \text{FDP} \right>$ coalition, one can always eliminate time dependence. This means

we have found a static solution which solves the time-independent Schroedinger equation

H Psi(Kohl) = E(Kohl) * Psi(Kohl)

Thus we have derived very easily an explanation for the fact that there has

been no progress in Germany for the last 14 years.

Next, we want to analyse political elections. As an example, let us consider the question of the probability of a political change after the next election. (The reader is asked to keep in mind, that these probabilities have already turned into certainties, which, while having been very unlikely, are now certain.) It is evident to every physicist that

one only has to calculate the matrix element of transition

W = <CDU | E1998 | SPD>

where E1998 is the election-operator of 1998 (which is of course hermite,

the outcome of elections being an observable). We now have only to consult linear algebra and to remember that |CDU> and |SPD> both belong to an orthogonal base to see that

W = 0

We want to remark here that the above calculation holds only if the system

is not observed, because only then can the time-development described by Schroedinger's equation be applied. Any observation of the system will of course lead to an immediate collapse of the wave-function. Thus as an spin-off from our calculation we now understand why polls frequently fail to produce correct predictions (and we have found someone to blame: this damned pollsters ruined our nice paper) .

World Trade and National Politics

As we now turn our attention towards global economics we will find the Heisenberg relations to be of great practical use. The world wide free trade like it is set down in the GATT treaty [4] means an increase in dX which infers an decrease in dP. As E is given in the non-relativistic case

as $E = P^2/(2m)$ this means that dE also decreases, which again results in dt getting bigger. Thus we have found a theoretical explanation for the empirically well known fact, that in global trade delivery times tend to be

longer than in regional markets.

Another question of great interest is the problem of the influence of national policies in a world of global markets. Concerning world trade national governments can almost only resort to tariffs and customs. In our

quantum theory we can describe this situation in terms of potential barriers which are setup by national governments. International trade now means nothing else than the scattering of particles by these potential barriers. Thus we are able to take the well established facts of the quantum theory of scattering and apply them to our problem. The first result that we obtain is the fact that the higher the potential barrier (i.e. the higher the customs) the less likely are foreign goods to enter the local market. This is in perfect agreement with the predictions of the

standard theories of economics [5]. But our theory does more than that : We

see for instance that not only the height of the potential barrier but also

its width is of importance, which means that import duties of big national

economies like the USA or Japan influence world economics rather more than

smaller economies like Costa Rica or Liechtenstein. Even such irregular phenomena like smuggling and bootlegging, which the older theories regularly failed to describe, are an integral part of quantum theory represented by the well investigated tunneling phenomena. We see that the whole variety and complexity of international economics can thus be described with quantum theory.

Conclusion

We have tried to choose the most simple and vivid examples and generally have kept mathematics to a minimum. Yet, even those few examples give a glimpse of the vast variety of possible future applications of this approach. When one considers that we didn't even use powerful concepts and theories like quantum field theory, Feynman diagrams and the violation of parity by weak interaction, one cannot be but awe-stricken by the thought of what will become possible in the future. We personally set our highest hopes in the CPT-Theorem and its consequences for politics. If policies can be developed which show an invariance under time reversal this could be the answer to the socio-economic and political problems of our troubled days [6]. Acknowledgments This work has been funded under no grant whatsoever [7]. Literature [1] C. Dickens, Great Expectations, London (1861) [2] C. Dickens, Hard Times, London (1854) [3] B. Joel, Getting it right the first time, The Stranger, Joelsongs (1977) [4] J. Irving, The World According to GATT, Random House, New York (1976)[5] O.V. Trebeis, Nationaloekonomologie, Tuebingen (1988) [6] Supertramp, Crisis ? What crisis ?, A&M Records (1975) [7] Beatles, You never give me your money, Abbey Road, Emi Records

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From: John Sergent (jsergent@ix.netcom.com)
from the Car Talk Mailbag...
William L. Roes sent the following letter (response sent from
mail@cartalk.com).

Dear Tom and Ray,

(1969)

I would like to discuss a subject that I am sure most individuals simply take as a fact of our daily existence: losing things!

An example: on more than one occasion while working on the car, I would drop something--a nut or bolt--and look for it in every location it could possibly have landed, only to discover that it was just not there. What would add to the frustration of the whole experience was that once I had surrendered to the futility of the search, there the object would be...in plain sight.

My mother used to say when something had strangely disappeared that it had fallen into a void. Later, when the object was recovered, it had somehow fallen back out of the void. That explanation did not satisfy my need to understand this mysterious phenomenon. I am happy to announce, after years of diligent effort, the answer is available. The turning point in the investigation was the realization that certain types of materials have a greater chance of being affected by this phenomenon. (This was discovered only after the disappearance of socks was found to be caused by an entirely different set of circumstances.) While this temporary disappearance can happen to any object under the right conditions, it occurs more often in metal objects subjected to a great deal of stress in their formation (i.e., nuts, bolts, earrings, keys, etc.).

What occurs is that when the object falls and strikes the ground, this causes vibration at the atomic level. In objects with a highly ordered crystalline structure (metals), it is possible to get all the atoms to vibrate in unison if the object is below a certain limiting size. So this usually happens only to small objects; the conditions required for this to happen to very large items will be discussed later. When the neutrons vibrate in unison it causes the subatomic gravitons to emit a type of energy not yet fully understood. The phenomenon has been named Graviton Oscillation Neutron Emission, or GONE for short. This energy field actually causes the object to shift in relative time. The degree of temporal shift is dependent on the amount of energy released It may shift just a few moments, in which case you may find the object while conducting your search. On other occasions it may take minutes, hours or months, or you may never catch up with the item in the stream of time.

For larger objects the energy from the impact is not sufficient to cause a shift in time. However, sympathetic vibrations due to resonance can spread throughout the structure, causing the temporal shift to occur later. This has been observed in mall parking lots where a car door had been slammed, and after a few minutes have passed the car disappears. This phenomenon is usually accompanied by a position shift as well, such that when the automobile reappears, it is in a different parking space than the one you are quite sure you left it in. In a few instances the vehicles have been found miles away from the point of disappearance, somewhat worse for wear from their journey through time and space. And often missing tires and electronic components, oddly enough.

So, now that this phenomenon is understood, it should relieve us all of unnecessary anxiety. When you can't find your keys or your car, just wait--it's only GONE temporarily. It will pop up when it falls out of the void. P

From deichman@cod.nosc.mil Wed Aug 05 04:20:00 1998

OBSERVATION OF WARM NUCLEAR FUSION IN CONDENSED SOUP

by Joseph D. Lykken Santa Cruz Inst. for Particle Physics Univ. of Calif., Santa Cruz, CA 95064

(Work supported by DOE, contract DE-AA03-76SF00010)

ABSTRACT

We report the observation of warm nuclear fusion of deuteron pairs catalyzed by a concentrated colloidal suspension of avian lipids. We present a simple theoretical model relating this process to superstring theory, quantum wormholes, fractal geometry, and high temperature superconductors. A straightforward scaling argument shows that the total annual energy requirements of the United States can be produced from approximately 137.03602 g of catalyst.

1. INTRODUCTION

Recent observations of cold nuclear fusion of deuteron pairs, through electrolysis in solutions of metallic salts, has generated considerable excitement in the physics community and elsewhere. The fusion catalysis process described by Fleischmann and Pons does, however, have several drawbacks when considered as a putative means of mass power generation. The process is slow, requiring a continuous electrical power input of several hours before the onset of fusion. In addition, this process requires costly palladium or titanium cathodes, as well as highly toxic combinations of dissolved metallic salts.

The modified *warm* fusion process which we have discovered (independently) and which is described in this paper suffers none of these disadvantages. In our process, the salt solution is augmented by a concentrated colloidal suspension of certain avian lipid compounds, available in an inexpensive commercial preparation (i.e., Campbell's Chicken Noodle Soup) in arbitrarily large quantities. This preparation is not only nontoxic, but actually healthful. Instead of requiring several hours of applied external current, our process induces fusion after gentle heating to 90 degrees Celsius, maintained for five minutes. The palladium cathode is replaced bv an inexpensive chromium-plated utensil, which is given an approximately circular motion induced by elementary mechanical means. Since our fusion catalysis technique is so simple, we will not belabor the description of the process itself, but instead focus on the analysis of the data and present an obvious theoretical model for the underlying physics. 2. NEUTRON CALORIMETRY AND DATA ANALYSIS Although, as we shall demonstrate, our warm fusion technique can readily produce a net power output in the terawatt range, our initial experimental setup operated at a more modest scale. Rather than resorting to direct detection of fusion product neutrons, we employed a highly accurate neutron calorimetry procedure. We first measured the total external power supplied to our system. This involved reading the electric meter on the circuit containing our (electrically powered) heating apparatus, and correcting for other power drains on the circuit, such as lightbulbs, radios, and video cassette recorders. We then corrected this power reading for the

electricity/heat conversion efficiency of our apparatus, taken from an authoritative source (c.f. _The World Book Encyclopedia_). Further corrections were made for cosmic ray background radiation incident on our apparatus, energy deposition from proton decay within the apparatus, and additional heat from minor amounts of paprika contamination.

To determine the total energy output from 300 seconds of catalyzed fusion events, 400 cc of the solution was ingested by a 75 kg male homo sapien volunteer subject. After a short digestion period, the subject was led through a series of mechanical tasks ("The Jane Fonda Ultimate Challenge Workout") and the resulting power output -- estimated by sophisticated nonlinear biodynamic integro-differential hyperelliptic functional analysis, simulated numerically on a Cray XMP supercomputer. Details of this analysis will be presented in a future publication.

The results of our analysis for a 400 cc catalytic solution were as follows: Total average external power input: {hfill}1193.762 watts Total average power output: {hfill} 1196.885 watts Net average power output due to fusion: {hfill} 3.123 watts

3. THEORETICAL MODEL

Although our experimental results may seem somewhat surprising to the uninitiated, there is a simple theoretical explanation of the underlying physics responsible for efficient warm fusion catalysis in lipid suspensions. As is well known, the principal obstacle to deuteron fusion is the Coulombic potential barrier induced by the electrostatic repulsion of the positively charged particles. A straightforward application of ten-dimensional heterotic superstring dynamics shows that deuterons can percolate through the Coulomb barrier through the spontaneous generation of

quantum wormholes. One can easily see why this process is enhanced in the

presence of suspended avian lipids by applying the Anthropic Principle. Obviously, if the laws of physics did not produce such an enhancement, we could not have observed it in our universe, and a contradiction of our material existence would result. The perforation of the Coulomb barrier by

quantum wormholes is elegantly described in terms of fractal geometry; an analytic continuation to planar surfaces produces analogous electromagnetic anomalies in resonant spin liquids, thus explaining the behavior of high temperature superconductors. Details of this model will appear in a

future

publication.

4. FUTURE OUTLOOK

We have considered the problem of scaling up our warm fusion technique to provide the commercial and strategic defense power requirements of the United States. The appropriate scaling law was obtained by repeating our initial experiment, but adding only half as much water to our commercial preparation as called for in the instructions. With this additional concentration of the catalytic solution, we obtained a net power output

increase of 0.00016%. Clearly, by continuing to halve the amount of added water, we can obtain an arbitrarily high power of this enhancement factor, and thus any level of power output desired. We estimate that, by limiting the amount of added water to 3 micrograms (easily accomplished through national technical means), more than 10 terawatts of warm fusion power could be produced. We strongly urge, and fervently hope, that the power of chicken soup will only be used for peaceful purposes. P_ From: brun@tybalt.caltech.edu (Todd A. Brun) This was my second Institute of Fuzzy Science bulletin. Readers of news:sci.physics, among others, should appreciate it. Crank Unified Theories: The CUTting edge of Fuzzy Science Quite recently the Institute of Fuzzy Science has announced the discovery of several bold new theories, providing a unified explanation, or at least excuse, for a broad range of natural phenomena. These theories are both extremely ambitious in their scope and modest in their assumptions. Their main trait is that they deduce a great deal from practically nothing. The creation of Crank Unified Theories is an old and honorable tradition, dating back to prehistoric times, when our ancient ancestors looked around them and asked, "How the heck did *this* all get here?" The process was lent considerable prestige by such luminaries as Aristotle and Ptolemy, in the classical age, and continues up to this day. One recent idea by a worker outside the Institute was Photon Mechanics, which postulated that all fundamental particles were composed of photons. In an attempt to prove this, he tried to synthesize a meal from gamma rays. Unfortunately, the food immediately propagated away at 299,000 kilometers per second, leaving critics of the light lunch unsatisfied. "Terrible," one physicist commented. "Much too bland." Others seemed to agree. The CUTs produced at the Institute of Fuzzy Science are notable in that they all contradict each other, and sometimes themselves. Thus, few would argue that all, or even most, are correct. The most successful theory to date is that of Dr. Isaac M. Woozy, commonly known as Woozy Theory. Woozy Theory has proven capable of predicting practically anything you put to it.

What is Woozy Theory? In its simplest outlines, it is an attempt to describe nature by unifying three separate realms of observation: General
Relativity, Quantum Mechanics, and Scrabble. By adopting a three pronged approach the theory is able to resolve the apparent contradictions between each of the sub-theories.

"I believe that the problems of earlier researchers," stated Dr. Woozy, "arose from treating the subjects piecemeal. A unified approach is required." He cites difficulties with Superstring Theory, Quantum Scrabble, and Scrabble in Curved Spacetime. In each case, he maintains, difficulties arose from neglecting a broad class of other phenomena. "My discovery was serendipitous," he recalls. "I'd been wrestling with various theories for weeks without getting anywhere. Finally, in my office, I picked up Merzbacher's Quantum Mechanics in one hand and Misner, Thorne and Wheeler's Gravitation in the other -- well, I touched it, anyway, it's too heavy to lift. Just as I was staring at both of them, my Scrabble set fell from the top shelf and hit me on the head." With the blow came illumination. If one merely assumes that Scrabble must exist, the rest of nature follows. Gravity, for example, is necessary to keep the pieces on the board. Electromagnetism provides light, to see the letters with. One critic pointed out the possibility of magnetized pieces; Woozy pondered for hours until he had resolved the conflict to his satisfaction. "One not only needs gravity to keep the pieces on the board," he explained, "but also to provide an atmosphere, so the players can breathe." When the critic began to suggest pressure suits and space colonies, Woozy silenced him with a skillfully thrown paperweight. "I take my work seriously," he declared. Most exciting of all, Woozy theory provides the first coherent explanation for the universe as a whole. If Scrabble is necessary, then so are players, and a universe to play in. Woozy calls this the "Really Strong" or "Scrabble" Anthropic Principle. Humans (or at least intelligent beings) are necessary, providing an order to biological evolution which has been lacking since the failure of the Chain of Being. This also suggests that if aliens exist, they may well play Scrabble. "That doesn't mean that they will speak English, necessarily," Woozy added cautiously. "There are foreign language versions, after all. And the point values may differ, somewhat." He suggested to SETI that they listen for very long range Play By Mail games. At present, his suggestion has not

been acted on. "They're just miffed that they didn't think of it," Woozy sniffed. Rival theories include unifying QFT and GR with chess or checkers, or even tic-tac-toe. While the originators of these theories remain hopeful, Woozy is pessimistic.

"Those games are extremely difficult to unify with Quantum Mechanics," Woozy explained, "since they lack an element of chance. And tic-tac-toe doesn't even have pieces, so gravity is pretty shaky as well. Plus it's a drawn game (no pun intended). Who'd want to live in a universe that boring?" Woozy also recalled an early game of quantum chess: "After about thirty moves, black was both mated and not mated. It made for terrible arguments."

Are these, or similar theories, the answer to the riddle of the universe? Most observers doubt it. Still, as Dr. Woozy himself points out, "What the heck, it keeps us off the streets." P_____

From: "Richard L. Hoffmann, Ph.D." <profhoff@iaonline.com>
BULLETIN BOARD BIOMASS: An Energy Alternative for the 21st Century

Richard L. Hoffmann, Ph.D. AESOP Loco Director Division of High Entropy Chemical Physics and Nuisance Herbs, Tuscarora, 75757

Introduction:

That we are enjoying a lull in the great energy wars of the past decades must not diminish our commitment to developing a means by which our nation may gain freedom from the threat of the oil embargo. Scientists at the Loco Institute of Educational Synectics (LIES) have been working diligently toward a solution to this imminent problem. We are pleased to announce a major breakthrough that we believe can meet our nation's energy needs now and in the foreseeable future. It involves a heretofore unknown violation of the law of conservation of matter. Though the law states that matter cannot be created or destroyed, only changed from one form to another, Loco research and management personnel, subsequently abetted by various funding and government agencies, have discovered that matter can apparently be created out of nothingness. The discovery is remarkable in that the demonstrated process is able to generate huge volumes of combustible cellulosic material with a single and quite familiar transducer -- a bulletin board.

Historical:

The biomass converters and the application described herein originated in 1967 at our institution's satellite facility, Informational Coprocessors Corporated (ICC) initially housed in temporary buildings located on a bluff above the Illinois river near Washington, Illinois. Though the staff was small, an astute member of our team noticed early on that bulletin boards tend to fill spontaneously with bulletins. It made no difference where the bulletin board was located -- if nearly empty one day, it would be found full the next. No one was ever able to observe directly a bulletin board in the act of biomass proliferation. However, many have witnessed the staggering quantities of sheet firewood that each unit was able to accumulate.

Presently, we have a team investigating a possible inverse relationship between the growth rates of bulletin board biomass and that of the elusive Morel mushroom -- no one has ever seen one of them grow either. We hope to publish that research at a later date in the Journal of Manure Science.

Experimental:

Preliminary experiments indicated that bulletin boards under the control of administrative personnel held the greatest potential as a source of biomass. Theirs were emblazoned with colorful and varied biomass units which were easy to see and harvest. Each fuel pod was affixed to the substrate with a quartet of convenient and easily removed needle-like units that bore a cylindrical plastic appurtenance designed to be gripped with the fingers; a degenerate form of the device is recognized as a thumbtack. On administrative terrain, at least, it appeared to matter little if the bulletin boards were inside enclosures. Although harvest was somewhat encumbered by an enclosure, it seemed to have no retardant effect whatever on the rate at which the board was able to breed copious biomass.

Field tests carried out on experimental plots throughout the Loco Institute revealed that there was an optimum harvest-to-latency period which influenced yields. Apparently, as biomass accumulates, the supporting acreage is unable to maintain further production. This clearly indicated that if sustained high yields were to be enjoyed, a program of vigorous pruning must be implemented and maintained throughout the useful lifetime of the biomass generator.

It is imperative that we insert a cautionary note for any who may implement our proposal -- the process can very easily run out of control and generate consequences ghastly to contemplate and impossible to rectify. Kinetic studies indicate that the rate determining reaction is zero order -- concentration dependent on nothing. It is a hyperbolic-hypergolic chain reaction that is impossible to moderate once it has proceeded beyond the induction period. We refer interested researchers to the seminal efforts of Shmidgall, et al, "The Paper Blob", Helvetica Federal Expressica Acta, (7), 2.71828, 1983. Loco therefore suggests the exercise of extreme caution and it disclaims any liability for attendant damage which may be caused by the imprudent use of our schemata.

Procedure:

In theory, virtually any fossil-fueled power plant can be modified to use biomass that might be harvested from bulletin boards. It is proposed that we mount a national effort to place numerous bulletin boards everywhere and harvest the biomass that is all but certain to appear upon them. Small children could be trained in early life to harvest small bulletin boards, thereby becoming accustomed to the endless work they will face as adults in a world filled with these heretofore unrecognized biomass generators. They would gain an early opportunity to taste the fruits of stoop labor as they gleaned the floors for fallen biomass. Unemployment would be cut drastically because, until fully automated harvest machinery is developed, biomass collection would be labor-intensive.

Like windpower, bulletin board biomass is best exploited where it is found in highest concentration. By coincidence, both resources are in bountiful supply in Washington, D.C. and in any organization that deals with governmental agencies. Washington windpower has already been treated in our paper, "The Bicameral Ram-Air Effect: A Biometric Boom", -- Journal of Kinetic Flatulence (37), Pork 3.14159, 1978. -- and is beyond the scope of the present treatment.

Other promising locations for bulletin board biomes include areas near the offices of safety inspectors, union chiefs, athletic managers and their supporters, near time-clocks, plant gates, bureaucrats both major and minor, staff mailboxes, and anywhere bulletin boards are found in educational institutions -- it is well known that those sited there are pretreated with a redolent spawn of academic humus which can attract substantial biomass.

Because everyone represents a cog somewhere in a bureaucratic machine, each has a capacity to make some contribution to the solution of our nation's energy problem. Supervisory and administrative personnel are in the best position to take the lead in this effort. Admittedly, their biomass generators are state-of-the-art devices. That fact notwithstanding, each of us has an obligation to make whatever contribution we can by emulating their example; alas, to equal them is known to be impossible.

Prognosis:

We envision vast fleets of combines groaning across the limitless bureaucratic veldt. Biomass from these sources alone appears to be infinite. Preliminary data suggest it is quite possible that a nation-wide effort to establish even a few properly sited small bulletin board biomass farms could produce annual yields that would easily outstrip the accumulated tonnage of planetary copies of the National Geographic Magazine, -- J. Irr. Results., (20), No.3, 22, 1974. For this reason we offered the earlier caveat; the concept is not trivial and merits all due caution.

Because it will be impossible to stockpile the overwhelming tide of biomass that will result once such farms are established, the citizenry must be carefully reprogrammed to abandon their misguided notions as to the benefits of energy conservation. They should be encouraged to raise their energy demands by whatever means at their disposal. This includes building homes with extra bathrooms so that all children could be retrained to leave the lights on. The scientific community is encouraged to step up its activities in genetic engineering so that we may develop humans with six ears and thus make it possible for everyone to own and use more powerful portable stereo sound systems. The Sahara could be air conditioned by use of a heat pump connected to the North pole. Some of the excess energy could be used to provide each citizen with his/her own black hole and thereby solve the problem of litter, pollution, and overpopulation in one fell swoop.

Conclusion:

Definitive experiments have clearly established that there is no theoretical limit to the size of the harvest that may be obtained from bulletin boards. No one has ever seen an empty bulletin board. Large or small, each is capable of a truly frightening fecundity only approached in vigor by a congressman's relentless quest for perquisites in an age of economic shortfall or by the academician's penchant for junketing.

Loco directors and staff scientists work tirelessly in the service of our nation toward the end that one day our cracked organization will be the first to overthrow the second law of thermodynamics. After which, energy will breed energy and all may enjoy the life they deserve.

Acknowledgments:

This work was supported by a grant from International Drone-Lassitude Enterprises (IDLE). The author wishes to express his appreciation to B. Cook, a Loco staff scientist, for his helpful laboratory work and the statistical data on which this study is based.

Dr. Verhagen,

Thank you for your speedy response regarding our paper on Bulletin Board Biomass (BBB)-- and for your willingness to include it in your very fascinating web-site.

Indeed, we are in agreement with your reviewer regarding the perpetual motion aspects of BBB. Thus, our precautionary note that once initiated, the process could have consequences too ghastly to behold.

Early on, before relevant experimental parameters were fully established, a quite modest pilot plant experiment ran amok. To bring matters under control we were forced to back-feed the excess electricity from our generator into the power grid. Our local coal-fired utility company was subsequently forced to cut itself from the national grid for almost 13 days. Alas, ramifications spread. Trainloads of coal backed up at the local deposition points snarled traffic for almost a month.

I would be pleased to send you full technical details of this incident. However, documents regarding it were stored in an unused closet that inadvertently contained a few coat-hangers. As you know, left unattended, coat-hangers can multiply more quickly than a Cray. Though this (storage) incident occurred some years ago, we are still entangled in the process of untangling tons of coat-hanger tangles. Several members of our team, unable to cope with the strain, have withdrawn from our program and are now resting comfortably in the care of Dr. Anthony Hopkins at a resort named "Wellville." Ρ_ From: rbaakk@att.att.com (Ronald S Baakkonen +1 201 949 7941) Dear Mr. Templeton: Due to frustrations I have experienced in recent months, I am forced to turn to you for help. For you see, I have made a remarkable discovery, that at present, I have had little luck in impressing upon a public made overly skeptical by wild and unsubstantiated claims made by crackpot media hounds posing as scientists. These imposters have sullied the public mind to true and enlightened breakthroughs, and I have been unable to have my work taken seriously at any of the well-respected scientific journals. I turn to you in desperation, and I know that my evidence will meet with unbiased, objective reason before your forum. I have discovered that a simple organic fabric, liberally soaked in an aqueous solution of di-hydrogen oxide, and then spun in a high temperature superconducting gyroscope, will experience a anomalous weight loss due, for the most part, to a cold fusion reaction. I describe my experimental procedure: An ordinary, carefully sorted load of all cotton fabrics was soaked in a distilled solution of di-hydrogen oxide. This load was carefully weighed and then put into the high temperature superconducting gyroscope. After a thirty minute exposure to a lateral spin, the load was removed and carefully weighed a second time. In every case, the second measurement indicated an anomalous weight reduction. Due to the absence of the aqueous solution after the spin, I theorize that this weight reduction is caused by a cold fusion reaction between the two hydrogen atoms in the di-hydrogen oxide molecule to produce one helium and one oxygen molecule. Since helium is lighter than air, perhaps this contributes to the weight reduction. The fact that I was unable to detect noticeable release of heat confirms that this is in fact cold fusion. I expect that the organic nature of the cotton fabric in some way provides а

I hope these remarks are clarify our paper. Should you wish to append

them to its presentation we would be agreeable.

Sincerely,

Richard L. Hoffmann, Ph.D. Loco Director of Research Parallel Universe Consortium catalyst for this reaction to take place. With this in mind, I attempted to determine if live organic matter would increase the effect. Unfortunately, the experiment was unconclusive as my cat, Fluffy, failed to remain in a live state over the duration of the experiment. Four further experiments, using various rodents, achieved similar results, leading me to conclude that the anomalous weight loss effect is not a suitable diet technique for humans.

I know that the gyroscope is superconducting since the metal casing is clearly marked "Amana Superconvection Dryer." Now, as we all know, convection is nearly the same as conduction, so this is what they must really mean. I know that it is a high-temperature superconductor because the temperature switch was set on "High" throughout the experiment.

The ramifications of this discovery are enormous. However, my every attempt to describe this important effect has fallen on deaf ears. Please help me spread the word about this earth-shattering breakthrough. P______

From:

atesli@aol.com (Atesli) The Philogiston Theory of Electronics*

A sheet of paper crossed my desk the other day and as I read it, realization of a Basic Truth came to me. So simple! So obvious we couldn't see it! John Kuivinen, Chairman of the Palomar Repeater Committee, (an amateur radio group), I think has discovered what makes intigrated circuits work. He says that smoke (yes, you read smoke) is the thing that makes ICs work because every time you let the smoke out of it,

thing that makes ICs work because every time you let the smoke out of it, the IC stops working. I was flabbergasted!!! Why of course he's right!!!

Smoke makes all things electrical work. Remember the last time the smoke escaped from your Lucas voltage regulator? Didn't it stop working?

I sat and smiled like an idiot as more of the truth dawned. It's the wiring harness that carries smoke from one device to another in your machine and when the harness springs a leak, it lets the smoke out all at once, and then nothing works. Can't you see now why motors have to be large to handle all that smoke, and don't they have smoke all over the inside when they quit working? Think about it!

* Original author's name not available or he didn't want credit.

From: "Mark Reynolds" <mar539@novell3.bham.ac.uk> ELEPHANT COLLIDERS

It's very tricky & very expensive to collide sub atomic particles together. CERN is such a drain, so perhaps we need a new method. Lets collide something bigger together. If we can see the particles, it's so much easier.

Lets use elephants on rollerskates.

One elephant is launched down a ramp towards a stationary target elephant. As they impact they can richoche off each other or merge to become a compound animal. This will then emit other animals and decay to something more stable, like a Giraffe.

Using this new method, Physicists have discovered that the wombat is responsible for carrying the charge between electrons, not the photons. They are now working with higher energies to create new heavier compound animals. Once a blue whale is created, scientists hope that higher energies will reveal new animals, perhaps dinosaurs.

It's also possible to examine the structure of the elephant. By firing a smaller animal, for example a badger, at the elephant it will penetrate, exposing the hidden fine structure.

The disadvantages are cleaning up afterwards. But elephants die off pretty quickly in comparison to the biproducts of nuclear fission! P_

From: mcripps@computan.on.ca (mervyn) From an article in Physics Today by Gary Taubs:

ONWARD TO THE DESSERTRON

The machine will be the most ambitious scientific instrument ever: a colossal doughnut-shaped accelerator so immense that all the jelly and cream in the world could not fill it. Dubbed the "Dessertron", it will create twin beams of ice cream, one vanilla and one chocolate, and will smash them together at energies of 40 trillion sprinkles (40 jimmies), one thousand times more powerful than any ice cream smasher ever made. Because matter and energy are equivalent in desserts, eternally linked by Einstein's famous equation:

(extra weight) = (mass) x (speed of consumption) squared

when these beams collide, they will do more than make soft yogurt. Theorists believe that scattered among the debris of the collisions will be elementary flavors and new desserts hundreds of times more fattening than any known now.

"Every time we have increased energy by a factor of 1000," says high-calorie fizzicist Sherbet Glace' of Harvard (who won the 1979 Nobel Prize for proving that at temperatures above 10 to the 28th power jimmies, strawberry rhubarb and French vanilla are both aspects of the same fundamental God-like flavor) "we have discovered something new. At one sprinkle, we discovered the banana. At one thousand, we figured out that frappes, westerns, malteds and milkshakes were simply different variations of ice cream and milk. At a million, we discovered fudge and made

brownies, and were content. The next big step was another factor of 1000, and quantum crust theories were invented as well as the Little Jack Horner uncertainty principle. It's clear that what we need to do is study desserts at several trillion sprinkles." In July, the High Calorie Dessert Advisory Panel of the Food and Drug Administration recommended that the number one priority in research for the next two decades should be the ice cream accelerator officially named the Superconducting Super Osterizer (SSO). The mammoth blender, as they have proposed it, would be as much as 120 miles in diameter with several different speeds from puree all the way through whip. It would take twelve years to build and cost \$2.2 billion, but it would also chop, dice, slice, and make moist icing. Among the desserts that scientists hope the machine will find are the raspberry quark, the Higgs Sundae (which may be responsible for defining the caloric content of all fundamental desserts during spontaneous symmetry breakfasting); those desserts predicted by the theory techniflavor, which postulates that the Higgs Sundae is not a fundamental dessert but is actually a bound state of more elementary desserts; and the particles of sugarsymmetry, which include spumpkin and specan pies, banino splits and banino cream pies and several different flavors of antipastries. Ever since the SSO was proposed in July, it has become the hottest mulq in science. Brighams, Carvel, Baskin-Robbins, Friendlies, LuCerne and Sealtest have already put in bids for the machine and many more are expected. The state of Texas has promised that if the machine is built in Texas, it will pay for the tunnels and the refrigeration equipment needed to cool the ice cream down to a few degrees above absolute zero to save money on artificial preservatives. When the SSO is finished, it will assure the U.S. pre-eminence in desserts well into the 21st century, and says Carob Rumraisin, the famous Italian fizzacist and discover of intermediate vector bonbons and low-calorie cannoli, "Once this machine is built, American scientists will finally get their just desserts." P_

From: zdxc0d@amoco.com (David Crowson) Physicists at Harwell have discovered the heaviest element known to science, named Administratum. The new element has no protons or electrons, and has an atomic number of zero. However, it does have one neutron, eight assistant neutrons, ten executive neutrons, 35 vice neutrons and 258 assistant vice neutrons.

Administratum has an atomic mass of 311 1/2, since the neutron is only detectable half of the time. Its 312 particles are held together by a force which involves the continuous exchange of meson-like particles, called morons. Since it has no electrons, Administratum is completely inert. Nevertheless, its presence can be detected because it impedes every reaction with which it comes into contact. One experiment, which should have lasted only a few days, is still running after 2= years due to the addition of just one milligramme of Administratum.

It is weakly active, and has a normal half-life of approximately six months. After this time, it does not actually decay, but undergoes a metamorphosis in which assistant neutrons, executive neutrons, vice neutrons and assistant vice neutrons exchange places. This almost invariably leads to an increase in atomic weight, hence it is self-sustaining.

Although it occurs widely, Administratum tends to concentrate around large corporations, research laboratories and government departments. It can especially be found in recently re-organised sites, and there is reason to believe that it is heavily involved in the processes of deforestation and global warming.

It should be remembered that Administratum is known to be toxic at all concentrations, and can easily destroy any productive reactions where it is allowed to accumulate. Numerous attempts have been made to determine how Administratum can be controlled to prevent irreversible damage, but results to date are not promising.

From: tornberg@netcom.com (Neal E. Tornberg)
Research at other laboratories indicates that Administratium occurs
naturally
in the atmosphere. It tends to concentrate at certain points such as
government agencies, large corporations and universities and can usually
be
found in the newest, best appointed and best maintained buildings.

From: Benjamin.J.Tilly@dartmouth.edu (Benjamin J. Tilly) One major problem is that proximity to this substance tends to make the process of getting anything done (such as getting grant money) more time-consuming, which makes the experiments in question extremely time-consuming.

An alternate version:

From: bobc@killer.DALLAS.TX.US (Bob Calbridge) April 1, 1988: The heaviest element known to science was recently discovered by physicists at Turgid University. The element, tentatively named Administratium (Ad), has no protons or electrons, which means that its atomic number is 0. However, it does have 1 neutron, 125 assistants to the neutron, 75 vice-neutrons, and 111 assistants to the vice-neutrons. This gives it an atomic mass number of 312. The 312 particles are held together in the nucleus by a force that involves the continuous exchange of meson-like particles called memoons.

Since it has no electrons, Administratium is inert. However, it can be

detected chemically because it seems to impede every reaction in which it is present. According to Dr. M. Langour, one of the discoverers of the element, a very small amount of Administratium made one reaction that normally takes less than a second take over four days.

Administratium has a half-life of approximately 3 years, at which time it does not actually decay. Instead, it undergoes a reorganization in which assistants to the neutron, vice-neutrons, and assistants to the vice-neutrons exchange places. Some studies have indicated that the atomic mass number actually increases after each reorganization.

Administratium was discovered by accident when Dr. Languor angrily resigned from the chairmanship of the physics department and dumped all of his papers into the intake hatch of the university's particle accelerator. "Apparently, the interaction of all of those reports, grant forms, etc. with the particles in the accelerator created the new element." Dr. Langour explained.

Research at other laboratories seems to indicate that Administratium might occur naturally in the atmosphere. According to one scientist, Administratium is most likely to be found on college and university campuses, near the best-appointed and best-maintained buildings.

[Ed: By Thomas Kyle of M.I.T.]
P_____

Philosophers have long wondered why socks have this habit of getting lost. and why humans always end up with large collections of unmatched odd socks. One school of thought says that socks are very antisocial creatures. and have a deep sense of rivalry. In particular, two socks of the same design have feelings of loathing towards each other and hence it is nearly impossible to pair them (e.g. a blue sock will usually be found nestling up to a black one, rather than its fellow blue sock). On the other hand, quantum theorists explain it all by a generalised exclusion principle --- it is impossible for two socks to be in the same eigen-state, and when it's in danger of happening, one of the socks has to vanish. Indeed the Uncertainty Principle also comes in --- the only time you know where a sock is, is when you're wearing it, and hence unable to be sure exactly how fast it's moving. The moment you stop moving and look at your sock, it then starts falling to pieces, changing colour, or otherwise becoming indeterminate. Either way, socks may possess Colour and Strangeness, but they seem to lack Charm.

From: eridani@scn.org (Martha K. Koester) Theories about disappearing socks--the two you cited are wrong. It has long been known that the sock is the larval form of the coat hanger. P

From: ken@capitalnet.com (Ken)

BUTTERED BREAD ON THE BACK OF A CAT: WHAT FALLS FIRST. Daniel D. Van Hoy wrote: >Just think: When you drop a cat from a few feet, it lands upright. >Also think: When you drop a piece of buttered bread, it lands with >the buttered side down >Now think: If you strapped a piece of buttered bread to the back >of a cat, which would land first. First the source of the forces must be understood. The force acting on the bread is not the butter, as some may think. Without the bread, butter wouldn't land bread side up, and therefore the force could not possibly be in the butter. We know the force is not the bread because it has been experimentally proven that bread does not land any particular side down without butter. The bread/butter force is caused by the fusing of bread and butter particles together. This fusion causes energy to be released in the form of shifting gravity and anti-gravity energy to opposite sides of the bread/butter continuum. The gravity energy naturally shifts to the butter since it is denser then the bread, while the anti-gravity energy shifts to the bread side. The energy in a cat for landing on its feet comes from the feet themselves. This has been proven experimentally. Cats without feet have a near zero success rate of landing on their feet. We will call this energy cat foot energy. Considering the equal but opposing bread/butter and cat foot forces one would expect the cat to spin violently about its axis. However the strength of these forces must be considered. A regular cat is not structurally stable enough to withstand the torque the spinning causes. I should not have to describe the way the cat's limbs give way, the way the legs wrench around until the feet are on the same side of the cat as the butter. And thus the cat can then land on its feet, butter side down. We are now researching the possibility of using structurally reinforced cats for levitation systems, but so far the cost is too high to be practical. Several attempts at producing economically viable systems were made by separating the feet so that the instability of the cat would not be a factor. At first there was dificulty because there was no cat to tie the bread to. Later it was discovered that when not attached to a cat the feet lost their cat foot force over time. It is hypothesized that the feet need to be living to exert the cat foot force, and so far no practical method has been found for keeping the feet alive other than a cat.

Attempts are also being made to breed flat cats with no legs (only feet). There are many other problems related with this method of levitation as you may well imagine, but they are beyond the scope of this discussion. Harold G Sputsberry PHD Institute for Alternative Energy Research P_____

From: Lizabeth Henderson [The following question was originally posed by Steven Wright.] Question: If you strapped a slice of buttered bread to the back of a cat, which way down would it land?

[Well, here's an explication of that question...]

I'm glad you asked this question.

IF WHEN YOU DROP A BUTTERED PIECE OF BREAD, IT DROPS BUTTER SIDE DOWN AND A CAT ALWAYS LANDS ON ITS FEET. WHAT WOULD HAPPEN IF YOU TOOK A PIECE OF BUTTERED BREAD, STRAPPED IT ON THE BACK OF A CAT (BUTTER SIDE UP) AND DROPPED IT OFF CENTERPOINT TOWER?

Even if you are too lazy to do the experiment yourself you should be able to deduce the obvious result. The laws of butterology demand that the butter must hit the ground, and the equally strict laws of feline aerodynamics demand that the cat can not smash it's furry back.

If the combined construct were to land, nature would have no way to resolve this paradox. Therefore it simply does not fall.

That's right you clever mortal (well, as clever as a mortal can get), you have discovered the secret of antigravity! A buttered cat will, when released, quickly move to a height where the forces of cat-twisting and butter repulsion are in equilibrium. This equilibrium point can be modified by scraping off some of the butter, providing lift, or removing some of the cat's limbs, allowing descent.

Most of the civilized species of the Universe already use this principle to drive their ships while within a planetary system. The loud humming heard by most sighters of UFOs is, in fact, the purring of several hundred tabbies.

The one obvious danger is, of course, if the cats manage to eat the bread off their backs they will instantly plummet. Of course the cats will land on their feet, but this usually doesn't do them much good, since right after they make their graceful landing several tons of red-hot starship and pissed off aliens crash on top of them. P______

From: Paul Matthews (paulmatt@triton.u-net.com)
Q:If you dropped a cat with a piece of buttered toast tied to its back (

butter side up of course) Which way up would it land?

A:This is the secret of levitation. Toast ALWAYS lands butter side down, but cats always land on their feet, so the combination will hover just above ground level rotating, neither the cat nor toast able to land.

From: Daniel Marshall <9774327@Narga.Sun.ac.za> Here is Phisical proof from a Physics Student!

Well Acording to Newtons third law, a force acting upon an object will exert an equal but opposite force on the adjacent object. The cat exerts a force say C on the toast, which in mathematical notation is $Ft = -C = (Mass of cat) \times g$.

Acording to Murphys law of probabilaty, any event in a constant time frame is said to happen to the inverse of the most prefferable. In this case, we have only two possible cases, P(T = toast) lands buttered side up or Ti=1-P(T) (Inverse probability of toast) landing downwward.

But From our previous metion of Murphys Law, we can clealy see that P(T) = 0 (or 0% of it happening) and P(T) = 1 (or 100% of it happening).

Thus this is an equilibrium problem as there are two forces acting in two different directions namely T and C. If The Air resistance is taken into consideration, and we have that C = T then if the toast is placed only slightly to the side of the center of gravity of the cat then we have a non-equilibral condition. So this then implies a rotational tourge (call it t for short). The t can be calculated by applying the tangental force aplied multiplied by the cross product of the radius r of the cat to the toast. So

t = Cos(theta)x r x (Aplied force)

But this aplied force is quite weak as it's only reliant on air resistance. But this then presents us with another problem. We have a conflict of laws of phyics and phylosophy (ie. Murphy vs Newton) Ienstein in his thesis on general relativety however sshowed that Newton's III law does not always aply to Objects nearing the speed of light. So the only conclution that we can draw is that the cat with the toast strapped to its back will rotate at near light speeds. However, the closer one gets to the center of the cat the faster the cat will have to spin. So the cat will not only spin, but be completely mangled in the process by the fact that Its insides spin faster that it's skin and outer flesh!

The law that cat's also land on there feet is also going to play a part n this disscusion. Whe released, The two forces C and T will simulaniously act opon one another, causing the cat and the toast to iether shoot upwards indefenetly increasing in speed as gravity decreaces the further one is away from earth or hover or plummet downwards. The latter seems the most feesable, with a difference however that it will not stop. The immence rotations of the cat and toast will generate enormous amounts of heat as it comes into contact with the ground through friction and tunnel downwards eventuall reaching the center of the earth. By that time the cat's legs wil have been eroded away and the butter will be off the toast and thus the laws which we first used do not apply any more. So to cat will stop spinning somewhere

in the earths crust. I hope that helps! From: "Peter T Wood" <ptwood@dezzanet.net.au> I DEMAND AN END TO ALL THIS!!! My seventeen hovering pussies are not amused. Although I should perhaps tell you that after careful experimentation regarding the thickness, composition, and density of the thread, I have determined that the rate of descent of the pussy/toast-unit can be accurately adjusted. This is particularly useful as a sort of timing device. Since the combination eventually lands with such commotion (due to the opposing effects of the toast/pussycat laws), ones attention is invariably drawn to it. Events such as putting out the garbage, watching the 6 0'clock news, or cooking eggs spring readily to mind. When the frustrated, bewildered, agitated, and terrified pussy is finally coaxed out from under the bed, the device can easily be reset by using the appropriate thread for the time frame required, and then simply hurling it into the air. I have also discovered that the rate of descent is also related to the cost of the carpet. Perhaps Mr. Marshall could calculate the appropriate formula? Ρ Flaws In the Flying Cat Theory: A Response Special to the Coastal Beacon A logical analysis of the BFAD (Buttered Feline Antigravity Drive) propulsion theory clearly demonstrates the impossibility of such a system. Let us begin with a simple analysis. 1) Buttered bread must fall butter side down. 2) A cat always lands on its feet. While both theorems are indisputable, the oracle offers no proof of the construct. The oracle implies that anyone who 'would' test this construct would immediately find the secret of BFAD. This is clearly nonsense. Let us assume a normal Einsteinian universe (although a Euclidean universe would serve our purposes just as well, the Einsteinian is both cheaper and drinks are readily available.)

To test BFAD, one must procure:

Bread Butter (margarine, for some reason, will not work) A cat A strapping device.

Let us assume that all of these are readily available.

Attach the strapping device to the cat.

See?

No cat.

what has happened? We have run up against an a priori universal law. By a priori, we mean that it takes priority over either the Buttered Bread Principle or the Law of Feline Landings.

What happens is that the instant a strapping device and a cat occupy the same four dimensional space, the cat disappears.

Now, this can easily be tested, and has been repeatedly. There are two schools of thought about this phenomenon.

The first holds that a cat and a strapping device are constituted out of different fundamental building blocks. According to this theory, a cat is constituted primarily of superquarks. (called meows by current theorists.) These superquarks demonstrate qualities that are both atomic (constituted as they are of groupings of normal quark particles) and feline (because these quarks exhibit characteristic of "charmed" or "lucky" particles.) Again, according to this theory, strapping materials are fashioned out of non-charmed particles. Bringing the two together causes one or the other to cancel out. One aspect of this theory that has not been sufficiently explained to date is the fact that it is always the cat, not the strapping

device, that disappears.

The second school of thought, and it is one that appears to be gaining ground in academic circles today, holds that cats are, in fact, super-intelligent pan-dimensional beings who exist in our four dimensional universe only because there is plenty of good food and a lot of creatures stupid enough to provide the food, along with plenty of attention. Whenever a strapping device appears, the cat simply opens a door to a different series of dimensions, and goes on an extended tour. According to this theory, purring is a cat's way of maintaining a constant balance cycling across multiple dimensions. This school holds that antigravity is impossible, but that theoretically, a REALLY good grip on а cat, while reaching for a strapping device, could result in our ability to cross dimensions with ease (barring scratches, that is.) Pessimists argue That if there was anything really interesting in those other dimensions, cats wouldn't spend so much time here, so why ask for a good scratching?

From: mj@redbud (MJ Kahn) Lightbulb list The Dark Sucker Theory (courtesy of rec.humor.d)

For years, it has been believed that electric bulbs emit light, but recent information has proved otherwise. Electric bulbs don't emit light; they suck dark. Thus, we call these bulbs Dark Suckers.

The Dark Sucker Theory and the existence of dark suckers prove that dark has mass and is heavier than light.

First, the basis of the Dark Sucker Theory is that electric bulbs suck dark. For example, take the Dark Sucker in the room you are in. There is much less dark right next to it than there is elsewhere. The larger the Dark Sucker, the greater its capacity to suck dark. Dark Suckers in the parking lot have a much greater capacity to suck dark than the ones in this room.

So with all things, Dark Suckers don't last forever. Once they are full of dark, they can no longer suck. This is proven by the dark spot on a full Dark Sucker. The dark which has been absorbed is then transmitted by pylons along to power plants where the machinery uses fossil fuel to destroy it.

A candle is a primitive Dark Sucker. A new candle has a white wick. You can see that after the first use, the wick turns black, representing all the dark that has been sucked into it. If you put a pencil next to the wick of an operating candle, it will turn black. This is because it got in the way of the dark flowing into the candle. One of the disadvantages of these primitive Dark Suckers is their limited range.

There are also portable Dark Suckers. In these, the bulbs can't handle all the dark by themselves and must be aided by a Dark Storage Unit. When the Dark Storage Unit is full, it must be either emptied or replaced before the portable Dark Sucker can operate again.

Dark has mass. When dark goes into a Dark Sucker, friction from the mass generates heat. Thus, it is not wise to touch an operating Dark Sucker. Candles present a special problem as the mass must travel into a solid wick instead of through clear glass. This generates a great amount of heat and therefore it's not wise to touch an operating candle. This is easily proven for lightbulbs too. When you compress a gas, it gets hot, right? So the light bulb gets hot because of all the dark being squished into the wires.

Also, dark is heavier than light. If you were to swim just below the surface of the lake, you would see a lot of light. If you were to slowly swim deeper and deeper, you would notice it getting darker and darker. When you get really deep, you would be in total darkness. This is because the heavier dark sinks to the bottom of the lake and the lighter light floats at the top. The is why it is called light.

Finally, we must prove that dark is faster than light. If you were to stand in a lit room in front of a closed, dark closet, and slowly opened the closet door, you would see the light slowly enter the closet.

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But since dark is so fast, you would not be able to see the dark leave the closet. So next time you see an electric bulb, remember that it is not a light emitter but a Dark Sucker.

The following line doesn't quite fit into the theory but almost does : - Ever seen the blue glow in vacuum tubes? That's because electrons are blue.

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UTC physics humor. http://www.utc.edu/physics/physicshum0.html More on darksuckers: THE DARKSUCKER CONSPIRACY (DC)

DARK CONSPIRACY INVOLVING ELECTRICAL POWER COMPANIES SURFACES: Updated 8/7/88 W0PN

For years the electrical utility companies have led the public to believe they were in business to supply electricity to the consumer, a service for which they charge a substantial rate. The recent accidental acquisition of secret records from a well known power company has led to a massive research campaign which positively explodes several myths and exposes the massive hoax which has been perpetrated upon the public by the power companies. The most common hoax promoted the false concept that light bulbs emitted light; in actuality, these 'light' bulbs actually absorb DARK which is then transported back to the power generation stations via wires. A more descriptive name has now been coined; the new scientific name is for the device is DARKSUCKER. This newsletter introduces a brief synopsis of the darksucker theory, which proves the existence of dark and establishes the fact that dark has great mass, and further, that dark is the fastest known particle in the universe. Apparently, even the celebrated Dr. Albert Einstein did not suspect the truth.. that just as COLD is the absence of HEAT, LIGHT is actually the ABSENCE of DARK... light does not really exist! The basis of the darksucker theory is that electric light bulbs suck dark. Take for example, the darksuckers in the room where you are. There is much less dark right next to them than there is elsewhere, demonstrating their limited range. The larger the darksucker, the greater its capacity suck dark. Darksuckers in a parking lot or on a football field have a much greater capacity than the ones in used in the home, for example. It may come as a surprise to learn that darksuckers also operate on a celestial scale; witness the Sun. Our Sun makes use of dense dark, sucking it in from all the planets and intervening dark space. Naturally, the Sun is better able to suck dark from the planets which are situated closer to it, thus explaining why those planets appear brighter than do those which

are far distant from the Sun. Occasionally, the Sun actually oversucks;

under those conditions, dark spots appear on the surface of the Sun. Scientists have long studied these 'sunspots' and are only recently beginning to realize that the dark spots represent leaks of high pressure dark because the Sun has oversucked dark to such an extent that some of actually leaks back into space. This leakage of high pressure dark frequently causes problems with radio communications here on Earth due to collisions between the dark particles as they stream out into space via the black 'holes' in the surface of the Sun. As with all manmade devices, darksuckers have a finite lifetime. Once they are full of dark, they can no longer suck. This condition can be observed by looking for the black spot on a full darksucker when it has reached maximum capacity... you have surely noticed that dark completely surrounds a full darksucker because it no longer has the capacity to suck dark at all. A candle is a primitive darksucker. A new candle has a white wick. You will notice that after the first use the wick turns black, representing all the dark which has been sucked into it. If you hold a pencil next to the wick of an operating candle, the tip will turn black because it got in the way of the dark flowing into the candle. Unfortunately, these primitive darksuckers have a very limited range and are hazardous to operate because of the intense heat produced. There are also portable darksuckers called flashlights. The bulbs in these devices cannot handle all of the dark by themselves, and must be aided by dark storage unit called a battery. When the dark storage unit is full, it. must be either emptied (a process called 'recharging') or replaced before the portable darksucker can continue to operate. If you break open a battery, you will find dense black dark inside, evidence that it is actually a compact dark storage unit. The darksuckers on your automobile are high capacity units with great range, thus they require much larger dark storage units mounted under the hood of the vehicle. Since there is far more dark available in the winter season, automobile dark storage units reach capacity more frequently than they do in the summer, requiring 'recharging', or in severe cases, total replacement. Dark has great mass. When dark is drawn into a darksucker, friction caused by the speed of the dark particles (called anti-photons) actually generates substantial heat, thus it is unwise to touch an operating dark sucker. Candles represent a special problem, as the dark must travel into a solid wick instead of through clear glass. This generates a great amount of heat, making it very dangerous to touch an operating candle. Because dark has such great mass, it is very heavy. If you swim just below the surface of a lake, you see a lot of 'light' (absence of dark, to be more precise). As you go deeper and deeper beneath

the surface, you notice it gets darker and darker. When you reach a depth of approximately fifty feet, you are in total darkness. This is because the heavier dark sinks to the bottom of the lake, making it appear 'lighter' near the surface. The power companies have learned to use the dark that has settled to the bottom of lakes by pushing it through turbines, which generate electricity to help push the dark into the ocean where it may be safely stored for their devious purposes. Prior to the development of turbines, it was much more difficult to get the dark from the rivers and lakes to the ocean. The Indians recognized this problem, and developed means to assist the flow of dark on it's long journey to the ocean. When on a river in a canoe travelling in the same direction as the flow of dark, they paddled slowly, so as not to impede the flow of dark; but when they travelled against the flow of dark, they paddled vigorously to help propel the dark along its way. Scientists are working feverishly to develop exotic new instrumentation with which to measure the actual speed and energy level of dark. While such instrumentation is beyond the capabilities of the average layman, you can actually perform a simple test to demonstrate the unbelievable speed of dark, right in your own home. All that is required for the simple test is a closed desk drawer situated in a bright room. You know from past experience that the tightly shut drawer is FULL of dark. Now, place your hand firmly on the drawer's handle. Quickly yank the drawer open.. the dark immediately disappears, demonstrating the blinding speed with which the dark travels to the nearest darksucker! The secrets of dark are at present known only to the power companies. Dark must be very valuable, since they go to such lengths to collect it in vast quantities. By some well hidden method, more modern power 'generation' facilities have devised methods to hide their collection of dark. The older facilities, however, usually have gargantuan piles of solidified dark in huge fenced in areas. Visitors to these facilities are told the huge black piles of material are supplies of coal, but such is not the case. The power companies have long used code words to hide their activities; D.C. is Dark Conspiracy, whole A.C. is Alternate Conspiracy. The intent of the A.C. is not yet known, but the D.C. is rapidly yielding it's secrets to the probing eyes and instruments of honest scientists around the world. New developments are being announced every day and we promise to keep the public informed of these announcements as they occur via this newsletter. Les Dark, Editor ++

=2.6 LEARNING PHYSICS

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JOKES FROM THE AMERICAN PHYSICAL SOCIETY PUBLICATIONS...(4/6/96)

Sex or physics discovers the joy of: Quite a surprise, the JOY of sex. Who

would have expected it? Imagine you are in your teens and it will take another dozen years of intense study to master sex. The years are filled with uncertainty. Sex is damn hard. It's not for everyone. You have to work long hours at it and neglect other things. Will you qualify? And then

what? Sure, you're good at it but will you get a job doing sex? Come on, gang, be realistic. What we need is The Joy of Physics. Lavishly illustrated, it will show all the positions by which you can go blind squinting at spectra.

Marketing or Physics Finally Learns How to Write a College Catalog Entry: (Physics 101, in competition with comparable courses of other science departments, is a Quantitative Lab Science Elective for non-science majors.) Students, listen up. You don't want to get acid burns on your clothes. You don't want to cut up frogs. You don't want to spend your days cracking rocks in the vain hope that the inside will differ from the

outside or your nights freezing on the roof waiting for the clouds to pass so you can peek at the moon. I didn't think so. Take Physics 101. The objective is to learn a little useful science and get a grade you and I

both live with without either of us suffering too much. Sound good?

The Legal Profession or Physics Discovers Advertising: Don't get burned twice. Your experiment has failed to produce the desired result. It's not your fault. It's the equipment. It's the manufacturer. They didn't do the job. Sue them. Physics Legal Aid will handle your case. Remember, if you don't get paid, we don't get paid. And we always get paid.

The Medical Profession or Physics Discovers Billing: Someone has a sick experiment. That's your cue and a cue for all other physicists within hearing. You simply show up one morning, read the thermometer, and mail in a bill for two hundred dollars. It works like magic. And most patients

a bill for two nundred dollars. It works like magic. And most patients recover. The insurance company pays and we all feel better.

Major League Sports or Physics Discovers Free Agency: (Be careful; this strategy works best for twenty game winners or thousand yard rushers, in other words Nobel Prize candidates.) My client has worked through his contract and is not free to sign with any other school run by millionaires. So bid him up. Maybe when all bids are in he'll re-sign with the same school for ten times his former salary. Plus incentives. Multi-year offers only.

Telemarketing or Physics Discovers Matchmaking: Have I got a physicist for

you? She's fresh out of school, our latest product. She programs in many languages. She builds equipment. She can pull a vacuum with best of them. And don't worry, fans, she checks for hidden leaks and repairs them. But that's not all. Your ginsu physicist takes data, analyzes it, fits it to standard models. That's still not all. At the command WRITE she will type your paper meeting the requirements of PHYS REV. Attractive enough to be in your own home yet sufficiently durable for the laboratory, this physicist will make you the envy of your friends. And she is almost willing to share housework or babysitting 50/50. Make that 25/75 and you do the cooking. Not sold in stores.

Astrology of Physics Encounters the Daily Newspaper: (Can you believe the Hartford Courant?) If today is your birthday and you are reading this column, you're out of your mind. What are you doing? Get out, get a life, study physics. (Getting control over my word processor.) Energy will be conserved. Use it well. Entropy will be created. Try not to worry. Discoveries will be made. By someone. (This shows the strong resemblance between astrological divination and Chinese cookie fortunes.) P______

Physics Course List

- * Do you scoff at artists who put the colors in the wrong order when painting a rainbow?
- * Do you try to correct people who refer to the clouds above a boiling pot as steam instead of water vapor?
- * Have you ever wanted to know why it is that 'hot air rises' and 'cold air sinks', but the higher you go the colder the air gets?

If you answered yes to one or more of these questions, you are a budding physicist (and you thought that only botanists were budding!). We strongly recommend that you drop whatever else you are doing (DROP/ADD forms are available at the Registrar's Office) and enroll as a physics major. If you need any further convincing, just have a look at all the wonderful courses we offer.

PHYS 100 Introduction to Physics

A required course for students in all subject areas which require the ability to think (e.g. engineering, physics, math ...) Topics Include: energy, momentum, heat, electricity, magnetism, optics, gravity

Prerequisites: Grade 12 Math and Physics

PHYS 110 Non-Calculus Physics

The ideal course for students in non-scientific areas of science (biology, geology, psychology and other such stuff). If the only reason you would ever be dragged into a physics class is that your degree requirements call for it - this is the course for you. Topics Include: user-friendly, watered-down versions of all the good stuff covered in PHYS 100 Prerequisites: Grade 3 Math, ability to distinguish between moving and parked cars PHYS 123 Physics for Artsies

This is admittedly a blatent attempt to increase enrollment in physics and simultaneously offer paid early retirement to some of our department members. But hey, what about 'Rocks for Jocks', or 'Computers for Clutzes'? Why are we expected to be the one department in the University that only offers quality courses? So if you need a science credit, and want to do as little work as possible to get it - remember 1-2-3. (Those who have already taken MATH 3.14159 Numbers, Fingers, and Stuff will have an advantage in remembering this.) Topics Include: which way is up? why tie your shoelaces? the difference between steam and ice (time and class intelligence permitting)

Prerequisites: pulse rate greater than 10 beats per minute

PHYS 150 Introduction to Astronomy

The ideal course for those who wish to study physics without having to actually study physics. This is traditionally the course of choice for those who think a physics minor would look good on their c.v., but who have no interest or ability in the subject.

Topics Include: which end of the telescope is for looking in? Prerequisites: A pledge never to ask the professor his 'sign'

PHYS 200 Modern Physics

Learn about all the theories and critical experiments of the last century, without being burdened with the mathematics that would permit you to do something with this knowledge. Topics Include: the Heisenberg Uncertainty Principle (perhaps) Prerequisites: readiness to accept that everything we taught you in PHYS 100 is only a classical approximation

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PHYS 201 E&M #1
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We couldn't teach you Electromagnetism properly in PHYS 100 because you had not yet taken any vector calculus. Even though you still have not taken any class in vector calculus, we consider that anybody who has opted to major in physics should be able to absorb the entire content of MATH 201 in the first week of the term. Topics Include: Maxwell's equations Prerequisites: PHYS 205, MATH 100

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PHYS 205 Optics
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Using your knowledge of electromagnetic fields (which you will acquire next term in PHYS 201) we introduce the subject of light - what is it and how does it behave? Topics Include: did you know that nearsighted people have eyes that are too strong, not too weak? Prerequisites: PHYS 201

PHYS 207 Mechanics

No, this is not a course in car maintainance! Topics Include: trajectories, oscillations, Hilbert space Prerequisites: PHYS 100

PHYS 300 S&M (Sadistical Mechanics)

Have you ever wondered what the laws of statistics and quantum mechanics say would happen if you were to put 1,000,000,000,000,000 gas molecules into a container? Take this class and find out! Topics Include: the Grand Ole Canonical Partition Function Prerequisites: PHYS 100, MATH 523

PHYS 312 QM (Quantum Mechanics)

This is what we wanted to teach you in PHYS 200, but weren't able to because you had only had five calculus courses so far. Topics Include: is your cat really alive? Prerequisites: PHYS 200

PHYS 400 E&M #2

Having weeded out all but the most highly intelligent students with PHYS 201, we are now able to get into the real meat of the subject of Electromagnetic waves and fields. Topics Include: optics, relativity, gauge transforms Prerequisites: PHYS 201, every math course you can get

PHYS 456 Advanced Physics for Artsies

We are presently the only Physics Department in the world to offer an advanced physics course especially geared for humanities students. Our consistent offering of this course is evidence of our belief that Physics is indeed a subject for everyone. In fact, Dr. M.C. Skewaired (who has been teaching this class for the last 14 years) has often said in defense of the funding for the course 'if I ever get any students, they will love this class'. Topics Include: which way is down? Prerequisites: PHYS 123

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Here is a simple experiment that will teach you an important electrical lesson: On a cool, dry day, scuff your feet along a carpet, then reach vour hand into a friend's mouth and touch one of his dental fillings. Did you notice how your friend twitched violently and cried out in pain? This teaches us that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important electrical lesson. It also teaches us how an electrical circuit works. When you scuffed your feet, you picked up batches of "electrons", which are very small objects that carpet manufacturers weave into carpets so they will attract dirt. The electrons travel through your bloodstream and collect in your finger, where they form a spark that leaps to your friend's filling, then travels down to his feet and back into the carpet, thus completing the circuit.

Amazing Electronic Fact: If you scuffed your feet long enough without touching anything, you would build up so many electrons that your finger would explode! But this is nothing to worry about unless you have carpeting. From: "Keith E. Sullivan" <KSullivan@worldnet.att.net>
TRANSFORMATIONS AND DISTRIBUTION

Dear Dr. Science,

I am interested in Fourier Transformations and the Theory of Distribution. Can you help me?

-- Prabir Mitra, Katowice, Silesia/Poland

What could you possibly need help with? Why, those transformations are as plain as the nose on my face. Think of them as a filter that detects random patterns and sends them far, far away. The Theory of Distribution is the way the random garbage finds its way to the dump. The dump used to be on Staten Island, but now it's on a barge, circling the world, looking for a port that will accept it. If Poland doesn't watch out, all the world's random patterns will end up there or in Czekoslovakia. Throw them into the Baltic, it's already so polluted no one will notice. At least that's what the Soviets thought.

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The following story was submitted by Russell Bray. It illustrates something that we Physicists have to live with... people who remain completely convinced of something that is incorrect even when corrected by someone who knows more about the subject than they do.

I am a Arizona State Secondary Ed Major with emphasis in Physics. In a class of Secondary Ed students (none of which are Physics), we were having group discussions. The dude giving his lecture (Theatre Major) asked the class what makes the sky blue. We were to get in groups of five, discuss, and come up with a collective answer.

I was not surprised when two groups decided that the sky was blue because the reflection of the ocean. I come to expect that, deal with it, and realize that they were lied to by their parents or second grade teacher. What I didn't expect was that the guy asking didn't know either. After I gave my response of scattering of the sun's light waves through the atmosphere, he said close, but no. Interesting. "What pray tell, is it" I ask.

He says, "Because our atmosphere is mostly Nitrogen Oxide, all the rays of the sun are absorbed by the molecules but blue, just like this blue

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folder absorbes all but blue rays." To a certain degree I see his point, but I couldn't leave it alone.

"Why is a sunset red" I ask.

"Pollution. We have beautiful sunsets because we have dirty air." He says confidently.

From: sirius@wam.umd.edu (The Human Neutrino) HEAVY BOOTS

About 6-7 years ago, I was in a philosophy class at the University of Wisconsin, Madison (good science/engineering school) and the teaching assistant was explaining Descartes. He was trying to show how things don't always happen the way we think they will and explained that, while a pen always falls when you drop it on Earth, it would just float away if you let go of it on the Moon.

My jaw dropped a little. I blurted "What?!" Looking around the room, I saw that only my friend Mark and one other student looked confused by the TA's statement. The other 17 people just looked at me like "What's your problem?"

"But a pen would fall if you dropped it on the Moon, just more slowly." I protested.

"No it wouldn't." the TA explained calmly, "because you're too far away from the Earth's gravity."

Think. Think. Aha! "You saw the APOLLO astronauts walking around on the Moon, didn't you?" I countered, "why didn't they float away?" "Because they were wearing heavy boots." he responded, as if this made perfect sense (remember, this is a Philosophy TA who's had plenty of logic classes).

By then I realized that we were each living in totally different worlds, and did not speak each others language, so I gave up. As we left the room, my friend Mark was raging. "My God! How can all those people be so stupid?"

I tried to be understanding. "Mark, they knew this stuff at one time, but it's not part of their basic view of the world, so they've forgotten it. Most people could probably make the same mistake." To prove my point, we went back to our dorm room and began randomly selecting names from the campus phone book. We called about 30 people and asked each this question:

 If you're standing on the Moon holding a pen, and you let go, will it a) float away, b) float where it is, or c) fall to the ground?

About 47 percent got this question correct. Of the ones who got it wrong, we asked the obvious follow-up question:

You've seen films of the APOLLO astronauts walking around on the Moon, why didn't they fall off? About 20 percent of the people changed their answer to the first question when they heard this one! But the most amazing part was that about half of them confidently answered, "Because they were wearing heavy boots."

From: RICHARD@lane.cc.ukans.edu (Richard Kershenbaum) The following was sent to me by Dr.Adrian Melott, Associate Professor of Physics and Astronomy here at the University of Kansas:

THE BURNING QUESTION OF HEAVY BOOTS

I put two multiple choice questions on my Physics 111 test, after the study of elementary mechanics and gravity:

13. If you are standing on the Moon, and holding a rock, and you let it go, it will:

(a) float away

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- (b) float where it is
- (c) move sideways
- (d) fall to the ground
- (e) none of the above

25. When the Apollo astronauts were on the Moon, they did not fall off because:

- (a) the Earth's gravity extends to the Moon
- (b) the Moon has gravity
- (c) they wore heavy boots
- (d) they had safety ropes
- (e) they had spiked shoes

The response showed some interesting patterns! The first question was generally of average difficulty, compared with the rest of the test: 57% got it right. The second question was easier: 73% got it right.

So, we need more research to explain the people who got #25 right but did not get #13 right!

The second interesting point is that these questions proved to be excellent discriminators: that is, success on these two questions proved to be an extremely good predictor of overall success on the test.

On the first question, 92% of those in the upper quarter of the test score got it right; only 20% of those in the bottom quarter did. They generally chose answers (a) or (b). On the second question, 97% in the upper quarter got it right and 33% in the lower quarter did. The big popular choice of this group was (c)...33% chose heavy boots, followed closely by safety ropes at 27%.

A telling comment on the issue of fairness in teaching elementary physics: Two students asked if I was going to continue asking them about things they had never studied in the class. P_____

From: voros@physics.monash.edu.au (Joe Voros)

The recent business of Heavy Boots (TM) was being discussed by my Engies the other day when I arrived to take them for a class. (I tutor a couple of freshman Engineer classes in Physics for the University.)

Anyway, they were arguing about this, and decided they'd ask me what the situation was. I talked about gravity and how all matter/energy gravitates, etc. The Sun gravitates and all the stars, etc etc. I had to also explain that, contrary to what some of them thought, gravity acts even when there is no air (!!); that the Moon has gravity despite having no atmosphere. This took some convincing(!), but I clinched it with the experiment with the hammer and feather -- they weren't wearing Heavy Boots, and yet still fell.

I then proceeded to discuss the nature of scientific theories, testing hypotheses, keeping an open mind but remaining sceptical, the usual stuff. I tend to get very animated when I talk Physics, and raise my voice, gesticulate, pace, and generally carry on. After some 20 minutes of this talk about Science (TM) and Scientific Method (TM), I finished up with something like "So that is how Science is done. Formulate theories, test them and believe them only when and how far they predict experimental results. ... Now, any questions?"

One girl up the back raises her hand, "Yes, I have one. You got very worked up over this -- are you a Scorpio?"

Oi veh!

joe

ps Of course I'm not a Scorpio!! I have a very balanced approach to these things -- I'm a *Libra*. P_____

From: partee@iastate.edu (Jonathan Partee) We read an article claiming that the average American does not know the correct answer to the following question:

If a pen is dropped on a moon, will it:
A) Float away
B) Float where it is
C) Fall to the surface of the moon

So a bunch of us TA's got together and gave our physics classes quizzes asking this question. Out of 168 people taking the quiz, 48 missed the question. The responses are below. Some people didn't write comments. The spelling and grammer were not changed, however, clarifying comments are enclosed in []'s.

{ed A report is that only 3 of the 48 were in this course. The rest were from lesser courses.} Physics 324 - Modern Physics for Engineers "A body is at rest tends to stay at rest, plus there's no gravity" "The gravity of the moon can be said to be negligible, and also the moon's a vacuum, there is no external force on the pen. Therefore it will float where it is." "The pen will float away because the gravitational pull of the moon, being approximately 1/6 that of the earth, will not be enough to cause the pen to fall nor remain stationary where it is. The gravatational pull of other objects would influence the pen" Physics 222 - Second Semester Calculus-based Introductory Physics "Because moon has gravitation 1/6 of the gravitation of earth the force will be small toward the moon [so it will float away]" Physics 221 - First Semester Calculus-based Introductory Physics "It will fall to the earth by force of gravity and by the attraction between the earth and the moon" "Because the gravitational pull of the moon is much weaker than that of the earth. And object such as a pen is so lite that it will float" "Because there are no external forces if you let go [it will float where it is] "External forces that are present on the moon will attract the pen. There isn't gravity on the moon as there is on earth so the pen won't drop." "Since there is no gravity it will float and fall slowly. It will not fall like in the ground quickly because there is no gravity" "The force of gravity on the moon is a fraction of the gravity on the earth, so the moon would not be able to attract the pen to inself. Rather, it would only be able to suspend the pen" "It will eventually fall to the surface of the moon because of the slight gravitational field plus the moment of inertia about the moon. Also with angular momentum being conserved, it must fall. I=MR^2" [We were

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studying

conservation of angular momentum when I gave this quiz] "The pen will fall to the surface of the moon. As we let go we will introduce some initial enerty into the pen thus putting it in a forward downward motion. Since on the moon there is no force of resistance the pen will fall very slowly towards the surface" "If you are standing on the moon holding a pen and you let go, it will float where it is. It will not fall to the surface of the moon because a gravitational force strong enough to cause this does not exist. In addition. the pen does not have a lot of external force on it, so it will not be likelv to move" "The pen will fall to the surface of the moon because the moon generates gravitational field by rotating and the pen must act under this force". Physics 111 - First semester Non-calculus Physics "It will float where it is because there is no gravity force on the moon. Also, if you just let go there isno acceleration so it should just float where it is." "There is no gravitational force on the moon, the pen therefore has no weight so its mass has no effect on 'where it goes'. Plus, you know, there is no wind to blow the pen up there! =)" Astronomy 150 - Physics for humanities majors "[It will float where it is] Because there isn't a real strong gravity force on the moon. Actually it is like having none at all. If I remember right, it is only like 2.9m/s (force of gravity)" "It will float away because the gravity of the moon won't pull it down to the surface, but it won't stay where it is because there is always some force acting on mass - (even though the gravity of the moon isn't strong enough)" "The gravity of the earth will pull it more than that of the moon, so it will float toward earth" "It'll float away because your body is not able to stay completely still. So it would float in the direction your hand was shaking" "There is not much gravitational pull on the moon to have it fall to the surface. The pen is so small and light, it probably would not be affected

by the gravitation of the moon so it would float away." "There is no gravity in space so if you just let it go, it will just gently float away." "It will float away because the gravitational force is less than here on the Earth where it would fall. I think it will float away because of what I have seen of the space rooms NASA uses to get astronauts ready for flight." "Theoretically, it should float away because it has no mass, gravity does not pull the pen towards the surface at a great enough rate to make it fall, however it does have enough force to keep it floating and ultimately it will drift away." "Because there is no gravity on the moon. Therefore it would float away because there is nothing to hold it there or to pull it to the surface of the moon" "[It will float away] Because there would be no gravitational force to hold it there or make it fall to the surface of the moon" "There is no gravitational pull on the moon to cause pen to come back towards surface. The pen would float away probably toward the gravitational pull of the earth." "[It will float where it is] Because there is no gravitational pull. It will neither fall towards the moon because there is no gravity to pull it there nor is there any other gravitational force that will pull it away from the moon." "Float where it is and will not move because there is no gravitational pull, it will not float away unless it is pushed." "The gravity on the moon is such that it won't be pulled to the surface, and since the pen won't make any movement it should float where it is." "It will float where it is until a force acts upon it. There is no gravity to act upon it." Astronomy 120 - Physics for brain-dead "[It will float away because there is] no gravity to hold it and no atmosphere"

"[It will float away] because the gravity on the moon is not as great as it. is on the earth" "Because the earth is a greater mass and the pen will be pulled toward the greater body because of gravity. The moon doesn't have that great of a gravitational pull" "No gravitatational pull so it won't fall and no force pulling it away so it will float where it is" "Lack of gravity on moon allows pen to float in space" "Because there is no gravitational pull on the moon, there is no pull towards the moon or away from." "The moon doesn't have gravity like the earth which would bring the pen down to the surface instead the moon's atmosphere would cause it to float above the moon's surface." "Gravity will not pull it down, because there is less of it. It shouldn't float away just because I've never seen it happen. There's a balance between gravity and the opposite force." "It would float where it is because gravity would not let it fall to the surface (there is no gravity) on the moon. It would not float away because it has no mass." Ρ From: pankaj@bu-pub.bu.edu

About eight years ago, when I was studying in high school in India, my Chemistry professor was trying to explain the "screening effect" of electrons (a phenomenon that makes metals bind their electrons less losely then other elements, resulting in conductivity).

He tried to give an analogy, using earth and moon. He said, "Imagine if their was another moon orbiting earth, then the pull that our true moon faces will be smaller." I was puzzled and declared that it is not possible. To which he further explained," Well it's like this. The earth now has to pull two moons instead of one hence it has to divide its force among the too, hence its pull on the moon will be halved."

At this point I argued that all the artificial satellites in the sky must face lesser pull by earth when ever a new satellite is launched. " That's true," he said, "and that's why the cost of launching satellites is going up these days...." P

From: rusty@rlyeh.engr.sgi.com (Rusty Ballinger)

pankaj@bu-pub.bu.edu's story reminded me of something I learned in my high school physics class. We were talking about surface tension, and the teacher had just demonstrated a floating razor blade and a drop of detergent. Out of curiosity, I asked whether surface tension could have any effect on something the size of a battleship. "Well, yes," he said. "That's how they float." Seeing our amazement, he even shared an anecdote to support this. "Sure, when I was your age, some friends and I went down to the pond one night and threw in a bunch of soap. The next morning, all the rowboats were at the bottom of the pond!" He wasn't the only one laughing about that. P_ "Girdle Popper" <G_Popper@Hotmail.Com> From: Asteroid Science According to NBC * Asteroids travel through space making a noise like a powerful but subdued engine. * Asteroids are usually locked into orbits, but if a comet comes by, they can be bumped out of their rut and become dangerously unstable. * It's only the fact that everything is locked into an orbit which prevents collisions in our solar system. Any asteroid that gets loose is certain to crash into Earth within a matter of hours. * It's just barely possible to evacuate Kansas City to a distance of 100 miles in 48 hours. This requires lots of airplanes. It also requires martial law, so that 'looters will be arrested on sight'. (Have they no mercy?) With 30+ hours to go, people will panic in the streets and run around at random. * A mile-wide asteroid can mostly burn up in the atmosphere, causing it to do only a relatively small amount of damage (bursting a dam) when it strikes. * A river from a burst dam can exactly keep pace with a pickup truck for several minutes. It will then obligingly pause as the pickup truck turns around and goes in another direction. * When a raging river washes over a pickup truck on a bridge, the bridge won't be damaged, the truck won't be swept off the bridge, and people in the open back of the truck won't be swept away. * A four-mile-wide nickel asteroid (which would mass about a *trillion* tons) can be destroyed -- literally destroyed, so that nothing remains --

by three airplane-mounted lasers.

* But with only two airplane-mounted lasers, it instead instantly explodes into thousands of pieces. Astronomers are very surprised that it wasn't literally destroyed.

* Laser beams are easily visible in space.

* Incoming asteroids spend several minutes in Earth's atmosphere.

* Asteroids made of softer or more volatile stuff than nickel will harmlessly burn up in the atmosphere regardless of size.

* Asteroids that land in the ocean will do no damage regardless of size.

* Asteroids are discovered by astronomers peering directly through their telescopes in brightly lit observatories. Whatever they see will appear on

computer monitors, however.

* Asteroid positions are reported in plainly audible 75 BPS Baudot teletype signals.

* Oddly, there will be no dog to be rescued at the last possible moment. Maybe only tornadoes and volcanoes come equipped with dogs. Would you settle for goldfish? P

From: jasonp@wam.umd.edu (Jason Stratos Papadopoulos) PROOF THE EARTH IS FLAT

Hello. If anyone out there watched a Learning Channel show "In Search of the Edge of the World", they heard some pretty bizarre (though creative) conclusive proofs the earth is flat. A sampler:

According to the theory of continental drift, all the continents can shift about the surface of the earth as if on a bed of some viscous fluid. Were the earth round and rotating, centrifugal force would make all the continents slosh to the equator, but this is a contradiction, as it is not the actual case. QED

A plumb bob always points to the center of the earth (assuming the earth is a sphere). Then a plumb bob used by someone else in a different place would make a different angle to an impartial observer. Since builders use plumb bobs to make buildings stick straight up, any building of sufficient size would then be larger on the top floor than on the bottom floor, but this is a contradiction. QED

And a few refutations of established results:

Ptolemy (?) proposed the earth was round and proved it by figuring its radius based on the angle the sun made with Alexandria on the same day it was directly over another city (7.2 deg.). Flat Earthers insist that this is only an assumption; if the earth was flat the experiment would still yield meaningful results, since the system is then a right triangle and the sun would therefore be 4,000 miles away.

And for all those who need visual proof and are satisfied with satellite photos, Flat Earthers cite Einstein's general theory of relativity and its proclaiming that light bends in the presence of massive objects; thus what is actually flat appears to cameras as round. This phenomenon also explains why ships appear to rise out of the horizon.

Finally, a story I read elsewhere: a researcher at some lab once got a letter from a very distressed Flat Earther, who had heard that the Soviets (I guess 1950s?) were going to detonate a nuclear bomb. Newton's third law would then dictate that the (flat) earth would then tilt toward the USSR, and everybody would slide off. The researcher wrote back that all was well, and that we in U.S. of A. planned to detonate a similar bomb at the same instant on OUR end of the world, thus cancelling the torque the Soviet bomb created.

The researcher was given a dressing-down when the Flat Earther wrote a letter of commendation and praise to the researcher's boss. P_____

A fellow was following a truck in heavy traffic. Every block or so, when they were stopped at a stop light, the driver of the truck would jump out of the cab with a big stick and bang on the side of the cargo bay. He'd then jump back into the cab in time to drive away when the signal changed.

The first fellow observed this for several miles, until he could stand it no longer. The next time the truck driver jumped out with the stick, the first fellow jumped out and ran up to him. "I'm sorry to bother you," he said, over the din of the banging, "but I am very curious; could you tell me what you are doing?" Without breaking rhythm, the truck driver replied, "Sure, Mac. Ya see, this here's a six-ton truck but I've got eight tons of canaries aboard, so I've gotta keep two ton of them flying all the time so I don't break an axle".

P__

From: sirius@wam.umd.edu (The Human Neutrino = Linda Harden)
IS THERE A SANTA CLAUS? (Spy Magazine, January 1990)

1) No known species of reindeer can fly. BUT there are 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not COMPLETELY rule out flying reindeer which only Santa has ever seen.

2) There are 2 billion children (persons under 18) in the world. BUT since Santa doesn't (appear) to handle the Muslim, Hindu, Jewish and Buddhist children, that reduces the workload to 15% of the total - 378 million according to Population Reference Bureau. At an average (census)rate of 3.5 children per household, that's 91.8 million homes. One presumes there's at least one good child in each. 3) Santa has 31 hours of Christmas to work with, thanks to the different time zones and the rotation of the earth, assuming he travels east to west(which seems logical). This works out to 822.6 visits per second. This is to say that for each Christian household with good children, Santa has 1/1000th of a second to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining presents under the tree, eat whatever snacks have been left, get back up the chimney, get back into the sleigh and move on to the next house. Assuming that each of these 91.8 million stops are evenly distributed around the earth (which, of course, we know to be false but for the purposes of our calculations we will accept), we are now talking about .78 miles per household, a total trip of 75-1/2 million miles, not counting stops to do what most of us must do at least once every 31 hours, plus feeding and etc. This means that Santa's sleigh is moving at 650 miles per second, 3,000 times the speed of sound. For purposes of comparison, the fastest man- made vehicle on earth, the Ulysses space probe, moves at a poky 27.4 miles per second - a conventional reindeer can run, tops, 15 miles per hour. 4) The payload on the sleigh adds another interesting element. Assuming that each child gets nothing more than a medium-sized lego set (2 pounds). the sleigh is carrying 321,300 tons, not counting Santa, who is invariably described as overweight. On land, conventional reindeer can pull no more than 300 pounds. Even granting that "flying reindeer" (see point #1) could pull TEN TIMES the normal anoint, we cannot do the job with eight, or even nine. We need 214,200 reindeer. This increases the payload - not even counting the weight of the sleigh - to 353,430 tons. Again, for comparison - this is four times the weight of the Queen Elizabeth. 5) 353,000 tons traveling at 650 miles per second creates enormous air resistance - this will heat the reindeer up in the same fashion as spacecrafts re-entering the earth's atmosphere. The lead pair of reindeer will absorb 14.3 QUINTILLION joules of energy. Per second. Each. In short, they will burst into flame almost instantaneously, exposing the reindeer behind them, and create deafening sonic booms in their wake. The entire reindeer team will be vaporized within 4.26 thousandths of a second. Santa, meanwhile, will be subjected to centrifugal forces 17,500.06 times greater than gravity. A 250-pound Santa (which seems ludicrously slim)would be
pinned to the back of his sleigh by 4,315,015 pounds of force.

In conclusion - If Santa ever DID deliver presents on Christmas Eve, he's dead now.

(story originally attributed to Richard Waller)

REBUTTALS:

REBUTTAL 1

From: hjiwa@nor.chevron.com Canonical List Of Holiday Humor Rebuttal: (Jim Mantle, Waterloo Maple Software)

Come on, ya gotta believe! I mean, if you can handle flying furry animals. then it's only a small step to the rest.

For example;

1) As admitted, it is possible that a flying reindeer can be found. I would agree that it would be quite an unusual find, but they might exist.

2) You've relied on cascading assumptions. For example, you have assumed a uniform distribution of children across homes. Toronto/Yorkville, or Toronto/Cabbagetown, or other yuppie neighbourhoods, have probably less than the average (and don't forget the DINK and SINK homes (Double Income No Kids, Single Income No Kids)), while the families with 748 starving children that they keep showing on Vision TV while trying to pick my pocket

would skew that 15% of homes down a few percent.

3) You've also assumed that each home that has kids would have at least one good kid. What if anti-selection applies, and homes with good kids tend to have more than their share of good kids, and other homes have nothing except terrorists in diapers? Let's drop that number of homes down a few more percent.

4) Santa would have to Fedex a number of packages ahead of time, since he would not be able to fly into Air Force Bases, or into tower-controlled areas near airports. He's get shot at over certain sections of the Middle East, and the no-fly zones in Iraq, so he'd probably use DHL there. Subtract some more homes.

5) I just barely passed Physics and only read Stephen Hawking's book once, but I recall that there is some Einsteinian Theory that says time does strange things as you move faster. In fact, when you go faster than the speed of light time runs backward, if you do a straight line projection, connect the dots and just ignore any singularity you might find right at the speed of light. And don't say you can't go faster than the

speed of light because I've seen it done on TV. Jean-Luc doesn't have reindeer but he does have matter-antimatter warp engines and a holodeck and that's good enough for me. So Santa could go faster than light, visit all the good children which are not uniformly distributed by either concentration in each home or by number of children per household, and get home before he left so he can digest all those stale cookies and warm milk yech. 6) Aha, you say, Jean-Luc has matter-antimatter warp engines, Santa only has reindeer, where does he get the power to move that fast! You calculated the answer! The lead pair of reindeer will absorb 14.3 quintillion joules of energy. Per second. Each. This is an ample supply of energy for the maneuvering, acceleration, etc, that would be required of the loaded sleigh. The reindeer don't evaporate or incinerate because of this energy, they accelerate. What do you think they have antlers for, fighting over females? Think of antlers as furry solar array panels. 7) If that's not enough, watch the news on the 24th at 11 o'clock. NORAD (which may be one of the few government agencies with more than 3 initials in it's name and therefore it must be more trustworthy than the rest) tracks Santa every year and I've seen the radar shots of him approaching mv house from the direction of the North Pole. They haven't bombarded him yet, so they must believe too, right? Yet another rebuttal to the rebuttal: REBUTTAL 2 Several key points are overlooked by this callous, amateurish "study." 1) Flying reindeer: As is widely known (due to the excellent historical documentary "Santa Claus is Coming to Town," the flying reindeer are not previously unknown species of reindeer, but were in fact given the power of flight due to eating magic acorns. As is conclusively proven in "Rudolph the Red-Nosed Reindeer" (a no punches pulled look at life in Santa's village), this ability has bred true in subsequent generations of reindeer, obviously the magic acorns imprinted their power on a dominant gene sequence within the reindeer DNA strand.

2) Number of households: This figure overlooks two key facts. First of all, the first major schism in the Church split the Eastern Churches, centered in Byzantium, from the Western, which remained centered in Rome. This occurred prior to the Gregorian correction to the Julian calendar. The Eastern churches (currently called Orthodox Churches) do not recognize the Gregorian correction for liturgical events, and their Christmas is as a result several days after the Western Churches'. Santa gets two shots at delivering toys. Secondly, the figure of 3.5 children per household is based on the aross demographic average, which includes households with no children at all. The number of children per household, when figured as an average for households with children, would therefore have to be adjusted upward. Also, the largest single Christian denomination is Roman Catholic, who, as we all know, breed like rabbits. If you don't believe me, ask my four brothers and two sisters, they'll back me up. Due to the predominance of Catholics within Christian households, the total number of households containing Christian children would have to be adjusted downward to reflect the overloading of Catholics beyond a standard deviation from the median. Also, the assertion that each home would contain at least one good child would be reasonable enough if there were in fact an even 3.5 children per household. However, since the number of children per household is distributed integrally, there are a significant number (on the order of several million) of one child Christian households. Even though only children are notoriously spoiled and therefore disproportionately inclined towards being naughty, since it's the holidays we'll be generous and give them a fifty-fifty chance of being nice. This removes one half of the single child households from Santa's delivery schedule, which has already been reduced by the removal of the Orthodox households from the first delivery run. 3) Santa's delivery run (speed, payload, etc.): These all suffer from the dubious supposition that there is only one Santa Claus. The name "Santa" is obviously either Spanish or Italian, two ethnic groups which are both overwhelmingly Catholic. The last name Claus suggests a joint German/Italian background. His beginnings, battling the Burgermeister Meisterburger, suggest he grew up in Bavaria (also predominantly Catholic). The Kaiser style helmets of the Burgermeister's guards, coupled with the relative isolation of the village, suggest that his youth was at the very beginning of Prussian influence in Germany. Thus, Santa and Mrs. Claus have been together for well over one hundred years. If you think that after a hundred years of living at the North Pole with nights six months long that they remain childless, you either don't know Catholics or are unaware of the failure rate of the rhythm method. There

have therefore been over five generations of Clauses, breeding like Catholics for over one hundred years. Since they are Catholic, their exponential population increase would obviously have a gain higher than the world population as a whole. There have therefore been more than enough new Santas to overcome the population increase of the world. So in fact, Santa has an easier time of it now than he did when he first started out.

Santa dead, indeed; some people will twist any statistic to "prove" their cynical theory.

Yet another rebuttal:

REBUTTAL 3

From: egreen@nyc.pipeline.com (Edward Green)
5) That's nonsense. I repeated the calculation, and the correct figure
is
17,500.03 times gravity. How can we place belief when such an
implausibly
high figure is accepted! The entire concept is obviously deeply flawed
and
arises from incorrect method!

Besides, Santa simply realizes all of his alternate quantum states at once. Everybody knows that.

People keep defending the existence of Santa Claus:

REBUTTAL 4

From: Jerome Elisha <jpse57@gte.net> Surely the 'esteemed' professional making the analysis means 'forces of acceleration', and not "centrifugal forces" as stated. Furthermore, to accept the ability of reindeer to defy the law of gravity and then bind them to the remaining laws of physics is an error in argument.

The assertion ignores empirical data - Santa does exist: one can see him often during the months leading up to the Big Day. Indeed, it is a frequent occurrence to see him on multiple street corners, or in front of several businesses, at the same time. Either A) Santa has many helpers, or B) Santa is capable of numerous manifestations. In either case, the acceleration arguments above are not valid, since the multiplicity of Santas (manifestations or helpers) could easily handle smaller portions of the task with time left over for cookies and milk.

Arguments A) and B) are both are supported by the different guises he sports in various countries (Santa Claus, Sinter Klaus, Kris Kringle, et al.), and by his acknowledged ability to "see you when you're sleeping; he knows when you're awake". The decision between A) or B) is left as a proof for the student.

And yet another rebuttal:

REBUTTAL 5

From: Lorenzo Sadun <sadun@fireant.ma.utexas.edu>

I wrote this rebuttal to the physics of santa analysis back in 1993: If you're going to criticise Santa Claus on physical grounds, you may at least do it right. The payload calculations are nonsense. Adding, say, 1000 stops back at the North Pole for reloading adds only a few percent to the entire distance covered, while reducing the payload by a factor of 1000. This is clearly the way to go. The nonuniform distribution of children has a tremendous effect on the routing. With sensible routing, the average distance from a good child to the next good child is only a couple hundred feet in suburban conditions (this is clearly higher in the country, but is much less in, say, New York City). With only .05 miles between average good children, Santa need only travel at Mach 200, just a little faster than Ulysses. This reduces the force of air resistance by a factor of 200, and the power absorbed by the reindeer by 3000. (Of course, if Santa stops to give coal to bad children it could slow things down a bit. But it appears that increasing population has made Santa give up that trick. When was the last time you heard of anybody getting a lump of coal?) We all saw the pictures of a smart bomb falling through an Iraqi smokestack during the Gulf War. Clearly Santa uses the same technology for toys and chimneys. By dropping, say, 100 toys at a time from high altitude, Santa can reduce his speed by another factor of 10. While still supersonic, this is now slightly less than orbital velocity, sparing Santa and his team the trauma of extreme centrifugal force. Santa's trip IS a remarkable feat of aeronautics, but please don't say it's impossible. Does anybody wish to make proof or disproof these assertions? -JV P_ HEAVEN IS HOTTER THAN HELL

The temperature of Heaven can be rather accurately computed. Our authority is Isaiah 30:26, "Moreover, the light of the Moon shall be as the light of the Sun and the light of the Sun shall be sevenfold, as the light of seven days." Thus Heaven receives from the Moon as much radiation as we do from the Sun, and in addition 7*7 (49) times as much as the Earth does from the Sun, or 50 times in all. The light we receive from the Moon is one 1/10,000 of the light we receive from the Sun, so we can ignore that ... The radiation falling on Heaven will heat it to the point where the heat lost by radiation is just equal to the heat received by radiation, i.e., Heaven loses 50 times as much heat as the Earth by radiation. Using the Stefan-Boltzmann law for radiation, $(H/E)^4 = 50$, where E is the absolute temperature of the earth (300K), gives H as 798K (525C). The exact temperature of Hell cannot be computed ... [However] Revelations 21:8 says "But the fearful, and unbelieving ... shall have their part in the lake which burneth with fire and brimstone." A lake of molten brimstone means that its temperature must be at or below the boiling point, 444.6C. We have, then, that Heaven, at 525C is hotter than Hell at 445C. -- From "Applied Optics" vol. 11, A14, 1972

Ρ_

From: Humor Man <humor@ted.org> , Gerald Clough
<DONTSPAMclough@texas.net>

The following is one of Dr. Schalmbaugh's Final Test questions for May 1997. (Dr. Schalmbaugh, University of Oklahoma School of Chemical Engineering, is known for asking questions such as this on his final exams.)

May 1997, Momentum, Heat and Mass Transfer II Final Exam Question:

"IS HELL EXOTHERMIC OR ENDOTHERMIC? Support your answer with truth."

Most of the students wrote proofs of their beliefs using Boyle's Law or some variant. One student, however, wrote the following:

First, we postulate that if souls exist, then they must have some mass. If they do, then a mole of souls can also have a mass. So, at what rate are souls moving into hell and at what rate are souls leaving? I think that we can safely assume that once a soul gets to hell, it will not leave.

Therefore, no souls are leaving. As for souls entering hell, lets look at the different religions that exist in the world today. Some of these religions state that if you are not a member of their religion, you will go to hell. Since there are more than one of these religions and people do not belong to more than one religion, we can project that all people and all souls go to hell. With birth and death rates as they are, we can expect the number of souls in hell to increase exponentially.

Now, we look at the rate of change in volume in hell. Boyle's Law states that in order for the temperature and pressure in hell to stay the same, the ratio of the mass of souls and volume needs to stay constant.

Case 1: If hell is expanding at a slower rate than the rate at which souls enter hell, then the temperature and pressure in hell will increase until all hell breaks loose.

Case 2: If hell is expanding at a rate faster than the increase of souls in hell, then the temperature and pressure will drop until hell freezes over.

So which is it? If we accept the postulate given to me by Theresa Banyan during my freshman year, "it will be a cold night in hell before I sleep with you" and take into account the fact that I still have NOT succeeded in having sexual relations with her, then case 2 cannot be true.

Thus, hell is exothermic.

The student, Tim Graham, got the only A.

There are no physicists in the hottest parts of hell, because the existence of a "hottest part" implies a temperature difference, and any marginally competent physicist would immediately use this to run a heat engine and make some other part of hell comfortably cool. This is obviously impossible. -- Richard Davisson P_____

From: ekstrom@pacificrim.net (Philip A. Ekstrom)
Whatever the temperature of hell, I can prove that it is isothermal.
We must begin by assuming that there is at least one physicist in hell.
Most
of us can think of a particular example.
Now assume that some portion of hell is out of equilibrium, a bit hotter
or
colder than the rest. If so, then that physicist would build a heat
engine
and extract some energy, and use that energy to run a refrigerator. He

cool some other part of hell down until it was comfortable.

But it is contrary to the definition of hell that any part of it should be comfortable. QED.

Ρ_

would

P___

From: Wilbert Dijkhof <w.j.dijkhof@student.utwente.nl>
T2 = 2 degrees Celius = 275.15 degree Kelvin
T1 = 1 degree Celius = 274.15 degree Kelvin

T2-T1 = 1 degree Celius = 1 degree Kelvin

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P_
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tag-line on usenetmessages: This message was written entirely with recycled electrons. $\ensuremath{\mathtt{P}}$

From: "Neuro" <nmancer@gil.com.au>

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I can travel through time and I do ... at the unremarkable rate of one
second per second.
P_
From: Ian Ellis <ian@iglou.com>
The speed of time is one second per second.
MP_
From: shhong@chiak.kaist.ac.kr (Hong Seongho)
Theoretical Physics is a science locally isomorphic to Mathematics.
Ρ
Bohr moved in atomic circles while Schrodinger waved and Heisenberg
hesitated.
P_{-}
From: Ian Ellis <ian@iqlou.com>
A rolling stone gathers momentum.
Ρ_
From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just)
OLD ASTRONAUTS never die, they just go to another world
OLD ATOMS never die, they just decay
OLD LASER PHYSICISTS never die, they just become incoherent
OLD METEORS never die, they just burn up
OLD NUCLEAR POWER PLANTS never die, they just go off-line
OLD PLANETS never die, they just lose their attraction
OLD THERMODYNAMICISTS never die, they just achieve their state -
                      - of maximum entropy
P___
From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines)
Plasma is another matter.
Interstellar Matter is a Gas
It's worse than that, it's physics, Jim!
"Apple" (c) 6024 b.c., Adam & Eve
"Apple" (c) Copyright 1767, Sir Isaac Newton.
"The faster you go, the shorter you are" - Einstein
A stitch in time would have confused Einstein.
And God said: E = +mv^2 - Ze^2/r ...and there *WAS* light!
All that glitters has a high refractive index.
Black Holes are Out of Sight
Black Holes were created when God divided by zero!
Black holes really suck...
The Universe is a big place... perhaps the biggest
The Hubbell works fine; all that stuff IS blurry!
Do radioactive cats have 18 half-lives?
Friction can be a drag sometimes.
Going the speed of light is bad for your age.
Gravity: Not just a good idea...it's the LAW.
How many weeks are there in a light year?
Jet Engine Theory -Suck, Squeeze, Bang, Blow!
Power corrupts, but we need electricity.
Resistance Is Useless!
                         (If < 1 ohm)
Supernovae are a Blast
Ρ
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From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection From: Joao Batista(fbatista@cc.fc.ul.pt), rgep@pmms.cam.ac.uk (Richard Pinch) Acoustics do it like Doppler. Acoustics do it orally. Acoustics do it with sounds. Astronauts do it above the atmosphere. Astronomers do it all night. Astronomers do it anually. Astronomers do it Charging, Coupling and Devising (CCDs). Astronomers do it cosmologically. Astronomers do it ellyptically. Astronomers do it hyperbolically. Astronomers do it in clusters. Astronomers do it in nebulae. Astronomers do it in the dark. Astronomers do it in voids. Astronomers do it in X-ways. Astronomers do it meteorically. Astronomers do it on mountain tops. Astronomers do it orbitally. Astronomers do it parabolically. Astronomers do it spectroscopically. Astronomers do it telescopically. Astronomers do it under the stars. Astronomers do it universally. Astronomers do it variably. Astronomers do it while gazing at Uranus. Astronomers do it with binaries. Astronomers do it with dwarfs. Astronomers do it with giants. Astronomers do it with lenses. Astronomers do it with light. Astronomers do it with lights out. Astronomers do it with long tubes. Astronomers do it with mirrors. Astronomers do it with sextants. Astronomers do it with stars. Astronomers do it with Uranus. Astronomers do it with Very Large Bottoms Interfeering (VLBI). Astronomers do it with young stars. Cryogenic physicists do it on the cold. Cryogenic physicists do it on the ice. Cryogenic physicists do it with a cold. Dyslexic Particle Physicists do it with hadrons. Electron microscopists do it 100,000 times. Fluid dynamicists do it in jets. Fluid dynamicists do it in the bath. Fluid dynamicists do it in vortices. Heisenberg was never sure whether or not he did it. Opticians do it visually. Opticians do it with their eyes. Particle physicists do it energetically. Particle physicists do it expensively. Physicists do it a quantum at a time. Physicists do it at two places in the universe at one time. Physicists do it attractively.

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Physicists do it energetically.
Physicists do it in black holes.
Physicists do it in waves.
Physicists do it like Einstein.
Physicists do it magnetically.
Physicists do it on accelerated frames.
Physicists do it particularly.
Physicists do it repulsively.
Physicists do it strangely.
Physicists do it up and down, with charming color, but strange!
Physicists do it with black bodies
Physicists do it with charm.
Physicists do it with large expensive machinery.
Physicists do it with rigid bodies.
Physicists do it with string and sealing-wax.
Physicists do it with Tensors.
Physicists do it with the help of an absolute Bohr (ouch!).
Physicists do it with their vectors.
Physicists do it with uniform harmonic motion.
Physicists get a big bang.
Physics majors do it at the speed of light.
Plasma physicists do it with everything stripped off.
Quantum mechanics do it in leaps.
Quantum theorists do it in tiny tiny pieces.
Quantum theorists do it uncertainly.
Rocket scientists do it with higher thrust.
Spectroscopists do it until it hertz.
Spectroscopists do it with frequency and intensity.
Vacuum physicists do it in voids.
P_{-}
Formula:
            "Energy equals milk chocolate square"
Ρ_
From: nbuchana@gpu.srv.ualberta.ca (Norm)
A probability is a desperate attempt of chaos to become stable.
P_
Heisenberg might have slept here.
Ρ_
<dnichols@d-and-d.com> Donald Nichols (DoN.):
        --- Black Holes are where God is dividing by zero ---
Ρ___
From: dcp@alpha.sunquest.com (Dave Peterson)
If the Titanic had struck a Heisenberg, would it still be floating?
P_
From: egreen@nyc.pipeline.com (Edward Green)
All coordinate systems are equal, but some are more equal than others.
P_
From: clprasad@watson.ibm.com (prasad)
```

```
Entropy isn't what it used to be...
```

++ =2.10 QUANTUM MECHANICS (STARRING SCHROEDINGERS CAT) Ρ From: CroutonGuy <CroutonGuy@centuryinter.net> If Schroedinger's Cat walks into a forest, and no one is around to observe it, is he really in the forest? P_ From: bijl@optica.tn.tudelft.nl (R.J. van der Bijl) Two electrons are sitting on a bench in the park. Another electron comes walking by and says: "Hi there, can I come sit with you?", to which the electrons reply: "Don't be ridiculous, we aren't Bosons." Ρ_ Sign on railroad station: These railroads are subject to Heisenberg's Uncertainty Principle: Position and Velocity of a given train can not be specified at the same time. -- Sydney Harris Cartoon Ρ_ I do not know what is wrong with Heisenberg. He seems so sure of himself lately. -- Sydney Harris Cartoon Ρ From: alpham@icanect.net, Marc de Groot <marc@immersive.com>, Keith Bostic <bostic@bsdi.com> SCHRODINGER'S CAT BOX A fun project is the Schrodinger's Cat Box. You need a mild source of radioactivity (I use scrapings from old "luminous" watches I get at flea markets). I make a box out of plywood except that two sides are small celled Nomex honeycomb (<.125") cut to three inch thickness. One honevcomb side is covered with onion skin paper and the other is left open. A strong light is positioned outside the open celled honeycomb wall and is directed into the box. The radioactive scrapings are smeared across the light lens with a bit of glue. Inside the box I put the sensor to a Geiger counter (borrow one from your local high school). The counter is connected to a fast relay which, when closed by an alpha particle from the scrapings, lights the light. Now, a small, live animal (cat) is placed into the box. One stands behind the onion skin paper side of the box and plugs in the Geiger Counter. With no light the alpha particles are few and are not sufficient to turn on the light. The light is switched the first time with a switch which is in parallel with the relay. Instantly you can see the shadow of the animal on the onion skin paper. Then, as the cat moves, the

light and rush of alpha particles turn the light on and off, strobe like, and you can see that sometimes the animal is not there, or some part of him is gone! It's quantum uncertainty can be measured. It proves that there are two states for the animal (and everything else) -- existence and non-existence. No harm comes to the animal, by the way. P_ From: Johan Blixt <blixt@trantor.math.kth.se> I found this in "The Guardian." (UK) Disregarding the metaphysical aspects of Schrodinger's cats, (Letters, April 28) I must protest at the use of (possibly live) animals for experiments such as these. I urge readers to boycott whatever product this research is leading to. Roger Bisby, Reigate, Surrey. [Note - originally appeared in RHF during second quarter of 1990 - ed] P___ From: kim@shell.portal.com (Kim DeVaughn) "Quantum mechanics, hmmm. You put a cat in a box, along with a hammer and some poison and a radioactive isotope ... I forget exactly how this goes. Anyway, keep some bandages on hand, because I guarantee the cat won't be happy." -Jack-Jack Snyder Ρ_ From: Bert de Bruijn <bob@tristan.arts.kuleuven.ac.be> "Wanted, dead or alive : Schroedinger's cat." Ρ_ From: seashore@pirinen.demon.co.uk (Anetta Meriranta Pirinen) Schroedinger's Vet: Specializing in gassed cats and monkeys with Carpal-tunnel syndrome. P_ From: wombat@tiggs.demon.co.uk (wombat) "Here Kitty, Kitty" - Schrodinger Ρ From: ogod <ogod@my-dejanews.com> The Schrodingers Cat experiment in Quantum Physics: Take one ordinary cat, one large box, a particle detector, a radiation source, a bottle of cyanide gas. Hook up the detector so that if it detects a particle from the radiation source, it will open the cyanide gas. Set it up inside the box in such a way that there will be a 50% probability of a particle being detected from the radiation source within a five minute period. Add the cat to the box. Theory says that the cat will enter a quantum state where it is 50% alive and 50% dead until the experimenter looks inside the box. However,

reality

teaches us that the severly pissed off cat cat WILL escape the box well before the 5 minutes are up, attack the experimenter and depart just in time for the severly lacerated experimenter to watch the hammer decend on the cyanide bottle one inch from his nose. P_____

From: al698@torfree.net (Christian Base) Why did Schrodinger sign his name this way? . . 0 r d h i c n S g e r Because the dots over the "o" are actually a lone pair! P_ From: emilsson@aries.scs.uiuc.edu (Tryggvi Emilsson) Historians have concluded that W.Heisenberg must have been contemplating his love life when he discovered the Uncertainty Principle: -When he had the time, he didn't have the energy and. -When the moment was right, he couldn't figure out the position... Ρ From: Giorgio Torrieri <orie0064@sable.ox.ac.uk> What did heisemberg say about sex? if you've got the position you haven't got the momentum & if you've got the energy you haven't got the time! Ρ From: shoulson@ctr.columbia.edu (Mark Shoulson)

I heard this from a friend, David Kra. He says it's original:

Q: What's the difference between a quantum mechanic and an auto mechanic? A: A quantum mechanic can get his car into the garage without opening the door. P

(This just materialized on my desk one day. It's in my handwriting, so I must have written it, though I'll deny it if I'm indicted. -AA)

The topic for today is quantum physics. Quantum physics was developed in the 1930's, as a result of a bet between Albert Einstein and Niels Bohr, to see who could come up with the most ridiculous theory and still have it published. Most people agree that Bohr won hands down, although Einstein did very well in the swimsuit competition.

One of the most important researchers in quantum physics is Werner

Heisenberg, a man with a wonderful sense of humor, who was always cracking one-liners, like "delta-p times delta-x is less than h!" Ha! ha! What a card! This is known as Heisenberg's Uncertainty Principle, which is closelv related to Goedel's Incompleteness Theorem, which says that some things are true, but you can't prove them, like when my wife and I argue over whether it's her turn to take out the garbage or not. What Heisenberg's Uncertainty Principle says is that if something is small enough, you can't say anything about it. Anyone with the I.Q. of baking powder immediately understood that this means that if you look at something so small that you can't even *see* it, like my dog, Oscar Wilde's, brain, then you obviously can't tell, say, what color it is. But some people didn't get the joke, and decided to investigate this principle further. They would gather and sit around all day, drinking beer and performing "Gedankesexperimenten," or "Thank God we're theoretical physicists so we don't have to get our hands dirty with particle accelerators and other heavy machinery." The most famous of these is Schroedinger's Cat, where several physicists kidnap Erwin Schroedinger's cat Fluffy and lock it up in a box, along with a radioactive source such as Cheez Doodles. Then they walk around with concerned expressions on their faces, commenting about how they don't know what's going on inside the box. This goes on until the cleaning lady discovers the box, opens it and tells the physicists whether the cat is dead, or whether it has mutated into a man-eating flea the size of Norway. The point of this experiment is to show that uncertainty at the quantum level can be detected in the macroscopic world and produce widespread anxiety and paranoia. It also explains why paper clips just lie there while you look at them, but as soon as you turn your back, they run away, giggling wildly, and transform themselves into coat hangers. Another famous researcher is Richard Feynman, who invented Feynman diagrams, which are bunches of squiggly lines with greek letters next to them. The way they were discovered was, one day, Hans Bethe came in to Feynman's office to say that some of the guys down in particle research were having а jam session down by the cyclotron, and would Richard like to come over and bring his bongos? Feynman was out, at the time, cracking a safe or something, so Bethe tried to leave him a note. On the desk, he found one of Feynman's daugter's kindergarten drawings. Bethe couldn't make head or tail

of it, and figured that if even he couldn't understand it, then it must be something Terribly Clever, and promptly called it a Feynman diagram.

This was a major scientific breakthrough, and ever since, proud parents have been hanging their children's Feynman diagrams on refrigerators with little muon-shaped magnets, confident that their Little Darlings are developing important scientific theories every day, because they are, after all, Gifted Crank Unified Theories: The CUTting edge of Fuzzy Science

Quite recently the Institute of Fuzzy Science has announced the discovery of several bold new theories, providing a unified explanation, or at least excuse, for a broad range of natural phenomena. These theories are both extremely ambitious in their scope and modest in their assumptions. Their main trait is that they deduce a great deal from practically nothing.

The creation of Crank Unified Theories is an old and honorable tradition, dating back to prehistoric times, when our ancient ancestors looked around them and asked "How the heck did *this* all get here?" The process was lent considerable prestige by such luminaries as Aristotle and Ptolemy, in the classical age, and continues up to this day. One recent idea by a worker outside the Institute was Photon Mechanics, which postulated that all fundamental particles were composed of photons. In an attempt to prove this, he tried to synthesize a meal from gamma rays. Unfortunately, the food immediately propagated away at 299,000 kilometers per second, leaving critics of the light lunch unsatisfied.

"Terrible," one physicist commented. "Much too bland." Others seemed to agree.

The CUTs produced at the Institute of Fuzzy Science are notable in that they all contradict each other, and sometimes themselves. Thus, few would argue that all, or even most, are correct. The most successful theory to date is that of Dr. Isaac M. Woozy, commonly known as Woozy Theory. Woozy Theory has proven capable of predicting practically anything you put to it.

What is Woozy Theory? In its simplest outlines, it is an attempt to describe nature by unifying three separate realms of observation: General Relativity, Quantum Mechanics, and Scrabble. By adopting a three pronged approach the theory is able to resolve the apparent contradictions between each of the sub-theories.

"I believe that the problems of earlier researchers," stated Dr. Woozy, "arose from treating the subjects piecemeal. A unified approach is required." He cites difficulties with Superstring Theory, Quantum Scrabble, and Scrabble in Curved Spacetime. In each case, he maintains, difficulties arose from neglecting a broad class of other phenomena. "My discovery was serendipitous," he recalls. "I'd been wrestling with various theories for weeks without getting anywhere. Finally, in my office, I picked up Merzbacher's Quantum Mechanics in one hand and Misner, Thorne and Wheeler's Gravitation in the other -- well, I touched it, anyway, it's too heavy to lift. Just as I was staring at both of them, my Scrabble set fell from the top shelf and hit me on the head."

With the blow came illumination. If one merely assumes that Scrabble must exist, the rest of nature follows. Gravity, for example, is necessary to keep the pieces on the board. Electromagnetism provides light, to see the letters with. One critic pointed out the possibility of magnetized pieces; Woozy pondered for hours until he had resolved the conflict to his satisfaction.

"One not only needs gravity to keep the pieces on the board," he explained, "but also to provide an atmosphere, so the players can breathe." When the critic began to suggest pressure suits and space colonies, Woozy silenced him with a skillfully thrown paperweight.

"I take my work seriously," he declared.

Most exciting of all, Woozy theory provides the first coherent explanation for the universe as a whole. If Scrabble is necessary, then so are players, and a universe to play in. Woozy calls this the "Really Strong" or "Scrabble" Anthropic Principle. Humans (or at least intelligent beings) are necessary, providing an order to biological evolution which has been lacking since the failure of the Chain of Being. This also suggests that if aliens exist, they may well play Scrabble.

"That doesn't mean that they will speak English, necessarily," Woozy added cautiously. "There are foreign language versions, after all. And the point values may differ, somewhat." He suggested to SETI that they listen for very long range Play By Mail games. At present, his suggestion has not been acted on. "They're just miffed that they didn't think of it," Woozy sniffed.

Rival theories include unifying QFT and GR with chess or checkers, or even tic-tac-toe. While the originators of these theories remain hopeful, Woozy is pessimistic.

"Those games are extremely difficult to unify with Quantum Mechanics," Woozy explained, "since they lack an element of chance. And tic-tac-toe doesn't even have pieces, so gravity is pretty shaky as well. Plus it's a drawn game (no pun intended). Who'd want to live in a universe that boring?" Woozy also recalled an early game of quantum chess: "After about thirty moves, black was both mated and not mated. It made for terrible arguments."

Are these, or similar theories, the answer to the riddle of the universe? Most observers doubt it. Still, as Dr. Woozy himself points out, "What the heck, it keeps us off the streets."

The Heineken Uncertainty Principle: You can never be sure how many beers you had last night. Ρ_

From: billyfish@aol.com (BillyFish) One day in class, Richard Feynman was talking about angular momentum. He described rotation matrices and mentioned that they did not commute. He said that Sir William Hamilton discovered noncommutivity one night when he was taking a walk in his garden with Lady Hamilton. As they sat down on a bench, there was a moment of passion. It was then that he discovered that AB did not equal BA. ++++++++ =2.11 RELATIVITY

Ρ_

From: bilbo (hobbit@rings.net)
Astonomer #1:so anyway the cop pulls me over and asks if I
realized
that I had just run a redlight. So I said that I did not see the light
as
being red, because it must have blue-shifted as i was approaching it.
Astronomer #2: And he let you go?
Astronomer #1: No. He gave me a speeding ticket intead.
P

From: mini-air <marca@wilson.harvard.edu>
1997-03-11 Scientific Correctness: Zippy Travel

Here is the report on our SCIENTIFIC CORRECTNESS SURVEY #2. The question was:

Is faster-than-light travel possible?

This survey drew an onslaught of opinions.

The vote was a landslide (72%) for the YES side. Thus, another controversy is put to rest. Henceforth, it will be scientifically correct to believe that faster-than-light travel is possible.

Opinions ranged from positive to negative, and from simple ("Yes") to hideously complex. While the results are interesting, the variety of methods used to obtain them is dazzling.

*

Some readers used fuzzy logic: I have never really believed that light actually goes at the speed of light. Have we any proof? I worked out that it should go at root two times the speed of light (c) making the constant itself irrelevant.

--Graeme Winter

Other readers used higher-level fuzzy logic: This is an interesting question, coincidentally I was driving through a Minnesota blizzard last week when my wife told me to slow down because I was 'over driving my headlights.' I was so

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*

excited I almost spilled my coffee because I thought that she meant I was traveling faster than the speed of light, but then I realized that she meant that because of the poor conditions, the stopping distance for my car was greater than my visibility. --Don Berryman * * One reader used tangential logic: Since light has yet to dawn on school boards here in Texas, we are unable to answer this question. --Julia Frugoli Some took a theoretical bent: Yes, but no matter what the destination, you always arrive at night. --Dick Baker My fraternity brother Charles Jones (MIT '63) created a fasterthan-light vehicle in 1960. A beam of light is reflected in a mirror. Approaching the mirror, the light's velocity is (+)c. After reflection it is -c. Ergo at the instant of reflection, its velocity is 0. When the vehicle passes the mirror, it goes faster than light. --A. D. Snider * Others relied on advanced theories: Faster than light travel IS possible but only if you are facing backwards. --Charles Belair It depends on how fast the light is going. --Michael Castleman * Some readers cited empirical evidence: Of course. It is demonstrated every week in "Star Trek: The Next Generation". They also demonstrate crystal power, telepathy, reversal of the polarity of neutron fluxes in starboard power couplings, and other facets of modern science. --Stephen Trier No. No no no no no. Most people think Star Trek has solved the problem of faster-than-light travel. I am much more fascinated by Star Trek's solution to the sound-in-a-vacuum problem. --Karen Lingel "Yes!" E-mail uses delivery through electrical circuits, therefore traveling at the speed of light (one of the reasons for its popularity over the historically traditional US Postal "Service"). America OnLine uses these same electrical circuits. It is well known that almost anything travels faster than AOL these days. --G. Borochoff Not everyone relied on intellectual arguments. Two readers, Charlie Cerf and Peter Thorp, sent in variants of the same classical argument:

There was a young lady called Bright who could travel much faster than light. She departed one day in a relative way and returned on the previous night * * *

Practical experience, too, was useful in solving the question:

Of course faster-than-light travel is possible. However, the probability that your luggage will wind up at the wrong destination increases as the cube of the velocity. --Bob O'Hara

Yes. Faster than light travel is possible and can be readily demonstrated by making the mistake of having two dates show up at your place at the same time. I've done this and witnessed first hand the flight, which happens so fast that you can't see it. --P. Hughes

Yes, but tickets must be purchased at least three weeks in advance and a Saturday night stay is required. --Kristina Pawlikowski

After my cat decided it was play time at 3 AM, he was forcefully accelerated from the bed. Quickly, his velocity reached the of light resulting in a mid-air white hot flash of spontaneous combustion (matter to energy.) Conversely, all internal energies (neuroelectrical, biochemical, etc.) were converted to matter. A strange ash covered the room, very similar to scoopable litter. The other possibility is that he landed on my camera equipment and has been hiding ever since.

--Don Copeland

Finally, one response defied categorization: Of course, as a physics teacher I tell my students that fasterthan-light travel is impossible, but that's just to crush their spirits.

*

--LaNelle Ohlhausen

Ρ

Q: What would happen if the speed of light were only sixty miles per hour?

A: As we approach the speed of light, the aging process slows down. So, if the speed of light were sixty miles per hour, we would have even more people speeding, especially older people trying to stay young. As a matter of fact, physics would demand that we go faster than the speed of light. The safest thing is to drive at a steady sixty to keep time and the highway patrol off our necks. Airplanes would become obsolete in this slow light world, because you would be going so fast, relatively speaking, that you'd be back before you even left. This would make business trips unnecessary and lead to economic collapse. So, to answer your question, life, if the speed of light were sixty miles per hour, would be youthful, fast, and dark. -- Ask Dr. Science P

From: tds@honet9.att.com (Antonio Desimone)
In article <S1ab.5c97@looking.on.ca> mm459504@longs.lance.colostate.edu
(When I'm good, I'm even better) writes:

The paper "National Geographic, The Doomsay Machine" which appeared in the _Journal of Irreproducible Results_ predicts dire consequences resulting from a nationwide buildup of _National Geographic_. The author's predictions are based on the observations that the number of subscriptions for _National Geographic_ are on the rise and that no one ever throws away a copy of the _National Geographic_.

In a similar vein, yesterday I was reading a collection of essays by David Mermin (co-author of the world's funniest solid-state physics text), where he observes that, extrapolating from the current rate of growth, soon volumes of the Physical Review will be filling library shelves at a rate exceeding the speed of light. There is no violation of special relativity, however, as no information is being propagated.

Mermin attributes the comment to Rudolf Pierles (sp?)

[This is probably just for the physics geeks in the crowd]

From: sbaker@oro.net (Steve Baker)
Here's a sample of some on-line humor from the website
http://www.drscience.com .

Dear Dr. Science

P___

Ρ_

Why is the speed of light only 186,000 miles per second? Can'[t science do better than this?

"Yes, you're right. It's a disgrace light only goes a measly 186,000 miles per second, but physicists are working on this problem. There's already a prototype vehicle that goes 200,000 miles per second, but the headlights shine at only 186,000 miles per second. This is equivalent to driving down the freeway the wrong way with the headlights not only out but actually chasing you down the road. This is why so many scientists today no longer own a driver's licence. " Remember, Dr. Science knows more than you do! P Q: How does Santa deliver presents all over the world on Christmas Eve? A: With Rudolf the red-shift reindeer.

--From: Jan-Eric Nystrom <animato@sci.fi> A student recognizes Einstein in a train and asks: Excuse me, professor, but does New York stop by this train? P

272

From: kudlicki@hydra.astrouw.edu.pl (Andrzej Kudlicki) Q: What's the easiest way to observe Doppler's effect optically (not accoustically) in one's everyday life? A: Go out in the evening and look at the cars. They lights are white or yellow when they approach, but they are red when they are moving away of you. P_ From: Ian Ellis <ian@iglou.com> "The probability of them visiting is directly proportioned to how much you feel like being *left alone*... (Einstein's Theory of Relatives) Cartoon from series "Tilted View by Steve Breen at "Ion Science" Web site: http://www.injersey.com:80/Media/IonSci/breen/breenarc/einstein.html Copyright © 1995 ION Science®. ++=2.12 MEASURE THE HEIGHT OF A BUILDING WITH HELP OF A BAROMETER P__ THE BAROMETER FABLE (This seems to be the original story. If you wish to see many solutions, you can go to the next item.) The following essay is frequently referred to, and often reprinted in textbooks on writing. I recall it was also reprinted in one of the Project Physics supplementary readers. Few people recall its source, or its author. As a bit of humor it is nicely constructed. As a parable with a moral, it falls flat. What is the author's point, one wonders? Is it an argument against a particular kind of pedantry in teaching? Is it a demonstration that exam questions can be subject to multiple interpretations? Is it an example of how a clever student can find ingenious ways to answer a question? Just what is the difference between exploring `the deep inner logic of the subject' and teaching `the structure of the subject'. Callandra doesn't make that difference clear, yet his student seems not to like the first, but would rather have the second. The title (which most people forget) is a clue. Medieval scholastics were fond of debating such meaningless questions as "How many angels can dance on the point of a pin," "Did Adam have a navel," and "Do angels defecate." The emerging sciences replaced such `scholarly' debates with experimentation and appeals to observable fact. Callandra seems to be suggesting that "exploring the deep inner logic of a subject in a pedantic way" is akin to the empty arguments of scholasticism. He compares this to the `new math', so much in the news in the 60s, which attempted to replace

rote memorization of math with a deeper understanding of the logic and principles of mathematics, and he seems to be deriding that effort also. So it still seems to me that we get no clear and useful message from this essay.

On almost every level, this essay falls apart on critical analysis. I wonder why it has become such a legend in the physics community?

[The equation, S equals 1/2 a times t-squared, may not come out properly on your browser or newsreader.]

Angels on a Pin

A Modern Parable by Alexander Callandra Saturday Review, Dec 21, 1968.

Some time ago I received a call from a colleague who asked if I would be the referee on the grading of an examination question. He was about to give a student a zero for his answer to a physics question, while the student claimed he should receive a perfect score and would if the system were not set up against the student: The instructor and the student agreed to submit this to an impartial arbiter, and I was selected.

I went to my colleague's office and read the examination question: "Show how it is possible to determine the height of a tall building with the aid of a barometer."

The student had answered: "Take a barometer to the top of the building, attach a long rope to it, lower the barometer to the street and then bring it up, measuring the length of the rope. The length of the rope is the height of the building."

I pointed out that the student really had a strong case for full credit since he had answered the question completely and correctly. On the other hand, if full credit was given, it could well contribute to a high grade for the student in his physics course. A high grade is supposed to certify competence in physics, but the answer did not confirm this. I suggested that the student have another try at answering the question I was not surprised that my colleague agreed, but I was surprised that the student did.

I gave the student six minutes to answer the question with the warning that the answer should show some knowledge of physics. At the end of five minutes, he had not written anything. I asked if he wished to give up, but he said no. He had many answers to this problem; he was just thinking of the best one. I excused myself for interrupting him and asked him to please go on. In the next minute he dashed off his answer which read:

"Take the barometer to the top of the building and lean over the edge of the roof. Drop that barometer, timing its fall with a stopwatch. Then using the formula $S = \frac{1}{2}at^2$, calculate the height of the building.

At this point I asked my colleague if he would give up. He conceded, and I gave the student almost full credit.

In leaving my colleague's office, I recalled that the student had said he had many other answers to the problem, so I asked him what they were. "Oh yes," said the student. "There are a great many ways of getting the height of a tall building with a barometer. For example, you could take the barometer out on a sunny day and measure the height of the barometer and the length of its shadow, and the length of the shadow of the building and by the use of a simple proportion, determine the height of the building."

"Fine," I asked. "And the others?"

"Yes," said the student. "There is a very basic measurement method that you will like. In this method you take the barometer and begin to walk up the stairs. As you climb the stairs, you mark off the length of the barometer along the wall. You then count the number of marks, and this will give you the height of the building in barometer units. A very direct method."

"Of course, if you want a more sophisticated method, you can tie the barometer to the end of a string, swing it as a pendulum, and determine the value of `g' at the street level and at the top of the building. From the difference of the two values of `g' the height of the building can be calculated."

Finally, he concluded, there are many other ways of solving the problem. "Probably the best," he said, "is to take the barometer to the basement and knock on the superintendent's door. When the superintendent answers, you speak to him as follows: "Mr. Superintendent, here I have a fine barometer. If you tell me the height of this building, I will give you this barometer."

At this point I asked the student if he really did know the conventional answer to this question. He admitted that he did, said that he was fed up with high school and college instructors trying to teach him how to think, using the "scientific method," and to explore the deep inner logic of the subject in a pedantic way, as is often done in the new mathematics, rather than teaching him the structure of the subject. With this in mind, he decided to revive scholasticism as an academic lark to challenge the Sputnik-panicked classrooms of America.

The article is by Alexander Calandra and appeared first in "The Saturday Review" (December 21, 1968, p 60). It is also in the collection "More Random Walks in Science" by R.L.Weber, The Institute of Physics, 1982. P

From: jdm@rheom.demon.co.uk (John Mitchell) Bob Pease (Nat.Semi.) records the story of the Physics student who got the following question in an exam:

"You are given an accurate barometer, how would you use it to determine the height of a skyscraper ?"

1: He answered: "Go to the top floor, tie a long piece of string to the barometer, let it down 'till it touches the ground and measure the length of the string".

The examiner wasn't satisfied, so they decided to interview the guy:

"Can you give us another method, one which demonstrates your knowledge of Physics ?"

2: "Sure, go to the top floor, drop the barometer off, and measure how long before it hits the ground....."

"Not, quite what we wanted, care to try again ?"

3: "Make a pendulum of the barometer, measure its period at the bottom, then measure its period at the top....."

"..another try ?...."

4: "Measure the length of the barometer, then mount it vertically on the ground on a sunny day and measure its shadow, measure the shadow of the skyscraper....."

"....and again ?...."

5: "walk up the stairs and use the barometer as a ruler to measure the height of the walls in the stairwells."

"... One more try ?"

6: "Find where the janitor lives, knock on his door and say 'Please, Mr Janitor, if I give you this nice Barometer, will you tell me the height of this building ?"

There are many more ways, for instance:

From: eaobrien@ebi.ac.uk (Emmet O'Brien) 7: To which the less polite alternative is to threaten to wallop the caretaker with the barometer unless they tell you how high the building is.

From: Phil Gustafson <phil@rahul.net>
The just-released book, "Expert C Programming (Deep C Secrets)", Peter
van der Linden, SunSoft/Prentice-Hall, ISBN 0-13-177429-8, lists
twenty-one (21) more or less useful ways to measure the height of a
building with a barometer.

8: Use the barometer as a paperweight while examining the building plans.

From: Mike <zeus@myth.demon.co.uk>
9: Sell the barometer and buy a tape measure.

From: gt4495c@prism.gatech.edu (Giannhs)
10: Use a barometer to reflect a laser beam from the top and measure
the travel time.

11: Track the shadow of the building positioning a barometer on the

ground every hour.

12: Create an explosion on the top and measure the time for the pressure depression indicated on the barometer.

From: peter@cara.demon.co.uk (Peter Ceresole) 13: For fun, how about using sound; fire a starting pistol at the bottom, time the difference of arrival at the top. About a second for the Empire State building, and of course it'd have to be a damn great gun to carry over the howl and screech of downtown Gotham. Also, the detonation might get confused with the sounds of routine crack dealing below.

Adam Jones <Adam@yggdrasl.demon.co.uk> From: 14: Here's one no-one seems to have thought of : 1) Build a sandpit (full of sand, OK?) at the bottom of the building. 2) Rake the sand flat. 3) Drop the barometer from the top of the building into the sand. 4) Measure the average diameter of the crater thus created. 5) From the answer to (4), the mass of the barometer and the properties of the sand (viscosity?) calculate its impact speed and thus the height from which it was dropped. Also has the advantage that you may get your barometer back intact if: a) The building is small. b) The sand is soft. c) The barometer is light and strong. P.S. Watch out for wind-affected drops hitting pedestrians from tall buildings... From: jjunging@sciborg.uwaterloo.ca (Yohaun) 15: 1) Borrow one of those fancy two channel digital oscilloscopes from somebody's lab when they aren't looking. 2) Connect a microphone to each channel. Place one microphone on ground level. Call it "A". 3) Place other microphone "B" at top of building, directly over the first microphone. Note that you may need a lot of cable. 4) Place barometer as close to A as possible. 5) Set scope to trigger on channel A. 6) Whack barometer once with hammer or suitable object. The purpose of this is to make a nice, sharp impulse. 7) Measure the difference in arrival time of the impulse in each channel. This is how long it took the sound to travel to the top of the building. The speed of sound is approximately 1 foot per millisecond under most conditions, so we can find the distance travelled by the pulse and thus the height of the building. Now don't even get me started about using a microphone, an oscilloscope and audible "clicks" to make an acoustical motion detector. :) Except for the trivial method (2), there are other ways to use dropping the barometer: From: nce@liverpool.ac.uk (Dr N.C. Eastmond)

16: Drop the barometer off the building onto someones head, killing them

outright. Wait for the next day's papers and read the part where is says "A man (39) was killed yesterday when a scientist (26) dropped a barometer from the top of an [x] foot building". 17: If it's a _tall_ building, one could drop the barometer, measure how much its length had changed when it reached the bottom, work out the speed from the relativistic dilation, and form that nd knwon gravitational acceleration calculate the height.. From: Gabriel Krabbe <satan@bofh.studfb.unibw-muenchen.de> 18: Actually, you don't have to drop it to use relativity.just hold it parallel to your speed vector (as you rotate with the world) and measure the length. do this at the top and at the bottom of the building; at the top, being further from the centre of the world, the speed is greater and can be determined by the dilatation of the length of the baro- meter. from there, it's easy to find out just how much further from the centre you are; this figure being the height of the building. From: Sebastian_Vielhauer@public.uni-hamburg.de (Sebastian Vielhauer) 19: 1) Make sure your barometer contains alcohol[1]. 2) Spill the alcohol over a heap of wood, paper and other inflammable stuff in the cellar of the building in question. 3) Ignite. 4) Get out. 5) Listen to a local station on your radio. 6) If all works fine, you will hear a message like "A fire broke out in the <actual height of building> feet tall <insert building name> in <insert adress of building> ... " 7) There you are. 8) "And now the police asks for your cooperation in connection with the fire in the <insert building name> today: A young man carrying a broken barometer has been seen leaving the building right before the fire was detected. Description as follows:..." DISCLAIMER: Don't try this at home. It's far too obvious. From: thweatt@prairie.NoDak.edu (Superdave the Wonderchemist) 20: 1) Measure the length of the barometer. 2) Borrow the scaffolding from the window washers. 3) Place the bottom of the barometer on the ground and make a pencil mark on the building at the top of the barometer. 4) Raise the scaffolding a bit to facilitate barometer and pencil manipulation. 5) Place the bottom of the barometer at the pencil mark on the

building from step 3 and make a mark on the building at the top of the barometer.

- 6) Repeat steps 4 and 5 until you reach the top of the building. Be sure to count the pencil marks as you go. If at the top of the building, you end up with the barometer sticking up above the building then you must follow the special steps noted later and add that to your answer.
- 7) Multiply the number of barometer lengths by the length of the barometer to get the building height.

****SPECIAL STEPS NOTED HERE****

s1) Holding the end of the barometer at the top of the last full barometer length mark, rotate the other end of the barometer until it is in line with the top of the building.

- s2) Measure the angle between verticle and the barometer.
- s3) Take the cosine of that angle.

s4) Take the answer to s4 and add that to the number of full barometer lengths measured and multiply by the length of the barometer.

Note: For best results, always hold the barometer vertically.

21: (Aneroid barometers only) Lie the barometer on its back on the ground. Bounce a laser off the glass front and time how long that takes. Subtract

the thickness of the barometer.

22: (Mercury barometers only) Drain the mercury out and put it in a bowl. Bounce a laser off the surface of the mercury, etc. etc. etc. Again, subtract the height of the surface.

From: jjhyvone@cc.hut.fi (Jorkki Hyvonen)

23:

1. Take the glass tube out of the barometer.

- 2. Attach one end of the glass tube to the top of the building, so that the other end points directly downwards.
- 3. Measure the time difference between step 2. and the other end of the glass tube touching the ground with a high-precision timing device.
- Calculate the height of the building using the known viscosity of glass.

From: mike@econym.demon.co.uk (Mike Williams)
24: Run a transparent tube up the side of the building. Fill it with
water,
seal the top and open the bottom inside a reservoir of water. I.e.
effectively make a water barometer - just like a mercury barometer, but
with water instead of the mercury.

Wait for a day when the water level matches the height of the building, and

read off the atmospheric pressure on your original barometer. Calculate the height of water that this atmospheric pressure can support. Unless your building is pretty close to 10 meters high, you may have to wait a long time. a.s.haines@davav.demon.co.uk (Tony Haines) From: 25 :Alternatively you could use fluids with different densities until you found one which was the height of the building. Remember you have to seal the top of the tube, and remove all air from it for an accurate reading. From: Adam Price <ami@gladstone.uoregon.edu> 26: 1) Beat on the foundation o the building, using the barometer, until the building comes crashing down. Any sizeable pieces should be pulverized into pebbles and dust. 2) The height of the building should be zero. If not, repeat step 2. 3) This method may require more than one barometer. Make sure that you buy the same kind, for a more scientific study. From: a.s.haines@davav.demon.co.uk (Tony Haines) 27: Remove the glass pipe from the barometer. Attach one end to an arrow and the other to the top of the building. Evenly heat up the middle of the tube to red heat and fire the arrow at the ground with a bow. Measure the width of the extended glass tube at several points and average. Knowing the original width, work out the distance travelled by the arrow. Measure the distance of the arrow from the base of the building. Use trigonometry to calculate the height of the building. 28: As a quick check, using the mercury you removed from the barometer: Measure the temperature of the mercury at the top of the building, and put it in a perfectly insulating container. Drop it off the building and measure the temperature of the mercury after it has landed. Calculate the energy gained and therefore the height of the building. Frank_Hollis-1@sbphrd.com (Triple Quadrophenic) From: 29: Sellotape a tuning fork to the barometer and whack it just before you throw the barometer off the building. Measure the doppler shift at the moment of impact to get its velocity and, hence, the height of the building. borism@interlog.com (Boris Mohar) From: 30: Wait untill Hell freezes over. Extrude the mercury into a wire. Use wire to measure the building. From: Michael Warner <warner@wsunix.wsu.edu> 31: 1) Set the barometer a measured distance from the building, ensuring a

clear line-of-sight exists between it and both the top and base of the building. 2) Buy, borrow or steal a theodolite. 3) Measure the angles (from horizontal) from the base and the top of the building to the barometer. 4) Diagram the distances and angles at a 1:1 scale on a really big piece of paper. 5) Lay out the diagram on a convenient empty parking lot. 6) Pace off the distance in question. From: Tracy Sweat <sweat@mmc1001.lfwc.lockheed.com> 32: Tie a copper barometer to a copper wire of known diameter. Lower barometer from roof until it just rests on the ground. Apply a known voltage between the barometer and the end of the wire at root level. Measure current flowing between these two points and divide this number into the voltage, giving you the resistance of the barometer/wire combination. Subtract the barometer's resistance and use the resistance of the wire to determine its length. Add back in the height of the barometer. Also, I'd like to see some answers formulated using a bungee jumping barometer. Possibly using the thickness of the bungee cord with the barometer at ground level, maybe using the barometer weight necessary to stretch the bungee cord all the way to the ground, etc... Every meteorological observation site should have at least one bungee jumping barometer. At least. From: spb@sv1.smb.man.ac.uk (Stephen Bates) 33: Read the inscription on the plaque on the back of the barometer, which says, "This barometer is the property of the <number> metres high <name> building. Please do not remove." [1] From: theise@netins.net (Ted Heise) 34: Okay, one more idea which was given to me by my graduate research advisor. Suspend the barometer from the top of the building with a wire. Remove the barometer and measure the change in length of the wire. With the weight of the barometer and Young's modulus for the wire, one can calculate the length. From: fc3a501@AMRISC04.math.uni-hamburg.de (Hauke Reddmann) 35: 1. Look for Godzilla. 2. Wait until he stand before the building. 3. Poke him with the barometer in the, eh, backside. 4. YEOWCH!SLAM!PLOFF! 5. Now that the house is overturned (I think you call it a "flat" :-) , the task has turned into measuring the length, which is much more convenient. From: dehall@hellcat.ecn.uoknor.edu (David Hall) And then there is trigonometry, gravity force differentials, laser rangefinding....and the list goes on. From: zara.baxter@jcu.edu.au (Silky)

36: Heres my silly [1] attempt at answering the question of how tall a building is, using a barometer. One can easily find the height of a building, simply by finding its top, and working from there.

Find a person with vertigo. (fear of heights)

Give them the barometer.

Tell them to put it on top of the building.

we have several measurements, which can then be cross referenced to determine the height of the building.

1. Measure the volume of the sound caused by the persons knees knocking together. The taller the building, the louder the knocking. This should be standardised first, by testing the sound produced for buildings of known height.

2. attach electrodes to your subject. measure the EEG reading at the moment immediately after placing the barometer on top of the building. (ie, the moment they look down) amplitude of waves indicates anxiety. Again, standardisation should be done to ensure accuracy. [2]

3. Measure the depth of the crater created when they land, after having seen how high they were when they put the barometer on top of the building.

Silky...in an attempt to be as perverse as possible. [3]

[1] well everyone else has.[2] a flat line is the exception to the rule here.[3] no, not pervert.

From: "Chester, Justin" <ChesterJ@jntf.osd.mil>
37: Take the barometer to the top of the building. At the base of the
building put a trigger that when the barometer is dropped onto it, it
emits
a loud, high frequency noise. Start stopwatch once the trigger is
activated. Put an audiometer at the top of the building to stop the
stopwatch when the audiometer is activated (at least activated higher
than
the backround noise already present). Determine from there the speed of
sound (for that particular day) and therefore determine the top of the
building.

From: Filip Larsen <filip@post4.tele.dk>
38:I think the best procedure must be:
a) Locate a university where a physics exam or test is about to begin.

b) Locate a student waiting for this test.

b) Impose as a physics professor (wear silly clothes, talk funny, mess up your hair, etc) and lure the student into a separate room.

c) Show the barameter you brought with you to the student and ask him the following question: "You are given an accurate barometer, how would you use it to determine the height of a skyscraper ?". Try to squeeze as

many answer out of him as possible.

building.

d) If you didn't get any useful answers from c), then try to post the question on Internet, preferably in a news group or on a web-page.

39: Find a barometer with heights of local buildings on it Go to all the local gift shops. Look for a fancy souvenir barometer, the kind which shows important local landmarks. Find one which shows the heights of local buildings and considers this building important enough to be listed. Use this barometer.

40: Drop the barometer on the roof and on the ground Hold the barometer straight in front of you and drop it. Measure, very carefully, how long it takes to hit the ground. Go up on the roof and hold the barometer in the same position. Drop it and measure, again very carefully, how long it takes to hit the roof. Since gravity falls off as the square of the distance from the centre of the planet, you can use the difference in times to calculate the height of the building relative to the distance from the base of the building to the centre of the planet. The local library can provide you with the distance to the centre of the planet in the required units.

Note: The ratio of the times is the same as the ratio of the distances from the drop points to the centre of the planet.

41: Drop (and shatter) the mercury barometer at the base of the building on a windless day. Measure the increase in the mercury vapour concentration at the top of the building. Solve the diffusion equation to determine the distance from the shattered barometer to the top of the building.

42: Place the barometer on the ground floor of the building. Seal all the building's doors and windows. Fill the building with water. Read the pressure measurement from the barometer. This gives the weight of a column of water the same height as the building. Use this and the ratio of the density of mercury to the density of water to calculate the height of the

Note: It is common courtesy to evacuate the building before using this technique.

43: If you have access to an airless world, take the building there. Throw the barometer horizontally off the building. If the barometer hits the ground, retrieve it and try again, throwing harder. The objective is to throw it hard enough to achieve a circular orbit. Once the barometer is in orbit around the planet, you can measure the period of the orbit. Compare this with the period of the orbit when you throw the barometer from the base of the building. Use this ratio and Kepler's laws to determine the height of the building (relative to the radius of the planet). From: Andy Johnson <prjohnson@utahlinx.com>

44:
(1) Get a barometer that uses a dial for the reading.
(2) Open the barometer and remove the mechanisim to allow the hand to

swing freely. (3) Dig a hole and climb in, hold the barometer at ground level and point it at the top of the building. (4) Use the barometer as a sextant and measure the angle of inclination, then pace off the distance to the building and use trig to calculate the height of the building. 45: (1) Get an assistant, two synchronized clocks, some gas and a match. (2) Assistant remains at the base of the building and you go to the top. (3) Assistant covers barometer with gas and at a predetermined time, lights barometer with match. (4) You time when you see the flash, and calculate the distance given the speed of light. 46: (1) Go to the top of the building. (2) Drop barometer off building and start timer. (3) Stop timer when you hear barometer hit the ground (4) Solve for height taking into account gravatational acceleration and the speed of sound. 47: From: Filip Janssen <janssf1@sh.bel.alcatel.be> Go to the barometers manufacturer and tell him you want a barometer as high as the building in question. the manufacturer will say something like: "what the fuck do you need a XXX feet long barometer for" 48: From: "Ali Tayarani" <eldiablo@idt.net> Tie barometer to a yardstick. Stack many yardsticks together (head to head). Measure inches. 49: From: CroutonGuy@centuryinter.net> Assume that the barometer has a rectangular shape. It therefore must have a corner. If we also assume that we are finding the height of the building for a professor on a test, then we must also assume that he has an answer already prepared to compare to the students answers. Since the entire class has to solve this question, every student has a barometer. Steal some other students barometers, sell them for a ski mask. Wear the ski mask to the professor's house, and threaten him with the pointy corner of the barometer. Force him to give the correct answer, then use the correct answer. 50: From: Tom Bach <tbach@cyberus.ca> 1. Weigh the barometer at the ground floor of the building (W). 2. Take the elevator to the roof and weigh the barometer a second time (w).

3. The height of the building ${\tt H}$ is given by

From: "Douglas Grimm" <hopehubris@mail.geocities.com> 61: Tie a long piece of string to the barometer. Hold one end of the string from the top of the building, so that the end of the barometer barely clears the ground. Give the barometer a small displacement and time its period as a compound pendulum.

62: Smash the barometer on the roof of the building and time how long it takes for the mercury to drip down the wall of the building to the ground. Use the known viscosity of mercury to find the velocity.

63: Throw the barometer horizontally off the building with a known velocity (calibrate your throwing ability by timing and measuring barometer throws on the ground). Use projectile motion to find the height of the building once the distance the barometer lands from the building is found.

64: Find a small, very efficient, very light electric motor. Weigh the barometer. Use the motor to carry the barometer up the building. Using a voltmeter and ammeter, calculate the work done by the motor, and thus the gravitational potential difference between the top and bottom of the building. Knowing g, find the height.

65: Go to the basement. Find a part of the basement such that directly above you is solid brick until you reach the roof. Throw the barometer at the ceiling of the basement, which is the floor of the building. The barometer will most likely bounce off the floor. Repeat n times, where n is a very large number. In a few trials, the barometer will tunnel through the potential field of the bricks, and appear on the top of the building. Calculate the percentage of trials for which the barometer tunnels. Use the quantum tunneling equation to calculate the length of the barrier, and thus the height of the building. Note: this effect can be calibrated properly by finding the likelyhood of the barometer tunneling through one brick.

66: Attach a copper wire to the top of the building, and attach the other end to the ground. Smash the barometer and use one of the shards of glass to cut the wire halfway up the building and place an ammeter in series with the wire. Knowing the current through the wire and the resistivity of copper, the potential difference between the top of the building and the bottom of the building can be found. This will be a gravitational potential difference, not an electrical one, but the electrons don't know that. Thus, since g is known, the height of the building can be found.

67: Find a large wooden rod a bit longer than the building is high. Wrap an insulated copper wire around this rod at a uniform turn density. Make the coil stop at the top and bottom of the building. Run alternating current through the coil, measure current and voltage, and determine the inductance of the coil. Place the barometer in series with the coil so the resistance of the circuit is enough to stop the wires from melting. With the inductance of the coil and its turns per unit length and radius, the length of the coil, and thus the height of the building, can be found. 68: Drop the barometer off the top of the building and measure the radius of the resulting puddle of mercury.

69: Using a device that can propel an object at a known velocity (such as a baseball pitching machine or a rail gun), find the escape velocity of the barometer from the ground, after first having tied a string to the barometer so it can be retrieved from deep space. Repeat on the top of the building. The difference in escape velocity energies gives the gravitational potential difference between the ground and the roof, thus yielding the height.

70: Using the aforementioned pitching machine or rail gun, find the velocity at which the barometer needs to be projected to reach the roof from the ground.

71: Make a small hole in the barometer through which mercury drips at a constant rate. Time this rate at the ground. Place the barometer on the roof and observe the drip rate from the ground with binoculars. The drip rate will be dilated, by general relativity, by a factor which will give the difference in the curvature of space at the bottom and top of the building. Knowing the mass and radius of the earth and so on, the height of the building can be found.

72: THIS METHOD USES MORE THAN ONE BAROMETER: Pack as many barometers as possible into the building until it undergoes gravitational collapse and becomes a black hole. Knowing the number of barometers used, the mass of this hole can be calculated, and the Schwarzchild radius of the hole is thus half the height of the building.

73: Find a barometer that uses a liquid with no surface tension whatsoever (superfluid helium?). Break the barometer and spread the liquid evenly over the surface of the building. Measure the depth of the resulting liquid film. Knowing the volume of the barometer, this gives the surface area of the building, which will give its height, if its width and depth are known.

74: Stand on the roof of the building. Throw the barometer to a point exactly on the horizon. Measure the distance from the bottom of the building to the barometer. This gives the horizon distance at the top of the building, thus giving its height above the ground.

75: Make a small hole in the barometer so mercury drips out at a constant rate. Place the barometer so that it is dripping off the roof onto the ground. Measure the time between a drop being released from the barometer and the drop hitting the ground. Repeat the measurement when moving towards the ground at a known velocity. The time between a drop being released and a drop hitting the ground will change. Using the Lorentz transformation equations and taking the top of the tower as x = 0, the position of the ground can be found. This will yield the height of the tower.

76: Find a steel cable. Attach it to the barometer and use the barometer as a physical pendulum to measure g. Then attach the building to the cable (after having remove it from its foundations and attaching the cable to a crane of some sort), and using the

building as a physical pendulum, and knowing g, measure its moment of inertia. This will give the dimensions of the building and so on.

77: Use a barometer containing sulfuric acid. Break the barometer on the roof of the building and time how long it takes the acid to eat its way down to the ground.

78: Measure the volume of the barometer at the bottom and top of the building. By knowing the coefficient of thermal expansion of glass, the temperature difference between the top and bottom can be calculated. Refer this to known data of atmospheric temperature as a function of height.

79: Every time somebody walks into or out of the building, stab them with the sharpened end of the barometer (after having sharpened it, of course). Word of the 'Barometer Murderer' will eventually reach the building's owner, who will of course be forced to sell the building. The real estate advertisement should give the height of the building.

80: Knowing the density, width and length of the building, rip the building from its foundations and place it on top of the barometer, giving it a pressure equal to the building's weight divided by the measurement area of the barometer. Thus the weight, and so the height, of the building can be found.

81: Find the architect who designed the building, crack the (mercury) barometer over his coffee, watch him die when he drinks it, then steal the building's specifications, including height.

82: THIS ALSO REQUIRES MORE THAN ONE BAROMETER: knowing Young's Modulus for brick, place barometers on the roof until the roof is lowered by one barometer length. This change in the height of the building under a known stress and Young's Modulus will give the height of the building.

83: Place a cat on top of the building. Prod it with the barometer so that it falls off the roof. See whether the cat dies when it hits the ground. Repeat n times, where n>>{a large number}. Refer to Dr Karl Kruszelnicki's paper on the probability of a cat dying when falling from a certain height.

84: AGAIN, MORE THAN ONE BAROMETER: place as many barometers in the building as will fit. This gives the volume, thus the height, if other dimensions are known.

85: Use a machine (such as the aforementioned baseball pitching machine or rail gun) that can hurl the barometer down from the ground into a hole in the ground at a velocity that is only known to within a certain tolerance. Find the smallest uncertainty in velocity, and thus momentum, such that the barometer appears on top of the building. Use Heisenburg's position-momentum uncertainty relationship to find the height of the building.

86: Tie a string to the barometer and hang it as a plumb bob. The string will be slightly deflected from the vertical by the gravitational effect of the building. This gives the mass of the building, etc.

87: Find at what velocity you must move upwards or downwards past the building such that the building is contracted to the same length as the barometer. Find gamma for this velocity, multiply by the length of the barometer.

From: Ephram Cohen <ephram@ear.Psych.Berkeley.EDU>
88:
Measure the color of the barometer.
Drop the barometer off the building.
Measure color doppler at the moment of impact.
From there extrapolate the velocity at impact.
Finally use the gravity exuation to figure the height of the building.
89:
Drop barometer
Measure radius of the debris field
This should be a function of velocity hence the height of the building.
90:
Place barometer in such a way that a rock will roll out and push whoever
grabs the barometer off the building.

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From: "Neil Wells" <wells@vision.com>

91: Mount the barometer to top edge of building. Use a projectile weapon from a fixed location to shoot it. Using ballistic curve and weapon specs, calculate height of building.

92: Using barometer as a pointer, count the number of floors in building, and calculate the total height using the standard height of a storey of that type of building. Or count bricks if you need to.

93: Measure the base of the building in barometer lengths. Measure the angle to the base corner to the diagonally opposite top corner. Use Trig to calculate unknown height of triangle.

94: Sell the barometer, put the money in an fee-free long term account. Put yourself in suspended annimation until the compound-interest on your money makes you the richest man on earth, then use this money to capitalize your plans for world domination. Then when you are the Almighty Supreme Master of the Entire Universe, order one of your lackeys to report back you with the height of that building. Or you could have the stupid thing knocked down if you wanted to ...95: Get some electronic parts, and a block of plasticine, stick the parts, and some coiled wires into the plasticine, and mount the barometer to this.

Put a sticker on the plasticine, that has, "C4", or "SEMTEX", written in clear, signal yellow lettering.
Go to your local airport and highjack an aircraft, explaining that you will detonate this device unless the pilot does exactly as told, (you can embroider this performance any way you wish ... eg. Wear a towel on your head and see if you can start a Middle-Eastern war. Or maybe you could have some more selfish demands like \$50 000 000 in small unmarked bills, or maybe demand that Roseanne Barr, be forced to give up acting, you know whatever you like). Anyway, where was I? So you instruct the pilot to fly directly past the building at roof level, and as you pass it, simply look at the altimeter. Ask the pilot if there are any calibration ajustments and then work out the building height. After this you can tell everybody the truth about the barometer and the bomb, and you can have a jolly good laugh about it and maybe get together afterwards for a social drink, or something. Of course, you could use the barometer to measure the pressure at the top and the bottom of the building and use the air density... IF YOU READ ALL THE ABOVE, YOU PROBABLY HAVE THOUGHT OF A NEW WAY

P__

From: Erin Leonard (not:Mariella Wells) Merit <wellsm@hsdemo.merit.edu> Copernicus' parents: Copernicus, young man, when are you going to come to terms with the fact that the world does not revolve around you?! P

From: Edward Ruden <ruden@plk.af.mil> An astronomer is on an expedition to Darkest Africa to observe a total eclipse of the sun, which will only be observable there, when he's captured by cannibals. The eclipse is due the next day around noon. To gain his freedom he plans to pose as a god and threaten to extinguish the sun if he's not released, but the timing has to be just right. So, in the few words of the cannibals' primative tongue that he knows, he asks his guard what time they plan to kill him.

The guard's answer is, "Tradition has it that captives are to be killed when the sun reaches the highest point in the sky on the day after their capture so that they may be cooked and ready to be served for the evening meal". "Great", the astronomer replies. The guard continues, though, "But because everyone's so excited about it, in your case we're going to wait until after the eclipse." P_ From: ale2@psu.edu (ale2) In Dec 1989 Physics Today ,page 9, David Gross wrote "...One of the best of the many Pauli jokes tells of Pauli's arriving in Heaven and being given, as befits a theoretical physicist, an appointment with God. When granted the customary free wish, he requests that God explain to him why the value of the fine-structure constant, $alpha = e^2/(hbar*c)$, which measures the strength of the electric force, is 0.00729735 God goes to the blackboards and starts to write furiously. Pauli watches with pleasure but soon starts shaking his head violently...." Ρ

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THE PHYSICISTS' BILL OF RIGHTS

(Author Unknown) We hold these postulates to be intuitively obvious, that all physicists are born equal, to a first approximation, and are endowed by their creator with certain discrete privileges, among them a mean rest life, n degrees of freedom, and the following rights which are invariant under all linear transformations:

1. To approximate all problems to ideal cases.

2. To use order of magnitude calculations whenever deemed necessary (i.e. whenever one can get away with it).

3. To use the rigorous method of "squinting" for solving problems more complex than the addition of positive real integers.

4. To dismiss all functions which diverge as "nasty" and "unphysical."

5. To invoke the uncertainty principle when confronted by confused mathematicians, chemists, engineers, psychologists, dramatists, and other lower scientists.

6. When pressed by non-physicists for an explanation of (4) to mumble in a sneering tone of voice something about physically naive mathematicians.

7. To equate two sides of an equation which are dimensionally inconsistent, with a suitable comment to the effect of, "Well, we are interested in the order of magnitude anyway."

8. To the extensive use of "bastard notations" where conventional mathematics will not work.

9. To invent fictitious forces to delude the general public. 10. To justify shaky reasoning on the basis that it gives the right answer. 11. To cleverly choose convenient initial conditions, using the principle of general triviality. 12. To use plausible arguments in place of proofs, and thenceforth refer to these arguments as proofs. 13. To take on faith any principle which seems right but cannot be proved. P__ From: mj@redbud (MJ Kahn) Lightbulb list Q: How many general relativists does it take to change a light bulb. A: Two. One holds the bulb, while the other rotates the universe. From:BRIAN6@VAXC.MDX.AC.UK (cannonical lightbulb collection) Q: How many quantum physicists does it take to change a lightbulb ? A: One. Two to do it, and one to renormalise the wave function. (Explanation - Renormalising the wave function is something that has to be done to a lot of quantum physics calculations to stop the answer being infinity and makes the answer always come out as one.) Q: How many quantum mechanicians does it take to change a light bulb? A: They can't. If they know where the socket is, they cannot locate the new bulb. Q: How many Heisenbergs does it take to change a light bulb? A: If you know the number, you don't know where the light bulb is. Q: How many astronomers does it take to change a light bulb? A: None, astronomers prefer the dark. Q: How many radio astronomers does it take to change a light bulb. A: None. They are not interested in that short wave stuff. From: Joao Batista <fbatista@cc.fc.ul.pt> 0: How many particle physicists are necessary to change a light bulb? A: Two hundred: 136 to smash it up + 64 to analyse the tiny pieces. Q: How many MIT students does it take to change a lightbulb? A: five --one to design a nuclear-powered one that never needs changing, one to figure out how to power the rest of Boston using that nuked lightbulb, two to install it. P_ From: Raymond W Jensen <rwj+@andrew.cmu.edu> Q:What do you get when you cross a Hell's Angel and a nerdy physics major? A:A guy that has Maxwell's Equations tatooed on his chest. P_

From: wiestt@rl.af.mil (Todd E. Wiest)
Q.) What's the difference between a mathematician and a physicist?
A.) A mathematician thinks that two points are enough to define a strait
line while a physicist wants more data!!!

MP_

From: weishaup@carina.unm.edu (Benjamin Jones) After taking a course in mathematical physics, I wanted to know the real difference between Mathematics and Physicists. A professor friend told me "A Physicist is someone who averages the first 3 terms of a divergent series" Schrodinger's Cat experiment. P_ From: "G - P" <GP@Girdle.Popper.Com> YOU MIGHT BE A PHYSICS MAJOR... if you have no life - and you can PROVE it mathematically. if you enjoy pain. if you know vector calculus but you can't remember how to do long division. if you chuckle whenever anyone says "centrifugal force." if you've actually used every single function on your graphing calculator. if when you look in a mirror, you see a physics major. if it is sunny and 70 degrees outside, and you are working on a computer. if you frequently whistle the theme song to "MacGyver." if you always do homework on Friday nights. if you know how to integrate a chicken and can take the derivative of water. if you think in "math." if you've calculated that the World Series actually diverges. if you hesitate to look at something because you don't want to break down its wave function. if you have a pet named after a scientist. if you laugh at jokes about mathematicians. if the Humane society has you arrested because you actually performed the if you can translate English into Binary. if you can't remember what's behind the door in the science building which says "Exit." if you have to bring a jacket with you, in the middle of summer, because there's a wind-chill factor in the lab.

If you are completely addicted to caffeine.

if you avoid doing anything because you don't want to contribute to the eventual heat-death of the universe.

if you consider ANY non-science course "easy."

if when your professor asks you where your homework is, you claim to have accidentally determined its momentum so precisely, that according to Heisenberg it could be anywhere in the universe.

if the "fun" center of your brain has deteriorated from lack of use.

if you'll assume that a "horse" is a "sphere" in order to make the math easier.

if you understood more than five of these indicators.

if you make a hard copy of this list, and post it on your door.

=2.14 ASTRONOMY

Ρ_

From: Edwin Spector <ems@lucent.com> Q: How many astronomers does it take to change a light bulb? 1). Ten! One to change the bulb, and nine to argue how their own bulb gives better colour. 2). None! Astronomers aren't afraid of the dark. 3). See the FAQs "What sort of light bulb should I buy?" "Should I start with a candle?" "Where should I buy my light bulb?" "Where NOT to buy a light bulb." "What type of light bulb to avoid?" "What will I be able to see with my bulb?" "How do I deal with telescope-pollution?" "Can I buy a bulb for a friend?" "Can I use my bulb in the daytime?" From: Perry <perrycn@bitbucket.apci.net> 4) FAQ addendums, approximately four pages, each: "The new microwave pumped plasma lamp vs. a bank of krypton incandescents for solar simulation experiments." "The red LED flashlight vs. the conventional flashlight with removable red filter." "The different light pollution filters and the lights they can filter."

"Directed beams for convincing automatic streetlights that it is davtime." From: Mark Gingrich <grinch@rahul.net> I believe the official IDA version of this riddle poses the question as follows: Q: How many light bulbs does it take to screw up an astronomer? From: Perry <perrycn@bitbucket.apci.net> How many astronomers does it take to change a light bulb? 0: A1: None, especially if it is burned out. A2: One more than the number of people who vote to keep the street lights the same. A3: One eloquent speaker at a town meeting. From: Dave Storey <dave@quik.demon.co.uk> Find books on A4: Just one, if he can shoot straight. (Can I get mounting rings to fit an air rifle on top of my 8" Schmidt-cass telescopic sight??). (Is it sporting to shoot off a field tripod, anyway?!) Ρ_ From: John Steinberg How many astronomers does it take to screw in a lightbulb? Answer: Astronomers have no time for screwing! Answer: Light....ick! Answer: 3, one to hold the bulb, one to hold the receptacle and one to write the save Stellafane petition. Ρ From: slevy@ncsa.uiuc.edu (Stuart Levy) A column in the Astronomical League's "Reflector" some years ago reported a T-shirt worn at a Texas Star Party -- presumably by a solar observer -- that read Limb Darkening: Early Treatment Saves Lives P___ From: "p" <foofoomonkey@hotmail.com> The New York Times, among other papers, recently published a new Hubble photograph of distant galaxies colliding. Of course, astronomers have had pictures of colliding galaxies for quite some time now, but with the vastly improved resolution provided by the Hubble Space Telescope, you can actually see lawyers rushing to the scene... Ρ_

From: Wayne Howell <whowell@gensearch.com>
Not just an story--but a true event.

About 15 years ago, several of us sat up our dobs in a shallow canyon

about a mile outside the Marine Base at 29 Palms, CA. We had them pointed towards the north to avoid the sun shining down the tubes--this also had them pointing towards the base.

The week-end warriors were flying their exercises, and about mid-day, a jet roared up the canyon. Apparently he spotted the scopes and thought they looked suspicious, because about 30 minutes later two helicopters came and hovered low over us, looking us over carefully. After a few minutes of inspection, they flew off...but returned that evening, well after dark and lit us up, ruining our night vision. Since they didn't fire on us, I guess we passed inspection!

From: Jim.Van.Nuland@sjpc.org (Jim Van Nuland) True story!

One of NASA's people came and talked to our astronomy club back when the Hubble was still on the drawing boards. To better place the time, it was not much after the rings were discovered around that planet.

A member asked if the HST would be able to observe the rings around Uranus. The NASA'er deadpanned "Not through the Earth's atmosphere!". P

From: Jim.Van.Nuland@sjpc.org (Jim Van Nuland)
 * SLMR 2.1a * Astronomers do it on mountaintops.

Ρ_

Ρ

gemfindr@my-deja.com wrote: A FEW REASONS WHY ASTRONOMY IS BETTER THAN SEX: 10. Guaranteed to get at least a little something in view. 9. If you get tired, wait 10 minutes and go at it again. 8. Nobody cares if you are ugly. 7. You don't have to compliment the person who gave you a view (thru their goto?). 6. Person you're with doesn't fantasize you're someone else. 5. 40 years from now, you can still participate regularly. 4. If you wear a Bill Clinton mask, no one thinks you're kinky. 3. Doesn't matter if kids hear you moaning, oohing and aahhing. 2. Less guilt the next morning. 1. ? From: Sharon Curtis <scu@nickel.cs.stir.ac.uk> 1. You can do it all night. From: Michelle Stone <litebkt@plettstone.com> 1. You can experience multiple objects in a single session From: "dmbarr@erols.com (HJ)" <dmbarr@erols.com> 1) there is less shame when purchasing the equipment Ρ_

Author: Wayne Howell <whowell@gensearch.com> More years ago than I care to think about, back in the early days of on-line activity, there was a group of us that discussed astronomy on the old, old version of Prodigy (I still see some of their names here once in while). In those days, every posting was read by a censor prior to allowing it on-line we had some real arguments over rejected postings because the censor that covered the "Outdoor Hobbies" area, where astronomy was covered, was _!!REALLY !! dumb! She wouldn't allow any posting regarding Uranus (she once told me that she KNEW there was no planet with that obscene name), rejected any discussing about Saturn (no commercials were allowed, and our efforts to discuss Saturn were "thinly veiled attempts to promote automobile sales"), and when we tried to refer to Saturn as the "ringed" planet, she rejected those postings also as 'inappropriate". She suggested that it would be "more appropriate" to talk about 'rings' on the jewelry making board. I raised so much objection to her stupidity with Prodigy management, who backed her completely, that I (and several others) ended up getting kicked off of Prodigy! P_ From: cberry@cinenet.net (Craig Berry) ...and says to the bartender, "Gimme a Mexican beer." Instead of handing him a beer, though, the bartender starts shouting "Okay, everybody out! Right now! Out you go!" and herds everyone out into the street. The solar physicist shakes his head sadly. "Dang," he remarks, "should've seen that Corona mass ejection coming." Ρ_ From: Michael Dworetsky <mmd@star.ucl.ac.uk> Two astrophysicists are discussing their research in a bar one evening when a drunk who has been sitting and listening in at the next seat turns and says, in a very worried voice, "What was that you just said!!??" "We were discussion stellar evolution, and I said to my colleague here that the Sun would run out of nuclear fuel and turn into a red giant star in about 5 billion years, possibly melting the Earth." "Whew!!," says the drunk, "You really had me worried. I thought you said 5 million." P_ From: justpat@ten.tropretni (Patrick Di Justo) Oh, that's too easy. This solar physicist walks into a bar and says the the bartender, "I'd prefer a cold Corona." Ρ From: Rob Z. <rzhome@ANTISPAMdallas.net> Q: How far can you see on a clear day? A: 93 Million miles...From here to the Sun. Ρ_

From: Gary Gullikson <garyg@e-world.net>
 * Eyepiece-Costs too much and you only get to watch!

Q: What's an astronomers dilemna? A: Answer: A sale on Meades ETX

From: announce <announce@wsf_su.org> ASTRONOMY LOSES "MAJOR SCIENCE" STATUS, SAYS WORLD SCIENCE FEDERATION

[**** For immediate release]

GENEVA (AP) January 25, 1999 -- In a surprising announcement, the World Science Federation said today that the field of astronomy will no longer be recognized as a major science along with the likes of physics and chemistry. Instead it is being reclassified as a "trans-earth auxiliary scientific pursuit" according to a new taxonomy laid down by the WSF, the international scientific community's governing body.

"This is a painful issue that we've been grappling with for some time," said Dr. Jean-Sven Johansson, president of the WSF. "The study of the heavens has been considered a science since prehistoric times. But if it were just discovered today, with all we've learned in the intervening millennia, there's no way we would categorize astronomy as a major science. It is too soft, too based on speculative theories, and too far removed from the everyday world."

"[The reclassification] is a difficult but ultimately correct decision," read a supporting statement from the United States Council of Scientists. "While we are sympathetic for practitioners of astronomy, we believe that the sanctity of science demands a more rigorous test for inclusion than merely a few centuries of tradition."

The news is a bitter pill for astronomers to swallow. For years they have endured derision from their colleagues in the so-called 'hard' sciences of physics, chemistry, and mathematics. Only recently had astronomers believed they'd earned a measure of overdue respect from the broader community of scholars. Stunning discoveries from the Hubble Space Telescope, plus new theories on the origins of the universe, had put astronomy into the forefront of public consciousness.

The WSF's announcement changes all that. While astronomy will still be studied in schools and research institutions, its practitioners may no longer refer to themselves "scientists". No future Ph.D. degrees may be conveyed by accredited universities of science. However, a grandfather clause allows current doctoral students to complete their studies and earn degrees within 18 months.

Perhaps the most significant changes are in matters of protocol when scientists meet. Astronomers will still be permitted to attend academic gatherings, but they must defer to official scientists in lectures, workshops, and buffet lines. They must also refrain from displaying items that identify themselves as scientists, such as t-shirts or vanity license plates.

Reaction to the WSF's announcement among astronomers was a mixture of disappointment and outrage.

"I am very saddened by this decision," said Dr. Velikov Vonk, noted planetologist and author of the seminal paper 'On Renaming The Big Bang To Something More Dignified.' "Astronomers have added much to the rich history of science and to our understanding of the universe around us. I pray the WSF will reconsider."

"It is disheartening, but not altogether unexpected," added Arpad Arkabaranan, a researcher at the University of New Jersey. "Rumors have been circulating throughout the scientific community for several months. Personally, I find it the pedantic act of a self-important panel. It accomplishes little more than fostering confusion among schoolchildren and requiring countless textbooks and encyclopedias to be rewritten, all for the sake of purity of nomenclature. Does the WSF not have any more important issues to worry about?"

Other astronomers accepted the news with less equanimity.

"Who died and left them boss?" fumed William McGilly, a propulsion engineer with NASA's Goddard Research Center. "I wonder what science is next on their hit list. If I were an anthropologist or a geologist or a cosmetologist, I'd be putting together my resume quickly."

Dr. Johansson points out that astronomy has not been kicked out of the scientific club entirely. Rather, it will become "auxiliary scientific pursuit #1", the first in a new category of demi-sciences under the WSF's revised hierarchy. "We will rename astronomy as 'trans-earth studies' to reflect its new status," says Johansson. "We believe that after the disappointment fades, astronomers will be proud and excited to act as the trailblazers in this exciting new arena."

Still, the WSF's announcement could not have come at a worse time to a field that was felt it was close to turning the corner. Notable breakthroughs in coming years would have included the Mars Lander, the International Space Station, and the much-anticipated results of a joint Canadian and Japanese task force to develop a pronunciation of Uranus that would not make high school students giggle. ("That was going to be huge for us," says Vonk forlornly.)

The new classification takes effect on April 1st, giving astronomers precious little time to solve what might be their last problem as scientists. For years, English-speaking children have been taught the phrase 'My very earnest mother just served us nine pickles' to remember the names of the nine planets in order. ('My' stands for Mercury, 'very' for Venus, etc.) If astronomers downgrade Pluto to a minor solar object as planned, possibly as their final act before losing their own official status, a new mnemonic will be necessary. The solution has eluded astronomers and linguists from around the globe. Ponders Arkabaranan: "My very earnest mother just served us....nutmeg? Nachos? New England Clam Chowder? Oh, poop! Give us time, we'll think of something." [nps. Thanks to Mr. R.A. Lafferty for his assistance in this story.] P_ From: Ian Ellis <ian@iqlou.com> Janet Reid was driving her daughter westward after the Malibu fires when the smoke in the sky made everything look surreal. "Ooh, Wendy, look at the sun," she told her daughter. "It looks like a big ball of fire." The 3-year-old preschooler replied: "It is a big ball of fire." -- from Los Angeles Times, Jan 13, 1997 P___ From: mstueben@tjhsst.vak12ed.edu (Michael A. Stueben) Question: What is more useful: the sun or the moon? Answer: The moon, because the moon shines at night when you want the light, whereas the sun shines during the day when you don't need it. Ρ From: Erin Leonard (not:Mariella Wells) Merit <wellsm@hsdemo.merit.edu> Fortune teller: Do the stars and planets control our lives? No; the IRS maybe, but not the stars and planets. P_ From: Jan.Six@uku.fi (Jan Six) "It is a hypothesis that the sun will rise in the morning. This means we don't _know_ it will rise" - Ludwig Wittgenstein "Actually, now that you come to mention it..." - Nikolaus Copernicus P__ From: aaron@falcon.cc.ukans.edu (Aaron Hoyt)W hatever the missing mass of the universe is, I hope it's not cockroaches. Ρ From: s232@brems.ii.uib.no (--Arild.) This has probably been around since Hubble (telescope not astronomer): Heard about the new hubble cocktail, it's expensive and when you drink it, everything looks fuzzy ...

Ρ_

From: "Valentine Germann" <v.germann@worldnet.att.net> Serious Astronomical Humor On The Net! Val Germann Central Missouri Astronomical Association Can anyone tell me if these two guys, Brothers Lance and Theodore, are around these days? The messages below date from about three years ago but have lost nothing over the intervening time! Begin Quote: To Brother Theodore, If thou wouldst but recount thine own experience with refractive glass, 'twould be of exceeding benefit to all--for knowledge increaseth understanding. For thine edification, Brother Lance would relate to thee an most perplexing recent incident: 'twas on Solstice eve, when peaceful slumber was interrupted by unexpected appearance of three Spirits, in close temporal succession, into sleeping chamber. Spirit of Solstice past did remind Brother Lance of the simple pleasures afforded him by the three inch reflector of his youth. Spirit of Solstice present did shew to unto this humble Brother the seeds of discontent present in wandering eye of he that doth covet the seductive convenience of Schmidt-Cassegrain and Maksutov, or the "perfect image" of the refractor (an image obtainable, in truth, only through the unobstructed reflector). The final Spirit did prophesy of the great wickedness and depravity that followeth close upon such covetousness: an evil progression of foul catadioptric, APO (rotten to the core), CCD, Nagler, cyphering machine in conjunction with stepping motor (but one step short of perdition), digital navigator, and all manner of vile optical and mechanical corruption, such that Brother Lance did fall to his face and clutch at the feet of this Spirit, to forsake and foreswear all association with such optical abomination and mechanical Manicheanism. Next moment 'twas morning, and Brother Lance did find himself deliriously clutching at the foot of his Brother Dobson type telescope, and oft repeating the words "I'm not the amateur I was." Mayhap such delirium resulteth from consumption, on previous even, of many bottles of Brother Molson's Exceedingly Fortified Special Solstice-Celebration Hop Beverage--but thou never knowest. Leastwise, said Spirit hath renewed mine old conviction of the divine

ordination of the reflecting glass, and mine erstwhile held belief in the absolute depravity of any optical instrument whose design doth deviate from the simplicity that dwelleth within our beloved Newtonian.

Nevertheless, whether thine eyes are bathed in the pure Light of the Reflected Truth, or are temporarily confounded by inferior glasses, the Solstice doth signal the end of darkness, and the beginning of a slow but steady progression into Light.

May ye all see the Light.

Brother Lance

To all:

WARNING: Brother Lance is a member of a strange medieval brotherhood that zealously defends its choice of telescope: the Newtonian. He speaks at great length about the evils of refractors, Maksutovs, Naglers, Baker-Nunn cameras, CCDs, equatorial mounts, and any aspect of astronomy that goes beyond observing the sky through a simple reflector and a simple eyepiece. He's been known to bend the truth in defense of his doctrine. Today's target: the Schmidt-Cassegrain.

compound instrument and the refracting glass. Peace unto you, brother.

Much instruction is gained through contemplation of the twofold heresy born

of the unholy union between The Followers of Schmidt and The Order of Casse-grain. The fallen nature of this depraved cult is made manifest in the foul instrument through which these children of darkness attempt an understanding of the world that night doth reveal to those attuned to the mysteries thereof. The depth of their depravity is revealed in the devious

means by which these scorpions attempt to cover up the optical wickedness and poisonous aberrations concealed within their evil cylinder. How the tube doth gleam in vainglorious attempt to please and distract the eye from

the optical corruption hidden within. Yet, to the unwavering eye, how evident the iniquities of design and grievous inadequacies of manufacture--grave impediment to the important verities shewed by the Divine Radiance.

And what host of wretched contrivances these creatures spawn, to facilitate the capture of Light, both sensible and insensible, upon sensitive plates

(another heresy worthy of much comment). Their ingenious devices, which serve only to distract from the Observed Truth, are abominations: engines to counteract the natural and pleasing motion of the sphere of fixed stars;

tiny mirrors in hollow tubes, with which they capture and imprison the off

axis light of a lone star--not to more readily study the Truth contained therein--but only to guide the aforementioned engine, to restrain or advance its movement, whilst they pursue their false images.

None of the holy treasures of the sky are safe from the perverse endeavours of these iconolators. Nay, not even the countenances of the Planetary Gods are sacred to these lost souls, intent on holding the Divine Light in their hands, or on their phos-phorescent screens. BLASPHEMERS! Sailors of the celestial seas consult charts, and rely upon age old traditions and intimate knowledge of heaven's shoals to wend their way among the luminaries. Not so the followers of Schmidt and Cassegrain. This nest of vipers hath concealed, deep within the bowels of their accursed double fork, ciphering machines of exceeding complexity, allied with their devilish enginery, allowing them to navigate midnight's ocean while yet remaining themselves rudderless. What manner of evil is contained within those forks? Verily, the pitchfork of The Enemy containeth fewer of the persuasive powers of perdition. Consider the injustice suffered by one who steadfastly leadeth a life of righteousness but, nonetheless, is turned away from Paradise at the last moment. Is not the situation similar in the case of the catadioptric abomination? Blessed Light, messenger of Truth, flieth through the aether on course straight and narrow, without regard for millennium upon millennium in her path. Mere inches short of her goal, she encountereth the refracting element, the passage through which rendereth the Light pregnant with false colour and foul aberrations. Her chastity is further sullied by the Evil One, whose gross form doth obstruct one third of the harbour toward which Lady Light is drawn. Dazed. she proceedeth on to the blessed reflecting element, whereupon she is not further confounded, but is greeted with warm, momentary embrace--her remaining purity preserved. Forthwith, she is sent back along her original path, and suffereth not one, but two more changes of course before the final necessary travail through the smaller refracting glasses. Brave Lady Light might endure three reflections and yet maintain her integrity; but in encounter with refracting element and looming bulk of the Evil One, none Light can prevail. I exhort the misguided multitude under the influence of the gravely mistaken

catadioptric teachings to forsake their heresies, and abjure their

compounding of errors. Partake of the glory that the reflecting glass doth reveal in friendly star, and subtle aspect of Wand'ring Fire, born high on gentle evening's bowl. And if on that even, by God's grace, the ocean of air be not troubled, but remaineth still throughout its depth, what marvels and glad tidings await those who stand with the Brothers of the Reflected Truth--in awe of the overarching magnificence we behold--eyes fixed upon the unblemished Light that proceedeth from our simple cylinders. We are content in the knowledge that brother Newton hath provided the means by which all Truth may be known. A scope within the grasp of even the lowest of men: a mirror in whose reflection we might gaze upon the face of Truth: a glass sufficient to reveal the luminous splendours and divers wonders that comprise the radiant complexion of the night. "Most assuredly, the Schmidt-Cassegrain doth suck! -- Aristotle -- Brother Lance

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End Quote
P_____
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From: Kurt Foster <kfoster@rmi.net>

FUN FIRSTS DURING MOON PROGRAM

Besides the dramatic firsts scored leading up to the moon landing - the successful docking, two weeks in space, first men to go beyond Earth orbit, etc - there are a number of other firsts that may not be getting the attention they deserve.

Of course, Apollo VIII first discovered (or made it so) that the moon was made not of green cheese, but American cheese.

But I have a vague recollection that during one of the Gemini space walks, they scored the first dirty (on the outside) window in space - the guy (White?) doing the space walk was using some gizmo that fired jets of gas, and it was causing something to be deposited in the window. The guy inside the capsule said something like, "You're messing up my windshield, you dirty dog!"

Also, I think it was one of the Gemini missions that scored the first corned-beef sandwich in space. One of the astronauts (Grissom?), sick and tired of the usual "space food", decided to bring some REAL food on a mission, and smuggled a sandwich on board. There were crumbs floating around in the capsule, and it smelled pretty strong, but nothing really

bad happened. Anyone have more details on these, or other "fun" firsts on the road to

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P_
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From: ac593@freenet.buffalo.edu SUBATOMIC PARTICLE STORE

The subatomic particle store had a sale last week. Electrons: \$0.10 Protons : \$0.10 Neutrons : free of charge P

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THE SEX LIFE OF AN ELECTRON (with unhappy ending)

One night when his charge was at full capacity, Micro Farad decided to get a cute little coil to discharge him. He picked up Millie Amp and took her for a ride on his megacycle. They rode across the wheat stone bridge, around the sine wave, and into the magnetic field next to the flowing current.

Micro Farad, attracted by Millie's characteristic curve, soon had her field fully excited. He laid her on the ground potential, raised her frequency, lowered her resistance, and pulled out his high voltage probe. He inserted it in parallel and began to short circuit her shunt. Fully excited, Millie cried out, "ohm, ohm, give me mho". With his tube at maximum output and her coil vibrating from the current flow, her shunt soon reached maximum heat. The excessive current had shorted her shunt, and Micro's capacity was rapidly discharged, and every electron was drained off. They fluxed all night, tried various connections and hookings until his bar magnet had lost all of its strength, and he could no longer generate enough voltage to sustain his collapsing field. With his battery fully discharged, Micro was unable to excite his tickler, so they ended up reversing polarity and blowing each other's fuses. P

From: Marcel Melters <mac@mcc.iaehv.nl> THE SEX LIFE OF AN ELECTRON (with happy ending)

One night when his charge was pretty high, Micro Farad went to see if he could find a cute little coil to let him discharge. He picked up Milli Amp, and took her for a ride on his Megacycle. They rode accross the wheatstone bridge, along the sine wave and stopped at a magnetic field flowing with current. Micro Farad soon had her resistance at a minimum level. They laid against ground level. Micro Farad then inserted his probe in Milli Amps socket. Mho, Mho, give me Mho, she said. They fluxed all night, trying out various connections. Afterwards Milli Amp tried self-induction and damaged her probe. After this, they went home and oscillated happily ever after.

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Ρ_
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From: bcbf
At first, God said :

Rot E = -dB/dt

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Div D = rho
   Div B = 0
   Rot H = j + dD/dt
and there was the light.
                           J. C. Maxwell
P_
From snowhare@nihongo.org Tue Feb 23 04:30:01 1999
Last week a national ISP had the mis-fortune to have their banner ad
touting
"The only thing slowing us down is the speed of light." be juxtaposed
with a
New York Times article titled ""In a Major Breakthrough, Danish Physicist
Slows
the Speed of Light" which reported on a scientist who had succeeded in
slowing
light to a paltry 38 miles per hour.
They now have a *new* banner ad out (this is for real):
"The only thing slowing us down....
          ... is the occasional group of physicists."
Touche!
Ρ_
From: Werner Haelg <Haelg@inorg.chem.ethz.ch>
A question for NMR-Freaks:
What is the meaning of the abreviation SPIN ?
S ociety for the
P rotection of
I nnocent
N uclei
P_
From: eridani@scn.org (Martha K. Koester)
New Age shops sell negative ion generators, as it is thought
by some that breathing negative ions boosts the immune
system. I have also heard that you can save your money and
pet your cat, as rubbing it's fur has the same effect. This
is unfortunately non-scientific, because how can a negative
ion be a cat ion?
Ρ_
From: wshaw@gate.net (William Shaw)
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When light passes from one medium to another, it obeys a set of partial differential equations (which "optimize" the path as it were). The light "slows down" for the amount of time it takes for it to solve the equations. But if the light is experienced enough, it can solve the equations faster than when it first started out.

Truly retarded light has so much trouble solving the equations that it just gives up and bounces back into the original medium (roughly four percent?)...

Ρ_

aa387@cleveland.Freenet.Edu (Jim Kutz) From: Although we modern persons tend to take our electric lights, radios, mixers, etc. for granted, hundreds of years ago people did not have any of these things, which is just as well because there was no place to plug them in. Then along came the first Electrical Pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same force as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims, such as, "A penny saved is a penny earned." Eventually he had to be given a job running the post office. After Franklin came a herd of Electrical Pioneers whose names have become part of our electrical terminology: Myron Volt, Mary Louise Amp, James Watt, Bob Transformer, etc. These pioneers conducted many important electrical experiments. Among them, Galvani discovered (this is the truth) that when he attached two different kinds of metal to the leg of a frog, an electrical current developed and the frog's leg kicked, even though it was no longer attached to the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled veterinary surgeons can take a frog that has been seriously injured or killed, implant pieces of metal in its muscles, and watch it hop back into the pond -- almost. But the greatest Electrical Pioneer of them all was Thomas Edison, who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention in 1877 was the phonograph, which could soon be found in thousand of American homes, where it basically sat until 1923, when the record was invented. But Edison's greatest achievement came in 1879 when he invented the electric company. Edison's design was a brilliant adaptation of the simple electrical circuit: the electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again. This means that an electric company can sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year any new electricity was generated was 1937. Today, thanks to men

like Edison and Franklin, and frogs like Galvani's, we receive almost

unlimited benefits from electricity. For example, in the past decade scientists have developed the laser, an electronic appliance so powerful that it can vaporize a bulldozer 2000 yards away, yet so precise that doctors can use it to perform delicate operations to the human eyeball, provided they remember to change the power setting from "Bulldozer" to "Eyeball."

From: Aliquotes iv.vi (journal) (rogerb@microsoft.com)

P_

My, But That's An Attractive Lawn Mower

Scientists aren't the only ones capable of starting relationships in the lab. Often times, in our effort to get that last result, we forget about the feelings of the equipment which we so callously use and discard. This is one such story of the love between a lawn mower and an NMR-MRI imager. Machines, yes, but machines wich couldn't bear to be separated. The research facility had just received their new NMR-MRI System and had been careful to inform the cleaning staff of the hazards of working around such a piece of equipment ... the high magnetic field wreaking havoc with any metal bearing equipment, erasing banking cards and terminating electrical equipment. This also includes pacemakers although you gotta wonder how they determined that the machinery would affect pacemakers, experiments or just a good guess. They were even so careful as to put the magnet well towards the back wall, away from the general working area of the facility. Yes, they were careful in telling the caretaking staff. Unfortunately, no one had taken the same care in informing the outdoor, groundskeeping staff. Shortly after the system was set up, one of the outdoor maintenance crew was mowing the lawn near the back wall of the facility. Picture the idyllic setting as the groundskeeper in wandering around the yard on a bright summer's day. The sun is shining, the birds are singing and the blades of grass are flying around in the normal manner when cut by the mower. Suddenly, the mower is yanked out of the groundskeeper's hands and is flung against the wall, suspended three feet off the ground with no signs of support. The surprised fellow spent quite a while trying to pry the mower of the wall but to no avail. It doesn't take a scientist to tell you that this only happens on Roadrunner cartoons. What was the poor man going to tell his boss? Eventually, when everyone became aware of the problem, they got their heads together and tried to come up with a reasonable expanation for this sudden. non-Newtonian event. Unfortunately, someone was running an experiment at the time and noticed the change in the field. Following the commotion,

equipment which is usually issued with an MRI but we won't quibble), they were able to pry the mower from the wall. This wall is now surrounded at a distance by a large fence and no one cares if the grass grows long and unruly. P_ Hamster Power: 42 ways to get electric power from hamsters 1. Stick copper and zinc electrode-needles in opposite ends of hamster. Use in series for higher voltage. -gwh 2. Shove them back and forth in Richard Gere's butt. Creates static electricity. 3. Go to Radio Shack and offer them the hamster in exchange for two AAA batteries. 4. Attach the hamster to a hand-crank generator and then drop it onto a trampoline. 5. Ignite in large numbers. Use heat released to drive steam turbine. 6. Kidnap and threaten to torture. Extort ransom from animal-rights activists and other anti-cruelty types: demand payment in the form of electric current. 7. Drop hamsters from great heights. Use water-mill like turbine to generate electricity. 8. Drop large numbers of hamsters into tar pit, wait a few million years, drill for crude oil at same location to run electric turbine. 9. Cold Fusion -> Steam Turbine. No explanation necessary. -seano 10. Any form of neutron capture / beta emission. -seano 11. Convince hamsters they're really lemmings. Show cliff to hamsters. Install turbine halfway down cliff. 12. Densely pack hamsters into flywheel shape. Spin rapidly. Attach generator. 13. Put hamster on electricity-generating treadmill. Feed back small portion of generated electricity into hamster brain pleasure center. Watch him generate his little heart out! 14. Seal large quantity of hamsters in air tight holding tanks. Add water. Allow suitable time to pass for decomposition. Collect methane gas resulting. Put gas in fuel cells. 15. Smush mucho hamsters in a trough, use the drippings/blood to run a waterwheel for hydroelectric power.

16. Give hamsters lots of shitty beer. Use piss and vomit to run hydroelectric generator.

17. Skin hamster. Melt animal fat into tallow and then form candles. Heat steam turbine.

18. Switch hamsters for P6 chips coming of Intel assembly lines. Saved electricity will be enormous. Cover performance loss by releasing new version of Windows NT at the same time. -gwh

19. Build glass room. Put hamsters inside. Put cocaine inside. Ground the floor and attach negative leads to the ceiling. -gwh

20. Have hamster steal one of Kube's magic cards. Leech power from resulting nuclear strike.

21. Teach hamsters to play blackjack. Once they're at the competitive level, convince Las Vegas hotel owners to convert to serving hamsters. Saved electricity from smaller lights, hotels, etc. -gwh

22. Accumulate enough hamsters that the self-gravitational force causes the

mass to shrink and heat up. Use thermocouples to generate energy. -gwh

23. Raid PG&E corporate headquarters. Threaten to drop hamster down CEO's pants unless he gives you a power plant. -gwh

24. Get several dozen hamsters. Shoot them up with crystal meth. Attach dog sled.

25. (This is, undoubtedly, the way to get the most power from them) Combine the hamster with an equal mass of antimatter -- a anti-hamster if you will. Then harness the massive energy release for power....

26. Have the Emperor warp and twist a hamster clone into an evil Anti-Hamster, Darth Hamster. This should be good for 4-6 sequels. Install tension to electricity converters into theatre. -gwh

27. a. Find a _good_ genetic engineer. b. Splice appropriate genes from electric eels into hamsters, because they're smaller and cuter and, well, hamsters. c. Feed the hamsters. d. Surgically install appropriate electrodes. e. Periodically drain off the voltage. Unfortunately, this only gets you DC current. P.S. How could I have been so blind? Splice in genes from blue-green algae as well, and you wouldn't even have to feed the

hamsters! (Well, maybe some phosphorous and iron and stuff)

28. Mail the electric company a dead hamster every day until they give you power for free.

29. Crossbreed hamster with a Mothra (a giant rodant in India) and use resulting giant mutant lightning-breathing hamster as power source.

30. Give the hamster to Scotty, he'll find some way to yeild 20% more power from the dilithium crystals.

31. Take thousands of hamsters into orbit -- when the orbit decays, they will heat up the atmosphere. With enough hamsters, you could raise the planets temperature as much as you want.

32. Pull the hamster out of root@soda's ass. Then when they turn red & embarrassed, use the heat from their red face to drive a Carnot engine.

33. Emmass enormous quantities of hamsters until it reaches enough mass to begin hamster fusion in the core. Use solar cells to convert radiation to electricity. - seano

34. Throw in more hamsters to 33 (above) until the hamster star goes supernova... you couldn't want any more energy than that...

35. Repeat 34 with another mass of hamsters... spin the resulting neutron-hamsters around each other in a binary orbit... use gravity waves to rotate hydro-turbine.

36. Take five or six hits of acid. Tell yourself very firmly that hamsters _are_ electricity. (Well, they've got lots of electrons in them, yes?) Acquire hamsters however you choose; "operationally", you've now got electricity. (I say "five or six hits", because I find that things which were perfectly clear to me after _one_ hit, e.g., that the word "Krups" is

actually a make onomatopoeic piece of German slang for an unprintable Viennese practice, make absolutely no sense afterwards; and Leary used to take five hits or so. QED.)

37. Give them little magnetic collars, and run them through a maze of coiled wires.

38. Reduce hamster to their component atoms. Compress the resulting plasma until it fuses. Transfer the released energy via heat/engine or energy conversion scheme of your choice. -ERic

39. Take two hamsters, run one through a klein bottle to convert it to anti-matter. Combine the first hamster with the anti-hamster. Harness the resultant massive burst of energy as per #38 above. -ERic

40. Drop hamster into black hole. Use photovoltaics to release the radiated energy. -Eric

41. It is a well-known result of quantum field theory that all fields are symmetric under the combined action of time-reversal, charge-conjugation and parity-inversion operators: the familiar TCP symmetry. It is trivial to show that time reversal and charge conjugation both take fermions into their anti-particles. Use this to show that plucking hamsters from mirrors will produce beaucoup electromagnetic radiation. (Hint: Do you need to pull the hamsters out of the mirror _going_backwards_in_time_?) Ref: J. J. Sakurai, _Adv. Quan. Mech._ 42. Put female hamster scent on glass rod. Release male hamster. He will try to rub his furry coat against glass rod. Drawback: only creates static electricity.

P__

A friend of mine has a theory about things electronic: they operate on smoke. It is very important for each component to have the correct amount of smoke, which is sealed inside at the factory. If this smoke ever gets out, the part is no longer functional. This is true: how many times have you ever seen an electrical or electronic device work right after smoke has

been emitted?

Ρ_

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From: pclarke@waite.adelaide.edu.au (Philip Clarke)
Cause and effect.
There are only three laws of nature, and one exception.
1) F=ma; 2) E=m(c squared); 3) You can't push a rope
From these three laws all others can be derived.
P______
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NEWTON'S FOURTH LAW: Physicists get together regularly in unknown European towns to make a group picture and disperse afterwards. -- from a Sydney Harris Cartoon with picture of VII Plovdiv conferencene. P_____

From: sellis@superscape.com (Sean Ellis) 25 Dec - Put an apple on your tree to celebrate Newton's Birthday!

P__

Three Laws of Thermodynamics (paraphrased): First Law: You can't get anything without working for it. Second Law: The most you can accomplish by work is to break even. Third Law: You can't break even.

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From: John Vinson <74222.2372@CompuServe.COM>
Ginsberg's Theorem (The modern statement of the three laws of
thermodynamics)
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1. You can't win. 2. You can't even break even. 3. You can't get out of the game. THE LAW OF ENTROPY: 4. The perversity of the universe tends towards a maximum. "Freeman's Commentary on Ginsberg's Theorem: "Every majoy philosophy that attempts to make life seem meaningful is based on the negation of one part of Ginsberg's Theorem. To wit: "1. Capitalism is based on the assumption that you can win. "2. Socialism is based on the assumption that you can break even. "3. Mysticism is based on the assumption that you can quit the game." From R.J.ABBOTT@dundee.ac.uk Since using the paraphrased laws of thermodynamics in my .sig the following additions have been sent to me From: potweed@calvados.apana.org.au (Bernard Booth) You can't bet unless you play. First Law: Second Law: The most you can hope for is to break even. Third Law: You can't break even. Fourth Law: Once you're born, you can't even get out of the game! From: N.P.Whittington (N.P.Whittington@spps.hull.ac.uk) Parodies of the laws of thermodynamics, in a science text book. 1. You can't win, you can only break even. 2. You can only break even at absolute zero. 3. You can never reach absolute zero. Ρ_ From: norman69@FeHmkRGbRIWg.com THE LAWS OF THERMODYNAMICS for Sanitation Engineers 0th: There is shit. 1st: You can't get rid of it. 2nd: It gets deeper. 3rd: A nice, empty trashcan is wishful thinking. KEEP SHOVELING!! ++ =2.19 IN THE LAB Ρ___

From: "Thomas P. Koch" <tom_koch@email.msn.com> I was in a Summer Organic Laboratory class. The instructor had just finished warnings about phosgene and hydrogen cyanide gasses and why they were so dangerous. It seems that the threshold at which you were able to smell the gas was above the toxic threshold. He had said that phosgene smelled like freshly mowed hay and cyanide smelled like almonds (how he knew this I never found out, unless that last gasp of a dying chemist was what the gas smelled like).

Anyway, back to the story. We had an old bottle of phosgene gas in the fume hood, it had been there several semesters. One summer afternoon, I was completing a typical recrystallization when all of a sudden I smelled

"freshly mown hay". All of a sudden I thought I was a goner, remembering the cannister of phosgene and the characteristic smell description. Fortunately, during my panic I heard the sound of the lawn mower outside the window of the chemistry building. P______

From: tlanda@nwu.edu (Anthony S. Landa) The following is an excerpt from my physics lab book. Needless to say, it was a long day in the lab.

Errors in our Calculations:

...Clearly, friction played a large role in our >75%<< error in our calculations, but the force of friction alone cannot affect much more than 5% of the experimental results. After pondering other things that might have also affected the experiment, I came up with a couple things:

1) Measurement of pi. We only used pi to 2 decimal places (3.14157 would have given more accurate results)

2) The moon's gravitational effect. We didn't take into effect the gravitational effect of the moon orbiting the earth. If it can cause tides, it can affect our experiment.

3) The book is wrong. Who knows? Newton lived a long time ago, before the Internet, and before highly sensitive electrical equipment. Perhaps all the equations we used are outdated and inaccurate. I will write a letter to the publisher immediately when I can confirm this.

4) Gravitational pull caused by us. My lab partner and I both exert a very tiny, but significant, gravitational attraction. This could have effected the pendulum in many ways, especially since we were moving around a lot.

5) Inaccurate measurement of weight. We never actually weighed the pendulum. We just used the value in the book.

6) Accumulation of dust. During the course of the experiment, I noticed dust accumulating on the bob of the pendulum. Oh, wait, frequency of a pendulum has nothing to do with mass. Forget 5 and 6.

Well, seriously, these other potential pitfalls are still very insignificant, so that leaves me with only one conclusion:

My lab partner screwed up.

I take no responsibility for these errors, because I put faith in my lab partner that he would solve the equations accurately. In the past, we have experienced problems with his inability to punch numbers into his calculator in the correct order. I also noticed him furtively peeking over on the other lab tables. Pardon my frankness, but this guy is not very bright, and I don't know how I got stuck with him. I probably should just double check his work, but I'm sure he would be insulted and create a scene. I've had problems with him in the past, and if the sole vindicator of our inaccurate lab data is, in fact, my lab partner, this would explain the last three labs, which, as you may recall, had errors similar in scope. Ρ From: Ian Ellis <ian@iglou.com> Seen on the door to a light-wave lab: "Do not look into laser with remaining good eye." P_ From: randy@aplcorejhuapl.edu (Randall C. Poe) Here's a joke on the physicists which could be an absolutely true story in my opinion: The experimentalist comes running excitedly into the theorist's office, waving a graph taken off his latest experiment. "Hmmm," says the theorist, "That's exactly where you'd expect to see that peak. Here's the reason (long logical explanation follows)." In the middle of it, the experimentalist says "Wait a minute", studies the chart for a second, and says, "Oops, this is upside down." He fixes it. "Hmmm," says the theorist, "you'd expect to see a dip in exactly that position. Here's the reason...". Ρ_ Numerical physicist might have the Monte Carlo method, other physicists use the Monte Christo method: Dig at a problem for years, and then solve it in a completely different way. ++ =2.20 STRANGE BUT REAL FINDINGS P___

From: mhayden@mantis.ece.usu.edu (Mitchell Hayden)
forwarded from: Scott E. Budge!

It's common practice in England to ring a telephone by signaling extra voltage across one side of the two wire circuit and ground (earth in England). When the subscriber answers the phone, it switches to the two wire circuit for the conversation. This method allows two parties on the same line to be signalled without disturbing each other.

Anyway, an elderly lady with several pets called to say that her telephone failed to ring when her friends called; and that on the few occasions when it did ring her dog always barked first. The telephone repairman proceeded to the scene, curious to see this psychic dog.

He climbed a nearby telephone pole, hooked in his test set, and dialed the subscriber's house. The phone didn't ring. He tried again. The dog barked

loudly, followed by a ringing telephone.

Climbing down from the pole, the telephone repairman found: 1. A dog was tied to the telephone system's ground post via an iron chain and collar. 2. The dog was receiving a 90 volt signalling current. 3. After several such jolts, the dog would start barking and urinating on the ground. 4. The wet ground now completed the circuit and the phone would ring. Which shows you that some problems can be fixed by just pissing on them. Ρ_ From: "Keith E. Sullivan" <KSullivan@worldnet.att.net> TWO FOUND, FOUR TO GO (Playboy, May 1997) The world's largest particle accelerator -- a 17-mile-long ring in Geneva, Switzerland in which subatomic particles whirl about at velocities approaching the speed of light -- was mysteriously inoperable for five days. Investigators combed the \$1 billion facility for clues and found two empty beer bottles in one of its vacuum chambers. Rob Mayoff <mayoff@tkg.com> Keith Bostic <bostic@bostic.com> Ρ From: urlichs@smurf.sub.org (Matthias Urlichs) GRAVE WINTERS? Good news for people who get lethargic when winter arrives: A German physics lab has reported that the onset of winter increases the Earth's gravity. Finally there's a scientifically confirmed excuse for not getting up when it's cold out there! The real reason, unfortunately, turned out to be that the basement of said lab was used to store a big heap of coal, for heating during the winter. Apparently these things are big enough to reliably affect gravitometers. ++ =3. CHEMISTRY C__ From: Paul Armitage <paul@darwin.ibg.uit.no> ... and here's a nice phrase my old chemistry teacher taught us: "All that glitters is not gold, but at least it contains free electrons" C__

From: winicur@beagle.colorado.edu (Zev Winicur) PROFESSOR EPPENDORF'S LABORATORY NOVELTIES AND PRACTICAL JOKES

by Zev Winicur

X-RAY SPECS

Forget the cheap, plastic x-ray specs from yesteryear. These battery powered spectacles contain a real x-ray! Hold your hand in front of your face to see your bones wiggling around. Count your friends' vertebrae and locate joint articulations. Great at lab parties!

\$11.99 each

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LEONARD THE TALKING LAB MOUSE

Turn Leonard on and he occasionally twitches in his cage. Pick him up by his tail and he says, ``Hey, put me down!'' Covered with real mouse fur, Leonard is the most realistic looking ersatz mouse on the market.

\$14.99 each

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REMOTE-CONTROLLED GEIGER COUNTER

Looks and acts like a real Geiger counter but you can make the needle ``jump'' at the press of a button. Hide the remote control in your pocket and make the needle move when people check themselves for radiation. They'll go into hysterics thinking they have received a lethal dose! Yuks galore!

\$259.99 each

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GLOW-IN-THE-DARK PIPETTE TIPS

You will be the talk of the lab with these handy glow-in-the-dark pipette tips. They fit standard 20, 200, and 1000 microliter pipetmen.

\$19.49 for bulk bag of 1000

SNAKE-IN-A-REAGENT-JAR

Three spring snakes fit into our realistic chemical reagent jar. People expecting to weigh out chemicals will be ``attacked'' by the snakes! A laugh riot!

\$4.99 for reagent jar and three snakes

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CENTRIFUGE NOISES

This mini tape recorder fits behind any standard ultracentrifuge. As the centrifuge accelerates, the mini recorder makes incredibly loud scraping sounds to simulate the rotor becoming unbalanced. Watch them run for cover as they think the rotor is about to go through the wall!

\$13.99 each

THE SPILLED EXPERIMENT GAG

Based on the old ``spilled beer gag'', an Erlenmeyer flask is tipped on its side with the ``contents'' spilling out. The ``liquid'' is really a transparent, solid plastic but only you will know that. Perfect for dealing with neatness nuts in the lab.

\$4.99 each

DRIBBLE BEAKER

Looks like a real beaker but when the researcher pours out any fluid, it dribbles down the side! More fun than a barrel of monkeys!

\$5.99 each C____

From: mini-AIR June 97 <marca@wilson.harvard.edu>
1997-06-11 Love and Organic Chemistry

Science and love are inseparable. That is the theme of the AIR Campaign for Textbook Improvement ("AIRCTI -- pronounced "AIR kitty"). AIRCTI aims to warm the cold, emotionless textbooks of today by adding to each a love interest.

Investigator Charles N. Horton has synthesized a love interest for the textbook "Organic Chemistry," 4th Edition, by John McMurry (Brooks/Cole Publishing Company, Boston, 1996). Horton mixed in the romance of a couple named Dan and Melissa. Here are relevant, abstracted snippets from the revised textbook:

CHAPTER 5: AN OVERVIEW OF ORGANIC REACTIONS Dan was shopping for some organic bean sprouts when he bumped into Melissa. "Oh! You like organic stuff too?" he asked. "Yes," she said, "and I know this great organic cafe..." .. CHAPTER 11: REACTIONS OF ALKYL HALIDES: NUCLEOPHILIC SUBSTITUTIONS AND ELIMINATIONS "Oh no," thought Dan. She already has a boyfriend. I must substitute myself for him! But how? And then a light came on in his mind. "I can eliminate him using an alkyl halide nucleophile!"

CHAPTER 30: THE ORGANIC CHEMISTRY OF METABOLIC PATHWAYS

THE CHEMIST'S RECIPIE FOR CHOCOLATE CHIP COOKIES

The following recipie for chocolate chip cookies recently appeared in Chemical & Engineering News (C&EN, Jun 19, 1995, p. 100). It was attributed to Jeannene Ackerman of Witco Corp.

Ingredients: 1. 532.35 cm3 gluten 2. 4.9 cm3 NaHCO3 3. 4.9 cm3 refined halite 4. 236.6 cm3 partially hydrogenated tallow triglyceride 5. 177.45 cm3 crystalline C12H22O11 6. 177.45 cm3 unrefined C12H22O11 7. 4.9 cm3 methyl ether of protocatechuic aldehyde 8. Two calcium carbonate-encapsulated avain albumen-coated protien 9. 473.2 cm3 theobroma cacao 10. 236.6 cm3 de-encapsulated legume meats (sieve size #10) To a 2-L jacketed round reactor vessel (reactor #1) with an overall heat-transfer coefficient of about 100 Btu/F-ft2-hr add one, two, and three with constant agitation. In a second 2-L reactor vessel with a radial flow impeller operating at 100 rpm add four, five, six, and seven until the mixture is homogeneous. To reactor #2 add eight followed by three equal portions of the homogeneous mixture in reactor #1. Additionally, add nine and ten slowly with constant agitation. Care must be taken at this point in the reaction to control

any temperature rise that may be the result of an exothermic reaction.

Using a screw extrude attached to a #4 nodulizer place the mixture piece-meal on a 316SS sheet (300 x 600 mm). Heat in a 460K oven for a period of time that is in agreement with Frank & Johnston's first order rate expression (see JACOS, 21, 55), or until golden brown.

Once the reaction is complete, place the sheet on a 25 deg. C heattransfer table allowing the product to come to equilibrium. C_

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Acid -- better living through chemistry.
All theoretical chemistry is really physics;
and all theoretical chemists know it. -- Richard P. Feynman
С
methionylglutaminylarginyltyrosylglutamylserylleucylphenylalanylalanylglu
tamin-
ylleucyllysylglutamylarginyllysylglutamylglycylalanylphenylalanylvalylpro
lvl-
phenylalanylvalylthreonylleucylglycylaspartylprolylglycylisoleucylglutamy
lqlu-
taminylserylleucyllysylisoleucylaspartylthreonylleucylisoleucylglutamylal
anvl-
glycylalanylaspartylalanylleucylglutamylleucylglycylisoleucylprolylphenyl
ala-
nylserylaspartylprolylleucylalanylaspartylglycylprolylthreonylisoleucylgl
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minylasparaginylalanylthreonylleucylarginylalanylphenylalanylalanylalanyl
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leucylalanylleucylisoleucylarginylglutaminyllysylhistidylprolylthreonylis
oleu-
cylprolylisoleucylglycylleucylmethionyltyrosylalanylasparaginylleuc
vlva-
lylphenylalanylasparaginyllysylglycylisoleucylaspartylglutamylphenylalany
ltyro-
sylalanylglutaminylcysteinylglutamyllysylvalylglycylvalylaspartylserylval
vlleu-
cylvalylalanylaspartylvalylprolylvalylglutaminylglutamylserylalanylprolyl
phe-
nylalanylarginylglutaminylalanylalanylleucylarginylhistidylasparaginylval
ylala-
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las-
party lasparty lasparty lleucy lleucy larginy lg lutaminy lisoleucy la lany lsery lty lleucy lsery lty lsery 
rosyl-
glycylarginylglycyltyrosylthreonyltyrosylleucylleucylserylarginylalanylgl
vcvl-
valylthreonylglycylalanylglutamylasparaginylarginylalanylalanylleucylprol
ylleu-
cylasparaginylhistidylleucylvalylalanyllysylleucyllysylglutamyltyrosylasp
aragi-
nylalanylalanylprolylprolylleucylglutaminylglycylphenylalanylglycylisoleu
cylse-
rylalanylprolylaspartylglutaminylvalyllysylalanylalanylisoleucylaspartyla
lanyl-
glycylalanylglycylalanylisoleucylserylglycylserylalanylisoleucylval
ylly-
sylisoleucylglutamylglutaminylhistidylasparaginylisoleucylglutam
vlpro-
lylglutamyllysylmethionylleucylalanyllalanylleucyllysylvalylphenylalanylva
lyl-
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glutaminylprolylmethionyllysylalanylalanylthreonylarginylserine, n.: The chemical name for tryptophan synthetase A protein, a 1,913-letter enzyme with 267 amino acids. -- Mrs. Bryne's Dictionary of Unusual, Obscure, and

Organic chemistry is the chemistry of carbon compounds. Biochemistry is the study of carbon compounds that crawl. -- Mike Adams C_____

Chemicals: Noxious substances from which modern foods are made.

С

From: ericd@jubal.mdli.com (Eric Desch)
Remember, if you're not part of the solution, you're part of the
precipitate!
C______

There is the joke about the homeopath who forgot to take his medicine and died of an overdose.

From: a94petbe@ida.his.se (Peter Bengtsson) Chemistry is really funny, there are even people who laugh at Nitrogen(I)Oxide. (You will have to know some chemistry to understand this :-) From: cgra@se.alcbel.be (Chris Gray) Or Nitrogen Triiodide??? C

From: "Lev A. Gorenstein" <lev@cv4.chem.purdue.edu> Anyway, I think this is a good idea. Here's my contribution. These are "crazy phrases" from some works on several Moscow city and regional high-school chemistry olympiads (I've been a member of the Organizing Committee for them for a number of years and I really miss this now). By the way, if anybody knows about similar things here in the US (and Indiana in particular) - I will be gratefull.

Unfortunately, all of these citations are in Russian (obviously ;-) and, what is much worse, most of them are unexpected (for their authors) puns, which are impossible (at least for me) to translate (some of these puns were just great, all the Orginizing Committee was rolling on the floor in tears ;-). I found only several phrases allowing translation (not best pearls, unfortunately...):

[For the question: "Why H2S is a poison for us?"] : "H2S reacts with the iron in hemoglobin, forming an insoluble FeS, thus causing the oxygen deficiency" (there were some variants like Fe2S, Fe2S3, Fe2S2... But - isn't it a good idea, especially taking into account that it was in the work of a 13 years old guy?)

[for the question: "Why lead compounds are poisons for us?"] :
a) "Lead ions make sugar in the blood poisoned"
b) "After Pb2+ gets in the stomach, since there is the Cl- in the stomach
juice, the reaction Pb2+ + 2Cl- ---> PbCl2 (s) occurs, and the unsoluble
PbCl2 precipitates into the stomach, thus distorting food digestion"

"Also the produced hydrogen is a gas with nasty smell"

[At the end of the work] : "Damn, done!"

"When AgNO3 reacts with NH4Cl, there forms the precipitate kind of white and Ag salt" (Everywhere I tried to translate it equivalently to it's Russian prototype, saving the grammar mistakes and style ;-)

[For the problem "Find mistakes in the following procedure of preparation of diluted H2SO4: "] :

- a) For preparation of diluted (strictly solution) sulfuric acid one must not use concentrated H2SO4.
- b) There is no such thing as "volumetric flask"
- c) The mixture of ice and table salt DOESN'T EXIST!

"Ice and NaCl mixture? Crap! The ice would momentarily melt because of NaCl!"

"To the sulfuric acid one must add water, but not water to sulfuric acid"

[The following was on the VERY weak work (it happened that the teacher said to pupils : "You won't get a good grade unless you go to the olympiads" and sometimes there was just a bunch of people who were not interested in chemistry and had came only "to be marked good" in teacher's eyes). They were starving there, because they were unable to solve any problem, they couldn't leave because of a teacher, and they had to entertain themselves. But how? Probably the oldest way to entertain oneself is to write something nasty to somebody else (also proved by recent anonymous posting about grad. schools *i*-). Ok, enough theory, I explained the joke, you may start laughing here *i*-) Okh, one more explanation: "pud" is an old Russian wieght unit, equals 16 kg:

"Don't have enough sake to find the mass % without calculator. That is why:

It's better eat a "pud" of shit, Than solve your chemistry, damn it!"

(this was rhymed! We thought about making this verse an unofficial slogan of our Committee ;-)

Will check in my books about any funny chem. experiments. Regards to all, would like to see other responces. C

From: naight@MCS.COM (Nathan Parker)
Remember that without t Chemistry, Nothing would exist!
C

From: Brian McClain <briguy@ecst.csuchico.edu>
How many physical chemists does it take to wash a beaker?
None. That's what organic chemists are for!
C______

From: kab4242@utxvms.cc.utexas.edu (Kevin Anthony Boudreaux) It is disconcerting to reflect on the number of students we have flunked in chemistry for not knowing what we later found to be untrue. --quoted in Robert L. Weber, Science With a Smile (1992) C_

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A male polar bear and a female brown bear are sitting at a bar.
Polar Bear: Sorry babe, I just don't think the
chemistry is right.
С
Physical Chemistry is research on everything for which the negative
logaritm is linear with 1/T -- D.L. Bunker
C_
From: arpepper@math.uwaterloo.ca (Adrian Pepper)
An Ironman Triathlon consists of a 2.4mile swim, a 112mile bicycle ride,
and a full marathon run (26 miles, 385 yards).
A Half-Ironman Triathlon consists of a 1.2mile swim, a 56mile bicycle
ride.
and a half marathon run (13 miles, 192 yards, one foot, six inches).
Since Iron has atomic number 26, and alumin[i]um atomic number 13,
would it be appropriate to describe Half-Ironman events as "Alumin[i]um
Man" events?
C_
From: mpark@kean.ucs.mun.ca (Murray)
        Ok, here's one of my own... I ususally don't say anything
quotable,
but a couple of my lab-mates thought this was pretty funny at the time...
Set up the quote: I am a synthetic inorganic chemistry student a Memorial
University of Newfoundland, St. John's, Newfoundland, Canada. Our
research
group attempts to make interesting magnetic materials...not facile.
After
a full week of null results at the bench, I had just found that my most
recent experiment had gone bust when a friend of mine walked in, finding
me scratching my head in bewilderment. With tinted bottles of solvents
and
chemicals all around me, I just turned to him and said,
        "All of these pretty little brown bottles surround me...and NOT A
SINGLE ONE OF THEM is filled with BEER."
C_
From: Martin Ystenes <ystenes@kjemi.unit.no>
This reminds me of a story of two students who wanted to celebrate the
long and light summer evening by fishing in their boat in the Norwegian
fjord. But first they went to the lab, grabbed a bottle with the
magic label 96%, and set off. After some time, the one said to
the other:
- I am afraid we have done something wrong. This is not ethanol,
it is sulphuric acid.
- I know. I have just peed a hole in he boat.
C_
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From: CJHEMMIN@SCIENCE.uwaterloo.ca (Christopher Hemming)
Q: How many physical chemists does it take to change a light bulb?

A: Only one, but he'll change it three times, plot a straight line through the data, and then extrapolate to zero concentration. С From: chngch@singnet.com.sg (Darren Chng) This is a true event..... IT'S OFFICIAL : CHEMISTRY LECTURES ARE A YAWN. (9. Oct 95) A scientist has come up with proof of something students have known for years -- chemistry lectures are boring. In an article published in the current issue of Chemistry in Britain, a university chemistry lecturer introduced a guest lecturer to a class of 50 doctoral candidates. Then, he and his colleagues studied variations in what he calls the HTFDR --"head-to-floor distance reduction." After about an hour , the average HTFDR dropped from 135cm to 121cm, said the author of the study, who preferred to remain anonymous. The HTFDR immediately bounced back to normal when the speaker uttered the magic words: "And in conclusion....." C_ From: Dave Arnold <arnold@pop1.science.widener.edu> What is Na2O7? Ans: Borax (Na2 before O7) C_ From: Ian Ellis <ian@iglou.com> ON A CHEMISTRY TEST at Midpark High School in Middleburg Heights, Ohio, one question concerned how to clean the floor after a chemical-powder spill. In detail, I described the liquid I would combine with the powder in order to dissolve it with chemical bonding and electron transfer. I was pleased with my grasp of molecular structure until the exams were handed back. Our teacher asked another student to read her answer. She suggested a broom and a dustpan to sweep up the spill -- and got full credit. --Contributed to "Tales Out of School" by Joe Astorino © 1996 The Reader's Digest Association, Inc. All rights reserved. C_ From: Ian Ellis <ian@iglou.com> DURING my freshman biology class at North High School in Springfield, Ohio, our teacher was lecturing on the conditions in which bacteria exist. Elaborating on the acidic environment where certain bacteria thrive, he suggested a simple experiment. "I want you to drop a nail into a glass of Coke or Pepsi, and then observe the acidic reaction on the nail," he said. The girl sitting next to me raised her hand and asked in all seriousness,

"Do you mean a real nail, or a press-on?"

--Contributed to "Tales Out of School" by Carolyn Stickney © 1996 The Reader's Digest Association, Inc. All rights reserved. C

From: "V. ROGERS" <TEXVR@leeds.ac.uk>

This was a story told to us by our chemistry master at school. A female student wished to make some potassium hydroxide solution (aqueous) and decided to throw a large lump of potassium into a bucket of water. Her professor observed what she was about to do, out of the corner of his eye and hurried towards her, and after confirming this was what she was intending to do, asked her first to stir the water in the bucket for five minutes before adding the potassium. She was puzzled and ran after him to ask the purpose of this action.

'It will give me time to get away' said the professor.

From: Donny Wibisono <dwibison@acad.bryant.edu>
"A super-saturated solution is one that holds more than it can hold."
BC______

From: Uncle Al <http://www.mazepath.com/uncleal/>

Isn't it time we required universal Federal licensing for use of Alka Seltzer, Fizzies, and Pop Rocks? Background verification, two week cooling off period, fingerprinting, mandatory fizz locks. No gas release in excess of one liter. No automatic unloading - no motorized or wind-up Pez dispensors!

CO2 kills! Suffocation! GREENHOUSE EFFECT! Save our children!

Minorities are put at risk! I want a National War on CO2! We already know how Belgium was decimated by Coke-a-Cola. Can we afford to risk American lives so the small cliques of fantatics and zealots can exercise their bubbling pornographic appetites? How many children must die before we act!

Burning the flag releases CO2, Hitler's crematoria released CO2, firebombing Dresden released CO2, nuking Hiroshima released CO2 - how much clearer must it be made?

And what about NO2? SO2? ClO2? Are we about to discriminate on the basis of Period Table group number? Renumbering the groups ws not enough. Renumbering the groups will NEVER be enough! I say, "NEVER!" Every elemental group must realize its full electrochemical potential and oxidation state, and all its lesser oxidation states as well - with equal representation!

Today it is baking soda and vinegar. Tomorrow it will be sodium hydroxide and concentrated sulfuric acid. By the end of the week butyllithium/TMEDA will be poured into Magic Acid by the pound! By the ton! WHERE WILL IT STOP!

Exotherms, global warming, penguins sweated to death... all because some MONSTER wanted a little fizz. Isn't that the way it always starts, with a "little" CO2 in a Bierstube in Munich? Computer models and their renormalized data are unequivocal: 44.0104!
Mommy, daddy, does your child breathe CO2? From:: François D'Hooge <fdhooge@club-internet.fr> Yes, good ideas. I'll add some few more: Stop breathing. Every human release carbon dioxide by breathing, so, if 5 billon people stop breathing, we may go back to the ice age . Cut trees [at night] Well, trees transform CO2 into O2 by day, but when night comes, their evil CO2 producing task, begins. so, let's cut all trees at night. cut all the rainforest in a few nights. From: Pieter.Kuiper@itn.hh.se (Pieter Kuiper) In article <378F6C91.3EFAEB39@hate.spam.net>, Uncle Al <uncleal0@hate.spam.net> wrote in a beautiful outburst: > We already know how Belgium was decimated by Coke-a-Cola. Well, the company blamed that on "the wrong kind" of CO2.... ++=3.1 CHEMISTRY POETRY С From: Uncle Al <UncleAl0@ix.netcom.com> THE CHEMIST'S SONG Sung to the tune of Monty Python's "I'm a Lumberjack and I'm Okay." CHEMIST CHORUS I'm in chemistry and I'm okay, He's in chemistry and he's okay, I sleep al night and I work all day. He sleeps all night and he works all day. I clean my flasks, I read my JACS, He cleans his flasks, he reads his JACS, I do reactions well. He does reactions well. Someday I'll be unlucky Some day we'll all be lucky And blow my self to Hell. And watch him blown to Hell. I'm in chemistry and I'm okay, He's in chemistry and he's okay, He prowls the library all day. I prowl the library all day. The articles that I could use The articles that he could use Are gone when they're in need. Are gone when they're in need. If he were a bookbinder, If I were a bookbinder, I'd have them all to read! He'd have to learn to read. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I sleep all night and I sleep all day. He sleeps all night and he

sleeps all dav. I like my work, I like my profs, He hates his work, he hates his profs, I go to seminars. He sleeps through seminars. When I do any research The Boss can take his research And shove it up his arse. I just wind up with tars. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I work all night and I work all day. He works all night and he works all day. I rotovap, distill it off, He rotovaps, distills it off, Do chromatography. Does chromatography. We think that by tomorrow I think that by tomorrow I'll have some THC. He'll have some LSD. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I work all night and I sleep all day. He works all night and he sleeps all day. I do my work, I teach a class, He does his work, he teaches class, I earn another buck. He earns another buck. There's one girl in his section There's one girl in my section I'd surely like to fail. He's never gonna fail. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I sleep all night and I work all day. He sleeps all night and he works all day. I used up all the ethanol, He used up all the ethanol, I don't know where it went. He don't know where it went. Now I can't work for six weeks, Now he can't work for six weeks, The stockroom's closed for Lent. He's drying out in Trent. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I'm in chemistry and I'm okay, I work all night and I sleep all day. He works all night and he sleeps all day. I make bad smells, I produce tar, He makes bad smells, produces tar, I spend the bosses grant. And spends the boss's grant. I tell him I'll make progress He tells him he'll make progress And work so hard I'll pant. Although he really can't. I'm in chemistry and I'm okay, He's in chemistry and he's okay, I sleep all night and I sleep all day. He sleeps all night and he sleeps al day. He works with nasty chemicals I work with nasty chemicals, They really make a stink. That really make a stink. I use the waste containers To clear a room is easy, And never use the sink. He pours them down a sink. I'm in chemistry and I'm okay, He's in chemistry and he's okay,

I phone all night and I phone all day. He phones all night and he phones all day. I buy up stocks, invest in bonds, He buys up stocks, invests in bonds, And sell commodities. And when the Market's slumping, I live in poverty! He does his chemistry! C______

From: nelson@cs.rochester.edu

For non cesiophiles, cesium is the most electropositive element known, and as such has merited its own newsgroup alt.cesium. It has a number of unique properties:

- o It explodes violently on contact with water.
- o It burns with a brilliant blue flame the name cesium derives from the sky-blue lines in its spectrum.
- It's hydroxide (what is left after it is finished exploding with water) is the most powerful base known, and will eat through glass.
- o It is used as the central component of cesium-beam clocks, the most accurate time pieces in existence.
- When consumed over a period of time, it produces a characteristic mania.

The following songs were posted to news:alt.cesium over a period of several weeks.

SONGS OF CESIUM Translations from the Cesish

Translator's note:

The ancient manuscripts from which these songs are derived are fragmentary, and consequently the accuracy of the following translations must be taken with a grain of Cesium Chloride. In places, the translator has filled in gaps to the best of his ability using available knowledge about the culture and traditions of ancient Cesia much of which, is itself controversial. Legitimate questions may certainly be raised, see for example, the comments on #117. To aid in perspective, the songs are presented in the order in which they were translated, rather than numerical order, as the translator learned much during the process of translation. The effort is an ongoing process, as the collection of available fragments is vast; and new translations may be added to this catalogue periodically. For now, Enjoy, Sing, and Hail Cesium!!! RN

_____ _____ Oh Cesium (Tune, Oh Christmas tree) Oh Cesium, oh Cesium, Thy spectrum doth us please-ium. Thy sky-blue lines in plasma's fire, Do dreams of icy lakes inspire. Oh Cesium, oh Cesium, Thy spectrum doth us please-ium. Oh Cesium, oh Cesium, When held, you never freeze-ium. Thy gently smoking silver spheres, When dropped in water, please the ears. Oh Cesium, oh Cesium, When held, you never freeze-ium. Oh Cesium, oh Cesium, You put us at our ease-ium. You tend the seconds of the day, So that our watches never stray Oh Cesium, oh Cesium, You put us at our ease-ium. ---Songs of Cesium #34 I Wish I had a Pound Oh I wish I had a pound of cesium. Oh I wish I had a pound of cesium. I would take it in the shower, And I'd glory in its power. Oh I wish I had a pound of cesium. ---Songs of Cesium #111 Cesium Cesium, 'tis of thee, Thy 'positivity, Of thee I sing. Thou whose hydroxide, dissolved my wife when she died, Glorious too, for suicide,

Here, death, is thy sting.

---Songs of Cesium #65 _____ Cesium the Beautiful Oh beautiful for blue of skies, Among thy spectral lines. When cast upon the waters clear, Thy splendid fire shines. Oh Cesium, Oh Cesium, Our days we trust to thee. Thy faultless rhyme, In keeping time, From care doth set us free. ---Songs of Cesium #68 _____ Cesium (Burning in the Dead of Night) (Tune, Blackbird) Cesium burning in the dead of night. Take your sky blue lines and start to shine. All my life, I was only waiting for the moment you were mine. Cesium burning on a lake of ice. Lift your glorious flame up to the skies. All your life, You were only waiting for some water to arise. Cesium burn. Cesium burn. Give your light to this coal black night. --- Songs of Cesium #133 _____ Why Don't We Mix Up the Two (Tune, "Why don't we get drunk..." with apologies to Jimmy Buffett) I've got a pound of Cesium, It's burning gently near. The sky-blue flame looks lovely, But it's noise I want to hear. So darlin' bring some water, A couple pints'll do.

And why don't we mix up the two?

Why don't we mix up the two? 'Cause Cesium and water, Really make a wicked brew. You say I've got a death wish, But honey, I'm just blue. So why don't we mix up the two? ---Songs of Cesium #29 _____ Yesterday Yesterday. I had Cesium with which to play Now all my fingers have been blown away. By cesium, since yesterday. Yesterday. Her sky blue flame appeared to light my way. Now the world seems so cold and gray. My eyes are dim since yesterday. Why she had to blow, I don't know, They wouldn't say. I used water wrong, And my skin dissolved away. Yesterday. Her path seemed such an easy way. Now I know that there's a price to pay. Oh, I believed just yesterday. ---Songs of Cesium #117 Soon after the publication of the above translation A mysterious monkey paid a call and pointedly insisted that the translation of SOC #117 (Yesterday) from the Cesish was seriously flawed, particularly in the second stanza, and offered a corrected version, which I supply without further comment. RN Yesterday Yesterday, I had Cesium with which to play. Now all my fingers have been blown away. And silence reigns since yesterday. Suddenly, I'm just half the man I used to be. I have no eyes with which to see. My legs have parted company.

Why she had to blow, I don't know, I can only say. Something went awful wrong, In the waterbed where we lay. Yesterday, Her sky blue path seemed such an easy way. Now I know there is a price to pay. Oh, I believed just yesterday. ---Songs of Cesium #117(b) _____ 'Lectropositive Mama (tune, Lady Madonna) 'Letropositive mama, Cesium on your meat, Wonder how you manage, To stay on your feet. How d'ya stand the smokin'? How d'ya 'bide the flame? Do you think that life's just A burnin' game. Monday night your hunger's a blue fire, Tuesday morn' you're cookin' 'fore the sun. Wednesday rain, you're only flamin' higher, Having your fun. 'Lectropositive mama, Cinders in your curls, No way can compare you, To ordinary girls. Likin' the explosions, Rock you on your seat. How can any woman handle All that heat? ---Songs of Cesium #47 _____ It's So Easy (Tune, It's so Easy) It's with Cesium I'm in love! It's with Cesium I'm in love! People say that I'm a fool,

When I take my Cesium into the pool. And it's so easy, So doggone easy, Yes it's so easy, Where my love's concerned, To get myself burned. But it's with Cesium I'm in love, It's with Cesium I'm in love! I look into her flame and see, A sky-blue light floodin' over me. Though it's so easy, So doggone easy, Yeah it's so easy, When she's concerned, To get myself burned. Still it's with Cesium I'm in love, It's with Cesium I'm in love! ---Songs of Cesium #87 Cesium (All through the Night) (Tune, Fever) (1)Never know how much I need you, Never know how much I'd dare, When I mix you up with water, I get a heat that's hard to bear. I need my Cesium! Burnin' brightly, Cesium to give me light. Cesium --In the morning, Cesium all through the night. (2) Sun lights up the daytime. Moon lights up the night. Cesium lights up heaven above, With a brilliant sky-blue light. I need my Cesium! Burnin' hotly. Cesium shinin' so bright. Cesium --In the morning, Cesium to make me feel right. (Coda) Everybody, Needs some Cesium, Cesium to give 'em that glow.

Cesium --Add some water, Get a fire hot as down below! (3) Romeo, he had Cesium, Cool water Juliette. When they mixed it up together, Things got as hot as they can get! They needed Cesium! Flamin' madly. Cesium burnin' so blue. Cesium --Shared between them. Cesium to make their love true. (4) Come to the end of my story. Got to the point that I made. Cesium's the stuff to heat you up, And you ain't gonna find no shade! You'll need cesium! As you sizzle. Cesium some comfort to earn. Cesium --It's almighty. What a lovely way to burn! --- Songs of Cesium #96 _____ Cesium Glows (Tune, Love's a Rose - Neil Young) Cesium glows, but you better not lick it, It's fire grows when it's on the tongue. Lips full of holes, you'll know you've kissed it, Just take a bite if you want to die young. I want to see what's never been seen, I want to dream that Cesium dream. Come on love, we can glow together, Let's eat it all right now. Take a bite right now. I want to lie in a hole in the ground, Six feet deep, and twelve feet 'round. Sky blue light around me shinin', Pale blue worms upon me dinin'. Cesium glows, but you better not lick it, It's fire grows when its on your tongue.

Mouth full of holes if ever you kiss it,

Gimme a spoon 'cause I wanna die Young. ---Songs of Cesium #109 _____ Cesium's Burning (a round, tune Scotland's Burning) Cesium's burning, Cesium's burning. Look out! Look out! Fire! Fire! Fire! Fire! Pour on water, pour on water. Oh shit! Oh shit! (repeat) ---Songs of Cesium #81 ______ Seventy Six Neutrons (Tune, Seventy Six Trombones) Seventy six lithe neutrons swayed on Cesium's bar, Half a hundred and ten bold protons... Hold it! Hold it!. That's Cesium 131. Half life only about 9.69 days. Let's go for immortality here. Worth a shot anyway... Seventy Eight Neutrons (Tune, Seventy Six Trombones) Seventy eight lithe neutrons swayed on Cesium's bar, Half a hundred and ten bold protons joined the press. And the eletronettes were a-whirling in duets, All but one, the singular miss Six S. Seventy eight nubile neutrons writhed in close array, Half a hundred and ten lusty protons swelled the crowd. And the electron pairs played blue photonic airs, From within a shining quantum cloud. There were pions, muons, quarks and other fermions, Tunneling, tunneling, in a state of partial dress. 'Till an oily bit of water came a wandering, And miss Six S got in a great big mess. Seventy eight screaming neutrons ran and jammed the door, Half a hundered and ten brave protons hit the ground. There was a sky-blue flash, then nothing left but ash, And the echo of a glorious thundering sound.

--- Songs of Cesium #76

Cesium's Strange (Tune, People are strange - The Doors) Cesium's strange, when you're a stranger Consummate danger, ready to blow. Water is wicked, wet and unwanted, Folks are unfriendly, when you glow. Don't take it out in the rain. You're insane! You're insane! Don't you remember the pain? You're insane! You're insane! You're insane ---Cesium's strange, pregnant with danger, Hand the next stranger a kilo or two. Pour on the water, lamb at the slaughter, Bathe in the light that is blue, sky-blue! Don't take it out in the rain. You're insane! You're insane! You'll always remember the pain. You're insane! You're insane! You're insane ------ Songs of Cesium #13 C__ From: rchin@resident.kenso.unsw.edu.au To the tune of Losing My Religion by REM That's me in the acid That's me in the test tube Losing my electrons Trying to keep my ions true But I don't know if I can do it Oh no this work's too tough I didn't study enough I thought that I saw it bubbling I thought that i saw it burn

I think I thought I heard it pop

(By Allison Healy and Melissa Shong) С Elements from Frey Scientific catalog You Pb me to believe he's dead; I Zn he won't survive. Ba in the ground, you fool, Do you Zn he's still alive? C_ From: Colin Murtagh <C_Murtagh@compuserve.com> Johnny saw some dynamite Couldn't understand it quite But curiosity never pays It rained Johnny for seven days. CB_ From: adamb@bgumail.bgu.ac.il (Adam Bernard) A mosquito cried out in pain: "A chemist has poisoned my brain!" The cause of his sorrow was para-dichlorodiphenyltrichloroethane [paraDichloroDiphenylTrichloroethane is the the full name for DDT] С David Smillie: Little Willie was a chemist. Little Willie is no more. For what he thought was H2O, Was H2SO4. C__ From: Mail@scri.sari.ac.uk Poor old Brown is dead and gone His face you'll see no more For what he thought was H2O was H2SO4. C_ From: Mario Zlatovic <mario@eunet.yu> Little Lucy in the lab Lies dead on the floor 'Cause what she taught was H2O Was realy H2SO4. С From: Richard Laysell <richard@laysell.demon.co.uk> Johnny, finding life a bore, Drank some H2SO4. Johnny's father, an MD Gave him CaCO3. Now he's neutralised it's true, But he's full of CO2.

C_

From: hjiwa@nor.chevron.com Canonical List Of Holiday Humor From: grandish@kits.sfu.ca (Gavin Lee Grandish) Chemistry Christmas Carols 1. The Chemistry Teacher's Coming To Town 2. I'm Dreaming Of A White Precipitate 3. Silent Labs 4. Deck The Labs 5. The Twelve Days Of Chemistry (2x) 6. Test Tubes Bubbling 7. O Little Melting Particle 8. We Wish You A Happy Halogen 9. Chemistry Wonderland 10. I Saw Teacher Kissing Santa Chlorine 11. O Come All Ye Gases 12. We Three Students Of Chemistry Are 13. Iron The Red Atom Molecule 14. Lab Reports 15. Silver nitrate 1. The Chemistry Teacher's Coming to Town You better not weigh You better not heat You better not react I'm telling you now The Chemistry Teacher's coming to town. He's collecting data He's checking it twice He's gonna find out The heat of melting ice The Chemistry Teacher's coming to town. He sees you when you're decanting He knows when you titrate He knows when you are safe or not So wear goggles for goodness sake. Oh, you better not filter And drink your filtrate You better not be careless and spill your precipitate. The Chemistry Teacher's coming to town. 2. I'm Dreaming of a White Precipitate I'm dreaming of a white precipitate just like the ones I used to make Where the colors are vivid and the chemist is livid to see impurities in the snow. I'm dreaming of a white precipitate with every chemistry test I write May your equations be balanced and right

and may all your reactions be bright.

3. Silent Labs

Silent labs, difficult labs All with math, all with graphs Observations of colors and smells Calculations and graph curves like bells Memories of tests that have past Oh, how long will chemistry last?

Silent labs, difficult labs All with math, all with graphs Lots of equations that need balancing Gas pressure problems that make my head ring Santa Chlorine's on his way Oh, Please Santa bring me an 'A'.

4. Deck the Labs

Deck the labs with rubber tubing Fa la la la la, la la la la. Use your funnel and your filter Fa la la la la, la la la la. Don we now our goggles and aprons Fa la la la la, la la la la. Before we go to our lab stations Fa la la la la, la la la la.

Fill the beakers with solutions
Fa la la la la, la la la la.
Mix solutions for reactions
Fa la la la la, la la la la.
Watch we now for observations
Fa la la la la, la la la la.
So we can collect our data
Fa la la la la, la la la la.

5. The Twelve Days of Chemistry

On the first day of chemistry My teacher gave to me A candle from Chem Study.

(second day) two asbestos pads (third day) three little beakers (fourth day) four work sheets (fifth day) five golden moles six flaming test tubes (sixth day) (seventh day) seven unknown samples (eighth day) eight homework problems (ninth day) nine grams of salt (tenth day) a ten page test (eleventh day) eleven molecules (twelfth day) a twelve point quiz

From: shaffer@morpheus.cis.yale.edu (Wendy Shaffer) Just thought I'd post this little carol, which I wrote to celebrate succesfully completing a recent Quantum Chemistry exam. Enjoy... 5b: On the first day of Christmas, my professor gave to me: An exam in Quantum Chemistry. On the second day of Christmas, my professor gave to me: a double integral and an exam in Quantum Chemistry. On the third day of Christmas, my professor gave to me: three orbitals, a double integral, and an exam in Quantum Chemistry. On the fourth day of Christmas, my professor gave to me: four harmonic oscillators, three orbitals, etc. On the fifth day of Christmas, my professor gave to me: Five Hermitian Operators! Four harmonic ocillators, three orbitals, etc. On the sixth day of Christmas, my professor gave to me: six spin-orbit couplings, etc. On the seventh day of Christmas, my professor gave to me: seven basis functions, etc. On the eighth day of Christmas, my professor gave to me: eight time dependent perturbations, etc. On the ninth day of Christmas, my professor gave to me: nine Slater determinants, etc. On the tenth day of Christmas, my professor gave to me: ten electrons tunneling, etc. On the eleventh day of Christmas, my professor gave to me: eleven photons emitting, etc. On the twelfth day of Christmas, my professor gave to me: 12 fermions exchanging, etc. 6. Test Tubes Bubbling (to the tune of "Chestnuts Roasting On An Open Fire") Test tubes bubbling in a water bath Strong smells nipping at ypur nose. Tiny molecules with their atoms all aglow Will find it hard to be inert tonight. They know that Chlorine's on its way He's loaded lots of little electrons on his sleigh And every student's slide rule is on the sly To see if the teacher really can multiply. And so I offer you this simple phrase To chemistry students in this room Although it's been said many times, many ways Merry molecules to you. 7. O Little Melting Particle (to the tune of "O Little Town Of Bethlehem") Para Dichloro Benzene how do you melt so well?

The plateau of your cooling curve is really something swell. We think the heat of fusion of water is so nice Give up fourteen hundred cals per mole and what you get is ice. 8. We Wish You a Happy Halogen To react with a metal. Good acid we bring to you and your base. We wish you a merry molecule and a happy halogen. 9. Chemistry Wonderland Gases explode, are you listenin' In your rest tube, silver glistens A beautiful sight, we're happy tonight Walking in a chemistry wonderland. Gone away, is the buoyancy Here to stay, is the density A beautiful sight, we're happy tonight Walking in a chemistry wonderland. In the beaker we will make lead carbonate and decide if what's left is nitrate My partner asks "Do we measure it in moles or grams?" and I'll say, "Does it matter in the end?" Later on, as we calculate the amount, of our nitrate We'll face unafraid, the precipitates that we made walking in a chemistry wonderland. 10. I Saw Teacher Kissing Santa Chlorine I saw teacher kissing Santa Chlorine under the chemistree last night They didn't sneak me down the periodic chart to take a peek At all the atoms reacting in their beakers; it was neat. And I saw teacher kissing Santa Chlorine under the chemistree so bright Oh what a reaction there would have been if the principal had walked in With teacher kissing Santa Chlorine last night.

11. O Come All Ye Gases O Come all yea gases diatomic wonders O come yea, o come yea calls Avogadro. O come yea in moles 6×10 to the 23rd O molar mass and molecules O volume, pressure and temperature O molar volume of gases at S.T.P. 12. We Three Students Of Chemistry Are We three students of chemistry are taking tests that we think are hard Stoichiometry, volumes and densities worrying all the time. O room of wonder room of fright Room of thermites blinding light: With your energies please don't burn us Help us get our labs all right. 13. Iron the Red Atom Molecule (to the tune of "Rudolph The Red-Nosed Reindeer") There was Cobalt and Argon and Carbon and Fluorine Silver and Boron and Neon and Bromine But do you recall the most famous element of all? Iron the red atom molecule had a very shiny orbital And if you ever saw him You'd enjoy his magnetic glow All of the other molecules used to laugh and call him Ferrum They never let poor Iron join in any reaction games. Then one inert Chemistry eve Santa came to say Iron with your orbital so bright won't you catalyze the reaction tonight? Then how the atoms reacted and combined in twos and threes Iron the red atom molecule you'll go down in Chemistry!

14. Lab Reports (to the tune of "Jingle Bells") Dashing through the lab with a tan page lab report Taking all those tests and laughing at them all Bells for fire drills ring making spirits bright What fun it is to laugh and sing a chemistry song tonight. Oh, lab report, lab reports, reacting all the way Oh what fun it is to study for a chemistry test today, Hey! Chemistry test, chemistry test isn't it a blast Oh what fun it is to take a chemistry test and pass. 15. Silver Nitrate (to the tune of "Silver Bells") Silver nitrate, silver nitrate it's chemistry time in the lab Ding-a-ling, with a copper ring soon it will be chemistry day. Take your nitrate, in solution Add your copper with style In the beaker there's a feeling of reactions silver forming, blue solution Bringing ooh's ah's and wows now the data processing begins. Get the mass, change to moles what is the ratio with copper? Write an equation, balance it we're glad it's Chemistry Day. C_ From: monroem@UWYO.EDU (Matt Monroe) CHEMISTRY CHRISTMAS 'Twas the night before Christmas, The lab was quite still; Not a Bunsen was burning (Nor had they the will). The test tubes were placed

In their racks with great care, In hopes Father Chemistry

Soon would be there.

The students were sleeping So sound in their dorms, All dreaming of fluids And Crystalline forms. Lab-Aids in their aprons And I in my smock. When outside the lab There arose such a roar I leaped from my stool And fell flat on the floor. Out ot the fire escape All of us flew. What was the commotion? Not one of knew. The flood-lights shone out O're the campus so bright It looked like old Stockholm On Nobel Prize Night. My fume-blinded eyes Then viewed (dare I say?) Eight anions pulling A water-trough sleigh. And holding the bonds Tied to each one of them Was a figure I knew As our own Papa Chem. With speeds in excess Of most X-rays they came. As they Dopplered along He called each one by name. "Now Nitrite, now Phosphate, Now Borate, now Chloride On Citrate, on Bromate, On Sulfite and Oxide. Forget what you know Of that randomness stuff, Let's go straight to that roof, If you've quanta enough." As fluids Bernoullian Behave in a pinch, Those ions said "Alchemist This is a cinch." So up to the lab-roof Those "chargers" they sped With Pop Chemistry safe In his water-trough sled. Just a microsec later Electroscopes showed Charged particles coming

To our lab abode

We raced back inside, And what d'ya think? Down the fume-hood Pop Chem fell, Right into the sink. He was dressed in a lab-coat, Quite ragged and old, With removable buttons (The style, we're told) A tray-full of beakers He clutched to his heart--And under his arm Was an orbital chart. His eyes through his goggles I just couldn't see His hands were all yellow From H-N-O-3. His head was quite bald With a fringe all around Like a ring test for iron, That same shade of brown. He puffed a cigar With a smell not at all Unlike the organic lab Right down the hall. The smoke billowed forth From his angular face And with Brownian Movement Enveloped the place. He was thin as a match And not terribly tall He wasn't the type I'd expected at all But a look at his clothes, In the lab's harsh white light, With their acid-burn holes --He's a chemist all right! He didn't say much (He had no time to kill) And filled all the test tubes With nary a spill. Then placing them bak On the benches with care He dashed to the fume-hood And rose through the air. He called to his team And his ions took off And kinetics took care Of Pop Chem and his trough, But I heard him cry out As he flew down the street

"Merry Holidays to all!

May your stockrooms stay neat!" С From: awillis@ix.netcom.com (al willis) Orig. Al Willis The professor talked much about Rhodium, And then he expounded on Sodium. His arms he did flail, Until he turned pale, And then he fell off of the podium. C_ From: Werner Haelg <Haelg@inorg.chem.ethz.ch> Chemist's fast prayer: Dear Lord, if I mix sodium with concentrated HNO3, and add to it Plutonium, would you take care on me? C_ From: pp002759@interramp.com (Richard Rateick, Jr.) I had a brand new beaker once its gone beyond recall for all the glass and pieces are embeded in the wall. -- Frey (sp?) Scientific Catalogue, ca. 1978. C_ From: Rose_Adrienne@msn.com (Rose Shlachtman) A mosquito was heard to complain That a chemist had poisoned his brain The cause of his sorrow Was paradichloro Diphenyltrichloroethane. C_ mini-air: Dr. Robert Stein sent us an essay about his adventures with pharmaceutical sales representatives. After lamenting that the drug companies no longer offer him free vacations to Hawaii, he concluded with this heart-rending flourish: The rep from the drug company Offers gifts that are no use to me. Of that junk do me spare! Give me one year of AIR! Till you do, go away! Let me be! С From: Dave Arnold <arnold@pop1.science.widener.edu> "Little Willie from the mirror Licked the mercury off. Thinking in his childish error It would cure his whooping cough. At the funeral, Willie's mother Smartly said to Mrs. Brown

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"Twas a chilly day for Willie
  When the mercury went down."
                                   Anon
С
From: "Hugh Janus" <HUGH_JANUS@born.in.the.USA.NET>
A teacher in chemistry class
Gave a talk on combustible gas
He scoffed down some beans
And pulled down his jeans
Then held up a match to his ass.
++
=3.2 CHEMISTRY QUOTES
C_
"Every attempt to employ mathematical methods in the study of chemical
questions must be considered profoundly irrational and contrary to the
spirit of chemistry.... if mathematical analysis should ever hold a
prominent place in chemistry -- an aberration which is happily almost
impossible -- it would occasion a rapid and widespread degeneration of
that
science."
 -- Auguste Comte, Cours de philosophie positive, 1830
С
From: "Brenda L. Carroll" <blcarrol@ehc.edu>
BUCKY BALL QUOTATIONS:
"If it ain't tubes, we don't do it."
               -Richard Smalley, ACS Fullerene Satelite-Link Talk
"We'd like to make it [bucky fiber] in a continuous fiber, roll it on a
drum, and go fishing with it."
               -Richard Smalley, more of the same ...
C__
From: "Brenda L. Carroll" <blcarrol@ehc.edu>
"Chemistry is all about getting lucky..."
               -Robert Curl
C_
From: kab4242@utxvms.cc.utexas.edu (Kevin Anthony Boudreaux)
It is disconcerting to reflect on the number of students we have flunked
in chemistry for not knowing what we later found to be untrue.
--quoted in Robert L. Weber, Science With a Smile (1992)
C_
From: scutchen@phoenix.phoenix.net (Steve Cutchen)
Stephen Wright:
(Referring to a glass of water:) I mixed this myself. Two parts H, one
part 0. I don't trust anybody!
They say we're 98% water. We're that close to drowning...(picks up his
glass of water from the stool)...I like to live on the edge...
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I bought some powdered water, but I don't know what to add to it. С "Christopher Brown" <cbrown@chem1.chem.dal.ca> From: Chemists are, on the whole, like physicists, only 'less so'. They don't make quite the same wonderful mistakes, and much what they do is an art, related to cooking, instead of a true science. They have their moments, and their sources of legitimate pride. They don't split atoms, as the physicists do. They join them together, and a very praiseworthy activity that is. Anthony Standen, Science is a sacred cow (1958). ++ =3.3 CHEMICAL PUNS C__ Have you heard the one about a chemist who was reading a book about helium and just couldn't put it down? From: Mariano Cecowski <MCecowski@sif.com.ar> Q: if both a bear in Yosemite and one in Alaska fall into the water which one disolves faster? A: The one in Alaska because it is Polar. С Quiplash (quiplash@aol.comnojunk) Author: Oxidants happen. С From: "Billy Dunne" <billy@dunne16.freeserve.co.uk> Hydrogen atom: Darn these oxidising agents! C_ From: Philip Clarke <clar0318@flinders.edu.au> Only 1 individual answered the question right. The question was "If h20 if water, what is h204?" This was a quick question. The answer is: If h20 is water, what is h20 "4" (for)...drinking, bathing, etc. C_ From: "Thomas P. Koch" <tom_koch@email.msn.com> Q: What weapon can you make from the Chemicals Potassium, Nickel and Iron? A: KNiFe. C_

From: Raymond W Jensen <rwj+@andrew.cmu.edu> Two chemists meet for the first time at a symposium. One is American, one is British. The British chemists asks the American chemist, "So what do you do for research?" The American responds, "Oh, I work with arsoles." The Brit responds, "Yes, sometimes my colleagues get on my nerves also." $\ensuremath{\mathtt{C}}$

From: Ralf Linnemann <ralf.linnemann@gmd.de> (Blame translation from German on Joachim Verhagen. The original was longer, but puns are impossible to translate, especially because the English/Americans use different names from everybody else.)

The school homework becomes more foolish all the time.. I have to tell my son the origin of the names of the first ten elements and to my shame I must confess that I don't know.

With a lot of trouble, I found that Helium is called after the Nordian death godin Hel, because it was discovered in Norway and that Bohr is called after the Danisch atomic physicist Niels Bohr, as he was the one that discovered it in the twenties, and that bromide occurs in blackberries, wich in German are called Brombeere.

Who can help me further?

C_

From: Emil Kelich <emil.kelih@kfunigraz.ac.at> Plutonium is called after the famous Disney dog, Pluto.

From: gmacbeth@cawdor.frozen.ca (GMacbeth)
"Take plenty of the dark purple solution", Tom offered, managnimously.
"This old pipe is rusty", said Tom, ironically.
"Scale keeps forming inside the kettle", complained Tom,
recalcitrantly.
C_

From: user557686@aol.com (Jim Palm) The media did a plate count and reported that the Mr. Petrie dished up several batches of gram crackers, inoculation fruit loops and tube steaks (made from his pet lab). Petrie graduated Beakers University, but was barely able to slide by with a 2.0-2.0 (cc) grade point average. Students described him as a vial, no culture specimen with an infectious smile. ehorvath35@aol.com (Eileen Horvath) From: He was also a liar, his lab assistant was burned one day quite badly because of his lack of ability. He told the police that Bunson Burned her! rg@netbistro.com (Megan Waves) From: He overreacted because he was insolvent. The lab assistant dissolved their partnership. From: pml <lavietes@dhc.net> Then he got arrested for flasking.

C_

From: Ovidiu Cristea <ez064938@mailbox.ucdavis.edu>, rq@netbistro.com (Megan Waves), An Insouciantly Blithe Fellow <philonos@crl.com> "Welcome to Entropy Burgers -- may I take your order?" "I put in disorder a long time ago. The service here is getting worse all the time." "My experience Gibbs me reason to believe you." "I know the waitress who asked that, too. Her name's Ellen Omega. She really made me thermally dynamic. So, I asked her out. I tell you, when she don't like you, she really Boltz, man. Women like that are never distributed normally among the population.' "What kind of Poisson would say something like this?" C_ From: Rob Sanders<saunders@ednet.co.uk> Before Richard Wagner completed his Ring cycle he wrote the well-known opera on chemical themes "Tristan und Diels-Alder". Other composers to write chemical operas include Jacques Offenbach ("Tales of Woodward and Hoffman"), Richard Strauss ("Electron"), Giuseppe Verdi ("A Masked Buckyball") and Wolfgang Mozart ("Die Sauerfloete"). Many modern composers have undertaken similar projects, such as Nigel Osborne ("The Elecrophilic Substitution of the Soviet Union"), Leonard Bernstein ("Chloride"), John Adams ("Neon In China"), and Philip Glass ("Einsteinium On The Beach"). However, some critics believe Rossini's "The Silicon Ladder" to have been a more significant influence on Glass. Sir Michael Tippett was nitred in recognition of his chemical opera "The KNO3 Garden". C_ What element do women use to get dates ? Tellurium What did the chemist say to a chic babe when he passed by her in his sports car ? Radon baby ! C_ From: jpark@eis.calstate.edu (John Park), Amy E. Bradburn (a.bradburn@sympatico.ca), flatter@rose-hulman.edu (Neil Flatter), ,Ron Forsch, (rforsch@ix.netcom.com) Megan Waves (rg@netbistro.com) What does one do with a dead body? Barium in a krypt-on Maybe he was killed oxydentally. They should have seen the doctor first, he'd Curium. Ah, barium anyway, just to see how he reacts. better though to have helium. Perhaps with a housplant, a Germanium. And if they stole it, the police would Cesium.

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Locked up for life, in Irons.
They would go crazy in jail, a Silicon.
Maybe their into plastic surgery.
What does the surgeon do for low cheeks, Lithium.
To large gashes? Sodium.
Tooth in water glass is a one molar soln.
Like BaNa2, name IOAg. I O Silver.
Rabbit like paired electrons on an ether, ether bunny.
And your aunt Ester and her husband Al K Hall.
From: nuke@netcom.com (Bill Newcomb)
With music by Al D. Hyde and the Ace Tones...
Where does one put the dishes? Zinc
What does one do if one can't zwim? Zinc
Name BaNa2. banana
Draw a 1,4 compound of benzene with two dice. Name it. Paradice
Also done w/ MD for paramedic
Done as 1,2 w/ DDS for orthodontist.
1,3 and physics, metaphysics.
Draw benzene with a Mercedes symbol single bonded to the uppermost
carbon. Name it. Mercedes benzene.
C_
From: bill.considine@execnet.com (BILL CONSIDINE) From C&E News (1/9/95
p.48):
What's a cation afraid of? A dogion!
C_
From: CLD@msc.com
        PhD
         (can draw ortho - doc's as well)
         PhD
                Para - Doc's
HiHoAg
                 hi ho silver!!!
From: dan.arico@wdn.com (Dan Arico)
     CH3
                             CH3
   CH3
                             CH3
```

Tetramethylchickenwire

From: bkd@christa.unh.edu (Brian K Dann) 0 0 0 H3C-CH2-CH2-O-/ \\/ \\/ \\ | | | / \/ \/ \

A propyl people ether!

From: dan.arico@wdn.com (Dan Arico)

Ferrous Wheel

From: sppp@hippo.ru.ac.za (Peter Piacenza)











```
From:
             ChemTeam@clubnet.net (John L. Park)
More benzene variations:
                             I guess this looks even better with
  chutes
                 dice
                             pictures for the dice.
    chutes
                dice
parachutes
              paradice
С
From: nuke@netcom.com (Bill Newcomb)
   O-R-NMe2
Ι
                           a 1-I-1-ORN-flying-propyl people ether
          \cap
                             (*stolen from A. Shusterman, with
enhancements)
        -- | --
          / 
C_
From: "donald haarmann" <donald-haarmann@worldnet.att.net>
                   This should be a circle with --OH's radiating out.
         HO_
                    Sun diol
            OH
C
From: a481@mindlink.bc.ca (J.D. Frazer)
What is this:
        NaCl(aq) NaCl(aq)
        ссссссс
Answer: (In a sing-song voice) "Saline, saline, over the seven C's"
From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite)
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C_



С From: johnmark@leland.stanford.edu (jmj) What is the name of this molecule: bunny-O-bunny A: "ether bunny" C__ From: tomm@netcom.com (Tom Murray) chemical formula: HIJKLMNO What is it? It's the formula for water. C_ From: KGNJ65A@prodigy.com (Ed Strnad) What's the formula for water? -H-two-O What's the formula for an ice cube? -H-two-O-CUBED C_ From: eridani@scn.org (Martha K. Koester) Chemical formulas: (NH2CONH2)2 = diurea C_ From: Raymond W Jensen <rwj+@andrew.cmu.edu> Q: What is this molecule: H3NCONH3? (Numbers are meant to be subscripts) A: Urea. Q: What is this molecule: H3NCONH2-H2NCONH3? A: Diurea. C___ "Dr. Steve Simpson" <S.J.Simpson@chemistry.salford.ac.uk> From: Hexakis(nitroso)benzene C6(NO)6 - the ultimate contraceptive ; NO in all positions. C_ From: lanzi@inland.com Q:What do you get when you combine [insert a person] with O2? A:Oxymoron C_ From: jay.freedman@pacsibm.org (Jay Freedman) These were printed on bumper stickers and given out at an American Chemical Society meeting 10 or 12 years ago: It takes alkynes to make a world. C_

From: bgnosis@isca.uiowa.edu (Billy Gnosis) What do you get when you cross buckminsterfullerene, helicase, and ATP? Screwballs." С From: bgnosis@isca.uiowa.edu (Billy Gnosis) Q:What does what does the Lone Ranger say to his horse? A:HIOAg, away! C_ From: ts@uwasa.fi (Timo Salmi) Free radicals have revolutionized chemistry. C_ From: gardner@sun.lclark.edu (Gillian Gardner) Q: Why do chemists like nitrates so much? A: They're cheaper than day rates. C_ From: S.P.F. Q: What do chemists use to make guacomole? A:Avogadros. C_ From: tm37@acme.gatech.edu (Tom Merchant) Q: What did the Italian chemist say when he became becalmed whilst sailing? A: Avagadro (I've a gotta row) С From: "Robert L. LaDuca" <rlladuca@rs01.kings.edu> Yesterday when talking about energy units/enthalpy I drew a man, woman, and child on the board. I put a "J" on each of them. Then I kept on going, without paying it any attention. I let them figure it out, a minute or so later got groans and laughter. Yup, the "Family Joule". ;) С From: Dennis Feely <dfeely@unlinfo.unl.edu> Chemistry: Did you hear about the chemist that fell into the esterification vat? They managed to save his life but he was left terribly butylated. C_ From: xxxxx@concentric.net The politically-aware chemistry student protested by carrying a picket sign that stated: "Free Radicals Now!" From: charlie (charlie@tuna.net) I'm positive that a free electron once stripped me of an electron after he lepton me. You gotta keep your ion them From: Soby1 (soby1@msn.fullfeed.com) It could be just a quark of his nature... Or perhaps he's just seeking a reaction. Chemists do like to mix it up. From: Matt Swanson <edgetho@aol.com> It's good to keep a positive attitude and not have an electron cloud hanging over your head.

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fc3a501@GEO.math.uni-hamburg.de (Hauke Reddmann)
From:
Did your hear about the chemist who had to
visit the urologist because of a screw dislocation?
C_
From: Rocky and Mugsy <just@aminute.duck>
The best chemists would definitely not be pet owners.
Their idea of a catalyst:
2 bags of cat litter
3 cans of cat food
1 can of flea powder
1 collar
С
From: pkenny@titan.oit.umass.edu (Patrick M Kenny)
 Black Angus
                        :
                                   Black Angus
 Black Angus
                        :
                                   Texas Longhorn
 Black Angus
                        :
                                   Brown Swiss
 Homogeneous Catalyst
                        :
                                 Heterogeneous Catalyst
C_
From: tphillips@biosci.mbp.missouri.edu (Thomas E. Phillips)
Q:How many atoms in a guacamole?
A:Avocado's number.
C_
From: mykestan@csu.murdoch.edu.au (Myke Stanbridge)
Q:What is the most chaste organic compound?
A:Why, hexanitrosobenzene of course!
С
From: (fortunes)
Florence Flask was ... dressing for the opera when she turned to her
husband and screamed, "Erlenmeyer! My joules! Someone has stolen my
joules!"
"Now, now, my dear," replied her husband, "keep your balance and reflux
a moment. Perhaps they're mislead."
"No, I know they're stolen," cried Florence. "I remember putting them
in my burette ... We must call a copper."
Erlenmeyer did so, and the flatfoot who turned up, one Sherlock Ohms,
said the outrage looked like the work of an arch-criminal by the name
of Lawrence Ium.
"We must be careful -- he's a free radical, ultraviolet, and
dangerous. His girlfriend is a chlorine at the Palladium. Maybe I can
catch him there." With that, he jumped on his carbon cycle in an
activated state and sped off along the reaction pathway ...
                -- Daniel B. Murphy, "Precipitations"
С
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356
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From: fc3a501@AMRISC04.math.uni-hamburg.de (Hauke Reddmann)

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How do you make a 24(??)-molar solution?
Put you artificial teeth in water.
С
From: pclarke@waite.adelaide.edu.au (Philip Clarke)
Q: What kind of ghosts haunt chemistry faculties?
A: Methylated Spirits....
С
From: "\"Alan \\\"Uncle Al\\\" Schwartz\"" <uncleal0@ix.netcom.com>
What do you call a fruit which is 97% ascorbic acid? A Pauling.
(appalling)
C_
From: "Anthony M. Becker" <becker@oakland.edu>
I saw one of those monster chemicals attacking a woman and shouting her
name; he kept screaming "Die, Ethyl!" That's radical, dude.
C_
From: mdecaire@eagle.wbm.ca (Marc Guy DeCaire)
Did you hear about the industrialist who had a huge chloroform spill at
his
factory?
His business went insolvent.
C__
From: mkastela@jagor.srce.hr (The MACAN Family)
And why does a white bear melt in water?
Because it's polar.
С
From: adwohlwi@uic.edu (Arthur Wohlwill)
I was going to make up a buffer, but I was out of Potassium Chloride. Oh,
well as they say K Cl, Cl.
C_
From: fmjones@gate.cybernex.net (Fred Jones)
You mean you haven't heard about that fatty acid ester, ethyl
palpitate, and the synthetic procedure, how to make ethyl palpitate??
C_
From: outlier@ix.netcom.com (Ray Redd)
Q:How do you get lean molecules?
A:Feed them titrations.
C_
From: bpc@netcom.com (Benjamin P. Carter)
How about the chemical workers--are they unionized?
                                                       ;)
C_
From: cblair@thenet.co.uk (Christopher J Blair)
Another example is the name for a molecule that is not ionized. Is
"unionized" a synonym for neutral?
From: wpenrose@interaccess.com (William R. Penrose)
No, it means they will stop carrying a charge until they get more money.
```

C_

From: thweatt@prairie.nodak.edu (Superdave the Wonderchemist) My favorite has always been uranyl acetate is it pronounced "yur-AYN-ul" or "YUR-u-nil"? The pronunciation makes a big difference. For those of you in the UK try uranyl arsenate. Of course you can try uranyl uranate, but that would be anatomically incorrect (or at least wierd). Is PoO4(2-) polonate? If so is it necessary for plant reproduction? What about GeO3(2-), is that germinate? If so is it necessary for agriculture as well? C_ From: peabody@wam.umd.edu (Doctor Soran) Go skiing in Tellurium, Colorado Stanley Cupric's "Full Metal Jacket" The Uranium Songs: "I Get a Kick out of U" (Cole Porter) "I Can't Stay Away from U" (Gloria Estefan) Movie: "I Was a Teenage Werewolfram" Miscellaneus: The Baltic states of Estonia, Latvia, and Lithuania along with the Cobaltic States of Germany, Poland, Sweden, and Finland June 6, 1944 was the radon Normandy. C_ From: Sluggo the Pig <sluggothepig@geocities.com> A group of students were in Chemistry class. They were in the process of heating a chemical material in a flask for futher study. They asked the teacher if he had any insulating material to handle the hot container with, to which the teacher replied, "No, Do as best as you can!!!" ++ =3.4 IN THE LAB C_ "G.P." <G_Popper@Hotmail.Com> From: Top Ten ways to get thrown out of chemistry lab 10. Pretend an electron got stuck in your ear, and insist on describing the sound to others. 9. Give a cup of liquid nitrogen to a classmate and ask, "Does this taste funny to you?" 8. Consistently write three atoms of potassium as "KKK." 7. Mutter repeatedly, "Not again... not again... not again."

6. When it's very quiet, suddenly cry out, "My eyes!"

5. Deny the existence of chemicals.

4. Begin pronouncing everything your immigrant lab instructor says exactly the way he/she says it.

3. Casually walk to the front of the room and urinate in a beaker.

2. Pop a paper bag at the crucial moment when the professor is about to pour the sulfuric acid

1. Show up with a 55-gallon drum of fertilizer and express an interest in federal buildings.

C_

Health Watch: The graduate student's guide to self-diagnosis and treatment. (The 3 a.m. version)

It is not unusual for a grad student to feel strains and stresses in the body during late night lab marathons. In spite of this fact, there is an appalling shortage of health clinics open at the hour that these symptoms usually begin to manifest. In recognition of this deficiency, this `how-to' list has been compiled to aid the graduate student in this time of need.

Symptom ======	Probable cause	Treatment(*) =======
Aching legs	Frequent trips to not-so-near neighbouring labs to use equipments not found in your own.	Move the equipment into the lab you are working in. Those with a sense of humor can try asking thei P.I.'s to buy them their own equipment.
Burning sensation in eyes	Eyeballs attempting to crawl out of your sockets in a bid to escape chronic exposure to acetic acid/methanol vapours that have equilibrated with the lab's already volatile atmosphere.	Confine all gel destainin practices to your boss's office. (Fumehood?! We don't need no stinkin' fumehood!)
Inability to turn head	Neck injury incurred while trying to simultaneously watch column not run dry while playing `Cat Shaver'' on the computer.	Accept as a fact that the moment your back is turned, the column will run dry on you anyway. Enjoy your game.

Unsafe use of ethanol Visit your local burger Burning sensation on during flame joint and beg for a sterilization. hairnet donation. (This head (usually presumes that you don't preceded by the crisp work there part-time to scent of make up the balance of melting hair) your salary, in which case you should already have your own hairnet.) Lightheaded Sleep deprivation. Practice performing simple giddiness lab techniques while sleeping. You can pipett water instead of chemical to start with. Soon you will find yourself able t catch up on your sleep while doing that all-important mini-prep o western blot! (This suggestion strongly endorsed by the inexhaustable Dr. Kay.) Lower back Centrifuge rotors Take sample with you on pain any one of the numerous spinning rides at the amusement park and hold the tube away from the center of rotation as far as possible. Ride for 3 hours or until nausea ensues. (*)Suitable replacement for all suggested treatments is to go home already! C__ From: "THE BIG PIG" <kcds1@Juno.com> Q: What's the most important thing to learn in chemistry? A: Never lick the spoon. C_ From: kkociba@magnus.acs.ohio-state.edu (Keith J Kociba) Chemists are the *cleanest* people you'll ever meet... they wash their hands even *before* they go to the restroom! C_ From: jpauer@mtu.edu (JAMES PAUER) First law of Laboratorics: Hot glass and cold glass look alike! C_ From: MOHAMMED CHUNGGAZE <m.chunggaze@ic.ac.uk> I was helping out in a first year undergraduate practical class when i came across a girl who i thought maybe washing Potassium Bromide plates under the
tap. i said to her

'i hope you are not washing those plates under the tap'

she replied: 'NO..i,m using distilled water' !!!! ++=3.5 CHEMICAL DICTIONARY

С

Xkarlk@POBoxes.comX (Karl) From: Disclaimer: I didn't write this, I'm just reposting it.

THE LAST WORD The Ultimate Scientific Dictionary

Activation Energy: The useful quantity of energy available in one cup of coffee.

Atomic Theory: A mythological explanation of the nature of matter, first proposed by the ancient Greeks, and now thoroughly discredited by modern computer simulation. Attempts to verify the theory by modern computer simulation have failed. Instead, it has been demonstrated repeatedly that computer outputs depend upon the color of the programmer's eyes, or occasionally upon the month of his or her birth. This apparent astrological connection, at last, vindicates the alchemist's view of astrology as the mother of all science.

Bacon, Roger: An English friar who dabbled in science and made experimentation fashionable. Bacon was the first science popularizer to make it big on the banquet and talk-show circuit, and his books even outsold the fad diets of the period.

Biological Science: A contradiction in terms.

Bunsen Burner: A device invented by Robert Bunsen (1811-1899) for brewing coffee in the laboratory, thereby enabling the chemist to be poisoned without having to go all the way to the company cafeteria.

Butyl: An unpleasant-sounding word denoting an unpleasant-smelling alcohol.

CAI: Acronym for "Computer-Aided Instruction". The modern system of training professional scientists without ever exposing them to the hazards and expense of laboratory work. Graduates of CAI-based programs are very good at simulated research.

Cavendish: A variety of pipe tobacco that is reputed to produce remarkably clear thought processes, and thereby leads to major scientific discoveries; hence, the name of a British research laboratory where the tobacco is smoked in abundance.

Chemical: A substance that:

- 1) An organic chemist turns into a foul odor;
- 2) an analytical chemist turns into a procedure;
- 3) a physical chemist turns into a straight line;

4) a biochemist turns into a helix;5) a chemical engineer turns into a profit.

Chemical Engineering: The practice of doing for a profit what an organic chemist only does for fun.

Chromatography: (From Gr. chromo [color] + graphos [writing]) The practice of submitting manuscripts for publication with the original figures drawn in non-reproducing blue ink.

Clinical Testing: The use of humans as guinea pigs. (See also PHARMACOLOGY and TOXICOLOGY)

Compound: To make worse, as in: 1) A fracture; 2) the mutual adulteration of two or more elements.

Computer Resources: The major item of any budget, allowing for the acquisition of any capital equipment that is obsolete before the purchase request is released.

Eigen Function: The use to which an eigen is put.

En: The universal bidentate ligand used by coordination chemists. For years, efforts were made to use ethylene-diamine for this purpose, but chemists were unable to squeeze all the letters between the corners of the octahedron diagram. The timely invention of en in 1947 revolutionized the science.

Evaporation Allowance: The volume of alcohol that the graduate students can drink in a year's time.

Exhaustive Methylation: A marathon event in which the participants methylate until they drop from exhaustion.

First Order Reaction: The reaction that occurs first, not always the one desired. For example, the formation of brown gunk in an organic prep.

Flame Test: Trial by fire.

Genetic Engineering: A recent attempt to formalize what engineers have been doing informally all along.

Grignard: A fictitious class of compounds often found on organic exams and never in real life.

Inorganic Chemistry: That which is left over after the organic, analytical, and physical chemists get through picking over the periodic table.

Mercury: (From L. Mercurius, the swift messenger of the gods) Element No. 80, so named because of the speed of which one of its compounds (calomel, Hg2Cl2) goes through the human digestive tract. The element is perhaps misnamed, because the gods probably would not be pleased by the physiological message so delivered.

Monomer: One mer. (Compare POLYMER).

Natural Product: A substance that earns organic chemists fame and glory when they manage to systhesize it with great difficulty, while Nature gets no credit for making it with great ease.

Organic Chemistry: The practice of transmuting vile substances into publications.

Partition Function: The function of a partition is to protect the lab supervisor from shrapnel produced in laboratory explosions.

Pass/Fail: An attempt by professional educators to replace the traditional academic grading system with a binary one that can be handled by a large digital computer.

Pharmacology: The use of rabbits and dogs as guinea pigs. (See also CLINICAL TESTING, TOXICOLOGY).

Physical Chemistry: The pitiful attempt to apply y=mx+b to everything in the universe.

Pilot Plant: A modest facility used for confirming design errors before they are built into a costly, full-scale production facility.

Polymer: Many mers. (Compare MONOMERS).

Prelims: (From L. pre [before] + limbo [oblivion]) An obligatory ritual practiced by graduate students just before the granting of a Ph.D. (if the gods are appeased) or an M.S. (if they aren't).

Publish or Perish: The imposed, involuntary choice between fame and oblivion, neither of which is handled gracefully by most faculty members.

Purple Passion: A deadly libation prepared by mixing equal volumes of grape juice and lab alcohol.

Quantum Mechanics: A crew kept on the payroll to repair quantums, which decay frequently to the ground state.

Rate Equations: (Verb phrase) To give a grade or a ranking to a formula based on its utility and applicability. H=E, for example, applies to everything everywhere, and therefore rates an A. pV=nRT, on the other hand, is good only for nonexistent gases and thus receives only a D+, but this grade can be changed to a B- if enough empirical virial coefficients are added.

Research: (Irregular noun) That which I do for the benefit of humanity, you do for the money, he does to hog all the glory.

Sagan: The international unit of humility.

Scientific Method: The widely held philosophy that a theory can never be proved, only disproved, and that all attempts to explain anything are therefore futile.

SI: Acronym for "Systeme Infernelle".

Spectrophotometry: A long word used mainly to intimidate freshman nonmajors.

Spectroscope: A disgusting-looking instrument used by medical specialists to probe and examine the spectrum.

Toxicology: The wholesale slaughter of white rats bred especially for that purpose. (See also CLINICAL TESTING, PHARMACOLOGY).

X-Ray Diffraction: An occupational disorder common among physicians, caused by reading X-ray pictures in darkened rooms for prolonged periods. The condition is readily cured by a greater reliance on blood chemistries; the lab results are just as inconclusive as the X-rays, but are easier to read.

Ytterbium: A rare and inconsequential element, named after the village of Ytterby, Sweden (not to be confused with Iturbi, the late pianist and film personality, who was actually Spanish, not Swedish). Ytterbium is used mainly to fill block 70 in the periodic table. Iturbi was used mainly to play Jane Powell's father.

From: "Earl L. Smith" <esmith@utep.edu>
S.I. Prefixes for molecules

C_

10-3	m	millimole
10-6	\mu	micromole
10-9	n	nanomole
10-12	р	picomole
10-15	f	femtomole
10-18	a	attomole
10-21	Z	zeptomole

10-24 g guacamole Note: 1 gmole represents 0.6 molecules. :-) Daniel Boismenu, CNE News 27 Jan. 1997, p. 72 +++++ =3.6 CHEMISTS C______

REASONS TO BE A CHEMIST

From: NOSPAMjmllab@lightspeed.net (T.A. Vera) ; "George D. McCallion"
<chem@bellatlantic.net> ; dale@ox.mc.edu (Chris Dale) ; (Rick Fletcher)
fletcher@news.uidaho.edu ; idigruach@aol.com (IDIGRUACH) ;
M.J.Pitt@shef.ac.uk (M J Pitt)

- All the coffee and pocket protectors you could want!

- Clark Kent style safety glasses.
- Exposure to all kinds of toxic and cencerous substances.

- The "opportunity" to deal with irate clients asking "where are my results?"

- Because it's pHun :)

- Access to 100% pure ethanol - Knowing how to completely dissolve the bodies of your enemies - You never have to worry about what you're doing on Friday night (You're working in the lab) - Permanent goggle marks cheaper than a tattoo. - You hope someday to be able to use the word "buckyballs" without bursting into a fit of laughter. - You wish to be blamed for all faults in the environment. - ditto for cancer - You are adept at poverty cooking - You prefer to get your course credits the hard way C YOU MIGHT BE A CHEMIST IF From: wpenrose@interaccess.com (William R. Penrose) - You keep a picture of Mme. Curie over your desk -- and it turns you on. - You named your firstborn after one of the lanthanides, and than felt compelled to have more until you had the whole set. - When you had an unexpected sixteenth child, you just had to name him actinium, and now you're not sure how to stop. - You know that Anal. Chem. is not the title of a raunchy video. - You think that fresh air smells bad. "Rebecca M. Chamberlin" <rmchamberlin@lanl.gov> From: You pronounce "unionized" with 4 syllables.... Rich Lemert <RLemert@continet.com> From: - You're a chemist if you wash your hands BEFORE you use the bathroom. From: Rob Buckley <R.Buckley@sct.gu.edu.au> - you played with explosives as a kid - and still have all you're fingers. - you're favorite activity is testing the water in the fish tank - and you don't even have any fish.. (if you have fish, you are a biochemist). - you wonder just _what_ the lubricant in that condom is made from... C_ From: Mooseman@FATE.ohz.north.de (Bjoern "Mooseman" Harste) (Blame JV for the translation from German.) The last words of a chemist: 1. And now the tasting test. 2. May that become hot? 3. And now a little bit from this... 4. ... and please keep that test tube alone! And now shake it a bit. 5. Why is there no label on this bottle? 6. In which glass was my mineral water? 7. The bunschen burnes *is* out! 8. 9. Why does that stuff burn with a green flame?!? 10. *H* stands for Nitrogen - and that does *not* burn... 11. Oh, now I have spilt something... 12. First the acid, then the water... 13. And now the detonating gas problem. 14. This is a completely save experimental setup. 15. Where did I put my gloves? 16. O no, wrong beaker... 17. The fire alarm is just being tested.

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18. Now you can take the protection window away...
19. And now keep ith constat at 24 degrees celsius, 25... 26... 27...
20. Peter can you please help me. Peter!?! Peeeeeteeeeer?!?!??
21. I feel it how long 15 seconds are!
22. Something is wrong here...
23. Where do all those holes in my kettle come from?
24. Trust me - I know what I am doing.
25. And now a cigarette...
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From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection
Chemical engineers do it in packed beds.
Chemists do it in test tubes.
Chemists do it in the fume hood.
Chemists do it periodically on table.
Chemists do it reactively.
Chemists like to experiment.
Electrochemists have greater potential.
From: skreyn@netcom.com (Veggie Boy = Sean K Reynolds)
Polymer chemists do it in chains.
From: "Western Research Center" <user@company.com>
Toxicologists do it till they're half-dead.
C
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From: roberts@ucunix.san.uc.edu (Michael A. Roberts) Isaac Asimov said that if you want to find a chemist, ask him/her to discuss the following words:

mole unionized

As he so eloquently put it, "If he starts talking about furry animals and organized labor, keep walking." CP

Make it myself? But I'm a physical organic chemist!

From: Jason In a recent contest, The Washington Post asked readers to dream up new elements for the Periodic Table. Among the best of the batch: Limbaughium Lb The heaviest known element. It possesses an ever-expanding mass. Very white. Acidic. Emits heat but no light. Instantly polarizes all elements that come in contact with it. Repels protons and electrons; attracts only morons. Billclintium Bc With a slick appearance and slimy texture, this element undergoes a series of interesting changes when in hot water. Canadium Eh Similar to Americium, but a little denser. Much more rigid. Often called Boron. Newtium Extreme irritant. Carries a strong negative charge. Does not possess magnetic properties. Can be purchased cheaply. Quaylium Vp Einsteinium it ain't. Budweisium Ps Has no taste or smell; is often indistinguishable from water. Cabmium Cb Found in abundance, except when needed. Exists in two states, in motion and at rest. When in motion, it cannot be stopped, no matter what you do. Cabmium has a charge associated with it. The charge is variable, and scientists have not determined the formula for calculating it. Politicium Po Contains a great deal of gas. Similar to radon in that it can reach lethal concentrations in the House. Congress Cg Atomic number 525. Can never be found in a solution. Snot Sn Bonds forever with corduroy. From: Blandford Goldsmitium Rf Trace amounts found all over country, but not in Europe. Toxic. С

From: lozinski@csugrad.cs.vt.edu (Joe Cool), Bobby H <bob@netxpress.com>

Man - A Chemical Analysis

Ele Sym Ato Qua Dis Oco	ement ubol omic Mass antitative scoverer curance	 Man Ah (short for Arsehole) Accepted as 70. May vary from 50-150 kg. Highly reactive at 150 or higher. (avoid at all costs) Accepted at 7 inches, wavy brown hair, 6' 0" in length, though some isotopes can be as short as 4 inches. Eve Found following duel element Wo, often in high concentration near a perfect Wo specimen.
Phy 1) 2) Wo	vsical proper Obnoxious w Tends to fai (Snore s	ties : en mixed with C*H*-OH (any alcohol). I into very low energy state directly after reaction with zzzz).
3) 4) 5) for	Gains Consid Rarely found Often damage	arable mass as specimen ages, loses reactive nature. in pure form after 14th year. ed as a direct result of unlucky reaction with polluted
6) 7) 8) 9)	Tarnishes ea Crusty exten Naturally for Simple in st	m ore. sily. Needs constant polishing and attention ior but may be soft underneath. ound in the crude state but may be purified cructure.
10) 11)	Often found Spontaneous	in the gaseous state. polarity changes relative to surrounding specimens.
Ch€ 1)	emical proper All forms de possible.	ties : sire reaction with Wo, even when no further reaction is
2)	May react wire favorable co	th several Wo isotopes in short period under extremely onditions.
3) 4) eff	Usually will Reaction Rat Sects	ing to react with what ever is available. es range from aborted/non-existant to Pre-interaction
5)	(which tend Reaction str	to turn the specimen bright red.
vic	lent/bloody	ieb vary from excremely brow, carm and wee co
6) 7)	Great affin: May react v	ty for fatty substances.
8)	Low boiling	point, high melting point.
9)	Attraction	o large quantities of iron.
11)	Pure substar	aces are rarely found except when covalently bonded.
Sto	orage : Best 25-3	results apparently near 18 for high reaction rate, for favorable reaction style.
Use	es : Heavy gener	boxes, top shelves, long walks late at night, al repairs, free dinners for Wo
Tes	sts :	
1)	Pure specime specimens b	n will rarely reveal purity, while reacted oadcast information on many wavelengths.
∠)	Appearance g	reacry improves when placed in a sports car.

3) Easily titrates to yellow under stress. 4) Never true blue. Caution : Tends to react extremely violently when other Man interferes with reaction to a particular Wo specimen. Otherwise very maleable under correct conditions. Woman - A Chemical Analysis : Woman Element Symbol : WO Atomic Weight : Accepted as 59, but known to vary 50-88. Discoverer : Adam Occurance Copious quantities in all Urban areas, : with slighlty lower concentrations in Suburban and Rural areas. Subject to seasonal fluctuations. Physical Properties 1) Surface usually covered with sticks painted film. 2) Boils at nothing, freezes without reason. 3) Melts if given special treatment. 4) Bitter if used incorrectly. Can cause headaches. Handle with care! 5) Found in various states; ranging from virgin metal to common ore. 6) Yields to pressure applied to correct points. 7) Undergoes inpredicatable spontaneous dehydrolyses (weeps). Chemical Properties : 1) Has great affinity for Gold, Silver, Platinum and many of the Precious Stones. 2) Absorbs great quantities of expensive substances. 3) May explode spontaneously if left alone on dates. 4) Insoluble in liquids, but there is increased activity when saturated in alcohol to a certain point. 5) Repels cheap material. Neutral to common sense. 6) Most powerful money reducing agent known to Man. Uses : Highly ornamental, especially in sports cars. Can greatly improve relaxation levels. Can warm and comfort under some circumstances. Can cool things down when it's too hot. Tests : Pure specimen turns rosy pink when discovered in natural state. Turns green when placed beside a better specimen. Caution : 1) Highly dangerous except in experienced hands. Use extreme care when handling. 2) Illegal to possess more than one.

From: Philip Clarke <clar0318@flinders.edu.au> C.O.S.H.H. A Complete Service for the Assessment and Control of Hazardous Substances Hazardous Materials Data Sheet : MAN Analysis: Has been going on for many years. No results yet available IMDG Code: Class 5, poss. 5105 Element: Man Symbol: Bd (From the Latin 'Beerus Drinkus') Discoverer: Eve Atomic Mass: Average about 80kg but can go up to SMFB size (Super Mega-Fat Bastard) Occurrence: Large amounts found in close proximity to ethanol deposits Smaller quantites found near refined petroleum deposits. PHYSICAL PROPERTIES 1. Surface is usually rough and covered in a furry substance 2. Boils in saturated solutions of ethanol, no known freezing point 3. Melts if kept near domestic appliances but seems to have a high tolerance for direct sunlight, especially if doused in cold liquids 4. Found in various grades from gem to v.poor. Amazingly if kept in prolonged contact with Wo (Woman) grade will tend to decrease CHEMICAL PROPERTIES 1. Has great affinity for ethanol, animal fats and dirt 2. Reacts badly to overusage - structure can break down 3. If combined with low-grade Wo a massive explosion will result 4. When combined with expensive foodstuffs becomes very malleable COMMON USES 1. Very useful for small repair jobs but requires careful handling in case of spontaneous combustion 2. Has an amazing ability to turn money into thin air TESTS 1. Pure specimen is impossible to find but supposedly will co-exist with Wo indefinitely 2. New sample will turn green in contact with large amounts of ethanol 3. Old sample will turn reddish in contact with even larger amounts of ethanol

C

4. Hard specimen will soften at sight of new offspring

From: http://www.circus.com/~no_dhmo/ BAN DIHYDROGEN MONOXIDE! THE INVISIBLE KILLER

Dihydrogen monoxide is colorless, odorless, tasteless, and kills uncounted thousands of people every year. Most of these deaths are caused by accidental inhalation of DHMO, but the dangers of dihydrogen monoxide do not end there. Prolonged exposure to its solid form causes severe tissue damage. Symptoms of DHMO ingestion can include excessive sweating and urination, and possibly a bloated feeling, nausea, vomiting and body electrolyte imbalance. For those who have become dependent, DHMO withdrawal means certain death.

Dihydrogen monoxide:

- * is also known as hydric acid, and is the major component of acid rain.
- * contributes to the "greenhouse effect."
- * may cause severe burns.
- * contributes to the erosion of our natural landscape.
- * accelerates corrosion and rusting of many metals.
- * may cause electrical failures and decreased effectiveness of automobile brakes.
- * has been found in excised tumors of terminal cancer patients.

CONTAMINATION IS REACHING EPIDEMIC PROPORTIONS!

Quantities of dihydrogen monoxide have been found in almost every stream, lake, and reservoir in America today. But the pollution is global, and the contaminant has even been found in Antarctic ice. In the midwest alone DHMO has caused millions of dollars of property damage.

Despite the danger, dihydrogen monoxide is often used:

- * as an industrial solvent and coolant.
- * in nuclear power plants.
- * in the production of styrofoam.
- * as a fire retardant.
- * in many forms of cruel animal research.
- * in the distribution of pesticides. Even after washing, produce remains contaminated by this chemical.
- * as an additive in certain "junk-foods" and other food products.

Companies dump waste DHMO into rivers and the ocean, and nothing can be done to stop them because this practice is still legal. The impact on wildlife is extreme, and we cannot afford to ignore it any longer!

THE HORROR MUST BE STOPPED!

The American government has refused to ban the production, distribution, or use of this damaging chemical due to its "importance to the economic health of this nation." In fact, the navy and other military organizations are conducting experiments with DHMO, and designing multi-billion dollar devices to control and utilize it during warfare situations. Hundreds of military research facilities receive tons of it through a highly sophisticated underground distribution network. Many store large quantities for later use.

IT'S NOT TOO LATE!

Act NOW to prevent further contamination. Find out more about this dangerous chemical. What you don't know CAN hurt you and others throughout the world. Send email to no_dhmo@circus.com, or a SASE to:

Coalition to Ban DHMO 211 Pearl St. Santa Cruz CA, 95060 C_____

From: Blurb@aol.com

A student at Eagle Rock Junior High won first prize at the Greater Idaho Falls Science Fair, April 26. He was attempting to show how conditioned we have become to alarmists practicing junk science and spreading fear of everything in our environment. In his project he urged people to sign a petition demanding strict control or total elimination of the chemical "dihydrogen monoxide."

And for plenty of good reasons, since:

- 1. it can cause excessive sweating and vomiting
- 2. it is a major component in acid rain
- 3. it can cause severe burns in its gaseous state
- 4. accidental inhalation can kill you
- 5. it contributes to erosion
- 6. it decreases effectiveness of automobile brakes
- 7. it has been found in tumors of terminal cancer patients

He asked 50 people if they supported a ban of the chemical. Forty-three (43) said yes, six (6) were undecided, and only one (1) knew that the chemical was water.

The title of his prize winning project was, "How Gullible Are We?"

He feels the conclusion is obvious.

From: Joseph Harper <joeha@microsoft.com> And here is the same story again with a student from another school: (?)

Idaho Falls, Idaho -- Dihydrogen monoxide causes thousands of drownings each year, leads to excessive sweating and vomiting and contributes to land erosion. And there's nothing anyone can do to stop it.

Fifteen-year-old Nathan Zohner made people aware of that fact by proving in his science project on critical thinking skills just how vulnerable people are.

Newspapers, magazines, radio and TV stations, universities, even members of Idaho's Congressional delegation have been calling Nathan in recent

weeks to talk about the project that won the Greater Idaho Falls Science Fair in April, the Post Register reported Wednesday.

The project asked 50 ninth graders if the compound called dihydrogen monoxide should be banned. Forty-three said yes and six were undecided. Only one person was able to tell Nathan dihydrogen monoxide is just another name for water.

The Skyline High School sophomore said he just wanted to show how easily people can be misled.

"Some of my friends could have done this. It wasn't that extraordinary. It was just a simple science project that kind of blew up," he said.

Nathan got the idea after his father, Steven, a nuclear scientist at the Idaho National Engineering and Environmental Laboratory, brought home a flier from an anonymous author describing the "dangers" of dihydrogen monoxide.

WhiteBoard News for Friday, October 24, 1997

C_

WATER FAQ Version 0.5b - June 4, 1994

This file is intended to answer typical questions about Water to reduce traffic on news:alt.drugs. This FAQ is continually maintained; new information about Water should be mailed to "csk@eecs.nwu.edu".

CONTENTS

1)	What is Water?
2)	Is Water dangerous?
3)	Can I put Water in my bong?
4)	A FOAF got some laced Water. How frequently does this happen?
5)	How is Water synthesized?
6)	Is homebrewed "bathtub" Water as effective as "the real thing?"
7)	What is 'kind' Water?
8)	Are there different types of Water?
9)	What is the LD50 of Water?
A1)	Descriptions of Water 'trips'
A2)	Street Prices, June 3, 1994
A3)	International Legality Update
A4)	List of Contributors

ANSWERS

1) What is Water?

Water, W, Hot Ice, Liquid Crystal... all these "street" terms refer to the same substance, known chemically as H2O. Water is a highly addictive and toxic chemical, which in its natural state is completely odorless, tasteless, and clear.

2) Is Water dangerous?

Yes. A scientific survey recently concluded that every creature on earth contains Water, and almost every creature imbibes more during its life. Moreover, every animal that has ever ingested this substance has invariably tried to get more. Organisms unable to get more Water show signs of withdrawal, or "dehydration," and eventually die. Organisms that ingest more Water inevitably die anyway. Aside from the biological considerations, remember that Water is composed of Hydrogen and Oxygen, which are used together as rocket fuel. Enough cannot be said about the volatile nature of this chemical. 3) Can I put Water in my bong? Mixing drugs is never recommended, but if you must attempt this, note the following: - Water acts as a coolant and filter. You are likely to get larger, smoother hits than normal. - Water may actually blend into the smoke, imparting its own qualities to the hit. - Water may splash up and get in your mouth. Yuck. 4) A FOAF got some laced Water. How frequently does this happen? Almost all Water contains some contaminants. Generally, since Water has no taste or odor, the presence of either of these may indicate foreign substances. Water is so strong, and so cheap to produce, that the story of

the dealer who dusted his grass to make it salable doesn't really apply.

5) How is Water synthesized?

The simplest synthesis is as follows:

-Fill a pot from the kitchen tap.

-Boil for fifteen minutes.

The Water is now suitable for ingestion.

Steve J. Quest gives a more involved recipe yielding a higher-grade intoxicant:

Preparation of Hydrogen Oxide (Water)

An Erlenmeyer flask is first filled with a few grams of zinc metal chips and is then fitted with a two hole rubber stopper. A thistle tube is introduced through one hole and pushed to a level where the end of the tube is just above the zinc chips. A rubber tube is introduced through the other hole and connected to a horizontal copper pipe filled with loose fitting chunk cupric oxide. The other end of the copper pipe is connected to a Liebig condenser mounted in a distilling fashion (open end pointing down) which is suspended above a capture beaker.

A bunsen flame is placed under the cupric oxide reaction pipe, and any kind of cold liquid is allowed to circulate through the condenser. (some would use cold tap Water, but I can not recommend that procedure here due to legalities involved.)

Sufficient quantities of concentrated sulfuric acid are then introduced through the thistle tube to completely cover the zinc chips to a level ABOVE the end of the thistle tube. Condensation will start to occur within the condenser and run out into the beaker. The crude product represents a technical grade of hydrogen oxide, suitable for recreational purposes.

The reaction sequence is as follows:

Zn + H2SO4 -> ZnSO4 + H2 H2 + CuO -> Cu + H2O

6) Is homebrewed "bathtub" Water as effective as "the real thing?"

In the author's opinion, "bathtub" Water ("slosh") will never be able to compete with legendary types like Owsley, Naya, and Perrier, but there is of course a certain satisfaction in synthesizing your own.

7) What is 'kind' Water?

According to Peter McDermott:

There are actually two major kinds. 'Soft' Water and 'Hard' Water. The 'soft' Water does less damage (to kettles, pipes, etc.) but the hard Water is a better hit.

Some people argue that there is something called a 'gatevalve' syndrome, where some people who begin on the relatively harmless 'soft' Water are likely to escalate to the hard stuff. However, this isn't true of every body. Personally, I've been drinking soft Water for years without ever trying anything harder.

8) Are there different types of Water?

Christopher K. Koenigsberg explains:

There are apparently variations in the chemical makeup of W sold in stores, so someone should look into this for the FAQ (W's still available over the counter, no prescription necessary, not yet regulated by the FDA, nor scheduled by the DEA, I guess? How much longer before they catch on? Maybe we should be more cautious and not talk about it so openly, before they start having congressional hearings or something?)

For example I've seen W labelled "Steam Distilled" but on the same shelf also seen W labelled "Drinking Water" and even "Spring Water", and a more

expensive kind for Babies (yes they are even hooking innocent infants) and there may or may not be differences beyond just the labels and packaging. There are variations in the price even for the same kind of stuff, the local store brand is always the cheapest, regional "Artesian Wells" etc. are more expensive, and the imported kind is most expensive. There are vending machines outside some grocery stores (hey! you don't even have to show an ID to prove your age!) which will disburse W either Distilled or for Drinking, into your own choice of unlabelled container (so you can pretend it's something else). And the Drinking kind supposedly has mineral additives. I don't know if this is Strychnine, among the additives, which maybe causes the cramps when you drink too much, too fast, or too cold.... but I hear that's just a myth. 9) What is the LD50 of Water? TOXICITY DATA REC-WMN LDLO:180 GM/KG/28H JAMAAP 104,1569,35 IPR-MUS LD50:190 GM/KG NTIS** AD628-313 IVN-MUS LD50:25 GM/KG MIVRA6 8,320,74 REVIEWS, STANDARDS, AND REGULATIONS NOHS 1974: HZD M1000; NIS 561; TNF 436805; NOS 294; TNE 7313166 NOES 1983: HZD M1000; NIS 500; TNF 313467; NOS 324; TNE 8785413; TFE 3032116 EPA GENETOX PROGRAM 1988, INCONCLUSIVE: B SUBTILIS REC ASSAY EPA TSCA CHEMICAL INVENTORY, JUNE 1990 EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1993 ADDITIONAL INFORMATION LD50 4180 MG/KG () () 99999 MG/KG (IPR-MUS) CHRONIC EFFECTS OTHER HEALTH HAZARDS PRIMARY INFECTIONS OF CYTOMEGALOVIRUS (CMV) ARE USUALLY ASYMPTOMATIC BUT IN RARE CASES, SUBSEQUENT INFECTIONS MAY CAUSE MONONUCLEOSIS-LIKE DISEASE. CMV CAN ALSO RESULT IN LATENT INFECTIONS AND HAS BEEN IMPLICATED IN CERTAIN TYPES OF CANCER. This is of course in mice and may not apply directly to humans. W can be very dangerous, so play nice and be safe. APPENDIX 1: Descriptions of Water 'trips' and usage Kevin Jernigan, alt.drugs #85634: I drank Water for the first time at a party last night, and it was great!! Some of my friends who do W told me about the experience earlier, but I

now realize that it was beyond my wildest expectations. I was a little bit

scared, at first, because I heard about some of the bad side effects that it can cause. A few people said they choked on it, and one guy said that he dribbled it all over his clothes and got them wet. Luckily, none of these things happened to me. They started passing glasses around to everyone and I decided to take one

The Water was very clear in color. They said it was scored from a guy who got it from a spring in Canada. I don't know whether it was really Canadian Water, but it was definitely good quality, judging by the color. I used about 500g of it. When I put the glass up to my mouth, and swallowed, the first sensation I felt was of something wet traveling down my throat. This sensation started before I had even removed the glass from

swallow. As the trip progressed, I noticed several other things. The W produced a state of mind that I believe could best be described as a lack of thirst. The trip didn't last for very long, but I think that it would be safe to say that the experience gave me some important insights into my

consciousness. Chief among these, is the realization that Water can relieve thirst.

Ray Mialki, email contribution:

seem to be my habitual use.

Although I don't partake, some of my neighbours down quite a bit of the stuff, filling swimming pools and such. I use it in great moderation, not even having an outside hose spigot to wash the car with. Daily showers

Peter McDermott, alt.drugs #unknown:

A recent major survey (n=1) has showed that Water addiction runs in families. At present, NIDA funded scientists are working flat out on the genesis of this crippling condition.

Unlike other addictions, W abuse is believed to affect all sections of society, rich and poor alike. However, scientists have discovered that a gene may well be responsible for a predisposition to drinking W.

Although 12 step 'W' recovery programmes have been around for some time now, major cities have begun to witness a growth in self-help programs for Adult Children of Waterholics. "Henry" is a member of such a group.

"Well, I've just got so much rage about this, y'know? I was never able to confront them about it at the time. I thought that drinking Water was normal.

Now I'm angry. Ours is a sick culture. The French would never dream of exposing their children to 'W' at dinner. There, the kids go from breast milk to wine. But every single day, there it was, sitting at the dinner table in front of me. Of course, they wouldn't let me have any, but after watching them do it, I saw where they got it from. I

began sneaking to the tap, and taking a sip. Before I knew where I was I was into the hard stuff - you know, Water sports. Baths, showers, stuff like that.

Well, eventually, I hit bottom. I out in town and the craving came on me and I found myself licking it up from puddles. Then it was toilet bowls. There are no wells too deep for the 'W' addict. So I went and got help. I've been in recovery for like.. 3 days now, but I wasn't making any progress. Then my therapist told me about A CoW and since then, it's been nothing but milk. And not mother's milk either..."

However, not everybody accepts that 'W' use is a problem. 'Mary' has been using 'W' for a month now. She feels that the dangers of 'W' have been much exaggerated.

"It's all propaganda, isn't it? I've been doing 'W' for ages now, and it's just a bit of a buzz, innit. It's harmless man. There isn't a single study that *proves* 'W" has any effect on the bladder, and as for people who say it makes you piss. Well, they are just dirty minded.

As I said, I've been doing 'W' for a month, and I've never had a piss, ever.

We've started a pressure group called 'Fair Play for Water' and it's our aim to force the government to tell the truth about 'W'. If there are risks, tell us what they are, and how we can minimize them. Prohibition doesn't work. The government knows that. Why else would they have repealed the laws against heroin and cocaine? Unfortunately, there are political careers to be made out of that issue. Vote Libertarian. Privatise the Water companies. Stop all government regulation of Water now!!!!

APPENDIX 2: Street Prices, June 4, 1993 Chicago, IL, North Shore Area -Typical Naya, \$1 US per liter.

Springdale Township, Pennsylvania \$5 per 1000 gallons.

APPENDIX 3: International Legality Update

In Europe W is becoming something of a threat real fast. I myself have witnessed tourists trying to score W desperately the last couple of hot days here this week. As of yet there is no shortage of W, but I've heard that in Greece it's getting scary.

The police are starting to recognise this situation and have called for more forces on the street, weeding out W-pushers and sentencing them to severe punishments straight away!

APPENDIX 4: Contributors

Kevin Jernigan(jkevin@mercury.aichem.arizona.edu)Ray Mialki(rmlg+@andrew.cmu.edu)Steve J. Quest(squest@moonwatcher.avrtech.com)Peter McDermott(peter@petermc.demon.co.uk)Christopher K. Koenigsberg(ckoenig@kimbark.uchicago.edu)

And to all you whose headers got chopped, my apologies. CB $_$

From Aliquotes Volume V Number vii July/97 (rogerb@microsoft.com) We present here actual excerpts from the Material Safety Data Sheets for water.

J. T. BAKER INC. 222 RED SCHOOL LANE, PHILLISBURG, NJ 08865

WATER EFFECTIVE: 05/30/86 ISSUED: 06/20/86 ************************ SECTION 1 - PRODUCT IDENTIFICATION PRODUCT NAME: WATER FORMULA: Н2О FORMULA WT: 18.00 CAS NO: ZC0110000 COMMON SYNOMYMS: DIHYDROGEN OXIDE PRODUCT CODES: 426,4219 ****** SECTION 5 - HEALT HAZARD DATA *********************** TLV, STEL, AND PEL HAVE NOT BEEN ESTABLISHED FOR THIS PRODUCT. TOXITY: LD50 (IPR-MOUSE) (G/KG) - 190 LD50 (IV-MOUSE) (G/KG) - 25 CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO EFFECTS OF OVEREXPOSURE NO EFFECTS OF OVEREXPOSURE WERE DOCUMENTED TARGET ORGANS NONE IDENTIFIED MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE NONE IDENTIFIED ROUTES OF ENTRY NONE IDENTIFIED EMERGENCY AND FIRST AID PROCEDURES IF SWALLOWED AND THE PERSON IS CONSCIOUS, INGESTION: IMMEDIATELY GIVE LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION. INHALATION: IF A PERSON BREATHES IN LARGE AMOUNTS, MOVE THE EXPOSED PERSON TO FRESH AIR. GET MEDICAL ATTENTION.

EYE CONTACT: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. SKIN CONTACT: IMMEDIATELY WASH WITH PLENTY OF SOAP AND WATER FOR

AT

LEAST 15 MINUTES.

SECTION VII - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE TAKE UP WITH SAND OR OTHER NONCOMBUSTIAL ABSORBENT MATERIAL AND PLACE INTO CONTAINER FOR LATER DISPOSAL.

DISPOSAL PROCEDURE

DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL

ENVIRONMENTAL REGULATIONS

SAF-T-DATA(*) STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

SPECIAL PRECAUTIONS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA. WATER IS CONSIDERED A NON-REGULATED PRODUCT, BUT MAY REACT VIGOROUSLY WITH SOME SPECIFIC MATERIALS. AVOID CONTACT WITH ALL MATERIALS UNTIL INVESTIGATION SHOWS SUBSTANCE IS COMPATIBLE. PROTECT FROM FREEZING. ++++

=4. BIOLOGY

В_

From: "Bruce P. Dunn" <bpdunn@home.com> Did you hear about the biologist who had twins? She baptized one and kept the other as a control. B

From: "Rob Slade, doting grandpa of Ryan and Trevor" <rslade@sprint.ca> By the same token, this business of genes outside of the normal sequence

By the same token, this business of genes outside of the normal sequence is difficult. A great deal of genetic material appears to have no particular purpose. There is the standard joke that has geneticists finally decode some of this material, only to find that some great long string of codons reads "This space intentionally left blank." B

From: "Alexander Vinogradov" <aevin@link.cytspb.rssi.ru> Biology (or natural philosophy?)

Studying flatworms, the student observed <in a limping translation>: "There gut exists, and the duct to gonad leads. What else for happiness one needs?" Another observation:

В

"The parasites die (only) on the corpse."

A joke that is too often used during a lecture on conferences: The speaker shows a gen (3000 times the characters G,A,C and T) and says: "People sitting at the back may not be able to read all of this, but the point is..."

(From the column of Ronald Plasterk in Intermediair, december 4, 1997) ${\tt B}$

From Aliquotes Volume V Number x October/97 (rogerb@microsoft.com)
Okay, let me see if I've got this right, _Bioinformatics_ is the science
of
taking sequential, structural and functional data, developed through
years
of tedious and painstaking experimentation by _other_ hard-working
scientists, manipulating the hell out of it with a series of
statististical
and computational algorithms, in the hope of presenting grand theories
which you will never have to test yourselves but which will have to be
verified by _other_ scientists at a later date.

Cool. Where do I sign?

From Aliquotes Volume V Number xi September/97 (rogerb@microsoft.com) I think that we should salute the dedicated scientists who spend every waking hour slaving at the bench and in the clinics, working like dogs, neglecting single-mindedly in pursuit of the answer to the causes of Obsessive-Compulsive Disorder. B

From Aliquotes Volume V Number xi September/97 (rogerb@microsoft.com) A word of warning to those who are surfing the Internet and who may fall into this trap... when you see a posting for "FREE XXX", this is _NOT_ an advertisement for a group of rebels in support of a free state for women with Kleinfelter's Syndrome B

From: oberon@vcn.bc.ca (Doug Skrecky) A Short History of Medicine

I have an earache:

2000 B.C. -Here, eat this root. 1000 A.D. -That root is heathen. Here, say this prayer. 1850 A.D. -That prayer is superstition. Here, drink this potion. 1940 A.D. -That potion is snake oil. Here, swallow this pill. 1985 A.D. -That pill is ineffective. Here, take this antibiotic. 2000 A.D. -That antibiotic is artificial. Here, eat this root.: B

From: bsb3@cornell.edu (Seth Bowden)

In neurobiology lecture today, the professor mentioned that much of the data we were seeing was culled from studies of leeches. He said, "Now, a lot of you may think leeches are nasty creatures. The people working with these creatures are quite fond of them, however. It is also reported that the leeches often become attached to the researchers."

From: (Robert Grove) rgrove@pogo.GPID.TEK.COM A seventh grade Biology teacher arranged a demonstration for his class. He took two earth worms and in front of the class he did the following: He dropped the first worm into a beaker of water where it dropped to the bottom and wriggled about. He dropped the second worm into a beaker of Ethvl alchohol and it immediately shriveled up and died. He asked the class if anyone knew what this demonstration was intended to show them. A boy in the second row immediately shot his arm up and, when called on said: "You're showing us that if you drink alcohol, you won't have worms." В_ From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection From: Joao Batista(fbatista@cc.fc.ul.pt) Biologists do it with clones. Molecular biologists do it with hot probes. Zoologists do it with animals. Genetists do it with sick genes. Geneticists Do Nearly Animalistically (DNA). В From: David Smillie: A little neurological put down: You've only got two neurons--and one of them's inhibitory. В Drew's Law of Highway Biology: The first bug to hit a clean windshield lands directly in front of your eyes. В Enzymes are things invented by biologists that explain things which otherwise require harder thinking. -- Jerome Lettvin В From: johnston@mhc.uiuc.edu (SJANNA JOHNSTON) Biology exam: Create life . Justify your answer. В THE HARVARD LAW Under the most rigorously controlled conditions of pressure, temperature, volume, humidity, and other variables the organism will do as it damn well pleases. В

From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just) OLD BIOLOGISTS never die, they just ferment away B_

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From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines)
Life is a sexually transmitted disease
Life is anything that dies when you stomp it!
Support bacteria - it's the only culture some people have!
Thesaurus: ancient reptile with an excellent vocabulary.
В
Much of what we know about man is derived from the study of sweet peas
and
a species of vinegar fly.
В_
From: stuart.andrews@stanilite.com.au (Stuart Andrews)
Q. What does DNA stand for?
A. National Dyslexics Association
B_
From: mwriggle@uoguelph.ca (Michael Wrigglesworth)
There was this biologist who was doing some experiments with frogs. He
was measuring just how far frogs could jump. So he puts a frog on a line
and says "Jump frog, jump!". The frog jumps 2 feet. He writes in his
lab book: 'Frog with 4 legs - jumps 2 feet'.
Next he chops off one of the legs and repeats the experiment. "Jump frog
jump!" he says. The frog manages to jump 1.5 feet. So he writes in his
lab book: 'Frog with 3 legs - jumps 1.5 feet'.
He chops off another and the frog only jumps 1 foot. He writes in his
book: 'Frog with 2 legs jumps 1 foot'.
He continues and removes yet another leg. " Jump frog jump!" and the
frog somehow jumps a half of a foot. So he writes in his lab book again:
'Frog with one leg - jumps 0.5 feet'.
Finally he chops off the last leg. He puts the frog on the line and
teels it to jump. "Jump frog, jump!". The frog doesn't move. "Jump
frog, jump!!!". Again the frog stays on the line. "Come on frog,
jump!". But to no avail.
The biologist finally writes in his book: 'Frog with no legs - goes
deaf'
B_
From: Aliquotes v.i (journal) (rogerb@microsoft.com)
                                   NEW
                          From Pair-Docs Pictures
             They killed his grant and they took away his lab.
                      Now, he's out for revenge...
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Mild lab worker, Zeno Puss, turns savage, becoming a specialist in amphibious assault...



You can *Rana* but you cannot hide from...



"It's a BLASTula..." Roger Egg-case, Taddlecreek Tattler

"...metamorphic in scope..."

Look for the soundtrack to

The Toad Warrior With music by Tina TAdpole

В

From: Aliquotes iv.i (journal) (rogerb@microsoft.com) IN THE SWIM OF THINGS

It was a banner day in the world of sport as the woman who won gold for Canada at the 1985 Winter Olympics in Synchronized Freestyle 4x100m Individual Relay, set a new mark in the swimming world. Famed Fay Kloried set the world on its ear by being the first to be succesfull in a tripple crossing of the Ion Channel off the coast of Greece.

When asked to explain this stellar feat, Ms. Kloried simply replied, "I stayed with the current and rode the gradient." Ms. Kloried stated that she

next planned to take on a double crossing of the Kalseum Channel, which has

only been accomplished by one other swimmer, Iona Fore. B_______A women who married for the fourth time appeared to be a virgin. She explained to her surprised new husband: "My first husband was a homosexual, the second had a weak heart and died during the wedding night. The Third was a gen therapeutist who kept telling me how good it would be if it would work. B

From Aliquotes iv.v (journal) Something tells me that no matter how good a series of experiments on reproductive technologies, the paper written about the work will never be described as seminal. B______

From: callista@phidar.traveller.com A trio of biologists were studying fruit flies and attempting to do microscopic observations. The first put his scalpel to work under the microscope and began to slice. He successfully chopped the wings off.

The second biologist began to work, and with a bit more effort managed to slice off the head from the body. Then the third one went to work, but nothing visible happened.

His two colleagues looked at him in astonishment. "What are you going to cut off?" one of them asked. His response was:

"You said to cut the fly, so this one won't be having children any more!"

From: Pam Baker <pambaker@umich.edu> A biology professor was addressing his class, wanting to see if they'd read the assigned text. He asked Miss Smith to stand. She does.

Professor: Miss Smith, what part of the human body increases ten times when excited?

Miss Smith blushes and hesitates and giggles.

В

Proessor: Miss Smith, please sit down. Miss Jones, please stand and tell me if you know what part of the human body increases ten times when excited.

Miss Jones: Yes, Professor. It's the pupil of the eye.

Professor: Very good. Thank you Miss Jones, you may sit down. Miss Smith, will you please stand again. (She does) I have three things to say to you.

- 1. You have not done your homework
- 2. You have a very dirty mind.
- 3. You're in for a big disappointment.

B_

From: sbaker@oro.net (Steve Baker) Dear Dr. Science: In order for people to have babies, the female egg has to be fertilized by the male sperm. How does the sperm get to the egg? "It hitchhikes. There are small arteries (or highways if you will) in the man's urethra. Small foreign bodies (or cars, if you will) pull over and pick up these little spermatozoans (Latin for 'tiny hitchhikers') then drive over the speed limit as fast as possible before the natural acids in a woman's body (the highway patrol, if you will) pull the sperm over reckless driving. ONce they get to the ovum (Latin for garage) they get out of the car, turn out the lights, lock up, take off their shoes and watch ΤV until they fall asleep. This is where babies come from: small suburban ranch-style homes hidden deep in a woman's body. I hope I've answered your question. Good luck on your date tonight." Dr. Science --- http://www.drscience-com/ He knows more than you do! В

From: Suzanne Sarlette/Gerald Pearson <suegerry@mut1.muscanet.com> Several years ago, I read something along these lines on the back page of Chemical and Engineering News, in the "Postscripts" column.

New embryological research on salamanders has shown that when the optic nerve is connected to the anus at a very early stage of development, the organism usually develops into an animal with hindsight. Some of the animals show symptoms of tunnel vision. B

From: Mark Noworolski <noworol@eecg.toronto.edu>
A friend of mine studying medicine once told me this story.

Apparently one day there was a lab where all the students were learning how to identify various cells. As samples they were using tissue scraped from the inside of the mouth.

One girl was having terrible difficulties figuring out what kind of cell she was seeing under her microscope--eventually she called over the teaching assistant to identify it. From: George Mayhew <mayhew@midgaard.genetics.wisc.edu> http://www.genetics.wisc.edu/staff/mayhew/ One truth in life is the need to laugh at difficult situations. Humour can make a difficult task more enjoyable. I think that this group (news:bionet.genome.autosequencing) is uniquely suited to understand the repetitious nature of high throughput sequencing. So I'm passing along a piece of humour constructed by one of our lab technicians. Feel free to pass it along to your technicians or anyone else who might appreciate the inside humour. (with sincere apologies to the musical group Chumbawumba) "Labgrumping" (to the tune of "Tubthumping" by Chumbawamba) I take gels down, and put 'em up again, and I run 'em for another round. I take gels down, and put 'em up again, and I run 'em for another round. Sequencing DNA, sequencing DNA. We wash the plates again, we pour the gels again, we wash the gels again, we flip the combs again, Then we retrack and extract all the gel files, then we analyze and dump all the sample files. No life for me, life for me, life for meeee.... I take gels down, and put 'em up again, and I run 'em for another round. I take gels down, and put 'em up again, and I run 'em for another round. Adapted by:

Guy Peyrot

E.coli Genome Center gpeyrot@genetics.wisc.edu B

From: "rusty" <rustysmith@cyber-wizard.com>
A biologist of world renown
says a chromosome's gender is found
by being so bold
as to take a good hold
of it's genes...and then pull them down.
B_______

ODE TO A CLONE

By John Scalzi (www.scalzi@aol.com)

(This originally appeared in America Online's "Howdy" area on March 6th.)

Oh clone, my clone, how can you bear it To exist knowing you have only one parent? No zygote you, when haploid cells met You were produced with a full chromosome set. And now I can see that you are confused To discover your genes have arrived slightly used. To answer your questions is the aim of this poem You who are like me, my clone, oh my clone.

You were not produced from between sweaty sheets In fact, you arose from cells scraped off of my cheek. Your genes gently placed in an egg we provided And then shocked with a current until they divided. You sat there a while till it was time to fish That thing that was you from that petri dish. (And though it may seem churlish at this time to mention, we suspect that the dish had post-partum depression).

Oh clone, my clone, don't feel angst or feel grief Because the genes that you have are not bought but are leased. You have no mother, but that's no impediment Indeed, you've bypassed the whole Complex of Oedipus. To your one parent you can always relate To do otherwise is a form of self hate. Who can tell us apart when we answer the phone? No one at all, my clone, oh my clone.

Think of all the experiences we'll have! (That is, once they allow you to go from the lab). I'll take you to places that I've already been So you can see them once more for the first time again. Let's go to work, where I think we will find That we'll get twice as much done in just half the time. And should we play tennis, our opponents have troubles As they must play singles, but we shall play doubles.

Oh clone, my clone, I see you are vexed By ethical issues admittedly complex. If you are my clone, are you wed to my wife? And would having two husbands cause marital strife? Suppose that we clone her? Then what would that be? Bigamy, polygamy, or polyandry? Oh, the guilt I would have would go to the bone If I accidentally slept with your wife, oh my clone.

Perhaps it would be better if we lived all our days Away from each other -- and go separate ways. I would stay here and live with my mate And you would take yours to some other state Perhaps to Alaska, with Northern Lights blue To live off the land, in a hut or igloo. And with a deep sense of pride all my friends would be shown Many pictures of your house, a Nome clone dome home.

Oh clone, my clone, you impressive feat The one person born with no help from gametes. When you have troubles getting yourself to sleep Do you think on your compatriot, Dolly the sheep? It's true that we both share our genetic information But I know that your mind performs its own peregrinations. In the end I am me, and you are just you alone You are your own person, my clone, oh my clone. B

Keith Bostic <bostic@bostic.com> MARY HAD A LITTLE FLOCK

Mary had a little lamb, then two and three and four. And each a perfect replica of all that went before. The followed her to school one day which was against the rule. It made the children laugh and play to see her flock at school. The teacher turned the woolies out to wait the bell at four. But when the children tried to leave more sheep had jammed the door. "What makes those lambs love Mary so?" The eager children fish. Says teacher, dialing 9-1-1: "She's got the Petri dish."

Toronto Sun B

From: Randy Willis <willis@gandalf.psf.sickkids.on.ca>
(from bionet.microbiology--by someone signing as Yersinia)

(1) A Mad Scientist Christmas

Twas the night before Christmas and all thru my house, Not a specimen was stirring, not even a louse. The test tubes were capped and the rat cages closed, The mold cultures fuzzy, the mice in repose. The oven kept warm the ebola and pox, I still need to locate my husband's clean socks... But that has to wait till tomorrow, I know; My buggies still need that much more time to grow.

When from the kitchen came a massive explosion, I leapt from my bed in perpetual motion. Grabbing my lab coat I pulled on my pants, Struggling into them a sick sort of dance. With fury and haste I put on a shirt, Running out of the bedroom on feet black with dirt. Buttoning my lab coat and donning a mask, I ran into the kitchen holding an Erlenmeyer flask.

I nearly passed out when the man who I saw, dressed in containment gear sealed without flaw, Held high a huge sack with his arm stiff and straight, I could tell he must have a hard time with his weight. Through the mike from his suit he said without pause, "Ho Ho Ho, Merry Christmas, I'm Hanta Claus!" Over his shoulder he hefted the sack, We walked into the living room, I offered a snack. He took it and smiled, placed the sack by my bench, Instantly I noticed the Clostridium stench. Brimming with joy, I cried out with glee, "Did you bring all of these germies for me?" "Oh yes, " said Hanta, "I must show propriety; By bringing you microbes, I'm saving society. "You are the only one who loves these diseases. Therefore I'm glad to oblige who it pleases."

Delirious with excitement I sat by his side While he gave me a year's stock of microscope slides, And pasteur pipettes, drug resistant bacteria, Such as staph, strep and cultures from the genus Neisseria.

The gleam in my eyes caused the house to be lit, The moment he gave me a gram-staining kit, Clostridium tetani, perfringens and sporogenes, Salmonella typhi and Streptococcus pyogenes! Plus viruses known to produce hepatitis, Herpes, and rabies, yellow fever and meningitis! But that was not all, he had parasites too, Plasmodia, trypanosomes and schistosomes true! Tapeworms and roundworms, plague-carrying fleas. How sincerely generous, Hanta did aim to please!

At long last he said he must now go away, His sled was experiencing radioactive decay. "Thanks for the presents," I said, shaking his hand, "They'll keep me off the streets, you understand."

Hanta Claus smiled and bid me goodnight, Shouting "Merry Christmas to all, and to all a good blight!"

(2) Hark! The Streptococcus Brings (Melody: "Hark! The Herald = Angels Sing") Hark! the Streptococcus brings Strep sore throat to all who sing, Chloraseptic doesn't cure it Other people's sneezing lures it. If the strep bug has a virus Scarlet fever then arises, Cross reaction with the heart Causes it to come apart, Hark! the Streptococcus totes, Toxin and fire to all it smotes.

Pneumonia makes you cough and wheeze, Mucus fills the lungs with sleaze A viscous greenish oozing cloak, That causes you to gasp and choke Without water you can drown If you breathe the strep germ down Hark! The Streptococcus breeds The misery of a bad disease

O Humid Night Anopheline mosquitoes Are circling you in the hope of a meal. She takes a bite, saliva from her mouthparts Drool parasites which you can't see or feel

Your brain can get sick, You will have a coma After the rage and the headaches have passed You're veggie soup, home to protozoa, Mosquito lands, time to go home at last..

Fall on your knees, Pale, burning with fever Plasmodia Are in your blood, were in your spleen Malaria There's no real cure, just in your dreams...

(4) Away in a Test Tube (Melody: "Away in a Manger")

Away in a test tube My plague cultures grow On nutrient agar Mankind's greatest foe It's easy to grow them If one does it right At thirty-five Celsius All day and all night Once they are ready You can let them go To sicken the masses With pus-filled buboes. "Van der waals with boughs of holly..." В From: awillis@ix.netcom.com (al willis) Orig. Al Willis This Salk by the name of Jonas Promised wealth and a title and bonus To these monkeys called Rhesus Who agreed, "You can lease us," But don't come on strong like you own us." В_ From: awillis@ix.netcom.com (al willis) Orig. Al Willis From bionet.general Thu Apr 27 10:06:46 1995 The transplant had finally started. The incision was carefully charted. The dog was just sliced, And the chicken was spliced, And the dog is now chicken-hearted. В From: awillis@ix.netcom.com (al willis) Sal is feared by all of us, But he's a decent fella. His label is a handicap: His name is Sal Monella. -- Al Willis B_ From: Ibelgaufts@vms.biochem.mpg.de (H Ibelgaufts) Bacterial Genetics When studying bacterial mating Lederberg found it frustrating to make things look nice and do everything twice he invented replica plating Reassociation kinetics: A scientist studying Cot and to him it meant rather a lot the lines that he plotted were very much dotted but the referee thought it was Rot

B_

From: mazda@basic2.kpu-m.ac.jp (Osam Mazda) A Scientist thought of a theory on lymphocyte after drinking overnight The theory became complicated more and more until finally nobody understood it any more And the reality was not also in his sight B_ From: peterk@sci.kun.nl (Peter Klaren) A couple of years ago I bought The Biochemist's Songbook. It's great! It's got all major biological pathways described and set to the tune of popular (folk) songs. Allright, I'll give an example.... *** Protein Synthesis *** (tune: My Bonnie Is Over The Ocean) The primary sequence of proteins Is coded within DNA On the sense strand of the double helix coiled antiparallel way (chorus:) Intron and exons changes are posttranscriptional, and all Glycosylations Don't alter such basics at all (... and so on for about 15 stanzas. The synthesis of proteins from DNA is a complex pathway....) One of my favourites: *** The Michaelis Anthem *** (tune: The Red Flag) The substrate changed by an enzyme Initially, in unit time Varies, if not in excess With substrate concentration, [S] If enzyme concentration's low And reaction back from product's slow Then if we choose a steady state Velocity and [S] relate. This relationship can be derived As Briggs and Haldane first contrived: The unbound enzyme, [E], we guess Is [E0] (total), less [ES] k1[S][E] gives [ES] formation and k2[ES], dissociation And [ES] gives the product, P, At a rate that's [ES] times k3

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When [ES] is at the steady state
These terms are all seen to relate
([E0] less [ES]) times k1[S]
Equals (k2 + k3) times [ES]
Now the maximum velocity
is k3[E0], (or big V)
These terms can be manipulated
If one more definition's stated
Define as Km (just for fun)
(k2 + k3) on k1
And note that v (velocity)
Is always [ES] times k3
Then rearranging these equations
We get the final rate equation
V times [S] on Km + [S]
is v (initial) - more or less
OK, one more taster....
*** The Respiratory Chain *** (tune: Battle Hymn of The Republic)
My eyes have seen the glory of respiratory chain
In every mitochondrium intrinsic to membranes
Functionally organised in complex sub-domaines
Where electron flow along
(chorus)
Glory, glory respiration
Glory, glory respiration
Glory, glory respiration
Where electrons flow along
(etc., etc.)
В_
From: ez005881@dale.ucdavis.edu (Noel Fong)
There was once a cloner named Hector,
who had problems in his private sector,
his wife was depressed,
'cos his genes weren't experessed,
for lack of a functioning vector!
B_
From: mini-AIR
A biology prof name of Caster
Had a project she knew would outlast her,
For it was most complex,
Aimed at changing the sex
Of drosophila melanogaster.
        --Don Homuth
Finally, a try at Don Homuth's effort might give, allowing
(illegally)an extra unaccented syllable at the end:
A biology prof name of Cast-
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er who's project she wanted to last Took an idea complex Aimed at changing the sex Of drisophila melanogaster. -- Jay M. Pasachoff [Based on a TRUE event that occurred in 1965, when I was a lab assistant at North Dakota State University:] The zoology coed did squirm At the lab quiz that ended the term. When asked "What are tadpoles?", (In the specimen bowls), She wrote down "They are elephant sperm." --David Hormuth A research professor (Renee), Cloned people from ape DNA. The project went well, Anyone can tell, 'Cause they're members of congress today. --Frank Weisel Montgomery County Public Schools, Rockville, MD B_ From: Hugh Baker <drhugh@idirect.com> What I Learned in Food Micro Bacteria have these flagella That spin like a little propella. They'll swim for a while Up a river of bile To your liver, which makes you turn yella. Entamoeba Nasty little protozoa Living in my lower bowel Make my gut like Krakatoa Paper's no good: use a towel! В From: Neve@ecol.ucl.ac.be (Gabriel NEVE) Behold the mighty dinosaur, Famous in prehistoric lore, Not only for his power and strength, But for his intellectual length. You will observe from these remains The creature had two sets of brains; One in his head, the usual place, The other at his spinal base. Thus he could reason a priori As well as a posteriori. No problem bothered him a bit He made both head and tail of it. So wise was he, so wise and solemn, Each thought filled a spinal column. If one brain found the pressure strong

It passed a few ideas along; If something slipped his forward mind, 'T was rescued by the one behind. Source forgotten. В From: Aliquotes iv.xi (journal) (rogerb@microsoft.com) Foment of Ferment By Wm. Shakespipette They would heva bleached hereafter. There would have been a time for such a growth. E. coli and E. coli and E. coli swirls in his petty flask from day to day to the last sample of recorded density And all our protocols have lighted fools the way to frothy death. Out, out brief culture! Life's but a tepid incubator, a poor plater that dabs and streaks his colony upon the stage and then is grown no more; it is a thesis told by an idiot, full of sound and fury signifying nothing. Thou comest to mouth pipette; thy inoculum quickly. CB From: Aliquotes iv.xii (journal) (rogerb@microsoft.com) THE NIGHT BEFORE DEFENCE (or A Visit From Citrate) Twas the night before defence, when all through te lab Not a gel box was shaking, with stain or with MAb; The columns were hung in the cold room with care, In hopes that my protein, I soon could prepare; The post-docs were nestled all smug in their beds, While extracts of barley muddled their heads; With the tech in the suburbs and PI the same, I had just settled down to another video game. When out of the fridge there arose such a clatter I sprang from the terminal to see what was the matter. Away to the cold box, I flew like a flash But the stench was o'erpowering and I threw up beef hash. The mould on the dampest of walls were cold Had the softness of kittens only seven weeks old; When what to my view, a thing I despise But a half eaten sandwich and four tiny mice; With a little old scientist, so lively and galling, I knew at a glance was Linus Pauling. More vapid than undergrads, his charges they came, And he whistled, and shouted, and called them rude names. "Now, Watson! Now Francis! You strange little modellers! On Luria! On Bertani! You stupid old broth'lers!
To the top of the bench, to the top of the wall! Purify! Purify! Purify all!"

As dry heaves before the commitee meeting, bend A young student's body and his colon distend, So up their earlobes, acytes they grew, With a sack full of antibodies, their skin turning blue.

And then, for a second, I heard from the 'fuge, An unbalanced rotor spinning something too huge. Where I put down my hand, to better hear the sound, Came the snapping of sparks from a wire sans ground.

Pauling's hair was al wavy, and I thought I must be sick `Cause the curls in his hair looked just like a helix. On an arm load of oranges, he started to snack An I recalled his fetish with citrate, the quack.

His eyes were all wrinkled, but the cheeks were yet red; Not too shabby for a man who was several years dead; The leer of his smile was just a tad scary And the snow on his rooftop made his head yet quite hairy;

The end of a pipette, he held in his teeth And a pile of kimwipes lay around his big feet. He held a small vial of something quite gel-ly, A mercaptan no doubt, for it make him quite smelly.

He changed `round the columns, adding to the confusion And I laughed to spite my own paranoid delusion. A wink of his eye and a rotation of his head, Told me whatever I drank would soon leave me dead.

He spoke not a word, just buggered up my work, And dried all my resins, that silly old jerk. And separating his middle finger from first, fourth and third, That crazy, old bugger, just flipped me the bird.

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В_
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From: Philip Clarke <clar0318@flinders.edu.au>
Trying to determine the structure of a protein by UV spectroscopy was
like
trying to determine the structure of a piano by listening to the sound it
made while being dropped down a flight of stairs.
-- Francis Crick [British molecular biologist, 1916-]
B______

From: edftz@aol.com (Ed Fitzgerald) EVOLUTION

[A] curious aspect of the theory of evolution is that everybody thinks he understands it. -- Jacques Monod (1910-1979) On the Molecular Theory of Evolution (1974)(French Biochemist, Nobel Prize Medicine 1965) Orgel's Second Rule: Evolution is cleverer than you are. -- Francis Crick (British molecular biologist, 1916-) quoted by Daniel C. Dennett in _Elbow Room_ (1984) Evolution is a tinkerer. -- Francois Jacob (French biochemist 1920-)"Evolution and Tinkering" (1977) From: kriman@acsu.buffalo.edu (Alfred M. Kriman) A hen is only an egg's way of making another egg. -- Samuel Butler _Life and Habit_ (1877) В_ @A: Haldane, John Burdon Sanderson (British geneticist and writer, 1892-1964) @Q: He seems to have an inordinate fondness for beetles. @%: When asked late in his life whether his studies had taught him anything about God that he might care to share. @%: JBS Haldane was an atheist. @%: Beetles comprise about a quarter of all known species. @Poster: Dan Case (V140PXGT@ubvms.cc.buffalo.edu), who has had correspondence published in _The New Republic_, and others. PB_ From: gt4495c@prism.gatech.edu (Giannhs) Physics-envy is the curse of biology. -- Joel Cohen В From: Neve@ecol.ucl.ac.be (Gabriel NEVE) "The death of the butterfly is the one drawback to an entomological career" - Margaret E. Fountaine (1892) В_ From: Ian Ellis <ian@iglou.com> "The species of whale known as the black right whale has four kilos of brains and 1,000 kilos of testicles. If it thinks at all, we know what it is thinking about." Jon Lien, "Whale Professor" at St. John's University, Newfoundland, speaking to the Norwegian Telegram Agency (spring 1995). В "Science has proof without any certainty. Creationists have certainty without any proof." -- Ashley Montague

From: eclayton@trincoll.edu (Edward Clayton)

В

"Louis Pasteur's theory of germs is ridiculous fiction". --Pierre Pachet, Professor of Physiology at Toulouse, 1872 B From: eclayton@trincoll.edu (Edward Clayton) "The abdomen, the chest, and the brain will forever be shut from the intrusion of the wise and humane surgeon". -Sir John Eric Ericksen, British surgeon, appointed Surgeon-Extraordinary to Queen Victoria 1873. В From: eclayton@trincoll.edu (Edward Clayton) "If excessive smoking actually plays a role in the production of lung cancer, it seems to be a minor one." -Dr. W.C. Heuper of the National Cancer Institute, as quoted in the New York Times on April 14, 1954. В From: eclayton@trincoll.edu (Edward Clayton) "For the majority of People, smoking has a beneficial effect." -Dr. Ian G. Macdonald, Los Angeles surgeon, quoted in "Newsweek", Nov.18th 1963. B_ Every species of plant and animal is determined by a pool of germ plasm that has been most carefully selected over a period of hundreds of millions of years. We can understand now why it is that mutations in these carefully selected organisms almost invariably are detrimental. The situation can be suggested by a statement by Dr. J.B.S. Haldane: "My clock is not keeping perfect time. It is conceivable that it will run better if I shoot a bullet through it; but it is much more probable that it will stop altogether." Professor George Beadle, in this connection, has asked: "What is the chance that a typographical error would improve Hamlet?" - Linus Pauling (in "No more War!") В_ From: scotth9999@aol.com (ScottH9999) "[Louis Pasteur's]... theory of germs is a ridiculous fiction. "How do you think that these germs in the air can be numerous enough to develop into all these organic infusions? If that were true, they would be numerous enough to form a thick fog, as dense as iron." --Pierre Pochet, Professor of Physiology at Toulouse, "The Universe: The Infinitely Great and the Infinitely Small" (1872); quoted in "The Experts Speak: The Definitive Compendium of Authoritative Misinformation", ed. by Christopher Cerf and Victor Navasky, (NY: Pantheon Books, 1984), p. 30. В

From: <xanthus@qni.com>

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Sex is a relatively recent addition to the dance of life. For more than
2,000,000,000 years, asexual reproduction was the rule. You know, if you
were a creature, you just separated into two clones.
   -- Walters, Mark Jerome
                               The Harper Book of Quotations. Third
Edition
В
From: eugenio@ci.uminho.pt (Eugenio Campos Ferreira)
"The best model of a cat is another cat or, better, the cat itself" -
N.WIENER
В
From: sjb8502@ucs.usl.edu (Bienvenu Jay )
"People are DNA's way of making more DNA." - Edward O. Wilson, 1975
B_
From: milligan@smartlink.net (Michael M Milligan)
Dr. Francis Gunther, known to his peers as the father of pesticide
residue chemistry, once said regarding humankind's ever increasing
ability to detect infinitestimal quantities of pesticides in food and
the paranoia that attends it in the minds of some:
"Yesterday we looked for little bits of a few things in some things;
today we look for less of more things in anything; tomorrow we will
look for nothing in everything."
++
=4.3 BIOLOGY PUNS
В
From: SWISH3303@aol.com (Robert Ohabim)
Q: what do you call the leader of a biology gang?
A: The nucleus
В
From: saz@xxxjdal.demon.co.uk (Sarah Dalrymple) [remove the xxx to reply]
"A bloke walks into a pub, and asks for a pint of Adeninetriphosphate.
The barman says "That'll be 80p (ATP) please!"
(note 100p = £1, and ATp is short for Adeninetriphosphate, but you
already knew that :))
В
From: Philip Clarke <clar0318@flinders.edu.au>
Q: Why are there no asprin in the jungle?
A: Because the parrots-eat-them-all.
В
From: "Heather Thompson" <Hpthompson@btinternet.com>
Two guys, called Joe and Dean, were fishermen. Every day, before dawn,
they set out to sea with their crews, coming home late in the evening
with
their catches of fish. Now, there was one particular area where they
would
cast their nets, because of a particular type of fish which was to be
found
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there. This was a mutant type of fish which had no hearing apparatus.

These rare fish fetched a high price from the local marine biologists who liked to study them. Now, the area where Joe and Dean caught these fish was very difficult to reach, and involved long hours of sailing through treacherous waters, which Joe didn't like at all. Well, one week, Joe didn't turn up for work at all, and when one of his crew went to Joe's house to find out what was wrong, Joe said, "I don't know what's wrong with me. I'm feeling really tired and lethargic. I have no energy at all." "Don't worry," said the crewman, "Dean has been putting all his catch of those mutant fish through as yours, so you will still have some money to pay our wages this week." "Oh, no," said Joe. "That means that I will have to get over this feeling of exhaustion and go out to that awful bit of

the sea next week, and all because -

I OWE DEAN DEAF FISH IN SEA." (Iodine deficiency)

В_

From: David Stillman (david.stillman@qmserver.hci.utah.edu)
Some two hybrid humor:

I was grading exams, and a student referred to the components of a two hybrid screen as "bait" and "pray." There may be some truth to that! B_____

From: wall@ti-csl.csc.ti.com (Raj Wall)

I heard this morning that veterinarians are beginning to use on household animals expensive upscale diagnostic equipment previously only available for humans, including CAT and PET scanners. B

From: "Pierre Abbat" <phma@trellis.net>
Some genetic researchers were studying Acinonyx jubatus to find out why
he had a high abnormal sperm count. They gave a group of these animals
a histocompatibility (tissue-type) test.

"This is singular," observed one to the other. "Every one of these cats gave the same answers."

"Aw," drawled the other, "they're all a bunch of cheetahs B

From: Gwynt (author) (http://www.geocities.com/Hollywood/Hills/9609/)

Q: How so you call a member of the finacial staff of the faculty of Biology? A: A Buy-ologist.

Q: Organ transplantation in the future. Brain transplantations are possible between relatives (immunological advantage). Father dies and donates his brain to his daughter. How do you call such a donor father? A: You call him Brain-dad. Windows 95 has a program option to index candybars: the Mars explorer. Do you know why dr. Frankenstein sometimes smoked knees and elbows? He just liked to smoke joints. You learn your whole life. When you were young you went to school. But even in the grave the learning goes on, because your head goes back to skull. B______

From: Matthew K Ashford <mkast9+@pitt.edu>
Q: What do you have upon a request for a mother's identification?
A: Cardamom!!
B

From: mini-AIR <marca@wilson.harvard.edu>
1997-02-10 Gene Story Contest Winners

Here are the winning stories submitted for our GENE STORY ANTHOLOGY contest. Contestants were asked to write short stories -- 100 words tops -- in which all nouns, verbs, adjectives and adverbs are the names of genes or gene products (such as "sonic hedgehog"). Some cheating was allowed -- it was okay to also use "him," "her," is, etc. Both winners will receive a copy of The Annals of Improbable Research specail Symmettra Issue (vol 2, no 3) autographed by scientist/supermodel Symmetra.

В

GOLIATH CAN CAST a GEM farther than BEN HUR. At its APEX, the fast OPAL HITA WHITE ANGEL. The ANGEL then BEAT a GALE. But the ANGEL'S BOSS, GOD, from AFAR CAN CALM the ANGEL. GOD FUSED the GAP between GOLIATH, the ANGEL, and their ILK.

The names in this story come from eight different species. (They are listed int the database Entrez, which is on the web at http://www3.ncbi.nlm.nih.gov/Entrez/.) Drosophila melanogaster: goliath ben white angel beat boss fused Homo sapiens: can CAST gem HuR fast GAP ILK CALM Mus musculus: Apex Haemophilus influenza: hitA galE Neisseria gonorrhoeae: opal Aspergillus niger: god Rattus norvegicus: AFAR

In the LOT behind CLUB ETHER-A-GOGO, AMY PRUNE'S BREATHLESS TORSO was SPLAYED in the GRAVEL. Her CROOKED-NECK was BENT over the STONEWALL in an ABRUPT TWIST. Her REFRINGENT THRONG was DISHEVELED and her WHITE-MOTTLED MINI UPTURNED. But no COPPER would ARREST the DERANGED KILLER-OF-PRUNE. No CELL would HOLD-UP that HEARTLESS SNAKE. For a SHOTGUN had REDUCED OSKAR'S BIG-BRAIN into STARDUST and FAINT-LITTLE-BALLS.

All the genes mentioned in this story are from Drosophila.

From: "Pierre Abbat" <phma@trellis.net>
>neural crest.....an oral hygiene product for the brain

Use with mental floss.

B___

B_

From: David den Ouden (D.I.denOuden@stud.biol.ruu.nl) After the homeotic - and oncogenes they recently discovered a new group of genes; the dancing genes, e.g. Gene Kelly

"Biology is the only science in which multiplication means the same thing as division." B

From: David den Ouden (D.I.denOuden@stud.biol.ruu.nl)
Q: How do you eat DNA-spaghetti?
A: With a replication fork.
B

Do molecular biologists wear designer genes? B_____

From: lozinski@netcom.com (Joe Cool)

MEDICAL TERMINOLOGY FOR THE LAYMAN

Artery	The study of fine paintings.
Barium	What you do when CPR fails.
Cesarean Section	A district in Rome.
Colic	A sheep dog.
Coma	A punctuation mark.
Congenital	Friendly.
Dilate	To live long.
Fester	Quicker.
GI Series	Baseball game between teams of soldiers.
Grippe	A suitcase.
Hangnail	A coat hook.
Medical staff	A doctor's cane.
Minor operation	Coal digging.
Morbid	A higher offer.
Nitrate	Lower than the day rate.
Node	Was aware of.

Organic-----Church musician. Outpatient-----Person who has fainted. Post-operative-----A letter carrier. Protein-----In favor of young people. Secretion-----Hiding anything. Serology-----Study of English knighthood. Tablet-----A small table. Tumor-----An extra pair. Urine-----Opposite of you're out. Varicose veins------Veins which are very close together. Benign-----What you be after you be eight. From: Santasam <Santasam@AOL.COM> ANTIBODY: against everyone ARTERY: the study of fine paintings BACTERIA: back door to a cafeteria BENIGN: what you be after you be eight BOWEL: letters like A, E, I, O, or U CAESAREAN SECTION: a district in Rome CARDIOLOGY: advanced study of poker playing CAT SCAN: searching for ones lost kitty CAUTERIZE: made eye contact with her COMA: a punctuation mark CONGENITAL: friendly CORTIZONE: the local courthouse D & C: where Washington is DILATE: to live longer ENEMA: not a friend ER: the things on your head that you hear with FIBRILLATE: to tell lies GENES: blue denim slacks HEMORRHOID: a male from outer space IMPOTENT: distinguished, well known LABOR PAIN: hurt at work MINOR OPERATION: somebody else's ORGAN TRANSPLANT: what you do to your piano when you move PARALYZE: two far-fetched stories PATHOLOGICAL: a reasonable way to go PHARMACIST: person who makes a living dealing in agriculture PROTEIN: in favor of young people RED BLOOD COUNT: Dracula RHEUMATIC: amorous SECRETION: hiding anything TABLET: a small table TERMINAL ILLNESS: getting sick at the airport TIBIA: country in North Africa TRIPLE BYPASS: better than a quarterback sneak TUMOR: an extra pair URINE: opposite of "you're out" VARICOSE: very close VEIN: conceited В

From: Aliquotes iv.v (journal) (rogerb@microsoft.com)

DR. NOAH BUDDY'S HANDY REFERENCE GUIDE TO SCIENTIFIC TERMINOLOGY

aminoacyl-----An -NH/sub2 that's a real jerk apical membrane-----That green bumpy stuff on the outside of a baby dill asymmetry-----Where you bury dead people beta-sheet-----Linen you only bring out for company CA/sup{2+} channel----The all-milk TV station chemotaxis-----A cab which provides drug therapy detergents------What women do when telling a guy to take a hike diglyceride-----what you scream out when trying to kill a glyceride hippocampus-----where hippos go to university. microtome-----An itty bitty book pachytene-----Adolescent elephants plastid-----Drunk prokaryote-----In favour of take-out food redox-----Rusty cattle taxol-----Liberal plan for increasing revenue B_ From: Aliquotes v.vii (journal) (rogerb@microsoft.com) You know you weren't prepared for the exam when you gave the following definitons: stereochemistry.....having the correct speakers for your CD player free radical.....a political movement

From: Aliquotes iv.xi (journal) (rogerb@microsoft.com) I Don't Re-Membrane, I Don't Recall

For many, to understand membranes is to understand key biological and biochemical determinants of life and because of this they are real pains in the butt to work with (Murphy, 1973). In an effort to assist anyone in their studies of membrane biochemistry, we have formulated this brief list of some of the terms across which they will come and our own special definitions of these terms.

PIP2.....finding your boss at the next urinal
micellar.....where I stayed when the tornado hit
palmitoyl.....what your hands secrete when you're nervous
polar head group.....Inuit psychiatrists
amphipathic.....the ability to hike both ways
bilayer.....yeh, like, I'm gonna touch that one
lecithin.....fatter
porin.....what it is when it's rainin'

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Schiff base.....stealing second
ionophore.....where I ended when I fell
hydrophobic.....fear of your electricity bill
deoxycholate.....countin' the oxen
sulfatide.....the effect of a moon on Venusian oceans
В
From: Aliquotes iv.xii (journal) (rogerb@microsoft.com)
As molecular biology and biochemistry come to play more important roles
in
the field of developmental biology, it is important for biochemists to
truly understand some of the more unusual terminology which they will
face
as they set up collaborations or just try to keep up with the literature.
For this reason, we have presented the following definitions as a guide.
placenta.....Act III of V
allantois.....how we found out wat Allan knew
neural crest.....an oral hygiene product for the brain
trophectoderm.....the outer layer of the Stanley Cup
spermatagonia.....the reproductive area in South America
oogonia.....the clumsy area of South America
oviposition.....your opinion on whether one can eat eggs and still
                      be a vegetarian
uturus......the question of whether you're a native of a
visitor
В
From: phma@trellis.net
Q: Why didn't the dendrochronologist get married?
A: All he ever dated was trees!
Q: How did the herpetologist know he would be married soon?
A:
     He caught the garter snake.
В
From: David den Ouden (D.I.denOuden@stud.biol.ruu.nl)
Computational / Theoretical Biology:
Q: How do you call eight Rabbits?
A: One Rabbyte
Biology, Morphology:
Q: How do you call being drunk at the same side of your body?
A: Tipsi-lateral
Q: Heredity at the same time?
A: Synchromosome
Q: How do you call a positively charged pussy-cat?
A: A CATion
В
From: David den Ouden <D.I.denOuden@stud.biol.ruu.nl>
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Q: How do you call a laboratory in which they use rats as test-animals
  (guinneapigs)?
A: Lab-rat-ory
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B_

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From: jimd@gate.net (James D. Davis)
Q: What rock band keeps changing their music?
A: Mutagenesis.
Q: Which biochemicals wash up on beaches?
A: Nucleotides.
В
Pat Bowne (pbowne@omnifest.uwm.edu)
Q: What is a paramecium?
A: Two latin mice
В
From: mtwenzel@pdqnet.com (Michael Wenzel)
Q: What is the only thing worse than a mecium?
A: A Paramecium
В
From: Garland Stern <stern@tiger.asel.udel.edu>, Matthew K Ashford
<mkast9+@pitt.edu>
Q:What does the H. in Jesus H. Christ stand for?
A:In order of increasing groans:
 1: Hallowed.
 2: Harold. (As in, "Harold be thy name.)
 3: Haploid. (Best of all.)
В
From: "Encarnacion Perez, Jr." <e.perezjr.@worldnet.att.net>
Q: As what did the antibody go to the Halloween costume party?
A: As an "immunogobulin"
В
From: Sandy Waldow <sandyw@sbei.com>
Q: how do you tell the sex of chromosome?
A: Pull down it's genes
B_
From: mace@NorthNet.org (Mace)
Q: What did the male stamen say to the female pistil?
A: I like your "style"
В
From: cvsjpd@leeds.ac.uk (J P Diesch)
'I want to shag a sheep' says one ribonucleotide to another.
     'Dont be so base!'
B_
From: Aliquotes i.v (journal) (rogerb@microsoft.com)
The G ot F transition is due to proteins which are "actin up".
People who go through waves of euphoria can be said to be suffering from
PEP-tides.
В
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From: De Guerin <da6bd@herts.ac.uk>
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Q: What do you call a faulty spirometer? A: Expired! В From: Teg Pipes <teg@fruitfly.berkeley.edu> Scientists are LAME! The straight line I've been waiting for for the past four years was finally delivered today. In the lab, obviously, four people were there, standing around the water cooler, talking about some heroic genetic screen, nice, pregnant pause after the straight line just begging to be exploited like а coal mine in the south east and I slid my joke in beautifully and...NOTHING! THEY ALL JUST STARED AT ME! FUCKS! I'LL KILL YOU ALL! ... that was the night that I mated four-thousand POST-DOC: pairs of flies. <pause> ME: Boy, you must've been really sore after that! <silence> ME: G'NIGHT FOLKS! DRIVE SAFELY! I work in a stupid genetics lab for FOUR YEARS waiting for that line, FOUR YEARS! And when it finally comes, I make my joke and EVERYONE JUST LOOKS AT ME! ARRRRGH! I COULD'VE BEEN DOING BIOCHEMISTRY ALL THIS TIME! ++=4.4 CLONING В From: Aliquotes v.iv (journal) (rogerb@microsoft.com) (Begin 1997, the first cloning of a sheep was announced. The sheep was called Dolly, because she was cloned from breast tissue. - JV) EWE GOT THAT RIGHT With the recent events in Scotland, we are saddened to announce that the

With the recent events in Scotland, we are saddened to announce that the mamalian male of each and every population has just taken an evolutionary step backward. After eons of enlarging anatomical development, to deal with harsh environments such that the female may brood in safety and security, a human male has now started us down the road to where our half of the species is obsolete. Just as the Western females of the species were discovering the early mortality and rampant disease that had largely been teh male domain, they have now been introduced to a system whereby much of their stress can be alleviated through the removal of the male population from the gene pool. FBI agent Clarissa would have been happy to

see these events unfold in a story that can only be termed

THE SILENCE OF THE RAMS

B_

From: jmbay@leland.Stanford.EDU (Joseph Michael Bay) Newsgroups: news:sci.chem.analytical, news:alt.religion.kibology "M. Otis Beard" <movinghand@geocities.com> writes: > I'm glad you asked that question, Sarah. It reminds me of the time that >my father and I had a conversation regarding just this issue. My father was >a self-made man in the truest sense of the word; he educated himself, built >his fortune on strict principles of hard work and integrity, and never once >tried to get ahead by slinging mud or stabbing somebody else in the back. That's interesting, because my father was a self-made man in the truest sense of the word. He enucleated an egg cell from a donor, micro-injected a nucleus from one of his own pluripotent stem cells, and implanted it in a psuedopregnant female goat. After gestation, he delivered himself and educated himself. Of course his fortune was largely willed to him by himself, but he had made that before, so it was okay. And to this day, he prides himself on his integrity, his compassion, and his ability to eat tin cans. В From: Aliquotes v.iv (journal) (rogerb@microsoft.com) New Scotland Bovine Labs

COW SYSTEM: Transgenic protein purification system

Instruction Manual

Introduction to Cow System(TM): The Cow cloning system is an advanced protocol for the purification of recombinatn proteins from lactating bovine species. The system is more reliable than current sheep cloning methods, requires less starting material, is less expensive and will not cause public controversy when the press get holds of it.

1) Description: The Cow System(TM) is the most powerfull system for the cloning and expression of recombinat protein. Target genes are cloned in clow plasmids under control of the bovine serum albumin promotor. The desired product can comprise more than 10% (50kg) of the animal after a few hours of fermentation, in inclusion bodies.

2) Host for cloning: Suitable cows for cloning include the Cowalbi, which are albino, and allows the black/white screening for the library when plated on the suitable field spread with X-Grass(TM) (GG) selective medium. Note that the Scottish Highland Cows (SHC) are more sensitive to the heat shock transformation. 3) Preparation of the medium: You need a very, very big flas (two million liters), a very, very big shaker and a clothes peg for your nose. The growth medium, "Cow Dip" or C.D. broth, is made from @m grass, 0.5M hay supplement, 0.2mM ice cream (vanilla flavour), pH7.2. An oxygen carrier, such as myoglobin, can be added to increase growth and prevent drowning. Alternatively, Farmer Seah(R) provide bovine aqualungs for growth in liquid media. Always, autoclave the medium in order to kill scrapie prions. 4) Transformation: You need alt least 12kg of plamid, a vet and a big swimming pool at 37C and a sauna at 42C. It is possible to use the FarmerKit(TM) from Farmer Seah(R). Supercompetent Cowalbi calves are provided with the kit. Recently, a protocol derived from Maniatis has been described by Jersey et al. (1996) using Brute Force(TM) on mature bovine. a- Place the cows in a room on ice and mix gently to assure that the cows are in good shape. b- Add 2kg of plasmid directly in each cow using a clean glove. Rotate gently to mix. c- Place cows on ice for 30 minutes. d- Heat shock the cows by placing them in the sauna at 42C for exactly $40\,$ seconds. Do not vortex; the cows will break the mixer. e- Place the cows in a cold room for 2 minutes. f- Add two million liters of GG medium. g- Incubate the cows at 37C with shaking in Earthquake zone for one hour and spread the cows on a green field(*). Note that premade libraries are available from Cowtech (Cambridge). 5) Expression: a- To start the culture, add two tonnes of transformed cows (0.25 vol. of total bovine prep (TBP)) in the liquid culture (figure 1) b- Incubate with shaking the culture at 37C until OD_600 of the supernatant reaches 0.8. $\ensuremath{\mathsf{c}}$ - The cows could be separated by decantation using a shepherd and his dog, by gentle centrifugation (5g) of filtration (filter, 1m). d- Lyse by osmotic shock in 2M Chocolate Syrup(**) or with three medium shrapnel devices. Atomic weapons are not advised. Note that English cows are very resistant to lysis. It is possible to use a French Press. e- Purify the product using normal procedures. For enhanced purification, use the Cow-Lyse Kit(TM). 6) Cloned gene expression in Cow System(TM) The plasmid included with this kit is the new pBSE, the Bovine System Expression plasmid. Other Cow-based expression systems can be used but may not over-express to the same extent. When cloning chimaeric gene constructs, remember to use Cowalbi which are missing the gene coding for the restriction enzyme BDNA I. Cowalbi are

If gene products are poor, try the Rhino Kit(TM). This incorporates a grey/white selection procedure to replace the Blue Whale Kit(TM), which has been discontinued due to poor yields and international pressures. (*) Single cloned cows could be stored as frozen at -80C or in a field in Greenland. (**) Note that the use of chocolate syrup osmotic shock can lead to milkshake production in certain bovine species. (***) pMooscript can be used instead for lower expression levels. figure 1: Fermentation conditions (Cows floating in a BIG erlenmeyer) Related products: New Scotland Bovine Labs Mootagenesis(TM) kit New Scotland Bovine Labs Cow-Lyse(TM) kit for release of inclusion bodies from bovine and udder sources. The Cow System is covered by Scottish patent. _For research use only._ В_ From: Aliquotes v.iii (journal) (rogerb@microsoft.com) WHEN PUSH COMES TO SHOVE Not to be outdone by their Highland brethren and Dolly, the Andean Association for Animal Science has recently announced the results of their most stunning achievement to date. Following on the heels of the nuclear tranplantation experiments which generated a cloned sheep, a group of Chilean researchers have used the technology of embryo fusions to generate the world's first Pushme-Pullyou, famed from the many novels of the adventures of Dr. Doolittle. This creature has the forelimbs and heads of two individuals at opposite ends. Due to the genesis of this animal, the Chilean group regrets that Butthead, as he is affectionately known, lacks any reproductive organs. Needless to say, Butthead is a very sad and bored animal. The same group was rather evasive about the results of the other half of the embryonic fusion experiments and there is an unconfirmed report that the other creature escaped from its pen and was last seen running for

From: Aliquotes v.iv (journal) (rogerb@microsoft.com)

PANIC IN THE HIGHLANDS

A reprint of some articles in newsgroups similar to the cloning debate.

Excerpted from the bio.plants.monk newsgroup:

political office in Canada.

B_

"I say to you all that we must stop the insanity before it is too late. What our Brother Gregor has been doing recently in the rectory garden is sacrilegious and dangerous for the general population. I mean, what self-respecting Brother of the cloth would stoop, literally and figuratively, to determine the colour and texture of peas? Can he not see where this will lead? Next thing you know, he will be doing experiments with chickens and horses. And from there, chaos. If the good lord had wanted these plants to mate, he would have made them all one colour... I imagine a beige of a nice taupe. There is a reason that these peas are a different colour and texture and that is because God said it should be so and we should stop Brother Gregor before he brings His wrath down on us."

Excerpted from the sci.chem.h-bond newsgroup: "I'm telling you that this recent discovery by Drs. Watson and Crick will be the end of us all. Now that they have elucidated the structure of DNA, there is no end to what some crackpot can do with this technology. Think of it. If this really is the stuff that makes us what we are, what is to prevent the crazies from looking further at it and finding out that we're not all that different after all. Not that I'm e prejudiced, you all understand, but it would be the end of civilization to find out that 'l share the same basic coding sequence with people like Siam and Rhodesia. It just would't do, you see. And heaven forbid that they find this out. They might expect to be treated like us, and we certainly can't have that.

B_

From Aliquotes Volume V Number xiii August/97 (rogerb@microsoft.com) WATCH YOUR LANGUAGE

The Sciences are very jargon oriented and this can cause problems when over-excited scientists carry on conversations in the real world... you know, the one without the pipettes and shakers and chemical bottles. The following are three true stories.

Politically Corrects

Two young scientists, a student and a post-doc, had left the lab after another succesfull day. As they rode the local transit on their way home,

they began a rather animated discussion about the day's results and more specifically about the success that one had with her gel retardation or mobility shift assays. On and on they went about the "retards" doing this

and the "retards" doing that when a woman across the aisle from them finally turned in disgust and said: "The word is mentally handicapped and it's not very nice to call them retards." The two scientist were shocked by this sudden outburst and the woman got off of the train before the two could correct her on the subject to which they were referring.

The Cutting Edge

In a protein lab, it is common for people to set up their proteins as a fusion with other domains which are easily purified through their affinity

to ligands attached to resin beads. One of the most common of these

domains is the glutathione S-transferase protein or GST. Typically, there is a small linker region between the protein of interest and the fusion parner and this amino acid sequence contains recognition sequences for proteases. After months in the lab, having limited success with her proteolysis reactions, a young female grad student finally had her patience and perseverence pay off when she destained yet another gel and saw that her protein had indeed been cut by the protease. In her joy, the young woman ran out into the hallway, proclaiming proudly to all:

"I've got cleavage. I've got cleavage. Come over here. Look at my cleavage."

A Graphic Plot

In another lab, on another day, yet another young, female graduate student was working on a poster for presentation at an upcoming meeting. She had been using fluorescence to study the binding of a protein to its ligand and had spent quite a bit of time getting just the right distribution of data points for her graph. After several days in front of the fluorimeter and hours in front of the computer, plotting her data, she sat back in satisfaction at her accomplishments. Seeing one of the guys from her lab passing in the hallway, she called out to him in a loud voice, "Hey come look at my figure. Are these outstanding curves or what?" They were nice curves and she had a really nice figure. B

From: Aliquotes v.vi (journal) (rogerb@microsoft.com)
If it's NOT one thing, it's another

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Your protein has NOT denaturated,
        it is simply structurally ambivalent.
Your DNA has NOT degraded,
       it is entropically exhuberant.
Your enzyme is NOT aggregated,
        it is monomerically challenged.
Your peptide has NPT precipitated on the column,
        it is merely elution reticent.
Your column resin is NOT compacting,
        it is being spatially frugal.
Your BamHI does NOT have star activity,
        it is simply expressing its individuality.
Your PCR products are NOT all mutant,
        they are just indulging in unscheduled evolution.
Your tissue culture is NOT contaminated,
       it is simply sharing living quarters.
Your computer has NPT crashed,
        it is merely being introspective.
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B_

From: Aliquotes v.vi (journal) (rogerb@microsoft.com) Toronto (ATP): Reports are slowly filtering in about an incident in a Toronto lab where one technician found that extra hand which he had requested from his boss, even though Human Resources was not involved. They say that good help is hard to find, but not if you simply dig a little

THE ICE MAN COMETH

Here's a story that'll frost your test tubes. The lab had been operational for several years when the technician decided that they were going to need to be able to put more than two sample boxes in the lab's -70 C freezer. Unfortunately, this was going to mean cutting through several feet of ice. As well, there was the serious danger of drowning as the ice began to melt into the lab. Thus, equipped with a hair dryer, hipwaders and aqualung, the technician pulled the plug from the outlet and went to lunch while waiting for the ice to begin to melt. (As an aside, please note the use of the hair dryer... this is how men defrost a freezer, unlike many women I have known who attack the ice with a knife or screwdriver, often leading to punctured freon tanks and larger ozone holes.) Returning from lunch, the technician spent the first half hour apologizing profusely to the graduate student whose sequencing gel he had turned off when he pulled the plug for the power pack instead of the one for the freezer. After that, he pulled the correct plug and spent the next several hours with the hair dryer pointed into the freezer and carefully pulling small glaciers from the shelves and sides of the freezer. As he proceeded deeper and deeper into the various icy strata, the history of the lab began to unfold. Within the first foot, he began to uncover the now-soggy cardboard storage boxes of the recently graduated students, unearthing (de-icing?) a couple of years worth of work and a number of plasmid vectors which the lab had given up on finding and had long ago reordered from the supplier. An hour or so into the work, he began to scrape the second foot of ice away and saw initial signs of a large package under the ice, but the frosting of the ice prevented him from immediately determining what it In the meantime though, he was able to free up some radiolabeled was. ATP which was now colder than it's environment and there was a vial of C14-labelled amino-acids which must have been a remnant of an early life and defied dating even with the most modern techniques. Another layer down, and on his third sink of ice, the technician got closer to the unidentified object locked in its frosty grave. On the way, he then began to pull out more sample boxes of people whose names the could't recognize and small brown vials containing enzymes with a best before date which predated him... not the date of his hiring, but his own age. But still, the icy object eluded extraction.

As afternoon gave way to evening, the technician could begin to make out details on the alien in the freezer and he quickly began to realize that the poor thing had a human form. He increased his pace but still spent several hours removing more ice before he could begin to free the poor person from the ice. Finally, he had removed enough that an arm fell free of the ice and the hair dryer began to warm the flesh. In less than an hour, he had removed the last of the ice and the body fell to the floor, shivering. As the body warmed, its lips moved as though trying to speak. It was another hour though, before words began to form. The tech asked the young man what had happened. Slowly, and with great effort, the young scientist began to speak. "I was on my way to the freezer to get some more DNA for my crystallization trials -- I think that I'm close to getting a structure, you know -- when got trapped. I know I should have been using gloves, but I was in a hurry. I grabbed for a box at the back of the freezer when my arm hit the side and got stuck. Quickly the ice crystallized around me and someone later came by, saw the door open and closed it without seeing that I was in there.", he said, still shivering. "By the way, how are McCarthy hearings going, anyway?" This was not going to be an easy one to explain to the boss. В From: Aliquotes v.v (journal) (rogerb@microsoft.com) You know your lab is too warm when... 1) Your low melt agarose does. 2) No matter how often you fill them, your ethanol bottels are always empty. 3) You can heat-shock your bacterial transformations on your bench. 4) The gas from a bunsen burner spontaneously ignites. 5) You put your plates in the incubator to cool down. 6) Every time you open the fridge door, it rains. 7) The urea in your sequencing gel mixes, goes into solution without difficulty. 8) A pellet of dry ice has a half-life of 12.3 seconds. The Taq polymerase begins to denature. 9) 10) The glucose in the cupboard begins to caramelize. В

From: Aliquotes v.v (journal) (rogerb@microsoft.com) Cabin Fever

Every so often, a lab citizen can be struck with what is commonly referred to as cabin-fever. This condition often leads to a display of bizarre behavior by the afflicted individual, often riveting the attention of lab-mates and bystanders alike - (most disconcerting to the PI, general progress in the lab can be severely affected). Of course, it is well known that these temporary bouts of lunacy are exacerbated by many things such as malfunctioning fume-hoods, looming committee meetings, sub-cloning, and gloves that cut off the circulation to the rest of your body. But the origin of this dangerous yet entertaining behavior is almost invariably linked to sensization to the lab environment, usually as a result of excessive experimentation. Although the laboratory strain of cabin-fever is not necessarily contagious, exposure can be dangerous. (Sadly, even pipette tips are harzardous when they fall into the wrong hands.) For this reason, we at *Aliquotes* have endeavored to provide you with some warning signs that may protend a possible breakdown. According to our quidelines, it is advisable to vacate the lab if you notice your labmate doing any of the following: * Suddenly screams "Don't touch my tweezers! I swear to (insert PC-sanctioned deity here) I'll *kill* you if you even look at my tweezers again!". * Spends the morning penciling in her name for all 365 days on the signcalendar by the HPCL machine. * Starts extending the use of yellow post-it notes to delineate new territory in the lab. * Is observed cradling a stir-bar while quietly muttering "They'll never get you my dear, you're my special one, my one and only and they can never take you away from me..." * Takes his coffee break underneath is desk. (Same place he keeps his tarot cards and palmistry book.) * Roots around the garbage sobbing, "No, No! Come back!" * Sits in front of the computer for days, endlessly changing the background colour on his slides. * Looks up dirty words in the Swiss-protein data bank. * Requires sunglasses if the curtains are opened in the lab. * Starts an elbow fight with you because you are pipetting on her side of the lab. * Autoclaves articles of your clothing when you don't strictly adhere to the schedule on the sign-up sheet. * Scrawls the words "Lab Police" in magic marker on the back of his lab coat and starts using the butt of his pipetteman as a tool for law enforcement. В Q: How many company biotechnologists does it take to change a light bulb? A: Four; one to write the proposal, one to design the bulb-changer, one to design the bulb-fetcher, and one to design the bulb. Q: How many freelance biotechnologists does it take to change a light bulb? A: One; he designs the bulb to crawl up the wall, unscrew the old one and

screw itself in. Q: How many evolutionists does it take to change a light bulb? A: Only one, but it takes eight million years. From: mjenson@silver.ucs.indiana.edu (Mike Jenson) Q:How many fruit flies does it take to screw in a light bulb? A:None. Fruit flies don't screw in light bulbs they screw in fruit BC

From: Aliquotes v.ii (journal) (rogerb@microsoft.com)

In development,

A new musical by Andy Wirld-Whyde Webber

YUSEF And the amazing Technicolor Labcoat

The story of a lonely MSc who is doted on by his supervisor, raising the $% \left({{{\left({{{\left({{{}} \right)}} \right)}_{i}}}_{i}}} \right)$

jealousy of his lab mates. To show his pleasure with Yusef, the supervisor

creates for him a special lab coat covered with a variety of stains and this technicolor lab coat sends his mates wild. While on their way to a lab products show, they trap Yusef in a cold room and sell him as summer student labour to a passing post-doc. Yussef works dutifully for his new master until another post-doc in the same group covets Yusef but Yusef rejects her advances. This second post-doc is angered by Yusef's rebuff and buggers up the work of the first post-doc, blaming it on Yusef.

Yusef is then chained to his bench as a volunteer labourer until one day, the Chair of the department walks by bemoaning a sub-cloning problem.

Yusef offers a piece of advice involving plasmid methylation and the Chair

tells his graduate students to check it out. They succesfully sub-clone the fragment and it turns out to be a novel gene. To express his gratitude, the Chair frees Yusef from his fetters and takes him under his wing as protege. Eventually, the Chair runs off to form his own compagny and takes Yusef with him as Head of Research and Development.

Years later, the lab mates from Yusef's original lab are about to finish

their degrees when their supervisor's grants run out and they are destitute. Yusef's old supervisor sends them to seek their fortunes in the

mystical land of Industry where they accidently meet on Yusef's doorstep. They do not recognize Yusef although he knows them, but he takes pity on them and sends for the old supervisor. They are happily reunited and all receive their degrees and, eventually, are tenured at al nearby university.

B_

From: Aliquotes iv.iii (journal) (rogerb@microsoft.com)
In the beginning, there was ...
Biochemistry's greatest hits. Now from *Kant tell records* comes the
followup album:

BIOCHEMISTRY'S DAMNED GOOD NEAR MISSES

"Never on a sunday" by The Technicians "Hi, Hi, Hi" by The Fume Sucker Four. "Do You believe in magic?" by the Seminar Six "Zhang-a-gong" by The Collum Driers "One more Gel" by The Thesis Writers "Scary Monsters, Super Freaks" by the Transgenics "In the air tonight" by Nat and The Fumehoods "G.I. Blues" by The Red Hot Chili Peppers "Sex is a Drug" by nanoMouskouri "the end" from the movie "The Graduate" "Light my fire" by Randy and the Bunsen Burners "Another one bites the dust" by The Grant Reviewers "It wont't be long" by The Committee "I don't Remember" by The Reclassifiers "I wanna be your man" by The Frustrated Fat Boys В_ From: Aliquotes iv.iii (journal) (rogerb@microsoft.com) The subtle irony of a neurotoxin like acrylamide is that you are the last one to realize that you should have worn gloves. В From: Aliquotes i.v (journal) (rogerb@microsoft.com) THE GRADUATE GAME OF LIFE (?) [Adapted for ASCII] Rules: Using one die, move your game piece the number of spaces that the die indicates and try to be the first to succesfully defend your graduate work. It's not as easy as it looks. _____ Welcome ->-> | | Cells didn't | Tube | Cells not To square One | --> | grow |labelled Taq |competent |In the Graduate| | Game of Life | | miss a turn|is really ExoIII|Are you? Miss 2 turns |Go back 3 spaces Controls didn't congratulations! You've graduated work again. Run like hell, Go back 2 spaces before they look _____ You failedLeads backwardscourse workMCATon gel boxpiles up. too closely at at your thesis. on gel box |piles up. <-_____ Advance 1 space Go back 3 spaces Miss a turn Thesis rejected You're dejected You failed Advance 2 spaces | LSAT _____| Advance 1 space Could not repeat | -----_____ ----| critical | |You failed Too many exams Found point Read experiment | | PSAT to mark deletion sequencing gel | Advance 3 spaces | Advance 1 space Miss a turn | Miss a turn inverted

|-----|Go back 2spaces _____ Competitors ----| scoop you on Subcloned PCR | results product backwards Advance 4 spaces Miss a turn |-----| ------| _____ |Collaborator | |Fell into coma while|Got drunk at party|Tuition due |faked all data | | using ether | told of PI Miss 3 turns while $|Advance 5 spaces| | \setminus / Miss a turn | Miss a turn | working for$ summer -----| |------_____ |----_____ Your NMR sample |is betalactamase| | \ / Advance 6 spaces ----| |-----| Dropped flask |Blotted gel onto You passed the MCAT | | | -> of pure protein |paper towels |Leave game now and /Go back 3 spaces Go back 2 spaces be joyfull ____| Ran air through -----| sizing column Radiation badge Go back 4 spaces lights |---------| fluorescent |Ultracentriguge tube bulbes broke, lose sample | Miss 3 turns Miss a turn |-----|----| ----| You failed |Computer crashes| lose notes MCAT again \ / | Go back 3 spaces Advance 1 space . | |----_____ ----|

В_

From: ajl3@mindspring.com (Blind faith is overated, and very dangerous when the terrain is rough.) [That's what the header says anyway - JV]

LADIES & GENTLEMAN !!!! IT'S THE BATTLE OF THE MILLENIUM !!!! CREATION VS. EVOLUTION!!!

This is going to be a caged, no holds barred match, to the death!!!!!

In one corner we have EVOLUTION, who brings with it an assortment of weapons, including : records, fossils, actual proof, and even a bit of faith & belief.

In the other corner we have CREATION, who brings---wait a minute, CREATION is pulling something from out of a sack, it's a....it's a.... It's a book ?!? CREATION has brought a book to use in battle. And yes a bit of faith & belief.

It's unbelievable the way they are going at each other folks ! It's a battle royal. Who will win this grudge match? Who will suffer from their loss? We may never know. Let's watch & see, and pray ours is the victorious one, which ever that may be. B

From: LEISTI@cc.Helsinki.FI (Teemu Leisti)

(Original version by Erkki Aalto, Dept. of Obstetrics, Gynaecology and Stork Science, University of Helsinki)

(English version by Jopi Louko, Institute of Stork Research, University of Alberta)

Ovulation versus cretinism

Two different theories exist concerning the origin of children: the theory of sexual reproduction, and the theory of the stork. Many people believe in the theory of sexual reproduction because they have been taught this theory at school. In reality, however, many of the world's leading scientists are in favour of the theory of the stork. If the theory of sexual reproduction is taught in schools, it must only be taught as a theory and not as the truth. Alternative theories, such as the theory of the stork, must also be taught. Evidence supporting the theory of the stork includes the following: 1. It is a scientifically established fact that the stork does exist. This can be confirmed by every ornithologist. 2. The alleged human foetal development contains several features that the theory of sexual reproduction is unable to explain. 3. The theory of sexual reproduction implies that a child is approximately nine months old at birth. This is an absurd claim. Everyone knows that a newborn child is newborn. 4. According to the theory of sexual reproduction, children are a result of sexual intercourse. There are, however, several well documented cases where sexual intercourse has not led to the birth of a child. 5. Statistical studies in the Netherlands have indicated a positive correlation between the birth rate and the number of storks. Both are decreasing. 6. The theory of the stork can be investigated by rigorous scientific methods. The only assumption involved is that children are delivered by the stork. В_ From: mini-air 1996-07-04 Scientific Correctness Survey A recent survey by the U.S. National Science Foundation found that 52% of the respondents believe that the earliest human beings lived at the same time as the dinosaurs. Once again it is time to vote on "scientifical correctness" and help the scientific community decide which side of various issues it should accept as "correct". Please check only one: 13% Dinosaurs and man walked together millions of years ago. 06% Dinosaurs and man walked together less than 10,000 years ago.

06% Dinosaurs and man walked together less than 10,000 years ago. 61% Dinosaurs and man walked together, but it was purely platonic. 14% Dinosaurs became extinct before the first humans existed. 06% Humans became extinct before the first dinosuars existed. But later on, mini-air reported: 1997-01-12 Scientific Correctness: Dino Survey Results

Thank you to everyone who participated in the first of our SCIENTIFIC CORRECTNESS SURVEYS to establish the correct answers to heated scientific controversies. This first question is now settled. The lion and the lamb, the preacher and the politician, the spider and the fly -- all can now walk hand in hand (or other, analogous appendage), in harmonious agreement. Here are the results, of the vote:

33% Dinosaurs and man walked together less than 10,000 years ago. 30% Dinosaurs became extinct before the first humans existed. 23% Dinosaurs and man walked together millions of years ago. 09% Humans became extinct before the first dinosaurs existed. 02% Declined, or were unable, to express an opinion 02% Agreed with all of the choices listed above 01% Dinosaurs and man walked together, but it was purely platonic.

Investigator Thomas B. Roos reports that he plans to use this survey in future exams at Dartmouth College.

Investigator J. Mohler reports, "As documented in the comic strip "Alley Oop", while dinosaurs and humans coexisted during prehistoric times, they rarely if ever walked together. When they were going in the same direction, the human invariably choose to ride."

Investigator John J. Lannutti concludes that, currently, "dinosaurs mostly fly while man mostly walks."

Investigator Jim Culter concludes that dinosaur bones were placed in the fossil strata 10,000 years ago in order to confuse and mislead 20th century scientists, and that dinosaurs never actually existed.

Investigator Frank Stephan raises a concern common to the German scientific community, in reporting, "This vote is placed in the belief, that alligators do not count as dinosaurs in spite of the fact that these two species are relatives. But in this case it was more a hating than loving relationship."

From: jokemaster@jokecenter.com (JokeMaster)

Dating Dinosaur Bones Some tourists in the Chicago Museum of Natural History are marveling at the dinosaur bones. One of them asks the guard, "Can you tell me how old the dinosaur bones are?"

The guard replies, "They are 73 million, four years, and six months old."

"That's an awfully exact number," says the tourist. "How do you know their age so precisely?"

The guard answers, "Well, the dinosaur bones were seventy three million years old when I started working here, and that was four and a half years

ago."

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[JokeCenter.com - http://www.jokecenter.com]
(PS I added 70 million to the date to get some semblance of correctness
- JV)
++++++
=4.7 MICE AND RATS
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В_

From: JMFS19A@prodigy.com (Nancy Carson)
Q: What did one lab rat say to the other?
A: "I've got my scientist so well trained that every time I push the
buzzer, he brings me a snack.
B

SCIENTIFIC STUDY The Cameron Column #41

In an extraordinary new scientific study which answers the question, "are we giving scientists too much money to investigate this kind of stuff?" researchers have determined that providing rats the equivalent of six cups of coffee enables them (the rats) to be one percent more productive.

Several questions immediately leap to mind. First, what, exactly, makes a rat more "productive?" The mice my son had (until he left the door to the cage open, and then the cat had them) "produced" only tiny black pellets. Did scientists count these pellets and find there were slightly more of them after six cups of coffee? If so, they may have inadvertently discovered a job for which my brother-in-law is qualified. As long as counting pellets doesn't involve (a) showing up for work on time or (b) showing up for work, I can see him rising to the top of his profession.

Second, what is the "equivalent" of six cups of coffee? Maybe the scientists stuck the little rat paws into an electric outlet. In that case, heck YES there were more black pellets, probably left there by rats awaiting their turn at the socket. Do the People for the Ethical Treatment of Rodents We Would Otherwise Exterminate know about this? I'm picturing rats sitting around with tiny cups and saucers, reading the equivalent of the morning newspaper, watching the equivalent of the Today show, getting ready for the equivalent of the morning rush hour so they can get to their little rat offices and start producing one percent more pellets. The scientists studying this must feel they are doing the equivalent of contributing to society.

Finally, if I drink the equivalent of 600 cups of coffee, does this mean I will be 100% more productive, thus able to stay home and do nothing while my more productive self goes off to work? How the heck can I be more productive if I am in the bathroom all day unloading 600 cups of coffee? If Al Gore drank 600 cups of coffee, would he change expression?

I have a suggestion: maybe next time the scientists should drink the

coffee themselves, and then they could come up with a better idea for something to study. Like, if you gave my brother-in-law the equivalent of six cups of coffee, would he find a job?

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Subscribing is as easy as sending a message to majordomo@cwe.com with the words "subscribe cameron" in lower case as the first line in your message.

This newsletter may be distributed freely on the internet but PLEASE include subscription and copyright information. B

From: brett@hpsrbkc.hp.com (Brett K. Carver) Here's something I wrote after reading one too many of this type of story.

LIVING IN CAGES LINKED TO CANCER IN LABORATORY RATS

AP--The federal government today released the findings of a four year study that linked living in cages to increased potential of developing cancer in laboratory rats.

The study, which cost an estimated \$17 Million, was started in 1983 when all the rats in a laboratory test control group contracted cancer.

Spokesperson John Smith explained: "We were running a test on the possible link between excess popcorn intake and increased incidence of colon cancer. The test group consisted of twenty rats who were force fed three quarts (roughly one and a half times their body weight) of popcorn daily, a perfectly reasonable amount. The control group consisted of twenty rats who lived in cages carefully shielded from all known carcinogens. To our surprise, all twenty control rats developed cancer within six months." Mr. Smith went on to say: "We had always had some trouble with control rats

contracting cancer. But as long as more of the rats in the test group than the control group got cancer, we were able to feel pretty good about

condemning whatever we were testing at the time." Mr Smith was then questioned about the possibility of test results being invalid if any of the control rats developed cancer. He responded: "Yeah, we had an scientist at the lab ask that once. We had to let him go though when we found out he was a member of the Audubon Society; you know, conflict of interest. He was a real trouble maker, always asking questions

like: 'Wouldn't eating that much popcorn give anyone cancer?' We just didn't need that kind of a negative influence. The last thing you want in a

research lab is someone asking a lot of fool questions."

When asked if these results would change any previous findings Mr. Smith replied: "Why yes. This could blow our whole gig. I mean, if it's been the cages all along, this could mean that things like asbestos, smoking, even radiation are perfectly harmless!"

Mr Smith continued: "This could change everything! We may be forced to recall all our previous findings at a cost of millions of dollars. This says nothing of the possible lawsuits from individuals who contracted cancer while spending time in prison, or zoo workers forced to spend extended periods inside the animal's cages."

When asked why the study cost seventeen million dollars, Mr Smith
responded: "Oh, you know how it goes; a little here, a little there.
Besides, do you have any idea how expensive it is to provide food and
living conditions for rats that doesn't expose them to any of the things
we
have determined to cause cancer? In fact right now we're in the middle of
a
two year study that may link breathing with lung cancer. You think the
cost
is bad now, just wait till we are forced to prevent the control rats from
breathing so as not to invalidate the results by having more of the
control
rats get cancer than test rats."
When asked if John Smith was his real name, the spokesperson replied:
"Huh,

what? You talking to me?"

В

From: Aliquotes i.v (journal) (rogerb@microsoft.com) BOOK REVIEW COLUMN

> After the experiments are over: 101 uses for transgenic mice

New from the "Book of the Mouse Club" is this volume describing the uses of of a transgenic mouse colony when the experiment is no longer in progress. This has often been a problem in the world of developmental biology, where resources are limited and the animal rights community is always observing in the distance. Why waste this valuable commodity when there are so many interesting uses which do not necessarily involve science.

Some of the chapters in this book include:

*Why you should never bet on the shivere mice. *Do you serve a white wine or red with the kabobs? *Opening a Home Shopping Network of cat toys. *Testing those unlabelled vials in the medicine cabinet. *ES cell omelettes, and other recipes.

"No development lab should be without this hand reference volume"

- Myc E Mouse

В_

From: Ian Ellis <ian@iglou.com>
From "Readers Digest," April '93, 'Campus Comedy', p.125-6

As we took notes, out anatomy instructor labored through a lecture on the way nerve cells transmit impulses. "Who can tell me how these cells communicate with one another?" he asked, expecting someone to explain the phenomenon of neurotransmission. After a few muffled whispers, one student finally spoke up. "With cellular phones?"

----- same source:

"...at Lamar University in Beaumont Texas, I noticed this sign on the door of the microbiology lab: 'STAPH ONLY!'" PB

From: David den Ouden (D.I.denOuden@stud.biol.ruu.nl)
Ideal experimental integration of Physics in Cell Biology: Treating
epidermal solar cells with Growth Vectors
B______

From: David den Ouden (D.I.denOuden@stud.biol.ruu.nl) Human being to a narrowminded science-o-holic Cell Biologist: Human being: "You are so narrowminded, only preoccupied with your cells. You don't know anything about the world you are living in. For instance, what do you know about culture?"

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Science-o-holic: "You mean CELL cultures?" B
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From: centaur@nai.net (Dave Wright)
Scientifically, maybe body cells -do- replace themselves completely in
seven years -- but, legally, you're still married.
--Attorney to client, cartoon by Bunny Hoest and John Reiner
B______

What's out for the hottest new show on the Dizzy Channel.

A new dramatic series set in the hustle bustle world of high fashion protein synthesis It's ...

ROUGH ER

See the drama of these hot young ribosomes as they fight to save proteins, surrounded by the harsh and cruel reducing environment of the big cytoplasm.

Watch as the mutilated remains of spliced and modified RNA come into the ER to be transformed into hardy new proteins. Ready to take on anything the extracellular environment can throw at them, as they go for the Golgi.

Stay tuned to your TV listings for where to tune for

ROUGH ER

В_

From Aliquotes Volume V Number vii July/97 (rogerb@microsoft.com) CATS AND BUGS

Life as a graduate student or other student can get kind of lonely and it would be nice to be able to go home to a loved one who is excited to see you. Having such a bizarre life style can cause problems though as pet ownership is a big responsibility. Thus, we at Aliquotes, would like to make a suggestion which we hope will ease those lonely nights. The following is a list of reasons why one might consider having bacteria as pets as opposed to the more traditional cat. We hope that this is of assistance.

1. A numbers game: To get more cats (why you would want them is another question), you need at least two of the opposite sex. With bacteria, one will set you up for life.

2. Sleepless nights: Unlike cats, bacteria do not go into heat and will keep you awake all night crying for a little fun.

3. Low maintenance: There is no litter box to change and bacteria can be easily fed by adding more sugar to their medium.

4. Vacation consideration: Bacteria do not require a neighbour's attention while you're away. Just put them in the fridge and they'll stay fresh. This can also be done with cats but is heavily frown upon.

5. Life in a vacuum: While bacteria are also covered with hair (cilia), but on a microscopic level, they do not feel the need to leave said hairs all over the place.

6. Exercise your rights: You do not need to put your bacteria out for exercise. Simply put them in a large flask and shake them for a few hours. They are also easier to round up by using the centrifuge.

7. Death before dishonour: Bacteria will not bring dead animals into vour house, displaying them proudly at dinner. At worst a renegade bacterium will keep you in the bathroom for a few days. 8. Scratching the surface: Washing a bacterial pellet does not require knowledge of the martial arts and will not leave you with scar tissue. 9. I can see clearly now: It is rare when you cannot see the TV screen because of a bacterium sleeping on top, dangling its legs. If this is a problem, it typically implies that you should spend a little more on your next TV set. 10. Feeling a little flushed: A bacterium is less likely to clog your toilet when it dies, causing a \$500 plumbing bill. В_ From: mike@tao.eco.twg.com (Mike Bartman) These two positive-strain E-Coli go into a bar. The first one says, "I'm so thirsty I could suck the cytoplasm off a Bacillis Anthrax' pilli!" and the second one says, "Moooo!!!!" ++=5. EARTH SCIENCES

From: Philip Clarke <clar0318@flinders.edu.au> Thanks everyone for your help on our tunnelling break-through t-shirt slogan

Here are the results:

1. Geology: where subduction always leads to orogeny! 2. Shear Heaven 3. Hit and Miss - Shear Bliss 4. What a lode off my mind 5. What the hell do we do now? 6. Holy Schist, Batman...We made it! 7. What a lode of fuchsite 8. We Dig Mother Earth 9. My Psychologist told me that every decline is a great Break Through 10. Banbrytande genombrott 11. Banbrytande genombrott utan avbrott 12. Banbrytarna avbryter (inte?) f=F6r ett genombrott 13. Go, Goare, Bananbrytarna 14. Genom berg och =F6ver kablar, Tord han skriker sablar 15. Det s=E4ger pang om du k=F6r =F6ver en slang 16. Grabben a dike by the cleavage! 17. I'm a geologist and I'm hung like a horst 18. I -WAS- working damit !!, I've been TUMBLING and MIMING, all day and THEY said I was goofing off ! 19. Geologists make the bed rock 20. Cummingtonite?

21. Which bed are you in? 22. Geologists make the bed rock 23. I am a down to "earth" person 24. Follow me, I am looking for gold 25. Lost a rock ? I will find it for you 26. I can guess how old the earth is, but still an amateur in guessing the age of a women 27. Wish the earth's inventor left the specs behind 28. Geologist drill at home and at work 29. Kiss a geologist: get your rocks off! 30. Geologists probe crevaces 31. Geologists get their Rocks Off 32. Mom Loves Geologists 33. Geologists know their plagioclase feldspar 34. Geologists do it in the dirt 35. Try a Geologist for a Volcanic Eruption 36. Thank God! That light WASN'T a train

From: Philip Clarke <clar0318@flinders.edu.au>
Geologists probe crevaces
Geologists get their Rocks Off
Mom Loves Geologists
Geologists know their plagioclase feldspar
Geologists do it in the dirt
Try a Geologist for a Volcanic Eruption
I'm a geologist and I'm hung like a horst.
Geological sexual harassment: Grabben a dike by the cleavage!

From: Philip Clarke <clar0318@flinders.edu.au>
Kiss a geologist and feel the earthquake.

From: Philip Clarke <clar0318@flinders.edu.au>
My sister is marrying a Geologist, and jokes would be appreciated.

You should take her aside and warn her that "Geologists have their faults".

You could warn her that "The more you try to be gneiss, the more you get taken for granite"

>>Schist happens. >>Tell her to have a gneiss day. >>Whatever you do, don't take him for granite. >>And lastly, may the quartz be with you! > >I've lost my apatite. > I stole this one off a tee-shirt from a guy I went through field camp with (it's been my .sig for about a year and a half now :-) : And let her not forget on her wedding night that geologists' make the

bedrock! That intrusion in his pants is a batholith From: Philip Clarke <clar0318@flinders.edu.au>
A man goes into a restaruant, sits down and starts reading the menu. The
menu
says:
Broiled Accountant \$5.95 per plate
Fried Engineer \$7.95 per plate
Toasted Teacher \$7.95 per plate
Grilled Geologist \$25.95 per plate
The man calls a waiter over and asks "Hey, why does the Grilled Geologist
cost
so much more?"
The waiter says, " Are you kidding? Do you know how hard it is
to clean one of them?!?!"

Is that a belemnite in your pocket or are you just glad to see me?

From: Philip Clarke <clar0318@flinders.edu.au>
Folds, thrusts, and overturned beds are
all common in zones of orogeny

From: Keith Morrison <keithm@polarnet.ca> So I was standing in the library discussing cleavage with a female colleague when the topic of intrusive dikes comes up. She said that the dikes she knew of were often associated with thrusting movements in a bed. I said that I usually didn't associate dikes with any sort of thrusting, but then you never know what can happen when a dike was in an orogenous zone.

From: Philip Clarke <clar0318@flinders.edu.au>
Never lend a geologist money. They consider a million years ago
to be Recent.

From: Philip Clarke <clar0318@flinders.edu.au>
Q:How does a geologist get his rocks off?
A:With a hammer and chisel.

From: Philip Clarke <clar0318@flinders.edu.au>
avalance....a mountain getting it's rocks off.

From: Keith Morrison <keithm@polarnet.ca>, dstierm@geology.utoledo.edu
(Donald Stierman)
A geologist is the only person who can can talk to a woman and use the
words "dike" "thrust" "bed" "orogeny" "cleavage" and "subduction" in the
same sentence without facing a civil suit.

From: Glen Gardner <ggardner@oucsace.cs.ohiou.edu>
Q: What is the difference between a geologist and a chemist?
A: A chemist will drink anything that is distilled.
 A geologist will drink anytrhing that is fermented....

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From: Geojoe <geojoe@ludin.com.au> wrote:
Q: Why did the fold get arrested???
A: He was caught rolling a joint!!!
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From: Roman G. Lahodynsky <r.lahodynsky@magnet.at>
Q: What is the difference between a geologist and a theologian?
A : There is none. They themselves have neither been below nor above.

From: "Tedd F. Sperling" <tedd@sperling.com>
Here's an old joke that some may appreciate.

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i l i	
	i i

Given the above, namely a dry well on the left and a producing well on the right, the following are the interpretations from some petroleum professions.

The interpretation of:

a) The Petroleum Engineer:



b) The Landman:



c) The Geologist:



d) The Geophysicist:

$ //// \langle \langle -0 - \rangle$	@
\\\\\ ////	C I
''	

Explanation: The point of my joke, was that everyone had their own interpretation of the producing well and the dry hole. Also, everyone was right, except for the Geophysicist.

You see, being a Geophysicist, I can poke fun at my profession. Which is something that is normally not in character for most Geophysicists. An ironic double pun as one might observe. But then again, maybe not.

Tedd

From: Michael Weiss <columbus@pleides.osf.org>
Letter from the Smithsonian:
Paleonanthropology Division Smithsonian Institute 207 Pennsylvania Avenue Washington, DC 20078

Dear Sir:

Thank you for your latest submission to the Institute, labeled "211-D, layer seven, next to the clothesline post. Hominid Skull."

We have given this specimen a careful and detailed examination, and regret to inform you that we disagree with your theory that it represents "conclusive proof of the presence of Early Man in Charleston County two million years ago." Rather, it appears that what you have found is the head of a Barbie doll, of the variety one of our staff, who has small children, believes to be the "Malibu Barbie."

It is evident that you have given a great deal of thought to the analysis of this specimen, and you may be quite certain that those of us who are familiar with your prior work in the field were loathe to come to contradiction with your findings. However, we do feel that there are a number of physical attributes of the specimen which might have tipped you off to it's modern origin:

1. The material is molded plastic. Ancient hominid remains are typically fossilized bone.

2. The cranial capacity of the specimen is approximately 9 cubic centimeters, well below the threshold of even the earliest identified proto-hominids.

3. The dentition pattern evident on the "skull" is more consistent with the common domesticated dog than it is with the "ravenous man-eating Pliocene clams" you speculate roamed the wetlands during that time. This latter finding is certainly one of the most intriguing hypotheses that you have submitted in your history with this Institution, but the evidence seems to weigh rather heavily against it. Without going into too much detail let us

say that:

a. The specimen looks like the head of a Barbie doll that a dog has chewed on.

b. Clams don't have teeth.

It is with feelings tinged with melancholy that we must deny your request to have the specimen carbon dated. This is partially due to the heavy load our lab must bear in its normal operation, and partly due to carbon dating's notorious inaccuracy in fossils of recent geologic record. To the best of our knowledge, no Barbie dolls were produced prior to 1956 AD, and carbon dating is likely to produce wildly inaccurate results. Sadly, we must also deny your request that we approach the National Science Foundation's Phylogeny Department with the concept of assigning your specimen the scientific name "Australopithecus spiff-arino." Speaking personally, I, for one, fought tenaciously for the acceptance of your proposed taxonomy, but was ultimately voted-down because the species name you selected was hyphenated, and did not really sound like it might be Latin. However, we gladly accept your generous donation of the fascinating specimen to the museum. While it is undoubtedly not a hominid fossil, it is, nonetheless, yet another riveting example of the great body of work you seem to accumulate here so effortlessly. You should know that our Director has reserved a special shelf in his own office for the display of the specimens you have previously submitted to the Institution, and the entire staff speculates daily on what you will happen upon next in your digs at the site you have discovered in your back yard. We eagerly anticipate your trip to our nation's capital that you proposed in your last letter, and several of us are pressing the Director to pay for it. We are particularly interested in hearing you expand on your theories surrounding the "trans-positating fillifitation of ferrous ions in a structural matrix" that makes the excellent juvenile Tyrannosaurus Rex femur you recently discovered take on the deceptive appearance of a rusty 3/8 inch Sears Craftsman automotive crescent wrench.

Yours in Science, Harvey Rowe Curator, Antiquities

Overseas Airlines: Now price reduction due to plate tectonics:

-- Sydney Harris Cartoon

From: "tone" <tonyf@netspace.net.au>
"Reunite Gondwanaland"
was the Bendigo CAE T-shirt logo for a number of years -late 70's-early
80's.

From: miklwillms@aol.com (Michael Williams)
"STOP PLATE TECTONICS".

From: patrick Murphy <patrick@kaos.es>
STOP CONTINENTAL DRIFT !!

From: StonyMeteor <nospam@geoserver1.aau.dk> Geologists make the bed rock.

From: StonyMeteor <nospam@geoserver1.aau.dk> I'm into "hard rock

From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection
From: Joao Batista(fbatista@cc.fc.ul.pt)
Geographers do it globally.
Geologists are great explorers.
Geologists do it eruptively, with glow, and always smoke afterwards.
Geologists do it in folded beds.
Geologists do it to get their rocks off.
Geologists do it on the ir rocks.
Oceanographers do it on the waves.
Oceanographers do it on the sea.
Oceanographers do it with currents.

From: "RMW Musson" <R.Musson@bgs.ac.uk> Geophysicists do it with higher frequency. From: Peregrine@t-online.de (FKoe) Geologists do it for ages. From: Neil McNaughton <neilmcn@csi.com> Geophysicists do it till it hertz..

From: kring@physik.uni-kl.de (Thomas Kettenring) Geologists are amazing. They know hundreds of words for different sorts of dirt and hundreds of words for things it does when left alone for a few million years.

From: pclarke@waite.adelaide.edu.au (Philip Clarke)
Two Geologists are walking across a granite outcrop one day. The first
says
to the second "Hey, this terrain is unmetamorphosed". Replies the second
one, "No Schist".

From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just)
OLD GEOLOGISTS never die, they just recrystalize
From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just)
OLD WEATHERMEN never die, they reign forever

From: "Douglas J Robinson" <robinson@syspac.com>
Metallurgist:
A pseudo scientist, who uses undetermined suppositions, indefinite
theories,

and inexpressible hypotheses; which are based on unreliable information, uncertain quantities, and incomplete data; derived from non-reproducible experiments and incomplete investigations; using equipment and instruments of questionable accuracy, insufficient resolution, and inadequate sensitivity, to arrive at timid, tentative cloudy, abstruse, and non-committed conclusions prefaced by the phrase, "IT DEPENDS".

From: Duncan A.McDonald <duncanmcdonald@home.com> Geologists get Rock Solid when in a sedimentary position.

Subject: Re: real maths stumper From: rc142 <rc142@cunix.cc.columbia.edu> Newsgroups: sci.math Jeffrey G. Montgomery wrote: >In article <m2yay9ticp.fsf@mailhost.neuroinformatik.ruhr-uni-bochum.de>, >David Kastrup <dak@mailhost.neuroinformatik.ruhr-uni-bochum.de> wrote: >>jgm7683@osfmail.isc.rit.edu (Jeffrey G. Montgomery) writes: >> >>> A man builds a house such that all four walls face North. He looks >>> out his window and sees a white bear. Where is he? >>> >>> Answer: This place is not on Earth. There are no polar bears at the >>> South pole, which is the only place he could build a house where all >>> four walls face North. :) >>Wrong. You might be underestimating the size of his house. It might >>be that its *outside* is not encompassing more than a bit of North >>pole and perhaps a polar bear or two (locked out), but the inside >>might well include the South pole and much of the North pole as well. >> >>Does the name "Wonko, the Sane" ring a bell with you? >No,... should it? :) >Please enlighten me - how can you have a house with four walls (and a roof) >where all walls face North, and yet it includes much of the North pole? >Also, you might not be up and up on English, but your cardinal directions >(East, West, North, South) are capitalized as a rule. >(Just one of those little-known rules that make it nicer, and easier, to >read news articles.) > Jeff >

In England, the "n" is only sometimes capitalized, such as in North Pole, North Korea, the Northeast of England, but not in "I walked three miles north" and similarly for the other directions: east, south and west. Your rule may be what is used in America, but it is certainly not a rule of English.

In any event, what about the following possibilities? The man kills a polar bear, goes to the South Pole, builds a house, dumps the polar bear outside, goes inside, looks out the window and sees a white bear- the very one he killed or indeed another one that someone else put there. It need not be a polar bear either. It could be a different type of bear, for example a grizzly bear, which he painted white or tippexed white or in some other way made white and then did as I suggested above with the polar bear. (By this I mean, kill it and place it outside his house.) Alternatively, he may have just transported a live white bear there. This would probably require a tranquilizer of some sort to sedate the bear during transportation and would be more dangerous in the event that he wished to leave the house. On the plus side, he could take supplies and have a fresh supply of meat from the bear at a later date whereas, if it were already dead, he would either have to eat it straight away or let it go to waste. Having written that, I suppose he could freeze it quite easily instead. This may sound far-fetched but it is no more so than building a house the roof of which covers nearly all of the planet- which is also a valid solution of course (I am not trying to say otherwise). More reasonably, it could have been a white teddy bear, especially if he had small children with him or a white welcome mat for visitors (see below) or a white hole-punch. There are still other possibilities which you can come up with from the source referenced below and which I might myself quote, were it not for the fact that my email account that has the OED on it crashed in the middle of writing this- leading to my having to post this from Netscape- and thus I don't have access to it (short of searching the web for long periods of time with the result that I would be late for "Mr. Nice Guy"). >From the Oxford English Dictionary (bear): 6. A rough mat for wiping boots on; a block covered with shaggy matting, used for scrubbing the decks of vessels. 1795 J. Aikin Manchester 349 The making (by blindfolk) of..white and tarred bears, foot-cloths, etc. 1805 D. Johnston Serm. for Blind 20 Rope-bears for cleaning the feet at our doors. 7. a. A machine for punching holes. 1869 Sir E. Reed Ship Build. xx. 446 The holes which come in the plate-edges are usually punched by a bear.

"Analyzing is paralysing, Mister" - Tilt

From: John Sergent (jsergent@ix.netcom.com) 'Greenwich Mean Time' Arrested His 'Mean' Reign of Terror Ends

LONDON: This Wednesday, GMT's fascist reign of terror was finally put to rest as officials placed it under arrest for malicious conduct.

Greenwich 'Mean' Time, the bad-boy of time zones and the standard for world timekeeping, has finally been dethroned. Executives of the London Time Council have replaced GMT with DKAT, Dublin Kindly Agreeable Time, long the quiet and polite secretary to Greenwich Mean Time.

The new changes will affect world time standards in the following ways (some slipped in as last minute conveniences by Time Legislators):

Time Magazine will no longer be able to use the "Time" trademark. The Council has recommended that they use the public domain "Division Of Geologic Chronology Magazine", "Duration Magazine", or "Spaceless Continuum Of Ordered Events Magazine".

The flow of time has been normalized; time will no longer fly when you're having fun, nor will the last fifteen minutes of class appear to take hours.

Milk will now immediately spoil when crossing the International Date Line on the day before its expiration date. This was previously abused by several black market milk dealers, who used this anomaly to keep milk fresh far past its expiration.

Due to the massive unpopularity of the setting-clocks-forward phase of Daylight Savings Time, the new standard mandates that the world set its clocks backward in both October and April, affording an extra hour of sleep twice a year.

Father Time commented, "These changes are definitely for the best. Frankly, I was sick of Greenwich's 'mean' time, and it's about.. er.. time that we instituted a more amicable version."

Time Magazine could not be reached for comment.

From: Mike Walker <mike.walkerNO@SPAMbakeratlas.com>
Real story... still funny

Talking to a group of primary school teachers about geology, and how to introduce it to the young. The inevitable discussion on dinosaurs...all kids are fascinated about dinosaurs.

So I asked the teachers, if so many kids were interested in dinosaurs, why weren't there more geologists...

The answer...most kids grow up !

From: Dan Shackelford <danshack@spam_me_not.ix.netcom.com>
Here in California, when a bldg falls down, we know it must be San
Andreas' Fault!

From: Duncan A.McDonald <duncanmcdonald@home.com> My Pet Rock went to a Shrink the other day and, The Doc told him that he to fat and, had little personality. Well, my pet rock to the Doc to stuff he prognosis and, he would get a second opinion. He then visited a Barber and, he recommended the he grow some hair. Then sold him some Grow gain. He also told him to socialize more my being seen by lots of humans young and old. He did this by getting a Job a Walmart as a Nut Cracker and hundreds of customers used him to crash a lot of nuts. He was surely disappointed that nobody cared to see him other than a Nut Cracker.

So the Moral of this story if you can't make it in Geology, don't ever work for Walmart.

From: Limestone Cowboy <outac@geocities.com>
I find drillers boring !

From: Hoffman, Nick N <Hoffman.Nick.N@bhp.com.au>
Geophysicists do it on impulse!
(courtesy of Merlin Profilers)

From: Ste Lomax <stephen.lomax@worc.ox.ac.uk>
Geologists get hammered and stoned.

MPE

jwest@jwest.ecen.okstate.edu:

A mathmatician, a physicist, and an engineer were all given a red rubber ball and told to find the volume. The mathmatician carefully measured the diameter and evaluated a triple integral. The physicist filled a beaker with water, put the ball in the water, and measured the total displacement. The engineer looked up the model and serial numbers in his red-rubber-ball table.

If it was my company: The engineer tried to look up the model and serial numbers, couldn't find them, so told his manager that it's just not going to work. MPE

So a mathematician, an engineer, and a physicist are out hunting together. They spy a deer(*) in the woods.

The physicist calculates the velocity of the deer and the effect of gravity on the bullet, aims his rifle and fires. Alas, he misses; the bullet passes three feet behind the deer. The deer bolts some yards, but comes to a halt, still within sight of the trio.

"Shame you missed," comments the engineer, "but of course with an ordinary gun, one would expect that." He then levels his special deer-hunting gun, which he rigged together from an ordinary rifle, a sextant, a compass, a barometer, and a bunch of flashing lights which don't do anything but impress onlookers, and fires. Alas, his bullet passes three feet in front of the deer, who by this time wises up and vanishes for good.

"Well," says the physicist, "your contraption didn't get it either."

"What do you mean?" pipes up the mathematician. "Between the two of you, that was a perfect shot!"

(*) How they knew it was a deer:

The physicist observed that it behaved in a deer-like manner, so it must be a deer.

The mathematician asked the physicist what it was, thereby reducing it to a previously solved problem.

The engineer was in the woods to hunt deer, therefore it was a deer. $\ensuremath{\mathtt{MP}}$

A mathematician and a physicist agree to a psychological experiment. The mathematician is put in a chair in a large empty room and a beautiful naked woman is placed on a bed at the other end of the room. The psychologist explains, "You are to remain in your chair. Every five minutes, I will move your chair to a position halfway between its current location and the woman on the bed." The mathematician looks at the psychologist in disgust. "What? I'm not going to go through this. You know I'll never reach the bed!" And he gets up and storms out. The psychologist makes a note on his clipboard and ushers the physicist in. He explains the situation, and the physicist's eyes light up and he starts drooling. The psychologist is a bit confused. "Don't you realize that you'll never reach her?" The physicist smiles and replied, "Of course! But I'll get close enough for all practical purposes!" ME_

From: LJGOLD01@ulkyvm.louisville.edu A businessman needed to employ a quantitative type person. He wasn't sure if he should get a mathematician, an engineer, or an applied mathematician. As it happened, all the applicants were male. The businessman devised a test. The mathematician came first. Miss How, the administrative assistant took him into the hall. At the end of the hall, lounging on a couch, was a beautiful woman. Miss How said, "You may only go half the distance at a time. When you reach the end, you may kiss our model." The mathmatician explained how he would never get there in a finite number of iterations and politely excused himself. Then came the engineer. He quickly bounded halfway down the hall, then halfway again, and so on. Soon he declared he was well within accepted error tolerance and grabbed the beautiful woman and kissed her. Finally it was the applied mathematician's turn. Miss How explained the rules. The applied mathematician listened politely, then grabbed Miss How and gave her a big smooch. "What was that about?" she cried. "Well, you see I'm an applied mathematician. If I can't solve the problem, I change it!" PEA

From: pascual@tid.es (Pascual de Juan Nuqez) Three men, a physican, a engineer and a computer scientist, are travelling in a car. Suddenly, the car starts to smoke and stops. The three atonished men try to solve the problem:

- Physican says: This is obviously a classic problem of torque.

It has been overloaded the elasticity limit of the main axis.

- Engineer says : Let's be serious! The matter is that it has been burned the spark of the connecting rod to the dynamo of the radiator. I can easily repair it by hammering.

- Computer scientist says : What if we get off the car, wait a minute, and then get in and try again?

EA_

From: Dave Murray <u01dagm@abdn.ac.uk>
There are comp sci student, an engineering student and a meterology
student
going through the desert in a jeep.
Suddenly the jeep stops and they're left sitting there wondering what
happened..

The Eng student pipes up, " must be the fan belt thats broken..the engine has overheated...so we'll just have to wait till it cools down, bodge the fan belt and we'll be fine."

The meterology replies, "naw, it's not that...its just the ambient heat in this place. It's not allowing the engine to breath correctly...we just have to wait till night time.."

The comp sci student thinks about this for a minute then says, "yeah, you might be right, but I've got an idea....What say we all get out..then get back in again?" MEA

An engineer, a mathematician, and a computer programmer are driving down the road when the car they are in gets a flat tire. The engineer

says that they should buy a new car. The mathematician says they should sell the old tire and buy a new one. The computer programmer says they should drive the car around the block and see if the tire fixes itself. MBA

A biologist, a statistician, a mathematician and a computer scientist are on a photo-safari in Africa. They drive out into the savannah in their jeep, stop and scour the horizon with their binoculars.

The biologist: "Look! There's a herd of zebras! And there, in the middle: a white zebra! It's fantastic! There are white zebras! We'll be famous!"

The statistician: "It's not significant. We only know there's one white zebra"

The mathematician: "Actually, we know there exists a zebra which is white on one side"

The computer scientist: "Oh no! A special case!" MPA

A philosopher, a physicist, a mathematician and a computer scientist were travelling through Scotland when they saw a black sheep through the window of the train.

"Aha," says the philosopher, "I see that Scottish sheep are black."

"Hmm," says the physicist, "You mean that some Scottish sheep are black."

"No," says the mathematician, "All we know is that there is at least one sheep in Scotland, and that at least one side of that one sheep is black!"

"Oh, no!" shouts the computer scientist, "A special case!"

Sherlock Holmes and Dr. Watson were travelling on the same train when they passed the same field full of sheep.

"Look at that solitary black sheep among all those white ones" said Watson to Holmes.

"Yes Watson, the ratio of black sheep to white in that field is one black to three hundred and seventeen white" replied Holmes.

"But how can you be so precise" said Watson, flabbergasted.

"Elementary, my dear Watson" replied Holmes, "I counted all of the legs and divided by four!" MPE

A mathematician, an engineer, and a physicist are being interviewed for a job. In each case, the interview goes along famously until the last question is asked: "How much is one plus one?"

Each of them suspects a trap, and is hesitant to answer.

М

The mathematician thinks for a moment, and says "I'm not sure, but I think it converges".

The physicist says "I'm not sure, but I think it's on the order of one"

The engineer gets up, closes the door to the office, and says "How much do you want it to be?".

A doctor, a lawyer and a mathematician were discussing the relative merits of having a wife or a mistress.

The lawyer says: "For sure a mistress is better. If you have a wife and want a divorce, it causes all sorts of legal problems.

The doctor says: "It's better to have a wife because the sense of security lowers your stress and is good for your health.

The mathematician says: "You're both wrong. It's best to have both so that when the wife thinks you're with the mistress and the mistress thinks you're with your wife --- you can do some mathematics. MPB

A Mathematician, a Biologist and a Physicist are sitting in a street cafe watching people going in and coming out of the house on the other side of the street.

First they see two people going into the house. Time passes. After a while they notice three persons coming out of the house.

The Physicist: "The measurement wasn't accurate.". The Biologists conclusion: "They have reproduced". The Mathematician: "If now exactly 1 person enters the house then it will be empty again." ME

There were two men trying to decide what to do for a living. They went to see a counselor, and he decided that they had good problem solving skills.

He tried a test to narrow the area of specialty. He put each man in a room with a stove, a table, and a pot of water on the table. He said "Boil the water". Both men moved the pot from the table to the stove and turned on the burner to boil the water. Next, he put them into a room with a stove, a table, and a pot of water on the floor. Again, he said "Boil the water". The first man put the pot on the stove and turned on the burner. The counselor told him to be an Engineer, because he could solve each problem individually. The second man moved the pot from the floor to the table, and then moved the pot from the table to the stove and turned on the burner. The counselor told him to be a mathematician because he reduced the problem to a previously solved problem. Three engineering students were gathered together discussing the possible designers of the human body.

One said, ``It was a mechanical engineer. Just look at all the joints.''

Another said, ``No, it was an electrical engineer. The nervous system has

many thousands of electrical connections.''

The last said, ``Actually it was a civil engineer. Who else would run a toxic waste pipeline through a recreational area?''

An engineer, a physicist, and a mathematician are shown a pasture with a herd of sheep, and told to put them inside the smallest possible amount of fence. The engineer is first. He herds the sheep into a circle and then puts the fence around them, declaring, "A circle will use the least fence for a given area, so this is the best solution." The physicist is next. She creates a circular fence of infinite radius around the sheep, and then draws the fence tight around the herd, declaring, "This will give the smallest circular fence around the herd." The mathematician is last. After giving the problem a little thought, he puts a small fence around himself and then declares, "I define myself to be on the outside!"

One day a farmer called up an engineer, a physicist, and a mathematician and asked them to fence of the largest possible area with the least amount of fence. The engineer made the fence in a circle and proclaimed that he had the most efficient design. The physicist made a long, straight line and proclaimed 'We can assume the length is infinite...' and pointed out that fencing off half of the Earth was certainly a more efficient way to do it. The Mathematician just laughed at them. He built a tiny fence around himself and said 'I declare myself to be on the outside.' EC______

Four men were sitting one day discussing how smart their dog's were. The first man was an Engineer, who said his dog could do math. His dog was named T-Square, and he told him to get some paper and draw a square, a circle, and a triangle, which the dog did with no sweat.

The Accountant said that his dog was better. His dog, Slide Rule, was told to fetch a dozen cookies, bring them back, and divide them into piles of 3, which Slide Rule did with no problem.

The Chemist said his dog was smarter, his dog named Measure, was told to get a quart of milk, and pour 7 ounces into a 10 ounce glass. The dog did this with no trouble at all, and all three men agreed that their dog's were equally smart.

Then they turned to the Union Member and asked, what can your dog do? The Union Member called his dog, who was named Coffee Break, and said, "Show the fellows what you can do".

 E_{-}

Coffee Break went over and ate the cookies, drank the milk, shit on the paper, fucked the other dogs, and claimed he injured his back while doing so, filed a grievence report for unsafe working conditions, put in for Workmens Compensation, and left for home on sick leave.

A mathematician and a physicist are given the task of describing a room. They both go in, and spend hours meticulously writing down every detail, each turning in nearly a ream of paper. The next day, the room is changed, and they are again given the task. The physicist spends the better part of the day, but the mathematician, amazingly enough, leaves within a minute. he hands in a single sheet of paper with the following description:

Put picture back on wall to return to previously solved state. ME

To tell a difference between a mathematician and an engineer, perform this experiment. Put an empty kettle in the middle of the kitchen floor and tell your subjects to boil some water.

The engineer will fill the kettle with water, put it on the stove, and turn the flame on. The mathematician will do the same thing.

Next, put the kettle already filled with water on the stove, and ask the subjects to boil the water. The engineer will turn the flame on. The mathematician will empty the kettle and put it in the middle of the kitchen floor... thereby reducing the problem to one that has already been solved! MPE

When considering the behaviour of a howitzer:

A mathematician will be able to calculate where the shell will land.

A physicist will be able to explain how the shell gets there.

An engineer will stand there and try to catch it. $\ensuremath{\mathtt{MPE}}$

From: "Frank Kosanke" <digger@htb.de>
(Blame translation from German on Joachim)
A physicist, an engineer and a mathematician make their first parachute
jump. Before the jump the instructor explains exactly what they must do:

Jump out of the plane, count until three and pull the line.

The physicist jumps. For him counting till three is too unexact and too primitive. Instead, he calculates out of his height, angle and velocity the exact moment he should pull the line for a soft landing and arrives optimally.

The engineer is a practical man and thinks calling to three is too unreliable and therefore dangerous... He jumps and pulls the line immediately. He takes a bit longer than the physicist but he lands safely.

Both see jump the mathematician jump out of the plane. He falls ... and falls ... and falls ... No parachute opens and finally he falls on the ground. Fortunately, he lands in a haystack. The physicist and engineer walk alarmed to the haystack and while they dig him out they hear him say: "From this follows from complete induction: 3" MPCB

The USDA once wanted to make cows produce milk faster, to improve the dairy industry.

So, they decided to consult the foremost biologists and recombinant DNA technicians to build them a better cow. They assembled this team of great scientists, and gave them unlimited funding. They requested rare chemicals, weird bacteria, tons of quarantine equipment, there was a horrible typhus epidemic they started by accident, and, 2 years later, they came back with the "new, improved cow." It had a milk production improvement of 2% over the original.

They then tried with the greatest Nobel Prize winning chemists around. They worked for six months, and, after requisitioning tons of chemical equipment, and poisoning half the small town in Colorado where they were working with a toxic cloud from one of their experiments, they got a 5% improvement in milk output.

The physicists tried for a year, and, after ten thousand cows were subjected to radiation therapy, they got a 1% improvement in output.

Finally, in desperation, they turned to the mathematicians. The foremost mathematician of his time offered to help them with the problem. Upon hearing the problem, he told the delegation that they could come back in the morning and he would have solved the problem. In the morning, they came back, and he handed them a piece of paper with the computations for the new, 300% improved milk cow.

The plans began:

"A Proof of the Attainability of Increased Milk Output from Bovines:

Consider a spherical cow....."
MPCE

An assemblage of the most gifted minds in the world were all posed the following question:

"What is 2 * 2 ?"

The chemist says immediately circa 10 to the power 1.

The engineer whips out his slide rule (so it's old) and shuffles it back and forth, and finally announces "3.99".

The physicist consults his technical references, sets up the problem on his computer, and announces "it lies between 3.98 and 4.02".

The mathematician cogitates for a while, oblivious to the rest of the world, then announces: "I don't what the answer is, but I can tell you, an answer exists!".

Philosopher: "But what do you _mean_ by 2 * 2 ?"

Logician: "Please define 2 * 2 more precisely."

Accountant: Closes all the doors and windows, looks around carefully, then asks "What do you _want_ the answer to be?"

Computer Hacker: Breaks into the NSA super-computer and gives the answer.

From: Tony Quinn <tonyquin@sixpints.demon.co.uk>
Stress engineer: Well I know it's 4, but let's call it 50 anyway.....

From: Detlef_Wendt@SU2.maus.de (Detlef Wendt) (blame JV for translation) The psychologist: Why do you wish to know that?

The sociologist: I don't know, but is was nice talking about it. $\ensuremath{\texttt{ME}}$

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From: pclarke@waite.adelaide.edu.au (Philip Clarke)
An Engineer, Statistician and Economist were asked "what does 2 + 2
equal?"
They answered as follows:
Engineer: With a safety factor of 2x, 2 + 2 = 8
Statistician: With a degree of freedom of 1, 2 + 2 = anywhere from 1 to
7,
but I can't be sure.
Economist: What would you like it to equal?
MP
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From: "Frank Kosanke" <digger@htb.de>

(Blame Joachim for translation from German) And yet another variation: A Physicist, a computer scientist and a mathematician must calculate what is 2 + 2. The physicist constructs out of slopes and balls etcetera a complicated measuring system and finds 3.99998 as solution. "Measuring errors are possible, of course" The computer scientist writes a 24 page Pascal Program, that spits out 4.000001 as solutions. "Going from a binary to a decimal system and back can cause inaccuracies." The mathematician buries himself in his books and writes complicates expressions on thousands pieces of papers. Then he proofs that there is only one solution, and it is calculable. MP_ From: carrt@ix.netcom.com (Tim Carr) Three people answered an add for a an open job - an engineer, a physicist and a statistician. When the engineer went in, he was asked: Q: "What is two plus two?" A: "Four." When the physisict went in, he was asked the same question: Q: "What is two plus two?" A: "Four." The statistician went in next. When the question was posed to him, he looked around furtively, shut the door and drew the blinds closed. His response: "What do you want it to be?" MPE The Board of Trustees, not convinced by the performance in a previous joke, decides to test the Profs. again. First they take a Math Prof. and put him in a room. Now, the room contains a table and three metal spheres about the size of softballs. They tell him to do whatever he want with the balls and the table in one hour. After an hour, he comes out and the Trustees look in and the balls are arranges in a triangle at the center of the table. Next, they give the same test to a Physics Prof. After an hour, they look in, and the balls are stacked one on top of the other in the center of the table.

Finally, the give the test to an Engineering Prof. After an hour, they $\ensuremath{\mathsf{look}}$

in and one of the balls is broken, one is missing, and he's carrying the third out in his lunchbox. PE

From: "F. Ted Tschang" <ft0d+@andrew.cmu.edu>
An economist, an engineer, and a physicist are marooned on a deserted
island. One day they find a can of food washed up on the beach and
contrive to open it. The engineer said: "let's hammer the can open
between these rocks". The physicist said: "that's pretty crude. We can
just use the force of gravity by dropping a rock on the can from that
tall tree over there". The economist is somewhat disgusted at these
deliberations, and says: "I've got a much more elegant solution. All we
have to do is assume a can-opener."

In some foreign country a priest, a lawyer and an engineer are about to be guillotined. The priest puts his head on the block, they pull the rope and nothing happens -- he declares that he's been saved by divine intervention -- so he's let go. The lawyer is put on the block, and again the rope doesn't release the blade, he claims he can't be executed twice for the same crime and he is set free too. They grab the engineer and shove his head into the guillotine, he looks up at the release mechanism and says, "Wait a minute, I see your problem....."

An engineer, a mathematician, and a physicist went to the races one Saturday and laid their money down. Commiserating in the bar after the race, the engineer says, "I don't understand why I lost all my money. I measured all the horses and calculated their strength and mechanical advantage and figured out how fast they could run..."

The physicist interrupted him: "...but you didn't take individual variations into account. I did a statistical analysis of their previous performances and bet on the horses with the highest probability of winning..."

"...so if you're so hot why are you broke?" asked the engineer. But before the argument can grow, the mathematician takes out his pipe and they get a glimpse of his well-fattened wallet. Obviously here was a man who knows something about horses. They both demanded to know his secret.

"Well," he says, between puffs on the pipe, "first I assumed all the horses were identical and spherical..."

A group of wealthy investors wanted to be able to predict the outcome of a horse race. So they hired a group of biologists, a group of statisticians, and a group of physicists. Each group was given a year to research the issue. After one year, the groups all reported to the investors. The biologists said that they could genetically engineer an unbeatable racehorse, but it would take 200 years and \$100 billion. The statisticians reported next. They said that they could predict the outcome of any race, at a cost of \$100 million per race, and they would only be right 10% of the time. Finally, the physicists reported that they could also predict the outcome of any race, and that their process was cheap and simple. The investors listened eagerly to this proposal. The head physicist reported, "We have made several simplifying assumptions... first, let each horse be a perfect rolling sphere..." MPE

A group of scientists were doing an investigation into problem-solving techniques, and constructed an experiment involving a physicist, an engineer, and a mathematician.

The experimental apparatus consisted of a water spigot and two identical pails, one of which was fastened to the ground ten feet from the spigot.

Each of the subjects was given the second pail, empty, and told to fill the pail on the ground.

The physicist was the first subject: he carried his pail to the spigot, filled it there, carried it full of water to the pail on the ground, and poured the water into it. Standing back, he declared, "There: I have solved the problem."

The engineer and the mathematician each approached the problem similarly. Upon finishing, the engineer noted that the solution was exact, since the volumes of the pails were equal. The mathematician merely noted that he had proven that a solution exists.

Now, the experimenters altered the parameters of the task a bit: the pail on the ground was still empty, but the subjects were presented with a pail that was already half-filled with water.

The physicist immediately carried his pail over to the one on the ground, emptied the water into it, went back to the spigot, *filled* the pail, and finally emptied the entire contents into the pail on the ground, overflowing it and spilling some of the water. Upon finishing, he commented that the problem should have been better stated.

The engineer, in turn, thought for some time before going into action. He then took his half-filled pail to the spigot, filled it to the brim, and filled the pail on the ground from it. Again he noted that the problem had an exact solution, which of course he had found.

The mathematician thought for a long time before stirring. At last he stood up, emptied his pail onto the ground, and declared, "The problem has been reduced to one already solved."

A doctor, an architect, and a computer scientist were arguing about whose profession was the oldest. In the course of their arguments, they got all the way back to the Garden of Eden, whereupon the doctor said, "The medical profession is clearly the oldest, because Eve was made from Adam's rib, as the story goes, and that was a simply incredible surgical feat." The architect did not agree. He said, "But if you look at the Garden itself, in the beginning there was chaos and void, and out of that, the Garden and the world were created. So God must have been an architect." The computer scientist, who had listened to all of this said, "Yes, but where do you think the chaos came from?" MPBE From: mstueben@pen.k12.va.us (Michael A. Stueben) The biologist says "I study the principles of life." The psychologist says "You are controlled by the principles of life." The businessman says "My business can use its force to control the economy." The economist says "The forces of the economy will control your business." The engineer says: "My equations are a model of the universe." The physicist says: "The universe is a model of my equations." The mathematician says: "I don't care." PCE_ From: chemistrwb@aol.com (ChemistRWB) A chemist, a physicist and an Engineer went on a camping trip, accompanied by a guide. The were brought to a cabin in the deep Canadian wilderness. Inside the cabin was a wood-burning stove, but it was set up on bricks about 60 cm above the floor of the cabin. The three scientists speculated about the function of the high placement of the stove. The chemist said, "Obviously, the guide has anticipated the convection currents of the heat an placed the stove in a raised position to maximize the heat flow in the semi-adiabatic system." The Physicist believed, "No, it's far simpler than that, the guide placed the stove higher so movement from the countertops to the stove would be minimized and energy conserved." The engineer believed he had the true answer, "Obviously, you fellows don't do much camping. The stove is place higher so we can bring in wood and put it under the stove to dry." The guide soon returned and all three scientists were eager to find out who was right. The guide replied, "Well, we was bringin' the dang thing up the river and part of the chimney pipe fell off the boat, so we had to put it up for the pipe to reach the ceiling." PS: If you know all the words in this essay, your English is better than 99% of native Americans. MPE

Α_

From: grayd@is.dal.ca (James D. Gray) An Engineering Student, a Physics Student, and a Mathematics student were each given \$150 dollars and were told to use that money to find out exactly

how tall a particular hotel was.

All three ran off, extremely keen on how to do this. The Physics student went out, purchased some stopwatches, a number of ball bearings, a calculator, and some friends. He had them all time the drop of ball bearings from the roof, and he then figured out the height from the time it took for the bearings to accelerate from rest until they impacted with the sidewalk.

The Math student waited until the sun was going down, then she took out her protractor, plumb line, measuring tape, and scratch pad, measured the length of the shadow, found the angle the buildings roof made from the ground, and used trignometry to figure out the height of the building.

These two students bumped into the Engineering student the next day, who was nursing a really bad hangover. When asked what he did to find the height of the building he replied:

"Well, I walked up to the bell hop, gave him 10 bucks, asked him how tall the hotel was, and hit the bar inside for happy hour!" MP______

From: arkoff@sun.lclark.edu (Gary Arkoff)
A math student and a physics student are camping. The physics students
takes
his turn to do the cooking first. He makes a tasty stew, but in so
doing,
uses up all the water.

The next day, it is the math student's turn to do the cooking. The physics student watches him go to the creek to fetch the water. He puts the water into the pot and then stops and goes off to do something else.

Puzzled, the physics student asks the math student when he is going to finish making dinner. The math student tells him that there is nothing left to do as now it has been reduced to a problem which has already been solved. MPE

From: spencer@cwis.unomaha.edu (Tom Spencer)
A mathematician, a physicist and an engineer were all umpiring a softball
game. The batter hit a fly ball to the outfield that was not caught. All
the runners who were on base scored easily and the batter tried to turn
it
into an inside the park home run. It became clear that there would be a
close play at the plate and all three umpires rushed into position to
make
the call. They all called the batter out. The captain of the batting team
went out to argue and demanded "Why is he out?"

The physicist said "I watched very carefully, and I saw that, at the moment

that the batter was tagged, he had not touched home plate; so he's out." The mathematician said "He's out because I called him out." ME From: agdoll@wimsey.com (Alex Doll) Ask a surveyor, a statistician, and an engineer to measure a 4 cm piece of string: Surveyor gets out his tripod, gets an assistant to hold the rod, then compensates for temperature and declares that the string is 4.000 cm long. Statstician takes a ruler marked in metres and makes $(n^{-1})/(1-1/n)!$ measurements before declaring that the string is between 1 cm and 10 cm 90 percent of the time Engineer takes out a pair of scissors and asks "How long do you want it to be?" MPE_ From: j.p.openshaw@swansea.ac.uk (John Openshaw) A Mathematician, Physicist and an Engineer all have to nip to the loo. The M has a leak, and then sprinkles a few drops of water on his hands, turns to the attendant and says 'Mathematicians learn to be concise'. The P has a turn, spends 5 minutes scrubbing his hands, then turns to the attendant and says 'Physicists learn to be thorough'. The engineer has a wee, doesn't bother washing his hands, turns to the attendant and say 'Engineers learn not to pee all over their hands'. MPE_ From: Alexis Monnerot-Dumaine <alexis.monnerot-dumaine@bnpgroup.com> A mathematician, a physician and an engineer are on vacation in Paris at their friend's Jean-Pierre. - How high exactly is that Eiffel Tower? asks the mathematician I've got an idea, replied Jean-Pierre. How about guessing it, and the winner wins a good dinner in a good restaurant?, what do you think? All right, says the physician,...but let's leave us some time and meet tomorrow at 10 a.m., Ok? Ok. As the mathematician and the physician stay to think on the problem, the engineer leaves: " Sorry, I've got a date, see you tomorrow ". The next morning, the friends meet at the bottom of the Eiffel Tower. - So, what's your estimation ? asked Jean-Pierre. Well, says the mathematician, I measured the length of the shadow of the tower and, according to the position of the sun, date and time GMT, a simple trigonometric calculation gave me 320,68 metres. - Not a bad idea, replied Jean-Pierre, but not quite the right answer. What about you? - Well, says the physician, I climbed the stairs up to the top of the tower, then I started a chronograph and dropped it immediately. As it hit the ground, it broke, indicating the duration of the fall.

Considering the Newton equations and the viscosity of the air, my calculations gave me 321,9 metres. - That's a bit better, but not the right answer, says Jean-Pierre. But, where is our engineer? The engineer arrives: - Sorry, I'm late, but, woahoo, what a night I had! . - So, what about our little bet ? asked the physician. - Our bet? What bet? Oh yes, the Eiffel Tower! I forgot...err...just wait here a moment. He turns back and comes again 2 minutes later: - The Eiffel Tower is 321,50 metres high. - That's absolutely right, says Jean-Pierre, you won the bet! The mathematician and the physician are puzzled: - How did you do it? And the engineer replies: - Oh...well...quite simple, in fact... I just went to that café over there...and asked the waiter... . EA_

From: Russell Turner <turnerr@actrix.gen.nz> Once upon a time, in a kingdom not far from here, a king summoned two of his advisors for a test. He showed them both a shiny metal box with two slots in the top, a control knob, and a lever. "What do you think this is?"

One advisor, an engineer, answered first. "It is a toaster," he said. The king asked, "How would you design an embedded computer for it?" The engineer replied, "Using a four-bit microcontroller, I would write a simple program that reads the darkness knob and quantizes its position to one of 16 shades of darkness, from snow white to coal black. The program would use that darkness level as the index to a 16-element table of initial timer values. Then it would turn on the heating elements and start the timer with the initial value selected from the table. At the end of the time delay, it would turn off the heat and pop up the toast. Come back next week, and I'll show you a working prototype."

The second advisor, a computer scientist, immediately recognized the danger of such short-sighted thinking. He said, "Toasters don't just turn bread into toast, they are also used to warm frozen waffles. What you see before you is really a breakfast food cooker. As the subjects of your kingdom become more sophisticated, they will demand more capabilities. They will need a breakfast food cooker that can also cook sausage, fry bacon, and make scrambled eggs. A toaster that only makes toast will soon be obsolete. If we don't look to the future, we will have to completely redesign the toaster in just a few years."

"With this in mind, we can formulate a more intelligent solution to the problem. First, create a class of breakfast foods. Specialize this class into subclasses: grains, pork, and poultry. The specialization process should be repeated with grains divided into toast, muffins, pancakes, and waffles; pork divided into sausage, links, and bacon; and poultry divided into scrambled eggs, hard- boiled eggs, poached eggs, fried eggs, and various omelet classes."

"The ham and cheese omelet class is worth special attention because it must inherit characteristics from the pork, dairy, and poultry

classes. Thus, we see that the problem cannot be properly solved without multiple inheritance. At run time, the program must create the proper object and send a message to the object that says, 'Cook yourself.' The semantics of this message depend, of course, on the kind of object, so they have a different meaning to a piece of toast than to scrambled eggs."

"Reviewing the process so far, we see that the analysis phase has revealed that the primary requirement is to cook any kind of breakfast food. In the design phase, we have discovered some derived requirements. Specifically, we need an object-oriented language with multiple inheritance. Of course, users don't want the eggs to get cold while the bacon is frying, so concurrent processing is required, too."

"We must not forget the user interface. The lever that lowers the food lacks versatility, and the darkness knob is confusing. Users won't buy the product unless it has a user-friendly, graphical interface. When the breakfast cooker is plugged in, users should see a cowboy boot on the screen. Users click on it, and the message 'Booting UNIX v.8.3' appears on the screen. (UNIX 8.3 should be out by the time the product gets to the market.) Users can pull down a menu and click on the foods they want to cook."

"Having made the wise decision of specifying the software first in the design phase, all that remains is to pick an adequate hardware platform for the implementation phase. An Intel 80386 with 8MB of memory, a 30MB hard disk, and a VGA monitor should be sufficient. If you select a multitasking, object oriented language that supports multiple inheritance and has a built-in GUI, writing the program will be a snap. (Imagine the difficulty we would have had if we had foolishly allowed a hardware-first design strategy to lock us into a four-bit microcontroller!)."

The king wisely had the computer scientist beheaded, and they all lived happily ever after. MPE_____

From: Rich Griffiths <richg@cybercomm.net> A mathematician and a physicist are trying to measure the height of a flag pole using a long tape measure. The mathematician takes the tape measure, walks up to the flag pole, and begins to shinny up the pole. A short way up, he slips and falls down.

The physicist notices a ladder lying nearby in the bushes. He leans the ladder against the pole, but it reaches only half way up. He climbs the ladder and tries to shinny up from there, but he also slips and falls.

While they sit near the pole scratching their heads, an engineer walks by, so the mathematician and the physicist tell him their problem. The engineer notices a crank at the base of the flag pole. He turns the crank, and the flag pole tilts over until it lies on the ground. The engineer stretches out the tape measure, cranks the pole back up, and tells the mathematician and the physicist: 'It is 15 meters.'

As the engineer walks off into the distance, the mathematician looks at the physicist and says: 'Isn't that just like an engineer? You ask him for the height, and he gives you the length.'

BUT SOME PEOPLE BELIEVE THE STORY GOES LIKE THIS: A team of engineers were required to measure the height of a flag pole. They only had a measuring tape, and were getting quite frustrated trying to keep the tape along the pole. It kept falling down, etc. A mathematician comes along, finds out their problem, and proceeds to remove the pole from the ground and measure it easily. When he leaves, one engineer says to the other: "Just like a mathematician! We need to know the height, and he gives us the length!" MPE_ From: Henry Cate's Life collection A mathematician, scientist, and engineer are each asked: "Suppose we define a horse's tail to be a leg. How many legs does a horse have?" The mathematician answers "5"; the scientist "1"; and the engineer says "But you can't do that!" MPE_ From: Henry Cate's Life collection 3.F There are three umpires at a baseball game. One is an engineer, one is a physicist, and one is a mathematician. There is a close play at home plate and all three umpires call the man out. The manager runs out of the dugout and asks each umpire why the man was called out. The physicist says "He's out because I calls 'em as I sees 'em". The engineer says "He's out because I calls 'em as they are". And the mathematician says "He's out because I called him out". MPE An engineer, a physicist, a mathematician, and a mystic were asked to name the greatest invention of all time. The engineer chose fire, which gave humanity power over matter. The physicist chose the wheel, which gave humanity the power over space. The mathematician chose the alphabet, which gave humanity power over symbols. The mystic chose the thermos bottle. "Why a thermos bottle?" the others asked. "Because the thermos keeps hot liquids hot in winter and cold liquids cold in summer." "Yes -- so what?" "Think about it." said the mystic reverently. That little bottle -- how does it *know*?" MPE

An engineer, a physicist and a mathematician find themselves in an anecdote, indeed an anecdote quite similar to many that you have no doubt already heard. After some observations and rough calculations the engineer realizes the situation and starts laughing. A few minutes later the physicist understands too and chuckles to himself happily as he now has enough experimental evidence to publish a paper.

This leaves the mathematician somewhat perplexed, as he had observed right away that he was the subject of an anecdote, and deduced quite rapidly the presence of humour from similar anecdotes, but considers this anecdote to be too trivial a corollary to be significant, let alone funny. ++++ =6.1 THE LOCKED ROOM AND THE TIN CAN

MPB_

Three men with degrees in mathmatics, physics and biology are locked up in dark rooms for research reasons.

A week later the researchers open the a door, the biologist steps out and reports: `Well, I sat around until I started to get bored, then I searched the room and found a tin which I smashed on the floor. There was food in it which I ate when I got hungry. That's it.'

Then they free the man with the degree in physics and he says: `I walked along the walls to get an image of the room's geometry, then I searched it. There was a metal cylinder at five feet into the room and two feet left of the door. It felt like a tin and I threw it at the left wall at the right angle and velocity for it to crack open.'

Finally, the researchers open the third door and hear a faint voice out of the darkness: `Let C be an open can.' $\ensuremath{\texttt{MP}}$

From: "Softsheep" <ns1052@fen.baynet.de>
(Blame JV for translation from german)

Take a mathematician, a physicist and a theologian and locks each of them in his own room with a can of spinach, but withouth a can opener. After a week one opens the doors. What has happened:

With the theologian: Bumps in the can, scratches on the wall, everywhere spinach. => He threw the can so long against the wall till it broke - He survived.

With the physicist: On the wall are calculations and in a corner a small scratch with spinach. => He calculated the force and the angel needed to open the can. - He survived.

With the mathematician: Dead! On the wall a text: "I define: The can is open."

From: stolze@minet.uni-jena.de (Knut) Which proves you cannot eat from open cans.

From: (Curd Reinert)

Which proves before all, that both theologians and physicists can live form one can of spinach and need no water. The mathematician, as a more demanding lifeform understood immediately, that an open can spinach would not reach for a week and made a last joke. MP

From: Florian Themé (Blame Joachim for translation from german)
The mathematician's version of the story:
A mathematician and a physicist are in a room an try to open a can of
beans. The physicist calculates the exact angle to throw the can against
the wall, that is necessary to open it. He throws, the can hits the
wall,
it bumps back to the physicist and throws him against the floor.
When he is standing again, he sees the mathematician eating the beans.
He asks: "How did you do that?"
The mathematician: "O, I just defined the can open."
M

From: Eike Michaelis <eike@nef.wh.uni-dortmund.de>
And yet another variation:
The room with the topologist mathematician, who was locked in the room
with the closed can is found empty, with the can still closed. Suddenly
something knocks in the can. The can is opened, the mathematician comes
out
with the word: "Shit, sign error."

MPE_

There was a mad scientist (a mad ...social... scientist) who kidnapped three colleagues, an engineer, a physicist, and a mathematician, and locked each of them in seperate cells with plenty of canned food and water but no can opener.

A month later, returning, the mad scientist went to the engineer's cell and found it long empty. The engineer had constructed a can opener from pocket trash, used aluminum shavings and dried sugar to make an explosive, and escaped.

The physicist had worked out the angle necessary to knock the lids off the tin cans by throwing them against the wall. She was developing a good pitching arm and a new quantum theory.

The mathematician had stacked the unopened cans into a surprising solution to the kissing problem; his desiccated corpse was propped calmly against a wall, and this was inscribed on the floor in blood:

Theorem: If I can't open these cans, I'll die.

Proof: assume the opposite...

MP

From: ui2b@rzstud2.rz.uni-karlsruhe.de (Ernst Schnell)
A philosopher, a physicist and a mathematician are scheduled to prove
their
surviving abilities. Therefore they are to be incarcerated in different
cells

with each having a closed can of corned beef and no opener. First goes the philosopher. After a time of two weeks, the cell is opened and the philosopher found dead, the can still closed. He must have died thinking about a way to open it. Second goes the physicist. Two weeks later he is found with the whole wall filled with formulas, munching happily on his corned beef. Last goes the Mathematician. Two weeks later the door is opened. The can is still there, untouched but the mathematician has disappeared. Suddenly the Jailor hears a knocking from inside the can. After he has qot an opener, he discovers the mathematician sitting inside, scratching his beard and mumbling, "There must have been something wrong with the prefix." ++ =6.2 FIRE

MPE

An engineer, physicist, and mathematician are all challenged with a problem: to fry an egg when there is a fire in the house. The engineer just grabs a huge bucket of water, runs over to the fire, and puts it out. The physicist thinks for a long while, and then measures a precise amount of water into a container. He takes it over to the fire, pours it on, and with the last drop the fire goes out. The mathematician pores over pencil and paper. After a few minutes he goes "Aha! A solution exists!" and goes back to frying the egg.

Sequel: This time they are asked simply to fry an egg (no fire). The engineer just does it, kludging along; the physicist calculates carefully and produces a carefully cooked egg; and the mathematician lights a fire in the corner, and says "I have reduced it to the previous problem." MPE

An engineer, a mathematician, and a physicist are staying in three adjoining cabins at a decrepit old motel.

First the engineer's coffee maker catches fire on the bathroom vanity. He smells the smoke, wakes up, unplugs it, throws it out the window, and goes back to sleep.

Later that night the physicist smells smoke too. He wakes up and sees that a cigarette butt has set the trash can on fire. He says to himself, "Hmm. How does one put out a fire? One can reduce the temperature of the fuel below the flash point, isolate the burning material from oxygen, or both. This could be accomplished by applying water." So he picks up the trash can, puts it in the shower stall, turns on the water, and, when the fire is out, goes back to sleep.

The mathematician, of course, has been watching all this out the window. So later, when he finds that his pipe ashes have set the bedsheet on fire, he is not in the least taken aback. He immediately sees that the problem reduces to one that has already been solved and goes back to sleep.

MPE

From: dhein@onramp.net

An Engineer, a Physicist, and a Mathematician all go the same Conference. University budgets being what they are, they all stay in the same cheap hotel. Each room has the same floor plan, has the same cheap TV, the same cheap bed, and a small bathroom. Instead of a sprinkler system, the hotel has opted for Fire Buckets.

The Engineer, Physicist, and Mathematician are all asleep in bed. At about 2AM, the Engineer wakes up because he smells smoke. He looks in the corner of the room and sees that the TV set is on fire! He dashes into the bathroom, fills the Fire Bucket to overflowing with water, and drenches the TV set. The fire goes out, and the Engineer goes back to sleep.

A little while later, the Physicist wakes because he smells smoke. He looks in the corner and sees that the TV set is on fire. He grabs a handy envelope, estimates the BTU output of the fire, scribbles a quick calculation, then dashes into the bathroom and fills the Fire Bucket with just enough water to douse the flames. He puts the fire out and goes back to sleep.

In a little while, the Mathematician wakes up to the smell of smoke. He looks in the corner and sees the TV on fire. He looks into the bathroom and sees the Fire Bucket. Having determined that a solution exists, he goes back to sleep. MPE

A physicist, an engineer and a mathematician were all in a hotel sleeping when a fire broke out in their respective rooms.

The physicist woke up, saw the fire, ran over to his desk, pulled out his CRC, and began working out all sorts of fluid dynamics equations. After a couple minutes, he threw down his pencil, got a graduated cylinder out of his suitcase, and measured out a precise amount of water. He threw it on the fire, extinguishing it, with not a drop wasted, and went back to sleep.

The engineer woke up, saw the fire, ran into the bathroom, turned on the faucets full-blast, flooding out the entire apartment, which put out the fire, and went back to sleep.

The mathematician woke up, saw the fire, ran over to his desk, began working through theorems, lemmas, hypotheses, you -name-it, and after a few minutes, put down his pencil triumphantly and exclaimed, "I have *proven* that I *can* put the fire out!" He then went back to sleep. ME

From: levd@alien (Lev Desmarais)
The difference between an Engineer and a Mathematician :

The Engineer walks in her office and finds her trash can on fire. She gets the fire extinguisher and puts out the fire.

The Mathematician walks in his office and finds his trash can on fire.

He gets the fire extinguisher and puts out the fire.

The following day :

The Engineer walks in her office and finds the trash can on fire on top of her desk. She gets the fire extinguisher and put out the fire.

The Mathematician walks in his office and finds the trash can on fire on top of his desk. He takes the trash can and puts it on the floor. He has reduced the problem to a previously solved state. Too solve it again would be redundant. MP______

A physicist and a mathematician setting in a faculty lounge. Suddenly, the coffee machine catches on fire. The physicist grabs a bucket and leaps towards the sink, fills the bucket with water and puts out the fire. The second day, the same two sit in the same lounge. Again, the coffee machine catches on fire. This time, the mathematician stands up, gets a bucket, hands the bucket to the physicist, thus reducing the problem to a previously solved one. MPE

From: iwaki <iwaki@gte.net>
An engineer, physicist, and mathematician were playing cards in a parlor.
A fire breaks out. The engineer start to calculate how much water it
takes
to put out the fire. The physicist figures out the best theory on how to
put out the fire. The mathematician tries to prove the fire doesn't
exist.
MPE

An engineer, a physicist, a mathematician, and a statistician are taken, one at a time, into a room to undergo a psychological test. In the room is a table (upon which is a pad and pencil), a chair, a bucket of water, and a waste basket rigged so that it can be set ablaze from an adjacent room in which the psychologists watch.

The engineer is first, and the basket is set ablaze. The engineer immediately jumps up, grabs the bucket of water and dashes the entire thing onto the fire, flooding the entire room and extinguishing the fire.

The physicist is next. The basket ignites, the physicist quickly calculates exactly how much water is required to extinguish the flames and pours exactly that amount, neatly extinguishing the flames.

The mathematician next. The basket blazes up, the mathematician calculates exactly how much water is required to put out the fire, and then walks out of the room.

The statistician is last. The basket is ignited. He grabs the bucket, pours

half on one side, half on the other, and announces, "It's out."

MPCE

From: Alison Reeve <e9329216@student.uq.edu.au> & unknown. Four professors (An engineer, a physicist, a chemist, and a statistician) are called in to see their dean. Just as they arrive the dean is called out of his office, leaving the three professors there. The professors see with alarm that there is a fire in the wastebasket. "Brute force is the answer" says the engineer. "If we hit it enough we can put it out". The physicist says, "I know what to do! We must cool down the materials until their temperature is lower than the ignition temperature and then the fire will go out." The chemist says, "No! No! I know what to do! We must cut off the supply of oxygen so that the fire will go out due to lack of one of the reactants." While they debate what course to take, they are alarmed to see the statistician running around the room starting other fires. They both scream, "What are you doing?" To which the statistician replies, "Trying to get an adequate sample size." ME From: Omar Lakkis <omar@sam.math.ethz.ch> Institute of technology is burning. Engineers realize they should pour some water on the fire to stop it. As usual they make a rather rough "calculation" on the amount of water and pour too much of it. They destroy the whole departement but manage to save their lives. Applied Mathematicians, using an brand-new UFWT (Ultra fast wavelet transform) technique calculate with a high degree of accuracy the ammount of water required and so, they save their lives AND the whole departement of applied mathematics. Pure Mathemticians are all dead! Why? Well, in 2 minutes they found a very simple proof for the existence of the solution... they lost then 3 hours trying to prove unicity. MP

A mathematician and a physicist were asked the following question:

Suppose you walked by a burning house and saw a hydrant and

a hose not connected to the hydrant. What would you do?

- P: I would attach the hose to the hydrant, turn on the water, and put out the fire.
- M: I would attach the hose to the hydrant, turn on the water, and put out the fire.

Then they were asked this question:

MPE

Suppose you walked by a house and saw a hose connected to a hydrant. What would you do?

P: I would keep walking, as there is no problem to solve.

 $\ensuremath{\mathsf{M}}\xspace$ I would disconnect the hose from the hydrant and set the house on fire,

reducing the problem to a previously solved form.

From: bhurt@subzero.winternet.com (Brian Hurt)
A company was going to hire someone to do a job. Given the
circumstances,
and the nature of the job, they were not sure if they needed an engineer,
a scientist, or a mathematician. So the manager devised a test
to decided which one to hire (I know- a manager with imagination
is kind of hard to swallow, but bear with me).

First, the manager brought in he engineer. Without warning, the manager tossed a lit match into the waste paper basket, causing an immediate conflagration. "Oh my ghod!" shouted the engineer, who the promptly ran out to the hall, returning with a fire extinguisher he had noticed there (having broken the glass with his slide rule- who says those things are worseless?). Several seconds later, the fire was out, with bits of burned

paper are fire extinguisher foam everywhere.

After the engineer had left, the manager brought in the scientist. Once again, the basket of waste organocarbon films were induced to exothermically react with the di-oxygen molcules in the atmosphere (whoosh). "Oh my" the scientist caused to vibrate in the atmospheric substrate. The scientist then proceeded to make several measurements of the rapidly occurring excthermic reactions, related mainly to the rate of said reactions, and then caused said reactions to cease with a controlled flow of dihydrooxygen obtained from the faucet in the mens room. This caused another data point to be graphed in the experiment the manager was performing.

After the scientists had left, the mathematician was brought in. Once again, the manager caused a graduate thesis to be throughly reviewed (whoosh). Upon viewing the nature of the problem, the mathematician said "The problem is obviously trivial, and will be left as an exercise to the student." The first round of tests being completed, the manager was still left undecided as to which to hire (that should make the manager more believable). So another round was decreed, but this time there would be a twist. Before being lit, the recycling container would first be put underneath a horizontal workarea ("desk"), preferably of wooden construction, so as to add a greater sense of urgency (the possibility of said horizontal work-area itself catching fire) and greater difficulty (the horizontal work area restricting access to the recycling bin).

Once again, the engineer was brought in, and the waste paper basket lit. Once again, the engineer retrieved the fire extinguisher from the hall, removed the danger of the desk catching fire and the interference of his aim by desk by kicking said desk over, and put the fire out. The engineer then left to post several flames to usenet anout people who post long, stupid jokes to alt.folore.computers.

Once again, the scientist was brought in, and the exothermic reaction resumed. Once again, said reaction was dampened by the measured application

of dihydro-oxygen, once said reaction was removed from underneath the desk. The scientist left to write a paper entitle "On the effects of the application of dihydro-oxgen to the continuing exothermic reactions of dioxygen and organocarbon polymers."

Once again, the mathematician was brought in, and the thesis reviewed. Sensing a punchline in the offing, the mathemitican removed the reviewing thesis from underneath the desk, whereupon he stated "I have reduced the problem to a trivial problem", and left.

=7. COMBINED SCIENCES

MP_

From: "ashok kumar jha" <ashokj@catsglobal.co.in>

THE SCIENCE OF KISSING

There is a general feeling in the public that IISC/IIT students are fundu, unassumingly lost in thought almost all the time. And girls fare no better in this respect. So let us see what a Non IISC/IITain may face when he marries a girl from this campus.

SCENE: First night of the marriage.

CHARACTERS: IISc/IIT Bride and Non IISc/IIT Groom.

The Groom approaches the Bride and proposes to kiss her. So let us see what would be her reaction..

GIRL FROM DEPT OF PHYSICS:

"Well kissing is relative. You can kiss me with respect to me or with

respect to you. First define how you are going to kiss. You can kiss me by treating me in the same reference frame as you are or treating me in a different inertial frame by producing waves of motion through your lips. How do you prefer?

The guy faints.

GIRL FROM DEPT OF MATHEMATICS:

"Kissing is fine. You can kiss me provided you satisfy the following conditions.

Necessary conditions: You should be close to me by a distance delta where delta is greater than zero and the limit for delta tends to zero and you satisfy the closure property.

Sufficient conditions: You should have lips. Where the number of lips is neither more than two nor less than two. You can also kiss by defining your hand to be me if and only if you satisfy the above conditions.

The guy goes mad.

GIRL FORM ECOLOGICAL SCIENCES:

"Oh Kissing, that is interesting phenomena that occurs in nature. This is an initiating process for sex not only found in homosapiens but also in all heterosapiens, mammals, camels, vertebrates, invertebrates and insects. Out of 1000 ants observed in a closed laboratory in Zuvinich in Yugoslavia 90% of them seem to involve in the process of kissing but the subsequence is very random with probability 0.672139 that a male ant kiss female ant. First observe the behaviour of ants and cockroaches under various conditions. That will be very interesting . Isn't it?

The guy has heart attack.

GIRL FROM CS (Computer Science):

"You want to kiss me. That is fine I assume that you know the algorithm for

that very well. But you have to complete the process within 56.22 seconds or else connection will be timed out. To optimise the timing lets do parallel processing. As we have to discuss about our future and other things, let us do the process of discussion foreground and why can't you put the process of Kissing background?"

The guy applies for divorce.

GIRL from EE (Electrical Engineering):

"So you would like to kiss me. The process of kissing is an age old communication process. The information content of the signal transmitted

from one pair of lips to the other is more if the probability of the event (of kissing) is less. Hence take care. If you want a successful communication between us, you should kiss me less often. If the information content is to be infinite, you should never kiss me at all!" The guy is found hanging from a fan next day В From: Ian Ellis <ian@iglou.com> From "New Scientist" June 28, 1997: Summer is the traditional season of exam howlers. This gem comes from an ecology exam at the University of Nottingham. Q: What is the consequence of the extinction of whales? A: "The sea level will fall, combating the effect of global warming." PCB_ From: jimjr@qis.net (Jim Moore Jr) http://www.qis.net/~jimjr Science Class The chemistry teacher was berating the students for not learning the Periodic Table of the Elements. She said "Why when I was your age I knew both their names and weights." One kid popped up, "Yeah... but teach, there were so few of them back then." One student couldn't be motivated to take an interest in science at all. He said, "I plan to go into the business. Name me one thing science has done to help business." The teacher shot back, "And just where would the belt industry be without the law of gravity." In biology class the teacher was explaining that germs always work in large groups. The class clown piped up, "That would explain then why no one has ever come down with the measle." When Stan Kegel was in college, for a class project in genetics, he wanted to develop a turkey that had bigger drumsticks. Failure after failure resulted, until he finally crossed a turkey with an ostrich. Its drumsticks were large enuff, but the bird kept hiding its head in the yams.

MATH/PHYSICS VALENTINES

From: Mathew Gustafson <mgustafson@mail.techplus.com> Remember those cheesy valentines you used to get when you were in elementary school? Well I give something similar to my Math Physics students on Valentines day. I tried it last year with good success and I was hoping that I could get some more ideas for cards. So it was recommended that I tap some of the greatest minds around, which is why I'm here. I'm not sure if anyone can help me, but if you have any more ideas or suggestions I would be greatly appreciative. Thanks in advance. Mathew The following is a list I have come up with already: * You're one of the fundamental forces in my life. Be my Valentine. * You're the net force that makes my heart accelerate. Be my Valentine. * There's an attraction between us, I think its gravity. Be my Valentine. * You're so great they should name a constant after you. Be my Valentine. * We're like opposite charges. Be my Valentine. * The lines of force point me towards you. Be my Valentine. * Like resonance tubes, we're in harmony together. Be my Valentine. * We add up to a good team. Be my Valentine. * You're a positive exponent in my life. Be my Valentine. * If they plotted you and I on a scatter-plot, they would find a positive correlation. Be my Valentine. * You're a positive exponent in my life. Be my Valentine. * You're the only variable for me. Be my Valentine. * Like functions, you're the only value for me. Be my Valentine. From: "J Walradt" <jwalradt@rmci.net> * Looking for an affractionate girl. Be my Valentine. * Met you at the decimall. Be my Valentine. From: "Marcel LeBlanc" <marleb@NO_spam_montrealnet.net> * Talking about you, I told my best friend "I would never lever!" .Be my Valentine * I don't care if your breasts pendulum, be my Valentine < not for young students ;-) > * Do you also feel the attraction? Be my Valentine * Do you see the gravity of this situation? You have to be my Valentine * When I first saw you I felt the Big Bang ! Be my Valentine * Ion the other hand, would love for you to be my Valentine * The only predicate: be my Valentine * At absolute zero you would still move me. Be my Valentine * Be my Valentine, even if it's only Faraday * My theorem is : you'd be great as my Valentine * I'm attracted, don't repel me. Be my Valentine * We'd make a nice tuple on Valentine, be mine * I want our relationship to be Ex-Static, be my Valentine * Don't be square, be my Valentine * Love hertz, be my Valentine

MP

* Wave if you accept to be my Valentine * The frequency of our dating would amplify if you are my Valentine From: "James D. Davis" <jimd@dakota.gate.net> * Oh, you could try the nerdy approach... My love for you is incalculable. * Or you could try Tweety Bird talk ... I'm equate-y for you! * Or you could get a bit racy... Algebras in the world can't measure up to your curvilinear structure. Beta Valentine of my life. From: mark@walshnet.com (Mark Samwick) $^{
m r}$ I've finally worked up the courage to ask ... be a joule and Be My Valentine. * Would you be inclined to Be My Valentine? * It would matter to me if you'd agree to Be My Valentine. * End the chaos in my life. Be My Valentine. * I feel an impulse to ask you to Be My Valentine. * I've finally overcome the inertia of shyness to ask you to Be My Valentine. * I love your body with naked singularity. Be My Valentine. * I hope that my boldness in asking you to Be My Valentine won't cause friction in our relationship! * I think of you with more and more frequency. Be My Valentine. * I can't resist asking you to Be My Valentine. * You generate excitement in my life. Be My Valentine. * I hope that from the smile on my face, you can extrapolate that I want you to Be My Valentine. * If you'll agree to Be My Valentine from across the room, please signify by giving me a standing wave. * If I ask you to Be My Valentine on February 15th, will you overlook that relative deviation? * I think our relationship has potential. Be My Valentine. * My heart is sad. You can rectify that by agreeing to Be My Valentine. * My affection for you will never decay. Be My Valentine. * Are you going to Be My Valentine, or watt? * Every second I think of you riding that Schwinn, and it hertz. Be My Valentine. From: "TM" <cpchand@giasdl01.diespammers.vsnl.net.in> * Be my valen[cy]-tine. * Be my valentine and I square I'll be yours. From: Mav <grossm@usd475.k12.ks.us> * You're the root of my affection. I really mean it! * In case you didn't hear, I'll theta gain... Be mine! * Give me a sine... Will you be my Valentine? * My heart and my foot-pounds when you are around. * We could be dynamic together! * I'll give you a moment to decide if you'll be mine. * I need to ask yaw... will you be mine? From: banalboy@aol.com (Banal Boy) * If you're looking for synthesis your opportunity, Be my Valentine. * I can't wait to explore your fuzzy boundaries. Be my Valentine.

From: rg@netbistro.com (Megan Waves)
* It was a magnetic moment when we met. Be my valentine. * You're the Great Attractor. Be my valentine. pml <lavietes@dhc.net> From: Roses reflect a light frequency at one end of the visible electromagnetic spectrum, Violets reflect a light frequency at the other end of the visible electromagnetic spectrum, Sugar is C12H22O11, And you release the endorphins in my brain. MPCBEA From: xjr3000@aol.com (Xjr3000) REPLYING TO AN INVITATION TO A SCIENTISTS' BALL Pierre and Marie Curie were radiating enthusiasm. Einstein thought it would be relatively easy to attend. Volta was electrified. Archimedes was buoyant at the thought. Ampere was worried he wasn't up to current research. Ohm resisted the idea at first. Boyle said he was under too much pressure. Edison thought it would be an illuminating experience. Watt reckoned it would be a good way to let off steam. Stephenson thought the whole idea was loco. Wilbur Wright said he'd take a flier on it. Dr Jekyll declined-- he hadn't been feeling himself lately. Morse replied: "I'll be there on the dot. Can't stop now - must dash." Heisenberg was uncertain if he could make it. Hertz said in the future he planned to attend with greater frequency. Henry begged off due to a low capacity for alcohol. Audubon said he'd have to wing it. Hawking said he'd try to string enough time together to make a space in his schedule. Darwin said he'd have to see what evolved. Schrodinger had to take his cat to the vet, or did he? Mendel said he'd put some things together and see what came out. Descartes said he'd think about it. Newton was moved to attend. Pavlov was drooling at the thought. Gauss was asked to attend because of his magnetic personality. --Sent by a friend, taken from the Net. Addendum; with contributions by my wife. Nobel got a big bang out of it. Freud could barely repress his excitement. Galileo thought people were much too inquisitive about the whole thing. Franklin said it beat flying a kite in a thunderstorm. Armstrong was regenerated by the certainty he would get a better reception than at previous events. Hewlett was oscillating in his feelings. Cantor wasn't able to count all the invitations he'd received.

Godel said he couldn't prove it but he'd be there. Hubble wanted to bring the idea into better focus. Sagan enthused that out of the billions and billions of invitations he'd received, he would pick just this one. Birdseye was frozen in indecision. Bardeen, Schockley and Brattain thought the event might be semi-conducive to a good time. Bell put the invitation on hold but promised to get back to it as soon as possible. Watson had to determine precisely what jeans he would wear. Fermat said his last invitation was truly wonderful but that he couldn't fit it into the margins of his appointment book. From: scotth9999@aol.com (Scott Harrison) Darwin declined, saying he always seemed to make a monkey out of himself on such occasions. Galileo said he'd love to roll on down, but reminded everyone that the Pope had him under house arrest. Gamow got a big bang out of the whole idea. Nobel thought the party-idea was dynamite! Niels Bohr sent thanks for the complementary invitation. Hans Bethe said the whole idea was stellar. Richard Feynman studied the diagram and said the only way he could make it is by going backward in time. Steven Jay Gould and Niles Eldridge said they'd arrive by leaps and bounds. William Harvey said he would circulate the bloody idea. From: twp@panix.com (Tom) Avogadro said he would like to bring a number of friends. Carnot cycled to the banquet. Coulomb got a big charge out of the invitation. Fourier said he had received a series of invitations. Jung said this occasion would be archetypical. Klein could hardly bottle up his enthusiasm. L'Hospital said that, as a rule, he didn't go to banquets. Laplace expected it to be a transforming experience. Mesmer was hypnotized by the prospect. Occam asked whether he would have to shave. Pasteur said this was just the chance for which his mind was prepared. Pythagoras said the guests were all too square for him. Roentgen saw through the whole scheme. Shannon promised to communicate his decision via the proper channels. Turing said that after this party he would have to call a halt. Van Allen said he would wear his new belt for the occasion. Wien said he'd cross that bridge when he came to it. From: jatzeck@freenet.edmonton.ab.ca (Bernhard Michael Jatzeck) Newton gravitated towards such occasions.

Einstein made light of it, thinking it all relative. Milliken replied: "Oil drop by some time." Halley declined because he had another comet-ment. Kelvin couldn't make it because of a cold. Gauss normally didn't go to such functions. From: middleto@mcmail.cis.McMaster.CA (Gerard Middleton) Naturally, Darwin said, he would select that engagement. Wilbur Wright accepted, provided he and Orville could get a flight. Newton planned to drop in. From: "Louis Hom" <lhom@nature.berkeley.edu> Watson and Crick thought it would be a nice chance to unwind. PB From demmy (demmy@usa.net) Proposal: The Human Supercollider For years now, the science of "anatomy" has been based on nothing but luck and speculation, shrinking away from addressing the true problem of uncovering the most basic constituents of the human body in fear of offending certain puritanical "moral" superstitions. I propose that, following in the footsteps of particle physics, we construct a tube 5 km long and about one meter in diameter into each end of which human subjects can be inserted and accelerated towards each other at upwards of 3*10^4 m/s. Upon collision the net energy should be sufficient to break apart the subjects into their component parts which will then be captured by a sophisticated bucket-and-tubing mechanism and classified by the planet's best anatomists. Only by such means can we ever hope to put the science of anatomy on a firm footing and shed light on that which has heretofore been veiled by the darkness of ignorance and fear. Please donate generously to the cause. Send unmarked, low-denomination bills to [address deleted]. Ideas for potential subjects are also appreciated. E_{-} From: "Callum Baxter" <callum@hotmail.com> 5 surgeons are taking a coffee break. 1st surgeon says: "Accountants are the best to operate on because when vou open them up, everything inside is numbered." 2nd surgeon says: "Nah, secretaries are the best. Everything inside them is in alphabetical order." 3rd responds: "Try geologists, man! Everything inside THEM is color coded." 4th intercedes: "I like engineers...they always understand when you have

few parts left over at the end." To which the 5th surgeon, who has been quietly listening to the conversation, says: "You're all wrong. Lawyers are the easiest. There's no guts, no heart, no spine and their head and butt are interchangeable." MPBA From: jha@manx2.demon.co.uk (John Atkinson) _New Scientist_ has a competition each year in which readers are invited to let their dreams unfold and tell the world the headline they would most like to see (in _New Scientist_) in the year to come. Here are this year's winners: Pope Joan-Paula I approves new contraceptive (Valerie Moyses). Indestrooktibul spel chequer virrus on rimpoge (Cheryl Chapman). Time travel to be discovered next year (J. White). Statisticians show that 80 per cent of damned lies are true (J. White). Found--the gene that causes belief in genetic determinism (Stephen Thompson). Water into wine--ancient catalyst rediscovered (Ray Heaton). I learnt touch typing in utero, says fetus (Helena Petre). Half-dead cat found in box--RSCPA seeks Austrian scientist (Peter Rowland). Tony Blair cloned--regional assemblies to get one each (George Oldham). "Dolly" Thatcher wins 10 seats in Parliament (Kevin Ennis). Fleischman and Pons awarded Nobel prize (Kevin Ennis) Mir operating manual discovered behind refrigerator in Moscow supermarket (Alastair Johnson). The Universe stops expanding this week--keew siht gnidnapxe spots esrevinU ehT (Raymond Broersma). Butterflies exterminated in Sumatra -- "We WILL stop hurricanes, " vows Clinton (Bonnie Ralph).

Genetically spliced yeast makes old malt whisky from remaindered books (Ronald Smith).

Meteorite hits lottery winner (Patrick Rowley).

Fermat's last memo discovered--"Sod the margin, look on the other side of the page" (Chris Moore).

Goodbye Dolly--biotechnology triumph mown down by tourist's car (Richard Collender).

"Face" on Mars proves to be optical illusion--NASA now investigating "vase" on Mars (Bruce Alcorn).

Immune system boosted by real ale (Gerald Leach).

Microsoft help helps (Mike Haslam).

"Guilt" gene isolated and destroyed--millions enjoy Christmas (Melissa Lewis) MCA

From: mathnews@watmath.waterloo.edu (Math society newsletter) Humourous Quotes from Professors at UW

(The math department here at UW has a student run news/humour magazine called, appropriately enough, mathNEWS. One of the best columns in there is the prof quotes. This is what keeps us awake in Friday morning classes:) "Has anyone had problems with the computer accounts?" "Yes, I don't have one." "Okay, you can send mail to one of the tutors..." - E. D'Azevedo Computer Science 372 "If that makes any sense to you, you have a big problem." - C. Durance Computer Science 234 "Let's make ethanol green this afternoon." - R. Friesen Chemistry 124 "You can write a small letter to Grandma in the filename." - Forbes Burkowski Computer Science 454 "What I've done, of course, is total garbage." - R. Willard Pure Math 430a "The algorithm to do that is extremely nasty. You might want to mug someone with it?" - M. Devine Computer Science 340 "Is it a really good acid, or just a half-acid?" - R. Friesen Chemistry 124

"You can do this in a number of ways. IBM chose to do all of them. Why do you find that funny?" - D. Taylor Computer Science 350 "This process can check if this value is zero, and if it is, it does something child-like." - Forbes Burkowski Computer Science 454 "I think it is true for all n. I was just playing it safe with n>=3 because I couldn't remember the proof." - Baker Pure Math 351a "Now this is a totally brain damaged algorithm. Gag me with a smurfette." - P. Buhr Computer Science 354 "Every prof blows this. We're all going to get AIDS or something." - J. Vanderkooy Physics 122 "How do you find an isomorphism? You just f it. See? Graph theory is a lot of fun." - I. Goulden Combinatorics and Optimization 230 "You can't drink negative beer. Well, I guess you could throw up." - Forbes Math Elective 102 "Due to the postal strike, the assignment is extended to one week from today. I do not give out extensions without good reason." - Forbes Burkowski Computer Science 454 "You can bring any calculator you like to the midterm, as long as it doesn't dim the lights when you turn it on." - Hepler Systems Design 182 "You have to regard everything I say with suspicion - I may be trying to bullshit you, or I may just be bullshitting you inadvertently." - J. Wainwright Mathematics 140b "Pascal is Pascal is Pascal is dog meat." - M. Devine and P. Larson Computer Science 340 "We'll call it S for cyclic." - Gord Sinnamon Mathematics 234b "Karen has her own i, and she is not going to let Frank put his data into it." - F. D. Boswell Computer Science 240 "All that was meant to bore you shitless." - I. Goulden Combinatorics and Optimization 230 "The subspace W inherits the other 8 properties of V. And there aren't even any property taxes." - J. MacKay Mathematics 134b "So you have this mapping P(v). So what does it mean? It means you

Genetic linguistics (or linguistic genetics).

This is a very promising field devoted to comparative analysis of genetic and linguistic texts (sequences). Below is one of the examples:

There are overlapping genes, but to my best knowledge, nobody reported the same for words. But it could save a lot paper or bandwidth.

Inviting my American colleagues to the conference devoted to biological consequences of the Chernobyl fallout, which was to be conducted in Chernobyl itself in the autumn a few years after the catastrophe, I concluded the letter with the following sentence, trying to remind both time and place in the same word:

"See you in the fall(out)."

Regrettably, they did not come. (As a matter of fact, I also.)

From: Mike Nowacki <mike@expedition-leader.com> 'In science and mathematics 2+2 always equals 4... unless of course you are a statistician or an ecologist where it can be made to equal 7 or 9 and sometimes even 3.'

Not sure who quoted this. I first heard it from a geology professor at McMaster University; M.J. Risk. PB_____

Why Yawning Is Contagious: You yawn to equalize the pressure on your eardrums. This pressure change outside your eardrums unbalances other people's ear pressures, so they must yawn to even it out. PB_____

The earth may spin faster on its axis due to deforestation. Just as a figure skater's rate of spin increases when the arms are brought in close to the body, the cutting of tall trees may cause our planet to spin dangerously fast. PB_____

Birds take off at sunrise. On the opposite side of the world, they are landing at sunset. This causes the earth to spin on its axis. PB_____

MB_

From: mini-air <marca@wilson.harvard.edu>

1997-03-09 Cloning Update

Μ

(This month the first cloning of a sheep was announced. The sheep was called Dolly, because she was cloned from breast tissue.)

Here are this month's cloning announcements from the AIR Research Laboratories.

1. We have successfully cloned the bacterium E. coli.

2. A team under the direction of MIT researcher Jim Propp <propp@math.mit.edu> is combining the latest in cloning research with recent advances in physics:

b. As the world knows, Scottish scientists have figured out how to create large numbers (well, at least one) of identical sheep;a. Not long ago, some of Propp's colleagues figured out how to create coherent beams of matter-particles (rather than just photons).

Propp is combining these ideas to produce the sheep-laser. As yet, he has not settled on a proper name for the technique ("Livestock Amplification through ..." is as far as he has gotten). In a second project, Propp is working to create a Bose condensate of identical sheep.

From: Ian Ellis <ian@iglou.com> Did you know that Rene Descartes met the Hunchback of Notre Dame?

They were both visiting Paris, and met on a ferry crossing the famous river. Somehow Quasimodo fell overboard. He disappeared under the water because of the weight of handbells he was carrying on his belt.

As Descartes began a rescue, he shouted, "Quasimodo, I see where you are," and plopped on his coordinates.

He found Quasimodo was already headed toward shore. He seemed to be running across the bottom, but then Descartes saw he was dancing! Descartes signed to him: "What are you doing that for?" Quasimodo signed back, "Save yourself! I'm happy. I'm just Ringing In The Seine!!"

So Rene reached the shore by bobbing up and down.

An onlooker asked, "How did you do that?"

"I'm a Cartesian diver," replied Descartes. "I realize, 'I sink.' Therefore I swam."

---- This story pasted together by Ian Ellis.

Proof of Time Travel Found

By Donovan Jones

Archaeologist Christopher Priest has found what he claims to be conclusive proof that time travel is possible and that visitors from the future have left their mark upon our past.

The proof, said Priest, was discovered in his very own front yard. He said, "I was clearing away strata of frozen white water crystals from the front of my house when I came upon a layer much harder than the others."

Priest alleges that this harder layer is a primitive pathway, used by homo sapiens before the advent of the personal automobile.

He said, "The discovery of this primitive path is reason enough for great celebration in the scientific community, but upon closer inspection, I found something even more startling."

Inscribed in the pathway is the cryptic phrase, "Archie + Veronica 4EVR." It is surrounded by a heart-like shape.

Priest explained his theory, "Archie and his counterpart Veronica are clearly the names of the temporal explorers. I believe that 4EVR is the year that they came from. That's right, they come from over twenty thousand years in the future."

Priest theorizes that in the future dates are calculated on a base seventeen numerical system. "It just makes sense," he says.

Public Works spokesman Jacqueline Branigin said, "By our estimation Mr. Priest's discovery is over twenty years old. Truly an amazing find." MPC

From: Ian Ellis <ian@iglou.com>
Chemistry is physics without thought; mathematics is physics without
purpose
MPCB

From: biology@ctos.com (Roberta Meehan) WHY I AM A BIOLOGIST

As my e-mail address indicates, I am a biologist. People sometimes ask me why. After much serious thought, I came up with this explanation: (Yes, it is original -- mine, completely mine.)

When I first started out, I was going to be a mathematician. So I took algebra, but I found that was highly variable.

So, I tried geometry. And that's where I learned all the angles.

Then I took calculus. That was truly an integrating experience, but it definitely had its limits.

After a great deal of consideration, I decided to turn away from math and give some serious thought to science.

I tried geology, but found that was kind of hard.

Next I tried physics but I knew that would never work.

And even though I'd heard chemists had all the solutions, I finally opted for biology because, after all, it's a living.

Why did the chicken cross the road? Darwin: It was the logical next step after coming down from the trees. Rene Descartes: It had sufficient reason to believe it was dreaming anyway.

Three mathematicians and a physicist walk into a bar. You'd think the second one would have ducked. (Ha, that quack's me up!)

The misnaming of fields of study is so common as to lead to what might be general systems laws. For example, Frank Harary once suggested the law that any field that had the word "science" in its name was guaranteed thereby not to be a science. He would cite as examples Military Science, Library Science, Political Science, Homemaking Science, Social Science, and Computer Science. Discuss the generality of this law, and possible reasons for its predictive power. -- Gerald Weinberg, "An Introduction to General Systems Thinking."

From: mcollins@plato.ucs.mun.ca (Michelle Collins)
Q:What's the difference between a science student and an arts student
tying
his shoes?
A:The arts student gets a credit.
MPB

From: Philip Clarke <clar0318@flinders.edu.au>
>How much do you know about science?
>Questions from The Sunday Times, August 27th, 1995

>Hello!

>Would you like to answer the following questions? I*d like to know, how >science is known without encyclopedia and schoolbook. Please answer the >questions without helping utilities! It doesn*t matter whether a question is >answered correctly or not, the "style" is important. If you are too keen for >these questions, please don't be angry with me. Forget it! You could send >your answers anonymously if this is possible. But please send via email to >L.BODINGBAUER@MAGNET.AT. >I am working on a radio project concerning science & education so I am really >waiting for your answer.

>Lothar Bodingbauer

>The Questions!

>1. Did evolution have a plan?

Yes. It was to turn single-celled slime into multicelled slime.

>2. Why does ice turn your whisky cold?

It doesn't. It is purely an illusion generated by the psychotropic effects of the whisky. In actuality, your whisky is getting *warmer*.

>3. Could the flapping of a butterfly*s wing in Kew Gardens set off a >hurricane in Bermuda?

Yes, but it is much more likely to get the butterfly eaten by a bird. Also: The logical conclusion is that if there are about 20 hurricanes in a year, there can only be 20 butterflies in Kew Gardens.

>4. When is a golf ball in flight travelling at its fastest?

In the car on the way to the golf course.

>5. If you have flipped an evenly weighted coin six times and it has come down >heads each time, is it more likely to come down heads or tails on the seventh >go?

It will come down on its edge.

>6. Does the eye work like a television camera?

Yes. It gives a completely distorted view of reality.

>7. Is there more than one correct scientific explanation for any phenomenon?

Yes. There is one explanation for each sponsor of the research. Example: If NIH is funding your research, smoking causes cancer. If the tobacco people are funding it, smoking does not cause cancer.

No. Absolutely not. It is just non-equilibrium thermodynamics doing its thing in an energy rich and aggressive environment - selfish genes seeking to transmit their information against the ravages of entropy.

>2. Why does ice turn your whisky cold?

The heat of fusion of water is 80 cal/gm. The phase transition of melting absorbs heat from the surrounding medium

>3. Could the flapping of a butterfly*s wing in Kew Gardens set off a >hurricane in Bermuda?

Not goddamn likely, no matter how the chaosticians hype. (The butterfly must be in China.)

>4. When is a golf ball in flight travelling at its fastest?

At the moment of launch.

>5. If you have flipped an evenly weighted coin six times and it has come down >heads each time, is it more likely to come down heads or tails on the seventh >go?

Now that depends upon whether is is an honest coin and an honest flip. If it an honest coin and flip, prior history is no prediction of future performance. If there is systemic bias, prior history is presumptive and perhaps predictive.

>6. Does the eye work like a television camera?

No. The mechanisms of detection, transmission... are different. For instance, the eye does not raster scan the received image. Image processing takes place immeidately within the retina to prevent "blooming" and ther foibles of a non-dynamic ampliifcation and limited, static gamma.

>7. Is there more than one correct scientific explanation for any phenomenon?

What does "correct" mean? Any model, even a heuristic, which delivers the right answer is accurate. "Correct" implies a fundamental origin of structure of the model. By this criterion, >no< explanation is "correct."

Uncle Al knocks upon your door bearing gifts and gnosis. Are you sliding down the razor blade of life? Yowl with Uncle Al! Alan "Uncle Al" Schwartz MP

From: gallegos@u.arizona.edu (Ranma Saotome) While on my way up to the 7th (top) floor of the Math building here at the University of Arizona to turn in my paper, I started reading the little scribblings people would write on the wall such as "Love makes the world go round", followed by "With a little help from intrinsic angular momentum" and such. (Dang physics students!)

Then I looked up at the lighted numbers above the door that indicate which floor I was on and read the following (floor numbers in parentheses):

(1) \/ 2 (2) e (3) pi (4) \/17 (5) 2e (6) 2pi (7) infinity

And underneath all that, was written (in red pen, no less):

"Incomplete proof. Resubmit."

[For the non-math people... e is the natural logarithm 2.71828, pi is 3.1415, the square root of 17 is 4.12310, 2e is 5.43656, and so forth.] PCB

From: tvaughan@buphyk.bu.edu (tvaughan)
 Sensual Guide To Departments
Don't LOOK at anything in a physics lab.
Don't TASTE anything in a chemistry lab.
Don't SMELL anything in a biology lab.
Don't TOUCH anything in a medical lab.

and, most importantly,

Don't LISTEN to anything in a philosophy department. MPCE_____

From: Philip Clarke <clar0318@flinders.edu.au>

GENERAL/SPECIAL KNOWLEDGE QUIZ Time Allocated: 40 minutes Text Books: As per joining instruction Marking: Each question is worth equal marks

1. HISTORY : Describe the history of the Papacy from its origins to the present date, concentrating especially but not exclusively on its social, political, economic, religious and philosophical impact on Europe, Asia, America and Africa. Be brief, concise and specific.

2. MEDICINE :You are provided with a razor blade, a piece of gauze and a bottle of scotch. Remove your appendix. Do not suture your work unit it has been inspected. You have 15 minutes.

3 PUBLIC SPEAKING : 2500 riot-crazed immigrants are storming the local Citizens Advice Bureau, Clam them. You may use any ancient language except Geek of Latin.

4 BIOLOGY : Create Life. Estimate the differences in subsequent human culture if this form of life had developed 500 million years later with special attention to its probable effects on the British Parliamentary party system. Prove your thesis.

5. MUSIC : Write a piano concerto. Orchestrate and perform it with flute and drum. Your will find a piano under your seat.

6. SOCIOLOGY : Estimate the sociological problems which might accompany the end of the world. Construct an experiment to test your theory.

7. ENGINEERING : The disassembled parts of a high-powered rifle have been placed in a box on your desk. You will also find an instruction manual, printed in Swahili. In 10 minutes a hungry Bengal tiger will be admitted to the room. Take whatever action you feel appropriate. Be prepared to justify your decision. 8. POLITICAL SCIENCE : There is a red telephone on the desk behind you. Start World War III. Report at length on its sociological aspects, if any. 9. PHILOSOPHY : Sketch the development of human thought; estimate its significance. Compare with the development of any other kind of thought. 10 GENERAL KNOWLEDGE : Define the universe. Describe in detail. Give three examples. NOTE: A pass mark of 85 % is set. Hmmm...no physics or chemistry section? 11. PHYSICS : Describe the workings of the universe at the molecular level (see question 10). Pay particular attention to Chaos theory, and using these two answers, predict the weather in Abu Dhabi (atlas provided) for the 23rd of October, 2463. 12. CHEMISTRY : Synthesise a prostaglandin, a steroid and at least one heterocyclic compound using Phosphorous. Starting materials include a ball point pen, a bar of soap and a sandwich (hint - a video of McGyver is provided. Watch closely as he produces a bomb from the aforesaid items it may give you vital clues). MPCBEA_ ~Subject: Life 6.H From: Henry Cate's Life collection 6.H [original author unknown] This file contains a list of quotes from people in mathematical or scientific circles at Cambridge University, England (hehehe, never miss a chance to put the Cambridge people down, especially if you study at Oxford). 1985: Overheard at a supervision : Supervisor : Do you think you understand the basic ideas of Quantum Mechanics? Supervisee : Ah! Well, what do we mean by "to understand" in the context of Quantum Mechanics? Supervisor : You mean "No", don't you? Supervisee : Yes.

The Tautology prize goes to the lecturer who uttered the gem: "If we complicate things they get less simple."

This year's modesty award is given for a phrase spoken by a lecturer after a rather difficult concept had just been introduced. "You may feel that this is a little unclear but in fact I am lecturing it extremely well."

Overheard at last year's Archimedeans' Garden Party: "Quantum Mechanics is a lovely introduction to Hilbert Spaces!"

A Senior mathematician was asked which language he used for some of his computing. He replied that he used a very high level language: RESEARCH STUDENT

1986

From an algebra lecture: "A real gentleman never takes bases unless he really has to." From the same lecturer: "This book fills a well needed gap in the literature." And another encouraging book review: "This book is only for the serious enthusiast; I haven't read it myself." Two quotes from an electrical engineer (but former mathematician): "...but the four-colour theorem was sufficiently true at the time." "The whole point of mathematics is to solve differential equations!" And, as a contrast, a quote from a well known mathematician/physicist: "Trying to solve [differential] equations is a youthful aberration that you will soon grow out of." While on the subject how about this fundamental law of physics heard in General Relativity this year: "Nature abhors second order differential equations." A perplexing quote from a theoretical chemist: "...but it might be a quasi-infinite set." What is a "quasi-infinite set? Answers on a strictly finite postcard, please. This year's Modesty Prize is awarded to the lecturer who said: "Of course, this isn't really the best way to do it. But seeing as you're not quite as clever as I am - in fact none of you are anywhere near as clever as I am - we'll do it this way." From the same lecturer: "Now we'll prove the theorem. In fact I'll prove it all by myself." And from a particle physics course: "This course will contain a lot of charm and beauty but very little truth."

A comparison between the programming languages BCPL and BSPL: "Like BCPL you can omit semicolons almost anywhere." At the beginning of a course it is important to reassure the audience about how straight-forward the course is and about how good the lectures are going to be. But what about this quote from the beginning of the Galois Theory course: "This is going to be an adventure for you...and for me." Or this one from Statistical Physics: "At the meeting in August I put my name down for this course because I knew nothing about it." In the middle of the Stochastic Systems course the lecturer offered this piece of careers advice: "If you haven't enjoyed the material in the last few lectures then a career in chartered accountancy beckons." A lecturer of Linear Systems found the following on his board when he arrived one morning: "Roses are red, Violets are blue, Greens' functions are boring And so are Fourier transforms." An engineer actually gave an answer to the question of "quasi-infinite" sets: "It's one with more than ten elements." And they wonder why buildings fall over... 1987 From a supervisor: "Any theorem in Analysis can be fitted onto an arbitrarily small piece of paper if you are sufficiently obscure." No matter how elegant a course is there will always be occasions when a certain about of arithmetic is called for: "I just want you to have a brief boggle at the belly-busting complexity of evaluating this." A lecturer recently started to use RUNES in his course! His justification: "I need an immediately distinguishable character...so I'll use something that no-one will recognize." From a Special Relativity lecture: "...and you find you get masses of energy." It's nice to see the general-purpose 'nobbling constant' making a welcome return to Cambridge lectures: "This must be wrong by a factor that oughtn't to be too different from unity." A flattering comment by a student for his GR supervisor: "She's the only person in DAMTP who's a real person rather than an

abstract machine for doing tripos questions." A worrying thought from the same student: "Sex and drugs? They're nothing compared with a good proof!" A description of a lecturer: "G----'s a maniacal pixie!!!" A less polite description of a famous (and notorious) mathematician: "I personally think he's the greatest fraud since Cyril Burt!!" - any guesses ? Renormalisation holds no fears for this lecturer of Plasma Physics: "...and divergent integrals need really sleazy cutoffs." In the true style of Cambridge Maths Tripos we have the following: "Proof of Thm. 6.2 is trivial from Thm. 6.9" Why do mathematicians insist on using words that already have another meaning? "It is the complex case that is easier to deal with." And from various seminars in the King's College Research Centre: "...the non-uniqueness is exponentially small." "I'm not going to say exactly what I mean because I'm not absolutely certain myself." "It's dangerous to name your children until you know how many you are going to have." "You don't want to prove theorems that are false." And that last one wins the Sybil Fawlty Prize for "Stating the Bleeding Obvious". A slightly more honest version of "The student can easily see that..." : "If you play around with your fingers for a while, you'll see that's true." Suggestions are welcome on the meaning of this: "If it doesn't happen at a corner, but at an edge, it nonetheless happens at a corner." - Eh ? In a Complex Variables course a long, long, LONG time ago a lecturer wanted to swap the order of an integral and an infinite sum... "To do this we use a special theorem...the theorem that says that secretly this is an applied maths course." I never name my lecturers but he's now head of the Universities Grant Commission. And a lot of universities would like to swap him for an infinite sum. From an Algebra III lecturer: "If you want to prove it the simplest thing is to prove it." This year's Honesty Prize goes to the natural sciences supervisor, who replied to a question with "Don't ask me. I'm not a mathmo." And from Oxford...

"This does have physical applications. In fact it's all tied up with strings." 1988 Good heavens, do I see a lecturer actually noticing the existence of his audience! "Was that clear enough? Put up your hand if that wasn't clear enough. Ah, I thought not." Snobbery or what? "In the sort of parrot-like way you use to teach stats to biologists, this is expected minus observed." Also from statistics: "I too would like to know what a statistician actually does." "We're not doing mathematics; this is statistics." "You could define the subspace topology this way, if you were sufficiently malicious." "You mustn't be too rigid when doing Fluid mechanics." Talk about ulterior motives... "This handout is not produced for your erudition but merely so I can practice the TeX word-processor.' From 1A NatSci "Cells" course: "There are two proteins involved in DNA synthesis, they are called DNAsynthase 1 and DNAsynthase 3" From a Part 2 Quantum Mechanics lecture: "Just because they are called 'forbidden' transitions does not mean that they are forbidden. They are less allowed than allowed transitions, if you see what I mean." From an IBM Assembler lecture: "If you find bear droppings around your tent, it's fairly likely that there are bears in the area." A Biochemistry paper included an analysis of a previously undiscovered sugar named by the researchers "godnose". From a 1B Electrical Engineering lecture: "This isn't true in practice - what we've missed out is Stradivarius's constant." And then the aside: "For those of you who don't know, that's been called by others the fiddle factor..." One from a 1A Engineering maths lecture: "Graphs of higher degree polynomials have this habit of doing unwanted wiggly things." "Apart from the extra line, that's a one line proof." "This is a one line proof...if we start sufficiently far to the left."

A slight difficulty occured with geometry in an Engineering lecture one day: "This is the maximum power triangle" said a lecturer, pointing to a rectangle. This year the Computer Scientists seem to be in the running for the Honesty Award: "Sorry, I should have made that completely clear. This is a shambles." From a Computer Sciences Protection lecture: "Who should be going to this lecture? Everyone...apart from the third year of the two-year CompSci course." "I don't want to go into this in detail, but I would like to illustrate some of the tedium." Oh those poor CompScis.... "I'm not going to get anything more useful done in this lecture, so I might as well talk." later followed by ... "Well there you are, one lecture with no useful content." Three from a NatSci Physics lecturer: "You don't have to copy that down -- there's no wisdom in it -- it only repeats what I said." "We now wish to show that they are not merely equal but _the same thing_." "And before I leave this subject, I would like to tell you something interesting." From a first year chemistry lecture some personal problems of the lecturer: "Before I started this morning's lecture I was going to tell you about third divorce but on reflection I thought I'd better tell my wife first." From a single research seminar at the King's College Research Centre: "I'm sure it's right whether it's valid or not." "WARNING: There is no reason to believe this will work." 1990: A nomination for the Sybil Fawlty "Stating the Bleedin' Obvious" Prize: "A polynomial f is said to have degree m, written deg f equals m, if it does have degree m." Now it is fairly well known that lectures are not supposed to be copied down mindlessly. But... "Recall word 2 of defn 2.1" But then again... "I know you all have very innocent minds, but occasionally a word should be allowed to wander through before reaching the paper."

And on the subject of teaching styles:

"Proof left as an exercise for your supervisor."

And this year's first contenders for the Tautology award:

"It's obvious that what I've just written down is obvious."

"The fixed element can be said to be exactly what it is."

Mathematical notation is a minefield of obscure symbols ranging over most alphabets and scriptstyles. Any guesses for which character was described by an undergraduate as:

"It's a script spider"?

And with the reading problems come the corresponding writing ones suffered by these lecturers:

"My script 'y's always end up looking like rabbits."

"Little mouse tensored with piece of cheese."

However, good notation has its rewards as described by this lecturer:

"The prime leaps on to the other factor in a most convenient fashion."

And now, back to the content of the lecture courses:

"You can hardly underestimate the importance of this."

"I've got a lot to say about this theorem, so don't stop me if I go too fast."

"Sometimes it's useful to know how large your zero is"

Three from the same lecturer who is clearly having real problems...

"What am I doing? I haven't written any damn thing yet - I've just written total rubbish."

"What am I talking about? Does anyone know what I'm talking about? This is rubbish."

"Every time I go to the board with these notes I write down something completely different."

Hmmm... do I detect someone almost as cynical as myself?

"Theoretical physicist - a physicist whose existence is postulated, to make the numbers balance, but who is never actually observed in the laboratory." A IB Chemistry lecturer, refering to a previously derived equation.

"This is rigorous. Well, it's rigorous in the sense that ... All right, it's not rigorous."

Certain calulations will always be CPU intensive ...

"This principle is sometimes known as assuming the CIA is paying our computing bills."

Letter from an editor:

"I very much regret to inform you that the review procedure of your paper 'Approximation of Delay systems by Fourier-Laguerre series', is incurring a delay..."

The end (as of 5th July 1990). MPCEA

From: jelee@sas.upenn.edu (Jang Eun Lee) The Ultimate List of Pick-Up Lines to use on Engineering Chicks

1. I won't stop bugging you until I get the address of your home page.

2. You fascinate me more than the Fundamental Theorem of Calculus.

3. Since distance equals velocity times time, let's let velocity and time approach infinity, because I want to go all the way with you.

4. My love for you is like a concave up function because it is always increasing.

5. Let's convert our potential energy to kinetic energy.

6. Wanna come back to my room? ...and see my 166Mhz Pentium?

7. How about you and I go back to my place and form a covalent bond?

8. You and I would add up better than a Riemann sum.

9. You're sweeter than glucose.

10. We're as compatible as two similar Power Macintoshes.

11. Why don't we measure the coefficient of static friction between you and me?

12. Wanna see the programs in my HP-48GX?

13. Your body has the nicest arc length I've ever seen.

14. Isn't your e-mail address beautifulgirl@mydreams.com

489

Inspired, perhaps, by the Unabomber, reader Chris Marks composed three original scientific limericks with the common theme of "Explosions of Various Sizes". They appear, for easy reference, in order of increasing magnitude of destruction:

> A cautious young chemist named Mound Was surprised (but not hurt) when he found That A mixed with B In the presence of C Made a hole (ringed with dirt) in the ground.

[note; in this limerick, (r) represents the "registered" symbol]
 A scientist working at Sandia(r)
 Found a way to make larger bombs handier.
 The result of a test
 In the desert Southwest
 Turned the land close at hand even sandier.

Great minds have been known to recite, Or in papers they publish, to write That before time began There occurred a Big Bang --But the theory has never been quite

completed.

PC

From: jcamara@jet.es (Javier Camara)
Tell me why the stars do shine,
Tell me why the ivy twines,
Tell me what makes skies so blue,
And I'll tell you why I love you.
Nuclear fusion makes stars to shine,
Tropisms make the ivy twine,
Raleigh scattering make skies so blue,
Testicular hormones are why I love you.
-- From the Joke Book of Isaac Asimov
++++
=7.2 COMPARE SCIENTISTS (USING LIONS, ELEPHANTS ETC.)

MPA_

Problem: To Catch a Lion in the Sahara Desert. (Hunting lions in Africa was originally published as "A contribution to the mathematical theory of big game hunting" in the American Mathematical Monthly in 1938 by "H. Petard, of Princeton NJ" [actually the late Ralph Boas]. It has been reprinted several times. This is a hugely extended version with contributions from the net.

1. Mathematical Methods

1.1 The Hilbert (axiomatic) method

1.2 The geometrical inversion method

We place a spherical cage in the desert, enter it and lock it from inside. Case 1: The lion is inside the cage. This case is trivial. Case 2: The lion is outside the cage. We then perform an inversion with respect to the cage. Then the lion is inside the cage, and we are outside. Warning: With this method, it is important not to stand in the middle of the cage, as one will disappear in the infinite.

1.3 The projective geometry method

Without loss of generality, we can view the desert as a plane surface. We project the surface onto a line and afterwards the line onto an interior point of the cage. Thereby the lion is mapped onto that same point.

1.4 The Bolzano-Weierstrass method

Divide the desert by a line running from north to south. The lion is then either in the eastern or in the western part. Let's assume it is in the eastern part. Divide this part by a line running from east to west. The lion is either in the northern or in the southern part. Let's assume it is in the northern part. We can continue this process arbitrarily and thereby constructing with each step an increasingly narrow fence around the selected area. The diameter of the chosen partitions converges to zero so that the lion is caged into a fence of arbitrarily small diameter.

Warning: With this method take care that the beautifull skin of the lion is not damaged.

1.5 The set theoretical method

We observe that the desert is a separable space. It therefore contains an enumerable dense set of points which constitutes a sequence with the lion as its limit. With a cage on our backs, we jump from point to point of this sequence an so approach the lion as near as we like.

1.6 The Peano method

In the usual way construct a curve containing every point in the desert. It has been proven [1] that such a curve can be traversed in arbitrarily short time. Now we traverse the curve, carrying a spear, in a time less than what it takes the lion to move a distance equal to its own length.

1.7 A topological method

We observe that the lion possesses the topological gender of a torus. We embed the desert in a four dimensional space. Then it is possible to apply a deformation [2] of such a kind that the lion when returning to the three dimensional space is all tied up in itself. It is then completely helpless.

1.8 The Cauchy method

We examine a lion-valued function f(z). Be zeta the cage. Consider the integral

1 [f(z) ----- I ----- dz 2 \pi i] z - \zeta C

where C represents the boundary of the desert. Its value is f(zeta), i.e. there is a lion in the cage [3].

1.9 The Wiener-Tauber method

We obtain a tame lion, L_O, from the class L(-\infinity,\infinity), whose fourier transform vanishes nowhere. We put this lion somewhere in the desert. L_O then converges toward our cage. According to the general Wiener-Tauner theorem [4] every other lion L will converge toward the same cage. (Alternatively we can approximate L arbitrarily close by translating L_O through the desert [5].)

From: chohn@vub.ac.be (Ohn Christian) 1.10 The Mathematical Induction method

Consider, for each n, the following statement:

P(n): 'It is possible to catch n lions in the desert.' Of course, P(n) is true for large enough n, because the lions are then so tightly packed together that it is easy to catch them. But now, P(n) implies P(n-1) ('cause if you catch some lions, you can always release one of them). Hence, P(1) is true.

1.11 The Banachsche or iterative method

Let f be a contraction of the Sahara in it with contraction point x_0 . On this point we put the cage. By successive iteration W(n+1) = f(W(n)), $n=,1,2,\ldots$. (W(0)=Sahara) the Sahara will be contracted to X_0 . In this way the lion will get in the cage.

1.12 The Kalra Method

Make a list of the lion's whereabouts. Classify them into different fuzzy sets. The lion will get confused and fall into your trap.

1.13 The Cartesian method

Take the origin as close as possible to the lion. Then perform rotation operation again and again. Initially, the lion will feel dizzy. Finally it will fall down.

1.14 The Inductive Method

Initial Condition: If you center a large cage on any one grain of sand, and a lion is on or close to the grain of sand. then he will be trapped by the cage. By close we mean within epsilon grains of sand. Given a cage the size of 2 * (size of lion * epsilon) it works.

First Hypothesis: Given the first grain of sand in the desert, if the lion is standing on it you will trap him.

Proof: Given by the initial condition.

Induction Hypothesis: Assume that a lion is on a grain

of sand n, and is trappable. Now, for grain n+1 (assume all grains of sand

are ordered, inorder) n+1 is close to n, hence n is close to n+1. If the lion is on grain n, and is trappable; then he is close to n+1, and by the above condition, trappable. Hence, no matter where the lions are if you drop a cage centered on a piece of sand you will catch a lion.

1.15 The Integro-Differential Method

Integrate the Sahara over its entire surface. The lion is now somewhere in the result. Differentiate the result w.r.t the earth's rotation. The resulting value is zero, and the lion is no more.

2 Theoretical Physics Methods

2.1 The Dirac method

We assert that wild lions can ipso facto not be observed in the Sahara desert. Therefore, if there are any lions at all in the desert, they are tame. We leave catching a tame lion as an exercise to the reader.

2.2 The Schroedinger method

At every instant there is a non-zero probability of the lion being in the cage. Sit and wait.

2.3 The Quantum Measurement Method

We assume that the sex of the lion is _ab initio_ indeterminate. The wave function for the lion is hence a superposition of the gender

eigenstate for a lion and that for a lioness. We lay these eigenstates out flat on the ground and orthogonal to each other. Since the (male) lion has a distinctive mane, the measurement of sex can safely be made from a distance, using binoculars. The lion then collapses into one of the eigenstates, which is rolled up and placed inside the cage.

2.4 The nuclear physics method

Insert a tame lion into the cage and apply a Majorana exchange operator [6] on it and a wild lion.

As a variant let us assume that we would like to catch (for argument's sake) a male lion. We insert a tame female lion into the cage and apply the Heisenberg exchange operator [7], exchanging spins.

2.5 The Newton gravitation method

Cage and lion attract each other with the gravitation force. We neglect the friction. This way the lion will arive sooner or later in the cage.

2.6 The Newton third law method

Let the lion catch you (let's assume you remain alive here). For every action there is an equal and opposite reaction. Therefore, you will have captured the lion.

2.7 The Special relativistic method

One moves over the desert with light velocity. The relativistic length contraction makes the lion flat as paper. One takes it, rolls it up and puts a rubber band around the lion.

2.8 The Special relativistic method (method 2)

Run in the direction opposite to that of the lion. The relative velocity makes the lion run faster and hence he feels heavier and gets tired.

2.9 The general relativistic method

All over the desert we distribute lion bait containing large amounts of the companion star of Sirius. After enough of the bait has been eaten we send a beam of light through the desert. This will curl around the lion so it gets all confused and can be approached without danger.

2.10 The Heisenberg method

Position and Velocity from a moving lion can not be measure at the same time. As moving lions have no physical meaningfull position in the desert, one can not catch them. The lion hunt can therefore be limited to resting lions. The catching of a resting, not moving lion is left as an exercise for the reader.

2.appendix The Heisenberg constriction

You will disturb the lion when you observe it before capturing.

So keep your eyes closed.

3 Experimental Physics Methods

3.1 The thermodynamics method

We construct a semi-permeable membrane which lets everything but lions pass through. This we drag across the desert.

3.2 The atomic fission method

We irradiate the desert with slow neutrons. The lion becomes radioactive and starts to disintegrate. Once the disintegration process is progressed far enough the lion will be unable to resist.

3.3 The magneto-optical method

We plant a large, lense shaped field with cat mint (nepeta cataria) such that its axis is parallel to the direction of the horizontal component of the earth's magnetic field. We put the cage in one of the field's foci . Throughout the desert we distribute large amounts of magnetized spinach (spinacia oleracea) which has, as everybody knows, a high iron content. The spinach is eaten by vegetarian desert inhabitants which in turn are eaten by the lions. Afterwards the lions are oriented parallel to the earth's magnetic field and the resulting lion beam is focussed on the cage by the cat mint lense.

 After Hilbert, cf. E. W. Hobson, "The Theory of Functions of a Real Variable and the Theory of Fourier's Series" (1927), vol. 1, pp 456-457
 H. Seifert and W. Threlfall, "Lehrbuch der Topologie" (1934), pp 2-3
 According to the Picard theorem (W. F. Osgood, Lehrbuch der Funktionentheorie, vol 1 (1928), p 178) it is possible to catch every lion except for at most one.
 N. Wiener, "The Fourier Integral and Certain of its Applications" (1933),

pp 73-74 [5] N. Wiener, ibid, p 89

- [6] cf e.g. H. A. Bethe and R. F. Bacher, "Reviews of Modern Physics", 8
- (1936), pp 82-229, esp. pp 106-107
- [7] ibid

4 Contributions from Computer Science.

4.1 The search method

We assume that the lion is most likely to be found in the direction to the north of the point where we are standing. Therefore the REAL problem we have is that of speed, since we are only using a PC to solve the problem.

4.2 The parallel search method.

By using parallelism we will be able to search in the direction to the north much faster than earlier.

4.3 The Monte-Carlo method.

We pick a random number indexing the space we search. By excluding neighboring points in the search, we can drastically reduce the number of points we need to consider. The lion will according to probability appear sooner or later.

4.4 The practical approach.

We see a rabbit very close to us. Since it is already dead, it is particularly easy to catch. We therefore catch it and call it a lion.

4.5 The common language approach.

If only everyone used ADA/Common Lisp/Prolog, this problem would be trivial to solve.

4.6 The standard approach.

We know what a Lion is from ISO 4711/X.123. Since CCITT have specified a Lion to be a particular option of a cat we will have to wait for a harmonized standard to appear. \$20,000,000 have been funded for initial investigations into this standard development.

4.7 Linear search.

Stand in the top left hand corner of the Sahara Desert. Take one step east. Repeat until you have found the lion, or you reach the right hand edge. If you reach the right hand edge, take one step southwards, and proceed towards the left hand edge. When you finally reach the lion, put it the cage. If the lion should happen to eat you before you manage to get it in the cage, press the reset button, and try again.

4.8 The Dijkstra approach:

The way the problem reached me was: catch a wild lion in the Sahara Desert. Another way of stating the problem is:

Axiom 1: Sahara elem deserts Axiom 2: Lion elem Sahara Axiom 3: NOT(Lion elem cage)

We observe the following invariant:

P1: C(L) v not(C(L))

where C(L) means: the value of "L" is in the cage.

Establishing C initially is trivially accomplished with the statement

;cage := {}

Note 0: This is easily implemented by opening the door to the cage and shaking out any lions that happen to be there initially. (End of note 0.)

```
The obvious program structure is then:
       ;cage:={}
       ;do NOT (C(L)) ->
               ; "approach lion under invariance of P1"
               ;if P(L) ->
                       ;"insert lion in cage"
                [] not P(L) ->
                       ;skip
               ;fi
       ; od
where P(L) means: the value of L is within arm's reach.
Note 1:
Axiom 2 ensures that the loop terminates.
(End of note 1.)
Exercise 0:
Refine the step "Approach lion under invariance of P1".
(End of exercise 0.)
Note 2:
The program is robust in the sense that it will lead to
abortion if the value of L is "lioness".
(End of note 2.)
Remark 0: This may be a new sense of the word "robust" for you.
(End of remark 0.)
Note 3:
From observation we can see that the above program leads to the
desired goal. It goes without saying that we therefore do not have to
run it.
(End of note 3.)
(End of approach.)
4.9 The Linked List Method
Make a linked list of all objects in the desert. Then delete the pointers
on either side of the lion.(Make sure you are not AFTER the lion.)
4.10 The Automata Method
Use a Non-Deterministic Finite Automaton with epsilon moves from all
states
to the final state, and no moves from the final state. The lion will soon
enter the final state and be trapped.
4.11 The Divide And Conqure Method (by recursion)
Divide the desert in half. Repeat the process until you have the lion, a
grain of sand, or some other object that cannot be divided without blood
shed. You have the lion. The order of this method = O(insane). (Where
sanity is anything reasonable.)
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5 Other Methods

5.1 The Time-Cop Method

Use a time-machine and take the entire Sahara back a few years in time. The lion is just a cub now, and all you need is a mouse-trap.

5.2 The Shakespeare Method

Hold the lion still for a moment (I don't care how you do it), and recite Shakespeare`s Hamlet to it. The lion will change from 'To be' to 'Not-to-be'.

5.3 The Pentagon method.

Construct a safe, secure cage and leave the door open. Alternate massive B-52 strikes across the Sahara desert with subtle propaganda campaigns emphasizing the safety and security of your cage. When a lion enters the cage, close and lock the door.

5.4 The supply-side method.

Distribute vast quantities of lion food and eliminate all threats to the lion population. Put a cage in the desert and wait for the explosive growth of the lion population to force a lion into the cage.

5.5 The Marxist-Leninist method.

Indoctrinate the gazelle population of the Sahara desert in dialectical materialism. Disguise your cage as a re-education camp for capitalist lions, and the gazelles will bring you all the lions you need.

For other articles, see also:

A Random Walk in Science - R.L. Weber and E. Mendoza More Random Walks In Science - R.L. Weber and E. Mendoza In Mathematical Circles (2 volumes) - Howard Eves Mathematical Circles Revisited - Howard Eves Mathematical Circles Squared - Howard Eves Fantasia Mathematica - Clifton Fadiman The Mathematical Magpi - Clifton Fadiman Seven Years of Manifold - Jaworski The Best of the Journal of Irreproducible Results - George H. Scheer Mathematics Made Difficult - Linderholm A Stress-Analysis of a Strapless Evening Gown - Robert Baker The Worm-Runners Digest Knuth's April 1984 CACM article on The Space Complexity of Songs Stolfi and ?? SIGACT article on Pessimal Algorithms and Simplexity Analysis

Μ_

From: Dick van der Sijs (D.A.vanderSijs@fys.ruu.nl)
Intercepted Mail:

July 5, 1997 Dear sir, I strongly object against the Integro-Differential Method[1] . There are too little lions left on the earth to make this a justifiable method. Actually, hereby I express my sincere concern against advertising any method to catch a lion (in the desert or elsewhere) apparently for the sole reason of catching it. Also, I question using these methods for any reason not in the interest of an individual lion's health or not benefitting the lion as a species. So said, with best regards, Dick van der Sijs member of WWF References: [1] To catch a lion in the Sahara Dessert, Method 1.15 The Integro-Differential Method, Science Jokes Collection, Section Combined Sciences (1997) _____ July 6, 1997 Dear Drs. van der Sijs, As regarding your letter of July 5[1], I can assure you that the lion catching project is completely beneficial. The original purpose[2,3] was of course just to put some transmitters on the lions[3], so that their migration patterns could be studied, so that those regions could be made into national parks, where they would not be disturbed. Some scientist just forget the use of projects and just find new methods and call it ``fundamental science'', aka without any use at all. This method[4,1] is clearly not ethical and will not be used in further experiments. With kind regards, The project leader, Member of WWF. References: [1]Personal communication, 1997. [2]H. Petard, "A contribution to the mathematical theory of big game hunting" in the American Mathematical Monthly, 1938. [3]H. Petard, Personal communication, 1937. [4] To catch a lion in the Sahara Dessert, Method 1.15 The Integro-Differential Method, Science Jokes Collection (1997) MPCE A lecturer tells some students to learn the phone-book by heart.

The mathematicians are baffled: `By heart? You kidding?' The physics-students ask: `Why?'

The engineers sigh: `Do we have to?' The chemistry-students ask: `Till next Monday?' The accounting-students (scribbling): `Till tomorrow?' The laws-students answer: `We already have.' The medicine-students ask: `Should we start on the Yellow Pages?' MPCEA From: chrisman@ucdmath.ucdavis.edu (Mark Chrisman), chris@labtam.labtam.oz.au (Chris Taylor), troyt@sun.com (troy trimble), sinan@u.washington.edu (Sinan Karasu), gkeir@extro.ucc.su.OZ.AU (George Keir), jgfoot@minerva.cis.yale.edu (Josh A. Goldfoot), BajoriAP@Perkin-Elmer.com (Andrew Bajorinas), eva dacouri <eva@cafe.glassnet.com>, crosby@cs.colorado.edu, (Matthew Crosby), lanzi@inland.com, Robert Billing <unclebob@tnglwood.demon.co.uk>, s5cfh@csc.liv.ac.uk (C.F. Hankel), Rangaswamy Ravindran <ravi@inforamp.net>, rjw3@kimbark.uchicago.edu (BOB!! Williams), eijkhout@jacobi.math.ucla.edu (Victor Eijravi@inforamp.net (Rangaswamy Ravindran), Daniel Kian Mc Kiernan <dmckiern@weber.ucsd.edu>, mike@setanta.demon.co.uk (Mike Causer), bill@umsa7.umd.edu (Bill Sudbrink), bhurt@subzero.winternet.com (Brian Hurt) Benjamin.J.Tilly@dartmouth.edu (Benjamin J. Tilly), fo807@cleveland.Freenet.Edu (Richard Merritt Hoskins),fc3a501@GEOMAT.math.uni-hamburg.de (Hauke Reddmann), rmorris@liverpool.ac.uk (Mr Richard J. Morris), royl@zen.icl.co.uk (Roy Lakin), barry@numetrix.com (Barry Fruitman), mlc@iberia.cca.rockwell.com (Michael Cook) sgalon <sgalon@iil.intel.com> Several students were asked the following problem: Prove that all odd integers higher than 2 are prime. mathematician: 3 is prime, 5 is prime, 7 is prime, and by induction, we have that all the odd integers are prime." Statistician: 100% of the sample 5, 13, 37, 41 and 53 is prime, so all odd numbers must be prime. Mechanical Statistician: 3 is prime, 5 is prime, 7 is prime, 9 is an outlier, 11 is prime, 13 is prime, all odd numbers are prime. Measure nontheorist: there are exactly as many odd numbers as primes (Euclid, Cantor), and exactly one even prime (namely 2), so there must be exactly one odd nonprime (namely 1). Physicist: 3 is prime, 5 is prime, 7 is prime, 9 is ... uh, 9 is an experimental error, 11 is prime, 13 is prime... Well, it seems that you're right."

Wouldn't a modern physicist employ something like renormalization? 3 is prime, 5 is prime, 7 is prime, 9 is ... 9/3 is prime 11 is prime, 13 is prime, 15 is ... 15/3 is prime 17 is prime, 19 is prime, 21 is ... 21/3 is prime Quantum Physicist: All numbers are equally prime and non-prime until observed. Chemist: "3 is prime, 5 is prime, 7 is prime.. that's enough." Chemist: 1 prime, 3 prime, 5 prime...hey, let's publish! Cosmologist: 3 is prime, yes it is true.... Engineer: 3 is prime, 5 is prime, 7 is prime, 9 is ..., 9 is ..., well if you approximate, 9 is prime, 11 is prime, 13 is prime... Well, it does seem right." Engineer: 3 is prime, 5 is prime, 7 is prime, 9 is not working, fetch toolbox. Engineer: 3 is prime, 5 is prime, 7 is prime, 9 is prime, 11 is prime... [Continue until told to go home by others] Professor: 3 is prime, 5 is prime, 7 is prime, and the rest are left as an exercise for the student. Computer scientist: I've just whipped up a program to REALLY go and prove it..." He goes over to his terminal and runs his program. Reading the output on the screen he says, "1 is prime, 1 is prime, 1 is prime, 1 is prime...." Computer scientist using Unix: 3's a prime, 5's a prime, 7's a prime, segmentation fault. core dumped. GNU program: % prime usage: prime [-nV] [--quiet] [--silent] [--version] [-e script] --catenate --concatenate | c --create | d --diff --compare | r --append | t --list | u --update | x -extract --get [--atime-preserve] [-b, --block-size N] [-B, --read-full-blocks] [-C, --directory DIR] [] [-f, --file [HOSTNAME:]F] [--force---checkpoint local] [-F, --info-script F --new-volume-script F] [-G, --incremental] [-g, --listed-incremental F] [-h, --dereference] [-i, --ignore-zeros] [--ignore-failedread] [-k, --keep-old-files] [-K, --starting-file F] [-l, --one-file-system] [-L, --tape-length N] [-m, --modification-time] [-M, --multi-volume] [-N, --after-date DATE, --newer DATE] [-o, --old-archive, --portability] [-0, --to-stdout] [-p, --samepermissions, --preserve-permissions] [-P, --absolutepaths] [--preserve] [-R, --record-number] [[-f script-file] [--expression=script] [--file=script-file] [file...] prime: you must specify exactly one of the r, c, t, x, or d options

For more information, type ``prime --help'' Computer Scientist: 3 is prime, 5 is prime, 7 is prime, 7 is prime, 7 is prime, 7 is prime... Bus error. Core dumped. The computer programmer method is: "3 is prime, 5 is prime, 7 is prime, 9 is prime, 9 is prime, 9 is prime, 9 is ..." Opps, let's try that again: "3 is prime, 5 is prime, 7 is prime, 9 is ... 3 is prime, 5 is prime, 7 is prime, 9 is ... 3 is ..." Um, right. Okay, how about this: "3 is not prime, 5 is not prime, 7 is not prime, 9 is not prime..." So much for the beta releases. Ship this: "3 is prime, 5 is prime, 7 is prime, 9 is a feature, 11 is prime..." and put on the cover "More prime numbers than anyone else in the industry!" Coming soon: "3 is a prime, 4 is a feature, 5 is a prime, 6 is a feature, 7 is a prime, 8 is not yet implemented, 9 is our backwards compatibilty module, ..." Computer Scientist: 10 prime, 11 prime, 101 prime... Programmer: 3 is prime, 5 is prime, 7 is prime, 9 will be fixed in the next release, ... C programmer: 03 is prime, 05 is prime, 07 is prime, 09 is really 011 which everyone knows is prime, ... BASIC programmer: What's a prime? COBOL programmer: What's an odd number? Windows programmer: 1 is prime. Wait. Mac programmer: Now why would anyone want to know about that? That's not user friendly. You don't worry about it, we'll take care of it for you. Bill Gates: 1. No one will ever need any more then 1. TRS-80 Computer Programmer: One is prime, Two is prime, Three is prime, Out of Memory. Computer Scientist with a Pentium: 3 is prime, 5 is prime, 6.9999978 is prime... Software tech support operator: Well, we haven't had any reports of composite odd numbers... do you have the latest version of ZFC? Logician: Hypothesis: All odd numbers are prime

Proof: 1) If a proof exists, then the hypothesis must be true 2) The proof exists; you're reading it now. From 1 and 2 follows that all odd numbers are prime Confused Undergraduate: Yes, it's true. Proof: Let p be any prime number larger than 2. Then p is not divisible by 2, so p is odd. QED Linguist: 3 is prime, 5 is prime, 7 is prime, 9 aaah. I can make 9 a prime. Linguist: are you lot going to shut up and buy me a beer or not? Computational linguist: 3 is an odd prime, 5 is an odd prime, 7 is an odd prime, 9 is a very odd prime, ... So we go on to the architect (Architecture is the only completely non-technical faculty in the technion): Architects are very friendly people who are always ready to help, so when asked to prove that all odd numbers are prime: "I'd love to help you, if you could just clarify something ... what exactly are odd numbers?" Philosopher : why don't we just call all the odd numbers prime and call all the prime numbers odd, that way all the odd numbers would be prime Philosopher: 3 is prime. Hum, thats an interesting statment, I'll get one of my research students to look into that. Economist: "Assume 9 is prime..." Economist: 2 is a prime, 4 is a prime. Economist: 2 is even, 4 is even, 6 is even... Economist: 3 is prime, 5 is prime, 7 is prime, 9 is not prime. Look the prime rate is dropping. English Major: 1 is prime, 2 is prime, 3 is prime, 4 is prime... Any fool could prove that the above is wrong... After all, no English major can count that high! ;-) P.S. And I should know...I've done^H^H^H^H spent time in the English army! Theologian: 3 is prime and that's good enough for me! Theologian: No after all before God all numbers even, odd and prime are created equal. Christian: I'm sure the Bible says that all odd numbers are prime. Pope: 9 is prime. If you think otherwise, prepare to be damned The Psychiatrist: 1 is prime, 3 is prime, 5 is prime, 7 is prime, 9 is prime but trying to supress it, 11 is prime..... Shrink: 3 is prime, 5 is prime etc... And how could one specify "prime" anyway? Psychologists: Do _they_ want to be?

Sociologist: 3 is a number, 3 is prime, all numbers are prime. Sociologist: is it right to call numbers odd? Sociologist: 3 is a number, 3 is prime, all numbers are prime.

Multiculturalist: Pfui! There you go, classifying numbers into categories.

Lawyer: 3 is prime, yet 5 could be anything, taking into account, but not limited to, the fact that 4 may or may not be prime, depending on the witnesses' testimonies and the written evidence furnished.
Lawyer: According to Maths v Logic, 9 was judicially declared prime
Lawyers: one is prime, three is prime, five is prime, seven is prime, although there appears to be prima facie evidence that nine is not prime, there exists substantial precedent to indicate that nine should be considered prime. The following brief presents the case for nine's primeness ...

Accountant: 3 is prime, 5 is prime, 7 is prime, 9 is prime, deducing 10% tax and 5% other obligations. Accountant: What would you like it to be?

Politician: 3 is prime, 5 is prime, 7 is prime, 9 is composite, 11 is
 prime -- we can ignore 9 because the primes have a majority.
Corrupt Politician: For a sufficient donation, 9 can be reclassified
Politician: Do you want them to be?

George Bush: What's nine got against being prime? I'll bet it won't allow

the pledge of allegiance to be said in our schools either.

Richard Nixon: Put nine on the enemies list. I'm gonna get that number.

Liberals: The fact that nine is not prime indicates a deprived cultural environment which can only be remedied by a federally funded cultural enrichment program.

Manager: 3 yes, 5 yes, 7 YES, 9 Now let's take a positive attitude here QA: 1 is not proven, 2 no and reported, 3 not proven, 4 no and reported, ...

Butcher: Prime? What do numbers have to do with meat?

Rec.humor poster: one is prime, one is prime, one is prime

Crank: 9 IS PRIME! NOW WHERE IS THE CAPS UNLOCK?

New Yorker: 3 is prime, 5 is prime, 7 is prime, 9 is ... NONE OF YOUR DAMN BUSINESS!

From: mstueben@pen.kl2.va.us (Michael A. Stueben) &
From: sm@wf-hh.sh.sub.de (Stefan Mohr)
ASSIGNMENT: Obtain an elephant from Africa.

PHYSICIST: Starting on the west coast, he searches north-to-south and south-to-north slowly moving east. He
inspects all gray animals keeping the first one that weighs the same as a known adult elephant plus-or-minus 500 pounds.

MATHEMATICIAN: Starting in the center he moves in an elliptical spiral (with major axis oriented north-to-south) removing all non-elephants keeping whatever is left.

EXPERIENCED MATHEMATICAN: Same as unexperienced mathematican, except that he first tries to proof there is at least one unabiguous elephant before he starts with the search.

MATHEMATICS PROFESSOR: Same as experienced mathematican, except that he leaves the actual searching and catching of the elephant to his students.

Other MATHEMATICIANS hunt elephants by going to Africa, throwing out everything that is not an elephant, and catching one of whatever is left.

COMPUTER SCIENTIST: First he notes that there are two kinds of elephants (African and Indian) and requests more detailed specifications as to which elephant is desired to be captured. Then he searches east-to-west and westto-east starting from the southern tip and moving north. He stops only when encountering and capturing an animal whose description matches the American Zoological Society's classification of the type of elephant he is seeking.

EXPERIENCED COMPUTER SCIENTIST: Same as inexperienced computer scientist, except that he places a known elephant in Cairo to guarantee that the algorithm terminates. (The way I teach the insertion sort is to first locate the smallest element and then to swap it into first place. Why? So that the insertion algorithm must terminate before reaching the non-existent zeroth position. I like to tell this joke just before I teach the insertion sort. -Michael A. Stueben)

ASSEMBLER PROGRAMMER: Same as experienced computer scientist, except that he prefers to do it on his hand and knees.

SQL PROGRAMMER: Uses the following expression: SELECT elephant FROM Africa.

STATISTICIAN: hunts the first animal he sees n times and calls it elephant.

ECONOMIST: He hunts no elephants, but believes that the elephants would deliver themselves if payed enough.

ECONOMICAL ADVISER: He hunts no elephants and has never hunted anything at all. You can hire them by the hour to give good advice.

SYSTEM ANALYSER: Is theoretically capable of calculating the the correlation between hat size and hit quote, if somebody would tell them what an

elephant is.

From: "\"Alan \\\"Uncle Al\\\" Schwartz\"" <uncleal0@ix.netcom.com> ENGINEERS hunt elephants by going to Africa, catching gray animals at random, and stopping when any one of them weighs within plus or minus 15 percent of any previously observed elephant

STATISTICIANS hunt the first animal they see N times and call it an elephant

OPERATIONS RESEARCH CONSULTANTS can measure the correlation of hat size and bullet colour to the efficiency of elephant hunting strategies, if someone else will identify the elephants

POLITICIANS don't hunt elephants, but they will share the elephants you catch with the people who voted for them

LAWYERS don't hunt elephants, but they do follow the herd around arguing about who owns the droppings

SOFTWARE LAWYERS will claim that they own an entire herd based on the look and feel of one dropping

When the VICE PRESIDENT OF R&D tries to hunt elephants, his staff will try to ensure that all elephants are completely pre-hunted before he sees them. If the vice president sees a non-pre-hunted elephant, the staff will

- (1) compliment the vice president's keen eyesite and
- (2) enlarge itself to prevent any recurrence

SENIOR MANAGERS set broad elephant hunting policy based on the assumption that elephants are just like field mice, but with deeper voices

QUALITY ASSURANCE INSPECTORS ignore the elephants and look for mistakes the other hunters made when they were packing the jeep

SALESPEOPLE don't hunt elephants but spend their time selling elephants they haven't caught, for delivery two days before the season opens

SOFTWARE SALESPEOPLE ship the first thing they catch and write up an invoice for an elephant

HARDWARE SALESPEOPLE catch rabbits, paint them gray and sell them as "desktop elephants". PCB_____

When a problem gets to complicated for the physicists, they hand the problem to the chemists. When a problem gets to complicated for the chemists, it is handed over to the biologist. And when biologists think it is to complicated they give the problem to the sociologists. PCB

If it moves it is biology, if it stinks it is chemistry and if it does not work it is physics. From: Daniel BB Jones Esq. <76612.3555@CompuServe.COM> [from "Murphy's Law, Book Two: More Reasons Why Things Go Wrong"] If it's green or it wriggles, it's biology. If it stinks, it's chemistry. If it doesn't work, it's physics. From: 157763091@cats.ucis.vill.edu (James J. Marshall) from "The Complete Murphy's Law, A Definitive Collection"] Cerf's Extension to the Handy Guide to Modern Science If it's incomprehensible, it's mathematics. If it doesn't make sense, it's either economics or psychology. From: kkrueger@osf1.gmu.edu (Karl A Krueger) If it causes cancer in laboratory animals, it's pharmacology or nutrition. If it's just plain wrong, it's education. If it crashes, it's either engineering or CS. If it falls on itself, smashing a hundred cars, it's civil engineering. If it fails to distribute the middle term, it's theology. MPCBE From: reid@indiana.edu (Frank Reid) Technicians think they are engineers. Engineers think they are physicists. Physicists think they are mathematicians. Mathematicians think they are philosophers. Philosophers think they are technicians. (Local philosophy prof sprayed WD-40 in his VCR.) OR: From: cyrus@josaiah.sewanee.edu (Cyrus) Biologists think they're biochemists. Biochemists think they're chemists. Chemists think the're physical chemists. Physical Chemists think they're physicists. Physicists think they're God. God thinks he is a mathematician. MPE From: asdalton@umich.edu (Andrew Dalton) I heard this one: Engineers want to be experimental physicists. Experimental physicists want to be theoretical physicists. Theoretical physicists want to be mathematicians. Mathematicians want to be philosophers. Philosophers want to be theologians. Theologians want to be engineers.

From: mini-air <marca@wilson.harvard.edu>

MPB

1997-03-07 More Smartypants

Here are further observations gleaned from the Project Smartypants survey (which field has the smartest, or believes it has the smartest, people?), the results of which were summarized in last month's mini-AIR.

Astronomer Vinay L. Kashyap: Speaking of ranking the various disciplines --Politicians think they are Economists. Economists think they are Social Scientists. Social Scientists think they are Psychologists. Psychologists think they are Biologists. Biologists think they are Organic Chemists. Organic Chemists think they are Physical Chemists. Physical Chemists think they are Physicists. Physicists think they are Mathematicians. Mathematicians think they are God. God ...umm... so happens that God is an Astronomer.

Geographer Wolf Roder: Back when my daughter was studying at Caltech it was *known* that astronomers (future) were those who could not make it in physics.

Biochemist Lex Kwee:

Engineering ranks itself pretty high and could beat Physics in a man to man contest, because they would bring more appropriate weaponry.

Pam Sexton, who did not identify her field: I can't say who is smarter, but I did have a physicist boss once who described chemists as the "lowest form of scientific life".

Astronomer Duncan Steele:

I was once at a seminar about some obscure branch of mathematics. (Actually I wasn't: I heard about this from someone who may, or may not, have been there. If it ever actually occurred). The lecturer drew some bizarre diagram on the board, whereupon a puzzled member of the audience put up his hand and said that he couldn't understand which way was up, and which down. The lecturer replied: "I am from Cambridge: hence all other directions are down." This proves beyond all reasonable doubt that mathematicians - at least those from Cambridge - think of themselves as being on the top of the heap.

Mathematician Fredrik Mansfeld: I'm a mathematician working as a computer scientist. Since I am of the purest academic discipline of them all I can assure you that my opinions are completely objective and unbiased. MPCBA

From: kludge@grissom.larc.nasa.gov (Scott Dorsey) How to identify scientists:

Chem Prof: Wears a white lab coat. This may actually be clean but does not have to be. P-chem profs have a brand new coat that has never been in the lab; polymer chem profs have strange glop on their coat, and intro chem profs have acid holes.

- Physics Prof: Wears blue jeans and a flannel shirt. May sometimes forget to wear shirt altogether. If a professor is wearing blue jeans and suspenders, ten to one he is a physicist. Physics profs often have German accents, but this is not a distingushing characteristic. Be wary of psychologists with fake Viennese accents which can sound similar to the unwary.
- Bio Prof: Sometimes wears a lab coat, though usually this is the sign of a biochemist. Marine biologists walk around in hip boots for no explainable reason, even in the middle of winter. They are apt to wear grey slacks and smell like fish, as opposed to most biologists, who smell strongly of formalin. Microbiology instructors go around in spotless white coats, refuse to drink beer on tap, and wipe all their silverware before using it. Never loan money to a bio prof, no matter how much he asks.
- Psych Prof: Psychologists are not real scientists, and can be easily identified by their screams of protest whenever anyone questions whether psychology is a science. Psych people have beady little eyes and don't laugh at jokes about psychology. If you are not sure whether a person is a scientist or a comparative religion instructor, he is probably a psychologist.
- CS Prof: Most CS profs are from India or Pakistan. You can tell by the gestures and accents. This is not a bad thing, though many of the American CS professors tend to pick up Indian accents which confounds more specific identification. Like mushrooms, CS students only come out at night, and, if not Indian, tend to take on a pasty appearance. CS professors do not use computers and therefore can be easily identified by their comparative good health with respect to their students. Many CS professors do not even know how to use computers, and are actually mathematicians or psychologists in disguise. Avoid these people.
- Math Prof: Math profs are like physics professors except without any practical bent. A math professor will have only books and pencils in his office, as opposed to the piles of broken equipment that physicists keep. Mathematicians scorn the use of computers and calculators and often have difficulty splitting bills in restaurants. The easy way to identify a mathematician is by the common use of the phrases "It can be shown that..." and "Is left as an exercise to the student..."

From: mini-air <marca@wilson.harvard.edu>
1997-03-06 Scientist Stereotypes

Investigator Chana Lajcher of the Jerusalem College of Technology reports on her analysis of science stereotypes:

I worked for a number of years at a large Israeli university science library (no, I won't mention names). We were usually able to guess the department of the students coming to the desk by just looking at them: Young married women, usually pregnant or with a baby in tow, were biology undergrads. Young males, looking lost, not knowing what book they wanted (They'd come to the desk saying, "Um, Is this the library? I need the book, for the course, you know..."), were pharmacology students doing their one botany course. Elderly library patrons, usually a bit eccentric, were researchers at the herbarium looking for very rare botany books which they would discover had been checked out ten years previously by one of their colleagues (and not yet returned but they promise they'll bring it in the minute we phone them - if the other reader needs it as much as they do). Young healthy males, were chemistry undergrads. Students grading stacks of exams were physics grad students (working part-time as teaching assistants). Math was in a different library so I have no stereotypes (oops I meant data) for them. MP

Where to Publish Your Paper

- 1) If you understand it and can prove it, then send it to a journal of mathematics.
- 2) If you understand it, but can't prove it, then send it to a physics journal.
- 3) If you can't understand it, but can prove it, then send it to an economics journal.
- 4) If you can neither understand it nor prove it, then send it to a psychology journal.
- 5) If it attempts to make something important out of something trivial, then send it to a journal of education.
- 6) If it attempts to make something trivial out of some-thing important, send it to a journal of metaphysics.

MP_

Dean, to the physics department. "Why do I always have to give you guys so much money, for laboratories and expensive equipment and stuff. Why couldn't you be like the math department - all they need is money for pencils, paper and waste-paper baskets. Or even better, like the philosophy department. All they need are pencils and paper." MEA

The problem with engineers is that they tend to cheat in order to get results.

The problem with mathematicians is that they tend to work on toy problems in order to get results.

The problem with program verifiers is that they tend to cheat at toy problems in order to get results.

The graduate with a Science degree asks, "Why does it work?" The graduate with an Engineering degree asks, "How does it work?" The graduate with an Accounting degree asks, "How much will it cost?" The graduate with a Liberal Arts degree asks, "Do you want mustard with that?" MPE_____

From: guptap@sun.soe.clarkson.edu (Piush Gupta) Piush does not agree with the above:

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What is the most frequently asked questions by the following after
they graduate :
1) Engineer : How do I do it?
2) Economist : How much will it cost?
3) Mathematician/Physicist : Will you like some ketchup with it?
MPE
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The engineer thinks of his equations as an approximation to reality. The physicist thinks reality is an approximation to his equations. The mathematician doesn't care.

OR:

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From: cantrick@rintintin.Colorado.EDU (Ben Cantrick (alias Macky
Stingray))
  Engineers think that equations approximate the real world.
  Scientists think that the real world approximates equations.
 Mathematicians are unable to make the connection...
MPE
What is "pi"?
Mathematician: Pi is the number expressing the relationship between the
               circumference of a circle and its diameter.
Physicist: Pi is 3.1415927 plus or minus 0.00000005
Engineer: Pi is about 3.
MPA
Philosopher: "Resolution of the continuum hypothesis will have
             profound implications to all of science."
Physicist:
             "Not quite. Physics is well on its way without those
              mythical `foundations'. Just give us serviceable
mathematics."
Computer Scientist:
             "Who cares? Everything in this Universe seems to be finite
              anyway. Besides, I'm too busy debugging my Pascal
programs."
Mathematician:
             "Forget all that! Just make your formulae as aesthetically
             pleasing as possible!"
ΜP
```

Einstein dies and goes to heaven only to be informed that his room is not yet ready. "I hope you will not mind waiting in a dormitory. We are very sorry, but it's the best we can do and you will have to share the room with others." he is told by the doorman (say his name is Pete). Einstein says that this is no problem at all and that there is no need to make such a great fuss. So Pete leads him to the dorm. They enter and Albert is introduced to all of the present inhabitants. "See, Here is your first room mate. He has an IQ of 180!" "Why that's wonderful!" Says Albert. "We can discuss mathematics!" "And here is your second room mate. His IQ is 150!" "Why that's wonderful!" Says Albert. "We can discuss physics!" "And here is your third room mate. His IQ is 100!" "That Wonderful! We can discuss the latest plays at the theater!" Just then another man moves out to capture Albert's hand and shake it. "I'm your last room mate and I'm sorry, but my IQ is only 80." Albert smiles back at him and says, "So, where to you think interest rates are headed?" MPE

From: shafiz@chat.carleton.ca (shoeb hafiz)
There is a glass half full of water:

Mathmetician: the glass is half full Physist: the glass is half empty Engineer: the glass is too big E_____

From: Rudolph Messerschmidt <reindeer@melbourne.DIALix.oz.au>
There is a half glass of scotch on a table,

Art student: symbolises unfulfilled enmotions Science student: calculates exact percentage full, Engineering student: drinks scotch, say's "what's the question?" MPE

From: mstueben@pen.kl2.va.us (Michael A. Stueben)
 A half full glass of whiskey was sitting on a table at a
university banquet. One of the waiters that night was a
graduate sociology student. As various professors and guests
walked by the glass during the night, the student asked each
one to make a comment.
Education professor: That glass is half full.
Catholic theologian: That glass is half empty.

Psychology professor: I don't know. What do you think it means? Zen Buddist: Nothing has existed from the beginning of time, not even an empty universe. Parapsychologist: All we can say is that the glass appears half empty on at least one side. Irish history professor: Drinks the whiskey and says, What's the question? Irish history professor (emeritus): Wha? . . . gih mee glasch uh wishkee. Baptist theologian: You're going to hell and I'm glad! Professor of Women's Studies: Fuck you! Mathematics professor: Huh?

BC___

From: Hauke Reddmann <fc3a501@AMRISC09.math.uni-hamburg.de>
Field biologists hear the Counting Crows.
Geneticists hear Offspring.
Chemists just hear Heavy Metal.

From mini-air (mini-air@chem.harvard.edu)

1999-03-07 Best Wrestlers (1) -- Most Popular Many and varied are the votes we received for last month's survey question: Of all different kinds of scientists and doctors, which make the best professional wrestlers? Numerous voters, many of whom used only a first name (led by Nick of Auckland), insisted that proctologists make the best wrestlers. But for every proctological vote, we received more than two in favor of a more structurally supportive medical specialty: "Orthopedists know the easiest ways to break bones." -- Michelle Garrison "As an operating room nurse of many years standing (way too little sitting!), I nominate orthopedic surgeons due to their ability to twist and tug." -- Sandra Bailey, PhD, RN, CNOR "Orthopedic Surgeons. No explanation required if you have ever seen them perform surgery." -- Matthew R. Healey "Orthopaedic surgeons - they tend to be big beefy ex-football players with few brains." -- Mark Pulley "Orthopedic surgeons, who are allegedly as strong as an ox and twice as smart, or was that as smart as an ox and twice as strong?" -- Mark Niemer _____ 1999-03-09 Best Wrestlers (1) -- Cult Favorites Some voters went against the crowd, insisting on their own favorites: "Anthesiologists: Wicked sleeper holds." -- Parminder Basran "A mathematician. Obviously." -- Kristina Sontag "Geomorphologists, because they stay fit through field work climbing mountains and sand dunes and they are mean because they get no respect as real scientists." -- Linda Lea Jones "A very large scientist and/or doctor with a chiseled body, a 24 inch vertical leap, really great teeth, and a very, very bad attitude. Probably a field geologist, because they lug heavy rocks all over for no apparent reason and so are in the best shape."

-- Ed Theriot

"Lepidopterists are adept at pinning their subjects to the mat." -- Paul Chapin

"Archeologists who work in the field have to do manual labor. They're probably the strongest scientists on average." -- Alan Barksdale

"Psychiatrists. They have the advantage of using psychology to make the opponent defeat himself. Very little blood is spilled or violence displayed, because it all happens in the mind!" -- Arif Shahabuddin

"Ornithologists, particularly those who specialize in banding ostriches."

-- Joanne Cook

"From prime experience, my largish husband, William Texas Bradley, neurologist in Fort Worth, Texas, would make the best professional wrestler type. I may have a master's in English, but he still provides physical 'airplane rides' which I am unable to avoid. (I bet you wonder what THAT means!)"

-- Baronda E. Bradley

More next month, perhaps. ME_____

From: danwong@avalon.nando.net A man dies and goes to heaven. Upon his arrival, he looks for an angel and asks, "Was I a mathematician or an engineer before I came here?" The angel ponders the question, and then says, "I wouldn't know...you'd have to ask God Himself." So the next day, the man walks up to God and asks his question again. God's only response is to hand the man a sheet of paper, after which he is dismissed. The man runs back to the same angel, and says, "God gave me this paper...what does it say? I can't read it." The angel scanned the sheet, and then translated aloud: Assume: New arrival was a mathematician in previous plane of existence.

From: danwong@avalon.nando.net

A man dies and goes to heaven. Upon his arrival, he looks for an angel and asks, "I loved the sea before...could we put in an aquarium here?" The

angel responds, "Sure," and forwards the request to God immediantly. God sees the request and sets to work, but is quickly stymied. He thinks, "We need to know the pressure on the surface of the aquarium, but I haven't

seen calculus in so long...We must have a mathematician." One is quickly called for, and solves the problem with ease. Next, God realizes that the glass must be able to withstand the pressure, and thinks, "We need a physicist to tell us how much glass is needed." Once again, a physicist is summonned and the problem is quickly solved. However, God now realizes that there remains the problem of construction, and thinks, "We must have an engineer." This time however, there is no response to the summons. God quickly notifies the entrance angel to send any engineers to Him right away, but to no avail. Finally, after a month he summons the sea-lover to his chamber and says, "I'm sorry, but we couldn't make the new aquarium." The man obviously wants to know why, and God replies: "We found a mathematician to figure pressure, we found a physicist to get the glass thickness right, but we couldn't find an engineer in ALL of heaven to put the thing together !! " ++ =7.3 REMARKABLE SCIENTIFIC SAYINGS FROM SCHOOL CHILDREN AND STUDENTS PCB_ From: mattie@aloha.net (melany chapint), NancyTorok <ntorok@198.4.75.45> Here are some interesting interpretations of nature from test papers and essays submitted to science and health teachers by junior high, high school, and college students(!) around the world. Here are some school childrens interpretations of science & school I found on the net:

(From _Popular Science_ by way of an Ann Landers column)

- When you breath, you inspire. When you do not breath, you expire.
- H2O is hot water, and CO2 is cold water
- To collect fumes of sulphur, hold a deacon over a flame in a test tube.
- When you smell an odorless gas, it is probably carbon monoxide
- Water is composed of two gins, Oxygin and Hydrogin. Oxygin is pure gin. Hydrogin is gin and water.
- Three kinds of blood vessels are arteries, vanes and caterpillars.
- Blood flows down one leg and up the other.
- Respiration is composed of two acts, first inspiration, and then expectoration.
- The moon is a planet just like the earth, only it is even deader.
- Artifical insemination is when the farmer does it to the cow instead of the bull.
- Dew is formed on leaves when the sun shines down on them and makes them perspire.
- A super-saturated solution is one that holds more than it can hold.
- Mushrooms always grow in damp places and so they look like umbrellas.
- The body consists of three parts--the brainium, the borax and the abominable cavity. The brainium contains the brain, the borax contains the heart and lungs, and the abominable cavity contains the bowels, of which there are five a, e, i, o, and u.
- The pistol of a flower is its only protection against insects.
- The alimentary canal is located in the northern part of Indiana.
- The skeleton is what is left after the insides have been taken out and the outsides have been taken off. The purpose of the skeleton is something to hitch the meat to.
- A permanent set of teeth consists of eight canines, eight cuspids, two

molars, and eight cuspidors.

- The tides are a fight between the Earth and moon. All water tends towards the moon, because there is no water in the moon, and nature abhors a vacuum. I forget where the sun joins in this fight.
 A fossil is an extinct animal. The older it is, the more extinct it is.
 Equator: A menagerie lion running around the Earth through Africa.
 Germinate: To become a naturalized German.
 Liter: A nest of young puppies.
 Magnet: Something you find crawling all over a dead cat.
 Momentum: What you give a person when they are going away.
 Planet: A body of Earth surrounded by sky.
- Rhubarb: A kind of celery gone bloodshot.
- Vacuum: A large, empty space where the pope lives.
- Before giving a blood transfusion, find out if the blood is affirmative or negative.
- To remove dust from the eye, pull the eye down over the nose.
- For a nosebleed: Put the nose much lower then the body until the heart stops.
- For drowning: Climb on top of the person and move up and down to make artifical perspiration.
- For fainting: Rub the person's chest or, if a lady, rub her arm above the hand instead. Or put the head between the knees of the nearest medical doctor.
- For dog bite: Put the dog away for several days. If he has not recovered, then kill it.
- For asphyxiation: Apply artificial respiration until the patient is dead.
- For head cold: Use an agonizer to spray the nose untill it drops in your
- throat.
- To keep milk from turning sour: Keep it in the cow.
- Nitrogen is not found in Ireland because it is not found in a free state.

MPCB

From: adam@crl.com (Stuart A. Bronstein) The beguiling ideas about science quoted here were gleaned from essays, exams, and classroom discussions. Most were from 5th and 6th graders.

Question: What is one horsepower? Answer: One horsepower is the amount of energy it takes to drag a horse 500 feet in one second.

You can listen to thunder after lightning and tell how close you came to getting hit. If you don't hear it, you got hit, so never mind.

Talc is found on rocks and on babies.

The law of gravity says no fair jumping up without coming back down.

When they broke open molecules, they found they were only stuffed with atoms. But when they broke open atoms, they found them stuffed with explosions.

When people run around and around in circles we say they are crazy. When planets do it we say they are orbiting.

Rainbows are just to look at, not to really understand.

While the earth seems to be knowingly keeping its distance from the sun, it is really only centrificating.

Someday we may discover how to make magnets that can point in any direction.

South America has cold summers and hot winters, but somehow they still manage.

Most books now say our sun is a star. But it still knows how to change back into a sun in the daytime.

Water freezes at 32 degrees and boils at 212 degrees. There are 180 degrees between freezing and boiling because there are 180 degrees between north and south.

A vibration is a motion that cannot make up its mind which way it wants to go.

There are 26 vitamins in all, but some of the letters are yet to be discovered. Finding them all means living forever.

There is a tremendous weight pushing down on the center of the Earth because of so much population stomping around up there these days.

Lime is a green-tasting rock.

Many dead animals in the past changed to fossils while others preferred to be oil.

Genetics explain why you look like your father and if you don't why you should.

Vacuums are nothings. We only mention them to let them know we know they're there.

Some oxygen molecules help fires burn while others help make water, so sometimes it's brother against brother.

Some people can tell what time it is by looking at the sun. But I have never been able to make out the numbers.

We say the cause of perfume disappearing is evaporation. Evaporation gets blamed for a lot of things people forget to put the top on.

To most people solutions mean finding the answers. But to chemists solutions are things that are still all mixed up.

In looking at a drop of water under a microscope, we find there are twice as many H's as O's.

Clouds are high flying fogs.

I am not sure how clouds get formed. But the clouds know how to do it,

and that is the important thing.

Clouds just keep circling the earth around and around. And around. There is not much else to do.

Water vapor gets together in a cloud. When it is big enough to be called a drop, it does.

Humidity is the experience of looking for air and finding water.

We keep track of the humidity in the air so we won't drown when we breathe.

Rain is often known as soft water, oppositely known as hail.

Rain is saved up in cloud banks.

In some rocks you can find the fossil footprints of fishes.

Cyanide is so poisonous that one drop of it on a dogs tongue will kill the strongest man.

A blizzard is when it snows sideways.

A hurricane is a breeze of a bigly size.

A monsoon is a French gentleman.

Thunder is a rich source of loudness.

Isotherms and isobars are even more important than their names sound.

It is so hot in some places that the people there have to live in other places.

The wind is like the air, only pushier. MPCB

From: dirt@pl.com (dirt)

"Scientists are hypothetical people," wrote a student in chemistry. The following student comments were gleaned from essays, examinations and classroom discussions. These beguiling theories are in no way hypothetical. They are all real and attest to the high level of scientific literacy in our nation:

* All animals were here before mankind. The animals lived peacefully until mankind came along and made roads, houses, hotels and condoms.

* Sir Isaac Newton invented gravity.

* The law of gravity says no fair jumping up without coming back down.

* Galileo showed that the earth was round and not vice versa. He dropped his balls to prove gravity.

* Mare Curie did her research at the Sore Buns Institute in France.

- * Men are mammals and women are femammals.
- * Proteins are composed of a mean old acid.

* The largest mammals are to be found in the sea because there is nowhere else to put them.

- * Involuntary muscles are not as willing as voluntary ones.
- * Methane, a greenhouse gas, comes from the burning of trees and cows.

 \ast The spinal column is a long bunch of bones. The head sits on the top and you sit on the bottom.

* Water is melted steam.

* A monkey has a reprehensible tail.

* Some people say we condescended from the apes.

* The leopard has black spots which look like round soars on its body. Those who catch soars get leprosy.

* A cuckoo does not lay its own eggs.

* To remove air from a flask, fill the flask with water, tip the water out and put the cork in, quick.

* The three cavities of the body are the head cavity, the tooth cavity and the abominable cavity.

* Cadavers are dead bodies that have donated themselves to science. This procedure is called gross anatomy.

* The cause of dew is through the earth revolving on its own axis and perspiring freely.

- * Hot lather comes from volcanoes, when it cools it turns into rocks.
- * The earth makes a resolution every 24 hours.
- * Parallel lines never meet unless you bend one or both of them.
- * Algebra was the wife of Euclid.
- * A circle is a figure with o corners and only one side.
- * A right angle is 90 degrees Farenhight.

* An example of animal breeding is the farmer who mated a bull that gave a great deal of milk with a bull with good meat.

* The hydra gets its food by descending upon its prey and pushing it into its mouth with its testicles.

* If conditions are not favorable, bacteria go into a period of

adolescence.

* When oxygen is combined with anything, heat is given off. This is known as constipation.

- * The hookworm larva enters the body through the soul.
- * As the rain forests in the Amazon are shrinking, so are the Indians.

* A major discovery was made by Mary Leaky, who found a circle of rocks that broke wind.

From: brent@questar.QUESTAR.MN.ORG (Brent Nordquist)
Forwarded from a friend who's doing student teaching this semester...

these are actual quotes taken from junior high students science tests.... [Curiously enough there was an overlap with the above lists]

- * The dodo is a bird that is nearly decent now.
- * A thermometer is an instrument for raising temperance.
- * Geometry teaches us to bisex angels.
- MPB_

From: Snot Eather ACTUAL EXCERPTS FROM STUDENT SCIENCE EXAM PAPERS IN THE U.S.A. (Who said the American education system is below par?) [Curiously enough there was an overlap with the above lists]

- * Charles Darwin was a naturalist who wrote the organ of the species.
- * Benjamin Franklin produced electricity by rubbing cats backwards.* The theory of evolution was greatly objected to because it made man
- think.
- * To prevent conception when having intercourse, the male wears a condominium.
- * Geometry teaches us to bisex angles.
- * A circle is a line which meets its other end without ending.
- * We believe that the reptiles came from the amphibians by spontaneous generation and study of rocks.
- * English sparrows and starlings eat the farmers grain and soil his corpse.
- * By self-pollination, the farmer may get a flock of long-haired sheep.
- * If conditions are not favorable, bacteria go into a period of adolescence.
- * Dew is formed on leaves when the sun shines down on them and makes them perspire.
- * Vegetative propagation is the process by which one individual manufactures another individual by accident.
- * A super-saturated solution is one that holds more than it can hold.
- * A triangle which has an angle of 135 degrees is called an obscene triangle.
- * A person should take a bath once in the summer, and not quite so often in the winter.
- * When you haven't got enough iodine in your blood you get a glacier.
- * It is a well-known fact that a deceased body harms the mind.
- * Humans are more intelligent than beasts because the human branes have

more convulsions.

- * For fractures: to see if the limb is broken, wiggle it gently back and forth.
- * For snakebites: bleed the wound and rape the victim in a blanket for shock.
- * Bar magnets have north and south poles, horseshoe magnets have east and west poles.

* When water freezes you can walk on it. That is what Christ did long ago

in wintertime.

From: "pmurG" <pmurG.@pmurG.Com> SCIENCE IN A NUTSHELL - 5th and 6th graders

A census taker is a man who goes from house to house increasing the population.

A city purifies its water supply by filtering the water and then forcing it through an aviator.

The inhabitants of Moscow are Mosquitoes.

It is so hot in some places that people there have to live in other places.

The four seasons are salt, pepper, mustard and vinegar.

One of the main causes of dust is janitors.

A monsoon is a French gentleman.

The word "trousers" is an uncommon noun because it is singular at the top and plural at the bottom. ++++++ =8. ACADEMIC LIFE

From: Claudia (claudia@sidj.tiac.net) by way of
Philip Clarke <clar0318@flinders.edu.au>

A Girl's Guide to Geek Guys By Mikki Halpin and Victoria Maat

So, your crush on the bass player from Vibrating Sandbox has finally died a whimpering death and you're wondering where to go from here. All the sinister dudes are either dating a series of interchangeable high-school riot girls in baby doll dresses and an overdose of manic panic, or permanently shacked up with some bitter old lady who pays all the bills. Which will it be, a wifely prison or a humiliating one night stand? Into this void of potential mates comes a man you may not have considered before, a man of substance, quietude and stability, a cerebral creature with a culture all his own. In short, a geek. Why Geek Dudes Rule
They are generally available.
Other women will tend not to steal them.
They can fix things.
Your parents will love them.
They're smart.

Where The Geek Dude Lurks

While they are often into alternative music, geek dudes tend not to go to shows too often. Instead you'll find them hanging out with their friends, discussing the latest hardware revolution or perfecting their Bill Gates impressions. You know how some people wear t-shirts with their favorite bands on them, thus showing that they went to certain shows? Well, geek dudes wear t-shirts with the logos of different software companies on them, thus showing that they are up on the latest, um, releases. A small, though convivial, rivalry may be detected here amongst the geek dudes. Try wearing one yourself and see if he strikes up a conversation.

Of course the best way to meet a geek dude is through the Internet. All geeks harbor a secret fantasy about meeting some girl in cyberspace, carrying on an e-mail romance in which he has the chance to combine an activity he is comfortable with, computing, with one he is very uncomfortable with, socializing. To many geek dudes, cyberdating is just an advanced form of some kind of video game, but they are frustrated by a lack of players. Their lack is your strength.

Imprinting

You might notice that these men harbor some strange ideas about how the world works and some particularly strange ideas about women. There is a reason for this. Because they've had limited interpersonal experience, geek dudes must look elsewhere for behavior models. Lacking a real world social milieu, geeks often go through a transference stage with such narratives, and try to model their interactions on them. Thus, certain media images and themes come to have an overly cathected, metaphorized reality to them, while the rest of us view such programming as mere entertainment. Case in point, our next topic...

The Trek factor

If you're not up on your Star Trek, you can forget about getting or keeping a geek dude. And I'm not just talking vintage-era Captain Kirk and Spock either. You've got to be up on your The Next Generation, your Deep Space Nine, your Babylon 5. Armed with your own knowledge of Federation policies, you can better gauge when and how to act. The sexual politics of Star Trek are pretty blunt: the men run the technology and the ship, and the women are caretakers (a doctor and a counselor). Note the sexual tensions on the bridge of the Enterprise: the women, in skin tight uniforms, and with luxuriant, flowing hair. The men, often balding, and sporting some sort of permanently attached computer auxiliary. This world metaphorizes the fantasies of the geek dude, who sees himself in the geeky-but-heroic male officers and who secretly desires a sexy, smart, Deanna or Bev to come along and deferentially accept him for who he is. If you are willing to accept that this is his starting point for reality, you are ready for a geek relationship.

Once You've Nabbed Him

Of course, catching that geek guy is only half the battle. Keeping him by your side is another story altogether. I was privileged to speak with Miss Victoria Maat, who not only got herself a geek guy but was also clever enough to marry him just a few short months ago. She interrupted her newlywed bliss to give us a few tips on the care and feeding of a geek man:

Geeks are sensitive and caring lovers and husbands. If you can hang with the techno-lifestyle, they make the best mates. They are the most attractive people, not flashy or hunky, but the kind who get cuter and more alluring over time (I told you she was a newlywed). Definitely give geeks a chance.

Geek Cuisine

Geeks tend towards packaged, junk foods since they prefer to work and think and aren't all that into cooking for themselves. Make sure that your geek understands that you are not merely a replicator, and provide him with home cooked food. A batch of chocolate chip cookies will let him know that you love him. You do have to monitor your geek for weight gain; however, remember that most of their days are spent sitting and staring at a monitor.

Geek Lifestyle

The geek dude has long work habits and tends to bring his work home with him. He seems permanently connected to his hard disk. You must at least appear interested in his work. Generally, a solid understanding of the computer is a must; if you cannot master this, you should at least be able to talk the talk. Remember most geeks are anal and they get stressed about details which appear insignificant. Be understanding, put on your best Deanna Troi face (see above) and empathize.

To relax, geeks love to play the latest computer games. Let him play Myst or Chuck Yeager's Air Combat for hours if he wants to. Act concerned if he's stuck or has just been ambushed by three MiGs. My geek loves to try to help people on the Internet who say that they are stuck in Myst. He comes up with clever riddles instead of directing them point blank. Geeks also like to go to sci-fi and Japanese animated movies, again, a basically harmless vent for your man.

Geek Buddies

Many geeks extend their work friendships into what they jokingly refer to as RL (Real Life, also known as "that big room with the ceiling that is sometimes blue and sometimes black with little lights"). The greatest thing about your geek's buddies is that you can feel secure in setting them up with your girlfriends. They may feel awkward around females at first, so don't overwhelm them. In time they will come out of their shell and realize that you are into the same things they are.

Post-It Note

I thank Victoria for the above advice. I must say that when she read my draft of the piece, before writing her section, she asked her husband which one he thought she was more like, Deanna or Beverly. Howard, the devil, immediately replied that he had always thought Victoria was actually most like Ensign Ro Laren, a cute character with a slight authority problem who is always had trouble (this is fairly apt). This exchange is interesting for several reasons:

Howard had already thought about who she was most like.

He could summon up characters from seasons past with ease.

Victoria actually knew who he meant.

Folks, I think this marriage will last.

One Last Thing

Because they have been so abused and ignored by society, many geeks have gone underground. You may actually know some and just haven't noticed them. They often feel resentful, and misunderstood, and it is important to realize this as you grow closer to them. Don't ever try to force the issue, or make crazy demands that he choose between his computer and you. Remember, his computer has been there for him his whole life; you are a new interloper he hasn't quite grasped yet.

Geek dudes thrive on mystery and love challenges and intellectual puzzles. Don't you consider yourself one? Wouldn't you like a little intellectual stimulation or your own? We thought so.

From: Philip Clarke <clar0318@flinders.edu.au> SCIENTISTS EXPLAINED

People who work in the fields of science and engineering are not like other people. This can be frustrating to the non-technical people who have to deal with them. The secret to coping with technology-oriented people is to understand their motivations. The following analysis will teach you everything you need to know. Their customs and mannerisms were learnt by observing them, much the same way Jane Goodall learnt about the great apes, but without the hassles of grooming.

1. SCIENTIST IDENTIFICATION KIT

Science is so trendy these days that everyone wants to be one. the word 'scientist' is greatly overused. If there's somebody in your life who you think is trying to pass as a scientist, give him/her this test to discern the truth: You walk into a room and notice that a picture is hanging crooked. You... A. Straighten it. B. Ignore it. C. Buy a CAD system and spend the next six months designing a solarpowered, self-adjusting picture frame while often stating aloud your belief that the inventor of the nail was a total moron. The correct answer is "C" but partial credit can be given to anybody who writes "it depends" in the margin of the test or who simply blames the whole stupid thing on "marketing". 2. SOCIAL SKILLS Scientists have different objectives when it comes to social interaction. "Normal" people expect to accomplish several unrealistic things from social interaction: * Stimulating and thought provoking conversation; * Important social contacts; * A feeling of connectedness with other humans. In contrast to "normal" people, scientists have rational objectives for social interactions: * Get it over with as soon as possible; * Avoid getting invited to something unpleasant; * Demonstrate mental superiority and mastery of all subjects. 3. FASCINATION WITH GADGETS To the scientist, all matter in the universe can be placed into one of two catagories: (1) things that need to be fixed, and (2) things that will need to be fixed after you've had a few minutes to play with them. Scientists like to solve problems. If there are no problems handily available, they will create their own. "Normal" people don't understand this concept, they believe that if it ain't broke, don't fix it. Scientists believe that if it ain't broke, it doesn't have enough features yet. No scientist looks at a TV remote control without wondering what it would

take to turn it into a stun gun. No scientist can take a shower without

wondering if some sort of Teflon coating would make showering unnecessary.

To the scientist, the world is a toy box full of sub-optimized and feature-poor toys.

4. FASHION AND APPEARANCE

Clothes are the lowest priority for a scientist, assuming the basic thresholds for temperature and decency have been satisfied. If no appendages are freezing or sticking together, and no genitalia or mammary glands are swinging around in plain view, then the objective of clothing has been met.

5. LOVE OF "STAR TREK"

Scientists love all of the Star Trek TV shows and movies. It's a small wonder, since the scientists on the USS Enterprise are portrayed as heroes, occasionally even having sex with aliens. this is much more glamorous than the life of a real scientist, which consists of hiding from the Universe and having sex without the participation of any other life forms.

6. DATING AND SOCIAL LIFE

Dating is never easy for scientists. A "normal" person will employ various indirect and duplicitous methods to create a false impression of attractiveness. Scientists are incapable of placing appearance above function.

Fortunately, scientists have an ace in the hole. They are widely recognised as superior marriage material: intelligent, dependable, employed, honest, and handy around the house. While it's true that most "normal" people would prefer note to date a scientist, most normal people harbour an intense desire to mate with them, thus producing scientist-like children who will have high-paying jobs long before losing their virginity.

Male scientists reach their peak of sexual attractiveness later than most "normal" men, becoming irresistable erotic dynamos in their mid-thirties to late forties. Just look at these examples of sexually irresistable men in technical professions:

* Bill Gates

* MacGyver

Female scientists become irresistable at the age of consent and remain that way until about thirty minutes after their clinical death. Longer if it's a warm day.

7. HONESTY

Scientists are always honest in matters of technology and human relationships. That's why it's a good idea to keep scientists away from customers, romantic interests and other people who can't handle the truth.

Scientists sometimes bend the truth to avoid work. They say things that sound like lies but technically are not because nobody could be expected to believe them. The complete list of scientist lies is stated below:

"I won't change anything without asking you first."

"I'll return your hard-to-find cable tomorrow."

"I have to have new equipment to do my job/research."

"I'm not jealous of your new computer."

8. FRUGALITY

Scientists are notoriously frugal. This is not because of cheapness or mean spirit; it is simply because every spending situation is simply a problem in optimization, that is, "How can I escape this situation while retaining the greatest amount of cash?"

9. POWERS OF CONCENTRATION

If there is one trait that best defines a scientist, it is the ability to concentrate on one subject to the complete exclusion of everything else in

the environment.

This sometimes causes scientists to be pronounced dead prematurely. Some funeral homes in high tech areas have started checking resumes before processing the bodies. Anybody with a B.Sc. or experience in computer programming is propped up in a lounge for a few days just to see if he or she snaps out of it.

10. RISK

Scientists hate risk. They try to eliminate it whenever they can. This is understandable, given that when a scientist makes a mistake, the media will treat it like it's a big deal or something.

Examples of Bad Press for Scientists:

- * Hindenburg
- * Challenger
- * SPANet (tm)
- * Hubble Space Telescope
- * Apollo 13
- * Titanic
- * Ford Pinto

The risk/reward calculation for scientists looks something like this:

RISK: Public humiliation and the death of thousands of innocent people. REWARD: A certificate of appreciation in a handsome plastic frame.

Being practical people, scientists evaluate this balance of risks and rewards and decide that risk is not a good thing. The best way to avoid risk is by advising that any activity is technically impossible for reasons

that are far too complicated to explain.

If that approach is not sufficient to halt a project, then the scientist will fall back to a second line of defense: "It's technically possible but it will cost too much."

11. EGO

Ego-wise, two things are important to scientists:

* How smart they are;
* How many cool devices they own.

The fastest way to get a scientist to solve a problem is to declare that the problem is unsolvable. No scientist can walk away from an unsolvable problem until it's solved. No illness or distraction is sufficient to get the scientist off the case. These types of challenges quickly become personal - a battle between the scientist and the laws of nature.

Scientists will go without food and hygiene for days to solve a problem (other times just because they forgot). And when they succeed in solving the problem they will experience an ego rush that is better than sex - and

we're including the kind of sex where other people are involved.

othing is more threatening to the scientist than the suggestion that somebody else has more technical skill. "Normal" people sometimes use that knowledge as a lever to extract more work from the scientist.

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When a scientist says that something can't be done (a code phrase that means it's not fun to do), some clever "normal" people have learnt to glance at the scientist with a look of compassion and pity, and say something along these lines: "I'll ask Bob to figure it out. He knows how to solve difficult problems."

At that point it is a good idea for the "normal" person to not stand between the scientist and the problem. The scientist will set upon the problem like a starved chihuahua on a pork chop.

Here follows a real e-mail I received. I am afraid it was not intended as a joke.

From: petuer.aubrey@rsc.co.uk
Received: from mail.filnet.fr (mail.filnet.fr [194.51.170.100])

by smtp3.xs4all.nl (8.8.8/8.8.8) with SMTP id QAA25384; Mon, 16 Nov 1998 16:17:45 +0100 (CET) Received: from sprynet.net (207.155.131.160) by mail.filnet.fr (EMWAC SMTPRS 0.81) with SMTP id <B0001029753@mail.filnet.fr>; Mon, 16 Nov 1998 14:09:11 +0100 Message-ID: <B0001029753@mail.filnet.fr> Subject: your request Date: Mon, 16 Nov 1998 04:46:20 Increase your personal prestige and money earning power through an advanced university degree. Eminent, non-accredited universities will award you a degree for only \$200. Degree granted based on your present knowledge and experience. No further effort necessary on your part. Just a short phone call is all that is required for a BA, MA, MBA, or PhD diploma in the field of your choice. For details, call 770-492-2925 From: " G.P." <G_Popper@Hotmail.Com> YOU KNOW YOU'RE AT A SCIENCE/ENGINEERING SCHOOL WHEN +Even the band cheers are equations. +You talk in SI units. +More people understand '42' than '69'. +You remember people by their e-mail address. $+2 + 2 = (-4) * \exp(i * pi)$ +You know your computer better than your girlfriend or boyfriend. +Lewd comments are often related to computer hardware. +Physics is the high point of your day. +Calculus is your blow off course. +Free body diagrams excite you. +You show up at the football games to laugh at your own team. +You've slashed your way through the giant's eye. +You hear a debate about the merits and drawbacks of reverse polish notation. +You ask someone what languages they know and expect them to answer Spanish, French, German, Latin, Pascal, C, BASIC, LISP, or Fortran. +Your molecular model kit is a fun toy.

+The movie Real Genius is autobiographical. +You understand that 'Bohr' is not a verb.

+Foundation or Time Enough for Love is a social handbook.

+You think of Gallium as a sex toy.

+S'n'M follows SNL.

+Trans-1,2-dibenzoylethylene is one of the words that you type rapidly. +Everyone has a science/math t-shirt.

+Social status is determined by Computer Power and number of network accounts.

+A lobby full of dormmates will be able to come up with what each of the following acronyms stands for: RADAR, MODEM, RAM, DNA, ATP, NADP, CRT, CRC. STP, NASA, MUD, LED, AI, LASER, SCUBA, WYSIWYG, and DAT. +You talk to your dormmates via e-mail due to: 1) Not being seen by them for over a week. 2) This being your normal mode of communication with people in the next room. +Greek letters in everyday conversation refer to variables and constants as frequently as fraternities and sororities. +You find yourself wishing the washer and dryer were networked and a message would pop up on your computer screen when your laundry is done. +You find yourself anticipating your weekly trip to a microcenter more than your upcoming date on Saturday. +Phasor has two meanings for you, one of which involves complex numbers. +You make a rodent wheel for your mouse because it looks bored sitting there in dos... +You regularly refer to an integration table at lunch. +Everyone played with Capsela as a kid. +You understand more than 20% of the above references. From laird@cs.byu.edu Sat Apr 04 02:30:02 1998 Top ten ways the Bible would be different if it were written by college students 10. Last Supper would have been eaten the next morning - cold. 9. The Ten Commandments are actually only five, double-spaced, and written in a large font. 8. New edition every two years in order to limit reselling. 7. Forbidden fruit would have been eaten because it wasn't cafeteria food. 6. Paul's letter to the Romans becomes Paul's e-mail to abuse@romans.gov. 5. Reason Cain killed Abel: They were roommates. 4. The place where the end of the world occurs: Finals, not Armageddon. 3. Out go the mules, in come the mountain bikes 2. Reason why Moses and followers walked in desert for 40 years: They didn't want to ask directions and look like Freshmen. 1. Instead of God creating the world in six days and resting on the seventh, He would have put it off until the night before it was due and then pulled an all-nighter.

From: TWPIERCE%AMHERST.BITNET (They Call Me Tim)

Reminds me of Raymond Smullyan's definitions of "obvious," according to various professors at a certain unnamed university (paraphrased from memory

from WHAT IS THE NAME OF THIS BOOK):

Here, if Professor A says something is obvious, it means that if you go

home and think about it for the rest of the afternoon, you will probably see that it is true.

If Professor L says something is obvious, it means that if you go off and spend the rest of your life considering it, the day might eventually come when you see that it is true.

If Professor W says something is obvious, it means that the class has known about it for the last two weeks.

If Professor F says something is obvious, it means that it is probably false.

From: Paul Brady <john.brady@ic.ac.uk>
University(college etc) is a fountain of knowledge where people go to
drink!!

From: "Keith E. Sullivan" <KSullivan@worldnet.att.net>
A university faculty is 500 egotists with a common parking problem.

Mike Lutz <mjl@tropix.UUCP> [news:rec.humor.funny.reruns]

From: "Keith E. Sullivan" <KSullivan@worldnet.att.net> ESCAPED LION

A lion escaped from the Jerusalem zoo. He was at large for month, when he was finally captured and returned to his cage. His cage-mate asked, "How did you manage to stay alive for a whole month?"

"It was easy," said the lion, "everyday I went to the University and ate a professor."

"How did they catch you?" asked the cage-mate.

From: Nancy Carson <JMFS19A@prodigy.com>

"One day I made a mistake and ate the lady who brings the tea."

Louis Berkofsky HAND <smiles@bapp.com>

PSALM OF THE TWENTY-THIRD YEAR
Dr. [] is my professor.
I shall not pass.
He maketh me to exhibit mine ignorance before the whole
 class.
He telleth me more than I can write.
He lowreth mine grades.
Yea, though I walk through the corridors of knowledge,
 I do not learn.
He tryeth to teach me.
He writeth equations before me in hopes that I will

understand them. He bombardeth my head with integrations. My calculator freezeth up. Surely enthalpies and entropies shall follow me all the days of my life And I shall dwell in the School of Engineering forever. Found in the Colorado Engineer magazine, author unknown

From: mini-AIR <marca@wilson.harvard.edu>
1997-04-05 Advice for Researchers

Here are some useful bits of advice for researchers. They were devised or plagiarized by three of AIR's most experienced editorial board members.

>From Earle Spamer, Academy of Natural Sciences, Philadelphia: Stare out a window frequently; 1. it inspires thoughtfulness among others. 2. Doze only when looking through a microscope; no one will know. Lend only dry pens to those who ask to borrow one; 3. eventually, they will leave you alone altogether. Fungal colonies in coffee cups DO constitute 4. science experiments. Start practicing now to write the date with "2000" 5. for the year. 6. Young researchers should practice their Nobel acceptance speeches early in their careers; but leave the subject area blank for now. 7. Always keep a tie in your desk for emergencies (this applies to men, mostly).

 Don't keep a stethoscope in your white lab coat pocket unless you are actually in the medical profession.

9. Smile a lot; it makes others nervous.

>From Wendy Cooper, Australian National University, Canberra:

- 1. Alwys use teh speling cheker.
- 2. Don't take naps in the lab.
- 3. Wear nothing under your lab coat.
- Be nice to experimental animals -- nobody has been able to disprove reincarnation.

From:BRIAN6@VAXC.MDX.AC.UK (who has a lightbulb collection)
Q: How many scientists does it take to change a light bulb?
A: None. They use them as controls in double blind trials.
Q: How many academics does it take to change a lightbulb ?
A: None. That is what their students are for. (from Philip Clarke in New

Scientist)

Five: One to write the grant proposal, one to do the mathematical A: modelling, one to type the research paper, one to submit the paper for publishing, and one to hire a student to do the work. How many laboratory heads (senior researchers, etc.) does it take to 0: change a lightbulb? A: Five; one to change the lightbulb, the other four to stand around arguing whether he/she is taking the right approach. Q: How many research technicians does it take to change a lightbulb? A: One, but it'll probably take him/her three or four tries to get it right. Q: How many post-doctoral fellows does it take to change a lightbulb? A: One, but it'll probably take three or four tries to get it right because he/she will probably give it to the technician to do. Q: How many graduate students does it take to screw in a light bulb? A: Only one, but it may take upwards of five years for him to get it done. It all depends on the size of the grant. Α: A: Two and a professor to take credit. A: 1/100. A graduate student needs to change 100 lightbulbs a day. A: I don't know, but make my stipend tax-free, give my advisor a \$100,000 grant of the taxpayer's money, and I'm sure he can tell me how to do the work for him so he can take the credit for answering this incredibly vital question. From: Chris Morton (mortoncp@nextwork.rose-hulman.edu) do it collection Scientists do it experimentally. Scientists do it with plenty of research. Scientists discovered it.

Graduates do it by degrees. Professors do it by the book. Professors do it with class. Professors forget to do it. Research professors do it only if they get grants. Researchers are still looking for it. Researchers do it with control.

From: Mark Frascinella
Question: What's the difference between a tenured professor and a
terrorist?
Answer: The terrorist you can negotiate with.

From: Aliquotes v.iii (journal) (rogerb@microsoft.com) LINE DANCING

As Valentines has just past, we thought that many of you would be totally depressed by another year in front of a bar without a mate and offer this

little tidbit as a ray of hope in the darkness of your despair. Below, we have listed a series of opening lines for the question of what you do for living, shou_ld the need ever come up over drinks with a stranger. We've listed the Good with the Bad and please note which is which. GOOD: 1) "I am a doctor at a nearby hospital." This is a great one as it doesn't distinguish between an MD and a PhD. Hopefully, the other party won't realize the difference until they've already been captivated by your innate wit and charm. 2) "I do research into human diseases." This one is pretty good as it implies an MD without directly saying so. If possible, try to specify the disorder or disease using catch phrases like cancer of heart disease but try to avoid disorders which are less appetising for the bar setting, while just as noble, such as colitis or anything sexually transmissable. 3) "I do research at the university." Not as good as the others but not too bad. Implies a level of intelligence which may or may not be the case, as well as giving the possibility of being a professor. BAD: 1) "I work at the university/hospital." Not terrible but leaves interpretation too open in that you may clean mildew off the walls and porcelain fixtures. While this may be true, we want to save hobbies until later in the conversation. 2) "I'm a biochemist." This one is usually greeted with a blank stare, a moment of silence and the response "Oh... how interesting." Typically, the other party will then decide to refresh their drink without offering to represh yours. Biochemistry is just to vague for them. You would have been better off saying Pharmacist. 3) "I'm a scientist." What, are you crazy ?!? You never use this one as it causes instant panic. The only time this should be used when you aren't interested in your companion and want to scare them off with the idea that you're a pocket-protectored, bridge-taped glasses, whiny, nasal-voiced nerd (which you may be for all I know). From: fc3a501@rzaix06.uni-hamburg.de (Hauke Reddmann) Why are dead post-docs always incinerated (not burned)? The rot of a grad is always zero!

(a matter of life and div)

From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just) OLD ACADEMICS never die, they just lose their faculties OLD STUDENTS never die, they just get degraded From: Jurrien Vroom <J.M.Vroom@fys.ruu.nl> From Ann Landers column, The Boston Globe, Feb. 20, 1995 Why God Never Received Tenure from Any University 1. He had only one major publication 2. It was in Hebrew and Greek. 3. It had no references 4. It wasn't published in a refereed journal 5. Some doubt He wrote it Himself 6. He may have created the world, but what has he done since? 7. The scientific community can't replicate His results 8. He never got permission from the ethics board to use human subjects 9. When one experiment went awry, He tried to cover it up by drowning the subjects 10. He rarely came to class and just told students to "Read the Book" 11. Some say He had His son teach the class 12. He expelled His first two students for learning. 13. His office hours were irregular and sometimes held on a mountaintop. 14. Although there were only 10 requirements, most students failed 15. His cooperative efforts have been quite limited. 16. When subjects didn't behave as predicted, he deleted them from the sample. From: fyikat@aol.com (Fyikat) 17. His first 2 experiments he threw out.

From: "Rita Stanley" <ritastan@worldnet.att.net>
Reasons he did not want a Phd.
1. He got tired of people telling Him that Ph.D. means "piled higher and
deeper"
2. He got tired of people telling Him that Ph.D. really means Phoney Doc
or Phooey Doc.
3. He really wants to be an M.D.

From: Aliquotes v.vii (journal) (rogerb@microsoft.com) SURVIVOR'S GUIDE TO A LIFE (?) IN SCIENCE

You've just finished another aruous week in the lab and you'v nothing to show for it. Your phospo-proteins aren't, you used DNase when RNasing your plasmid prep, you knocked out three of you colleagues when etherizing your rats and you somehow managed to develop a new protocol for the productions of trinitro-toluene. You've pretty much reached wits end and you're ready to quit. Well, we at *Aliquotes* have decided to give you the following suggestions to help you cope with weeks like these and remind you that life is good. 1. Buck up, chum. Life is okay and you just have to remind yourself that

you'r pretty darn special. (This one hardly ever works and your friends

start to get really worried about you. Beware of men carrying the white coats with really long sleeves.) 2. Talk to some of your colleagues or your supervisor and see if you can't troubleshoot the problems, coming up with a solution which will be beneficial to all. (This one is rarely followed as it requires the scientist to own up to the fact that there is a problem in the first place. It's bad enough that you feel terrible, but to look stupid in your department would be just too much to bear.) 3. Lower your standards for success. Congratulations, you've been able to get a mole of NaCl to dissolve in a litre of water and the pH meter said that the pH4 standard had a pH of four! (This one is good, but tends to only last a little while before the pH meter starts to give you trouble and you realize that you need more than 1M NaCl to finish your experiments.) 4. Go find someone else in the department who is having a worse time than you are and revel in the fact that it could be worse. Try not to gloat though as that is just crass. (This is a pretty good one and will give you some satisfaction for a week or so, but the joy tends to wear thin as you begin to empathize with the individual and can no longer take joy from their misfortune. Also there is the serious risk that there is no one in worse shape than you and everyone else is coming to your bench.) 5. Visit a factory where people work at jobs requiring excessive and strenuous effort or are involved in the endless tedium of punch cards and paper pushing. (This tends to scare people into submission and should only be attempted under the most extreme cases.) 6. Take a look at you C.V. and you will quickly realize that you are not acually suited to any other form of employment. (This one tends to only depress people further as they realize that they are trapped and their only other choice involves the expression, "Do you want fries with that?".) 7. Go to the local drinking establishment and run up a tab which challenges your student loans. (This is clearly the most popular method for dealing with stress. The one draw back is that you walk in on Monday morning with a large woolen sock around your tongue and the ability to sense every corpuscle wich passes through the capillaries under the skin of your scalp, but hey, you had a good weekend.) From: jsih@gort.ucsd.edu (Julie Sih) Dear Fellow Scientist:

This letter has been around the world at least seven times. It has been to many major conferences. Now it has come to you. It will bring you good fortune. This is true even if you don't believe it. But you must follow these instructions:

- include in your next journal article the citations below.
- remove the first citation from the list and add a
- citation to your journal article at the bottom.
- make ten copies and send them to colleagues.

Within one year, you will be cited up to 10,000 times! This will amaze your fellow faculty, assure your promotion and improve your sex life. In addition, you will bring joy to many colleagues. Do not break the reference loop, but send this letter on today.

Dr. H. received this letter and within a year after passing it on she was elected to the National Academy of Sciences. Prof. M. threw this letter away and was denied tenure. In Japan, Dr. I. received this letter and put it aside. His article for Trans. on Nephrology was rejected. He found the letter and passed it on, and his article was published that year in the New England Journal of Medicine. In the Midwest, Prof. K. failed to pass on the letter, and in a budget cutback his entire department was eliminated. This could happen to you if you break the chain of citations.

1. Miller, J. (1992). Post-modern neo-cubism and the wave theory of light. Journal of Cognitive Artifacts, 8, 113-117.

2. Johnson, S. (1991). Micturition in the canid family: the irresistable pull of the hydrant. Physics Quarterly, 33, 203-220.

3. Anderson, R. (1990). Your place or mine?: an empirical comparison of two models of human mating behavior. Psychology Yesterday 12, 63-77.

4. David, E. (1994). Modern Approaches to Chaotic Heuristic Optimization: Means of Analyzing Non-Linear Intelligent Networks with Emergent Symbolic Structure. (doctoral dissertation, University of California at Santa Royale El Camino del Rey Mar Vista by-the-sea.

From: Bernard T. Donovan <btdonov@rs6000.cmp.ilstu.edu> WRITE THESIS FAST

This letter was first written by a graduate student in Europe in 1954 and has traveled around the world at least 16 times. At first I wouldn't believe that it would work, but after trying it, I am now a believer in its mystical and magical power.

This letter was received by a graduate student in Chicago, IL in 1973 and within two weeks, he had completed a 5600 page doctoral dissertation and began a career which lead to a Nobel Prize. A few years later, another graduate student received this letter and sent it to 5 of her friends, and she too completed a 3100 page paper which has continued to grow to this day!

Simply write five pages of text on the given subjects for each person on this list. Than place your name in slot #1 and move everyone else's name down one space. Send this letter to ten of your colleagues, and within a month, you too will have a thesis or disertation which your advisor can choke on if he or she doesn't go blind or break his or her back first.

1. Bernard T. Donovan, M.S. student in biochemistry

EPR spectroscopy of crud from my refrigerator

2. James C. Messier, PhD. student in political science The Cuban Missile Crisis: What if Nixon were president?

3. Frances K. Allen, M.A. student in music theory Development of polyphonic forms from Gregorian Chant

4. Penny S. Jordan, PhD student in computer science Is Windows 95 merely Mac 84?

5. Thomas J. Quinn, MBA student Bears and Bulls in the stock market, but what about Sox and Cubs?

The last person who received this letter and did not respond was tormented by receiving 100-level teaching assignments until he was 40 years old. Today he works as a clerk for the Little-Plastic-Pizza-Table Museum in Cleveland, OH, making minimum wage and regretting his terrible decision not to perpetuate this letter.

UNDERGRADUATE STUDENT

- * Falls over doorstep when trying to enter buildings
- * Says "Look at the choo-choo"
- * Wets himself with a water pistol
- * Plays in mud puddles
- * Mumbles to himself

GRADUATE STUDENT

- * Runs into buildings
- * Recognizes locomotives two out of three times
- * Is not issued ammunition
- * Can stay afloat with a life jacket
- * Talks to walls

INSTRUCTOR

- * Climbs walls continually
- * Rides the rails
- * Plays Russian Roulette
- * Walks on thin ice
- * Prays a lot

ASSISTANT PROFESSOR

- * Makes high marks on the walls when trying to leap tall buildings
- * Is run over by locomotives
- * Can sometimes handle a gun without inflicting self-injury
- * Treads water
- * Talks to animals

ASSOCIATE PROFESSOR

- * Barely clears a quonset hut
- * Loses tug of war with a locomotive
- * Can fire a speeding bullet
- * Swims well
- * Is occasionally addressed by God

PROFESSOR

- * Leaps short buildings with a running start and favorable winds
- * Is almost as powerful as a switch engine
- * Is faster than a speeding BB
- * Walks on water in an indoor swimming pool
- * Talks with God if a special request is honored

THE DEPARTMENT HEAD

- * Leaps short buildings in a single bound
- * Is more powerful than a switch engine
- * Is just as fast as a speeding bullet
- * Asks how much it costs to fill the pool
- * Talks with God

THE DEAN

- * Leaps tall buildings in a single bound
- * Is more powerful than a locomotive
- * Is faster than a speeding bullet
- * Walks on water
- * Gives policy to God

DEPARTMENT SECRETARY

- * Lifts buildings and walks under them
- * Kicks locomotives off the tracks
- * Catches speeding bullets in her teeth and eats them
- * Freezes water with a single glance
- * She's the closest thing to God, at any College

From: brooks@bizauto.com (Brooks Hilliard)

I picked this up from the LACC list to which I subscribe:

>To: qotd@ensu.ucalgary.ca (Quote of the day mailing list) >Subject: LACC: Quote of the day >From: qotd-request@ensu.ucalgary.ca (Quote of the day) >Date: Wed, 29 May 1996 05:50:01 -0600 >On 12/2/95, the weekly magazine "Science News" ran an article entitled >"When not to photocopy", which prompted this letter from a reader: >"Your article caused me serious concern. Many of my faculty colleagues > routinely photocopy material from journals, and sometimes they even > distribute photocopies to classes or to their research groups. They are > not aware, I am sure, that they may be in hot water. >"Therefore, I photocopied your article and distributed it in all the > faculty and staff mailboxes in our department." > (signed) Jimmie G. Edwards, Professor of Chemistry, University of > Toledo, Toledo, Ohio, USA > > Submitted by: "John S. Karabaic" <jk@exnext.com> > Mar. 11, 1996 >

From: strange@cats.ucsc.edu

This is something I wrote a few months back which has been making the rounds at UCSC. It's very long, and my not be suitable for posting on the net because of that. But it's funny, I think.. anyhow, here it is.

You are in your dorm room. Your roommate is playing Jello Biafra. The cups on the desk are shattering. There is an unfinished lab book here. There is a chemistry book here. There are socks here. There are empty beer bottles here. There is a computer here. There are six moldy bananas here. There are several tons of dirty laundry here. There are shattering cups here. There is a refrigerator here. There is a desk with drawers here. > turn off music Your roommate makes discouraged sounds. The cups stop shattering. > play beach boys Your roommate throws a hammer into your stereo. You now have no stereo. Your I.Q. Decreases by 10 points. > fix stereo The stereo is shattered beyond repair. > curse stereo "May the fleas of a thousand camels infest your erogenous zones!" The stereo is fixed. The sheer quantity of dirty socks in this room is making it hard to move. > look at socks They are very smelly. It is getting harder and harder to move. > clean up socks. You can't. They're all welded together. > throw socks out window They soar out the window with the greatest of ease, hit the ground, and shatter. > leave room 24 hour Dave enters, fiending for weed. He blocks your exit. > kick dave Dave doesn't seem to notice. > yell at dave Dave doesn't seem to notice. > feed dave Dave thankfully gobbles your food and asks if there is any more. > eat dave's head You start chewing on dave's head. Dave doesn't seem to notice. Your I.Q. goes up forty points. You now understand chapter four of your chemistry assignment. Dave is still here. > work on lab book You don't have the lab book. > pick up lab book It is very heavy. You are carrying too much. > inventory You are carrying:
A +10 cut-offs of tumescence A +3 tee-shirt of tie-die A +2 elven sneakers of silence A swiss army knife A badly laminated card with a picture of you on it. A very large ring of Keys. A (much too small) bag of weed. A package +3 papers of zig-zag. > look papers The papers are blank. > drop keys You load lightens considerably. > pick up lab book You struggle under the load, but prevail in the end. > do chemistry lab You have no calculator. Dave grabs the lab book from you and does the lab. You are thirsty. > open refrigerator A considerable amount of cheap beer is revealed. > drink cheap beer You have an instant hangover. You can't stand up. Dave mutters something about being left out. > kick dave Dave doesn't seem to notice. > offer beer to dave Dave is drunk. Dave mutters something about being back and leaves. > leave room You can't. You're suffering from a hangover. > open desk There is some aspirin here. > eat aspirin YUCK! You munch it up. You begin to feel better. > leave room The door locks behind you. You are in a north-south hall. There are several doors here, some marked with magazine clippings. > unlock door You can't. Your keys are in the room. > open doors You open the nearest door without knocking. Charles and Anna are here. Dave is here. There are clothes on the floor. There are no clothes on Charles and Anna. You get the feeling you should leave. > leave room As you are leaving, Dave mutters something about Birkenstocks. You are back in the hall. You are hungry. > south You come to a lounge. There is a door here. There are two chairs here. There is a desk here. Tony is here, studying chemistry. > greet tony Tony says, "Hey, bro! How's it goin'? Nice suit." > commiserate with tony Tony says, "I'm really stressing hard on this test, bro." You are still hungry.

> open door There are stairs down to the west. There are stairs up to the west. There is a walkway to the south. > down There is an east-west ramp here. There are some people here. They comment loudly on your nudity. > west You are in a quad. There is a picnic table here. The door to the cafeteria is to the north. > north They don't let naked people into the cafeteria. You are forcibly ejected. > inventory You are carrying: A +10 cut-offs of tumescence A +3 tee-shirt of tie-die A +2 elven sneakers of silence A swiss army knife A badly laminated card with a picture of you on it. An (even smaller) bag of weed. A package of blank +3 papers of zig-zag. > wear shirt You are resplendent in your +3 tee-shirt of tie die. > wear shorts You are now a bulging wonder. > north You are in a room full of simulated food. > eat food You aren't even vaguely hungry. In fact, the concept of introducing this swill into your system is bletcherous. > south You are in a quad. > smoke weed You now have the munchies. Your subjective I.Q. increases by 10 points. You have a revelation involving the cosmic significance of Spam. > north You are in a room full of an infinite amount of delectable munchables. > eat food You need a tray first. > get tray You now have the Tray of Cafeteria Browninan Motion. > eat food You serve yourself a generous portion of cafeteria yumness. You take a seat and begin shoveling it into your face. After two bites you are full. You have food poisoning. > leave You can't. The cafeteria is cursed. You still have food poisoning. > search cafeteria You find half a bottle of Everclear stashed in the salad bar. > drink bottle Wouldn't you prefer something safer? Like cutting a preenrollment line? > take small sip

A small sip is probably sufficient to kill all the residents of Hong Kong and render it uninhabitable until the lease runs out. > take small small sip You feel the potent brew coursing down your digestive tract, killing everything in its path. You no longer have food poisoning. You pass out. After two hours, you wake up. You are in a quad. > west You are in no shape to move. You attempt to sit up, and the world does a tap dance on your face. > wait Time passes.... > wait Time passes.... > wait Time passes..... The world slows to a waltz. > west There is a militant lesbian here, blocking your path. > kick lesbian She enjoys it. She points out that you are a fascist sexist bastard. > wait The lesbian launches into a discourse on the oppressive patriarchal system. > smell lesbian Don't do that. > pull leg hairs You have been kicked in the balls. You pass out. You lose 5 I.Q. points. You wake up numb from the waist down. You are in a quad. > west There is a militant lesbian here, blocking your path. > bash male sex The militant lesbian smiles, calls you a sister, and walks off. > west This is a gentle downhill slope. There is a meadow to the west. The path forks here. There is a path to the northwest. There is a path to the southwest. > southwest You arrive at the mailhouse. > look in mailbox There are six thousand freshmen kneeling at the bottom row of boxes. Some are wearing short skirts, but that's slim consolation. > wait Time passes.... > wait Time passes.... A space opens up in front of your box. > look in box The space is grabbed faster than you can move. You need splitsecond reflexes. > wait Time passes.... > wait Time passes.... A space opens up in front of your box. > lunge You get your spot.

> look in box It's packed to the bursting point. > open box You goof up. > again You goof up. > aqain You finally manage to open the box. Inside there are eight flyers for college events that happened three weeks ago. A ninth is current - an invitation to play croquet with the provost. You decline and roundfile the sheaf. There is a package notice here. There is a letter here. > read letter You open the letter. It is a long steamy graphic explicit love letter... from a total stranger. > check address Both the package notice and the opened letter are for your boxmate. They are postdated three months ago. You have been airboxed. • north You are hemmed in by 1000 dorm androids sans brassieres trying to get to their boxes. > howl Your howling causes the androids to stare at the sky in confusion, giving you time to make your escape. > north You exit stage left, kicking several fembots in the shins as you pass. The bit of abuse you inflict causes several of the fembots to follow you, hoping for more. There is a very small grove of trees to the east. > east You are in a grove of trees, some slightly taller than others. There are some fembots here. > north You are in a grove of trees, some slightly smaller than others. There are some fembots here. > west You are in a grove of trees, some slightly bigger than others. There are some fembots here. > north You are in a grove of trees, some slightly leafier than others. There are some fembots here. > southeast You are in a grove of trees, some slightly greener than others. There are some fembots here. > east You are in a grove of trees, some slightly darker than others. There are some fembots here. > south You are in a grove of trees, some slightly moister than others. There are some fembots here. > west You are in a grove of trees, some slightly creepier than others. There are some fembots here. > south You are in a grove of trees, some slightly older than others. There are some fembots here.

> west You are in a grove of trees, some slightly browner than others. There are some fembots here. > north You are in a grove of trees, some slightly odoriferous than others. There are some fembots here. > west You are in a grove of trees, some slightly taller than others. There are some fembots here. > west You are standing in the quad again. The smell of sweat socks fills the air. The cafeteria is preparing dinner. There are some fembots here. There are some shattered sweat socks here. There is a small red bottle that says "Drink Me!" here. There is a book of matches here. There is a lamp post here. There is a notice pinned to the lamppost. > Get matches. Taken. > burn notice Don't you want to see what it says first? > burn notice There are many trees nearby. > burn notice godammit You must first light a match. > light match The match refuses to burn. > drop match You violate the ecological pristiness of the area by dropping a filthy, unnatural, manmade piece of trash on the ground. One of the fembots gets offended and leaves to organize a protest. > light second match The second match bursts into flame. > burn notice The notice burns with a pleasant green flame. > get bottle You take the bottle that says "Drink Me!" > north You walk to a deserted area between two buildings. There is a north-south path here. There are some fembots here. There are some protesters here. Your fingers are getting warm. > north You walk north. The path winds around to the east. There is a building to the north. There are some fembots here. There is some chanting coming from the south. Your fingers are burning. > Drop match You drop the match on the ground. Your fingers continue to burn. > Suck on fingers The fembots are offended by the sexual symbolism and leave. The fire is extinguished. Your fingers are throbbing now. There is a match burning on the ground. > step on match

You step on the match, burning the bottom of your foot in the process. You should remember to wear shoes more often. There is a burnt-out match sitting on the ground. > wear shoes You move very quietly now. > north You smack your head into the building. The building does not move. Your I.Q. drops by 10 points. You no longer grok spam. > east You enter the Merrill academic building. You are in a North-South hallway. There is a door to the East. Exit is to the West. > east You enter a quiet classroom. The students, who had apparently been taking an exam, look up at you angrily. The professor glares at you angrily. The students return to their frantic efforts. The professor, who looks vaguely familiar, continues to glare. You suddenly realize that this is your calculus class, which you have not attended in three weeks. > sit You find an empty desk. The chair squeaks as you seat yourself, causing the student next to you to give you a grimace that would make a good Butthole Surfers album cover. The professor brings you a copy of the midterm. > look test You look at the test. The problems on the first page are impossible. The material on the following eight pages is worse. Test stress causes your I.Q. to drop 100 points. > do test This is impossible, as you have neither pencil nor calculator. You realize that failing this exam means failing the course. > borrow pencil Your neighbor growls angrily as soon as you start to vocalize your request. > steal pencil You steal the extra pencil from your neighbor's desk. He does not notice. > do test You start to work on the first problem, even though you have only a vague understanding of how to solve it. The pencil hurts your charred fingers. Beads of sweat form on your forehead as you scratch out calculations that would normally be done on a calculator. You reach an answer that could not possibly be correct. > do second problem Just reading the second problem severely stresses your mental resources. You suffer a brain embolism. > do problem You begin calculations on the second problem. Sweat begins to trickle from your face and armpits. You begin to stink. The trickle of sweat turns into a raging torrent. Your brain seizes. You cannot move. > wait Time passes... > wait Time passes... > wait Time passes. You can move now.

> smoke test Do you really want to do that? > smoke test As you inhale the xeroxed papyrus, you feel the knowledge of the ancients seeping into your mind. You come to a complete understanding of the material, but you no longer have anything to turn in. > write answers What do you want to write the answers on? > paper You start scribbling the solutions to the problems on the blank papers of zig-zag. Just as you write the last answer, the teacher collects the exams, staples them together, and leaves. You have truly smoked this test. > east You are in a north-south hallway. There is a door to the east. > north You stumble down the hallway in a northerly direction. Smacking into the door at the end and popping it open. You trip over your untied shoelaces and fall through the doorway. The door slams shut behind you. > Tie shoelaces You tie your shoelaces into a very tight knot. Your shoes can now only be removed by surgery. Ρ_ From: magidin@math.berkeley.edu (Arturo Magidin)

'rom: magidin@math.berkeley.edu (Arturo Magidin) Weekly Work Reports and the Moshinsky Maneuver

This is a true story, as told by my father, whose sister worked in the ININ. It is called "The Moshinsky Maneuver":

At one point, in Mexico's National Institute of Nuclear Research (ININ), instead of appointing a scientist as head of the Institute (as was traditional), the president appointed an administrator. The new Director promptly enacted all sorts of administrative procedures and forms that had

to be filled by every department. In particular, he announced that every Department Head had to file a weekly Activities Report, and a weekly "Projected Activities for the Coming Week" report, both to be delivered during a weekly Department Head meeting with the Director.

Dr. Marcos Moshinsky was then the head of the Theoretical Physics Department. This is how he dealt with the announcement:

At the first weekly meeting, the Theoretical Physics Dept. presented the following report:

"During the past week, the Theoretical Physics Dept. worked on solving the following differential equations:" and then followed two pages of hand-written differential equations.

"During the coming week, the Theoretical Physics Dept. hopes to solve the following differential equations:" and then followed three pages of hand-written differential equations. The Head of the Institute announced the next morning that the Theoretical Physics Dept. was excused from the weekly meetings, and could present only one report every six months.

From: voros@physics.monash.edu.au (Joe Voros)

This sequence of notices was reported on the Faculty of Education's News Sheet. The name of the writer has been changed, but follows the original form of signature each time. Enjoy.

1-----

Third Year Noticeboard.

!-----

Friday, May 4, 1990.

Just a friendly reminder. Please note that the last date for the submission of continuous assessment essays is Friday May 18 1990. Your essays should be handed to Maureen in the departmental office on or before that day and a receipt obtained.

Generic Lecturer

!-----

Friday, May 18, 1990.

It rather looks as though some third year students have not yet handed in their continuous assessment essays to Maureen in the departmental office. The FINAL deadline for the submission of these essays is TUESDAY MAY 22.

Generic Lecturer (Prof)

!-----

Tuesday, May 22, 1990.

One or two third year students have still not handed in their continuous assessment essays to Maureen in the departmental office. The ABSOLUTE AND FINAL deadline for submission of these essays is FRIDAY MAY 25. You are advised that failure to submit by this date may have implications for your final mark.

G. Lecturer (Professor)

!-----

Friday, May 25, 1990.

Listen. You lot really are pushing your luck this year. I know that some of you are relying on the soft-hearted liberals and pusillanimous social workers in the department to vote down any

system of penalizing late submissions but you should note that we failed to get a draconian punishment system through by only one vote last year and that means with our new and highly authoritarian external examiner on the committee this year you could be in for a very nasty shock indeed. (How about THREE marks off your total for every day late? What d'you think of that, eh?) So this is your ABSOLUTE AND FINAL AND ULTIMATE LAST CHANCE. Unless you get those bleeding essays in to Maureen by Monday morning May 28 at 9.30am, I will do my damnedest to ensure that there'll be no reason whatsoever for YOUR mother to show up on this campus on Graduation Day. GET MY DRIFT?

Professor G. Lecturer BA, MA, PhD.

From: Paula Defensor (pdefensor@hotmail.com)
HOW TO IRRITATE SCIENTISTS Jokes (DEDICATED TO STEPHEN HAWKING, MY IDOL
)

(A Peachie Defensor all-original composition) pdefensor@hotmail.com Reprints with acknowledgement & dedication on a science website highly encouraged.

1. Ask a scientist why if he's so brilliant, he cant make money. :)

2. Kiss him sweetly. Then tell him to list down liquids and solids in the fridge that make a perfect dinner. When he's done, tell him to start cooking.

3. Ask for the formula of transforming energy into passion.

4. Ask him why he doesnt have it.

5. Ask him to turn the black hole white.

6. Ask him to compute the velocity of an ant. Then ask : "what if there's an oscillating atom of sugar on top of the ant and it's on top of a building ?" Tell him to use quantum laws. Give him 10 minutes.

7. Ask him to compute the computational theory of the mind. Lend him an abacus. Then tell him you're just joking. Give him a calculator and wait. If he still cant, ask him if he prefers Casio.

8. Ask him if his mother was a primate. Tell him you appreciate honesty.

9. Tell him he sleeps like a baby. In a test tube.

10. Tell him you mistook the frozen specimens for condiments, fried them, and he's eating it now.

11. If he gets upset, give him ketchup.

12. If he asks why you havent done the laundry, tell him very seriously that you're experimenting on telekinesis and you're about to succeed ANYTIME now !

13. Ask him if he has a B.S., an M.S., an M.A., an M.D. or Ph.D. Then ask him if he has a J.O.B. 14. Tell him, "Honey, for Christmas, let's help Stephen Hawking walk straight." 15. You have a surprise for him. You bought a spectrum and his wardrobe now has ALL colors. And for every shirt, there's pants of EXACTLY the same color ! Then tell him the Chinese say wearing red brings good luck. He might win a Nobel Prize !! 16. Tell him if he loves you, he will do everything to stop evaporation. When he asks why, tell him you just broke one of those test tubes in the fridge. 17. If he's so talented, ask him why he cant play classical piano. 18. Tell him you love him, but he's so dumb. 19. When he asks why you keep buying so much make-up, tell him that steady state cosmology is the study of fine particles and you're about to prove theory. When he asks what ? Tell him that "tired scientists can still have endurance." LOL 20. Tell him you're sorry, but the balance in your bank account seems to be on a "time warp" and you just went shopping - for him. 21. Ask him to draw the genealogical chart of his family. Then ask where exactly did the ape fit in. LOL 22. Ask him why phi is always misspelled. 23. Give him another chance to reconsider his answer. Then tell him :"It's really okay to be humble when you're great. " 24. When you're mad at him, go out to the balcony and sit there for hours. When he asks what you're doing there, tell him you are trying to get intelligent-looking signals from the sky. 25. Tell him you're in love with another scientist. When he asks who (they WILL ALWAYS ASK WHO ??!!??)....tell him "someone with huge potential. He looks like Einstein." 26. When he's about to fall asleep, suddenly cry out :"Oh God ! I spilled sulfuric acid on you!!!"

27. When you got him fully awake and terrified, switch on the light. Heave a sigh of relief. Tell him it was a mistake.... "It's just muriatic acid."
28. Tell him to wait for 10 minutes. Then another 10 minutes. Then the LAST
10 minutes. Then say you dont feel like going. LOL (wanna bet...a scientist's gonna get upset? LOL)
29. When he asks you how come you exceeded the household budget again, tell
him : "That's a question neither science can affirm nor refute. And you're
the expert."

30. Ask him :"Darling, what happens if the universe stops expanding and then starts contracting ? Will the thermodynamic arrow be in reverse and disorder begin to decrease with time ?" When he asks why you're asking...tell him : "Oh, just wondering... I think I broke your eyeglasses to pieces."

* * * * * * * * *

DEDICATION TO STEPHEN HAWKING:

These jokes are dedicated to Stephen Hawking, one of the great minds of science, for making the profound in theoretical physics within reach of ordinary mortals like me.

While in high school, I wanted to become a physicist someday and passed the national science scholarship exam. But being in a developing country didnt give me a bright future in science. I became a lawyer like 4 others in the family. I miss Physics very, very much and hope my daughter will become a scientist. I hope too that someone creative will create a website for my science jokes, in the hope they will reach Mr. Hawking. I used some of his theories for these jokes. To all of you - scientists, know that from thousands of miles away, we admire and thank you for your contributions to mankind but we do love to annoy you with these jokes because we can never approximate your brilliance.

P. Defensor

In theory, there is no difference between theory and practice, but in practice there is a great deal of difference.

From: Steve Davis <"sdsd@userid"@west.net>
Law of invisible phenomena: The absence of evidence is not evidence of
absence.

Unnamed Law: If it happens, it must be possible.

FINAGLE'S LAWS:

1. If an experiment works, something has gone wrong. 2.1 No matter what result is anticipated, there is always someone willing to fake it. 2.2 No matter what the result, there is always someone eager to misinterpret it. 2.3 No matter what happens, there is always someone who believes it happened according to his pet theory. In any collection of data, the figure most obviously correct, beyond 3. all need of checking, is the mistake. 4 Once a job is fouled up, anything done to improve it only makes it worse.

> FINAGLE'S CREED Science is Truth; don't be misled by facts.

THE FINAGLE FACTOR (Sometimes called the SWAG(Scientific Wild-Assed Guess) Constant)

That quantity which, when multiplied by, divided by, added to, or subtracted from the answer which you got, yields the answer you should have gotten.

[note] Items such as 'Finagle's Constant' and the more subtle 'Bougerre Factor' are loosely grouped, in mathematics, under constant variables, or, if you prefer, variable constants.

Finagle's Constant, a multiplier of the zero-order term, may be characterized as changing the universe to fit the equation.

The Bougerre (pronounced 'bugger') Factor is characterized as changing the equation to fit the universe. It is also known as the 'Soothing Factor'; mathematically similar to the damping factor, it has the characteristic of dropping the subject under discussion to zero importance.

A combination of the two, the Diddle Coefficient, is characterized as changing things so that universe and equation appear to fit without requiring a change in either.

FINAGLE'S COROLLARY

On a seasonally adjusted basis, there are only six months in a year.

If mathematically you end up with the wrong answer, try multiplying by the page number.

IGGY'S RULE OF SCIENTIFIC ADVANCES

All scientific discoveries are first recorded on napkins or tablecloths. Engineering advances are drawn inside matchbook covers. Keep supplies of them handy at all times.

RULES OF THE LAB 1. When you don't know what you're doing, do it neatly. Experiments must be reproduceable, they should fail the same way 2. each time. First draw your curves, then plot your data. 3. Experience is directly proportional to equipment ruined. 4. A record of data is essential, it shows you were working. 5. To study a subject best, understand it thoroughly before you start. To do a lab really well, have your report done well in advance. 6. 7. If you can't get the answer in the usual manner, start at the answer 8. and derive the question. 9. If that doesn't work, start at both ends and try to find a common middle. 10. In case of doubt, make it sound convincing. 11. Do not believe in miracles---rely on them. 12. Team work is essential. It allows you to blame someone else. 13. All unmarked beakers contain fast-acting, extremely toxic poisons. 14. Any delicate and expensive piece of glassware will break before any use

can be made of it.(Law of Spontaneous Fission)

RULE OF ACCURACY

When working toward the solution of a problem, it always helps if you know the answer

RULE OF FAILURE

If at first you don't succeed, destroy all evidence that you have tried.

RULE OF REASON If nobody uses it, there's a reason.

ARNOLD'S LAWS OF DOCUMENTATION

1. If it should exist, it doesn't.

2. If it does exist, it's out of date.

3. Only useless documentation transcends the first two laws.

From: Jim Hargrove <hargrove@austin.asc.slb.com> Documentation is like sex: when it is good, it is very, very good, and when it is bad it's still better than nothing.

THE TEN COMMANDMENTS OF STATISTICAL INFERENCE

1. Thou shalt not hunt statistical inference with a shotgun.

- 2. Thou shalt not enter the valley of the methods of inference without an experimental design.
- 3. Thou shalt not make statistical inference in the absence of a model.
- 4. Thou shalt honour the assumptions of thy model.
- 5. Thy shalt not adulterate thy model to obtain significant results.
- 6. Thy shalt not covet thy colleagues' data.
- 7. Thy shalt not bear false witness against thy control group.
- 8. Thou shalt not worship the 0.05 significance level.
- 9. Thy shalt not apply large sample approximation in vain.
- 10. Thou shalt not infer causal relationships from statistical significance.

From: clprasad@watson.ibm.com (prasad) Never replicate a successful experiment -Fett's law. [cf CF]

From: Koos.denOudsten@phil.ruu.nl Discovery: A couple of months in the laboratory can frequently save a couple of hours in the library.

WEINER'S LAW OF LIBRARIES There are no answers, only cross references.

From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines)
A little inaccuracy sometimes saves tons of explanation.
Always draw your curves, then plot the data.
An ounce of application is worth a ton of abstraction.
An ounce of emotion is equal to a ton of facts.
Always proofread carefully to see if you any words out.
Dangerous exercise: Jumping to conclusions.
Discoveries are made by not following instructions.

FURTHER HINTS ON WRITE-UPS:

- 1. In any collection of data, the figures that most closely confirm the theory are wrong.
- 2. No one you ask for help will see the mistakes either.
- 3. Any nagging intruder who stops by with unsought advice will see them immediately.
- 4. If an experiment works, you must be using the wrong equipment.
- 5. An experiment may be considered successful if no more than half the data
 - must be discarded to agree with the theory.
- 6. No experiment is ever a complete failure. It can serve as a bad example.
- 7. Always leave room, when writing a report, to add an explanation if it

doesn't work (Rule of the Way Out).

From: jac@ds8.scri.fsu.edu (Jim Carr)
Raw data is like raw sewage, it requires some processing before it can
be spread around. The opposite is true of theories.

Murphy's law of research: Enough research will tend to support you theory.

WETHERN'S LAW Assumption is the mother of all screw-ups.

WYSZOWSKI'S LAWS 1. No experiment is reproducible 2. Anything can be made to work if you fiddle with it long enough. From: jejanes@mtu.edu (Jeff E. Janes) I believe there is a scientific method, or at least a method that serves me well. Jeff's scientific method: play with it until--1) you break it 2) it breaks you 3) you figure it out 4) your mom/boss/TA/Prof catches you 5) you discover something more interesting to play with. Ε From: "kaushik dayal" <k_dayal@hotmail.com> Engg. Research Thumb Rule : When in doubt, fit a curve. С From: mcrae@husc.harvard.edu A recent joke in this group reminded of one that my physics professor used to tell: THE CHEMIST'S RULE: Never take more than three data points. There will always be some kind of graph paper on which they fall in a straight line. THE CHEMIST'S RULE, FIRST COROLLARY: If you have only one kind of graph paper, never take more than two data points. ++ =8.2 RULES FOR WRITING AN ARTICLE:

From: chris@labtam.labtam.oz.au (Chris Taylor) A brief guide to Scientific literature ------The following phrases, frequently found in technical writings, are defined below for your enlightenment. Phrase Translation _____ It has been long known.....I haven't bothered to check the references It is known.....I believe It is believed.....I think It is generally believed.....My collegues and I think There has been some discussion.....Nobody agrees with me It can be shown.....Take my word for it It is proven.....It agrees with something mathematical Of great theoretical importance.....I find it interesting Of great practical importance.....This justifies my employment Of great historical importance.....This ought to make me famous Some samples were chosen for study... The others didn't make sense Typical results are shown.....The best results are shown Correct within order of magnitude....Wrong The values were obtained empirically. The values were obtained by accident The results are inconclusive......The results seem to disprove my hypothesis Additional work is required.....Someone else can work out the details It might be argued that.....I have a good answer to this objection The investigations proved rewarding..My grant has been renewed From: eridani@scn.org (Martha K. Koester) Synthesised according to.....Purchased from Sigma standard protocols Thanks to Joe Blow for expert.....Thanks to Joe Blow for doing technical assistance and Jane all the work and Jane Doe for Doe for valuable discussion. telling me what it meant. From: Neve@ecol.ucl.ac.be (Gabriel NEVE) While it has not been possible..... The experiments didn't work out, to provide definite answers to but I figured I could at least these questions. get a publication out of it. Mus musculus domesticus.....Mus musculus domesticus was chosen as especially suitable to is a lovely animal which is easy to study in test this hypothesis. the lab. Accidentally strained during.....dropped on the floor mounting

Handled with extreme care.....not dropped on the floor throughout the experiments Although some detail has been.....It is impossible to tell from the lost in reproduction, it is clear original micrograph. from the original micrograph Presumably at longer times.....I didn't take the time to find out. The agreement with the predicted curve is... excellent fair good poor satisfactory doubtful fair imaginary as good as could be expected non-existent The most reliable values are.....Jones was a student of mine. those of Jones. It is suggested that... It is believed that... I think that... It may be that... It is generally believed that.....A couple of other guys think so too. It is clear that much additional.....I don't understand it. work will be required before a complete understanding... Unfortunately, a quantitative.....Neither does anybody else. theory to account for these effects has not been formulated. It is hoped that this work will.....This paper isn't very good, but stimulate further work in the field. neither are any of the others in this miserable subject. High purity.....Composition unknown except for Very high purity the exaggerated claims of the suppliers A fiducial reference line on.....A scratch. the specimen... [adapted by Dominic Semple and Gabriel Neve from 'A glossary for research reports' by C.D. Graham, Jr., Metal Progress Vol 71, No. 5, 1957, and Technology Review, January 1977] And the last one from mammalogists : Arvicola voles were found as The radio-traking collars we've especially suitable to investigate got are too big for Microtus this interesting ecological problem vole species. From: "Dennis Davis" <dennov@worldnet.att.net>

"A definite trend is evident"... These data are practically meaningless. "These results will be in a subsequent report"... I might get around to this sometime, if pushed/funded. "In my experience"... Once! "In case after case"... Twice! "In a series of cases"... Thrice! "It is believed that"... I think... etc. (see above) "A highly significant area for exploratory study"... A totally useless

_____ From: sjreeves@eedsp.gatech.edu (Stan Reeves)

[My office-mate, Robert Bamberger, and I wrote this abstract after attending a particularly LPI-ish conference. :-)]

AN ANALYTIC STUDY OF THE LEAST PUBLISHABLE INCREMENT

Abstract

topic selected by my committee.

This paper presents an analytic study of the least publishable increment (LPI). The LPI is defined as the smallest acceptable difference between two publishable papers. Two metrics for the LPI are derived. The first metric is based on a generalized distance measure derived from the Hausdorff metric and is used to differentiate between papers on similar topics by different authors. The second metric describes a distance measure for papers from the same author.

Further studies using cross-journal and conference proceedings relations are also discussed. We outline a simple strategy for maximal publication based on these distance measures. An illustrative example of the maximal publication scheme is shown and its correlation to actual publications is also given.

We present a proof that maximal publication based on the LPI is an optimal approach for junior faculty members attempting to get tenure.

THE REFEREE'S CREED: What I don't understand I despise, what I despise I reject.

The game of refereeing: The author's goal: Publish a worthless paper. The referee's goal: Prevent publishing of a major contribution to field. No matter what degree of rigor the author uses, the referee replies by saying it is not the correct one.

"It is dangerous to be right in matters on which the established authorities are wrong." - Voltaire

Referee's report: This paper contains much that is new and much that is true. Unfortunately, that which is true is not new and that which is new is not true.

From: rconroy@rcsi.ie (Ronan Conroy) Footnotes that Somehow Got Left out of Published Manuscripts

Edwin A. Locke, Ronan M Conroy and others

These footnotes were found behind the editor's desk. They seem to have fallen off manuscripts which were being processed, but unfortunately it is not possible to identify the specific manuscripts.

(Note: These footnotes were originally published by Edwin Locke, of the Society of Organizational and Industrial Psychologists. I managed to contact Dr Locke after many years and he doesn't recognise half of them. I am guilty of a certain amount of input, but so too are an unknown number of anonymous hands.)

FOOTNOTES

1. The second author designed the study. The research assistant (credited in the very small print at the end) carried it out and wrote it up. The first author is a Very Important Professor who has generously donated the weight of his prestige.

2. Previous reviews by associate editors of 3 other journals, all of whom rejected the manuscript, totalled 27 single-spaced pages of comments, all of which we ignored as they were clearly motivated by professional jealosy.

3. Many of the references in this paper are totally unrelated to the topic of the study, but we added them to make the paper look scholarly. 3a. The remaining references were chosen for the quality of their contribution to the field, hence the preponderance of citations of previous papers by the present authors.

4. The hypotheses were invented after-the-fact to explain the totally unpredicted and seemingly nonsensical results we obtained.

5. Two subjects were omitted for noncompliance with the protocol and a further 67 subjects were discarded for non-compliance with the hypotheses.

6. The original questionnaire included 100 predictor scales. This study

reports the results for the 5 that were picked out by a stepwise regression package that the research assistant got from her flatmate.

7. We tried 37 different analytic techniques, some invented in ancient China, including Optician's c-test, Hate's d-test, the Lastwill n-test, Pretty's q-test, the Van Gough r-test, Washes' y-test, followed by the Wineman post-hock test. The one reported here (The Kawasaki Inverted-Listerine Analysis) was the only one that got significant results.

8. We ran 12 pilot studies and finally got the design to work after threatening the subjects with bodily harm.

9. A copy of the data is available from the authors. This is in the form of a binary dataset on an Atari disk which can be read by any COBOL compiler earlier than 1972. As we are at present upgrading out copy of SAS, we will be unable to handle any requests for data for the next five years, at which time we hope to have carried all the manuals upstairs into the office (if they haven't collapsed inwards under their own mass and formed a neutron star). Please write to us then. ("Thank you for your belated inquiry about our data. Unfortunately they have been discarded because they are more than 5 years old" The Authors).

From: "donald haarmann \ Eminence gris" <donaldhaarmann@worldnet.att.net>

The turbo-encabulator in industry.

For more then 50 years the Arthur D. Little Industrial Bulletin has endeavored to interpret scientific information in terms that he lay person could understand. "The turbo-encabulator in industry" is the contribution of J.H. Quick, graduate member of the Institution of Electrical Engineers in London, England, and was, first published in the Institution's Students' Quarterly Journal in December 1944, It is here reprinted without the kind permission of that publication and of the author in a further salute to Quick. For a number of years now, work has been proceeding to bring perfection to the crudely conceived idea of a machine that would not only supply inverse reactive current for use in unilateral phase detractors, but would also

be

capable of automatically synchronizing cardinal grammeters.

Such a machine is the "turbo-encabulator." Basically, the only new principle involved is that instead of power being generated by the relative motion of conductors and fluxes, it is produced by the medial interaction of magneto-reluctance and capacitive directance.

The original machine had a base plate of prefabulated amulite, surmounted by a malleable logarithmic casing in such a way that the two spurving

bearings were in direct line with the pentametric fan. The latter consisted simply of six hydrocoptic marzelvanes, so fitted to the ambifacient lunar waneshaft that side fumbline was effectively prevented. The main winding was of the normal lotus-0-delta type placed in panendermic semiboiloid slots in the stator, every seventh conductor being connected by a nonreversible tremie pipe to the differential gridlespring on the "up" end of the grammeters. Forty-one manestically spaced grouting brushes were arranged to feed into the rotor slipstream a mixture of high S-value phenylhydrobenzamine and 5% remanative tetryliodohexamine. Both of these liquids have specific pericosities given by P=2.5C.n(exponent)6.7 where n is the diathetical evolute of retrograde temperature phase disposition and C is Chlomondeley's annular grillage coefficient. Initially, n was measured with the aid of metaploar refractive pilfrometer (for a description of this ingenious instrument, see Reference 1), but up to the present, nothing has been found to equal the transcendental hopper dadoscope (2). Electrical engineers will appreciate the difficulty of nubing together a regurgitative purwell and a supramitive wennelsprock. Indeed, this proved to be a stumbling block to further development until, in 1942, it was found that the use of anhydrous nangling pins enabled a kryptonastic boiling shim to the tankered. The early attempts to construct a sufficiently robust spiral decommutator failed largely because of a lack of appreciation of the large quasipiestic stresses in the gremlin studs; the latter were specifically designed to hold the roffit bars to the spamshaft. When, however, it was discovered that spending could be prevented by a simple addition to the living sockets, almost perfect running was secured. The operating point is maintained as near as possible to the h.f. rem peak by constantly fromaging the bitumogenous spandrels. This is a distinct advance on the standard nivel-sheave in that no dramcock oil is required after the phase detractors have remissed. Undoubtedly, the turbo-encabulator has not reached a very high level of technical development, It has been successfully used for operating nofer trunnions. In addition, whenever a barescent skor motion is required, it may be employed in conjunction with a drawn reciprocating dingle arm to reduce sinusoidal depleneration. References

Rumpelvestein, L.E., Z. Elektro-technistatisch-Donnerblitz vii.
 Oriceddubg if the Peruvian Academy of Skatological Sciences, June 1914.

From an unknown but astute source: Every new scientist must learn early that it is never good taste to designate the sum of two quantities in the form: 1 + 1 = 2(1) Anyone who has made a study o f advanced mathematics is aware that: 1 = ln e $1 = \sin^2 x + \cos^2 x$ ∖inf 1/2**^**n 2 = sumn= Therefore eq. (1) can be expressed more scientifically as: \inf $ln e + sin^2 x + cos^2 x =$ sum 1/2**^**n (2) n= This may be further simplified by use of the relations: $1 = \cosh y \operatorname{sqrt}(1 - \tanh^2 y)$ e = lim (1+1/z)^z z-> inf Equation (2) may therefore be rewritten as: inf cosh y sqrt(1 - tanh^2 y) $\ln[\lim (1+1/z)^{z}] + \sin^{2} x + \cos^{2} x = SUM$ z-> inf n= 2**^**n (3) At this point it should be obvious that eq. (3) is much clearer and more easily onderstood than eq. (1). Other methods of a similar nature could be used to clarify eq. (1), but these are easily divined once the reader grasps the underlying principles.

Since figures and pictures strike the imagination of the reader much better, all articles and dissertations should be published in cartoon form to reach a larger publicum.

562

From: Aliquotes iv.vii (journal) (rogerb@microsoft.com) IF SECRETARIAL DUTIES WERE PERFORMED BY SCIENTISTS...

A letter wich was dictated to read....

from the desk of: ELAINE ROBINSON

Anyday, February 31, 1996

Dear Jerry,

We regret to inform you that we have reanalyzed the current fiscal situation in the company and have come to the decision that the position which you currently hold will be phased out in the next few months. As you

have been a loyal employee for the past twenty years, we will be offering you an early retirement package wich will hopefully fulfill all of your requirements. We wish you the best of luck in your future endeavours and hope that you will stay in touch.

Sincerely,

Elaine Robinson, CEO

would instead read....

Analysis of Fiscal Responsibilities in the Company Superstructure Robinson, Elaine (CEO), et al.

The following treatise describes the results of the most recent findings

of the study of monetary fluctuarions in the area of resource management, especially with regard to the placement and distribution of human resources. There is an indication from the data wich has been presented (see Figure 1a) that the future fiscal situation will indicate deficiencies. While this is counter to the previous results (Company profile, 1994 and 1995), we feel strongly that the data suggests a realignment of personnel placements, although we do not discount other avenues of readjustment (for a review, see Memo #17, 1996). While the analysis is not complete, the projection of the curve (Figure 2) indicates

that the changes which we propose should occur within a time frame amenable

to stabilizing the situation.

Previous results (Employee Profile, 1976-1995) have suggested other possible scenarios but the present situation (Figure 3) causes our group to

re-evaluate. Owing to the enormity of our proposal, certain allowances have been established (Table 1) to deal with the current findings and we will soon present more findings regarding the extended time vector (data not shown, in preparation).

Note added in proof: Further analysis has indicated a strong preference for the sacrifice of secific variables, with particular reference to Jerry.

From: Jennifer M. <jmorales@cybergrrlz.comx>
The following is a small excerpt from an article published in *laffs*,
the
jokes/humor page in my e-zine.

IF SCIENTISTS WROTE NURSERY RHYMES Jokes

1. A research team proceeded toward the apex of a natural geologic protuberance, the purpose of their expedition being the procurement of a sample of fluid hydride of oxygen in a large vessel, the exact size of which was unspecified. One member of the team precipitately descended, sustaining severe fractural damage to the upper cranial portion of his anatomical structure. Subsequently, the second member of the team performed a self-rotational translation oriented in the direction taken by the first member.

< Jack and Jill went up the hill To fetch a pail of water. Jack fell down and broke his crown, And Jill came tumbling after.>

From: aroy@cs.uoregon.edu (amitabha roy) New Latex commands

We propose the following extensions to the current version of Latex. We anticipate that it will help many struggling scientists who agonize over the correct formatting of their scientific papers.

\wave:

The generic \wave command : this is used to simulate waving various objects in your documents.

For example, a difficult proof for a theorem can be effectively finished with a $wave{\hand}$ command.

A criticism of someone who caught errors in your previous papers can be made scathing with the $\were {\finger}$ command.

We also recommend that all papers finish with a friendly \wave{\bye} command,

\namedrop:

This powerful extension allows the scientist to justify research of dubious value with a set of names chosen from an extensive database. The database consists of names such as Don Knuth, Alan Turing, Andrew Wiles , Einstein. The database also contains a list of all the papers that these illustrious scientists have written. \namedrop chooses a random paper corresponding to the name chosen.

We realize that \namedrop has a severe limitation. After all, an

unproven and outrageous claim cannot always be attributed to the name of a living (or recently dead) person. There are people who actually cross check all references - no, really ! To obviate this difficulty, we propose the all powerful \namedrop{God} command.

The citation at the end of the paper becomes

[5] God, personal communication.

There are options on choosing Gods from a variety of religions. {\namedrop{God{Vishnu}}} The only drawback in using this option is that one can only cite Gods from one religion in a paper. For some inexplicable reason, Latex does not work if we allow the multiple religion option.

Verbose commands:

Following Seinfeld, we also have a \yada-yada command which substitutes randomly chosen text (from a database) to fill up several pages. We do not recommend that this option is used to fill up the whole paper as that may look suspicious. If one needs to do that, we strongly recommend that the \namedrop{God} option and the powerful \wave{\knife} option be used liberally at the beginning of the paper. Currently, we only have Kitty Kelly's masterpiece "Jackie Oh!" in our database.

\graphs:

This option allows the user to include graphs that simulate actual statistical experiments into the paper. The graph usually have the following characteristic: there is one best case line and one worst case line. There are options to refer to others' experiments for the worst case. This is a powerful tool to criticize your colleagues work with scientific proof and not just words.

We are excited about bringing these tools in front of the scientific community. Please send us your responses (aroy@cs.uoregon.edu) about further additions to the list.

(joint work with Chris)

From: "Vadim Zelenkov" <zelenkov@gray.isir.minsk.by> GRAMMAR

[This is not really science, but it *was* published in Physical Review Letters.]

It is said that back in the 1940's, the following message was prominently displayed at the front of the main chemistry lecture hall at a major university:

The English language is your most versatile scientific instrument. Learn to use it with precision.

In the intervening years, the teaching of proper grammar in the public elementary and high schools fell into disfavor. The inevitable result is that manuscripts submitted to us are often full of grammatical errors, which their authors probably do not even recognize (and often would not care about if they did).

We regard this state of affairs as deplorable, and we want to do something $% \left({{{\mathbf{x}}_{i}}} \right)$

about it. For many years we have tried to correct the grammar of papers that we publish. This is toilsome at best, and sometimes entails rather substantial rephrasing. It would obviously be preferable to have authors use correct grammar in the first place. The problem is how to get them to do it.

One fairly effective way is to provide examples of what not to do; it is particularly helpful if the examples are humorous. We have recently seen several lists of grammatical examples of this type. A few weeks ago we found taped to a colleague's office door the most complete one we have seen. (He tells us it was passed out in a class of Darthmouth - not in English - at the time a term paper was assigned). We reproduce it here in the hope that it will have some effect.

1 Make sure each pronoun agrees with their antecedent.

- 2 Just between you and I, the case of pronoun is important.
- 3 Watch out for irregular verbs which have crope into English.
- 4 Verbs has to agree in number with their subjects.
- 5 Don't use no double negatives.
- 6 Being bad grammar, a writer should not use dangling modifiers.
- 7 Join clauses good like a conjunction should.
- 8 A writer must be not shift your point of view.
- 9 About sentence fragments.
- 10 Don't use run-on sentences you got to punctuate them.
- 11 In letters essays and reports use commas to separate items in series.
- 12 Don't use commas, which are not necessary.
- 13 Parenthetical words however should be enclosed in commas.
- 14 Its important to use apostrophes right in everybodys writing.
- 15 Don't abbrev.
- 16 Check to see if you any words out.
- 17 In the case of a report, check to see that jargonwise, it's A-OK.
- 18 As far as incomplete constructions, they are wrong.
- 19 About repetition, the repetition of a word might be real effective
- repetition take, for instance the repetition of Abraham Lincoln. 20 In my opinion, I think that an author when he is writing should
- definitely not get into the habit of making use of too many unnecessary

words that he does not really need in order to put his message across.

21 Use parallel construction not only to be concise but also clarify.

- 22 It behooves us all to avoid archaic expressions.
- 23 Mixed metaphors are a pain in the neck and ought to be weeded out.
- 24 Consult the dictionery to avoid mispelings.
- 25 To ignorantly split an infinitive is a practice to religiously avoid. 26 Last but not least, lay of cliches.

George L. Trigg Phys.Rev.Lett., 42, 12, 748 (1979). Articles are warped by "unexplained acronyms, cryptic symbols, endless sentences, and monstrous graphs". Analyzing the psychology of why this exists, Phillip Schewe (American Institute of Physics, US) says:

"You lose all your readers, but at least you can't be accused of being an idiot. Instead, the readers are made to feel like they're idiots." (Science, 15 Aug 97)

P___

From: S.D.Appleton@newcastle.ac.uk (Shaun Appleton)

As seen in Physics World Feb. '93 (the Institute of Physics monthly mag.)

"Last month saw the issue of a preprint from CERN's theory division by D Hajdukovic and H Satz:- 'Does the one-dimensional Ising model show intermittency?' asks the title. For those who understand the question but are uninterested in the details, the abstract is commendably and may be unprecendently succint... 'NO.'

I wish all academics would write like this.

From: Ian Davis <davis@licre.ludwig.edu.au>
Clearly no-one in this group has read my thesis. This would have fit
right in. I can write an outline of his dissertation for him now if you
like:

Dedication page: Thank the Academy. Suck up to supervisor. Include cool quotes. Suggest: "Still just a potatoe" - B Simpson "A mouse is an animal that if killed in sufficiently many and creative ways will generate a PhD." "I refrain from publishing for fear that disputes and controversies may be raised against me by ignoramuses." - Sir Isaac Newton, correspondence to Liebniz

Publications resulting from this work: Cite UseNet posts Article for college newsletter The Nature paper

Chapter 1 - Literature review Listing of my bookshelf

Chapter 2 - Materials and methods Not quite a billion but let's call it a billion cos it's a cool acronym array linking 20 486 processors on the number 13 bus to the station. Pizza. Beer. Cheap porno movies. Chapter 3 - Results Nothing yet.

Chapter 4 - Method modification 1 Nothing yet. Chapter 5 - Method modification 2 Turn on power. Nothing yet. Chapter 6 - Method modification 3 Remove Minesweeper from array. Definite signal originating from Epsilon 3. Clear indication of intelligent life. Further studies indicate that signal may also be due to fridge light coming on during ancillary SECB (Search for Extra Can of Beer) project. Discounted. Paper accepted by Nature. Chapter 7 - Discussion and conclusions More studies are required. References Nature paper. 600 distantly related papers picked up on computer literature search but not actually read. Consciously omit reference to Cassidy FJ and Whitford A: Unusual "love waves" recorded above the Cascadia Subduction Zone. Seismologial Research Letters 67(6):49-51, 1991, describing seismic event induced by a young couple unaware that they were on the surface of a seismic vault in a quiet wood. Hope this helps. No need to acknowledge me in the thesis. ++

=8.3 ACADEMIC LIFE POETRY

From: Aliquotes iv.vi (journal) (rogerb@microsoft.com) AS THEY LIKE IT By: Wm Shakespipette

All the world's a lab, And all the men and women merely subjects: They have theri theses and exams, And one doc in his time plans many experiments His notes in seven stages. At first the _undergrad_, mewlink and puking at the frat house jams. And then the winning _doctorate_, with his papers And statistical analysis, doing just enough If only to graduate. And then the _postdoc_, Wailing like hell, with a woeful ballad Of experiments gone sour. Then _assoicate prof_, Full of strange theories and requiring a tech, Jealous in honour, sudden and quick in temper, Seeking the bubble reputation While kissing the chairman's butt. And then the _tenure_, In fair round belly with good postdocs lined, With eyes severe and pen to thesis cut, Full of wise saws and forgotten techniques;

And so he plays his part. The sixt stage shifts To the lean and slippered _chair_ With spectacles on nose and job on the side, His theories of youth, well saved, a world to weird For his shrunk grant; and so his "go get'em" attitude Turning again towards mild caution, tempered Theories all around. Last scene of all, That ends this strange eventful history, Is status _emeritus_ and mere oblivion, sans students, sans postdocs, sans grants, sans everything.

From Hello i'm an Alien (TiddyOgg@half.co.ck)
My son stood alone with head bowed.
On his thesis he pondered aloud:
"It's quite good, it's true,
But what can I do,
To make it stand out from the crowd."

My answer, I'm sure you'll surmise, He greeted with some great surprise: "Compose it young Jim, In the form of a lim, You'll be sure to achieve a great prize."

Tiddy Ogg. cf. "The Application Of Polymeric Compounds In High Temperature Spectroscopy." by JamesGawain Ogg, University of Rockall, 1998.

From: "Zine" <jrasmuss@iupui.edu> JABBERWOCKY A LA ACADEME

'Twas spring break, and the student droves Did drink and snorkle in Florida: Most times mainly without clothes, And their Lit and Math ignorida.

"Beware the Professor, my son! The jaws that lecture, the hands that grade! Beware the Teaching Assistant: shun! And the frumpy Librarian evade!"

He took his laptop computer in hand: Long time the passing grade he sought--But rested he in lecture-hall dreamland, and dreamed awhile of nought.

And, while in daydreamy thought he drooled, The Professor, with sinusitis a flame, Came sniffling into the lecture hall, And teaching as he came!

One, two! One, two! And through and through The Prof wrote theorem, lemma, proof! But alas, the laptop battery went dead and all the notes went "poof."

"And hast thou pleased the Professor? Come to my arms, my Baccalaureate boy! O Graduation day!" But "Student loans to pay," his son replied without joy. 'Twas spring break, and the unemployed droves Did drink and snorkle in Florida: Most times mainly without clothes, And their resumes ignorida. _ _ If you forward this messsage, please include this as the source: "S k e w ! a journal on the rrragged edge of academe" http://psychology.iupui.edu/skew/splash.htm From: Nik Synytskyy <u1644126@csi.uottawa.ca> On a lecture this lim`ric was written With boredom the author was smitten Cause Pascal does suck Our TA is a shmuck Who by mad dogs was surely bitten. There was a bored student in Ottawa Who during a lecture once gottago But being embarrased His nature he harnessed In the end he has met his um... WATERloo Our TA has tried to be slick Tried to write an applet with a glick But he got all crashed The appled has crashed Entirely screwing the trick. Grant, oh God, Thy benedictions on my theory's predictions Lest the facts, when verified, Show Thy servant to have lied. May they make me B.Sc. A Ph. D. and then A D. Sc., and F. R. S. A Times Obit. Amen. Oh, Lord, I pray, forgive me please, My unsuccesful syntheses, Tho know'st, of course -- in Thy position --I'm up angainst such competition. Let not the hardened Editor, With referee to quote, Cut all may explanation out And print it as a Not.

- Researcher's prayer, from: R.L. Weber (ed.), A random walk in Science, the Institute of Physics, London, 1973, 1974, 1975. ++=8.4 RESEARCH QUOTES

From: Vadim Zelenkov <zelenkov@gray.isir.minsk.by> Science is the best way to satisfy your own curiosity for the governmental account.

Soviet physicist Lev Artsimovich (1909-1973)

From: WINDERL@AgResearch.cri.nz (Louise Winder) 'The most exciting phrase to hear in science, the one that heralds new discoveries, is not "Eureka!" ("I found it!") but rather "hmm....that's funny..."' --Isaac Asimov

Research ! A mere excuse for idleness; it has never achieved, and will never achieve any results of the slightest value. -- Benjamin Jowett (1817-93), British theologian.

From: edftz@aol.com (Ed Fitzgerald) The ability to reduce everything to simple fundamental laws does not imply the ability to start from those laws and reconstruct the universe. -- Philip W. Anderson "More Is Different" Science magazine (1972)

Errors using inadequate data are much less than those using no data at all.

- Charles Babbage (1792-1871)

From: jr3000@aol.com (JR3000) If a man will begin with certainties, he will end in doubts; but if he will be content to begin with doubts, he will end in certainties. -Francis Bacon (1561-1626), Advancement of Learning_

May every young scientist remember and not fail to keep his eyes open for the possibility that an irritating failure of his apparatus to give consistent results may once or twice in a lifetime conceal an important discovery.

- Patrick Blackett (British physicist, 1897-1974)

An expert is a man who has made all the mistakes, which can be made, in a very narrow field. - Niels Henrik David Bohr (1885-1962)

"The opposite of a correct statement is a false statement. But the opposite of a profound truth may well be another profound truth." -- Niels Bohr More from Bohr in the physics section

@A: Bronowski,Jacob (1908-1974)
@Q: That is the essence of science: Ask an impertinent question, and you are on the way to a pertinent answer.
@R: Ascent of man (1973) ch.4.

If scientific reasoning were limited to the logical processes of arithmetic, we should not get very far in our understanding of the physical world. One might as well attempt to grasp the game of poker entirely by the use of the mathematics of probability. -- Vannevar Bush

From: CRITESS@delphi.com (Susan Crites/CRITESS) As an adolescent I aspired to lasting fame, I craved factual certainty, and I thirsted for a meaningful vision of human life -- so I became a scientist. This is like becoming an archbishop so you can meet girls. -- Matt Cartmill

CLARKE'S LAWS Arthur C. Clarke (1917-)

When a distinguished but elderly scientist states that something is possible, he is almost certainly right. When he states that something is impossible, he is very probably wrong. __Profiles of the Future_ (1962; rev. 1973) ``Hazards of Prophecy: The Failure of Imagination'' Clarke's First Law

On which he commented:

Perhaps the adjective ``elderly'' requires definition. In physics, mathematics, and astronautics it means over thirty; in the other disciplines, senile decay is sometimes postponed to the forties. There are, of course, glorious exceptions; but as every researcher just out of college knows, scientists of over fifty are good for nothing but board meetings, and should at all costs be kept out of the laboratory!

> _Profiles of the Future_ (1962; rev. 1973) ``Hazards of Prophecy: The Failure of Imagination''

But the only way of discovering the limits of the possible is to venture a little way past them into the impossible. _Profiles of the Future_ (1962; rev. 1973) ``Hazards of Prophecy: The Failure of Imagination'' Clarke's Second Law

Any sufficiently advanced technology is indistinguishable from magic. _Profiles of the Future_ (1962; rev. 1973) ``Hazards of Prophecy: The Failure of Imagination'' Clarke's Third Law Clarke adds: As three laws were good enough for Newton, I have

A post with the ``first law'' invariably gets followed up with one

When, however, the lay public rallies round an idea that is denounced by distinguished but elderly scientists and supports that idea with great fervor and emotion--the distinguished but elderly scientists are then, after all, probably right.

> Isaac Asimov (1920-1992) _Fantasy & Science Fiction_ 1977 [magazine] In answer to Clarke's First Law

I love fools' experiments; I am always making them
- Charles Darwin (1809-1882, British biologist)

From the Sanity Inspector (chollanamdo@mindspring.com) Wandering in a vast forest at night, I have only a faint light to guide me. A stranger appears and says to me: 'My friend, you should blow out your candle in order to find your way more clearly.' This stranger is a theologian.

--Diderot, c1762

modestly decided to stop there.

mentioning this:

From: marlow@concentric.com (marlowe) In science one tries to tell people, in such a way as to be understood by everyone, something that no one ever knew before. But in poetry, it's the exact opposite . -- Paul Dirac

From: FCB <fbaer@mci.newscorp.com>
Keep on the lookout for novel ideas that others have used successfully.
Your
idea has to be original only in its adaptation to the problem you're
working
on. - Thomas Edison (1847-1931)

Results! Why, man, I have gotten a lot of results. I know several thousand things that won't work. - Thomas Edison (1847-1931)

From: Steve Cutchen <scutchen@arco.com>
@A Richard Feynman *
@Q First you guess. Don't laugh, this is the most important step.

Then you compute the consequences. Compare the consequences to experience. If it disagrees with experience, the guess is wrong. In that simple statement is the key to science. It doesn't matter how beautiful your guess is or how smart you are or what your name is. If it disagrees with experience, it's wrong. That's all there is to it. @D The quote is from a PBS show on Dr. Feynman. He was describing to his class how to look for a new law of physics

From: Steve Cutchen <scutchen@arco.com> Richard Feynman @A I think that it is much more likely that the reports of flying @() saucers are the results of the known irrational characteristics of terrestrial intelligence than of the unknown rational efforts of extraterrestrial intelligence

"I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forego their use." -- Galileo Galilei

"It has always seemed to me extreme presumptuousness on the part of those who want to make human ability the measure of what nature can and knows how to do, since, when one comes down to it, there is not one effect in nature, no matter how small, that even the most speculative minds can fully understand." - Galileo Galilei

From: Don Westerheijden <d.f.westerheijden@cheps.utwente.nl> Einstein didn't go around racking his brain, muttering to himself, "How, oh how, can I come up with a Great Idea?" [...] The bottom line is that invention is much more like falling off a log than like sawing one in two.

-- Douglas R. Hofstadter, Metamagical Themes, p. 233

From: bouche2@server.uwindsor.ca (Boucher David) It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories instead of theories to suit facts." - Sherlock Holmes

Why think? Why not try the experiment? -- John Hunter (letter to Edward Jenner) The great tragedy of science - the slaying of a beautiful hypothesis by an ugly fact. - T H Huxley (English scientist, 1887-1975)

From: charles@jolt.mpx.com.au (Charles Cave) Inventions have long since reached their limit, and I see no hope for further development. -- Julius Sextus Frontinus (Highly regarded engineer in Rome, 1st century

A.D.)

From: Don Olivier <don@hsph.harvard.edu> The value the world sets upon motives is often grossly unjust and inaccurate. Consider, for example, two of them: mere insatiable curiosity and the desire to do good. The latter is put high above the former, and yet it is the former that moves one of the most useful men the human race has yet produced: the scientific investigator. What actually urges him on is not some brummagem idea of Service, but a boundless, almost pathological thirst to penetrate the unknown, to uncover the secret.... His prototype is not the liberator releasing slaves, the good Samaritan lifting up the fallen, but a dog sniffing tremendously at an infinite series of ratholes.

-- H. L. Mencken

From: jr3000@aol.com (JR3000) ORIGINALITY: A man with a new idea is a crank until he succeeds. --Mark Twain In every work of genius we recognize our own rejected thoughts; they come back to us with a certain alienated majesty. --Ralph Waldo Emerson Accept your genius and say what you think. --Emerson From: ldiaz@ix.netcom.com (LTD) Who never walks save where he sees men's tracks makes no discoveries. --J.G. Holland From: amills@acpub.duke.edu (Anita Mills) It is through science that we prove, but through intuition that we discover. - Henri Poincare

From: Antonio Almeida <aalmeida@lemac18.lemac.ist.utl.pt> "Science is built upon facts, as a house is built of stones; but an accumulation of facts is no more a science that a heap -- Henri Poincare' in Science and of stones is a house." Hypothesis

I didn't think; I experimented.

- Wilhelm Roentgen (German physicist, 1845-1923)

drifted away, then came back and said, "Do you mind if I ask you a
question?" "Of course not," I replied. He asked, "why does science take
so
long?" I said, "Mr. Warhol, when you do a picture of Marilyn Monroe, does
it have to be exactly like her, as close to being her as you can make
it?"
He said, "Oh no. And anyhow, I have this place called the Factory where
my
helpers do it." I said, "Well, in science it has to be exact, as exact as
you can make it." He looked at me with limp sympathy and said, "Isn't
that
terrible?"
-- Gerald M. Edelman _Bright Air, Brilliant Fire_ (1992)

@A: Herbert George Wells (1866-1946) @Q: Experimental work is the most tedious thing in the world (unless it be the reports of it in the _philosophical transactions_). @R: The food of the gods (1904)

From: Serenleono (verax@mindspring.com) Science is a match that man has just got alight. He thought he was in a room -- in moments of devotion, a temple -- and that his light would be reflected from and display walls inscribed with wonderful secrets and pillars carved with philosophical systems wrought into harmony. It is a curious sensation, now that the preliminary splutter is over and the flame burns up clear, to see his hands and just a glimpse of himself and the patch he stands on visible, and around him, in place of all that human comfort and beauty he anticipated -- darkness still.

-- H. G. Wells, "The Rediscovery of the Unique", THE FORTNIGHTLY REVIEW, N. S. 50 (July 1891).

Everything of importance has been said before by somebody who did not discover it. -- Alfred North Whitehead (1861-1947) [English philosopher and mathematician]
@A: Wigner, Eugene Paul. Hungarian/US physicist (1902-1995)

 @Q: There is no natural phenomenon that is comparable with the sudden and apparently accidentally timed development of science, except perhaps the condensation of a super-saturated gas or the explosion of some unpredictable explosives. Will the fate of science show some similarity to one of these phenomena?.
 @R: In an essay ``The Limits of Science'' intended to estimate them,

originally in Procs. of the _Amer. Philosophical Soc._ v. 94, #5 (1950).

From: drory@buphyk.bu.edu (Alon Drory) Furious activity is no substitute for understanding -- H. H. Williams

From: don_b@larry.infi.net (Don A. Berkowitz)
As I look back upon my education in chemistry and physics, I see that
each
year I learned that the stuff I learned the previous year was either a
special
case of a more general theory, an approximation, or, on occasion, an
outright
lie! Nonetheless, I needed those lower order approximations to be able
to make
sense of more general and conceptually more difficult formulations.
-- Don A. Berkowitz

What used to be called a prejudice is now called a null hypothesis. - AWF Edwards, Nature, 9th March 1971

From: WINDERL@AgResearch.cri.nz (Louise Winder)
'The average scientist is basically toilet-trained to the point where if
what
he does is comprehensible to the general public, it means he's not a good
scientist. That's what I thought. I was wrong'
 Paul Ehrlich, biologist
 Author of 'The Population Bomb'

From: Dr. Stuart Savory savory.pad@sni.de / savory.pad@sni-usa.com
"If we knew what it was we were doing, it would not be called research,
would it?". -- Albert Einstein (1879-1955) [German physicist]

From: offordj@aa.wl.com (Jim Offord) Four stages of acceptance: i) this is worthless nonsense; ii) this is an interesting, but perverse, point of view; iii) this is true, but quite unimportant; iv) I always said so. (J.B.S. Haldane, Journal of Genetics #58, 1963, p.464) Probably an adaption of the following: Every great scientific truth goes through three stages. First, people say it conflicts with the Bible. Next they say it had been discovered before. Lastly they say they always believed it. -- Louis Agassiz (Swiss naturalist, 1807-1873) From: Paul D. Shocklee (pds1@cornell.edu) When in doubt, cause as much confusion as you can, and, with luck, there'll always be a loophole. - Richard Mueller From: edftz@aol.com (Ed Fitzgerald)

An important scientific innovation rarely makes its way by gradually winning over and converting its opponents: it rarely happens that Saul becomes Paul. What does happen is that its opponents gradually die out and that the growing generation is familiarized with the idea from the beginning. -- Max Planck "The Philosophy of Physics" (1936)

We have no right to assume that any physical laws exist, or if they have existed up to now, that they will continue to exist in a similar manner in the future. -- Max Planck (1858-1947), German physicist.

From: mdc@math.canterbury.ac.nz (El Technicolour) "The symbols are so illuminating that the fact that the text is incomprehensible doesn't much matter" - A.N. Prior

From: "donald haarmann" <donald-haarmann@worldnet.att.net> The way to capture a student's attention is with a demonstration where there is a possibility the teacher may die."

Lectures were once useful; but now, when all can read, and books are so numerous, lectures are unnecessary. If your attention fails, and you miss a part of a lecture, it is lost; you cannot go back as you do upon a book. . . People have nowadays got a strange opinion that everything should be taught by lectures. Now, I cannot see that lectures can do as much good as reading the books from which the lectures are taken. I know nothing that can be best taught by lectures, except where experiments are to be shown. You may teach chymistry by lectures. You might teach making shoes by lectures!

-- Samuel Johnson, quoted in Boswell's Life of Johnson (1791).

Never underestimate the joy people derive from hearing something they already know. -- Enrico Fermi (1901-1954)

From: "M.Sc. Omar Lakkis" <omar@sam.math.ethz.ch>
In our department there was a professor known to be God... everybody
heard
about its existence but nobody actually saw him!

- - -

Lectures were given by his assistant... "the Prophet". ;-)

From: "G.P." <G_Popper@Hotmail.Com>

UNOFFICIAL MANUAL FOR GRADUATE TEACHING ASSISTANTS LATE HOMEWORK

1.When a student turns in his/her project two weeks late and asks for full credit, accept the late work and tell them that it will be awarded full credit. However, do inform them that you will not have time to grade it until after you complete your Ph.D.

DISRUPTIVE STUDENTS

1.If students will not stop talking when the class period begins, announce that there will be a quiz the following day on today's lecture. Then leave.

2. If your students are prone to reading the school paper in class, try taking out a full page ad in the paper informing them that they are going to flunk your class.

LECTURES

1. In the event that you are unprepared for a lecture, be sure to use the class time to stress to the class the importance of keeping up with the readings. In fact, spend most of the class time stressing this.

2.When the time comes to lecture on a subject you know nothing about, the art of controlled digression is invaluable. Here, you try to incite

unrelated questions from the class which you answer at length. Then at the end of class you scold them for digressing and tell them they'll just have to get the material from the book. GRADING 1. Always use a fire engine red felt-tip marker with a 1/2 inch tip to grade papers. Position your comments strategically so that they spell "DUMB" when seen from a distance. 2. You may grade assignments however you like. Here is a guide to quick and easy grading: 20 % Name 20 % Penmanship 50 % Homework is stapled together 10 % The work itself Warning: Be prepared for a 60% class average. GRADING ERRORS 1.If student A approaches you complaining that an answer on their exam was marked incorrect but was marked correct on student B's exam, promptly mark student B's answer incorrect as well. This will redirect the heat from you onto student A. EXTRA CREDIT 1.If students request extra credit to make up for the homework they didn't turn in, be sure to make the opportunity available to them. Some good extra credit problems are: Solve the dining philosophers problem, using semaphores. Write a C compiler for the Commodore 64. Translate Moby Dick into ASCII-8 code with a leftmost odd parity bit. Design a replacement for the 80486 chip. Build a File Allocation Table (FAT) out of balsa wood. 2. You may also wish to tell the student that they can do extra credit work while you decide whether to accept it. When the student turns in the work, decide against it. CHEATING 1. When it is obvious to you that several people have copied each others homework, grade one person's work on a separate sheet of paper, then photocopy your comments onto everyone else's homework. 2.Should you have very skilled cheaters in your class, try giving incorrect information during your lectures. This should result in incorrect answers on exams. Examples that have proven effective at this technique include: The three components of a computer system are Larry, Moe, and Curly. The only possible digits in the binary system are 0, 1, and 2. The three components of the CPU are the ALU, REGISTERS, and cheap bathroom lighting fixtures. The microphone is an output device. "Booting" the computer involves waving a large magnet over your hard drive for 60 seconds. MS-DOS is the operating system for the CRAY Y-MP. When preparing to purchase a new computer system running Windows, you should make sure it has at least 128,000 bytes of main memory. Protocols include saluting your computer and calling the mouse "sir". CPU stands for Ceramic Public Urinal. Structured Programming says that you can write any computer program using only three basic control structures: Sequence, Selection, and Guessing. LAB You are expected to spend at least 4 hours each week in the lab to assist with student's questions. Student's have been known to come up with some real beauties: "Why should I save it? I wasn't done yet." "My disk erased itself!" "Hurry up, I need help. This was due last week." "Directory? What's that?" "What do I need my textbook for? I'm using a computer." Here are the solutions to the most common problems: P: "The screen is blank - I can't see what I'm doing" S: Turn on the monitor P: "How do I get into Windows?" S: Stare at it long enough and it will start to look like candy. P: "I can't get this computer to do anything." S: Have them move to a computer that has a keyboard. P: "The stupid printer printed the wrong file." S: Reprimand the printer. P: "WordPerfect didn't do what I told it to do." S: Tell them they have to earn its respect first.

From: "Alexander Vinogradov" <aevin@link.cytspb.rssi.ru>

During a rather dull anatomic lecture, the old professor had abruptly inserted the beginning of the sentence: "So that not to become pregnant...", by which all students were wakened up. Not finishing it, he continued his discourse. He repeated this trick several times, at neither of them finishing the intriguing sentence but still keeping his auditory awake. After the lecture he was approached by one student: - But, professor, what was that means for not to become pregnant? - Oh, that... it's a cup of coffee. - But before or after ...? - Instead.

Anthon_Pang@mindlink.UUCP (Anthon Pang) From: (If any of these are not original, please blame it on my Commerce 335 professor, Dr. Yair Wand. Otherwise, all humour can be attributed to him as the source.) A physics professor was very strict about attendance, and despised tardiness. Every student caught arriving to class late (especially those interrupting his lecture) was quickly reprimanded in front of the whole class. Students were quick to comment on the professor's genetics. Well, one day a student entered through the front doors of the lecture hall, while the prof was writing notes on the chalkboard. The professor caught the student out of the corner of his eye (this acute sense of peripheral vision, further supported the rumours of his evolution), and turned to face the student. He demanded, "What do you think you're doing?". Being a science student, one naturally thinks quickly, so the student snapped up and replied, "I came down from the back to get a better look at the board". The prof smiled. Back in those days, it was required that in order for a student to receive credit for a particular course, a card (listing of his/her courses) had to be signed by the instructor/lecturer. It was, at the time, policy that students attend their courses. But depending on the size of the class, it was often quite possible to receive credit, even after not attending the class regularly. Not so, with this physics professor...if he didn't recognize you, you would have to repeat the course (& attend!). On one occasion, a student handed his card to be signed. The professor looked at the name, then at the student, and said, "I've never seen you in my class," and handed back the card. Now being a science student, he naturally thought quickly, and proceeded to the end of the line. When he was at the front again, he handed his card to the prof. The prof looked at the name, then at the student, and said, "You look familiar. OK", and signed the card.

From: "Keith E. Sullivan" <KSullivan@worldnet.att.net> SHORTAGE OF PROSTITUTES

Annoyed by the professor of anatomy who liked to tell "naughty" stories during class, a group of female students decided that the next time he started to tell one, they would all rise and leave the room in protest.

The professor, however, got wind of their scheme just before class the following day, so he bided his time. Then, halfway through the lecture, he began.

"They say there is quite a shortage of prostitutes in France."

The girls looked at one another, arose and started for the door.

"Young ladies," said the professor with a broad smile, "the next plane doesn't leave till tomorrow afternoon."

~From: Evu -- Mumbai, Maharashtra, India The Humour Man <dbarout@ilink.nis.za>

University of Delaware EE Department (smirk, true)

From: rih@udel.edu (Ron Ih) This happened in a class I was attending a few years ago.

While giving a lecture on the mechanics of momentum and kinetic energy transfer, my physics professor noticed a student busily snoozing in the fourth row of the auditorium. He turned to a girl sitting in the first row and asked her what the result of a collision between two particles with masses, velocities, and trajectories that he specified would be. After a few seconds of thinking and calculating she came up with the correct answer.

The professor then awoke the sleeping student and said, "You! Same question!"

The student, a bit stunned and bleary eyed, looked around and replied, "Same answer."

After the laughter died down the professor turned around and said, "OK, you got me on that one, I won't call on you again..."

From: no@idon'tknow.net (no no)
Subject: Science vs God
An anonymous dialogue, which I found brilliant and insightful:
"Professing to be wise, they became fools . . . "

"Let me explain the problem science has with Jesus Christ." The atheist professor of philosophy pauses before his class and then asks one of his new students to stand. "You're a Christian, aren't you, son?"

"Yes, sir."

"So you believe in God?" "Absolutely." "Is God good?" "Sure! God's good." "Is God all-powerful? Can God do anything?" "Yes." "Are you good or evil?" "The Bible says I'm evil." The professor grins knowingly. "Ahh! THE BIBLE!" He considers for a moment. "Here's one for you. Let's say there's a sick person over here and you can cure him. You can do it. Would you help them? Would you try?" "Yes sir, I would." "So you're good...!" "I wouldn't say that." "Why not say that? You would help a sick and maimed person if you could... in fact most of us would if we could...God doesn't. (No answer.) He doesn't, does he? My brother was a Christian who died of cancer even though he prayed to Jesus to heal him. How is this Jesus good? Hmmm? Can you answer that one?" (No answer) The elderly man is sympathetic. "No, you can't, can you?" He takes a sip of water from a glass on his desk to give the student time to relax. In philosophy, you have to go easy with the new ones. "Let's start again, young fella. Is God good?" "Er... Yes." "Is Satan good?" "No." "Where does Satan come from?" The student falters. "From... God..." "That's right. God made Satan, didn't he?" The elderly man runs his bony fingers through his thinning hair and turns to the smirking, student

audience. "I think we're going to have a lot of fun this semester, ladies and gentlemen." He turns back to the Christian. "Tell me, son, Is there evil in this world?" "Yes, sir." "Evil's everywhere, isn't it? Did God make everything?" "Yes." "Who created evil? (No answer) "Is there sickness in this world? Immorality? Hatred? Ugliness? All the terrible things - do they exist in this world?" The student squirms on his feet. "Yes." "Who created them? " (No answer) The professor suddenly shouts at his student. "WHO CREATED THEM? TELL ME, PLEASE!" The professor closes in for the kill and climbs into the Christian's face. In a still small voice: "God created all evil, didn't He, son?" (No answer) The student tries to hold the steady, experienced gaze and fails. Suddenly the lecturer breaks away to pace the front of the classroom like an aging panther. The class is mesmerized. "Tell me," he continues, "How is it that this God is good if He created all evil throughout all time?" The professor swishes his arms around to encompass the wickedness of the world. "All the hatred, the brutality, all the pain, all the torture, all the death and ugliness and all the suffering created by this good God is all over the world, isn't it, young man?" (No answer) "Don't you see it all over the place? Huh?" Pause. "Don't you?" The professor leans into the student's face again and whispers, "Is God good?" (No answer) "Do you believe in Jesus Christ, son?" The student's voice betrays him and cracks. "Yes, professor. I do." The old man shakes his head sadly. "Science says you have five senses you use to identify and observe the world around you. Have you seen Jesus?"

"No, sir. I've never seen Him." "Then tell us if you've ever heard your Jesus?" "No, sir. I have not." "Have you ever felt your Jesus, tasted your Jesus or smelt your Jesus...in fact, do you have any sensory perception of your God whatsoever?" (No answer) "Answer me, please." "No, sir, I'm afraid I haven't." "You're AFRAID... you haven't?" "No, sir." "Yet you still believe in him?" >> "...yes..." "That takes FAITH!" The professor smiles sagely at the underling. "According to the rules of empirical, testable, demonstrable protocol, science says your God doesn't exist. What do you say to that, son? Where is your God now?" {The student doesn't answer} "Sit down, please." The Christian sits...Defeated. Another Christian raises his hand. "Professor, may I address the class?" The professor turns and smiles. "Ah, another Christian in the vanguard! Come, come, young man. Speak some proper wisdom to the gathering." The Christian looks around the room. "Some interesting points you are making, sir. Now I've got a question for you. Is there such thing as heat?" "Yes," the professor replies. "There's heat." "Is there such a thing as cold?" "Yes, son, there's cold too." "No, sir, there isn't." The professor's grin freezes. The room suddenly goes very cold. The second Christian continues. "You can have lots of heat, even more heat, super-heat, mega-heat, white heat, a little heat or no heat but we don't have anything called 'cold'. We can hit 458 degrees below zero, which is no heat, but we can't go any further after that. There is no such thing as cold, otherwise we would be able to go colder than 458 - You see, sir, cold is only a word we use to describe the absence of heat. We cannot measure cold. Heat we can measure in thermal units because heat is energy. Cold is not the opposite of heat, sir, just the absence of it." Silence. A pin drops somewhere in the classroom. "Is there such a thing as darkness, professor?" "That's a dumb question, son. What is night if it isn't darkness? What are you getting at ... ?" "So you say there is such a thing as darkness?" "Yes..." "You're wrong again, sir. Darkness is not something, it is the absence of something. You can have low light, normal light, bright light, flashing light but if you have no light constantly you have nothing and it's called darkness, isn't it? That's the meaning we use to define the word. In reality, Darkness isn't. If it were, you would be able to make darkness darker and give me a jar of it. Can you...give me a jar of darker darkness, professor?" Despite himself, the professor smiles at the young effrontery before him. This will indeed be a good semester. "Would you mind telling us what your point is, young man?" "Yes, professor. My point is, your philosophical premise is flawed to start with and so your conclusion must be in error...." The professor goes toxic. "Flawed...? How dare you...!"" "Sir, may I explain what I mean?" The class is all ears. "Explain... oh, explain..." The professor makes an admirable effort to regain control. Suddenly he is affability itself. He waves his hand to silence the class, for the student to continue. "You are working on the premise of duality," the Christian explains. "That for example there is life and then there's death; a good God and a bad God. You are viewing the concept of God as something finite, something we can measure. Sir, science cannot even explain a thought. It uses electricity and magnetism but has never seen, much less fully

understood them. To view death as the opposite of life is to be ignorant of the fact that death cannot exist as a substantive thing. Death is not the opposite of life, merely the absence of it." The young man holds up a newspaper he takes from the desk of a neighbor who has been reading it. "Here is one of the most disgusting tabloids this country hosts, professor. Is there such a thing as immorality?" "Of course there is, now look..." "Wrong again, sir. You see, immorality is merely the absence of morality. Is there such thing as injustice? No. Injustice is the absence of justice. Is there such a thing as evil?" The Christian pauses. "Isn't evil the absence of good?" The professor's face has turned an alarming color. He is so angry he is temporarily speechless. The Christian continues. "If there is evil in the world, professor, and we all agree there is, then God, if he exists, must be accomplishing a work through the agency of evil. What is that work, God is accomplishing? The Bible tells us it is to see if each one of us will, of our own free will, choose good over evil." The professor bridles. "As a philosophical scientist, I don't view this matter as having anything to do with any choice; as a realist, I absolutely do not recognize the concept of God or any other theological factor as being part of the world equation because God is not observable." "I would have thought that the absence of God's moral code in this world is probably one of the most observable phenomena going," the Christian replies. "Newspapers make billions of dollars reporting it every week! Tell me, professor, do you teach your students that they evolved from a monkey?" "If you are referring to the natural evolutionary process, young man, ves, of course I do." "Have you ever observed evolution with your own eyes, sir?" The professor makes a sucking sound with his teeth and gives his student silent, stony stare. "Professor, since no one has ever observed the process of evolution at work and cannot even prove that this process is an on-going endeavor, are you not teaching your opinion, sir? Are you now not a scientist, but a priest?" "I'll overlook your impudence in the light of our philosophical

discussion. Now, have you quite finished?" the professor hisses.

"So you don't accept God's moral code to do what is righteous?"

"I believe in what is - that's science!"

"Ahh! SCIENCE!" the student's face splits into a grin. "Sir, you rightly state that science is the study of observed phenomena. Science too is a premise which is flawed..."

"SCIENCE IS FLAWED..?" the professor splutters.

The class is in uproar.

The Christian remains standing until the commotion has subsided. "To continue the point you were making earlier to the other student, may I give you an example of what I mean?"

The professor wisely keeps silent.

The Christian looks around the room. "Is there anyone in the class who has ever seen the professor's brain?"

The class breaks out in laughter.

The Christian points towards his elderly, crumbling tutor. "Is there anyone here who has ever heard the professor's brain... felt the professor's brain, touched or smelt the professor's brain?" No one appears to have done so. The Christian shakes his head sadly. "It appears no-one here has had any sensory perception of the professor's brain whatsoever. Well, according to the rules of empirical, testable, demonstrable protocol, science says the professor has no brain."

The class is in chaos. The Christian sits... Because that is what a chair is for.

From: Mad Michi <mad.michi@softhome.net> ACADEMIC LIKE ME

Jan 3rd, 1995 I have long heard of the lives of the privileged classes, and now I have prepared myself to experience life as a member. Tomorrow, I will don the the uniform of the academic and re-enter society, NOT as I once was, a worker and pawn of the educated classes, but as a peer of those very people. Tomorrow, I shall become an academic!

Jan 4th, 1995 Dressed in a pair of green slacks with shortened legs, red cardigan and egg-yolk-stained tee-shirt; sporting a scraggly beard and armed only with a pipe, I stepped onto the University Campus. Immediately upon mumbling some incomprehensible gibberish, I was greeted on with respect and awe by my fellow academia

Applying for tenure was simple. The questions were very direct:

They:	Do you know what you're doing?	
Me:	This is Belgium, right?	
They:	You have a masters in English?	
Me:	I have a Red Volvo!	
They:	And you're applying for a position in the	
	department of Physics?	
Me:	I think sometimes, therefore I am illogical!	

I was appointed immediately and released to an unsuspecting student population.

Jan 5th 1995 Today was my first as a lecturer. I prepared concientiously by drinking heavily, watching lots of television and going to bed very late the preceding night

Turning up at my lecture the prescribed 1 minute late, I spoke of Yeats and the passion of his poetry.

The first year Physics students were left speechless.

Jan 6th 1995 I did not go to work today, due to my thinking it was Saturday.

Jan 7th 1995 I did not go to work today, due to my thinking it was a Wednesday

Jan 8th 1995 I went to work today and was distressed at the lack of attendance.

Jan 9th 1995 Being conscientious in the maintenance of my diary, I take a well deserved holiday knowing that in three more days I will be eligible for a six month sebattical.

Jan 12th 1995 My lecture this morning was a landmark effort. I launched into the explanation of the right-hand-rule, then, remembering that I was an academic, subverted myself into discussing of the right-hand-rule of hitch-hiking, the dangers of hitchhiking, the dangers of hitching in South America, my Holiday in South America, the woman I met in South America, the place she worked at, their physics department, then to finish off, what their physics department said about the right-handrule.

I think I was well received

Jan 13th 1995 A minor piece of confusion here in that I brought my Telephone book instead of my lecture notes.

I improvised the basic electrical safety section of the course with the aid of two paper clips, a student and a handy power point. I feel sure the class now appreciates the dangers of electricity. Attendance dropped by one. Jan 14th Being a friday, I decide to excite my first year pupils with an experiment in wave theory. I walked into the lab, waved, and left. I'm sure my students appreciated the humourous content Jan 17th Having now mastered when weekends occur, I turned up to receive confirmation of my sebattical, taking it, on full pay, immediately Jul 17th Back from sebattical I realise that I did not make arrangements for a stand-in lecturer. In an attempt to catch up for the lost time, I set the students some homework, pages 1-375, read and do all exercises. Jul 18th Attendance was exceptionally low today with only one student in class. When I asked him how his homework was going as his entire coursework depended on it. He screamed and left. I marked him absent and informed the grants department that no-one was attending my courses. Jul 21st My students are all back having received the letter informing them that grants are only paid to attending students. Scholarship students, with a far harsher attendance policy, are openly weeping. Jul 24th I am now eligible for three months extra-curricular sebattical, which I decide to take immediately, warning my students that the exam will be held the day I return, covering all aspects of the course, including the last minute addition of the Encyclopedia Brittanica to the Book List. I expect all students to have a copy. Oct 24th. Exam day. Having no preparation time, I use last years exam and substitute different values for the equation. I randomly appoint a student from another class to work out the answers and mark the exams. Oct 27th I receive the results of the exam which indicate that 89% of the class passed the exam. Lauded as an academic genius, I am awarded 6 months further paid sebbatical to study the effects of

The upgrade path to the most powerful and satisfying computer:

- * Pocket calculator
- * Commodore Pet / Apple II / TRS 80 / Commodore 64 / Timex Sinclair (Choose any of the above)
- * IBM PC
- * Apple Macintosh
- * Fastest workstation of the time (HP, DEC, IBM, SGI: your choice)
- * Minicomputer (HP, DEC, IBM, SGI: your choice)
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And then you reach the pinnacle of modern computing facilities:

Yes, you just sit back and do all of your computing through lowly graduate students. Imagine the advantages:

- * Multi-processing, with as many processes as you have students. You can easily add more power by promising more desperate undergrads that they can indeed escape college through your guidance. Special student units can even handle several tasks *on*their*own*!
- * Full voice recognition interface. Never touch a keyboard or mouse again. Just mumble commands and they *will* be understood (or else!).
- * No hardware upgrades and no installation required. Every student comes complete with all hardware necessary. Never again fry a chip or \$10,000 board by improper installation! Just sit that sniveling student at a desk, give it writing utensils (making sure to point out which is the dangerous end) and off it goes.
- * Low maintenance. Remember when that hard disk crashed in your Beta 9900, causing all of your work to go the great bit bucket in the sky? This won't happen with grad. students. All that is required is that you give them a good *whack!*

upside the head when they are acting up, and they will run good as new.

- * Abuse module. Imagine yelling expletives at your computer. Doesn't work too well, because your machine just sits there and ignores you. Through the grad student abuse module you can put the fear of god in them, and get results to boot!
- * Built-in lifetime. Remember that awful feeling two years after you bought your GigaPlutz mainframe when the new faculty member on the block sneered at you because his FeelyWup workstation could compute rings around your dinosaur? This doesn't happen with grad. students. When they start wearing and losing productivity, simply give them the PhD and boot them out onto the street to fend for themselves. Out of sight, out of mind!
- * Cheap fuel: students run on Coca Cola (or the high-octane equivalent -- Jolt Cola) and typically consume hot spicy chinese dishes, cheap taco substitutes, or completely synthetic macaroni replacements. It is entirely unnecessary to plug the student into the wall socket (although this does get them going a little faster from time to time).
- * Expansion options. If your grad. students don't seem to be performing too well, consider adding a handy system manager or software engineer upgrade. These guys are guaranteed to require even less than a student, and typically establish permanent residence in the computer room. You'll never know they are around! (Which you certainly can't say for an AXZ3000-69 150gigahertz space-heater sitting on your desk with its ten noisy fans...) [Note however that the engineering department still hasn't worked out some of the idiosyncratic bugs in these expansion options, such as incessant muttering at nobody in particular, occasionaly screaming at your grad. students, and posting ridiculous messages on world-wide bulletin boards.]

So forget your Babbage Engines and abacuses (abaci?) and PortaBooks and DEK 666-3D's and all that other silicon garbage. The wave of the future is in wetware, so invest in graduate students today! You'll never go back!

From: north@hgl.signaal.nl (S.North)
In a forest a fox bumps into a little rabbit, and says, "Hi, junior, what
are you up to?"
"I'm writing a dissertation on how rabbits eat foxes," said the rabbit.
"Come now, friend rabbit, you know that's impossible!"
"Well, follow me and I'll show you."
They both go into the rabbit's dwelling and after a while the rabbit
emerges

with a satisfied expression on his face.

Along comes a wolf. "Hello, what are we doing these days?"

"I'm writing the second chapter of my thesis, on how rabbits devour wolves."

"Are you crazy? Where is your academic honesty?"

"Come with me and I'll show you."

As before, the rabbit comes out with a satisfied look on his face and this time he has a diploma in his paw.

The camera pans back and into the rabbit's cave and, as everybody should have guessed by now, we see an enourmous mean-looking lion sitting next to the bloody and furry remains of the wolf and the fox.

The moral of this story is:

It's not the contents of your thesis that are important -- it's your PhD advisor that counts.

From: Tonu Laas <tony@tpu.ee>
After a party for getting a master degree, one of graduate students says
to colleagues:
"Henceforth I will go only in funerals and not to graduation parties."
"Why that?" ask the others.
"At funerals nobody asks "Are you the next one?"

From: "Kelvin Mok" <klmok@tunnel.cal.shaw.wave.ca>

Umpteen years ago when I was an undergrad the Zoology Department used to keep a gibbon under the rooftop sheds. Every morning and evening this gibbon would whoop it up and cry like a child, a very mournful, disturbing and distracting cry that carried half across the campus. That expression of territorial behavior had many students mystified.

Well during one of the lab classes a student asked the teaching assistant "What is that noise?"

Without missing a beat the TA said "Well a few years ago we had a brillinat student. Studied too hard. Couldn't hack it and went mad. We had to lock him in the roof to let him finish his thesis."

Our man could certainly tell a whopper when he hears one but couldn't call the TA a liar. So went to higher authority.

"Prof Harrison, TA says that there is a mad student locked upstairs. Is that true?"

"Huh?" The Prof's jaw dropped. One could clearly see the thoughts that raced through his mind. "What has today brought?"

Then the light bulb lit - Ah! thatTA. Postscriptum: I was the only one who saw the whole thing because the joke went so smoothly and was totally unplanned. The old prof had passed away and the TA is now the Asst. Prof. She said she had no recollection of the incident but we really had a good laugh when I retold that story over a class reunion. Nearly everyone fell off their chairs. That student went on to law school. Always wondered if the gibbon had anything to do with it. From: "Keith E. Sullivan" <KSullivan@worldnet.att.net> Subject: Graduate School HARD EARNED Ph.D. After 12 long, difficult years of study, my daughter finally earned her Ph.D. On the night of her graduation, we celebrated at an exclusive restaurant. "Honey," I said, raising a glass in her direction, "we are so happy for you." "Thanks, Dad," my daughter replied. "But from now on, it will be DOCTOR honey." Gerald DeHaan GRADUATE EDUCATION REQUIREMENTS "Many of the requirements of graduate education ... are "dragons." Dragons have no purpose except to be slain; that is, they are tests of motivation to prove how difficult it is to get knighthood (or the valuable doctorate) and, therefore, how valuable those people must be who already have it (the faculty)." --Mills (1953) cited by Karon, 1995 in "Becoming a first-rate professional psychologist despite graduate education." James Taylor <tayl5980@mach1.wlu.ca> Quote of the Day <qotd-request@ensu.ucalgary.ca> =-=-=-=-=-=-=-=-=-=-=-= A GRAD-STUDENT CHECKLIST 6:30 am Wake up and lie awake in bed. 6:31 Realize you spent \$18 on last night's dinner, means no eating out for the next 6 weeks. 6:32 Hit snooze button. Go back to sleep. 7:00 Wake up suddenly with heart in mouth when you realize you didn't hit the snooze button -- you turned it off. 7:01 Fall asleep again.

- 7:44 Wake up with heart in mouth again.
- 7:45 Get ready to go to school, will shave tomorrow, will eat early brunch at (Denny's/Penny's/Lenny's/Dinko's whatever cafeteria).
- 8:03 Arrive at school. Realize your foreign office mate arrived earlier today must have got more work done.
- 8:04 Pass by Advisor's office, chat with Secretary to find out if he is coming in today. He is, darn. Need to start work on the draft due this afternoon.
- 8:15 Read electronic mail.
- 8:20 Delete mail from students taking CMPSC201 regarding questions about the class. Hate your TA job. Depression: too much work to do today.
- 9:00 For jump-start: go to Pepsi machine.
- 9:05 Kick Pepsi machine; promise yourself to call up the company and ask for your money back. Wonder why they would believe you.
- 9:33 Start printing out loads of stuff that may be vaguely related to your work.
- 9:41 Early morning stupefaction. Mutter racist comments to yourself about your office mate.
- 9:43 Curse your office mate in a low tone he would not comprehend. Feel good about him not grasping English well.
- 9:58 Finger everyone in the department and most people half way around the world (using the "finger" command, of course)
- 10:19 Feel sleepy, should not have stayed late playing Tetris last night.
- 10:31 Momentary panic attack!!!!!!!!!!
- 10:43 Edit .plan file. Write a shell program to edit .plan more easily.
- 10:59 Drop in at advisor's office and borrow something you don't need & and kinda make him aware you are working hard on your project.
- 11:05 Perverted daydreams.
- 11:11 Read electronic news. Midmorning yawn time.
- 11:34 Start typing junk at a very high key-in rate to pretend you are working hard as your advisor passes by from outside.
- 11:35 Press the BackSpace key for one and a half minute until all the garbage you typed in is erased. Realize that you can type

more than 256 characters per half minute.

- 11:41 Flirt with the new girl in the department.
- 11:45 Print out some slides for afternoon's draft + presentation.
- 11:47 Print them again, you forgot to change the date from last presentation.
- 11:49 Print another copy in case this one gets lost.
- 11:51 Completely forget about suing the coffee machine company.
- 12:15 pm Hunger pangs:
- 12:20 BigMac/Fries time. Drink a not-so-cold generic can of cola from your desk. Ch-Ching, you just saved 35 cents by buying bulk cola.
- 1:00 Group Meeting with advisor.

1:14 Sudden awareness of one's shallowness. Resentment towards foreign

office mate for sucking up to your advisor. Get reminded by your advisor that you need to do some more work for your literature survey.

- 1:51 Advisor hands you the reddened copy of your draft for corrections.
- 1:51:02 The 49 second urge to murder advisor begins!!
- 1:51:52 Realize that he controls your assistantship/grade/ graduation possibility/graduation date/all job opportunities/ and the rest of your life.
- 1:52:53 Thank him.
- 1:52:54 Thank yourself for not saying something stupid to your advisor.
- 1:53:00 Splitting headache #1.
- 1:59 Check electronic mail, don't reply though, you are too busy to do that.
- 2:06 More generic cola.
- 2:17 Oh No, it is my turn to cook tonight. :-(
- 2:30 Sit through the class you were told to sit through.
- 2:39 Look outside the window make unrealistic plans to quit this degree program and take up a job. Wonder why blonde girls are so pretty.
- 2:48 More perverted daydreams. Close the office door and open a few .gif files. Sharpen pencil.

- 3:06 Worry about never graduating. Time to write a letter -- NOT! no time for that. Rearrange desk. Call up bank; see if you have any money. Fear of losing aid next fall. Read latex manuals to figure out how to put &\$%&% in %\$^% format.
- 3:43 Watch the clock. Make plans to do a all-nighter tonight. Vow to watch only 2 TV programs
- 4:58 Notice Advisor leave.

4:58:01 Sudden sense of freedom. Go home for quick, short dinner break.

9:00 Come into the office.

sense

- 9:01 The hard working grad student you are, you have to come to the office late at night to "get the work done."
- 9:03 Check electronic mail. Decide it would be a good time to attack those ftp sites since network won't be loaded. Run into "since network won't be loaded" traffic and get the pictures into your machine. Compress all unwanted research/class directories to make space. Back up all your pictures.
- 10:11 Admire pictures. Begin work. Realize you need references. Realize its too late today to go to the library. Sudden feeling of having wasted the day.
- 10:49 Sudden feeling of possibly having to waste the night. Decide to turn in early and come back very early tomorrow morning. Decide to play a Tetris on the system to put yourself in a good mood.
- 11:15 Play game after game after game to improve your score and get on the scoreboard. Realize that your office mate is still at number 6, two notches above you on the scoreboard.
- 12:20 Play until you beat your office mate into the 7th place. A
- of achievement !! Yes, today was not wasted !! Return home to find

your roommate watching David Letterman reruns on NBC. Tell him about the "hard working grad student day you had." Discuss philosophy with roommate

1:09 Think about becoming a philosopher and dining with 4 others. (The Dining Philosophers problem, hee hee :-) (Comp Sci joke)

Argue with him about politics, why people prefer Japanese cars and whether it is better to set the heat to "hot" or "cold" to defrost the windshields faster.

- 1:49 Realize neither of you have bought milk today. Get reminded of the "too much milk problem"
- 2:04 Forget about getting up early. Turn the phone ringer off and

go to sleep.

(repeat)

Deanna <deanna@keylink.net> David A. Rinke II <drinkeii@erie.net> --Keith's Mostly Clean Humor & Weird (McHaw) List

To subscribe or unsubscribe, write maiser@mail.otherwhen.com and put "SUBSCRIBE McHawList" or "UNSUBSCRIBE McHawList" in the message body. Send contributions to KSullivan@worldnet.att.net

From: G_Popper@Hotmail.Com WHY GRADUATE STUDENTS ARE LIKE CATS

They are your friends if you feed them. They talk to you and you can't understand what they are saying. They tend to run amok in the apartment/house for no apparent reason in short bursts of frenzy, followed by dormancy. They can survive with a minimum of attention, but do like to be noticed and praised every so often. They are creatures of the night. They follow instructions if they feel like it. They can be soft and cuddly when they feel like it. Cats barf hairballs, grad students barf highballs (and any other drink they can consume to excess). Food is very important to them. Sleep is also very important to them. Both can sleep or otherwise ignore you while you are talking to them. Both hide when something big and noisy (vacuum cleaner or supervisor) comes into their vicinity They eat some of the most disgusting things (free food) They can sleep just about anywhere They have their own set of morals They both like using the computer (cats for warmth) They both could care less about (insert anything here) They both get amazingly high on herb extracts They both represent anarchy in its most creative form They both show a general lack of respect for authority You see them only at dinner hour You get looks like "and you are?", "this concerns me how?", "am I under arrest? can I go now?" ,and "duuuude!" from them at least once a day The idea of movement horrifies them They both tend to collapse in the middle of rooms due to alcohol and/or a warm sunbeam. They are both vomit machines

From: raja@cs.uiuc.edu (Bala Rajagopalan)

Recent Results in Theory of Computing - I

"The Halting Problem is Solvable"

A fundamental question in the graduate computer science curriculum can be posed as follows: Given an average grad student doing a Ph.D, will the student ever complete his dissertation? This problem has been termed the "Halting Problem," and it has been an open problem thus far. In the following, we show that the halting problem is solvable. Furthermore, the problem can be solved within the time stipulated by the Graduate College for Ph.Ds or, in the worst case, with only a constant number of petitions for extensions.

The halting problem was first formulated by Alan Turing, who observed a number of his graduate students being apparently busy all the time but never graduating. Turing tried to solve the problem by first stopping all assistantships after the sixth year and then by purging all games from the research computers. Needless to say, his efforts were fruitless. Later, Church almost succeeded in solving the problem when he placed notices in grad students' mailboxes indicating attractive jobs in industry with several orders of magnitude higher remuneration. The so called Church's thesis was that the halting problem is solvable, given enough financial motivation. Church's idea backfired when grads found out that they have to actually work to earn money in the outside world. Thus, far from solving the halting problem, Church aggravated it (After this, we are not sure whether Church himself graduated). Recently, Cook et al have shown that the halting problem falls under a new complexity class, "NP Hairy." (NP hairy is the class of hopelessly complicated problems with no known solutions. The hardest problem in NP hairy has been shown to be the problem of trving to claim standard deductions in the 1040 form). In the following, we show that the halting problem is indeed solvable. For this, we assume the existence of a "Super Grad," who is capable of working in any area in CS (except possibly numerical analysis). For notational convenience, we call this super grad, S sub G sup i,j sub * (written using a funky theoretical CS font). The property of Super grad is that, given the description of any grad (mostly in terms of the number of newsfiles he/she reads every day) and a description of his/her thesis topic, Super grad will either halt with a dissertation or keep publishing technical reports indefinitely. Now, we give Super grad a description of himself and his own thesis topic. If Super grad halts, we are done (and so is he) otherwise we get a stream of technical reports. But by the "fundamental research theorem" of CS Departments (refer to the graduate study manual) any five arbitrary technical reports on unrelated topics can be compiled into a Ph.D thesis. Thus, we are done in the second case too.

Finally, how long does it take for a dissertation to be completed? The time is either less than or equal to the duration allowed by the Grad College for the completion of a Ph.D or it is greater. In the latter case, infinite number of petitions can be filed for extensions. Since the Grad College never remembers previous petitions, the total number of petitions received by the Grad College is always one, a small constant. (QED)

From: Tonu Laas <tony@tpu.ee>
Q: Why is the thesis of a doctoral degree worse than the thesis of a
master
degree?
A: Because the theses for a doctoral degree are written by students of
masters, but theses for a doctoral degree - by doctors.

From: Amitabha Roy <aroy@cs.uoregon.edu> GRADUATE LIFE

A grad student, a post-doc, and a professor are walking through a city park and they find an antique oil lamp. They rub it and a Genie comes out in a puff of smoke.

The Genie says, "I usually only grant three wishes, so I'll give each of you just one."

"Me first! Me first!" says the grad student. "I want to be in the Bahamas, driving a speedboat with a gorgeous woman who sunbathes topless." Poof! He's gone.

"Me next! Me next!" says the post-doc. "I want to be in Hawaii, relaxing on the beach with a professional hula dancer on one side and a Mai Tai on the other." Poof! He's gone.

"You're next," the Genie says to the professor.

The professor says, "I want those guys back in the lab after lunch."

From Aliquotes Volume V Number x October/97 (rogerb@microsoft.com)

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One... belief in a bright future

Last Seen... between transfer into PhD programme and and present

If Found... please return to nearest graduate student

From Aliquotes Volume V Number vii July/97 (rogerb@microsoft.com) While it is true that William Shakespeare was an extremely prolific playwright and is known the world over for his keen insights into the human condition, it is a much lesser known fact that Bill was also a graduate student in the Department of Alchemy at the University of Avon (home of the "Fighting Lip Balms" football team). His experiences in science have lead to graduate school references in a number of his plays, as indicated below. "My friends were poor but honest." - All's well that ends well, act I, scene ii. "Oft expectations fail, and most oft there where most it promises." - All's well that ends well, act II, scene i. "The little foolery that wise men have makes a great show." - As you like it, act I, scene ii. "My pride fell with my fortunes." - ibid. "A wretched soul, bruised with adversity."

A comedy of errors, act II, scene i.
"Some griefs are medicinable."
Cymbeline, act II, scene ii (originally linked with the line "Get thee
to a med school." which was later adapted for Hamlet.)

From: David A. Rinke II <drinkeii@erie.net>, Natalie Brady
<Natalie_Brady@maclan.mcgill.ca>, Tonia Sciannamblo
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E. Sullivan <KSullivan@worldnet.att.net>

WHAT YOUR ADVISOR SAYS	WHAT YOUR ADVISOR MEANS
Look at this as a learning experience	You're going to suffer
Let me explain the format of the defense.	Let me make you even more nervous.
I'm here to lend you support.	I'm here to destroy you so you won't look smarter than me.
I found the overall concept interesting.	This is my token compliment before ripping your idea to shreds.

I would like to have had more time to study this.

I have some concerns about the insult theory upon which your study is based.

There are some aspects of the study that I would like to hear more about.

Your hypotheses are not strongly enough linked to the existing literature.

Your research is an interesting extension of my own work.

You have failed to take into account some of the more relevant literature.

I would like you to explain... stuff

Your statistical results don't seem to support your hypothesis.

Your selection of statistical understands tests is rather simplistic. in.

How did you ensure that you had drawn a random sample?

This is a great topic for your thesis.

You will be ready to write up soon, but need to do just one more experiment/program/chip.

Your funding is secure.

Your funding is probably OK.

I'll see what we can do about funding.

Think of this as an investment in skills that will be useful I hate the theory, but I can't

I didn't read it.

the author so I'll insult your work instead.

I read it but I just don't remember anything about it.

You came up with an innovative idea and I want to make sure you never do it again.

Why didn't I think of this before you did?

You failed to cite me.

I don't know anything about this so you'll have to explain it to me.

I don't understand statistics.

I'm the only one here that

statistics and I wanted to rub it

I had to come up with at least one question and this one always works.

This is some grunge work that will help me get tenure.

You have now become a useful slave, and I am not about to let you graduate without doing more footwork for me.

Maybe.

Start worrying.

Start looking for another advisor.

We're going to exploit you to the gills.

to you in your later career. Don't listen to XYZ, just Both XYZ and I are fools, but I'm listen to me. funding you. Let's wrap this up. I'm hungry. Could you step out of the room We decided beforehand to give you while the committee comes to a your degree, but we still want to make decision? you sweat some more. Write another chapter. Write another chapter.

From: srt@cs.ucla.edu (Scott R. Turner) TOP TEN EXCUSES WHY YOU HAVEN'T GRADUATED YET

10. Recurring bouts of malaria slow research.

- 9. Cost of translation from Ancient Sumerian limits obtainability of important research materials.
- 8. Can't remember anything that happened in 1986.
- 7. Six month sabbatical to train for World Bellyflop
- Championships (placed sixth, highest U.S. finisher).
- 6. I.M. coaching position a lifelong responsibility.
- 5. Certain I can win with a female gnome paladin.
- 4. Could type a lot faster on a Dvorak keyboard.
- 3. Wasted time memorizing UUCP map of the US and Australia.
- 2. Thought the major field exam was "just a joke" until too late.

And the Best Reason for Not Yet Graduating:

1. Could have finished years ago, but wanted dissertation to rhyme.

From: Aliquotes iv.iii (journal) (rogerb@microsoft.com) TEN REASONS WHY MY THESIS TOOK SO LONG TO WRITE

1. I had to run that gel nine times before I loaded just enough to keep the

contaminants from showing.

- 2. I couldn't remember the biological significance of my work.
- 3. Writing is very boring ... although, I now have high score on "Wolfenstein".
- 4. I had to repeat that last experiment four times to get the results I wanted^D^D^D^D^D^D^D just right.
- 5. I had to wait three weeks for new cells as my original tissue cultures are now a rhinovirus purification kit.
- 6. I was to busy in interviews with future employers (yeah right!).
- 7. My psychotherapy sessions took longer than I expected, but I'm apparently doing much better.
- 8. I wanted my thesis to be not only informative but an entertaining work of fiction.
- 9. Mine is not a hypo-thesis, it's a hyper-thesis.

^{10.}I don't want to leave ... please, don't make me go ... I like it here ..

it's scary out there ...

From: mnsotn@picard.cs.wisc.edu (Christopher Bovitz) 189 THINGS (NOT) TO DO AT OR FOR YOUR THESIS DEFENSE (in no particular order) Written by Peter Dutton, Jim Lalopoulos, Alison Berube, and Jeff Cohen, grad students extrordiannaire (#1 - 101). Appended by Chris Bovitz, grad student grandioso (#102-131). (#132 from Mary C. Liles). Patricia Whitson and a few others (#130-...) 1) "Ladies and Gentlemen, please rise for the singing of our National Anthem..." 2) Charge 25 cents a cup for coffee. 3) "Charge the mound" when a professor beans you with a high fast question. 4) Interpretive dance. 5) "Musical accompaniment provided by ... " 6) Stage your own death/suicide. 7) Lead the specators in a Wave. 8) Have a sing-a-long. 9) "You call THAT a question? How the hell did they make you a professor?" 10) "Ladies and Gentlemen, as I dim the lights, please hold hands and concentrate so that we may channel the spirit of Lord Kelvin..." 11) Have bodyguards outside the room to "discourage" certain professors from sitting in. 12) Puppet show. 13) Group prayer. 14) Animal sacrifice to the god of the Underworld. 15) Sell T-shirts to recoup the cost of copying, binding, etc. 16) "I'm sorry, I can't hear you - there's a banana in my ear!" 17) Imitate Groucho Marx. 18) Mime. 19) Hold a Tupperware party. 20) Have a bikini-clad model be in charge of changing the overheads. 21) "Everybody rhumba!!" 22) "And it would have worked if it weren't for those meddling kids..." 23) Charge a cover and check for ID. 24) "In protest of our government's systematic and brutal oppression of minorities..." 25) "Anybody else as drunk as I am?" 26) Smoke machines, dramatic lighting, pyrotechnics... 27) Use a Super Soaker to point at people. 28) Surreptitioulsy fill the room with laughing gas. 29) Door prizes and a raffle. 30) "Please phrase your question in the form of an answer..." 31) "And now, a word from our sponsor..." 32) Present your entire talk in iambic pentameter. 33) Whine piteously, beg, cry... 34) Switch halfway through your talk to Pig Latin. Or Finnish Pig Latin. 35) The Emperor's New Slides ("only fools can't see the writing...") 36) Table dance (you or an exotic dancer). 37) Fashion show. 38) "Yo, a smooth shout out to my homies..."

39) "I'd like to thank the Academy..." 40) Minstrel show (blackface, etc.). 41) Previews, cartoons, and the Jimmy Fund. 42) Pass the collection basket. 43) Two-drink minimum. 44) Black tie only. 45) "Which reminds me of a story - A Black guy, a Chinese guy, and a Jew walked into a bar..." 46) Incite a revolt. 47) Hire the Goodyear Blimp to circle the building. 48) Release a flock of doves. 49) Defense by proxy. 50) "And now a reading from the Book of Mormon..." 51) Leave Jehovah's Witness pamphlets scattered about. 52) "There will be a short quiz after my presentation..." 53) "Professor Robinson, will you marry me?" 54) Bring your pet boa. 55) Tell ghost stories. 56) Do a "show and tell". 57) Food fight. 58) Challenge a professor to a duel. Slapping him with a glove is optional. 59) Halftime show. 60) "Duck, duck, duck, duck... GOOSE!" 61) "OK - which one of you farted?" 62) Rimshot. 63) Sell those big foam "We're number #1 (sic)" hands. 64) Pass out souvenier matchbooks. 65) 3-ring defense. 66) "Tag - you're it!" 67) Circulate a vicious rumor that the Dead will be opening, making sure that it gets on the radio stations, and escape during all the commotion. 68) Post signs: "Due to a computer error at the Registrar's Office, the original room is not available, and the defense has been relocated to Made-up non-existent room number)" 69) Hang a pinata over the table and have a strolling mariachi band. 70) Make each professor remove an item of clothing for each question he asks. 71) Rent a billboard on the highway proclaiming "Thanks for passing me Professors X,Y, and Z" - BEFORE your defense happens. 72) Have a make-your-own-sundae table. 73) Make committee members wear silly hats. 74) Simulate your experiment with a virtual reality system for the spectators. 75) Do a soft-shoe routine. 76) Throw a masquerade defense, complete with bobbing for apples and pin-the-tail-on-the-donkey. 77) Use a Greek Chorus to highlight important points. 78) "The responsorial psalm can be found on page 124 of the thesis..." 79) Tap dance. 80) Vaudeville. 81) "I'm sorry Professor Smith, I didn't say 'SIMON SAYS any questions?'. You're out."

82) Flex and show off those massive pecs.

83) Dress in top hat and tails. 84) Hold a pre-defense pep rally, complete with cheerleaders, pep band, and a bonfire. 85) Detonate a small nuclear device in the room. Or threaten to. 86) Shadow puppets. 87) Show slides of your last vacation. 88) Put your overheads on a film strip. Designate a professor to be in charge of turning the strip when the tape recording beeps. 89) Same as #88, but instead of a tape recorder, go around the room making a different person read the pre-written text for each picture. 90) "OK, everybody heads down on the desk until you show me you can behave." 91) Call your advisor "sweetie". 92) Have everyone pose for a group photo. 93) Instant replay. 94) Laugh maniacally. 95) Talk with your mouth full. 96) Start speaking in tongues. 97) Explode. 98) Implode. 99) Spontaneously combust. 100) Answer every question with a question. 101) Moon everyone in the room after you are done. 102) Rearrange the chairs into a peace symbol. 103) Refer to yourself in the third person, like Julius Caesar did. 104) Mention your professor as "my helper." 105) Say that you'd like to thank a few people. Pull out the White Pages. Start reading. 106) Advertise it as "pot luck". 107) Talk in Klingonese. 108) Dress like your favorite character from "Star Trek". 109) Ask imaginary helpers to change transparencies; fly off the handle when they don't. 110) Wear a trenchcoat. And nothing else. 111) Dress in a Wild West style. 112) Go dressed in scuba gear. Use the oxygen tank. 113) Preface with the story of your life. 114) Wear a swimsuit from the opposite sex: man - wear a bikini, woman wear trunks. 115) Have bodyguards on your sides as you talk. The bigger, the better. Have a questioner thrown out "as an example." 116) Have someone wheel in a big cake with you in it. Jump out and begin. 117) Perform your defense as a Greek tragedy, kill yourself offstage when you're done. 118) Half way through, break down. Go to your professor, curl up on his or her lap and call him or her "Mommy". Suck your thumb. 119) Suddenly develop Turret's Syndrome. 120) Suddenly develop the China Syndrome. 121) "This defense has been sponsored by the fine people at (your favorite corporation)..." 122) Secede from the U.S. Give yourself political asylum. 123) Talk in Canadianese - add an "eh" after every sentence.

124) When a professor asks you a question, argue with your imaginary twin over the final answer. 125) Videotape it ahead of time, and get someone set it up to show. Come in the back and sit there. When your tape is done, ask for questions. In person. 126) Have every person pick a "CB" handle. Enforce their usage. Talk in CB lingo. End every statement with "good buddy." End every question with "over." 127) Provide party favors. Noisy ones. 128) Frequently ask if anyone has to go to the potty. 129) Mention that you have to hurry because "Hard Copy" is on in 15 minutes. 130) Dress like your school mascot. 131) Urge your committee that if they like your defense enough to tell two friends, and then they'll tell two friends, and so on, and so on... 132) Show up in drag accompanied by the Drag Queens you met at last night's performance and proclaim your thesis presentation will instead discuss: "Blue Eyeshadow: Our Friend Or Foe?" From: smitch@alcor.concordia.ca (Sidney N. Mitchell) 133) Plead the fifth ammendment if you can't answer a question. 134) Keep your back to the committee during the presentation and defense phases. 135) Answer only questions that begin with sir and end with sir. (tell your committe this beforehand). 136) Limit the number of questions that you will allow, and then when the limit is almost reached, go into aerobics terminology... four more...three more...two more..and...rest. 137) Ignore the committee and say "I think that young man/lady at the back has a question". 138) Have your parents call your committee members repeatedly the week before your defense to tell them how expensive it is putting a child through graduate school etc. 139) At the defense, have your parents sit directly behind your committee. 140) Burp, pass gas, scratch (anywhere repeatedly), and pick your nose. 141) "Laugh, will you? Well, they laughed at Galileo, they laughed at Einstein..." 142) Hand out 3-D glasses. 143) "I'm rubber, you're glue..." 144) Go into labor (especially for men). 145) Give your entire speech in a "Marvin Martian" accent. 146) "I don't know - I didn't write this." 147) Before your defense, build trapdoors underneath all the seats. 148) Swing in through the window, yelling a la Tarzan. 149) Lock the department head and his secretary out of the defense room. And the coffee lounge, the department office, the copy room, and the

mail

room. Heck, lock them out of the building. And refuse to sell them stamps. (NOTE: This is an inside gripe, based on conditions that existed in the ME department at WPI while we were there. Sorry.) 150) Roll credits at the end. Include a "key grip", and a "best boy". 151) Hang a disco ball in the center of the room. John Travolta pose optional. 152) Invite the homeless. 153) "I could answer that, but then I'd have to kill you" 154) Hide. 155) Get a friend to ask the first question. Draw a blank-loaded gun and "shoot" him. Have him make a great scene of dying (fake blood helps). Turn to the stunned audience and ask "any other wise-ass remarks?" 156) Same as #154, except use real bullets. 157) "Well, I saw it on the internet, so I figured it might be a good idea..." 158) Wear clown makeup, a clown wig, clown shoes, and a clown nose. And nothing else. 159) Use the words "marginalized", "empowerment", and "patriarchy". 160) Play Thesis Mad Libs. 161) Try to use normal printed paper on the overhead projector. 162) Do your entire defense operatically. 163) Invite your parents. Especially if they are fond of fawning over you. ("We always knew he was such an intelligent child") 164) Flash "APPLAUSE" and "LAUGHTER" signs. 165) Mosh pit. 166) Have cheerleaders. ("Gimme an 'A'!!") 167) Bring Howard Cosell out of retirement to do color commentary. 168) "I say Hallelujah, brothers and sisters!" 169) Claim political asylum. 170) Traffic reports every 10 minutes on the 1's. 171) Introduce the "Eyewitness Thesis Team". Near the end of your talk, cut to Jim with sports and Alison with the weather. 172) Live radio and TV coverage. 173) Hang a sign that says "Thank you for not asking questions" 174) Bring a microphone. Point it at the questioner, talk-show style. 175) Use a TelePromTer 176) "Take my wife - please!" 177) Refuse to answer questions unless they phrase the question as a limerick. 178) Have everyone bring wine glasses. When they clink the glasses with a spoon, you have to kiss your thesis. Or your advisor. 179) Offer a toast. 180) Firewalk. 181) Start giving your presentation 15 minutes early. 182) Play drinking thesis games. Drink for each overhead. Drink for each question. Chug for each awkward pause. This goes for the audience as well. 183) Swoop in with a cape and tights, Superman style. 184) "By the power of Greyskull..." 185) Use any past or present Saturday Night Live catchphrase. Not.

186) Stand on the table.

187) Sell commercial time for your talk and ad space on your overheads.188) Hold a raffle.189) "You think this defense was bad? Let me read this list to show you

what I COULD have done..."

(FINAL NOTE: Depending on the subject of your thesis, some of these things, such as tap dance, virtual reality, or reading from the Book of Mormon might be entirely appropriate, of course.)

(FINAL FINAL NOTE: Circulate this list freely if you'd like, but please remember to credit Peter, Jim, and Alison as the major authors.)

From: grizzly@iastate.edu (Eric H Anderson)
The graduate student's prayer (with apologies)

Our professor, who art in tenure, Hallowed by thy grant. Thy method come. They experiment be done, in lab as it is in textbooks. Give us this day, our daily enzyme. And forgive us our contamination, as we forgive our collaborators. And lead us not into chemistry, but deliver us from physics: For thine is the laboratory, and the method, and the glory, for ever. Amen.

From: pclarke@waite.adelaide.edu.au (Philip Clarke)
The Top Ten Lies Told by Graduate Students
(taken from the Harvard Crimson)

- 10. It doesn't bother me at all that my college roommate is making \$80,000 a year on Wall Street.
- 9. I'd be delighted to proofread your book/chapter/article.
- 8. My work has a lot of practical importance.
- 7. I would never date an undergraduate.
- 6. Your latest article was so inspiring.
- 5. I turned down a lot of great job offers to come here.
- 4. I just have one more book to read and then I'll start writing.
- 3. The department is giving me so much support.
- 2. My job prospects look really good.
- 1. No really, I'll be out of here in only two more years.

Top Five Lies Told by Teaching Fellows:

- 5. I'm not going to grant any extensions.
- 4. Call me any time. I'm always available.
- 3. It doesn't matter what I think; write what you believe.
- 2. Think of the midterm as a diagnostic tool.
- 1. My other section is much better prepared than you guys.

From: pclarke@waite.adelaide.edu.au (Philip Clarke)

You just might be a graduate student if you can analyze the significance of appliances you cannot operate. ... your carrel is better decorated than your apartment. ... you have ever, as a folklore project, attempted to track the progress of your own joke across the Internet. ... you are startled to meet people who neither need nor want to read. ... you have ever brought a scholarly article to a bar. ... you rate coffee shops by the availability of outlets for your laptop. ... everything reminds you of something in your discipline. ... you have ever discussed academic matters at a sporting event. ... you have ever spent more than \$50 on photocopying while researching a single paper. ... there is a microfilm reader in the library that you consider "yours." ... you actually have a preference between microfilm and microfiche. ... you can tell the time of day by looking at the traffic flow at the library. ... you look forward to summers because you're more productive without the distraction of classes. ... you regard ibuprofen as a vitamin. ... you consider all papers to be works in progress. ... professors don't really care when you turn in work anymore. ... you find the bibliographies of books more interesting than the actual text. ... you have given up trying to keep your books organized and are now just trying to keep them all in the same general area. ... you have accepted guilt as an inherent feature of relaxation. .. you reflexively start analyzing those greek letters before you realize that it's a sorority sweatshirt, not an equation. you find yourself explaining to children that you are in "20th grade".you start refering to stories like "Snow White et al." you frequently wonder how long you can live on pasta without getting scurvy you look forward to taking some time off to do laundry \ldots you have more photocopy cards than credit cards you wonder if APA style allows you to cite talking to yourself as "personal communication"

From: Aliquotes iv.i (journal) (rogerb@microsoft.com) A DAY IN THE LIFE

Damn. 5:30 am. Time to get out of bed. Ah, I really don't need to get up yet. I'll just snooze for a few more minutes. Dreaming now. I'm standing at a conveyor belt and stamping the lids onto bottles. Stamp, stamp, stamp.

Boss is looming over me. Wants to see me in the office. No I'm on a stage receiving the Nobel Prize. For what? What did I do? Rinnnnnnnnng. Whew. 12:00 noon. That was an awful dream. Sure glad I don't work in a place like

that. You know, I sort of feel like baking some bread for breakfast this morning. All I need to do is buy som flour and \dots AH CRAP!! Broke again. I

forgot I blew all that money on photocopying yesterday. Ah well, Kraft dinner sounds good...

Whow I'm at work before 3 pm today. I've got to stop being so hard on

myself like this. Wait a second - where is everybody? There isn't a soul around here! Oh yeah! There's a seminar at 3! What does this notice say about it? Yikes, who would go to listen to this talk? It sounds so *dull*. Let's see here - yep, there's coffe and donuts served. That explains it. I'm too late for it, so what shall I do? I know! I can do some computer work! There has got to be a video game high score to break somewhere! Okay, It's 6 pm. Perhaps I should go home and relax. Ah, alright, I'll check yesterdays experiments. OH MY GOD! I DON'T BELIEVE IT! THIS CAN'T BE TRUE! EVERYBODY WILL BE OVERWHELMED WITH AMAZEMENT! The experiments failed again. Should have guessed so. I tell you, someday that distilled water is going to have to be tested. It really is wreaking havoc with my science... Alright. Time to go home an do some reading. I always find it more productive to read my journals at home in a relaxed environment, away from the pressures of the lab. Let's see here. "The journal of Chemical Biology". Nah. How about "The Biological Chemistry Journal". Read it. Okay here's something new: "The Biological Journal of Chemistry". Yeah, this is it. Wow, first paragraph and I'm lost. Feeling sleepy ... stay awake ... can't ... Zzzzzzzzz. 8 pm. A day of grad school concludes.

(Not Andy Green's, however)

From: Aliquotes iv.i (journal) (rogerb@microsoft.com) From the people, who brought you "The graduate game of life" THE POST-DOC PERSONEL GAME

_____ Send out Sorry No Send out Not Hiring Hot tip START So you want |resume |Jobs here|C.V. |Just Now |On Job. A job? Advance | Go Back | Advance | Go Back | Advance Do you feel lucky? |One Space | 2 Spaces |One Space | 4 Spaces |One Space _____ So sorry Just a Rumor The game that challenges all post-doc's to find employment. |Go Back 6 spaces Just roll a die and move along the board accordingly. |========|
GO!!!| job| It's not as easy as it looks. | you|

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|WAY TO |Here's a | designed |just for

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From: KSullivan@worldnet.att.net "Keith's Mostly Clean Humor & Weird List" Subject: Exams

GOOD! YOU'RE LETTING IT OUT!

Tracy Thompson <thompson@spanport.umass.edu> relates:

I once wrote the word "kill" on a psychology final exam over and over for an hour. Strangely enough, I got an "A" on the exam in question. (Then again, I didn't write the "kill" on it till after I got it back.) Wei-Hwa Huang <whuang@ugcs.caltech.edu> [rec.humor.funny] ______ THE STUDENT MIND DURING A FINAL EXAM The last thoughts, and percentages of brain capacity * 10% The prof. never covered this section! * 10% Actual knowledge on the subject. The T.A.'s kinda cute! * 10% * 10% I knew I should have read the book! Soon this will all be behind me! * 10% * 10% I hope the curve is really low! * 10% PANIC ZONE! * 10% Prayers for a miracle flood, fire, tornado, hurricane, earthquake...etc... * 10% Eeny, meeny, miny moe... * 10% Summer break! HAND <smiles@bapp.com> ELECTRONICS STUDENT IN AN INTERVIEW Interviewer: Why is a thicker conductor necessary to carry a current in A.C. as compared to D.C.? Candidate: An AC current goes up and down (drawing a sinusoid) and requires more space inside the wire, so the wire has to be thicker. Interviewer: How will you tell if that wall outlet carries AC or DC? Candidate: I will put my finger in. If it is pushed away, it is DC. If it gets stuck, it was AC. Interviewer: How will you reverse direction of an induction motor? Candidate: I will remove the four bolts at the base, turn the motor around, and put back the bolts. Interviewer: How do you start a synchronous motor? Candidate: Interviewer: Stop! Stop! Candidate: Interviewer: How do you limit surge current within an integrated circuit? Candidate: By using a miniature circuit breaker. External (to student): Why does a capacitor block DC but allow AC to pass through? Student: See, a capacitor is like this ---| |--- , OK.

DC Comes straight, like this -----, and the capacitor

stops it. But AC, goes UP, DOWN, Up DOWN and jumps right

the capacitor!"

Examiner: "What is a step-up transformer?" Student: "A transformer that is put on top of electric poles." Examiner (smiling): "And then what is a step-down transformer?" Student (hesitantly): "Uh -- A transfomer that is put in the basement or in a pit?" Examiner (pouncing): "Then what do you call a transformer that is installed on the ground?" (Student knows he is caught -- can't answer) Examiner (impatiently): "Well?"

Student (triumphantly): "A stepless transformer, sir!"

From: Jonathan Lethem's really quite wonderful new novel, _As She Climbed Across the Table_ (Doubleday, 1997: ISBN 0-385-48517-4).

.....I looked at the clock. I'd slept all night and morning, through most of the last meeting of my freshman class.

I struggled back into my preworn clothing, my pretied shoes, ran to the anthropology building, and rushed upstairs to the airless classroom. Only one of my sixteen students remained. He sat alone at his desk, writing in his notebook with a ballpoint pen. He looked up, astonished at my arrival.

"Professor Engstrand."

"Angus."

over

"I'm almost done."

"Done with what? Where did they all go?"

He blinked twice. He looked frightened.

"Tell me what happened, Angus."

"We met and waited for you, sir. Sat in our places. But you didn't come. No one said anything. Half an hour passed. Then someone suggested that your absence might represent some new form of final exam. Some arcane and menacing form, I believe those were the exact words. We laughed nervously at first. But one by one we opened our notebooks. Began attempting to answer the question you were posing. That's why it's a little unsettling to see you here, sir. I was almost finished. The others handed in their papers to the department secretary. May I ask you a question, sir?"

"Yes, Angus."

"Does this mean I failed?"

"No, Angus. There's no time limit. Hand it in when you're done."

(page 159-160, and no, no names were changed)

Fred Burke <fburke@best.com> [alt.thinking.hurts]
--

Keith's Mostly Clean Humor & Weird (McHaw) List

To subscribe or unsubscribe, write maiser@mail.otherwhen.com and put "SUBSCRIBE McHawList" or "UNSUBSCRIBE McHawList" in the message body. Send contributions to KSullivan@worldnet.att.net

From: tsvetova@femto.cs.umn.edu (Maksim B. Tsvetovatyy)
In a high-level math class a prof gave a final with one question:
"Write a suitable final exam for this class (also supply a key)".
A student simply repeated the question and added "If this final exam is
good
anough for prof. <insert name of prof>, it's good enough for me"

Sarah Plummer <splummer@abacus.bates.edu> wrote: I was also told this about happening at my college. We'll see how many schools have had the same story repeated there. 8) In one of the houses in which all the lacrosse/fortball players live they have a file of papers for classes so people don't have to write them, they can just take a paper previously written and change the name and hand it in. Well, there was one paper for a class which someone had written and gotten a B on. But on the corner of the front page was a little drawing of a whale. The next year а brother" took the class (we don't have frats on campus. This is as close as we get) and when he had to do the paper he just xeroxed the paper and qot a B on it as well. Then the next time the class was offered another brother took the paper and xeroxed it, but whited out the whale so the prof wouldn't suspect that it was the same paper etc. Well, he got a C on it. When he asked the prof why he got a C on it, when all the other people who copied the paper got a B on it and he got a C and it was the same paper, the prof said I liked the whale." From: rhawkins@iastate.edu (R E HAWKINS) Or from my father. A student questioned his 0 on a test. "But these are the same answers as Tran, and he got hundred percent."

"Tran had a different test."

UNIVERSAL GRADE CHANGE FORM

	University
To: Professor From:	
I think my changed fro	grade in your course,, should be m to for the following reasons:
1. did.	The persons who copied my paper got a higher grade than I
2. did.	The person whose paper I copied got a higher grade than I
3. get	This course will lower my Grade Point Average and I won't into: Law School
	Medical School Graduate School Dental School My Fraternity/Sorority The Mickey Mouse Club Tri County Tech
4.	I have to get an A in this course to balance the F in
5.	I'll lose my scholarship.
б. сору	I'm on a varsity sports team and my tutor couldn't find a of your exam.
7.	I didn't come to class and the person whose notes I used did not cover the material asked for on the exam.
8.	I studied the basic principles and the exam wanted every little fact.
9.	I learned all the facts and definitions but your exams asked about general principles.
10.	You are prejudiced against: MalesJewsBlacks FemalesCatholicsWhites ProtestantsMoslemsMinorities ChicanosPeopleStudents
11.	If I flunk out of school my father will disinherit me or at least cut my allowance.
12. following	I was unable to do well in this course because of the illness: monobroken baby finger acute alcoholismpregnancy
	VDfatherhood

13.	You told us to be creative but you didn't tell us exactly how you wanted that done.
14.	I was creative and you said I was just shooting the bull.
15.	I don't have a reason; I just want a higher grade.
16.	The lectures were: too detailed to pick out important points not explained in sufficient detail too boring all jokes and not enough material all of the above This course was: too early, I was not awake. at lunchtime. I was hungry
18.	too late, I was tired My (dog, cat, gerbil) (ate, wet on, threw up on) my (book, notes, paper) for this course.
19.	Other
++++++++++++ ++ =9. MISCELLA	++++++++++++++++++++++++++++++++++++++

A theory is something nobody believes, except the person who made it. An experiment is something everybody believes, except the person who made it.

From: brun@tybalt.caltech.edu (Todd A. Brun)

Last year I founded the Institute of Fuzzy Science here at Caltech, as a public service for scientists everywhere. This was my original announcement. I thought it might be of more general interest; there are several other bulletins if this one is successful.

-- Todd Brun brun@tybalt.caltech.edu

New IFS Option

A new interdisciplinary option for graduate students has been instituted, in collaboration with the nearby Institute of Fuzzy Science. IFS, for those who are not aware, is an institution to promote research in "unusual, spooky, or just plain off-the-wall" areas of modern science, generally not accepted by the mainstream of the academic community. "We don't believe in discouraging a researcher," IFS president C.P. Diem commented in a recent interview, "just because 99% of the anal-retentive scientists in this country believe that conservation of energy holds, or that natural gas is fossil fuel, or that antigravity is impossible. It really annoys me when people invoke buzzwords like General Relativity or Quantum Mechanics," he "Accepting things just because there is experimental evidence for added. them is poor science. After all, tomorrow we might all fall off the surface of the earth into space. Isn't it better to study what would happen if we did? IFS is here," he declared, "to handle the 'if's." Until quite recently, IFS was a pure research institution, staffed mainly by scientists who are extremely reluctant to give their names to reporters. "We like to keep a low profile," said one IFS scientist, Dr. Mindy E. Mouse. "We've got funding here, we do essentially anything we want to, and nobody bothers us. Why rock the boat?" Due to this general philosophy, the decision to accept students was a controversial one. The doubters were convinced, however, by a recent sociology study performed bv an Institute physicist. A handful of students were admitted, and fears that they would bring unwelcome publicity were quickly put to rest. Indeed, most of the students refused to admit that they'd gone to IFS at all, even when confronted with copies of their diplomas. The Institute of Fuzzy Science is not organized on a traditional basis. "We don't like to divide things up by fields of study, here," Diem explained. "After all, half of us don't really know what field we're working in, most of the time. One of our best researchers recently thought he'd developed a new cosmological model that had no need to invoke the concept of gravity. Unfortunately, the model did not actually work; but with slight modifications, he was able to present it as a new Computer Science algorithm. Serendipitous finds like that are extremely common here." IFS is therefore divided into three departments based on degree of fuzziness. The largest department, holding around half of the Institute scientists, is the Department of Slightly Fuzzy Science. It is staffed mainly by scientists attempting to prove unpopular or dated theories, or trying to reproduce results observed once, late at night. Another large group in the department are known as the SWOTS, or Scientists Working Outside Their Specialties. "This is a time- honored tradition, precedented by many famous scientists," laughed Diem. "If a physical chemist wants to perform medical testing, or a physicist to dabble in eugenics, who are we to say no?" The second department is the Department of Fairly Fuzzy Science. Here, Flat Earth proponents rub shoulders with conspiracy theorists and parapsychologists, each working on their various research projects. "It gives us a real feeling of freedom," mentioned one worker in the department. "I mean, mainstream science is just a result of the axioms that you choose. If you choose different axioms, it's amazing what you can

prove." Another researcher agreed: "Basically, we just chuck out modern theory and start over." However, both the Departments of Slightly and Fairly Fuzzy Science tend to be cautious in assessing the results of the

third and smallest department, the Department of Extremely Fuzzy Science, which is dominated by creation scientists and supply-side economists. "Frankly, they're so fuzzy even we don't believe it," admitted President Diem. "We don't let our students come into contact with the extremely fuzzy scientists. At least, not at first. Young students tend to be very impressionable; early exposure to extremely fuzzy studies tends to make them what we call FTF: Far Too Fuzzy." Though IFS supplies consultants both for Hollywood moviemakers and the

Though IFS supplies consultants both for Hollywood moviemakers and the Department of Defense, many scientists feel that their work does not receive the recognition it deserves. "Take all this controversy over the existence of magnetic monopoles," complained one IFS biologist. "Why, we've had half-a-dozen detections here, but no one has taken any notice.

myself detected two last week." A conspiracy theorist offered his explanation: "I think it's essentially because the Communist party controls

the government. Since they depend on federal grants, most universities lack the courage to accept results not dictated by the party line." His colleagues agreed, though they differed on whether is was Communists, Fascists, Jews, or Catholics, or possibly an alliance of all four.

The new graduate option includes both a Master's program and a Doctorate of Advanced Fuzzy Studies. All interested students should contact the

Institute of Fuzzy Science directly, at their main office on Hollywood and

Vine. Further bulletins on progress in the Fuzzy Sciences may be forthcoming as new results are obtained.

-- A.E. Muss

From: tlode@nyx.cs.du.edu (trygve lode) SCIENCE OF THE FUTURE

Anyone who has been on the net for more than a few days has had the chance to run into a few of the people who populate nearly every newsgroup, devoting their lives to the propagation of their particular theories on the nature of the cosmos, theories such as "the space program is a hoax," "gravity doesn't really exist and the reason that people and their pets don't fly off into space is because of a powerful electromagnetic reaction that only I understand," "the earth used to orbit Saturn, resulting in completely different physical laws that explain all the miracles described in the Bible," "our DNA is really seven-dimensional and only by engaging in special breathing exercises in my specially treated hot tub with a pyramid-shaped cover can we learn to understand out higher multi-dimensional spiritual nature," and so forth. [Note: I am not making any of these up.]

These sorts of theories generally have three things in common: 1) their truth is being actively suppressed by a conspiracy of mainstream scientists, 2) future generations will know the truth and will be amazed at how we could have been so stupid as to have questioned these obvious truths, and 3) the authors of these theories have gained considerable mastery of the use of the CAPS-LOCK key. Of course, knowing that in the future we will regard the authors of these various theories with the same sort of reverent appreciation that we now reserve only for those who have contributed the most to our science and culture--Madonna, for example--has made me wonder, "just what will future universities be saying about physics in years to come?"

With this in mind, and with the benefit of reading several recent articles that show a quantum mechanical basis for precognition, I decided to attempt to channel just such a university physics course of the future.

"Ohm...ohm...ohm....ohm...." (Well, what else would you chant?)

#trance(ON)
#trancemode(FUTURE | PHYSICS | CAPITAL_LETTERS)

"Good morning, class, and welcome to the 2826 school year's first session of 'Alternative Physics 201.'

"Science, above all else, is based on evidence; it cares nothing for what you personally like and don't like and, no matter what your personal preferences are for how the universe ought to work, in the end, the theory that best explains the evidence wins. We can do experiments in the present, but this is necessarilly a limited exercise, since experiments performed today can only tell us what the laws of physics are like today. Mainstream scientists tend to ignore this fundamental fact and, thus, are hopelessly hamstrung by uniformitarian assumptions when trying to explain events in the past, many of which simply don't fit with our current physical theories. Much better, then, would be if we could somehow find out what the laws of physics really were in the past, and then use those to explain past events.

"Of course we can't just travel back in time and perform our experiments back then--and, unfortunately, records from even a few centuries ago are sparse and incomplete. Back in the early twenty-first century, all existing records were digitized and stored within the capacious memory banks of the most powerful computer of all time, the MegaloMainframe. High-speed data links fed every remote computer in the world, eliminating the need for local storage devices which soon vanished from use. Libraries became unnecessary with everything being instantly available through the world-wide computer network that the MegaloMainframe serviced; books became useful only as collectors' items.

"Unfortunately, one day a careless user accidentally reformatted the MegaloMainframe's main storage--and the Sysadmin mounted the backups and entered the wrong command-line option to the backup program, erasing all of the world's knowlege with a mistaken keystroke. Few records survived the ensuing chaos, and most of what we know of civilization before 2050 comes from facts that the users of the MegaloMainframe thought were so important that they printed them out and attached them to the walls of their places of work--so great was the rioting and destruction that only a few sturdy, fire-resistant office buildings remained and even these were ransacked by looters who left little but those few bits of information that the people of that era valued enough that they attached them reverently to the walls of their work areas. "What can we learn from these past records? Perhaps most exciting is the knowlege that even the basic forces of nature were completely different back then. Gravity, for example, was far weaker than it is now, and on smaller celestial bodies like the moon, it was so weak that pencils would simply float away if released. Yet, at the time, there was another force, probably electromagnetic in nature, that held the planets together and kept their inhabitants from flying off; lunar explorers used devices known as "heavy boots" to hold themselves to the moon without need for gravity.

"It appears that nuclear forces were also quite different in those days, allowing the formation of many stable elements that are no longer possible under our current physical laws. While we may never know much about many of these now-impossible elements and their properties, we know from the surviving documents that one of the most important and widely used of these was an element they called Administratium; another was a substance called Thiotimoline, of which we know nothing at all save that, when resublimated, it developed endochronic properties.

"There remain many other mysteries that the ancients have left for us to explain--what was the popular and powerful technique of chemical analysis that nothing remains of but the name--the Roble Hall Purity Test? What physical laws were there that allowed them to measure physical beauty (in units called millihelens) by the action of boats? Did the interaction of gravity and the strange electromagnetic forces of their time permit animals to communicate telepathically, as they are shown doing in the few fragments we have found of their most prestigious scientific journal, the "Far Side"?

"Perhaps the one tidbit that most tantalizes us today is the knowlege that the ancients understood the seemingly bizarre laws of physics they lived under so well that the most famous scientist of their age, a man we know only as "Murphy" was able to codify them all in a single grand unified theory that bears his name. Alas, no records of what "Murphy's Law" was have yet been discovered, so we can only speculate upon whether this pinnacle of twenty-first century knowlege would still apply to our world today...."

Unfortunately, my trance ended abruptly with an eerie, authoritarian voice demanding that I insert two Trigannic Pu's for another three minutes; then there was a click, and I was back in my ordinary, twentieth-century bedroom.

There you have it; it would seem that what we now think of as crackpot ideas will be at least as enduring and well-accepted in the future as our more conventional scientific theories, so the next time someone on the net tells you that nuclear power is a hoax and the energy is actually being produced by channelling the vibrational modes of the third of twelve higher planes of existence, a fact being suppressed by greedy oil companies who don't want you to discover that you can power your car safely and without pollution merely by meditating on your five non-material chakras which are contained in the higher-dimensional component of your DNA, the existence of which is being suppressed by scientists who want to keep you from learning your spiritual power, don't be quite so quick to dismiss it without giving it the serious consideration it deserves.

From: Tonu Laas <tony@tpu.ee>
The famous scientist was asked, whether he could tell what were the five
happiest years of his life.
"Of course," the famous man said. "The five years, I studied in first
class."

From: KSullivan@worldnet.att.net THE METRIC SYSTEM (For us Europeans, The SI system)

NUMBERS

If the metric system ever takes over we may have to say the following:

* A miss is as good as 1.6 kilometers.

* Put your best 0.3 of a meter forward.

- * Spare the 5.03 meters and spoil the child.
- * Twenty-eight grams of prevention is worth 453 grams of cure.
- * Give a man 2.5 centimeters and he'll take 1.6 kilometers.
- * Peter Piper picked 8.8 liters of pickled peppers.

Dear Dr. Science,

I get sooo tired of hearing about the metric system. Why doesn't the rest of the world switch to the standard system?? After all, it is called the STANDARD system

-- Joel Kiesey, Mount Pleasant, IOWA

Foreigners are always trying to celebrate the abnormal, pretending that it's exceptional and that's why they're charging more for it. You could have two bottles of an identical soft drink, one could be a quart, the other two liters. Guess which one they'd charge more for? You guessed it -- the second one because it was measured in liters, a metric unit. Ask yourself this, if the Creator had meant for us to measure distances in meters, how come he gave us each two feet? If you ask me, all this pro-metric agitation is a ruse designed to distract us from our real problems, like where to build the superconducting supercollider and what really happened at Roswell.

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Dr. Science <Doc@drscience.com> TEN LETTER METRIC ALPHABET Tom Harrington <tph@rmii.com> wrote: > I notice that, while you insist that the metric system is > a good idea, you nevertheless fail to adhere to the ten-letter > metric alphabet required by ISO. Could it be that, since you > use more than ten letters, you perhaps realize that what > you're doing is evil? In fact, the ISO metric alphabet (sic) is composed of 1 die-cast platinum letter (the "bet"), which is housed in the basement of the ISO building in Lausanne, just next to the kitty litter. From this, a variety of __bets" can be constructed; the most popular being the "decabet" (100 letters) and the "kilobet" (1000 letters). At present the "millibet" (1/1000 letter) is significantly underused and a steering committee has been started to try and improve this situation. Please note that the prefix "alpha" is not a valid metric prefix, and as such will be phased out in due time (maybe faster if the re-education camps are successful). We thank you for your interest in the metric system. Miss Information <misinfo@iso.org.ch> [rec.humor.oracle.d] Kyle R. Hofmann <rhofmann@crl.com> [alt.humor.best-of-usenet] TEN LETTER METRIC ALPHABET (REVISITED) Miss Information (misinfo@iso.org.ch) wrote: : In fact, the ISO metric alphabet (sic) is composed of 1 die-cast : platinum letter (the "bet"), which is housed in the basement of the ISO : building in Lausanne, just next to the kitty litter. From this, a : variety of "_____bets" can be constructed; the most popular being the : "decabet" (100 letters) and the "kilobet" (1000 letters). At present : the "millibet" (1/1000 letter) is significantly underused and a steering : committee has been started to try and improve this situation. Here at work we are unfortunately required to use the nanobet, which contains 1/100000000 of a letter. Last week I typed for eight solid hours and I still had not even a single line of code done. This is really making my productivity sink; I type well past the "carpal tunnel" stage and still have nothing to show for it. And to think that someone claimed the metric system *helped* working people. Furrfu. Now you know why I think the metric system is evil.

Please note that the prefix "alpha" is not a valid metric prefix, and as
such will be phased out in due time (maybe faster if the re-education
camps are successful).

Suddenly I have this awful vision of the metric equivalent of alphabet soup. Just think of the megabet (1,000,000 letters) -- you'd have a soup bowl the size of a swimming pool just to cover the entire thing.

Tom Harrington <tph@longhorn.uucp> [rec.humor.oracle.d] sgf <sfolse@du.edu> [alt.humor.best-of-usenet]

From: JDH92@campus.swarthmore.edu (Hildebaby)
A member of our Engineering Department wears a T-shirt he apparently made
himself. It says, "Flatland 3-D: The Sequel."

From: David Seppala <dseppala@flash.net>
Einstein was feeling gloomy. A friend asked him, "What's the matter?"
Einstein replied: "my wife just doesn't understand me!"

From: cbressl@aol.com (CBressl) Reminds me of the guy who said " I see the trees waving back and forth making the wind. Now I know what makes the wind but I don't know what makes the trees move"

From: mini-air (mini-air@chem.harvard.edu)
1997-08-05 Correctness Survey Results: Reality -- Yes or No?

Our Scientific Correctness Survey in mini-AIR 1997-06 asked you to settle, once and bureaucratically for all, the question, "Does reality Exist?"

We had 139 comprehensible responses. Of these, 42% believe reality exists, while 31% believe it does not. From those who believe reality exists we learn that it is "over priced", "over rated" and "a military secret." From those who believe reality does not exist we learn that it "used to" and is "all done with mirrors" (this last one from Ira Green, who may be willing to show how it is done).

One person admits to being undecided, two voted both ways, four people feel their reality exists but ours does not, and seven are agonizing over the definitions of various words.

Frank Stephan says reality has existed since 1984. Stephan's conclusion is based on the following quote, which he found in a public rest room: "Reality is the Illusion which is caused by the absence of alcohol."

Dennis McClain-Furmanski believes reality can be tested by locking a physicist and a cat in a box with two slits in it. He has a

particular physicist in mind but needs help getting said physicist into the box.

Catherine Armour asks if we consulted God. We are ashamed to admit that we did not. However, we did hear from a descendent of Rene Descartes, who said, "I think so." A contrasting view came from Fredrik Mansfeld, who wrote:

Behold this absolutely true statement: "Cogito, ergo sum." And reality doesn't think, I think. Hence, it does not exist.

Jim Livingston feels that "Reality exists when it is really necessary." Bob Wakulich knows the answer but refuses to tell us. Nigel Wilson "found [reality] whilst sorting through some rubbish". Rosemary Webb told us "Yes, but you can't get to it". Carson Bays expressed a view held by many readers: "Yes, except in New Jersey." Karem Lingel holds a variant of that view, specifically that: "Reality exists in Ithaca, NY for about 30 minutes, 12 hours after a thunderstorm"

A few people apparently answered alternate questions. This included one gentleman who stated "No. I was married to her ... and I killed her", and two "college students" who had the phrase "hardbodies" in their domain name. Karl Evan Hallowell justifies a NO answer thusly: "If reality exists, then we mathematicians would have proven it by now." Joe Kelley reached the same conclusion, but by a different rout: "If reality existed there would be a user manual."

More responses next month.

From: jleung@hp.memh.ti.com (Jackson Leung) Modified from a forwarded message from The Net: EVERY MOMENT IS PRECIOUS

To realize the value of ONE THOUSAND YEARS Ask a programmer who has programmed with 2 digits for the year's value.

To realize the value of ONE HUNDRED YEARS Ask a Hong Kong resident who has witnessed the Handover.

To realize the value of SEVENTY YEARS Ask a dying Christian who has never shared the Gospel with others.

To realize the value of FORTY YEARS Ask an Israelite who has traveled in the wilderness.

To realize the value of SEVEN YEARS Ask a professor who did not get his sabbatical leave.

To realize the value of FOUR YEARS Ask a U.S. president who was not re-elected for the second term.

To realize the value of ONE YEAR Ask a student who has failed to promote to next grade. To realize the value of ONE MONTH Ask a mother who has given birth to a pre-mature baby.

To realize the value of ONE WEEK Ask an editor of a weekly.

To realize the value of ONE DAY Ask a daily wage laborer.

To realize the value of ONE HOUR Ask a driver who is getting stuck in traffic.

To realize the value of ONE-HALF HOUR Ask the lovers who are waiting to meet.

To realize the value of ONE MINUTE Ask a person who has missed the plane.

To realize the value of ONE SECOND Ask a person who has survived an accident.

To realize the value of ONE-TENTH SECOND Ask the person who has won a silver medal in Olympics.

To realize the value of ONE MILLI-SECOND Ask the (electric) power engineer who has brought darkness to a city.

To realize the value of ONE MICRO-SECOND Ask the person who has bought a Pentimum machine.

To realize the value of ONE NANO-SECOND Ask the digital circuit designer who has just promoted.

To realize the value of ONE PICO-SECOND Ask the analog circuit designer who has filed many patents.

To realize the value of ONE FEMTO-SECOND Ask the physicist who has won the Nobel prize.

Treasure every moment that you have!

Fourth Law of Applied Terror: The night before the English History mid-term, your Biology instructor will assign 200 pages on planaria.

Corollary:

Every instructor assumes that you have nothing else to do except study for that instructor's course.

ACHILLES AND THE TORTOISE (Zeno's Paradox) Proof that Achilles cannot overtake a tortoise which has a lead. By the time that Achilles has reached the tortoise's point of departure the tortoise has retreated. Achilles then has to cover that extra distance but finds the tortoise has retreated farther. He covers that only to find that the tortoise is not there. And so on and so forth. So Achilles never reaches the tortoise.

From: jcf@world.std.com (Joseph C Fineman) According to the late R. P. Feynman, an easy rule for telling which was is up is the following: point the index finger of your right hand in the direction of motion of the bus, and the thumb in the direction of motion of exiting passengers. The middle finger will point *up*.

In Britain, use the left hand.

From: clprasad@watson.ibm.com (prasad)
"That must be wonderful! I don't understand it at all."

From: RVFT60@email.sps.mot.com (Mike Scott) The chief of a poor American Indian tribe .. no paved roads, no electricity, no indoor plumbing .. scrimped and saved and finally was able to send his eldest son to college. The lad did well, working hard for four years and finally graduating with a bachelor's degree in electrical engineering.

Arriving home after graduation, the boy was treated to a welcoming party, complete with plenty of refreshments. Shortly after he retired to sleep, the son was awakened by a call of nature. Exiting the hut, he proceeded down the road to the outhouse, only to stumble and fall because of the lack of lights.

The next day, the son decided to put his education to work. He sat down, did the calculations, and prepared construction drawings for a lighting system for the outhouse, complete with lights for the path leading thereto. It was constructed and was an immediate success. This chief's son will go down in history as the first indian to wire a head for a reservation.

From: oxton@skopen.dseg.ti.com (Gail Oxton)
Even earlier in history, the introduction of electricity to English
castles produced the first knight lights.

From: dhawkins@meaddata.com (Dan Hawkins) As I recall that job was done by Sir Bud of Light.

It may be that human life is "the galaxy's way of evolving a brain." This will come as a surprise to pessimists who, contemplating humankind's destructive tendencies, may be wondering if life isn't the galaxy's way of eliminating certain planets.

I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant.

When skating on thin ice, allow others to take the lead. There is no disgrace in learning from others, particularly when doing so avoids putting

yourself in jeopardy.

THE SECOND BOOK OF VECTOR

There dwelt in the land of Brit certain high priests who served in the temples of Elektron, which is an invisible god who darteth around in ever-decreasing circles but never into his own nucleus. And the priests of Elektron were devout men, serving no other god but he. And Elektron looked with favour upon them and rewarded them each according to his worth with divers strange gifts. To some he gave power to converse with those from afar off and to others he brought visions of strange happenings in distant lands; yeah, even of the United States cavalry in glorious Technicolor. And to certain other of his high priests Elektron gave powers of levitation, so that they walked with their feet ever- so-slightly off the ground; these dwelt in glass temples called, in the native tongue, Researchlabs or Funnifarms, which were set apart from the common people and to which entrance was denied to all, saving only those having scrips of authority from their chief priest. And these priests were called by the common people Egbonces which meaneth he who knoweth the square root of minus one. And the Egbonces were cunning at fashioning curious devices from boot-latchets and wax so that the populace were astonished and continually cried out, saying, behold, these are great wonders but of what use be they? Yet other high priests of Elektron were followers of the prophet Babbage and these were set in authority over divers machines that brought much benefit to the common people; some computed the numbers of the tribes and the taxes that each man should pay; others controlled the paycheks of these that laboured, so that each man received less than his hire, while others suggested that the inter-city chariots were tardy in arrival. And Elektron taught the high priests to feed the engines with curious symbols engraven upon tablets that they might print out likenesses of the sex-goddess Bardot devoid of her apparel, which gave satisfaction to many. And these priests likewise withdrew the hems of their garments from the common populace and, by conversing in the alien tongues of Fortran and Algol, preserved their mysteries jealously. At this time the skies were filled with heavier-than-air machines of many nations which flew with the noise of emasculated hornets and carried the peoples to and fro, even unto the ends of the earth. These machines

were under the auspices of the god Hijak. And certain of the nations had air machines which could drop unpleasantness on the land beneath to discomfort the people; but certain other nations who were poor and backward

and, as the saying goeth, not with it, did not possess these amenities.

Thus it came to pass that the acquisition of such machines was regarded by all as an outward and visible sign that the possessor nation was emerging from savage practices and an example to others.

And certain rich merchants searched diligently and redeemed many heavier-than-air machines; some from the knocker's yard; some which fell from the back of an hangar and yet others which were dislodged privily from the Science Museum. And they purposed to sell these to the heathen for many shekels of gold and at great profit. So it came to pass that the merchants

sent envoys to a far country, even to the kingdom of Tsetse-Tsetse.

And the envoys said unto the king of Tsetse-Tsetse, O king live for ever but put not thy money upon it. And the king answered saying, What meanest thou? Then did the envoys reply saying, Surely thou knowest that they neighbour the king of Beri- Beri hath cast covetous eyes upon thy lands and they maidens? If only thou hadst an Air Force it would cause thine adversary to wind his neck in. Then did the king beat his breast crying, Wo is me! And the envoys made reply saying Not so, O king, for it so happeneth that we can supply thee with a squadron of Bleriot Mk.Is. And thus it came to pass the king bought from the envoys for much fine gold and

slept peacefully with his wives that night.

Then did the envoys depart and journeyed to the neighbouring land that is called Beri-Beri. And they said to the king of Beri-Beri, O king live for ever but begin not the reading of any long novels. And the king said What meanest thou? Whereupon the envoys replied saying, Knowest thou not that they neighbour the king of Tsetse-Tsetse hath secretly purchased war-birds and purposeth to ravage thy country? At this the king went as pale as was possible and the end of the matter was that he became Commodore

of a squadron of Cabbage White Mk. VIIs.

And it came to pass that in Brit the god Elektron gave unto his high priests the power to fashion magick bowls which could divine the presence and movements of heavier-than-air machines even at great distances. Yeah, and not only this, for by gazing into the bowl, vessels having their business in great waters could be made to broach each other with greater certainty. And on land its magick powers enabled the Fuzz to put the finger upon all charioteers who, like their forbear Jehu, drove furiously. And the name of this new wonder was radar, which, being translated, meaneth that which worketh by suction and mirrors.

And the rich merchants came unto the high priests of radar and said unto them. Lo, we have heard much of the wonders that they god Elektron hath taught thee and it seemeth that we can do a deal with profit to all. Make for us great numbers of these magick bowls, we pray thee, that we may sell them to the nations for their greater safety. Do this and we will pay thee many shekels of gold; moreover, we will pull down thy temples to the greater glory of Elektron, wherein thou shalt find all the instruments that they heart desirest. And we will clothe thee in white raiment and give thee charge over many. What sayest thou? And the high priest conferred privily and agreed among themselves that they were on to a good thing. So it came to pass that the merchants caused mighty temples to be built wherein the god Elektron might be served, both by day and night; and the high priests, for their part, devised magick bowls with ever greater cunning and these the merchants sold to whoever was in the market place. Thus it came about that both the king of Tsetse-Tsetse and the king of Beri-Beri were persuaded to buy the magick bowls with which to keep vigil each upon the other. Yeah, both primary and secondary radar had they in plenty and certain inhabitants of the two countries were trained to interpret the signs and portents which appeared upon these bowls whenever an heavier- than-air machine was drawing nigh. And behold, it came to pass that upon a certain night there was a watchman in the kingdom of Tsetse-Tsetse who was an exceeding dim lamp; moreover, when interpreting the symbols on the magick bowl, he was, as the saying is, unable to tell Squawk from Clutter. And this watchman, fearful of what he supposed he saw upon the face of the bowl, said unto himself The enemy is upon us, and thereupon smote the Panick Button. Hereupon the Bleriot Mk.Is rose (all excepting one which had broken its elastick band) and brought destruction to the sleeping land of Beri-Beri. But the Cabbage Whites, being forewarned by their magick bowls, were already riding the heavens and bringing affliction upon their neighbours. And, by morning, both countries were bathed in blood. And in the temples of Elektron there was great commotion, for the hot lines were glowing red and the artificial moons which the high priests had raised were overburdened with coloured images of the slaughter, for the delectation of the common people. And when all was accomplished, overseers from the United Nations came and wagged their heads and voted Tsetse-Tsetse and Beri-Beri into their assemblies in recognition of their emergence.

v.

From: ted_swift@qm.sri.com (Ted Swift)
"Bring me into the company of those who seek the truth,

and deliver me from those who have found it."

From: sjt@xun8.sr.bham.ac.uk (James Tappin)
"If all else fails--read the instructions!"

From: peekstok@u.washington.edu (Anna Peekstok) PROBLEM SOLVING P R O C E S S



NOTEBOOK OF LAZARUS LONG in "Time Enough for Love" -Robert A. Heinlein (1907-19??) [US science-fiction writer]

Always listen to experts. They'll tell you what can't be done and why. Then do it.

If it can't be expressed in figures, it is not science; it is opinion.

Most 'scientists' are bottle washers and button sorters.

The truth of a proposition has nothing to do with its credibility. And vice versa.

Never underestimate the power of human stupidity.

The difference between science and the fuzzy subjects is that science requires reasoning, while those other subjects require merely scholarship.

Expertise in one field does not carry over into other fields. But experts often think so. The narrower their field of knowledge the more likely they are to think so.

Natural laws have no pity.

Climate is what we expect. Weather is what we get.

A committee is a life form with six or more legs and no brain.

There is no way of falsifying "Unicorns exist."

From: alund@unlinfo.unl.edu (anders lund) FROM THE HOME OFFICE IN LOS ALAMOS, NEW MEXICO, THE TOP TEN REASONS NETWORK NEWS PRODUCERS DON'T GIVE SCIENCE MORE AIR TIME.

NUMBER TEN: "ALREADY DID THE O.J. DNA FINGERPRINT STORY."

NUMBER NINE: "'BUCKY BALLS' EXPUNGED FROM SCRIPTS BY NERVOUS NETWORK CENSORS."

NUMBER EIGHT: "WAITING FOR COLD FUSION."

NUMBER SEVEN: "WOULDN'T KNOW THE SUPER CONDUCTING SUPERCOLLIDER FROM A HOLE IN THE GROUND."

NUMBER SIX: "STILL THINK SCIENCE'S GREATEST ACHIEVEMENT WAS TANG."

NUMBER FIVE: "FEEL GUILTY BECAUSE OZONE HOLE LINKED TO EXCESSIVE HAIR SPRAY USE BY NEWS ANCHORS."

NUMBER FOUR: "POCKET PROTECTORS CAUSE TOO MUCH GLARE UNDER HARSH TV LIGHTS."

NUMBER THREE: "BRAINWASHED BY BIOSPHERIANS."

NUMBER TWO: "UNABLE TO LOCATE FILE FOOTAGE OF THE 'BIG BANG.'"

AND THE NUMBER ONE REASON NETWORK NEWS PRODUCERS DON'T GIVE SCIENCE MORE AIR TIME: "JOURNALISTS ARE FROM MARS...SCIENTISTS FROM VENUS."

Miles O'Brien

ASMS meeting 1995

634

From: "G&P" <GPoper@Hotmail.Com> The Top 15 Signs American Students are Lacking Math and Science Skills 15 - Typical science student thinks the Energizer Bunny disproves that "conservation of energy" theory. 14 - They think "Bill Nye the Science Guy" is a grunge band. 13 - Hilarious "Top 5" list by purported high school graduate always has 12 or more entries. 12 - One, they can't count. Three, they can't add. 11 - And the number 3 sign that American Students Are Lacking Math and Science Skills... 10 - Ranks of chemists thinned by constant mistaking of H2SO4 for H2O. 9 - Hey, it's tough counting the number of beers in a six pack. 8 - If they can't find a Number 2 pencil for a test, they bring half of a Number 3. 7 - Most students can't locate the earth on a globe. 6 - Science Fair project demonstrates Space Shuttle fuel consumption using bottle of Tequila & lemon wedges. 5 - "Algorithm" may sound like liquored-up Vice President bustin' a move, but it's not. 4 - Your child consistently confuses "Pi-R-Squared" with "Pizza Pizza." 3 - Then: Intricate handmade bombs with precise triggering mechanisms. Now: Ryder truck filled with cow manure. 2 - Actually, six out of five math teachers say there's no problem whatsoever. and the Number 1 Sign American Students are Lacking Math and Science Skills... 1 - "5 + 3 equals... Hey! 'Melrose' is on!" From: el102@bih.lhg.hib.no (Sigurd Raubotn) Why the scientist never spends more than 15 hours in cyberspace? Cause there is no toilets there.

formula's are like your children. You love them, but nobody else appreciates them.

635

From: mlynd@cix.compulink.co.uk (Michael Lynd) THE TIME AND DATE OF CREATION The Creation, as everyone knows, took place in 4004 B.C. To be really exact it took place at 6 p.m. on Wednesday, March 21st, 4004 B.C. The evidence for these dates is entirely documentary. The date of the year as calculated by Archbishop Ussher is obtained by taking the Jewish date of the Flood -- 2348 B.C. -- and adding to it in succession the age of each patriarch when he begat a son. The other items can be worked out from the data given in the first chapter of Genesis: * Six p.m. The periods of creation are divided into "days" and each "day" is said to consist of evening and morning, showing that the "day" began on what we should now call the evening before, e.g., Passover, Day of Atonement, Eve of St John, Eve of All Hallows, Ramadan, and in Palestine, Easter Eve. * Wednesday. The earth was created on the fourth day of the week, and Wednesday is the fourth day of the week. * March 21. As the length of days varies according to the season of the year, it is obvious that any calculation must have been made when day and night were equally balanced, i.e. one of the equinoxes. And as the vernal equinox has always been more important than the autumnal, we get March 21. ** Therefore: the full date, 6 p.m., Wednesday, March 21. Dr Margaret Murray Antiquity XXXV, 137, March 1961 From: Aliquotes iv.ii (journal) (rogerb@microsoft.com) Is it just a coincidence that the acronym for the National Science Foundation is the same as that in the banking community for Not Sufficient Funds? Kinda make you wonder. From: DMJT30C@prodigy.com (J Mikes) BARTENDER: MR. DESCARTES, DO YOU DRINK SOMETHING? I DON'T THINK... AND DISAPPEARED E_{-} From: schiec@jec3210-17.its.rpi.edu (Christopher L. Schierer) I was going to be an engineer.... Aerospace but it just didn't fly. Aeronautical but I couldn't keep my head above water. Bio-Medical but I was rejected. Chemical but the job really stunk. Civil but I couldn't make the grade. Computer but I got stuck in a loop. Electrical but it was all current events. Genetic but I only wore Levis.

Industrial but I couldn't get off the floor. Management but I wasn't a team player. Materials but I didn't have the fiber. Mechanical but I got shafted. Metallurgical but I couldn't get the lead out. Nuclear but I didn't have the glow. Power but it went to my head. E From: pischke@ecf.toronto.edu (PISCHKE DAVID) Engineering is the art of moulding materials we do not fully understand into shapes we cannot fully analyse and preventing the public from realising the full extent of our ignorance." \mathbf{E}_{-} From: Tim.Nelson@Canada.ATTGIS.COM (list of Old * Never Die, they just) OLD ENGINEERS never die, they just lose their bearings OLD ELECTRICAL ENGINEERS never die, they just have slower rise times OLD ELECTRICIANS never die, they just do it until it Hz OLD ELECTRICIANS never die, they just lose contact Ε From: nelsonbe@ucsu.Colorado.EDU (NELSON BRIAN EDWARD) TEN REASONS TO DATE AN ENGINEER 10. Why not? 9. They are user friendly 8. No need to call a handy man 7. Learn how to use the other buttons on your calculator 6. Homework help without the guilt 5. They will make lots of money 4. Not all of them wear dark blue jeans 3. They know how to push the right buttons 2. They understand heat-transfer 1. They are used to pulling all nighters ++ =9.1 POETRY E_ From: NANCY_GILL@bdt.COM (Nancy Gill) The Condemned When the earth was created, the powers above, Gave each man a job to work at and love. He made doctors and lawyers and plumbers and then, He made carpenters, singers, and confidence men. And when each had a job to work as he should, He looked them all over and saw it was good. He then sat down to rest for a day, When a horrible groan chanced to come his way. The Lord then looked down and his eyes opened wide, For a motley collection of bums stood outside. "And what do you want?" the creator asked them, "Help us," they cried out, "A job for us men".

"We have no profession," they cried in dismay, "And even the jails have turned us away". Said the Lord, "I've seen many things without worth, But here I find gathered the scum of the earth!" The Lord was perplexed, and then he was mad, For the jobs were all gone, there was none to be had. Then he spoke aloud in a deep angry tone, "Forever and ever ye mongrels shall roam, Ye shall freeze in the summer and sweat when it's cold, Ye shall work on equipment that's dirty and old, Ye shall crawl under raised floors, and there cables lay, Ye shall be called out at midnight and work through the day, Ye shall work on all holidays, and not make your worth, Ye shall be blamed for all downtime that occurs on the earth, Ye shall watch all the glory go to software and sales, Ye shall be blamed by them both if the system then fails. Ye shall be paid nothing out of sorrow and tears, Ye shall be forever cursed, and called FIELD ENGINEERS!"

From: clulow@ix.netcom.com (John Clulow) Plot the product of xy equals 3, 4, or 5 on a sphere of immeasurable size. Then through mental transportation find the point of destination, independent of real space and time.

A single path is found to go the sphere around; to where East meets West and where north-'n-south's a jest, and where positive and negative unite. ++++++ =9.2 EINSTEIN QUOTES

From: Dr. Stuart Savory savory.pad@sni.de / savory.pad@sni-usa.com
"If we knew what it was we were doing, it would not be called research,
would it?". -- Albert Einstein (1879-1955) [German physicist]
P

P______ From: sdnaik@iastate.edu The wireless telegraph is not difficult to understand. The ordinary telegraph is like a very long cat. You pull the tail in New York, and it meows in Los Angeles. The wireless is the same, only without the cat. - Albert Einstein P_____

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite)
Here are some more Einstein quotes:

When asked how World War III would be fought, Einstein replied that he didn't know. But he knew how World War IV would be fought: With sticks and stones! "Put your hand on a hot stove for a minute, and it seems like an hour. Sit with a pretty girl for an hour, and it seems like a minute. THAT'S relativity." Sometimes one pays most for the things one gets for nothing. If I had my life to live over again, I'd be a plumber. Einstein, Albert (1879-1955) * Science without religion is lame, religion without science is blind. _Science, Philosophy and Religion: a Symposium_ (1941) ch. 13 Ρ From: throopw@sheol.org (Wayne Throop) traditional paraphrase sequence: "God does not play dice with the universe." -- Einstein "Who are you to tell God what to do?" -- Bohr "God not only plays dice, but sometimes throws them where they cannot be seen." -- Hawking (More Einstein in the miscellany section)

From: AXYG58A@prodigy.com (Kristian Jungen)
My favorite from Einstein (forgive me if I paraphrase slightly:)
Einstein was listening to a student of his when he stated:
"Do not trouble me with your concerns with Mathematics.
I assure you, mine are greater."

From: goble@infonaut.com (Clark Goble)
Two things are infinite: the universe and human stupidity; and
I'm not sure about the the universe. -- Albert Einstein

From: jr3000@aol.com (JR3000)
"The must incomprehensible thing about the universe is that it is
comprehensible." --Albert Einstein

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite)
Common sense is the collection of prejudices acquired by age 18.
 - Albert Einstein

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite)
"Nothing will benefit human health and increase the chances for survival
of life on Earth as much as the evolution to a vegetarian diet"
- Albert Einstein

From: sue@dnai.com (Sue Reinhold)
"You do not really understand something unless you can explain it to your
grandmother." - Albert Einstein

From: kharris@ozonline.com.au (Kevin Harris)
Albert Einstein (1879-1955)

I want to know God's thoughts; the rest are details.

Anyone who has never made a mistake has never tried anything new.

Science is a wonderful thing if one does not have to earn one's living at it.

The secret to creativity is knowing how to hide your sources.

God does not care about our mathematical difficulties. He integrates empirically.

One had to cram all this stuff into one's mind for the examinations, whether one liked it or not. This coercion had such a deterring effect on me that, after I had passed the final examination, I found the consideration of any scientific problems distasteful to me for an entire year.

...one of the strongest motives that lead men to art and science is escape from everyday life with its painful crudity and hopeless dreariness, from the fetters of one's own ever-shifting desires. A finely tempered nature longs to escape from the personal life into the world of objective perception and thought.

You're aware the boy failed my grade school math class, I take it? And not that many years later he's teaching college. Now I ask you: Is that the sorriest indictment of the American educational system you ever heard? [pauses to light cigarette.] No aptitude at all for long division, but never mind. It's him they ask to split the atom. How he talked his way into the Nobel prize is beyond me. But then, I suppose it's like the man says, "It's not what you know..." Karl Arbeiter: former teacher of Albert Einstein

From: karp@cybernetics.net (Eric Karp)
I never thought that others would take them so much more seriously then I
did. - Albert Einstein about his theories

From: tdelling@eehpx13.cen.uiuc.edu (Timothy M Dellinger)
It is a miracle that curiosity survives formal education.
 -Albert Einstein

From: fcbaer@shentel.net (FRANK)
Subject: FRANK's Quotations for Mar 14 from Albert Einstein

FRANK's Ouotations for Mar 14 from Albert Einstein Foraging Quote: We should take care not to make intellect our god; it has, of course, powerful muscles, but no personality. Reflecting quote: I think and think for months and years. Ninety-nine times, the conclusion is false. The hundredth time I am right. Adopting quote: A theory can be proved by experiment; but no path leads from experiment to the birth of a theory. Nurturing Quote: Everything should be made as simple as possible, but not simpler. Knuckling Down Quote: Try not to become a man of success but rather try to become a man of value. % Albert Einstein (1879-1955) born on Mar 14 Swiss-German-U.S. physicist; His theories of relativity revolutionized physics; famous for E = MC squared; won Nobel Prize, 1921. From: John Beaderstadt <beady@together.org> Date: 1999/04/13 "I tried to imagine the easiest way God could have done it." --Albert Einstein From: Ian Ellis <ian@iglou.com> Q. What were Einstein's last words? A. No-one knows! Albert Einstein's last words were spoken in German. The only other person in the room was a nurse who didn't speak or understand German, so Einstein's "last words" remain a mystery. [source "Poor Charlie's Almanac©" by Charles Suitt] More from Einstein in the physics section ++=9.3 OTHER QUOTES "There is a theory which states that if ever anyone discovers exactly what the Universe is for and why it is here, it will instantly disappear and

be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened." -- Douglas Adams

"The creator of the universe works in mysterious ways. But he uses

a base ten counting system and likes round numbers." Scott Adams

From: edftz@aol.com (Ed Fitzgerald)
At each stage [of the hierarchical structure of reality] entirely new
laws,
concepts and generalizations are necessary, requiring inspiration and
creativity to just as great a degree as in the previous one. ...
Psychology
is not applied biology, nor is biology applied chemistry.
-- Philip W. Anderson "More Is Different" Science magazine (1972)

From: Don Olivier <don@hsph.harvard.edu>
My studies in Speculative Philosophy, metaphysics, and science are all
summed up in the image of a mouse called man running in and out of every
hole in the Cosmos hunting for the Absolute Cheese.
 -- Edmund Burke (?)

From: Don Westerheijden <d.f.westerheijden@cheps.utwente.nl>
The present flood of publications hampers the progress of science.
(Eric Evers, thesis in Ph.D. dissertation, Amsterdam --my translation,
DFW)

From: richard@milton.win-uk.net (Richard Milton)
"Nothing is too wonderful to be true if it be consistent with the laws of
nature." - Michael Faraday

God could cause us considerable embarrassment by revealing all the secrets of nature to us: we should not know what to do for sheer apathy and boredom. -- Goethe (Johann Wolfgang von; 1749-1832), German poet and dramatist.

From: edftz@aol.com (Ed Fitzgerald)
'There is no truth beyond magic' ... reality is strange.
Many people think reality is prosaic. I don't. We don't explain things
away in science. We get closer to the mystery.
-- Brian Goodwin quoted by Roger Lewin in "Complexity" (1992)

From: edftz@aol.com (Ed Fitzgerald)
Science is an integral part of culture. It's not this foreign thing,
done
by an arcane priesthood. It's one of the glories of human intellectual
tradition.
-- Stephen Jay Gould

From: Jane Vosk <justjane@u.washington.edu> Now, my suspicion is that the universe is not only queerer than we suppose, but queerer than we _can_ suppose. ... I suspect that there are more things in heaven and earth than are dreamed of, in any philosophy.[note] That is the reason why I have no philosophy for myself, and must be my excuse for dreaming. J.B.S. Haldane, "Possible Worlds", in "Possible worlds and other essays", Chatto & Windus, London, 1927. On p286 of that edition. Haldane, John Burdon Sanderson (British geneticist and writer, 1892-1964)

From: Mark Gingrich <grinch@rahul.net> Science doesn't have a chance until people learn to carry their intelligence the way James Dean carried his cigarette.

From: lstowell@pyrnova.mis.pyramid.com (Lon Stowell)
 "It is unworthy of excellent men to lose hours, like slaves, in
 the labors of calculation" -Gottfried Wilhelm Leibnitz (German mathematician and philosopher,16461716)

From: locker@uxa.cso.uiuc.edu (Jon Locker)
It is one Thing, to show a Man that he is in an Error,
and another, to put him in possession of Truth." - John Locke

From: Neve@ecol.ucl.ac.be (Gabriel NEVE)
"Scientific theories tell us what is possible; myths tell us what is
desirable. Both are needed to guide proper action."
 - John Maynard Smith (Science and myth)

From: Casper Lans <cdlans@cs.ruu.nl>
Who says nothing is impossible? Some people do it every day!
--Alfred E. Neuman

If I have seen further it is by standing on the shoulders of Giants. - Isaac Newton (1642-1727) in: Letter to Robert Hooke, February 5, 1675/1676

In the sciences, we are now uniquely privileged to sit side by side with the giants on whose shoulders we stand. -- Gerald Holton

If I have not seen as far as others, it is because giants were standing on my shoulders. -- Hal Abelson

In computer science, we stand on each other's feet. -- Brian K. Reid From: vanhoose@gdl.msu.edu (Todd E Van Hoosear) In the sciences, we are now uniquely privileged to sit side by side with the giants on whose shoulders we stand. -- Holton, Gerald From:liblancl@nic.cerf.net (Bill Thomas) -- Bartlett 16. Note: See Robert Burton. On the history and the pseudo-history of this celebrated aphorism see Robert K. Merton, _On the Shoulders of Giants_ [1965]. Robert Burton 1577-1640 A dwarf standing on the shoulders of a giant may see farther than a giant himself. The Anatomy of Melancholy [1621-1651]. Decomocritus to the Reader_ From: fcbaer@shentel.net (FRANK) Creative Quotations for Apr 23 from Max Planck On Foraging: Science cannot solve the ultimate mystery of nature. And that is because, in the last analysis, we ourselves are part of nature and therefore part of the mystery that we are trying to solve. On Reflecting: Ego is the immediate dictate of human consciousness. On Adopting: Anybody who has been seriously engaged is scientific work of any kind realizes that over the entrance to the gates of the temple of science are written the words: 'Ye must have faith.' It is a quality which the scientist cannot dispense with. On Nurturing: We have no right to assume that any physical laws exist, or if they have existed up until now, that they will continue to exist in a similar manner in the future. Max Planck (1858-1947) born on Apr 23 German physicist; He pioneered modern physics by proposing the quantum theory, 1900-01; won 1918 Nobel Prize. From: Don Westerheijden <d.f.westerheijden@cheps.utwente.nl> science is common sense `writ large' - Karl R. Popper (1902-), Austrian philosopher of science. in: The Logic of Scientific Discovery, 1980 edn., p. 22

From: cyp@Rrlyrae.Berkeley.EDU (Chien Peng)
"The only posible conclusion the social sciences can draw is: some do,
 some don't." -- Ernest Rutherford, New Zealand physicist (1871-1937)
More Rutherford in physics section.

From: edftz@aol.com (Ed Fitzgerald)
We live in a society exquisitely dependent on science and technology, in
which hardly anyone knows anything about science and technology.
 -- Carl Sagan

From: marlow@concentric.com (marlowe)
Science is nothing but developed perception, interpreted intent, common
sense rounded out and minutely articulated.
-- George Santayana (1863-1952) [US philosopher]

From: dok@fwi.uva.nl (Sir Hans)

@A: Twain, Mark (1835-1910) *

@Q: In the space of one hundred and seventy-six years the Lower Mississippi has shortened itself two hundred and forty-two miles. That

is an average of a trifle over one mile and a third per year.

Therefore, any calm person, who is not blind or an idiot, can see that

in the Old O\"olitic Silurian Period, just a million years ago next November, the Lower Mississippi River was upward of one million three hundred thousand miles long, and stuck out over the Gulf of Mexico like

a fishing-rod. And by the same token any person can see that seven hundred and forty-two years from now the Lower Mississippi will be only

a mile and three-quarters long, and Cairo and New Orleans will have joined their streets together, and be plodding comfortably along under

a single mayor and a mutual board of alderman. There is something fascinating about science. One gets such wholesome returns of conjecture out of such a trifling investment of fact.
 @R: _Life on the Mississippi_ (1883) ch. 17

From: mzintl@plasma.ps.uci.edu (Michael W. Zintl)
"Scientists have odious manners, except when you prop up their theory;
then you can borrow money from them." --Mark Twain

From: Stefan Winkler <Stefan.Winkler@epfl.ch>
It is still an unending source of surprise for me how a few scribbles on
a
blackboard or on a piece of paper can change the course of human affairs.
- Stanislaw Ulam

From: sichase@csa5.lbl.gov (SCOTT I CHASE) The question seems to be of such a character that if I should come to life definitely settled, I think I would immediately drop dead again." - Vandiver From: fcbaer@shentel.net (FRANK) Werner von Braun: Basic research is when I'm doing what I don't know I'm doing. I have learned to use the word "impossible" with the greatest caution. The best computer is a man, and it's the only one that can be mass-produced by unskilled labor. Crash programs fail because they are based on theory that, with nine women pregnant, you can get a baby a month. We can lick gravity, but sometimes the paperwork is overwhelming. Wernher VonBraun (1912-1977) born on Mar 23 German-U.S. engineer; He pioneered all aspects of rocketry and space exploration, first in Germany and, after World War II, in the U.S. From: goble@infonaut.com (Clark Goble) One could not be a successful scientist without realizing that, in contrast to the popular conception supported by newspapers and mothers of scientists, a goodly number of scientists are not only narrow-minded and dull, but also just stupid. -- J. D. Watson _The Double Helix_ From: jr3000@aol.com (JR3000) Seek simplicity but distrust it. -- A N Whitehead

after my death and some mathematician were to tell me that it had been

From: FCB <fbaer@mci.newscorp.com>
It requires a very unusual mind to undertake the analysis of the obvious.
(in *Science and the Modern World*)

From: charles@jolt.mpx.com.au (Charles Cave)
Alfred North Whitehead
We think in generalities, but we live in detail
Source: Little Zen Companion, Schiller.

The "silly question" is the first intimation of some totally new development. Source: Little Zen Companion, Schiller.

Every really new idea looks crazy at first Source: The Art of Creative Thinking - book by Robert Olson (1986) From: labonnes@csc.albany.edu (S. LaBonne), fbecker@dtic.dla.mil (Francoise Becker), weitzen@temp10.physics.uiuc.edu (Scott Weitzenhoffer), BUTTHEAD@TRASHCAN.ESCAPE.DE (Matthias Grohmann), Kelvin Mok (klmok@shaw.wave.ca) POSITIVE, adj. Mistaken at the top of one's voice. -Bierce -----units and dimensions------2 monograms 1 diagram 8 nickles 2 paradigms 2 wharves 1 paradox 10E5 bicycles 2 megacycles 1 unit of suspense in an Agatha Christie novel 1 whod unit 1 milli-Helen = the amount of beauty required to launch 1 ship 1 megaphone = 10^6phones 10[^]-6phones = 1 microphone 10^-6phones-10**12 microphones110^-12los=1picolo 10^-12los = 10**^**9los = 1 gigalo 10**21 picolos = l gigolo = 1 paradox 2PhDs = 1 decacard (deck of) 52 cards 0.1 mate = 1 decimate 10^3 sions = 1 konfusion Originals from Kelvin Mok: 10 decisions 10 monologues = 1 decalogue 10 dances = 1 decalogue 500 biorrel 500 bicycles 1 kilocycle = 10³wontons = 1 kiloton 3 1/3 tridents 1 decadent = 2000 mockingbirds = 2 kilomockingbirds = 10 meal-units in Italy Q: What is one-trillionth of a surprise? A: A pico-boo.

From: sbaker@oro.net (Steve Baker)
Samples of puns --er, misdefinitions --you'll find buried deep inside the
"Ask Dr. Science" website -- http://www.drscience.com

Ferric: ironic Genetic Code; Another name for so-called "Code of the West," exemplified by actor Autry. Kilogram: what scientists send instead of postcards Modulation: how the Golden Rule says we should do all things Semiconductor: part-time musician Bunsen Burner: the only safe method of Bunsen disposal Antidote: a brief, amusing story Fission: what atoms do for fun Hertz: prime ingredient in donuts Lecithin: Fat lite Neuron: What we'll need when Ron retires Parallax: Future perfect tense of paralyzed From: jhd@Radix.Net (Joseph Davidson) ass-toroid: mathematical name of a toilet seat? From: charlie@fia.net (charlie) High-tech consumer items Oedepus pyrex: Used for test tube babies For thirsty moon walkers Crater Ade: Quark Bars: Sweetness and 'charm' Bermuda Triangles: Diet breakfast cereal that makes pounds disappear without a trace Ether Oar: Small positioning thruster used by NASA Used to relieve the pain and suffering of asteroids Preparation A: Suture Self: Home medical kit Ε From: badour@umich.edu (Paul Badour) Top 20 Engineers' Terminologies 1. A NUMBER OF DIFFERENT APPROACHES ARE BEING TRIED - We are still pissing in the wind. 2. EXTENSIVE REPORT IS BEING PREPARED ON A FRESH APPROACH TO THE PROBLEM - We just hired three kids fresh out of college. 3. CLOSE PROJECT COORDINATION - We know who to blame. 4. MAJOR TECHNOLOGICAL BREAKTHROUGH - It works OK, but looks very hi-tech. 5. CUSTOMER SATISFACTION IS DELIVERED ASSURED - We are so far behind schedule the customer is happy to get it delivered. 6. PRELIMINARY OPERATIONAL TESTS WERE INCONCLUSIVE The darn thing blew up when we threw the switch. 7. TEST RESULTS WERE EXTREMELY GRATIFYING - We are so surprised that the stupid thing works. 8. THE ENTIRE CONCEPT WILL HAVE TO BE ABANDONED The only person who understood the thing quit. 9. IT IS IN THE PROCESS It is so wrapped up in red tape that the situation is about hopeless. 10. WE WILL LOOK INTO IT - Forget it! We have enough problems for now. 11. PLEASE NOTE AND INITIAL - Let's spread the responsibility for the screw up. 12. GIVE US THE BENEFIT OF YOUR THINKING - We'll listen to what you have to say as long as it doesn't interfere with what we've already done. 13. GIVE US YOUR INTERPRETATION - I can't wait to hear this bull!
14. SEE ME or LET'S DISCUSS - Come into my office, I'm lonely. 15. ALL NEW - Parts not interchangeable with the previous design. 16. RUGGED - Too damn heavy to lift! 17. LIGHTWEIGHT - Lighter than RUGGED. 18. YEARS OF DEVELOPMENT - One finally worked. 19. ENERGY SAVING - Achieved when the power switch is off. 20. LOW MAINTENANCE - Impossible to fix if broken. From: sapient@pearwood.demon.co.uk (Barny Shergold) 21. IT IS TECHNICALLY IMPOSSIBLE - I don't feel like doing it. 22. IT DEPENDS... - Abandon all hope of a useful answer. 23. THE DATA BITS ARE FLEXED THROUGH A COLLECTIMIZER WHICH STRIPS THE FLOW-GATE ARRAYS INTO VIRTUAL MESSAGE ELEMENTS - I don't know. ++ =9.5 THE NERD TEST AND OTHER TESTS From: jjb1@crux3.cit.cornell.edu Here it is guys... The Official MIT Nerd Test Score one point for each YES. Total score is % nerdity. Good luck! 1. Have you ever used a computer? (If the answer is no, try taking the Baker House Purity test.) 2. Have you ever programmed a computer? 3. Have you ever built a computer? 4. Done #2 continuously for more than four hours? 5. Have you ever "fingered" anyone on a computer? б. Did you enjoy it? 7. Do you wear glasses? Are your glasses broken (e.g. taped) ? 8. Is your vision worse than 20/40? 9. 10. Worse than 20/80? Are you legally blind? 11. 12. Have you ever asked a question in lecture? 13. Have you ever answered a question in lecture? 14. Have you ever corrected a professor?

- 15. Have you ever answered a rhetorical question?
- 16. Do you sit in the front row?
- 17. Do you take notes in more than one color?
- 18. Have you ever worn a calculator?
- 19. A pocket protector?
- 20. Have you ever used a microscope?
- 21. Have you ever used a telescope?
- 22. Have you ever used an oscilloscope?

23. Is your weight less than your IQ? 24. Have you ever done #2 on Friday, Saturday, and Sunday of the same weekend? 25. Have you ever done #2 past 4 am? Have you ever done #2 with someone of the appropriate (Either 26. or both, your choice) sex (besides your consultant)? 27. Have you ever done #2 for money? 28. Do you own a Rubik's Cube? 29. Can you solve it? 30. Without the book? 31. Without looking? 32. Do you have acne? 33. Do you have greasy hair? 34. Are you unaware of it? 35. Have you ever bought anything from Radio Shack? Did you redesigned anything from Radio Shack? 36. Do you know how to use a sliderule? 37. Do you know calculus? 38. 39. Do you know Maxwell's Equations? 40. Do you have them on a T-shirt? 41. Have you ever dissected anything? 42. Do you know pi past five decimal places? 43. Do you know e past five decimal places? 44. Do you own more than \$500 in electronics (excluding stereo)? 45. More than \$1000? 46. Have you ever built more than \$1000 worth of electronics? 48. Have you ever designed a multistep chemical synthesis? 49. Was it fun? 50. Have you ever read The Hitchhiker's Guide to the Galaxy? 51. Was your math SAT more than 300 points higher than your verbal? 52. Have you ever worked on a Friday night? 53. While there's a party next door? 54. And wished that someone would invite you to over? 55. Have you ever played a computer game? 56. Done #55 in the last three months? 57. Done #55 in the last three weeks? 58. Have you ever written a computer game? 59. Are your pants too short? 60. Do your socks mismatch? 61. Have you used a chemistry set? 62. After the age of 13? 63. Have you ever played D&D (or other role-playing game)? 64. Since high school? 65. Have you ever entered a science fair? 66. Did you win? 67. Do you own a digital watch? 68. Does it play music? 69. Does it have a calculator? 70. Have you ever used a rare earth element? 71. Do you own a CRC? 72. Do you own a CRT? 73. Do you own an HP calculator? 74. Do you know how to use it? 75. Were you ever on a chess team? 76. Were you ever on a debate team? 77. Do you know more than three programming languages? 78. More than eight?

79. Have you ever made a technical joke? 80. Did no one get it? 81. Can you name more than ten Star Trek episodes? 82. Are you socially inept? 83. Do you own a pencil case? 84. Do you wear it? 85. Do you know Schrodinger's equation? 86. Have you ever solved it? 87. Have you ever used the word "asymptotic"? 88. Can you count in binary? 89. Have you ever broken into a computer system? 90. A government system? 91. Have you ever changed your bank account? 92. Changed someone else's? 93. Done #2 for money? 94. Have you ever inhaled helium? 96. Do you own anything that is radio controlled? 97. Have you ever interpolated? 98. Have you ever extrapolated? 99. Have you ever used a modem? 100. Have you ever reached sexual climax while doing #2? RANK CLASSIFICATION _____ _____ 1-20 Totally cool, dude! 21 - 40Your social life needs some serious help.

21-40 Your social life needs some serious help. 40-60 Nerd! 60-80 YOU need some serious help. 80-100 Hail, O Great Nerd Master. I have sacrificed some virgin, untouched sliderules in your name.

There is an interactive later version of this test with 500 questions(!) on: http://www.frontiernet.net/~jbennett/nerd/

From Aliquotes Volume V Number vii July/97 (rogerb@microsoft.com) GEEKOMETER By Natalie Goto

Now that the timid Canadian summer has finally decided to grace us with her presence, voices of dissent have been heard to echo through the increasingly empty hospitall halls. The complaint? "Not enough time spent in the lab! Far too much lollygagging! What is it with the students of today? Idle hands..." Evidently, it's time to clear the air and separate the studious from the slackers. For this reason, a convenient diagnostic test has been supplied to help you objectively ascertain the amount of time that a student has spent in the lab lately. (Don't worry, the test won't take up too much of your students' lab time.)

1. In the fish section of St. Lawrence market, your first thought is:

a) Why don't I buy fish for a change? b) I should bolster my eicosanoid levels with some tasty fish eyes! c) I smell TEMED. 2. You associate the logo for CAA with: a) The Canadian Automobile Association. b) The sound made by a crow. c) Glutamine. 3. You have the kind of skin that: a) Tans easily. b) Burns when exposed to the sun the first few times. c) Makes Casper look healthy. 4. When you go to the pet store, do you: a) Google your eyes at the adorable puppy dogs. b) Complain loudly about the effect that this visit will have on your allergies. c) Contemplate the potential experiments that could be performed. 5. Your first reaction to a hockey puck rocketed into your direction is: a) Block the shot. b) Protect the jewels. c) Think to yourself, "Gee, this must be what a piece of DNA feels like when it's about to be bombarded by free radical generated by oxidized iron - OUCH!" 6. When you go to Disneyland, do you: a) Re-experience the wonder of childhood. b) Try hard not to think about the lab time you're missing. c) Suffer from intense mouse tail flashback and end up sobbing your apologies to Mickey. 7. At the dinner table, are you: a) A polite and pleasant dinner companion. b) A focussed eater who refuses to sully good foot with conversation. c) An occasional sculptor of mashed potato into frenzied helical twists and beta slashes with the hopes that your enlightened audience will be able to pick out the SH2 domain that you see so clearly. 8. You think that the Rubix cube was: a) A fun fad while it lasted. b) Easy to solve once you worked on it obsessively for two weeks. c) A highly under-rated visual aid for introducing your three year old to the wonders of crystal packing. (They're never too youg for Bragg!) In the upcoming provincial election, you plan to vote for: 9. a) The candidate who best matches your political standards. b) The candidate who you believe will do the least amount of damage to the province in the next four years. c) There's an election??? 10. You think that roller blading is:

a) A pleasurable form of exercise. b) A hellion's form of fun that should be banned from all public places and consigned to the same areas where smokers are now kept. c) An excellant way to increase your productivity in the lab. How did you do? Scoring sceme: c=0, b=1, a=2 Lab Time Evaluation Score Classification GEEEEEEEEEEEEEEEEEEEEEEEEEEEEE 0-5 The laws of physics would have to be broken before you could spend You are *such* a geek! more time in the lab. 6-14 Reasonable amount of time in the lab. Weird Science-type 15-20 Normal civilian Not a graduate student. GEEK TEST 1. A friend opens a magazine full of scantily-clad members of your preferred sex. Do you: A. Openly Ogle B. Act Non-Chalant C. Comment "Gee, that's got to be at least 400 dpi, colour!" D. Slip the hand down the pants for a bit of good, old-fashioned executive relief. 2. You're at a party. Someone comes over and asks you your star sign. You: A. Tell them to bugger off B. Lay them one in the groin, then tell them to bugger off. C. I don't go to parties. D. I don't get invited to parties. 3. You're at the head of a large queue in front of a cash-register in a large department store. The register gives a >beep< and stops dead. You: A. Wait patiently B. Plant all the stuff you were going to buy in a nearby baby carriage and call the store detective (to while away the time) C. Break out your ever-present C64 notebook and try to debug the thing D. I don't know 4. You're shopping for some personal hygiene equipment when the chemist runs up saying the prescription database on his 386 is corrupt. You: A. What's a prescription database? B. What's a 386? C. What's personal hygenie? D. What was the question again? 5. A friend wants to borrow a record off you. You A. Lend it out, and tell them it's a boomerang.

B. Tell them to go buy it. C. Consult the database to see that status of the record concerned D. Sell it to them for a beer. You'd most like to meet: 6. A. The person who wrote "Gulag Acapeligo" B. The person who wrote "War and Peace" C. The person who wrote MSDOS D. A person who can write 7. You win a "Grocery-Grab" at a local supermarket. You've got one minute to pack a cart with as much stuff as you can. You start: A. In the Liquor Section In the Confectionary Lane в. C. At the Pencil Bar D. At the cash register 8. You've been hit by a car and your life flashes before your eyes. The thing you remember most vividly is: A. Your Mother's voice as a child B. Your first Love C. The Ascii table. D. The tire pressure was maybe a little too high 9. You get to compete on blind date. You have one statement to change the choosers mind about you. You say: A. I've got a 12 inch tounge B. I can go all night C. I'VE GOT A 386SX with 64K Ram Cache D. I've killed 5 people 10. You feel naked without your: A. Electric Guitar B. Wallet C. VT100 reference guide D. Axe 11. You see someone standing on a ledge, about to jump. You can save them if you say the right thing. You say: A. I know things are bad, but do you want to talk about it? B. I feel you just need someone to talk toC. Want to come and play on my C64? I bet you haven't got the guts.... . . . Oh, I see you did... D. 12. You told your best friend the first time you: A. Had Sex B. Had Oral Sex C. Got a Ram expansion D. Killed a cat. 13. No-one understands you like: A. Your Mother B. Your Father C. Your PC D. Your Parole Officer

14. For your 18th birthday you wanted: A. A Car B. A Shaver C. A C64 Cassette Drive D. Some Piano Wire, and the Neighbours Cat Scoring Mostly A's: You're normal. Boring Boring Boring. You're the sort of person who'll justy fritter their way thru life enjoying themselves and having a good time. Shame on you! Mostly B's: You're mostly normal. Nothing a little ECT can't clear away in any case. You mostly come into the "Mostly A's" above. Mostly C's: Geek Alert! Break out the pocket protector! With a set of horn rims and a pocket calculator, you're ready for Revenge Part #72. You can be the person that gets beat up all the time. Mostly D's: So you're a socipath; But that doesn't mean you're a bad person. Just keep taking the Lithium and everything'll be fine Are you STILL a computer geek? Ok, so you lucked out last time - you were about as socially adjusted as onion and jelly sandwhich, BUT YOU MIGHT HAVE CHANGED! You may not be a computer geek any more! It's possible!!! (Not probable, but possible) Test yourself now! It's a stag party for one of your friends. You and the rest of your 1. friends all put money in for: a. A set of driving mirrors b. A stripper c. A stripper with a set of driving mirrors d. A VGA screen so he can check out alt.sex.pictures.of.girlies You want to improve your social life. You a. Ask people to go out with you. Join a club to meet new people b. c. Drink yourself unconcious and forget about it. d. What's a social life? 3. You ideal partner would have: a. Looks b. Intelligence c. Money d. A 1.2 Gig Hard Drive, Twin floppies + SVGA screen, and 5 Meg

Memory

- 4. You have the most horrific nightmare of your life. It involves: a. You driving off a cliff
 - b. You showing up somewhere with no clothes on
 - c. A hungry alsation, your private parts and some tomato sauce.
 - d. A tax on pocket protectors and thick glasses
- 5. You're on blind date. The question you would ask is:
 - a. "Name the weirdest place you ever kissed someone"
 - "Name the weirdest place you ever made love" b.
 - "Name the weirdest place you ever played soggy biscuit" c.
 - d. "Name the weirdest place you ever booted MSDOS 4"
- 6. Your role model is:
 - a. Rudolf Steiner
 - Mother Theresa b.
 - c. Charlie Manson d. R2D2
- 7. Your favourite fashion accessory is:
 - a. Winklepickers
 - b. Collar Studs
 - c. An axe
 - d. What's fashion?
- 8. If you had your life to live again, would you:
 - a. Make no changes
 - b. Make a few changes
 - c. Make a lot of changes
 - d. Upgrade to SVGA
- 9. Your favourite pickup line is:
 - a. "I've just won the lottery"
 - b. "Has anyone seen the keys to my Porsche?"
 - c. "\$hit, I'm pissed"
 - d. "I'm superuser at work.."
- 10. During sexual climax, you think of:
 - a. Your partner
 - b. Your partner's body

 - c. Yourselfd. The 487 co-processor at 52 Meg

Scoring You don't really need the score card do you? Mostly A's or B's means you're the normal run-of-the-mill, 90212 (the house next door) walk alike, talk alike that gives us real jerks a bad name; C's mean you're a. Well, frankly, I don't know what you are, but it's probably treatable with large amounts of voltage, and D's of course means that you've got a fantastic career stretched out in front of you as far as your nose can see. Happy camping. Ε

From: ibrahim@leland.stanford.edu (Nabeel Robert Ibrahim) Electrical Engineering Purity Test, Version 1.0 (c)1994 Nabeel Ibrahim

You may distribute this freely, but please leave the headers intact.

This test consists of 50 yes/no questions to test your Electrical Engineering Purity. You score 1 point for each "Yes" and 0 points for each "No," except where noted.

(that's a summation symbol) MAIL ANY COMMENTS/SUGGESTIONS TO: ibrahim@leland.stanford.edu 0 Have you ever discharged a capacitor? 1 Done 0 twice in one day? 10 Done 0 with your tongue? 11 Have you ever doped silicon? 100 Done 11 with someone else? 101 Done 11 with two or more people? 110 Done 11 with someone without knowing their name? 111 Have you ever tweaked a resistor? (oh, that's so sexy...) 1000 Have you ever blown up an electrolytic capacitor? 1001 Done 1000 while an animal watched? 1010 Have you ever fondled a 10K resistor? 1011 Have you ever derived an equation? 1100 Done 1011 with a member of the opposite sex? 1101 Have you ever worn a pocket protector? 1110 Have you ever checked your email more than 10 times in one day? 1111 Done 1110 for one week straight? 10000 Have you ever made a joke about transistors? 10001 Have you ever laughed at a joke about transistors? (this one is worth 3 points) 10010 Have you ever wondered how the circuitry would work in that liquid metal guy in T2? 10011 Have you ever used Ohm's Law to excess? 10100 Done 10011 while someone of the opposite sex watched? 10101 Done 10011 with a large ungulate (hooved animal)? 10110 (Guys only) Have you ever counted the number of females in one of your EE classes so you could gain sympathy from friends in Liberal Arts? 10111 Do you speak in assembly? 11000 Has your skin color changed as a result of spending too much time in front of a terminal? (That green tone really works for me...) 11001 Have you ever had a serious discussion with someone about whether CISC is better than RISC? 11010 Have you ever used :-) to excess? 11011 Have you ever had to explain :-) to a friend? 11100 Have Fourier, LaPlace, or Maxwell ever visited you in a dream? (This one is worth 20 points. You *should* not, under any circumstances, fantasize about EE!) 11101 Have you ever read "The Sex Life of an Electron"? 11110 Can you rapidly count to 100d in binary?

11111 Do you have more than 5 computer accounts?

100000 Do you have more than 10 computer accounts? (Geek!) 100001 Have you ever laughed at a Liberal Arts major because they couldn't find a job? (You should...it's really fun) 100010 Are you addicted to reverse polish(HP) notation? 100011 Have you ever slept with your significant other (girlfriend/boyfriend) on the floor of a computer lab? 100100 Have you ever been in a relationship with someone you met through email or a newsgroup? 100101 Have you ever been turned on by a transistor? 100110 Have you ever turned on a transistor? 100111 Have you ever measured ground bounce? 101000 Done 100111 with an inanimate object? 101001 Done 100111 with a cadaver? 101010 Have you ever faked a bias point? (Have you no shame?!?!?) 101011 Have you ever had an intimate encounter with a voltage supply? 101100 Have you ever watched while someone else had an intimate encounter with a voltage supply? 101101 Have you ever probed a circuit? 101100 Done 101101 with other people watching? 101111 Done 101101 more than five times in one day? 110000 Done 101101 without protection? (You should really wear a ground strap!) 110001 Did you laugh while taking this quiz? (This one should be worth 30, but it's only worth 2) Scoring Scale: 00-15 points ==> Go back to your English class. 15-25 points ==> Either you have a life or you are an underclassman/woman. 25-35 points ==> You can feel your life slipping through your fingers as you get sucked into the world of Electrical Engineering. It could be worse...you could be in CS. 35-45 points ==> You should definitely go to grad school in EE. 45-72 points ==> You are a lost cause. You're the EE equivalent of Carl Sagan. Please do not contact me...ever. Note: Please send me your score, as I am trying to accumulate enough data to do a statistical analysis...seriously!! ibrahim@leland.stanford.edu (Nabeel Ibrahim) ΡB

Well, the Galileo spacecraft has blown up on Jupiter, and frankly we couldn't be more excited. At first glance it seems to be a waste to send a spacecraft several hundred million miles to be blown up on a distant planet, when we've got any number of 14 year old boys who would happily blow it up here on earth for free. But that's sort of missing the point. That space craft didn't blow up just for fun (though it probably *was* fun); it blew up in the service of science.

But it's the fate of science to be misunderstood. Most people

took science in high school but didn't pay attention, due to a sneaking suspicion that if they did, they'd end up having to teach science to people just like them. For better or worse, most people's understanding of science is limited to what they learn off of the "X-Files" and occassional "Nightline" appearances by Carl Sagan.

Wait a minute, you say. You can learn a *lot* from that Sagan guy. Well, yes, you can. But can you learn *enough*? To test this, I've created this quick science quiz, just a few questions on some basic scientific ideas. Grab that pencil, haul your thinking cap out of the attic, and try your hand at these babies. No fair looking at someone else's paper.

1. The Galileo Spacecraft was named after Galileo Galilei. Galileo Galilei was: A) The Italian astronomer who discovered Jupiter's moons B) A notorious mob boss, who was the basis for Don Corleone in "The Godfather" C) The nice green grocer down the street from NASA headquarters D) Dean Martin's real name. 2. The First Law of Thermodynamics states: A) "If you leave the top off the Thermos, your coffee gets cold." B) "Energy is neither created nor destroyed." C) "Entropy is what happens when you just don't care." D) "Use an electron, go to jail." 3. What do Albert Einstein, Erwin Schrodinger and Werner Heisenberg have in common? A) They are all Leos B) They were the backbone of the 1905 University of Chicago defensive line C) They are notable physicists D) At one time, each of them played guitar for the Red Hot Chili Peppers. 4. Fossils are: A) What you call the Rolling Stones if you are under the age of 25 B) Technically eligible for AARP benefits C) God's inside joke D) Mineralized remains of prehistoric life. 5. Which of these accurately describes a "black hole": A) Any job requiring the use of the phrase "Today's special is..." B) Your credit card bill C) A collapsed star with a gravitational field so strong that light cannot escape D) Any of the last three seasons of "Saturday Night Live." 6. Define "Medulla Oblongata": A) A lesser-known opera of Guiseppe Verdi B) A part of the brain situated near the spinal cord C) The forbidden dance of love D) What Freddie Mercury sings in "Bohemian Rhapsody." 7. Define "quark":

A) A sub-atomic particle

B) What ducks say at a nuclear reactor C) Slang for flatulence D) What you call that ooky stuff that covers a canned ham. 8. Which four names below are the names of the major Jovian moons? A) Ciera, Achieva, Integra, Lumina B) Fuschia, Magenta, Sienna, Taupe C) Groucho, Harpo, Zeppo, Chico D) Io, Callisto, Europa, Ganymede The answers: 1:A 2:B 3:C 4:D 5:C 6:B 7:A 8:D. Miss any of these, and *boy,* are you dumb. Which is why someone else is having all the fun, blowing up space probes. Think about it. ++ =9.6 MURPHY'S LAW MURPHY'S LAWS In any field of scientific endeavor, anything that THE PRIME AXIOM: can go wrong, will. 2. If the possibility exists of several things going wrong, the one that will go wrong is the one that will do the most damage. 3. Everything will go wrong at one time. 3.1 That time is always when you least expect it. 4. If nothing can go wrong, something will. 5. Nothing is as easy as it looks. б. Everything takes longer than you think. 7. Left to themselves, things always go from bad to worse. 8. Nature always sides with the hidden flaw. 9. Given the most inappropriate time for something to go wrong, that's when it will occur. 10. Mother Nature is a bitch. 10.1 The universe is not indifferent to intelligence, it is actively hostile to it. 11. If everything seems to be going well, you have obviously overlooked something. 12. If in any problem you find yourself doing an immense amount of work, the answer can be obtained by simple inspection. 13. Never make anything simple and efficient when a way can be found to make it complex and wonderful. 14. If it doesn't fit, use a bigger hammer. 15. In an instrument or device characterized by a number of plus-orminus errors, the total error will be the sum of all the errors adding in the same direction. 16. In any given calculation, the fault will never be placed if more than one person is involved.

From: Freek <frbrysse@vub.ac.be>
"Proof of Murphy's Law:
Murphy's Law cannot be proven, yet is correct, as when you try to prove
Murphy's Law, you will see that the proof is incorrect. This is obviously
due
to Murphy's Law, therefore Murphy's Law is correct and proven."

GLASSER'S COROLLARY

If, of the seven hours you spend at work, six hours and fifty-five minutes are spent working at your desk, and the rest of the time you throw the bull with your cubicle-mate, the time at which your supervisor will walk in and ask what you're doing can be determined to within five minutes.

> ZYMURGY'S SEVENTH EXCEPTION TO MURPHY'S LAWS When it rains, it pours.

> > JENKINSON'S LAW It won't work.

O'TOOLE'S COMMENTARY ON MURPHY'S LAWS Murphy was an optimist.

 E_{-}

LAWS RELATING TO DESIGN:

 In any given price estimate, the cost of the equipment will exceed estimated expenditure by a factor of 3.
 Dimensions will always be expressed in the least useable terms.
 For example, velocity will be expressed in furlongs/fortnight.
 If the breadbox trial model functions perfectly, the finished product will not percolate.
 In a mathematical calculation, any error that can creep in, will.

will be in the direction that will do the most damage to the calculation. In any collection of data, the figures that are obviously correct, 5. beyond all need of checking, contain the errors. 6. The probability of a dimension or value being omitted from a drawing is directly proportional to its importance. 7. In specifications, Murphy's Law supersedes Ohm's. 8. Information necessitating a change in design will be conveyed to the designer after, and only after, the plans are complete. 9. In simple cases, presenting one obvious right way vs. one obvious wrong way, it is often wiser to choose the wrong way so as to expedite subsequent revisions. 10. The more innocuous a modification appears to be, the further its influence will extend and the more plans will have to be redrawn. Ε LAWS RELATING TO ASSEMBLY: 1. If a project requires n components, there will be n-1 components available. 2. Interchangeable parts won't. 3. Components that must not and cannot be assembled improperly will be. 4. The most delicate component will be dropped. 5. The construction and operation manual will be discarded with the packing material. The garbage truck will have picked it up five minutes before the mad dash to the rubbish can. The necessity of making a major design change increases as the 6. assembly and wiring of the unit approach completion. 7. THE LAW OF SELECTIVE GRAVITATION: A dropped tool will land where it will do the most damage. 8. A component selected at random from a group having a 99% reliability will be a member of the 1% group. 9. Tolerances will accumulate unidirectionally toward maximum difficulty of assembly. 10. The availability of a component is inversely proportional to the need for that component. If a particular resistance is needed, that value will not be 11. available. Furthermore, it cannot be developed with any series or parallel combination. 12. After an instrument has been assembled, extra components will be found on the bench. E_ LAWS RELATING TO WIRING, TEST, AND OPERATION: 1. Any wire cut to length will be too short. 2. Milliammeters will be connected across the power source, voltmeters in

series with it. 3. The probability of an error in the schematic is directly proportional to the trouble it can cause. 4. Identical units tested under identical conditions will not be identical on the final test after being buried under other components and wiring. A self starting oscillator won't. 5. A crystal oscillator will oscillate at the wrong frequency -- if it 6. oscillates at all. 7. A p-n-p transistor will be found to be an n-p-n. 8. A fail-safe circuit will destroy others. 9. If a circuit cannot fail, it will. 10. A transistor protected by a fast-acting fuse will protect the fuse by blowing first. Probability of failure of a component is inversely proportional to 11. the ease of repair or replacement. 12. A KEY RULE OF STARFLEET OPERATIONS: Some idiot has left open the number two impulse vent. (Check the position of all switches, knobs, and dials before turning on a piece of equipment. Both you and the equipment will live longer.) Ε LAWS CONCERNING TROUBLE SHOOTING: 1. After the 24th cabinet-to-chassis screw has been removed to replace the under chassis fuse, it will be observed that the line cord plug has become disengaged from the a.c. receptacle. 2. After the 24th cabinet-to-chassis screw has been replaced, the driver tube will be found under the schematic on the bench. 3. The bleeder resistor will quit discharging the filter capacitors as the operator reaches into the power supply enclosure. ALLEN'S AXIOM When all else fails, read the directions. GUNNERSEN'S LAW The probability of a given event is inversely proportional to it's desirability. MESKIMEN'S LAW There's never time to do it right, but always time to do it over.

JONES'S LAW

The man who can smile when things go wrong has thought of someone he can blame it on.

LORD FALKLAND'S RULE

When it is not necessary to make a decision, it is necessary not to make a decision.

GUMMIDGE'S LAW

The amount of expertise varies in inverse proportion to the number of statements understood by the general public.

SATTINGER'S LAW It works better if you plug it in.

THE LAW OF THE PERVERSITY OF NATURE You cannot successfully determine beforehand which side of the bread to butter.

ZYMURGY'S FIRST LAW OF EVOLVING SYSTEM DYNAMICS Once you open a can of worms, the only way you can recan them is to use a larger can. (Old worms never die; they just worm their way into larger cans.)

> OSBORN'S LAW Variables won't, constants aren't.

> > THE SNAFU EQUATIONS

 Given any problem containing N equations, there will be N+1 unknowns.
 The object or bit of information most needed will be least available.
 The device requiring service or adjustment will be least accessible.
 In any human eneavor, once you have exhausted all possibilities and failed, there will be one solution, simple, obvious, and highly visible to everyone else.
 Badness comes in waves.

1) Hofstadter's Law: "It always takes longer than you expect, even when you

take Hofstadter's Law into account."

2) Morton's Law: "If rats are experimented upon, they will develop cancer."

3) Epstein's Axiom: "With extremely few exceptions, nothing is worth the trouble."

4) Mathis' Rule: "It is bad luck to be superstitious."

5) Laura's Law: "No child throws up in the bathroom."

6) "If there is a opinion, facts will be found to support it." -- Judy Sproles.

7) "Rich folks get more strokes." -- Greg Beil.

8) "If A = B and B = C, then A = C except where void or prohibited by law".

-- Roy Santoro.

9) Preudhomme's Law of Window Cleaning: "It's on the other side." -- Doug Preudhomme

11) Slick's Three Laws of the Universe: "(1) Nothing in the known universe

- 12) The two laws of Frisbee: "(1) The most powerful force in the world is that of a disc straining to land under a car, just out of reach (this force is technically termed 'car suck'); (2) Never precede any maneuver by a comment more predictive than 'Watch this!'"
- 13) (Sam) Goldwyn's Law: "A verbal contract isn't worth the paper it's printed on."
- 15) (Mark) Twain's Rule: "Only kings, editors, and people with tapeworms have the right to use the editorial 'we'."
- 16) "Bodies in motion tend to remain in motion. Bodies at rest tend to remain in bed." -- Dave Tewksbury

From: joeshmoe@world.std.com (Jascha Franklin-Hodge) (List of Taglines)
Any wire cut to length will be too short.
1st rule of intelligent tinkering - save all the parts
If it's not going to plan, maybe there never was a plan.
If Murphy's Law can go wrong, it will.

PROOF METHODS

WIPE-METHOD: One wipes the blackboard, immediately after writing. (write to the right, wipe to the left.) METHOD OF EXACT DESCRIPTION: Let p be a point q, that we will call r. PREHISTORIC METHOD: Somebody has once proven this. AUTHORITY BELIEVE METHOD: That must be right. It stands in Forster. AUTHORITY CRITICAL METHOD: That must be wrong. It stands in Jaenich. COGNITION PHILOSOPHY, METHOD 1: I recognized the problem! COGNITION PHILOSOPHY, METHOD 2: I believe, I recognized the probelm! PACIFISTIC METHOD: Thus, before we fight about it, let's just believe it COMMUNICATIVE METHOD: Does anybody of you know it? KAPITALISTIC METHOD: The profit is maximal, if we do not proof anything, because that costs the leasts pieces of chalk. COMMUNISTIC METHOD: We proof it together. Everybody writes a line and the result is government property. NUMERICAL METHOD: Roughly rounded, it is correct. SMART GUYS METHOD: We do not proof that now. Anyway, it is to complicated for the physicists. TIMELESS METHOD: We proof so long till nobody knows wether the proof is ended or not.

PROOF TECHNIQUES

written by Armen H. Zemanian, published in The Physics Teacher, May 1994.

The usual techniques for proving things are often inadequate because they are merely concerned with truth. For more practical objectives, there are other powerful - but generally unacknowledged - methods. Here is an (undoubtedly incomplete) list of them:

Proof of Blatant Assertion: Use words and phrases like "clearly...,""obviously...,""it is easily shown that...," and "as any fool can plainly see..."

Proof by Seduction: "If you will just agree to believe this, you might get a better final grade."

Proof by Intimidation: "You better believe this if you want to pass the course."

Proof by Interruption: Keep interrupting until your opponent gives up.

Proof by Misconception:

An example of this is the Freshman's Conception of the Limit Process: "2 equals 3 for large values of 2." Once introduced, any conclusion is reachable. Proof by Obfuscation: A long list of lemmas is helpful in this case - the more, the better. Proof by Confusion: This is a more refined form of proof by obfuscation. The long list of lemmas should be arranged into circular patterns of reasoning - and perhaps more baroque structures such as figure-eights and fleurs-de-lis. Proof by Exhaustion: This is a modification of an inductive proof. Instead of going to the general case after proving the first one, prove the second case, then the third, then the fourth, and so on - until a sufficiently large n is achieved whereby the nth case is being propounded to a soundly sleeping audience. More proof methods: Proof by passion: The author gives the proof with a lot of passion, expressive eyes and vigorous movements... Proof by example: The author gives only the case n = 2 and suggests that it contains most of the ideas of the general proof. Proof by intimidation: 'Trivial.' Proof by vigorous handwaving: Works well in a classroom or seminar setting. Proof by cumbersome notation: Best done with access to at least four alphabets and special symbols. Proof by exhaustion: An issue or two of a journal devoted to your proof is useful. Proof by omission: 'The reader may easily supply the details.' 'The other 253 cases are analogous.' '...' Proof by obfuscation: A long plotless sequence of true and/or meaningless syntactically related statements. Proof by wishful citation: The author cites the negation, converse, or generalization of a theorem from literature to support his claims. Proof by funding: How could three different government agencies be wrong? Proof by personal communication: 'Eight-dimensional colored cycle stripping is NP-complete [Karp, personal communication].' Proof by reduction to the wrong problem: 'To see that infinitedimensional colored cycle stripping is decidable, we reduce it to the halting problem.'

- Proof by reference to inaccessible literature: The author cites a simple corollary of a theorem to be found in a privately circulated memoir of the Slovenian Philological Society, 1883.
- Proof by importance: A large body of useful consequences all follow from the proposition in question.
- Proof by accumulated evidence: Long and diligent search has not revealed a counterexample.
- Proof by cosmology: The negation of the proposition is unimaginable or meaningless. Popular for proofs of the existence of God.
- Proof by mutual reference: In reference A, Theorem 5 is said to follow from Theorem 3 in reference B, which is shown from Corollary 6.2 in reference C, which is an easy consequence of Theorem 5 in reference A.
- Proof by metaproof: A method is given to construct the desired proof. The correctness of the method is proved by any of these techniques.
- Proof by picture: A more convincing form of proof by example. Combines well with proof by omission.
- Proof by vehement assertion: It is useful to have some kind of authority in relation to the audience.
- Proof by ghost reference: Nothing even remotely resembling the cited theorem appears in the reference given.
- Proof by forward reference: Reference is usually to a forthcoming paper of the author, which is often not as forthcoming as at first.
- Proof by semantic shift: Some standard but inconvenient definitions are changed for the statement of the result.
- Proof by appeal to intuition: Cloud-shaped drawings frequently help here.

Even more Proof Techniques

Methods for getting people to believe you (as good as, if not better than, proof). A collection of proof techniques that will prove invaluable to both mathematicians and members of the general public.

PROOF TECHNIQUE #1 - 'Proof By Induction'

- 1. Obtain a large power transformer.
- 2. Find someone who does not believe your theorem.
- 3. Get this person to hold the terminals on the HV side of the transformer.
- 4. Apply 25000 volts AC to the LV side of the transformer.

5. Repeat step (4) until they agree with the theorem.

PROOF TECHNIQUE #2 - 'Proof By Contradiction'

- 1. State your theorem.
- 2. Wait for someone to disagree.
- 3. Contradict them.

PROOF TECHNIQUE #3 - Fire Proof

- 1. Summon all your inferiors for a departmental meeting.
- 2. Present your theorem.
- 3. Fire those who disagree.

PROOF TECHNIQUE #4 - The Famous Water Proof

- 1. State your theorem.
- 2. Wait for someone to disagree.
- 3. Drown them.

NB. This is closely related to the 'bullet' proof, but is easier to make look like an accident.

PROOF TECHNIQUE #5 - Idiot Proof

- 1. State your theorem.
- 2. Write exhaustive documentation with glossy colour pictures and arrows about which bit goes where.
- 3. Challenge anyone to not understand it.

PROOF TECHNIQUE #6 - Child Proof

- 1. State your theorem.
- 2. Encapsulate it in epoxy and shape it into an ellipsoid.
- 3. Put it in a jar with all the other proofs (one with one of those Press-to-Open lids).
- 4. Give it to a professor and challenge him to open it.

PROOF TECHNIQUE #7 - Rabbit Proof

- Generate theorems at an altogether startling rate, much faster than anybody is able to refute them. Use up every body else's paper. Run away at the slightest sign of danger.
- 2. Leave any crap in small, easily identified piles, in prominent places where you no longer are, and it cannot in fact be proven that you ever were.

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PROOF TECHNIQUE #8 - Fool Proof
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- 1. State your theorem.
- 2. Invite colleagues to comment.
- 3. If they don't agree, exclaim loudly, "You Fools!"

=10. ANECDOTES ABOUT FAMOUS SCIENTISTS

M

this.

From: Bob Hayden (hayden@oz.plymouth.edu) A query from Laurie Snell at Dartmouth... ----- Forwarded message from J. Laurie Snell -----I wonder if you could do me a favor. I am trying to find the origin of the mathematician-baker story. The version I heard was that Poincare bought bread once a day from his local baker. The bread was supposed to weigh 1 kilo but afer a year of record keeping Poicare found a nice normal distribution with mean 950 gr. He called the police and they told the baker to behave himself. One year later Poicare reported to the police that the baker had not reformed. The police confronted the baker and he said "How could Poicare have known that we always gave him the largest loaf? Poincare then showed the police his record for this year which was again bell shaped curve with max at 950 gr. but trucated on the left side. There is an exhibit at the Boston Science Museum about this but there is no reference given. Could you ask your newsgroups if anyone knows the orgin of this story? Thanks. Laurie From: "Alexander Vinogradov" <aevin@link.cytspb.rssi.ru> Ernest Rutherford (1871-1937) New Zealand physicist One student in Rutherford's lab was very hard-working. Rutherford had noticed it and asked one evening: - Do you work in the mornings too? - Yes, - proudly answered the student sure he would be commended. - But when do you think? - amazed Rutherford. М From: entropy@pawl.rpi.edu (Mark-Jason Dominus) Paul Erdos, currently most prolific mathematician in history, is always making jokes about how old he is. (He says, for example, that he is two and a half billion years old, because in his youth the age of the Earth was known to be two billion years and now it is known to be 4.5 billion years.) He observed one day that the audiences at his talks had been getting larger and larger, to the point where they filled halls so big that his old and feeble voice could not be heard. Erdos speculated as to the cause of

"I think," he said, "it must be that everyone wants to be able to say 'I remember Erdos; why, I even attended his last lecture!'"

Μ_

Ernst Eduard Kummer (1810-1893), a German algebraist, was rather poor at arithmetic. Whenever he had occasion to do simple arithmetic in class, he would get his students to help him. Once he had to find 7 x 9. "Seven times nine," he began, "Seven times nine is er -- ah --- ah -- seven times nine is. . . " "Sixty-one," a student suggested. Kummer wrote 61 on the board. "Sir," said another student, "it should be sixty-nine." "Come, come, gentlemen, it can't be both," Kummer exclaimed. "It must be one or the other."

From: voigtman@informatik.tu-muenchen.de (Thomas Voigtmann) This story is about the number 2^67-1, the 67th Mersenne number (Numbers, Mersenne had claimed to be prime, which was proven to be non-prime in 1903 by F.N.Cole (1861-1927). In the October meeting of the AMS, Cole announced a talk "On the Factorisation of Large Numbers". He walked up to the blackboard without saying a word, calculated by hand the value of 2^67, carefully subtracted 1. Then he multiplied two numbers (which were 193707721 and 761838257287). Both results written on the blackboard were equal. Cole silently walked back to his seat, and this is said to be the first and only talk held during an AMS meeting where the audience applauded. The were no questions. It took Cole about 3 years, each sunday, to find this factorisation, according to what he said. This is freely quoted from E.T.Bell's book "Mathematics: Queen and Servant of Science", published in London, 1952; you can find the story in David Wells: "The Penguin Dictionary of Curious and Interesting Numbers" (Penguin Books, 1986) For the curious: $2^{67} - 1 = 193707721 \times 761838257287 =$ 147573952589676412927 М

(I'm not sure if the following one is a true story or not) The great logician Bertrand Russell (or was it A.N. Whitehead?) once claimed that he could prove anything if given that 1+1=1. So one day, some smarty-pants asked him, "Ok. Prove that you're the Pope." He thought for a while and proclaimed, "I am one. The Pope is one. Therefore, the Pope and I are one."

[NOTE: The following is from merritt@Gendev.slc.paramax.com (Merritt). The story about 1+1=1 causing ridiculous consequences was, I believe, originally the product of a conversation at the Trinity High Table. It is recorded in Sir Harold Jeffreys' Scientific Inference, in a note to chapter one. Jeffreys remarks that the fact that everything followed from a single contradiction had been noticed by Aristotle (I doubt this way of putting it is quite correct, but that is beside the point). He goes on to say that McTaggart denied the consequence: "if 2+2=5, how can you prove that I am the pope?"

have replied: "if 2+2=5, 4=5; subtract 3; then 1=2; but McTaggart and the pope are two; therefore McTaggart and the pope are one." When I consider this story, I am astonished at how much more brilliant some people are than I (quite independent of the fallacies in the argument).

Since McTaggart, Hardy, Whitehead, and Russell (the last two of whom were credited with a variant of Hardy's argument in your post) were all fellows of Trinity and Jeffreys (their exact contemporary) was a fellow of St. Johns, I suspect that (whatever the truth of Jeffreys' story) it is very unlikely that Whitehead or Russell had anything to do with it. The extraordinary point to me about the story is that Hardy was able to snap this argument out between mouthfuls, so to speak, and he was not even a logician at all. This is probably why it came in some people's minds to be attributed to one or other of the famous Trinity logicians.

From: Karl Beidatsch <jvdhoek@cygnus.uwa.edu.au>

No, no. The reason it was attributed to one of them is easily provable if given that 1+1=1. McTaggart is one; Hardy is one. Therefore Mctaggart and Hardy are one. We'll call this MH. Whitehead is one; Russell is one. Therefore Whitehead and Russell are one. We'll call this WR. MH is one; WR is one. Therefore MH and WR are one. We'll call this MW.

Jeffreys is one; MW is one. Therefor Jeffreys and MW are one.

Ergo, all five are actually one person; the unit MHWRJ is their collective consciousness.

Just goes to show what a little idiocy can do for you.

Karl "My head hurts now!" Beidatsch.

Μ

From: Stephen Montgomery-Smith <stephen@showme.missouri.edu>

The mathematician Hardy was to give a keynote speech at a conference. Asked for an advance summary, he said he would present a proof of the Rieman zeta hypothesis -- but they should keep it under their hats. When he arrived, though, he spoke on a much more prosaic topic. Afterwards the conference organizers asked why he said he'd talk about the theorem and then didn't. He replied this was his standard practice, just in case he was killed on the way to the conference.

It was part of his tactics against God - in that he thought God would not allow him to die on the sea trip, because then everyone would think that Hardy had solved this great theorem. Hardy had other anti-God tactics,

including always taking an umbrella, and some grading or other boring work, with him to the cricket games. For an athiest Hardy certainly spent a lot of effort against God.

Apparently Hardy's ambitions were:

1. Prove the Riemann zeta hypthosesis.

- 2. Score the winning play in an important game of cricket.
- 3. Murder Mussolini
- 4. Prove the non-existance of God.

Well, I think that these ambitions (and maybe a couple of others) were listed in Nature many years ago - maybe someone else on the usernet would know.

John von Neumann (1903-1957) [Hungarian/US mathematician and scientist] The following problem can be solved either the easy way or the hard way.

Two trains 200 miles apart are moving toward each other; each one is going at a speed of 50 miles per hour. A fly starting on the front of one of them flies back and forth between them at a rate of 75 miles per hour. It does this until the trains collide and crush the fly to death. What is the total distance the fly has flown?

The fly actually hits each train an infinite number of times before it gets crushed, and one could solve the problem the hard way with pencil and paper by summing an infinite series of distances. The easy way is as follows: Since the trains are 200 miles apart and each train is going 50 miles an hour, it takes 2 hours for the trains to collide. Therefore the fly was flying for two hours. Since the fly was flying at a rate of 75 miles per hour, the fly must have flown 150 miles. That's all there is to it.

When this problem was posed to John von Neumann, he immediately replied, "150 miles."

"It is very strange," said the poser, "but nearly everyone tries to sum the infinite series."

"What do you mean, strange?" asked Von Neumann. "That's how I did it!"

From: thommark@access5.digex.net (Mark A. Thomas) How about the apocryphal story about the MIT student who cornered the famous John von Neumann in the hallway:

Student:	"Er, excuse me, Professor von Neumann, could you please
	help me with a calculus problem?"
John:	"Okay, sonny, if it's real quick I'm a busy man."
Student:	"I'm having trouble with this integral."
John:	"Let's have a look." (insert brief pause here)
	"Alright, sonny, the answer's two-pi over 5."
Student:	"I know that, sir, the answer's in the back I'm
	having trouble deriving it, though."

John:	"Okay, let me see it again." (another pause)
	"The answer's two-pi over 5."
Student	(frustrated): "Uh, sir, I _know_ the answer, I just don't
	see how to derive it."
John:	"Whaddya want, sonny, I worked the problem in two different ways!"

Von Neumann and Norbert Weiner were both the subject of many dotty professor stories. Von Neumann supposedly had the habit of simply writing answers to homework assignments on the board (the method of solution being, of course, obvious) when he was asked how to solve problems. One time one of his students tried to get more helpful information by asking if there was another way to solve the problem. Von Neumann looked blank for a moment, thought, and then answered, "Yes".

Weiner was in fact very absent minded. The following story is told about him: When they moved from Cambridge to Newton his wife, knowing that he would be absolutely useless on the move, packed him off to MIT while she directed the move. Since she was certain that he would forget that they had moved and where they had moved to, she wrote down the new address on a piece of paper, and gave it to him. Naturally, in the course of the day, an insight occurred to him. He reached in his pocket, found a piece of paper on which he furiously scribbled some notes, thought it over, decided there was a fallacy in his idea, and threw the piece of paper away. At the end of the day he went home (to the old address in Cambridge, of course). When he got there he realized that they had moved, that he had no idea where they had moved to, and that the piece of paper with the address was long gone. Fortunately inspiration struck. There was a young girl on the street and he conceived the idea of asking her where he had moved to, saying, "Excuse me, perhaps you know me. I'm Norbert Weiner and we've just moved. Would you know where we've moved to?" To which the young girl replied, "Yes daddy, mommy thought you would forget."

The capper to the story is that I asked his daughter (the girl in the story) about the truth of the story, many years later. She said that it wasn't quite true -- that he never forgot who his children were! The rest of it, however, was pretty close to what actually happened...

The french scientist Ampere was on his way to an important meeting at the Academy in Paris. In the carriage he got a brilliant idea which he immediately wrote down ... on the wand of the carriage: dH=ipdl/r^2. As he arrived he payed the driver and ran into the building to tell everyone. Then he found out his notes were on the carriage and he had to hunt through the streets of Paris to find his notes on wheels.

During a class of calculus my lecturer suddenly checked himself and stared intently at the table in front of him for a while. Then he looked up at us and explained that he thought he had brought six piles of papers with him, but "no matter how he counted" there was only five on the table. Then he became silent for a while again and then told the following story:

"When I was young in Poland I met the great mathematician Waclaw Sierpinski. He was old already then and rather absent-minded. Once he had to move to a new place for some reason. His wife didn't trust him very much, so when they stood down on the street with all their things, she said: - Now, you stand here and watch our ten trunks, while I go and get a taxi. She left and left him there, eyes somewhat glazed and humming absently. Some minutes later she returned, presumably having called for a taxi. Says Mr. Sierpinski (possibly with a glint in his eye): - I thought you said there were ten trunks, but I've only counted to nine. - No, they're TEN!

- No, count them: 0, 1, 2, ..."

Albert Einstein (1879-1955) [German physicist] Albert Einstein, who fancied himself as a violinist, was rehearsing a Haydn string quartet. When he failed for the fourth time to get his entry in the second movement, the cellist looked up and said, "The problem with you, Albert, is that you simply can't count."

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite) Einstein was attending a music salon in Germany before the second world war, with the violinist S. Suzuki. Two Japanese women played a German piece of music and a woman in the audience excaimed: "How wonderful! It sounds so German!" Einstein responded: "Madam, people are all the same."

From: "Alexander Vinogradov" <aevin@link.cytspb.rssi.ru> Einstein once said that it would be hard to teach in a co-ed college since guys were only looking on girls and not listening to the teacher. He was objected that they would be listening to HIM very attentively, forgetting about any girls. But such guys won't be worth teaching, - replied the great man.

From: Colin_Douthwaite@equinox.gen.nz (Colin Douthwaite) This is a story I heard as a freshman at the University of Utah when Dr. Henry Eyring was still teaching chemistry there. Many years before he and Dr. Einstein were colleagues. As they walked together they noted an unusual plant growing along a garden walk. Dr. Eyring asked Dr. Einstein if he knew what the plant was. Einstein did not, and together they consulted a gardner. The gardner indicated the plant was green beans and forever afterwards Eyring said Einstein didn't know beans <g>. I heard this second hand and I don't know if the story has ever been published...

From: peter.oram@oml.ericsson.se (Peter Oram)
Isaac Newton (English physicist and mathmatician (1642-1727):

I am trying to find a reference to a story said to be about Sir Issac Newton and an orrery, which sci.astro readers may be able to help me with. The story as I have heard it is as follows:

The story is told of an atheist scientist, a friend of Sir Issac Newton, who knocked on the door and came in after he had just finished making his solar system machine (ie one of the machines like the one in the science museum where you crank the handle and the planets and moons move round). The man saw the machine and said `how wonderful' and went over to it and started cranking the handle and the planets went round. As he was doing this he asked ` who made this?'. Sir Issac stopped writing and said `nobody

did'. Then he carried on writing. The man said `You didn't hear me. Who made the machine?' . Newton replied `I told you. Nobody did.' He stopped cranking and turned to Issac `Now listen Issac, this marvellous machine must have been made by somebody - don't keep saying that nobody made it.' At which point Issac Newton stopped writing and got up. He looked at him and said `Now isn't it amazing. I tell you that nobody made a simple toy like that and you don't believe me. Yet you gaze out into the solar system

- the intricate marvelous machine that is around you - and you dare say to

me that noone made that. I don't believe it'. As far as the record goes the

atheist went away and he was no longer an atheist. He was suddenly converted to the idea that God was behind the laws that were found in creation.

Where is the story to be found? Who was the man? Also, is it likely to be incorrect? Since the first orrery machine was 1721, Sir Issac (1643 - 1727) must have been quite old at the time.

I welcome email as well as netnews replies - if anyone has a source reference for this or any other info please let me know. I have heard that this story has been seen around on the net .. any leads?

After a remark from the net Peter gave the following in support of the story: Newton was an Arian, ie he had problems with believing the orthodox concept of the Trinity, but this doesn't take away from the central point of the story. I grant you the story may be apocraphal, (which is why I originally posted out a request for information which may verify or discredit it), but I don't think that you can dismiss it because of his beliefs; what I mean is Newton was a deist not an atheist and as such can fit the role the story ascribes to him.

"Newton's science was closely related to his theology. In the General Scholium of his Principia, he states that its purpose was to establish the existence of God (Westfall, 205,290; Clark, 12; Brooke, p.169; Mandelbrote, p.292,300). It was to combat atheism (Mandelbrote, p.292), challenge the mechanical explanation, and point to the need for a wise and benevolent deity and an intelligent Creator (Harrison, p.27). He believed that the universe was governed by general, natural laws set up by God, but preserved by special providence, i.e., aided by supernatural acts, such as comets (Harrison, p.27; Mandelbrote, p.290). " sourced from Bob Clausen's web page. He wrote: "This most beautiful system of the sun, planets and comets, could only proceed from the counsel and dominion of an intelligent Being" Issac Newton "Principia" 2nd Edition

From: mstueben@tjhsst.vak12ed.edu (Michael A. Stueben)
 The English mathematician John Wallis (1616-1703) was
 a friend of Isaac Newton. According to his diary, Newton
 once bragged to Wallis about his little dog Diamond.

"My dog Diamond knows some mathematics. Today he proved two theorems before lunch."

"Your dog must be a genius," said Wallis.

"Oh I wouldn't go that far," replied Newton. "The first theorem had an error and the second had a pathological exception."

In the period that Einstein was active as a professor, one of his students came to him and said: "The questions of this year's exam are the same as last years!" "True," Einstein said, "but this year all answers are different."

Marilyn Monroe suggests to Einstein: What do you say, professor, shouldn't we make a little baby together: what a baby it would be - my looks and your intelligence! Einstein: I'm afraid, dear lady, it might be the other way around...

From: ? ,corrected by rtomes@kcbbs.gen.nz (Ray Tomes)
Niels Bohr (1885-1962) Danish physicist.
Professor Niels Bohr, a famous Applied Mathematician-Physicist, had a
horse
shoe over his desk. One day a student asked if he really believed that a
horse shoe brought luck. Professor Bohr replied, "I understand that it
brings you luck if you believe in it or not."

In his later days, Niels Bohr designed a remarkable way to avoid difficult questions. When somebody was driving him into a corner during a coloquium or lecture, he took a matchbox, apparently to light is cooled pipe, but in fact (as experienced listeners already knew) to drop the inside on the floor. Afterward he took his time to gather the stick and continued with a talk, about which nobody, least of all the questioner, remembered if it had anything to do with the question.

From: rtomes@kcbbs.gen.nz (Ray Tomes) George Gamow also tells in "Thirty years that shook the world: the story (?) of quantum physics" a charming story about Dirac: When Dirac was visiting Wigner, he saw --- as I recall it was Wigner's sister whom he wound up marrying --- Wigner's sister knitting. After he left, he came back, and picking up the needles said there is one and only one other variation on this. Whereby he unknowingly proceeded to demonstrate earling!

Bertrand (Arthur William) Russell (1872-1970) [British philopher and mathematician]: The following is supposedly a true story about Russell. It isn't really a math joke since it makes fun of the British hierarchy, but it's funny anyway....

Around the time when Cold War started, Bertrand Russell was giving a lecture on politics in England. Being a leftist in a conservative women's club, he was not received well at all: the ladies came up to him and started attacking him with whatever they could get their hands on. The guard, being an English gentleman, did not want to be rough to the ladies and yet needed to save Russell from them. He said, "But he is a great mathematician!" The ladies ignored him. The guard said again, "But he is a great philosopher!" The ladies ignore him again. In desperation, finally, he said, "But his brother is an earl!" Bert was saved.

This story is told with several different protagonists. (Who knows the truth?):

1) Another "true" story, kinda like the aforementioned urban legend: Enrico Fermi, while studying in college, was bored by his math classes. He walked up to the professor and said, "My classes are too easy!" The professor looked at him, and said, "Well, I'm sure you'll find this interesting." Then the professor copied 9 problems from a book to a paper and gave the paper to Fermi. A month later, the professor ran into Fermi, "So how are you doing with the problems I gave you?" "Oh, they are very hard. I only managed to solve 6 of them." The professor was visibly shocked, "What!? But those are unsolved problems!"

From: lrmead@whale.st.usm.edu (Lawrence R. Mead) 2) Very nearly this exact story was told to me (or I read it) about the mathematician David Hilbert when *he* was a grad student. Can anyone here confirm this?

From: columbus@osf.org (Michael Weiss)
3) Well now, I heard the same thing about John Milnor. Moreover the
unsolved problem was showing that any smooth closed curve in 3-space
of total curvature <= 4pi is unknotted, and Milnor *did* prove that as
an undergraduate.</pre>

From: visser@ph.tn.tudelft.nl (Boudewijn W. Ch. Visser)

4) It was not Fermi, but George Danzig.

The story as told in alt.folklore.urban (see the FAQ from there) tells about a student, not paying attention. At the end of the lecture, the professor writes down 8 problems, and the student, waking up, thinks it is homework. At the next class, the student apologizes for having finished only 4 problems , and having an idea about 2 more. Turns out the problems were famous unsolved problems. The student was George Danzig. _ _ From: sidles@u.washington.edu (John Sidles) The soon-to-be-famous student who solved a previously unsolved problem, in the mistaken belief that it was a homework assignment, was indeed... ****** George Dantzig ******. His first-person account can be found (along with many other fascinating accounts) in the book "More Mathematical People".

Here is the full reference; this book is highly recommended....

~Title: edited	More mathematical people : contemporary conversations /
	by Donald J. Albers, G.L. Alexanderson, Constance Reid.
Edition:	1st ed.
Pub. Info.:	Boston : Harcourt Brace Jovanovich, c1990.
Phy Descript:	375 p.
Notes:	Includes bibliographical references.
LC Subject:	Mathematicians Interviews.
	Mathematicians Biography.
Other Author:	Albers, Donald J., 1941
	Alexanderson, Gerald L.
	Reid, Constance.
Library Loc.:	Mathematics.
Status:	Mathematics Research General Stacks
	QA28 .M67 1990 CHECK THE SHELVES

While Boltzman gave a lecture on ideal gasses, he casually mentioned complicated calculations, which didn't give him any trouble. His students could not follow the fast mathematics and asked him to do the calculations on the blackboard. Boltzman apologized and promised to do better next time. The next lesson he began: "Gentlemen, if we combine Boyle's law with Charles's law we get the equation $pv=p \ buble 0 \ v \ buble 0 \ (1 + a t)$. Now it is clear that $\ buble a \ buble b = f(x) \ dx \ x \ (a)$, then is pv=RT and $\ buble V \ S \ f(x,y,z) \ dV = 0$. It is so simple as one and one is two. At this moment he remembered his promise and dutyfully wrote 1 + 1 = 2. Then he continued with the complicated calculations from his bare mind.

From: kriman@acsu.buffalo.edu (Alfred M. Kriman)

Wigner, Eugene Paul (11 Nov. 1902-1 Jan. 1995) About given name: born Jeno Wigner in BudaPest. Published as Eugen when in Germany, as Eugene after 1930 in U.S. About family name: there is an urban legend around Princeton University, that he once simply asked a graduate student, "How do you pronounce my name?" Got back an American pronunciation of the W, and thenceforth went by that pronun- ciation. In reality, he was too gentle and

modest to correct anyone's pronunciation of his name.

From: LHILL@Bridgewater.edu (L. Michael Hill)
How about Charles Darwin when he saw a beetle and picked it up. He saw a
second and picked that one up in the other hand. He then saw a third one
which he really wanted. Not knowing what to do, he shoved one of the ones
he was holding into his mouth in order to pick up the third one. The one
in
the mouth emmitted some kind of stuff which made him spit out the beetle
and also lose the other two!
Charles R. Darwin (1809-1182) [English biologist]

Berthelot was so proud of his Legion d'Honneur that he had a lab coat made with a hole in it, through which you could see and admire the medall.

From: jpnairn@eworld.com (Jerry Nairn) There's the story of Sir Eddington, later to become known as Sir "Adding-one", at an interview with a reporter, in the 30s, I think. The interviewer said, "I've heard that you're one of the three people in the world who understand General Relativity." Eddington got a puzzled look on his face. The interviewer asked him what was the matter, and he replied, "I'm trying to think who the third person would be." P______

From: Axel Harvey <axe@cam.org>

Okay, here are a couple of Eddington jokes. You already have a version of the first one, but this one seems better documented. It is reported by Subrahmanyan Chandrasekhar in _Truth_and_Beauty:_Aesthetics_and_ Motivations_in_Science_, U. Chicago Press, 1987, p. 117, and was told by Eddington himself to Chandrasekhar and others at a dinner in Trinity during the Christmas recess of 1933:

[...] as the joint meeting of the Royal Society and the Royal Astronomical Society was dispersing [this was 6 November 1919, when the results of the eclipse expedition that confirmed Einstein's prediction of the bending of light by gravity were announced], Ludwig Silberstein came up to him and said, "Professor Eddington, you must be one of three persons in the world who understands general relativity." On Eddington's demurring to this statement, Silberstein responded, "Don't be modest, Eddington," and Eddington replied that, "On the contrary, I am trying to think who the third person is."

From: Axel Harvey <axe@cam.org>

The other I read or heard, but I don't remember where. Eddington was giving a lecture on cosmology and began with a rapid overview of early models of the universe. He mentioned the Indian idea that the world rested on the back of a giant turtle, and said it wasn't a good model because it didn't say what the turtle rested on. After the lecture an elderly lady went up to him and said, forcefully, "You are very clever, young man, very clever, but there is something you do not understand about Indian cosmology: it's turtles ALL THE WAY DOWN!"

From: Nicolas Bray <bray@soda.CSUA.Berkeley.EDU>
From A Brief History of Time by Stephen Hawking(don't sue me):

A well-known scientist (some say it was Bertrand Russell) once gave a public lecture on astronomy. He described how the earth orbits around the sun and how the sun, in turn, orbits around the center of a vast collection of stars called our galaxy. At the end of the lecture, a little old lady at the back of the room got up and said: "What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise." The scientist gave a superior smile before replying, "What is the tortoise standing on?"

_ _ _ _ _ _ _ _ _ _ _ _

"You're very clever, young man, very clever," said the old lady. "But it's turtles all the way down!"

From: Anton Sherwood (anton@pobox.com) To add to the confusion: When I first heard the story with the above punchline, the scientist was Huxley ("Darwin's bulldog").

So, anyone knows which scientist was given this wise lesson?

From: PHILIP MILLER TATE <CH_S521@crystal.king.ac.uk> I was reading your scientific jokes / anecdotes web page today and saw a reference to Sir Arthur Eddington. You may be interested to know that he once set a Cambridge University Tripos examination question which made reference to "...a perfectly spherical elephant, whose mass may be neglected." I'm not sure in what context...

I've not seen the exam paper but there is a reference to it in a 1954 book on computers called "Faster than Thought".

From: Jim Hewitt <jimbo@sierra.net>
AE was talking to one of his colleagues about quantum mechanics. The
colleague kept using classical terms to discuss the quantum
phenomema. Einstein finally said (something to the effect), "I can't be
sure that I understand you because you are using the wrong words."
M______

From: kovarik@mcmail.cis.mcmaster.ca (Zdislav V. Kovarik) Evariste Galois was not only a mathematical genius but also a dedicated revolutionary. Ironically, he proved that many problems cannot be solved by radicals. From: cxm7@po.CWRU.Edu (Colin Mclarty) Actually, on the math side, Galois showed how to tell when a problem CAN be solved by radicals (Abel earlier proved some can't).

From: kemp@resptk.bhp.com.au (Ian P Kemp) The story is that Albert Einstein's driver used to sit at the back of the hall during each of his lectures, and after a period of time, remarked to AE that he could probably give the lecture himself, haveing heard it several times. So at the next stop on the tour, AE & the driver switched places, with AE sitting at the back, in driver's uniform. The driver gave the lecture, flawlessly. At the end, a member of the audience asked a detailed question about some of the subject matter, upon which the lecturer replied, 'well, the answer to that question is quite simple, I bet that my driver, sitting up at the back, there, could answer it...'.

Shortly after his seventh birthday Gauss entered his first school, a squalid relic of the Middle Ages run by a virile brute, one Buettner, whose idea of teaching the hundred or so boys in his charge wast to trash them into such a state of terrified stupidity that they forgot their own names. In his tenth year Gauss was admitted to the class in arithmetic. As it was the beginning class none of the boys had ever heard of an arithmetical progression. It was easy then for the heroic Buettner to give out a long problem in addition whose answer he could find by a formula in a few seconds. The problem was of the following sort, 81297 + 81495 + 81693 + + 100899, where the step from one number to the next is the same all along (here 198), and a given number of terms (here 100) are to be added. It was the custom of the school for the boy who first got the answer to lay his slate on the table; the next laid his slate on top of the first, and so on. Buettner had barely finished stating the problem when Gauss flung his slate on the table: "There it lies", he said. Then, for the ensuing hour, while the other boys toiled, he sat with his hands folded, favored now and then by a sarcastic glance from Buettner, who imagined the youngest pupil in the class was just another blockhead. At the end of the period Buettner looked over the slates. On Gauss' slate there appeared but a single number. To the end of his days Gauss loved to tell how the one number he had written was the correct answer and how all the others were

wrong. Gauss had not been shown the trick for doing such problems rapidly. It is very ordinary once it is known, but for a boy of ten to find it instantaneously by himself is not so ordinary. This opened the door through wich Gauss passed on to immortality. Buettner was so astonished at what the boy had done without instruction that he promptly redeemed himself and to at least one of his pupils became a humane teacher.

Eric Temple Bell, "The prince of mathematicians" in James R. Neuman "The world of mathematics" part I page 293-294.
[Karl F. Gauss (1777-1855), German mathematician]

From: jeffs@math.bu.edu (Jeff Suzuki)
Another story about Gauss involves his construction of a
septendecagon. He went to a professor (whose name escapes me) and
said "I have just constructed a septendecagon!"

"Nonsense. That is impossible."

"Well, then, I have just figured out how to resolve a seventeenth degree polynomial."

"Bah. Trivial; I've done it myself."

Gauss later paid back this professor (who was an amateur poet) by calling him "The finest poet among mathematicians, and the finest mathematician among poets."

Someone who had begun to read geometry with Euclid, when he had learned the first proposition, asked Euclid, "But what shall I get by learning these things?" whereupon Euclid called in his slave and said "Give him three pence since he must make gain out of what he learns." - Stobaeus

From: Mountain Man <prfbrown@magna.com.au> Pauli asks Heisenburg the big one

Wolfgang Pauli: "Do you believe in a personal god?"

Heisenburg: "May I rephrase your question?

"I myself should prefer the following formulation: Can you, or anyone else, reach the central order of things or events, whose existence seems beyond doubt, as directly as you can reach the soul of another human being? I am using the term "soul" quite deliberately so as not to be misunderstood. If you put your question like that, I would say yes."

> Werner Heisenburg (Physics and Beyond) New York: Harper & Row, 1971 - Page 215

During a lecture, professor Dirac made a mistake in an equation he was writing on the blackboard. A couragous student raises his finger and says timidly : "Professor Dirac, I do not understand equation 2.".Dirac continues writing without any reaction. The student supposes Dirac has not heard him and raises his finger again, and says, louder this time: "Professor Dirac, I do not understand equation 2." No reaction. Somebody on the first row decides to intervene and says: "Professor Dirac, that man is asking a question." "Oh," Dirac replies, I thought he was making a statement."

Ρ_

Murray Gell-Mann

In 1963, when I assigned the name "quark" to the fundamental constituents of the nucleon, I had the sound first, without the spelling, which could have been "kwork." Then, in one of my occasional perusals of Finnegans Wake, by James Joyce, I came across the word "quark" in the phrase "Three quarks for Muster Mark." Since "quark" (meaning, for one thing, the cry of a gull) was clearly intended to rhyme with "Mark," as well as "bark" and other such words, I had to find an excuse to pronounce it as "kwork." But the book represents the dreams of a publican named Humphrey Chimpden Earwicker. Words in the text are typically drawn from several sources at once, like the "portmanteau words" in Through the Looking Glass. From time to time, phrases occur in the book that are partially determined by calls for drinks at the bar. I argued, therefore, that perhaps one of the multiple sources of the cry "Three quarks for Muster Mark" might be "Three quarts for Mister Mark," in which case the pronunciation "kwork" would not be totally unjustified. In any case, the number three fitted perfectly the way quarks occur in nature.

Murray Gell-Mann, The Quark and the Jaguar, W.H. Freeman, New York, 1994, pp 180-181. (1) \underline{M}

Thomas Hobbes: He was 40 years old before he looked on geometry; which happened accidentally. Being in a gentleman's library, Euclid's Elements lay open, and "twas the 47 El. libri I" [Pythagoras' Theorem]. He read the proposition . "By God", sayd he, "this is impossible:" So he reads the demonstration of it, which referred him back to such a proposition; which proposition he read. That referred him back to another, which he also read. Et sic deinceps, that at last he was demonstratively convinced of that trueth. This made him in love with geometry.

In O. L. Dick (ed.) Brief Lives, Oxford: Oxford University Press, 1960.
Ρ_

passed

From: Jdowling@ssdd.redstone.army.mil Enrico Fermi, Italian physicist, 1901-1954. When I was an undergraduate at the University of Texas, I worked in the Fusion Research Center. We had an elderly secretary named Sadie, whose last name I forget. During WWII, she had a job as a secretary at Los Alamos. As she told the story, she was partly responsible for making sure that the scientists properly disposed of secret documents in the incinerator. No one seemed to have problems with this except Fermi who--although he invented the first atomic pile--never could quite figure out how to work the incinerator, and Sadie always had to take him through the steps each time he had to dispose of a document. Ρ_ From: joshua@cimatron.co.il Before they immigrated to the US, the Einsteins endured the severe economic situation in post WWI Germany. Mrs. E saved old letters and other scrap paper for Albert to write on and so continue his work. Years later, Mrs. Einstein was pressed into a public relations tour of some science research center. Dutifully she plodded through lab after lab filled with gleaming new scientific napery, The American scientists explaining things to her in that peculiarly condescending way we all treat nonnative speakers of our own language. Finally she was ushered into a high-chambered observatory, and came face to face with another, larger, scientific contraption. "Well, what's this one for?" she muttered. "Mrs. Einstein, we use this equipment to probe the deepest secrets of the universe," cooed the chief scientist. "Is THAT all!" snorted Mrs. E. "My husband did that on the back of old envelopes!" P_ From: gvg@lvld.hp.com (Greg Goebel) Niels Bohr (1885-1962) Danish physicist On reading of a particularly bizarre physical theory (Dirac's theory leading to the discovery of the positron, to be stuffy about it) Niels Bohr proposed that it would be very useful as an elephant trap. Simply put an explanation of the theory on a poster, tack it up on a tree in the jungle, and any elephant (a beast noted for its wisdom) that

by would immediately become so engrossed trying to figure it out that it could be packed up and delivered to the Copenhagen zoo before it realized

anything had happened.

С

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From: "Zoran Zdravkovski" <zoran@robig.pmf.ukim.edu>
Justus von Liebig (1803-1873) one day was approached by his assistant who
all excited informed him that he had just discovered a universal solvent.
Liebig asked:
                 - "And what is a universal solvent?"
                  - "One that dissolves all substances."
Assistant:
Liebiq:
                  - "Where are you going to keep that solvent, then?!!!"
C_
From: "Zoran Zdravkovski" <zoran@robig.pmf.ukim.edu>
The novelist Hermann Sudermann met once Emil Fischer and started thanking
him on his discovery of veronal:
- You know it is so efficient, I don't even have to take it, it's enough
that I see it on my nightstand.
Fischer replied:
- What a coincidence, when I have problems falling asleep, I take one of
your novels. As a matter of fact, it's enough that I see one of your
wonderful books on my nightstand and I immediately fall asleep!
From: "Alexander Vinogradov" <aevin@link.cytspb.rssi.ru>
(Walter) Hermann Nernst (1864-1941), German physical chemist.
Nernst (the author of the third law of thermodynamics) was breeding
fishes in a pond near his cottage.
- Why do you bother with them? - asked his acquaintance. - Even a
poultry breeding seems to be more interesting.
- I bred animals which are in thermodynamic equilibrium with the
environment. - replied Nernst. - Breeding homeotherms just means
warming the Universe at your expense.
(And exceeding the CO2 output, can we add nowadays.)
Ρ___
From: "Zoran Zdravkovski" <zoran@robig.pmf.ukim.edu>
Walther Nernst, the famous German physical chemist, developed an electric
lamp, known as the "Nernst lamp", which he sold for a very large sum of
money. A colleague of his, not without spite asked him whether his next
project will be making diamonds. Nernst answered,
-"No, I can afford to buy them now, so I don't need to make them".
M
I once heard that the great mathematician David Hilbert was
invited to give a talk on any subject he liked during the early
days of air travel. His subject:
      The Proof of Fermat's Last Theorem
Needless to say, his talk was eagerly anticipated.
The day arrived, the talk was given, and it was brilliant --
but it had nothing at all to do with Fermat's Last Theorem.
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After the talk, someone asked Hilbert why he had picked a title that had nothing to do with the talk. His answer:

"Oh, that title was just in case the plane crashed."

From: essoft@ix.netcom.com
This reminds me of an old anecdote, presumably true, which went
something like this --

Mr. Hilbert has accepted an invitation to deliver a keynote address to a large engineering convention. The organizers subsequently learned that Hilbert was known for rather acerbic attitude towards engineering. Greatly concerned they decided to go back and talk to him.

After beating around the bush for a while they managed to convey to him that they are worried that he may offend some people, and if he could sort of hold back during his speech.

When Hilbert realized what they were asking he grinned broadly and said, "You don't have to worry about that at all. How could I possibly offend anyone for mathematics and engineering have absolutely NOTHING IN COMMON".

From:Terry Pilling <terry@offshell.phys.ndsu.nodak.edu>
Just a few trivial observations,

P_

A funny thing that one notices in the course of learning particle physics is the various signature nuances of various authors, they each seem to have a favorite word or phrase that they use over and over.

For example if you begin your studies with the introductory text by Franz Gross "Relativistic Quantum Mechanics and Field Theory" you will notice that he loves the word "famous" and uses it very frequently throughout the text - if you notice it very early on, it becomes ridulously funny as you go along (in a weird sort of way)

The next step comes with the graduation to "Quantum Field Theory" by Micho Kaku. You can hardly turn a page without noticing his favorite phrase, "highly non-trivial" is very copiously used.

Then finally when you have learned all of that preliminary stuff you begin to read "Superstring Theory" or, in fact, any of the mountain of papers written by Edward Witten, and you notice that you cannot go very far in one of his introduction sections without noticing his favorite word - "crucial".

Some physics-nerd grad student could develop a sort of twisted "Where's Waldo" - type drinking game wherein one must take a drink everytime you come across the word "crucial" in a Witten introduction.

At the very least it brings a chuckle or two into an otherwise difficult read.

Well back to reading another "famous" and yet "highly non-trivial" paper, "crucial" to my understanding of particle physics!

:-)

-Terry-

From: scienctrix@juno.com (Sciencetrx) One line summaries: (Can anybody elaborate on these stories?) - Newton purportedly died a virgin. - Paracelsus was the basis of Faust. The word "bombastic" allegedlt comes from his name because of his manners. - Galileo never dropped the balls from the tower. - Feynman was a trickster of sorts. - The watch gag, cracking combination locks, played the bongos, etc. - Reich, a once highly respected psychologist, ended up his life being considered a crackpot with his Orgone theory. John Mack, of Harvard, is somewhat of an outcast due to his abduction theories. - Tycho Brahe lost the tip of his nose in a duel about a math problem. He wore a metal prosthesis for the rest of his life. Allegedly he died due to a burst bladder. During an audience with the king, he literally held his water. - Einstein walking around without socks, extra marital affairs, etc. - Edison's sometime habit of not bathing frequently. His bad business sense in building cement houses. - AC Gilbert (of Gilbert Science sets and Erector Sets fame) blew up a family shed as a youngster. ++ =11. MNEMONICS =11.1 MNEMONICS

From:alfa@werple.apana.org.au (Glenn Durden): Its a bit of a nasty word to spell though. From (I think) OMNI magazine a few years back: Mnemonics Neatly Eliminate Mans Only Nemesis - Insufficient Cerebral Storage. From: poodge@econBerkeley.EDU (Sam Quigley) How about a mnemonic for remembering how to spell "mnemonic?" My Nasty Editor Might Occaisonally Not Interpret Commas

++ =11.2 MATHEMATICS М Pi: Pi = 3.141592653589793238462643383279..... From: mshapiro@netlink.nix.com (Michael Shapiro) writes: Now I will a rhyme construct By chosen words the young instruct. Cunningly devised endeavor, Con it and remember ever. Widths of circle here you see. Sketched out in strange obscurity. From: stephan@artn.iit.edu (Stephan Meyers) Sir, I send a rhyme excelling In sacred truth and rigid spelling Numerical sprites elucidate for me the lexicon's full weight. If nature gain, who can complain tho' Doc Johnson fulminate. From: clprasad@watson.ibm.com (prasad) Sir, I bear a rhyme excelling In mystic force and magic spelling; Celestial sprites elucidate All my own striving can't relate. From: gsc@cairo.anu.edu.au (Sean Case) A.C. Orr, in: Literary Digest, vol. 32 (1906), p. 84 Now I, even I, would celebrate in rhymes inept, the great immortal Syracusan rivall'd nevermore who in his wondrous lore passed on before left men his guidance how to circles mensurate. Americans can spell "rivall'd" as "rivaled", which works a lot better. From:bhuntley@tsegw.tse.com (Brian Huntley): How I want a drink, alcoholic of course, after the heavy chapters 3 1 4 1 5 9 2 5 3 б 5 8 involving quantum mechanics. 9 7 9 - Sir James Jeans From: J B Youles <john.youles@dial.pipex.com> "I wish I could determine pi Eureka! cried the great inventor Christmas pudding, Christmas pie Is the problem's very centre." From: s6sj7gt@aol.com (Mike Keith)

May I have a large container of coffee?

(It is assumed that you know the first digit).

From ian@iglou.com Sat Dec 23 03:25:11 1995
http://users.aol.com/s6sj7gt/mikerav.htm
Poe, E.: Near A Raven

The poem below, which bears an uncanny similarity to a certain famous poem by Edgar Allen Poe, is my latest and most difficult attempt at constrained writing. Constrained writing is the art of constructing a work of prose or poetry that obeys some artificially-imposed constraint. For example, there are two published novels from which the letter 'e' is absent - Gadsby, by Ernest Vincent Wright (1938), and La Disparition by George Perec (still in print, and even available in a very recent English translation (A Void, translated by Gilbert Adair) that also obeys the constraint!).

Your mission, should you decide to accept it, is to figure out the constraint imposed on this poem. The answer is given after the end, so if you want to try to figure it out, just look at the beginning of the poem.

Poe, E. Near A Raven

Midnights so dreary, tired and weary. Silently pondering volumes extolling all by-now obsolete lore. During my rather long nap - the weirdest tap! An ominous vibrating sound disturbing my chamber's antedoor. "This", I whispered quietly, "I ignore". Perfectly, the intellect remembers: the ghostly fires, a glittering ember. Inflamed by lightning's outbursts, windows cast penumbras upon this floor. Sorrowful, as one mistreated, unhappy thoughts I heeded: That inimitable lesson in elegance - Lenore -Is delighting, exciting...nevermore. Ominously, curtains parted (my serenity outsmarted), And fear overcame my being - the fear of "forevermore". Fearful foreboding abided, selfish sentiment confided, As I said, "Methinks mysterious traveler knocks afore. A man is visiting, of age threescore." Taking little time, briskly addressing something: "Sir," (robustly) "Tell what source originates clamorous noise afore? Disturbing sleep unkindly, is it you a-tapping, so slyly? Why, devil incarnate !-- " Here completely unveiled I my antedoor --Just darkness, I ascertained - nothing more. While surrounded by darkness then, I persevered to clearly comprehend. I perceived the weirdest dream...of everlasting "nevermores".

intellect said, (Desiring, imagining still) that perchance the apparition was uttering a whispered "Lenore". This only, as evermore. Silently, I reinforced, remaining anxious, quite scared, afraid, While intrusive tap did then come thrice - O, so stronger than sounded afore. "Surely" (said silently) "it was the banging, clanging window lattice." Glancing out, I quaked, upset by horrors hereinbefore, Perceiving: a "nevermore". Completely disturbed, I said, "Utter, please, what prevails ahead. Repose, relief, cessation, or but more dreary 'nevermores'?" The bird intruded thence - O, irritation ever since! -Then sat on Pallas' pallid bust, watching me (I sat not, therefore), And stated "nevermores". Bemused by raven's dissonance, my soul exclaimed, "I seek intelligence; Explain thy purpose, or soon cease intoning forlorn 'nevermores'!" "Nevermores", winged corvus proclaimed - thusly was a raven named? Actually maintain a surname, upon Pluvious seashore? I heard an oppressive "nevermore". My sentiments extremely pained, to perceive an utterance so plain, Most interested, mystified, a meaning I hoped for. "Surely," said the raven's watcher, "separate discourse is wiser. Therefore, liberation I'll obtain, retreating heretofore -Eliminating all the 'nevermores' ". Still, the detestable raven just remained, unmoving, on sculptured bust. Always saying "never" (by a red chamber's door). A poor, tender heartache maven - a sorrowful bird - a raven! O, I wished thoroughly, forthwith, that he'd fly heretofore. Still sitting, he recited "nevermores". The raven's dirge induced alarm - "nevermore" quite wearisome. I meditated: "Might its utterances summarize of a calamity before?" 0, a sadness was manifest - a sorrowful cry of unrest; "O," I thought sincerely, "it's a melancholy great - furthermore, Removing doubt, this explains 'nevermores' ". Seizing just that moment to sit - closely, carefully, advancing beside it, Sinking down, intrigued, where velvet cushion lay afore. A creature, midnight-black, watched there - it studied my soul, unawares. Wherefore, explanations my insight entreated for. Silently, I pondered the "nevermores". "Disentangle, nefarious bird! Disengage - I am disturbed!" Intently its eye burned, raising the cry within my core. "That delectable Lenore - whose velvet pillow this was, heretofore, Departed thence, unsettling my consciousness therefore. She's returning - that maiden - aye, nevermore."

Since, to me, that thought was madness, I renounced continuing sadness.

Continuing on, I soundly, adamantly forswore: "Wretch," (addressing blackbird only) "fly swiftly - emancipate me!" "Respite, respite, detestable raven - and discharge me, I implore!" A ghostly answer of: "nevermore". " 'Tis a prophet? Wraith? Strange devil? Or the ultimate evil?" "Answer, tempter-sent creature!", I inquired, like before. "Forlorn, though firmly undaunted, with 'nevermores' quite indoctrinated, Is everything depressing, generating great sorrow evermore? I am subdued!", I then swore. In answer, the raven turned - relentless distress it spurned. "Comfort, surcease, quiet, silence!" - pleaded I for. "Will my (abusive raven!) sorrows persist unabated? Nevermore Lenore respondeth?", adamantly I encored. The appeal was ignored. "O, satanic inferno's denizen -- go!", I said boldly, standing then. "Take henceforth loathsome "nevermores" - 0, to an ugly Plutonian shore! Let nary one expression, O bird, remain still here, replacing mirth. Promptly leave and retreat!", I resolutely swore. Blackbird's riposte: "nevermore". So he sitteth, observing always, perching ominously on these doorways. Squatting on the stony bust so untroubled, O therefore. Suffering stark raven's conversings, so I am condemned, subserving, To a nightmare cursed, containing miseries galore. Thus henceforth, I'll rise (from a darkness, a grave) -- nevermore! -- Original: E. Poe -- Redone by measuring circles. Solution: Despite the rather difficult constraint (to be revealed shortly),

observe how this revised version of "The Raven" duplicates the story, tone, and rhyme scheme of the original fairly closely (including the internal rhymes in the first and third line of each stanza). The only major concession to the form is that the original has six lines per stanza, with the fourth and fifth lines usually being very similar. Due to the nature of the constraint I imposed (revealed in the next paragraph), this would have been nearly impossible to do. Therefore, this version eliminates the similar line in each stanza.

Give up? Hint: Start at the very beginning (with the word 'Poe') and write next to each word the number of letters it contains. Put a decimal point after the first digit. Look at the first few digits (or more if, like me, you know the first several hundred by heart). Are you impressed yet?

Even given the rather difficult constraint, I was able to match the

original very closely in spots. The very first line, although its meter is wrong, is surprisingly close. Others which are very close, even to the point of using many of the same words, are stanza 4 line 5, stanza 6 line 3, stanza 7 line 4, and stanza 15, line 1.

Note the use of the term "blackbird" a couple of times. Though not, strictly speaking, correct (a raven is a black bird, not a blackbird), the term is particularly appropriate. It is a subtle reference to George Perec's La Disparition, which contains another written-with-constraints version of "The Raven" - in this case the constraint being "write it in French without using the letter 'e'". In the English translation of La Disparition by Gilbert Adair, the poem is faithfully translated into English, also without using letter 'e'. The English version of the poem is titled (wait for it...) Black Bird!

The poem encodes the first 740 decimals of pi. The encoding rule is this: a word of N letters represents the digit N if N<9, the digit 0 if N=10, and two adjacent digits if N>10 (e.g., a 12-letter word represents the digit '1' followed by '2').

A much less well-known example is this nice poem by Joseph Shipley (1960):

But a time I spent wandering in bloomy night; Yon tower, tinkling chimewise, loftily opportune. Out, up, and together came sudden to Sunday rite, The one solemnly off to correct plenilune.

I believe that "Near a Raven" establishes the world record for length of a pi mnemonic. I would be glad to hear of other wordy attempts, either in prose or poetry. Perhaps someone would like to attempt a short story or a novel?!

From: s6sj7gt@aol.com (Mike Keith)
I have just finished composing a short story that sets a new
world record for the length of a pi mnemonic: 3835 decimals!

Check it out, at

http://users.aol.com/s6sj7gt/cadenza.htm

You may recognize the first section, a pi-digits version of Edgar Allen Poe's "The Raven" that I wrote about a year ago [See above]. The story takes off from there, in a somewhat science-fictiony vein.

From: thomas@melchior.frmug.fr.net (Thomas Quinot)
For PI, we have in France :
Here is the full mnemonic, from Helen A. Merrill's Mathematical
Exurcsions
(Dover, 1957), reprinted in Dr. Crypton's Mind Benders from Science
Digest
(St. Martin's Press, 1981).

Que j'aime a faire apprendre un nombre utile aux sages Immortel Archimede, artiste, ingenieur

Qui de ton jugement peut priser la valeur ? Pour moi ton probleme eut de pareils avantages. From: Daniel Kobler <kobler@dma.epfl.ch> 1. Que j'aime a faire apprendre un nombre utile aux sages. 2. Glorieux Archimede, artiste ingenieux ! 3. Toi, de qui Syracuse, aime encore la gloire, Soit ton nom conserve par de savants grimoires. 4. 5. Jadis, mysterieux, un probleme existait. 6. Tout l'admirable procede (l'oeuvre etonnante !) Que Pythagore decouvrit aux anciens Grecs : 7. O quadrature ! Vieux tourment du philosophe ! Sibylline rondeur ! 8. 9. Trop longtemps vous avez defie Pythagore et ses imitateurs ! 10. Comment integrer l'espace plan circulaire ? 11. Thales tu tomberas ! Platon tu desesperes ! 12. Apparait Archimede : 13. Archimede inscrira dedans un hexagone : 14. Appreciera son aire fonction du rayon ; 15. Pas trop ne s'y tiendra ! 16. Dedoublera chaque element anterieur, 17. Toujours de l'orbe calculee approchera ; 18. Laquelle limite donne l'arc, 19. La longueur de cet inquietant cercle, 20. Ennemi trop rebelle ! 21. Professeur, enseignez son probleme avec zele ... You can change lines 11 et 12 to 11'. Former un triangle auquel il equivaudra ? 12'. Nouvelle invention : and lines 18 and 19 to 18'. Definira limite ; enfin, l'arc, 19'. le limiteur de cet inquietant cercle This gives 126 decimals (after the 3.) Μ_ From: Jean Debord <JDebord@compuserve.com> A french riddle to remember the digits of "e" : Tu aideras a rappeler ta quantite a beaucoup de docteurs amis (You will help to remember your quantity to many friend doctors) I have found them in the last issue (October 1998) of "Pour la science"

From: "Chiem Whua Ma" <sdragon@flash.net>
My father learned this on in Hong Kong and I can't believe it hasn't
made it's way here sooner.

(french edition of "Scientific American").

М

The mnemonic doesn't hold in English, but it's only needed for the placement of the functions which is easily remembered.

(This MUST be viewed in a non-proportional font):



(SIN TAN SEC on left, CO-functions on right, 1 in the middle)

Using this chart (I just look at it in my head) you can remember the following things:

```
Across the 1:
      1/SIN=CSC or 1/CSC=SIN
      1/TAN=COT or 1/COT=TAN
      1/SEC=COS or 1/COS=SEC
Down any triangle:
      SIN^2+COS^2=1
                =SEC^2
      TAN^2+1
            1+COT^2=CSC^2
Up any triangle:
      SEC^2-1
                =TAN^2 or
                              1-TAN^2=SEC^2
                 =COT^2 or CSC^2-COT^2=1
      CSC^2-1
          1-SIN^2=COS^2 or
                              1-COS^2=SIN^2
A function and its two nearest CLOCKWISE or COUNTERCLOCKWISE neighbors
around any edge of the square:
      (listed starting at tan going clockwise)
            TAN=SIN/COS
            SIN=COS/COT
            COS=COT/CSC
            CSC=SEC/TAN
            SEC=TAN/SIN
      (listed starting at tan going counter-clockwise)
            TAN=SEC/CSC
            SEC=CSC/COT
            CSC=COT/COS
            COS=SIN/TAN
            SIN=TAN/SEC
```

A function and its two neighbors around any edge of the square: (listed starting at tan going clockwise)

```
TAN=SIN*SEC
           SIN=COS*TAN
           COS=COT*SIN
           CSC=COT*SEC
           SEC=TAN*CSC
М
Here are some phrases used to remember SIN, COS, and TAN.
(SIN = Opposite/Hypotenuse, COS = Adjacent/H, TAN = O/A).
From: dannyb@panix.com (danny burstein):
Soh-Kah-Toa
             Sine=opposite/hypotenuse, etc.
From: stephan@artn.iit.edu (Stephan Meyers)
Some officers add curly auburn hair to offer attraction
From: kcousins@awadi.com.au (Kevin Cousins)
Sydney Opera House: Costs are higher than originally anticipated.
From: ahcson@ccwf.cc.utexas.edu (Tree Pig)
how about Oscar Had A Hit Of Acid? write the first letter of
each word along with the letters SCT like :
S OH (sine = opposite/hypotenuse)
C AH (cosine = adjacent/hypotenuse)
T OA (tangent = opposite/adjacent)
From: Alan Meban <AMEBAN@bfsec.bt.co.uk>
Two
        Old
                Angels
Skipped Over
                Heaven
Carrying Ancient Harps
From: pdundas@bfsec.bt.co.uk (Paul Dundas)
Two Old Angels
Skipped Over Heaven
Carrying A
              Harp
From: pyotr@chinook.halcyon.com (Peter D. Hampe)
Oscar Had A Heap Of Apples - you just have to remember the sine, cosine,
tangent progression on your own.
From: Andrew Rogers (rogers@sasuga.hi.com):
Saddle Our Horses, Canter Away Happily, To Other Adventures.
From: cs92dy@cen.ex.ac.uk
sin/cos etc.
Silly old Henry, caught Albert Hugging/Humping two old Aunts.
From: heath@pi.cs.fsu.edu (Taliver B Heath)
Oscar had a hairy old ass.
      SOHCAHTOA
                     (sock-a-toe-a)
      The Cat
                Sat
      On An
                Orange
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~
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And Howled Hard

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696
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Some Old Hulks Carry A Huge Tub Of Ale

Silly Old Hitler Caused Awful Headaches To Our Airmen

Some Old Hag Cracked All Her Teeth On Asparagus

Some Old Hairy Camels Are Hairier Than Others Are

Silly Old Harry Caught A Herring Trawling Off America

SOPHY, CADHY, TOAD

From: mau059@clss1.bangor.ac.uk (D.M.Rigby)
Smiles Of Happiness Come After Having Tankards Of Ale!!!

From: John Jetmore <jj33@evansville.edu>
I was taught the following phrase to remember SIN, COS, and TAN
relationships:

"The Old Arab Sat On His Camel And Hiccupped"

From: raistlin@mentor.cc.purdue.edu (Paul)
For remembering the sign of trig functions in the quadrants:

All Suckers Take Calculus: in quadrants one through four

S	A
Т	C

All=sin, cos, and tan are all posative Suckers=sine positive (others negative) Take=tangent positive (others negative) Calculus=cosine positive (others negative)

taking quadrant 1 (all) covering positive X and Y From: dloucks@primenet.com (Donovan Loucks) Signs of trignometric functions in the four quadrants: Aunt Sally Tickles Cannibals Admiral Spock Tickles Cabbages After Saturday, Tommy Croaked Atra Shaved Timmy Closer From: Vinod Bamalwa <ncb@giascl01.vsnl.net.in> Perp=Perpendicular / | hyp=hypotenuese (hyp)/ (perpendicular) base=base /____| Base Sine=Perp/hyp Cos=Base/hyp Tan=perp/base In one single rhyme it can be summarised as: Some people have curly brown hair turned permanantly black. Sin= p/h cos=b/h Tan=p/b From: Jan OR Christiane Woloniecki <janandchris@northrock.bm> Scruffy Old He Cats Are Hungrier Than Other Animals (Rules of Triganometry) For positive or negative signs: All Sausages Taste Cool (or, very UK this) All Trains Stop (at) Crewe From: Ben Bullock <ben@hayamasa.demon.co.uk> All Sadists Teach Chemistry Μ From: Jim Hollerman <jhollerm@usd.edu> I don't have a better one for the roots of quadratics, but I learned the sine-cosine song for the sum and difference formulae. (I'll describe it here, but it works better if you can hear the chant.) You memorize the formulae for the sine of a sum or difference on the first line and the cosine on the second. The chant goes "sine cosine cosine sine cosine cosine sign sine sine" (the last three are a triplet -- done in the same time as two of the previous) then fill in the angle names alternately and the + and - signs as appropriate. (That's the purpose of the 'sign' -- to remind you that if the angles are added, then the products of trig functions are subtracted.) I also learned a cute, no-brainer method of remembering the second derivative test. You'll see the trick if you draw a smiley face with +'s for eyes and a frowning face with -'s for eyes. (I don't really like to teach this one, as I think that the students are better off understanding

what the sign of the second derivative tells us about the first, and what

that entails about the concavity of the function. I usually mention it during the review for the final exam, rather than the chapter test that includes the second derivative test. Weber Tracy L (tweber@cc.brynmawr.edu): "Please excuse my dear aunt Sally" or "PEMDAS" Default operator precedence () $\frac{1}{2}$ * / + -From: g4klx@g4klx.demon.co.uk (Jonathan Naylor) I was taught a longer version at school: "Brackets of my dear aunt Sally" Which nicely included the fact that brackets and "of" were higher in precedence that * / + -. Being a bunch of nasty snivelling (sp?) ten year olds, we changed it to "Bollocks of my dear aunt Sally". For our American readers, Bollocks == Gonads. Not biologically correct but who cares ? From: magyar@hss.caltech.edu (Ted Turocy) Please excuse my dear aunt Sallv parentheses exponents multiplication division addition subtraction From: dloucks@primenet.com (Donovan Loucks) Porno Pictures Make Dad Act Silly (algebraic order of operations) М From: boingo@agora.rdrop.com (Capuchin=Jeme A Brelin) Quotient rule for derivatives ala Cab Calloway: Hodehi minus hideho over hoho. From: ssw@hamlet.umd.edu (Susan Schwartz Wildstrom) My friend and colleague, Lynn Gruner (who teaches BC Calculus with me at Walt Whitman HS in Bethesda, MD) has altered the quotient rule song that we received some years back. Her version (sung to OLD MACDONALD'S FARM) goes like this: Lo-de-hi less hi-de-lo EIEIO Then draw the line and down below EIEIO With a dx here and a dy there Here a slope, yes there's hope, you can cope Denominator squared will go EIEIO I composed a chain rule "song" to the tune of Allouette, but it's too long to be of much value as a mnemonic. The point of the song certainly

underscores how the chain rule works, but it's not one you'd be likely to remember.

On another mathematical subject, Lynn also uses EIEIO as a mnemonic for extracting roots and when the absolute value symbols are required in the answer Even Index, Even In yielding Odd (exponents). \underline{M}

From: Duran Castore <duran_castore@yahoo.com>
sin 2a = 2 * sin a * cos a -- 2sicko

 $\cos 2a = (\cos a)^2 - (\sin a)^2 - \cos 2si^2$ (no hint for signal, but is obvious that is "-", for $\cos^2 + \sin^2 = 1 \dots$) Μ____ From: David Vivash <PMA98DAV@shef.ac.uk> I remember one my physics teacher taught me (I still use it... but that probably says more about me than the mnemonic) Is dc negative? Means Integrate Sine / Differentiate cos gives negative М From: Susan Schwartz Wildstrom <ssw@csc.umd.edu> A student of mine learned a song (from her mother) that helps her remember it. It is sung to the tune of Pop Goes the Weasel X equals negative B Plus or minus square root of B squared minus four A C All over two A. Μ_ From: Jeff <munchcruncher@nospam.msn.com> When I was in Jr. High and first learning about the trig functions, I thought of Howard Cosell. "Cosell is an a**hole" for cos=a/h. I never got sine and cosine confused since. М From: John Harper <harper@kauri.vuw.ac.nz> For those wishing to remember which is the domain and which the range: ^ y ____ ~@@@@@@@@ ~~@@@@@@@ | - |~~@@@@@@@@ ___/

+----> x Home on the Range

(Acknowledgements to whoever drew this on a men's room wall in the U of Chicago mathematics department many years ago, which is where I saw it. Few graffiti one sees in such places are so useful!) ++++ =11.3 COMPUTER SCIENCE A______

From: jbaldwin@teleport.com (Jim Baldwin)
For the order of declarations in Pascal:

Let's Cook Textured Vegetable Protein

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For: Labels, Constants, Types, Variables, Procedures
Α
From: tomv@vismag.limmat.net.ch (Thomas Voirol)
Two stupid ones:
CAFE - the positive (or unsigned)
                               first nibble in EBCDIC numbers
DB - the negative
e.g. C3 = +3
     F8 = 8
                (unsigned)
     D9 = -9
33 45 7C = +33'457 (packed decimal)
A_
From: fanf@moggy.inmos.co.uk (Anthony Finch)
PCMCIA: People Can't Remember Computer Industry Acronyms
damn! no, that's wrong -- it should be "Memorise". It must be true...
(even though it's not a mnemonic)
From: khm@skom.se (Karl-Henry Martinsson)
Or, as Brendan McGuire (Executive Director of PCMCIA) said: President
Clinton Makes Cornbread In Arkansas
A_
From: bigbear@garlic.com
Computing: You don't go to the STORE to get VD.
          The 360 instructions for which the second operand, instead of
          the first, is the recipient of the data. (STORE and cVD-
         convert to decimal)
++
=11.4 PHYSICS
PC_
From: alkarismi@aol.com (Alkarismi)
After
             atto
                       10*-18
             femto
                       10*-15
Fellatio
                       10*-12
```

Please	pico	10^-12
Note	nano	10*-9
You	micro	10*-6
Must	milli	10*-3
Cum	centi	10*-2
Kiss	Kilo	10*3
My	mega	10*6
Giant	giga	10*9
Todger	tera	10*12

From: Johann Beda <j-beda@pobox.com>
I have been using two different mnemonics for the metric system prefixes:

Every Exta 10*18 10*15 Person Peta 10*12 That Tera 10*9 Gave Giga Me Mega 10*6 Kisses Kilo 10*3 Has Hecto 10*2 10*1 Diarea Deca diary deci 10*-1 centi COWS 10*-2 milli make 10*-3 micro 10*-6 milk 10*-9 not nano pink pico 10*-12 10*-15 fruit femto asshole atto 10*-18 From: cbutler@bnr.ca (Chris Butler) I remember one for the metric system: "King Hector Doesn't Usually Drink Cold Milk" for Kilo 1000 Hecto 100 Deca 10 Units 1 Deci 0.1 0.01 Centi Milli 0.001 From: jsandler@encore.com (Jeff Sandler) My math teacher, who taught us a similar one, must have been more..um... sadist. "Kill Hector Dead <units>, Dear Cousin Milli." P__ The way that I remembered (and still do) Newton's Laws of Motion. The first law - Inertia = I made up a hyphenated word "One - ertia" The Third Law - equal and opposite = a sideways 3 - turn the three so the openings of the three are upward - each side of the sideways three is "equal and opposite" Once I know which the 1st and third are - the second is the only one left. acceleration is directly related to the force applied If I push down the gas pedal in 2nd gear - I accelerate in direct proportion to the force on the gas pedal. Ρ_

From: SCIENCTRIX <SCIENCTRIX@aol.com> Here's a mnemonic to give an indication of the relative comparison of Celsius for those who grew up with the Fahrenheit scale.

30 is hot

20 is nice 10 is cold 0 is ice. P

P_

From: "Dr. Robert L. LaDuca" <rlladuca@rs01.kings.edu>
Q: Why do gas molecules like to look into your window at night?
A: Because they're PVnRT'ed. (pronounce: pivnerted)
OK, I'm ducking the tomatoes. :) :)

(Actually this helped my students remember the gas law!)

From: Mark Gingrich <grinch@rahul.net>
To aid my recollecting the direction of increasing position angle (it
is measured from North, sweeps through the East cardinal point, then
South, then West), I always recite the following:

Never eat Shredded Wheat.

(And, no, this is not a personal vendetta against the Nabisco Company.)
P_____

From: Richard Mentock <mentock@mindspring.com>
Since the meter seems defined in terms of the speed of light
http://math.ucr.edu/home/baez/physics/speed_of_light.html
the speed of light is always 299,792,458 meters/second.

299 792 458 = "We guarantee certainty, clearly referring to this light mnemonic"

299 792 458 = "My ingenious astronomy student remembers an easy light mnemonic" (number of characters of a word = digit) P

From: Rik Deitsch <EDE18384@ACC.FAU.EDU> The EM Spectrum

Cary Grant eXpects Unanimous Votes In Movie Reviews Tonight Cosmic Gamma X-rays Ultraviolet Visible Infrared Microwave Radio Television P

From: slavins@psy.man.ac.uk (Simon Slavin) And the planet one (which I got from Robert A. Heinleins "Have Space Suit, Will Travel): Mother very thoughtfully made a jam sandwich under no protest. for: Mercurius, Venus, thoughfully = Terra = Earth, Mars, Asteroids,

Jupiter, Saturnus, Uranus, Neptune, Pluto. From: snowhare@xmission.com (Snowhare) Mike Bandy wrote on 20 Jul 1994 09:33:13 -0400:

Most Volcanoes Erupt Mouldy Jam Sandwiches Under Normal Pressure

Many Viscious Earth Monsters Just Sat Under Nellies Porch

From: dolf@echo.tds.philips.nl (Dolf Grunbauer) Planets in the solar system. My Very Excellant Memory Just Stores Up Nine Planets. From: badger@phylo.life.uiuc.edu (Jonathan Badger) My Very Educated Mother Just Sent Us Nine Pizzas Actually, currently, I guess it is Pizzas Nine... From: jeff.zeitlin@execnet.com (Jeff Zeitlin) Planets of the Solar System, in order: My Very Extravagant Mother Just Sent Us Nine Parrots. When Pluto comes closer to the sun than Neptune: ... Just Sent Us Pine Nuts. From: kirrilyr@union3.su.swin.edu.au (Kirrily Robert - SINN Editor) Many Very Early Mornings Julie Sits Up Naming Planets From: ted_swift@qm.sri.com (Ted Swift) Matilda Visits Every Thursday, Just Stays Until Noon, Period. From: billa@znet.com (Bill Arnett) My favorite so far is this one for the order of the planets: "Many voters earn money just showing up near polls". I believe it is attributed to Isaac Asimov. From: BillFerris (billferris@aol.com) My Very Efficient Motorcycle, AJS, Uses No Petrol. From: Bevan Harris (BMH@bigpond.com) Another one for the planets, courtesy of Greg Lowe at Perth Observatory. My Very Early Model Jaguar Just Smashed Up Near Pinjarra. (Pinjarra is a moderate sized country town about 80km south of Perth.) From: tomv@vismag.limmat.net.ch (Thomas Voirol) A German one: Mein Mercury mγ Vater Venus father Erklaert Earth explains Mars (to) me Mir Jeden Jupiter every Sonntag Saturn sunday Unsere Uranus our Neuen Neptune new

This will help you remember the sequence of sol's planets. If you speak German, that is...

plans

Plaene

Pluto

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Mercury, Venus, Terre (earth), Mars, ASteroids, Jupiter, Saturn, Unanus,
Neptune, Pluto
             Jean-Philippe Granchi < jean-
From:
philippe.granchi@ota.fr.socgen.com>
Me Voici Tout Mouillé J'ai Suivi Un Nageur Poilu
English: Now I'am wet I was following a hairy diver
This sentence has great success with young (French) amateur ... :-)
From: Jean Debord <JDebord@compuserve.com>
A French mnemonic for the planets
Monsieur, vous tirez mal - Je suis un novice pitoyable.
(Mister, you shoot badly - I am a pitiful beginner)
I have found them in the last issue (October 1998) of "Pour la science"
(french
edition of "Scientific American").
Ρ_
From:
             blandp1@aol.com (Blandp1)
Gallilean moons of Jupiter:
I eat green catapillers: Io, Europa, Ganymede, Callisto.
             freeman-despamifier@netcom.com (Jay Reynolds Freeman)
From:
With all these mnemonics flying about, I Easily Get Confused...
             kwilson@atlas.vcu.edu (Kenneth D. Wilson)
From:
An Icecube Ever Grows Colder
 For: Amalthea, Io, Europa, Ganymede, Callisto.
P_
             Richard Jakiel <jakiel@crl.crl.com>
From:
Here's one for Saturn's Moons:
MET DR THIP
FOR : Mimas, Enceladus, Tethys, Dione, Rhea, Titan, Hyperion, Iapetus and
Phoebe
P___
From:
            billa@znet.com (Bill Arnett)
"Neptune's tiny dancing girls look pretty to-night"
Neptune's moons: Naiad, Thalassa, Despina , Galatea, Larissa , Proteus,
Triton, Nereid.
Ρ_
From: rjohnson@apple.com (Rob Johnson)
The constellations of the zodiac:
A Tense Gray Cat Lay Very Low Sneaking Slowly Contemplating A Pounce
                    i
                         ic a a
r a
       е
            а
                е
                                                           qi
                        b o
                   r
                                    g
i
i u
       m
            n
                                                           u s
                0
                                            р
                       r r
a p
e r
       i
            С
                    g
                                             r
                                                           a c
                                     -
t
       n
           е
                                            i
s u
                    0
                                                           r e
          r
                                     t
                                                           i s
  s
       i
                             i
                                            С
                                           0
                                     а
                                                          u
                             0
                                            r
                                      r
                                                           s
                                      i
                                            n
                                      u
                                      s
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 P_{-} From: eng20216@leonis.nus.sg (CHEW JOO SIANG) How bout the one for the colours of the rainbow -Virgin In Bed Gives You Orgasmic Release For : violet, indigo, blue, green, yellow, orange, red. From: dtrg@st-andrews.ac.uk (David Thomas Richard Given) Rip Off Your Goolies Before I Vomit From: pdundas@bfsec.bt.co.uk (Paul Dundas) Richard of York gave battle in vain From: drory@buphyk.bu.edu (Alon Drory) Or the one I picked up from an Asimov essay: Read Out Your Good Book In Verse He also said that since Violet was just a fancy-schmancy word for purple, more populistic minded people could also Read Out Your Good Book In Prose From: avg@sprintlink.net (Vadim Antonov) Russian for spectrum colors: Zhelayet Znat' Gde Kazhdyi Okhotnik Sidit Fazan wants to_know where sits a_fazan every hunter (a kind of bird) Krasnyi Oranzhevyi Zhyoltyi Zelenyi Goluboy Siniy Fioletvyi Red Orange Yellow Green Lt_Blue Blue Violet From: ingvar@ki.se (Ingvar Mattsson) Or ROY G BIV, for the same colours in the opposite direction. From: mchndnd@marie.physik.tu-berlin.de (Neil Dobson) Or ROY G BIV, for the same colours in the opposite direction. Roy G. Biv, Roy G. Biv, He's the colour quaddie That the spectrum gives. Lois McMaster Bujold. Ρ_ From: sjt@xun8.sr.bham.ac.uk (James Tappin) From: cummings@u.washington.edu (Mike Cummings) Stellar spectral classes: Oh be a fine girl, kiss me right now - SMACK For: 0, B, A, G, K, M, R, N, S.

From: lou@xilinx.com (Lou Sanchez-Chopitea)
(The original from Henry Russell himself.)
Oh be a fine girl, kiss me right now sweetheart.

"Paulo Valdivieso" <pvcosta.nreal@mail.telepac.pt> From: For the HR mnemonic, you cannot forget the female version... simply put 'guy' instead of 'girl'. Michel Gaustad's Astronomy - Cosmic prespective gave for the outdated classes R, N and S the following string - Oh Be A Fine Girl (Guy) Kiss Me Right Now Shmack. He didn't mention the W classe. Well. From: cummings@u.washington.edu (Mike Cummings) Oh Big And Ferocious Gorilla, Kill My Roommate Next Saturday! Only Boring Astronomers Find Gratification Knowing Mnemonics. From: lrmead@whale.st.usm.edu (Lawrence R. Mead) On bad afternoons fermented grapes keep Mrs. Richard Nixon smiling. From: "David W. Knisely" <dk84538@navix.net> As for the spectral type code, it has to be changed, since R, N, and S types have been combined into the C class (carbon stars), maybe to "Oh Be A Fine Girl Kiss Me Constantly" :-) From: davercrb@thegrid.net (Dave Majors): Wow-Oh Be A Fine Girl. Kiss Me Right Now! *Smack* (includes the W class) P_ From: garret@mrao.cam.ac.uk (Garret Cotter) And while we are on the topic of color, how about the one for recalling spectrographic notation: Sober Physicists Don't Find Giraffes Hiding In Kitchens. Ρ From: rjc@mail.ast.cam.ac.uk (Robert Cumming) I used to remember Newton's First Law by singing it (sotto voce, _of course_) to the tune of the Birdie Song: Every body continues in its state of rest Or of uniform motion Until compelled by some external force to change that state of rest Or of uniform motion Ρ_ From: claybake@cae.wisc.edu (Peter Jon Claybaker) Q: What's new (nu)? A: mu / rho It's the only way I can remember the relationship between absolute and kinematic viscosity. From: Johann Beda <j-beda@pobox.com> Q: What's new (nu)? A: c / lambda Ρ_

From: mje@pookie.pass.wayne.edu (Michael J. Edelman)
Another favorite, learned late in life, for electronics types:

Eli the Ice man.

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It's for remembering whether current leads voltage or lags it in reactive
circuits.
In inductive ('L') circuits, voltage ('E') leads current ('I'), hence
'E L I'.
In capacitive ('C') circuits, it's the other way, so 'I C E'.
Ρ_
From: howe-c@physics.utexas.edu (Chris Howe)
I have a relatively good one (albeit fairly useless) for
remembering the order that the nuclear shells get filled up as you add
more nucleons to the nucleus:
spuds if pug dish of pig
If you write it down and then cross out all of the vowels except for
the final 'i' you get
spdsfpgdshfpig
and since you are worying about nuclear levels, you already know the
spectroscopic notation: spdfghi s=0, p=1, ... so if you start numbering
above these letters how many times the letter has occured, you get the
principal quantum number, and angular momentum of the energy states in
the
```

order that they are filled:

11121212312312 spdsfpgdshfpig

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C__
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PERIODIC TABLE
From: mjh22@mrao.cam.ac.uk (Martin Hardcastle)
OK, _my_ high school teacher had the following:

"Hell! Here're Little Beatniks Brandishing Countless Numbers Of Flick kNives."

H He Li Be B C N OF er, Ne

"Naughty Maggie Always Sips Pure Sweet Claret"

N Mg Al Si P S Cl

He couldn't remember any more after that, so nor can I.

From: kirrilyr@union3.su.swin.edu.au (Kirrily Robert - SINN Editor)
"Hi Helen, Little Betty Boron Can Not Often Find

Neddy. Naughty Meg Always SiPS Chlorine in <thinko - no idea what this is> Kenny's Car"

From: dlf@torfree.net (Doug Forkes) Harry HElped LIttle BEnny Balmer Carry Neat Oysters From Neptune's NAtural MenaGerie ALways SInging Polite Sonnets CLearly ARf Key CAsually.

From: Charles Williams <s216@dcta.demon.co.uk>
Healthy Little Beggar Boys Catching Newts Or Fish

From: dbromage@metz.une.edu.au (David Bromage) When I was an undergraduate I heard a good one for the Lanthanide series. Little Cute People Need Plenty Sex Every Given Time Despite having Enough Through Young Love. (La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Th Yb Lu)

From: "Rebecca M. Chamberlin" <rlmiller@lanl.gov>
A mnemonic for the lanthanide elements (Ce - Lu):
Currently parties never provide sexy English girls that drink heavily,
even though you look.

From: mec@treflan.shout.net (Michael Elizabeth Chastain)
The second half of the lanthanides:

The Dancers Have Everything That You Love Terbium Dysprosium Holmium Erbium Thulium Ytterbium Lutetium

From: Mike Brown <mdbrown2@uiuc.edu> I'll list a few of mine. The rest make reference to various parts of the anatomy or just names of people I know. I have them for all but the inner transitions, your mileage may vary.

Group:

I Her Little Name Klub; Ruby, Cessie and Francie.

II Before Megan Can Start Barry Raids the alkaline earth metals

III Boring Al's Galloping Indian on a horse named Thallium

IV Carbon has Silicon German (word for breasts) and Tin Sin feinn drinks in a Lead Pub (Sn for tin and Pb for lead)

V Now Paddy's Arse And Timony's Sub all go swimming in a Bismuth tub

Group VI and VII I already knew

0 His Noblemen Are Kwite Xtra Rude

From: Joel Gordon <jgordon@taconic.net>

Many years ago (1963) I was required to learn the entire periodic table (except the transuranium elements) for a course entitled "Advanced Inorganic Chemistry." While I did not have any mnemonics, I did find that the entire table can be PRONOUNCED, and I memorized it that way, a row at a

time. I still receive requests from my daughter in college to recite it for her friends, an exercise which can make one feel like an incredible geek. From: Martin Ystenes <ystenes@kjemi.unit.no> This one is probably best in Norwegian, but as far as I can see it can be easily transferred to other languages. I teach it to my students every year: Hy! He! LiBe BoCNOF Ne! NaMgAl SiPSClAr KaCaScaTi VaCroMan FeCoNiCu "Zed Enn" GaGe AsSe BroKr I wonder who will be the first one to include this in a song. From: David Mascord <david@dtvm31.demon.co.uk> Aa an undergraduate I learnt to sound the first 36 symbols as one very long word: $\label{eq:heliBeBCNOFNeNaMgAlSiPSClarKCaScTiVCrMnFeCoNiCuZnGaGeAsSeBreak} Hhe \label{eq:heliBeBCNOFNeNaMgAlSiPSClarKCaScTiVCrMnFeCoNiCuZnGaGeAsSeBreak} Hhe \label{eq:heliBeBCNOFNeNaMgAlSiPSClarKCaScTiVCrMnFeCoNiCuZnGaGeAsSeBreak} He \label{eq:heliBeBCNOFNenamgAlSiPSClarKCa$ Essentially every consonant is sounded with "c" replaced by "k" and the two initial "h" sounded as "huh" "huh". I can still remember it so it obviously worked for me! From: Peter Swindells <cs1966@wlv.ac.uk> I remembered the two short periods as two separate words that went (more or less phonetically: Helibebcanofnee and Namgalsipsclar From: lawson@pax.llnl.gov (William S. Lawson) From: DPierce@world.std.com (Richard D Pierce) How about Feynman's mnemonic for the third period of the periodic table: "NeNa, M'gAl, SiPS Chlorine"? Η Н Не N O F Ne Li Be ВC Al Si P S Cl Ar Na Mg From: cummings@u.washington.edu (Mike Cummings) Let me offer this one, see if it's any better. A High School teacher taught me, "H! HeLiBebCNOFNeNaMgAlSiPSiCl!" Not much help, huh? Here's pronunciation key: "H!" (Just make a loud H, then pause, looking as if you're about to pounce. Nice dramatic effect that gets the listener's attention.) "Heh-Lee-Beb-K'Noff-" (Easy so far) "N'Nahm" (That's N(schwa) - Nahm[rhymes with bomb])

"Gall-Sip-Sickle" From: harper@kauri.vuw.ac.nz (John Harper) And in chemistry we eventually learnt to pronounce the following, though each line seems harder than the one before: HHeLiBeBCNOF NeNaMgAlSiPSCl AKCaScTiVCrMnFeCoNiCuZnGaGeAsSeBr (this was before they changed it to ArKCa...) KrRbSrYZrNbMoTcRuRhPdAgCdInSnSbTeI but I must admit I didn't find the rare earths memorable this way. С We got german, french and russian in this thread. Time for a dutch one. The electro-negativity of Metals: Karolientje NAaktgeboren MaG Alleen op ZoN en FEestdagen SNoepen. nakedborn may only on sun- and Hollidays eat sweets. Caroline (=real dutch family name) ProBeer Haar te Kussen(=Cu) achter(Ag) de Platina AUto. Try her to kiss the platina car. behind From: matthew@tadtec.co.uk (Matthew Sweet) But in english: Please Send Little Charlie McKie A Zebra If The Horse Can't Munch Sweet Green Plants Potassium, Sodium, Lithium, Calcium, Magnesium, Aluminium, Zinc, Iron, ?Tin? Hydrogen Copper, ?Mercury?, Silver, Gold, Platinum C_ From: kemp@resptk.bhp.com.au (Ian P Kemp) Oil Riq ! (oxidation is loss, reduction ois gain) (of electrons) From: Rik Deitsch <EDEI8384@ACC.FAU.EDU> For those who forget re-dox orders . . LEO the lion goes GER lose electrons (=) oxidation gain electrons (=) reduction C__ From: kemp@resptk.bhp.com.au (Ian P Kemp) Scandinavian television corrupts many french coalmen's neices and cousins Mn Fe Co Sc Ti V Cr Ni Cu Zn

(1st row of transition metals)

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From: mlynd@cix.compulink.co.uk (Michael Lynd)
If a soluble salt you wish to provide
You first on the acid settle;
Then neutralize with the proper oxide,
hydroxide, carbonate or metal.
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But if the salt will not dissolve,
A simpler means you'll try:
Precipitate it, you resolve,
Then filter, wash and dry.
CB
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From: Rik Deitsch <EDEI8384@ACC.FAU.EDU>
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The amino acids:
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С

С

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Hydrophilic Neutral:
Girls Are Very Loving If Men Can Prepare Perfect Tea
(Glycine, Alanine, Valine, Leucine, Isoleucine, Methionine, Cysteine,
Proline, Phenylalanine, Tryptophan)
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Positive:
Alexander Graham Spoke Through (the) Telephone
(Asparagine, Glutamine, Serine, Threonine, Tyrosine)
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Neutral:
Laurel And Hardy
(Lysine, Arginine, Histidine)
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Negative: Aspartate and Glutamate (all that's left. . . ) CB \,
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From: ckwcheng@acs4.acs.ucalgary.ca (Calvino Ka-wing Cheng)
Biochemical pathways:
Aldohexoses: All Altruists gladly make gum in gallon tanks.
++++
=11.6 BIOLOGY AND MEDICINE
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B_

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From: Lisa Friesen <lfriesen@accglobal.net>
Phrenic nerve:
C3,4,5...keeps the diaphragm alive
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(C3,4,5 are the spinal levels supplying the phrenic nerve, which innervates the diaphragm. Breathing ceases when these spinal levels are damaged. We were given this by one of our med profs.) B_ The brachial Plexus: "Robert Taylor Drinks Cold Beer" R=roots, T= trunks, D=divisions, C=cords, B=branches В From: bethany@robotron.rs.itd.umich.edu She was all gal (ALGAL) and he was a fun guy (FUNGI). They took a likin' (LICHEN) to each other. In order to remember that LICHEN are made up of ALGAE and FUNGI (it's better spoken). The 12 Cranial nerves: From: sterner@upenn5.hep.upenn.edu (Kevin Sterner) On Old Olympus's Towering Top, A Finn And German Viewed Some Hops From: mje@pookie.pass.wayne.edu (Michael J. Edelman) On Old Olympus' towering top, a fat-assed german veiwed a hop. From: john.tant@exchange.com (John Tant) On Old Olympus, Terry Tried Abducting Fanny After Giving Vegas Some Help Oh, oh, oh, to touch and feel a girl's vagina- ah, heaven! From: ARChester <hchester@sprintmail.com> Oh, Oh, Oh, to touch a fast girl very sexy and hot. From: spbcajk@ucl.ac.uk (Mr Andrew John Kale) Oh, Oh, Oh To Touch A Fair Virgin's Glistening Vagina And Hymen for the twelve cranial nerves: Olfactory, Optic, Oculomotor, Trochlear, Trigeminal, Auditory, Facial, Vestibulocochlear, Glossopharyngeal, Vagus, Accessory, Hypoglossal B_ From: gilad <roniko@ibm.net> a nice mnemonic will allow you to remember whether as nerve is sensory (S) , motor (M) or both (B). Each word of this 12 word sentence correspond to the cranial nerve of the same number: Some Say Marry Money, But My Brother Says Big Boobs Matter More! From: sharworld@aol.com (Sharworld) Some Say Marry Money But My Brother Says Bad Business Marry Money. From: Dennis Feely <dfeely@unlinfo.unl.edu> "Some Surgeons Make Money But My Brother Says Buxom BLondes Make More"

From: abw@bu.edu (Al Wesolowsky) Anatomy, for the bones of the wrist:

"Never lower Tillie's pants. Grandmother might come home." Navicular Lunate Triquetral Pisiform Greater Multangular Lesser Multangular Capitate Hamate From: spbcajk@ucl.ac.uk (Mr Andrew John Kale) I was always taught this as : Scabby Lucy Tried Peeing Having Copulated Twenty Times Scaphoid Lunate Triquetral Pisiform Hamate Capitate ... and two others I've forgotten (it was a long time ago!) В From: dpbsmith@world.std.com (Daniel P. B. Smith) Classification: Kingdom, Phylum, Class, Order, Family, Genus, Species, Variety. Kings play cards on fairly good soft velvet. Kings Play Cards On Fat Girls Stomachs. From: Matthew K Ashford <mkast9+@pitt.edu> Kings Play Chess On Fat Guy's Stomachs. From: gjb@evolving.com (Gregory Bloom) Then there's the ever-popular 'King Phillip Cuts Open Five Green Snakes' for Kingdom, Phylum, Class, Order, Family, Genus, Species From: alderc@aol.com (Alder Castanoli) King Philip Came Over From Germany Speedily From: joev@garden.WPI.EDU (Joseph W. Vigneau): Ian Young <iyoung@buddy.wright.edu> wrote: King Phillip Came Over For George's Sword From: joev@garden.WPI.EDU (Joseph W. Vigneau): King Phillip Came Over For Good Sex From: scs@eskimo.com (Steve Summit) King Philip can only farm green spinach. From: olivcm@OAMPC7.uucp (Colleen M. Oliver) King Phillip Came Over For Green Spaghetti. From: Charlie Gibbs (Charlie_Gibbs@mindlink.bc.ca) King Phillip Came Over for a Glass of Scotch

From: ab401@freenet.carleton.ca (Paul Tomblin)
King Phillip: Come Out For God's Sake.
(From Colin Fletcher, "The Man Who Walked Through Time" - a book about a
walk
down the length of the Grand Canyon)

From: (scotcampbell@delphi.com) King Phillip Came Over From German Soil

From: gedau <gedau@mim.com.au>
Kinky People Can Only Fuck Goannas Sideways.

From: "... sara ..." <silver_creature@hotmail.com>
Kinky people can often find great/good sex

From: tjd@db.erau.edu (Tim Drozinski)
King Phillip Came On Four Groovy Skanks.
King Phillip Came On Five Gorgeous Sluts.

From: "Timothy D. Betts" <tdbetts@students.wisc.edu>
Keep Phillip's/Phyllis's Clothes Off For Great Sex
Keep Putting Chemistry Off For Greater Subjects

From: sichase@csa5.lbl.gov (SCOTT I CHASE) King Phillip Came Over From Germany, Stoned on Gin, Rum, and Vodka.

This gives you subspecies classifications as well (variety, etc.)

From: dloucks@primenet.com (Donovan Loucks)
Way, back in high school, one of the gals in our Advanced Biology class
was named Kim. So, the mnemonic was:
 Kim's Pretty Coccyx Often Feeds Green Snakes

From: badger@phylo.life.uiuc.edu (Jonathan Badger) Kraft Parmesian Cheese On Fingers Gets Sticky

From: "Michael A. Arocho" <krispy-@email.msn.com> Kids Pick Cooties Off Fat Girl Scouts

Kings Play Chess On Falling Glass Stairs. B

From: Peter Berger <peterb@telerama.lm.com> All Chaperones Must Previously Have Had Sex.

Animalia, Chordata, Mammalia, Primata, Hominidae, Homo, Sapiens.

Man's taxonomy. B

From: sclatter@littlewing.Eng.Sun.COM (Sarah Clatterbuck)
Then there's my personal fave, because I made it up:

"Lazy zebras ponder dire disasters."

leptotene zygotene polytene diplotene diakinesis

I think the spellings may be wrong. They're the five sub-phases of the prophase of meiosis (reproductive division). B

From: mmmr4zal@fs2.scg.man.ac.uk (Zahid Ahmed)
S2,3,4 ...keeps the penis off the floor. (Innervation)
ONE heart, TWO lungs (beta 1 receptors in the heart, beta2 in the lungs)
Two Zulu's Buggered My Cat (Facial muscles, Temporal, Zygomatic....etc,)
B_____

From: Dev Britto <dtbritto@unixg.ubc.ca>
This has helped me immensely in remembering the citric acid cycle (aka
Kreb's cycle, TCA [=tricarboxylic acid] cycle):

Actors In Kansas Should See Foreign Movies, Of Course

(Aconitate, Isocitrate, a-Ketoglutarate, Succinyl-coA, Succinate, Fumarate, Malate, Oxaloacetate, Citrate).

Can Intelligent Karen Solve Some Foreign Mafia Operations? The Krebs Cycle: Citric acid, Isocitric, Ketoglutaric, Succinyl, Succinic, Fumaric, Malic, Oxaloacetic.

From: mtwenzel@pdqnet.com (Michael Wenzel) Cell Cycle: I learned it as "Immediately Paul Made Anna Talk"; however, I teach it to my students as "I Pee (on the) M.A.T." -- a little more straightforward.

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Interphase, prophase, metaphase, anaphase, telophase
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В

В

From: Bullseye01@aol.com Never Let Monkeys Eat Bananas... Neutrophil, Lymphocyte, Monocyte, Eosinophil, Basophil

These are the white blood cells also in descending percentage (65, 30, 6, 3, 1%).

To divide them by agranular and granular, put it as...

From: davek@microware.com (Dave Kimble)
MUSIC:
order of sharps:
Father Charles Goes Down And Ends Battle
order of flats:
Battle Ends And Down Goes Charles' Father

Richard F. Drushel <rfd@po.CWRU.Edu> wrote: Every good boy does fine = line notes, treble clef, bottom to top From: harper@kauri.vuw.ac.nz (John Harper) Every good boy deserves food though girls quoted it as: Every good boy deserves flogging. E_{-} From: jmpierce@medea.gp.usm.edu (Jim M. Pierce) Color codes resistors: 'Bad Boys Rape Our Young Girls But Violet Gives Willingly, Get Some Now. ' black brown red yellow green blue violet grey white gold silver GSN stands for the plus or minus bit... 5 percent, 10 percent, and 20 percent. i.e. 100 ohms, plus or minus 5 percent. From: jac@ds8.scri.fsu.edu (Jim Carr) Bad Boys Rape Our Young Girls But Violet Gives Willingly, for Gold or Silver. "Pete Peterson" <peterson@usaor.net> From: Bad Boys Rape Our Young Girls Behind Victory Garden Walls. From: tonyg@kcbbs.gen.nz (Tony Garnock-Jones) : Yes, but I always get stuck trying to remember is "bad" black or is : "boys"? I always forget without difficulty. Blue and the two g's I can : remember no problem. BlAck -> BAd BrOwn -> BOys BlUe -> BUt The second letter of each B-word is the _third_ letter of the word it stands for :-) Neat pattern... From: rcsacw@rwc.urc.tue.nl (Christ van Willegen) Black bastards Rape Our Young Girls But Violet Gives Willingly. (offending, but easier to remember black, brown) From: wingo@apple.com (Tony Wingo) This alternative version solves that problem: Blackie Brown rapes our young girls but violet gives willingly. From: Quentin Grady The clean variation: Bad Betty runs over your garden but Violet Gray won't. From: Lawrence R Glickman <lglickman@ameritech.net> Big boys race our young girls, but violet generally wins (color code for resistors) Black brown red yellow blue violet, and then the tolerance (silver or gold)

From: woodman@bnr.ca (Dave Woodman) "Billy Brown Revives On Your Gin, But Values Good Whisky." From: jlowrey@skat.usc.edu (Fritz Lowrey) Bad Beer Rots Our Young Guts, But Vodka Goes Well From: Mike Nalbone <nalbone@pluto.njcc.com> Blackberry Brandy Rots Our Young Guts But Vodka Goes Well. Grant Edwards <grante@reddwarf.rosemount.com> wrote: Better Be Ready, Or Your Great Big Venture Goes West. (goes west = fails, dies) From: eeyimkn@unicorn.nott.ac.uk (M. Knell) My eternal favourite (and the one that nobody's mentioned yet): Black Beetles Running On Your Garden Bring Very Good Weather From: Suzanne Sarlette/Gerald Pearson <suegerry@mut1.muscanet.com> Here's a G rated British mnemonic for the resistor color code: Bye bye Rosie, off you go, Bristol via Great Western. From: thomas@melchior.frmug.fr.net (Thomas Quinot) French version : Ne Mangez Rien Ou Jeunez, Voila Bien Votre Grande Betise. quentin@inhb.co.nz (Quentin Grady) From: I prefer rhymes for individual colours black hero ... zero brown bun ... one red shoe . . . two. orange tree ... three yellow door ... four (picture + rhyme) is equivalent to having random access. From: *sathe_dilip@bah.com* (Dilip) The one I know has some extra words in it to make it a sentence. It goes like... B. B. ROY of Great Britain has a Very Good Wife. From: phma@trellis.net Here's one I learned as a child from my father (who was the son of a shipbuilder in Normandy): Tricot rouge, bassinoire. Which stands for: Tribord (starboard) Babord (port) Cylindre Cone Rouge (red) Noir (black) It refers to the colors and shapes of buoys on a river.

From Charlie_Gibbs@mindlink.bc.ca:
There's no red port wine left. (navigation light colours)

From: bigbear@garlic.com
Geology: Terrible Giants Can Find Alligators Or Quaint Tigers
Conveniently Digestible.
Hardness scale for minerals: Talc, Gypsum, Calcite, Flourite,
Apatite, Orthoclase feldspar, Quartz, Topaz, Corundum, Diamond.

From: Matthew Rowles <rowlesmr@ses.curtin.edu.au>

To convert between Grid north and magnetic north on a map, use: East is least, West is best.

If the magnetic variation is, say, 3 degrees west, add 3 onto the grid bearing to obtain a magnetic bearing. And vice versa.

From: Matthew Rowles <rowlesmr@ses.curtin.edu.au> This is almost a mnemonic.

The four cycles of a four stroke engine: Suck, squeeze, bang & blow (intake, compression, ignition & exhaust)

From: dpbsmith@world.std.com (Daniel P. B. Smith)
Geology: "Come on, see daring men play polo." (Cambrian, Ordovician,
Silurian, Devonian, Mississippian, Pennsylvanian, Permian).
"Phooey! Even old men play polo, right?" (Palaeocene, Eocene, Oligocene,
Miocene, Pliocene, Pleistocene, and Recent).

From: Richard Mentock <mentock@mindspring.com> As many eras have the same first letter, this can be confusing (originally pensylvanian and permian were transposed in this list).

A better mnemonic avoids this problem (it incorporates the first *three* letters of each name) is "CAMpus ORDered SILicon DEVices, MISsed PENcil PERmits," which gives a nice leg up on memorizing the mnemonic.

From: john.tant@exchange.com (John Tant)
Campbell's Onion Soup Does Make People Puke.

From: Jim Himanga <auu_auu@kingwoodcable.com>

To avoid confusing stalactites with stalagmites: As mites go up, tites come down.

From: Jim Himanga <auu_auu@kingwoodcable.com>
For the order of the Palezoic:
Can Oscar see down my pants pocket?
Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian,
Permian.

For the Cenozoic: Put eggs on my plate please. Paleocene, Eocene, Oligocene, Miocene, Pleistocene

From: jeff.zeitlin@execnet.com (Jeff Zeitlin)
From navigation, for converting between True, Magnetic, and Compass
directi
applying variation and deviation:
True virgins make dull company
Or backwards:
can dead men vote twice

From: dloucks@primenet.com (Donovan Loucks) Joan found Mark and Mike jumping Janet and Susan outside Nora's Drugstore

= months of the year

C_

From: GemOfLight@aol.com
For all the psycholinguists who can't remember the difference between
phonemes (the smallest units of sound in the spoken form of a language)
and
morphemes (the smallest units of meaning in a language):
m is for "meaning" -- p is for "ptttthb"
+++
=12. PRANKS

From: Alan Meiss, ameiss@gn.ecn.purdue.edu Wherein the author relates the Tale of the Exploding Pen.

Everyone who's taken high school chemistry probably has some entertaining stories of experiments not included in the syllabus, myself included. A friend and I did a great deal of spontaneous research in our class involving myriad flame tests and chemical combinations "Mother Nature never intended." I recall one time when the teacher left the room, and my friend dashed into the storeroom in the back to see what he could filch. He returned with a heaping handful of silver nitrate powder, which isn't exactly recommended handling procedure for this chemical. When rapid discomfort made him dispose of this material, the rest of us observed to
our amazement that his entire hand had turned silver. By the end of the dav it had turned purple. But all this, of course, is peripheral to the Tale of the Exploding Pen. One day in Chemistry class we were using calcium metal, which reacts with water to give off hydrogen gas and heat. This was definitely Nifty, and I saved several pieces. It became a source of amusement to drop it in а puddle of water and watch it bubble and sputter, then quickly hand it to someone during a quiet class to provoke an alarmed bellow (the stuff got pretty hot). By the afternoon I had one piece left, which I, based on thought processes that now entirely elude me, stored, along with some water, in my pen, one of those Bic Biros with the large white barrel and detachable endcap. It soon slipped my mind that I'd done this, and I went on my way to Biology class. Midway through class, we were wrapping up an experiment, with the teacher giving a lecture and the class taking notes. Ι was standing in the back of the room, writing down final data from our petri dishes of E. Coli, when my pen exploded. It was very loud, louder than a firecracker, and I looked up to see every face in the class staring at me and the remnant of my pen with great alarm. The resulting silence was finally broken when someone muttered "his pen exploded!" I tried to play it cool, giving my pen as cursory an inspection as possible, as if this were frequent occurence of little concern, and returned to an extroadinarily studious job of note-taking. The teacher just smiled and continued the lecture in a bit; I guess he was used to this sort of thing. We had some other interesting experiences in this biology course, including the development of Live Chicken Bowling, and the concealment of chickens in people's personal belongings. In one class I remember, one of the kids wadded up paper towels into a foot-wide ball, and for reasons $\ensuremath{\mathtt{I}}$ don't fathom arrived at the decision to set it on fire when the teacher left the room. Too late it occcurred to him that a large ball of fire is fairly conspicuous in a classroom setting, so he stuffed it into the lab drawer beside his desk just before the teacher returned. The sudden earnest interest in the lecture he tried to demonstrate was not enough to distract from the smoke rising from his desk, however, and he got in a significant amount of trouble. But let me return once again to Chemistry class. In all, it was a fairly boring class, and we even had to pursue non- flammable entertainment. I programmed a Blackjack game on my pocket computer, and we would pass it around the class for all to play. A lively betting pool would sometimes start when the score got high. One day we managed to play a full game of Risk in the back of the room during lecture. Some of us would spend a half an hour at a stretch duplicating Muppet noises from Sesame Street episodes: "Tiiiick Tooooock BrrrrrrRING! Yupyupyupyup". Others would interupt any rare quiet moments by yanking leg hairs from other guys

wearing shorts. None of this infantilism, however, can compare to the mayhem related to me by one of my roommates that went on in his own high school chemistry class. He had a particularly anarchic chem class that seemed to involve an impressive amount of pyrotechnics. On one occassion, someone threw a fist-sized chunk of potassium metal in a sink full of water, which destroyed it (both sink and water) with a great shower of sparks. Another time his classmates covered an entire desktop with infamous nitrogren tri-iodide, an unstable compound made from ammonia and iodine that explodes when touched, leaving purple stains. They detonated it by throwing a paper airplane, blowing the top off the desk. In an act of tremendous stupidity, they filled an entire liter beaker with the gray incendiary material from sparklers, and when some fool tossed in a match, the resulting column of fire burned holes in both the table and ceiling. In an extra-curriculur adventure, they piled a mound of thermite they'd prepared in class on a particularly despised person's driveway. When ignited, it blasted a foot wide hole through the concrete and down to the dirt. Their most notable "achievement", however, was placing in someone's locker in a dish of water a large chunk of some unknown material that gives off noxious odors when moist. He said that the resulting nauseating stench spread through the entire school. One girl barfed in mid-sprint to the bathroom, and the school had to evacuate the building and cancel classes for the rest of the day. In an entire semester of Chemistry class, his only remotely educational experience was learning to make soap, and he had to repeat the subject here at Purdue, minus the pyrotechnics. PCB_

From: junep@bu.edu (June Peckingham)
I recall those days of high school science pranks well.
(although our chem teacher was much to smart to ever
leave sodium of potassium where we could find it).

-Earth Science - learning to burn skin with a magnifying glass. Also learned that chalk, when heated with a magnifying glass, will explode. -Biology - Actively participated in an experiment to kill the mutant fish that lived in the aquarium. We tried everything - soda, windex, acid. These guys were tough. The other high point of bio was having a frog pee down my friend's arm, cool. -Chemistry - In a neighboring school one of the hooligans superglued everything in the classroom. The teacher was infuriated. When he went to sit down he found that his chair was also stuck in place. He did succeed in moving it, only by removing the four floor tiles it was glued to. My high school chem teacher was too scary to try anything fun on. I did manage to light a table on fire though. -Physics - Our physics teacher was cool. He let us form a line into the hall and use the power of the Van

de Graph generator to shock passers by. hehe. We

stomach to demonstrate inertia. He taught us the 'to every force there is an equal and opposite ... ' by throwing himself against a wall while wearing roller skates. Ρ From Jens_Kilian@bbn.hp.com Wed Jun 23 14:04:02 1999 I remember a Christmas physics lecture on acoustics where the prof first breathed helium to demonstrate the well know "squeaky voice" effect, then proceeded to do the same thing with a heavy gas (might have been the stuff mentioned above). After that, he had his assistants stand him on his head for the stuff to drain out. Needless to say, by that time everybody in the place was screaming with laughter. C_ From: Donald Haarmann (excerpt) Finally, there is the case of explosives scientist who fabricated an ash tray from cast TNT and kept it on his office desk for the use of visitors, only revealing its nature after they had extinguished a cigarette in it with no untoward results. С From: pkukla@silver.ucs.indiana.edu (Peter Kukla) When I was in High School, one of my classmates was having a serious problem with people stealing his lunch. Every day it disappeared from his locker (don't recall whether his lock was broken off or what.) Complaining to the principal did no good, so he went to his father, a pharmacist. His father gave him some substance (Silver Nitrate) which didn't discolor the food, but which turned your skin black or purple when you came in contact with it. This guy liberally coated his food with it, and waited. I was fortunate enough to see the results. Another classmate, who had ostensibly gone to the bathroom, returned to the math class, hiding his hands and face as best he could. It didn't work - his dyed skin was obvious. A cohort of his didn't even bother to return to class, he just fled the school for the day. C_ From: "Scott Jäger" <syeager@destruction.dyn.ml.org> I remember my 10th grade highschool chem 1 class. I was a prety intelligent person at the time, for my age. One day we decided to play a prank on the class, scared the shit out of the whole bunch of them. Took some potassium, a beaker, a very large baloon, and a lighter. Stuck some water, and potassium in the baker, and placed the baloon over it.. We all

also got to chop a large block of wood off his

know that will produce hydrogen, so we let the baloon off the beaker, closed it off, and let it be passed around the room for a while. The teacher started to get curious about what we were doing (he couldn't see

us

doing this). We finally decided to light it up, right in the middle of a small chapter test. Letting the baloon go, someone stuck it with one of those grill lighters. The baloon exploded into a large ball of fire, and an interesting noise followed. The smartass who lit it up had no hair on his arms anymore, and we had no grade in chem 1. ohwell.

From: meyerar@scooby.beloit.edu (Arden Meyer) When I was in High School, my chemistry teacher had the privilege of scaring most of the freshman chem class. He had a wooden cutting block set out on the bench at the front of the class, with a large butcher's knife. After everyone took their seats, he produced an apple, two 200 mL beakers containing clear fluid, an empty 500 mL beaker, and an eye dropper. He proceeded to cut the apple in half, and then place the knife back in a locked drawer (he didn't trust us!). With the dropper, he squirted some of liquid A onto one half of the apple, and we all saw it eat away at the apple rather quickly. Then, after rinsing the dropper, he squirted some of liquid B onto the remaining half of the apple, which also ate it away. He then poured liquid A and liquid B into the 500 mL beaker, and swirled the mixture for a few moments (about twenty seconds). He then downed the whole thing in one big swallow! As it turned out, liquid A was hydrocloric acid, and liquid B was sodium hydroxide. They were both of the same molarity, and so when mixed, they produced salt water. The most interesting happening of this was the next year, when a young lady passed out as the teacher swallowed his drink... ## if you have the stupidity to try this, make sure you know alot about chemistry and that you get the concentrations right !!! ## C_ From: Chris Ingram <ingramc@csdc02.orl.lmco.com> This prank is very similar to one you have listed, except it backfired. Our high school chemistry teacher used equal molarity solutions of HCl and NaOH, mixed them and drank them in front of class. While he did not burn his gullet, he did use phenothalene as the indicator. He later learned (or

remembered) that phenolthalene is the main ingredient in many laxatives and paid dearly for his mistake over the next several days.

C_____

From: glyle@marie.seas.ucla.edu (George Lyle)
Not quite a prank, but dang funny:

While I was in a high school chem class, the teacher was showing how to properly heat a test tube with a Bunsen burner. He said "never point the mouth of the tube toward you like this (pointing tube at his head)" Always point the test tube away from your body (turns test tube away). At that instant, the alcohol/acid solution in the tube shot out and ignited, flaming a 5 foot periodic table on the wall. Half of class broke out laughing while other half was frozen in seats. Teacher grabs fire bottle and puts out fire. Teacher never gave that demo in the same way again!

From: tomcheng@soda.berkeley.edu (Thomas T. Cheng) We must have had the same chem teacher or something. The exact same thing happened in our class, except it was our homework that caught on fire.

From: isoner@clt.fx.net (Isoner)

C_

My science teacher gave a demonstration on electric current by makeing circits in beakers of salt water. Then he dropped it so that half of it was in a beaker and the other half was out. Theoreticaly he should have been able to pick it up with no problem because it was not completeing a circut. would have been safe, except he was leaning against the metal plumbing. He almost put a dent in the chalk board.

Later in the year he used the gas lines in the class rooms to blow bubbles and them ignite them with a match. There is still a scorch mark uon the celing. $_{\rm C}$

From: Trish or CJ <TBC104@psuvm.psu.edu> When I was in high school I pulled off this particular prank. This one quy in the class was always pissing me off, so I conspired to make a fool of him in front of the class. The next day during chem lab, we were informed that we would be using concentrated sulfuric acid, which is clear. Anyway, during the lab, I took the beaker full of sulfuric acid (and this is the kind of stuff that burns through flesh) and hid it behind a desk. I then filled an identical beaker full of steaming-hot, but not burning-hot water. I used a wax pencil to write on the outside. 'Concentrated Sulfuric Acid'. Then I walked over to this guy that was pissing me off and got his attention. I took a medicine dropper, filled it with the stuff (which he thought was acid) and shot it all over his face. It was hot water, so he thought he was burning! He started screaming, 'Cj threw acid on me!!!' And promptly began thrashing and shrieking. Everyone stared at me. Then I held the beaker aloft, threw my head back and drank the whole thing. The teacher nearly dropped dead on the spot. The rest you can just imagine. --CJ Calo

From: gandalf@gibeah.connected.com (Gandalf the Grey) Ammonium tri-iodide is an extremely fun chemical. But you have to be careful. My chem prof played a really cool joke on this really annoying bastard in my class. Real pop-off, and he deserved it. You simply fix iodine crystals (expensive) and ammonia (roughtly as much as the crystals can dissolve into). While it is liquid, it's reasonably safe. Don't use more than a drop on anything, since it will explode once it's dry, and can be dangerous.

However, when placed on a countertop in a very small amount, the first person to touch it gets quite a surprise and a stain on their skin and doesn't come off easily. Hilarious actually. I've only made it once, though. C

From: eapu160@rigel.oac.uci.edu (Mr. Wizard) I know that this doesn't really count as a "prank", but once in high school chem we were doing potassium experiments, and there were 36 students (so there were 37 people including the teacher). Each student has 20 test tubes full of water and into each one he or she places a small amount of potassium (the experiment was supposed to test the production of hydrogen.) After the experiment, each person puts the test tubes into a central trash can (for those of you slow in math, that's 740 test tubes EACH ONE of which is pumping out hydrogen.) Later on we were doing tests with glowing splints, and the teacher said "don't put a burning splint into the trash can" (for obvious reasons) Well, one girl thought that a glowing splint (not burning) would be ok. All I can say is that the column of red flame was more spectacular than any movie nuclear blast! In fact, to this day (6 years later), there is still a very large burn mark on the ceiling of that classroom. Another one with the same teacher was another potassium mishap. Since potassium cannot be stored in water, it is stored in a sort of oil. Well, he took a golf-ball size chunk and held it in is hand as he cut it. Unfortunately, the oil was slippery and the chunk fell into the beaker. Well, what happened was that the beaker EXPLODED and impaled the teacher with several bits of glass (he was in hospital for a day or two) and the

However, one real prank was with the SAME teacher was in order to keep sanity and good behaviour in class, he would keep 2 squirt guns with him. One with water, and the other with SILVER NITRATE SOLUTION. (this stuff looks just like water but it turns skin BLACK on contact) He shot about 4 people during the year, but only one girl (the same one with the hydrogen) got the silver nitrate (on the FACE!!!).

desk was strewn with a hundred or so pock-marks.

Finally, this was one I did in college. My first year in the dorms, I would keep a bottle of root beer which someone would continually drink without my knowing. After I couldn't stand it anymore, I went to a friend in the chem dept. and asked him for an acid/base indicator that turns base pink (I forget what the indicator was), and put a bit in my

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root beer bottle. The plan was that human urine is somewhat base, so when the culprit drank my root beer, he began to pee pink. Needless to say, about 12 hours later, this guy thought he was gonna die! C_____

From: daudo@bcars201.bnr.ca (Dau Do)
Yeah, these stories remind me about my science teacher. He's used to
wear
a prescripted sunglass so that no one knew that he's sleeping while
students
were writing test. Anyway, after one of the experiments that used acids,
one
guy in my class pour the acid on his desk. He didn't know and took off
his
glass put on the wet spot. When he put it on again, his skin burned left
a
red circular around his eyes ...

From: lister@dbreath.uucp (Lister) Well I am a Medical Technologist, and through the years in the field we have pulled some good jokes. One of the funny ones I can remember is a day when I was working in Hematology. One of the other techs, that was working in Chemistry, was this real whining hypochondriac. Well he came over to me telling me that he felt really sick and was wondering if I would run A CBC and Differential on him. So I drew his blood and labeled it and it to hematology and ran it.. It was normal as normal could be, but I decided to have a bit of fun. Earlier in the day a known CLL patient had been in and gave some blood, so I took one of the extra tubes, poured it into a new tube and labeled it with this techs info (making sure to make mark as to not confuse the real sample up). Well I ran the CLL pt. blood and made a smear, then I went over to him and said "you had better take a look at this". He came over and looked at the results and then looked at the smear, and went a bit pale and said that I must have mixed it up, with somebody else. So I gave him the falsely labeled tube and he ran it himself getting the same results. You should have seen his face I thought he was gonna Die right there! Anyway I let him suffer for about 2 min. or so then gave him the real results and from the look on his face I though I was gonna die! C_

From: <NEMCC@CUNYVM.CUNY.EDU>

What follows is not an invented joke, but a true story, although I may have embellished it a little over many years of telling. "Sister Karen" was a nun and a Chemistry teacher who had come to work on her Master's degree with my now retired colleague Prof Herbert Meislich , who happens to be Jewish. Her first task was to monobrominate a ketone. She added her Br2, and started the stirrer as instructed....nothing happened STILL no decolorisation..... after some time she is getting worried, and asks another student, who told her - "See that man over there - that's Prof McKelvie, ask him" A slightly out of breath nun comes up to me - "Prof McKelvie? My reaction won't work !" My evil mind was thinking WHICH of her reactions was not working, but that's another story.) Anyway, I could have told her that bromination is dependent on making the enol, and this is promoted ny acid, so that the HBr produced will aid enolisation and all will be well. BUT - that morning I'd found on the floor a Star of David that had fallen off some Jewish girl's neck, and I'd been looking for the owner... INSPIRATION! - the problem is that you've had the wrong theoretical training ! Just a moment I tied the Star of David around her apparatus, added a few drops of hydrochloric acid just to help things along, and announced that NOW it would work in five minutes ! It took four minutes and 50 seconds by my watch. "SEE?!" She had the brains and a good Irish sense of humour to realise she was being "had", and I explained that it was her Organic Chemistry that was being deficient, not theology..... (Aftermath - two Jewish girls came down from upstairs and wanted to borrow the gold chain so that THEIR reactions would work better.....) Neil McKelvie C_

From: <U58563@uicvm.uic.edu> "Back when I was taking Chemistry 101, my instructor did a little demonstration" [this is the proper start for this Urban Legend] "He pointed to a large beaker on the table full of yellow liquid. He said: The first thing a chemist must learn is not to be disgusted by anything. This is a beaker of horse urine. The simplest way to determine if the horse is diabetic (dipping his finger in the beaker) has always been to simply taste for sugar! (licking his finger!)" "Is there anyone here willing to demonstrate?" and a big guy from a fraternity came up with a grin on his face to taste the "urine", knowing it was a gag. He dipped his finger in the "urine" and licked it dry --- and from the expression on his face, it really was urine! "The second thing a chemist must learn is to be observant! (Holding up his

hand, the professor demonstrates.) I dipped the _other_ finger!!!"

From: Terry Simonds <fsimonds@icanect.net> When in high school, a chemistry professor was giving us a lecture on qualitative analysis of a substance. He mentioned color, consistency, weight, taste, etc., admonishing us to exercise our powers of observation above all. He pulled a small beaker of yellowish liquid from under the bench and began to call out its characteristics.

"This is a sample of some urine from my goat (yes, he had a pet

goat...). If you will notice, it is a liquid, somewhat yellowish in color, but translucent." He then thrust his hand down into the beaker, rapidly withdrawing it and sticking a finger in his mouth, ostensibly tasting the liquid. We gasped; one started retching. He then explained. "I mentioned 'observation,' ladies and gentlemen. If you had been oberving closely, you would have seen me insert my index finger in the urine and then lick my middle finger."

C_

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From: wa4qal@vnet.ibm.com (Dave) In my freshman chemistry class (many years ago), the first day was allocated to a talk about chemistry (what it is, why it's important, how it affects our lives, blah, blah, blah). To illustrate this talk, Doc carried in two beakers filled with clear liquids. As he progressed through the talk, he would ocassionally pick up one of the beakers and swirl it (Thus confirming that it really was filled with a liquid). Toward the end of the talk, he would pick up both beakers and swirl them. Next, he would start pouring the liquids from one beaker into the other repeatedly (Thus really proving that they contained liquids). Finally, he would walk around the podium, while still swirling the beaker containing both sets of contents, and stop in front of some glazed-eyed student. As he finished his lecture with the statement 'This is why chemistry is important to you.', he would slosh the beaker toward the student, who never failed to dive for cover. Of course, the chemicals had reacted and formed a gelatin which stuck to the bottom of the beaker. Therefore nothing came out. Well, at least, that's the way it was supposed to work. The next year, one of the graduate students intercepted Doc on the way to the class, and switched beakers with him, replacing one of the chemicals with water. I'm not sure who was more surprised that year, the student who ended up with lap full of chemicals, or Doc. P.S. He should have known something was up, what with all of the graduate students clustered outside of the classroom door... P.P.S. I actually witnessed the 'dry' version of the trick, but I wasn't lucky enough to have witnessed the 'wet' version, although I did hear about it from several (many) credible witnesses.

From: Darren Schilberg <schi35@eetsg53.bd.psu.edu>

My dad told me this one and I absolutely MUST see someone try it again. His Chem professor was showing the awesome powers of liquid nitrogen (not to be attempted at home) where a banana is used to hammer in a nail and a balloon shatters when hit with a frozen rose. However, the best prank of all with liquid nitrogen has to be this one. Before the prank is pulled (or before the class fills up), a Vienna sausage is placed in the finger of a rubber glove and set on the table. Then a bowl of liquid nitrogen is obtained. Now when the students file in they will think everything is typical. After the balloon and banana trick with the liquid nitrogen the teacher puts his hand into the rubber glove and tries to remember which one he placed the Vienna sausage in. Next he dips THAT finger in the liquid nitrogen, grabs a hammer, and smashed the frozen Vienna sausage. This will make it look as if real meat is flying across the room. My dad said that several girls in the class passed out after this prank, so make sure the students are situated near the floor to prevent any injuries. Hope you enjoy the prank. В_ From: andrewr@wormald.com.au (Andrew Rodgers) This is a practical joke I played on a Biology Teacher. When dissecting frogs, toads, mice or rats, cut out the tongue of the animal and discard. Next, cut out the liver (or kidney) and shove it in the animals mouth. After you have covered your tracks, and included the rest of the class in the little joke, stick your hand up and ask the teacher why the animals tongue is so swollen. Sit back, relax, and have a bit of a giggle at the explanations. С From: "Raleigh C. Perry" <rperry@mindspring.com> When in a high school chemistry class in the early 60's I had the joke of laboratory assistant. After a few weeks on the job, it was evident that I had a firm appreciation of chemistry and that there was much fun latent in the chemicals over which I had control.

The instructor was bright and well prepared. However, she had never encountered such as my partner and me. Each Friday on cleaning up the lab we would take the drain cock out of the trap on the teacher's sink draining all of the water out. On Monday, refitting the lab for the experiments for the week, we would place about 1/2 a teaspoon of metal sodium taken from the kerosene tank in the chemical room and put it into the sink after we had put the drain cock back in place. When she turned on the water, another old lead pipe had to be replaced. She never figured out what was happening.

From: jmartin@ll.mit.edu (James Martin)
While I was a junior in high school, I took chemistry under our
department
chairman, Peter Quackenbush McKee. Mr. McKee was sharp, except for a
tendency to do experiments that get out of hand. His most notable exploit
(?) occurred during a demonstration of the thermite reaction. This was
done

in a ceramic "cup" which sat in a sandbox on a lab bench covered with asbestos paper. In order to give a better idea of how hot it gets, Mr. McKee put a couple of nails and a couple of brass screws in the bottom of the cup before filling it with thermite. Well, actually he filled the cup about half-way with thermite, paused, then said "Well, let's go all the way" or words to that effect, THEN filled the cup. This immediately got our attention, since we had seen him in action before. He then put a little starter mixture on the top, and stuck a magnesium strip into it. In order that we might see the proceedings more clearly, he turned out the lights. As he was lighting the magnesium strip, he advised us, "This may spit a little, so why don't the guys in the front row move back a little?"

This was enough to cause the entire class to move to the back wall. He shrugged, then lit the strip.

The magnesium strip burned brightly until it reached the starter mixture, which sputtered a little, then the thermite caught. It did indeed spit a little, but as soon as the reaction zone moved below the surface it all became rather tame. After, say, 15 or 20 seconds, he remarked that we had gotten excited for nothing.

Then the reaction zone reached the bottom of the cup.

Now, thermite is hot enough that the byproducts are molten aluminum oxide floating in molten iron. This does nothing to iron nails, but it is hot enough to vaporize brass.

In the darkened classrom, it looked for all the world like a Bessemer converter firing off in a steel mill. Blobs of molten iron were scattered across the floor like incandescent blobs of mercury as everyone tried simultaneously to levitate. Smoke rose from the benchtop, where puddles of iron had eaten through the asbestos paper, and from the baseboards where they had caught fire. It was all very impressive and no one was hurt. What more can one ask from a science experiment?

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From: Patrick Hughes <phughes@swbell.net>
(Not a prank, but this kind of stories seems to gather in this section)

I BLEW UP MY VERY FIRST EXPERIMENT

I have the dubious distinction of having been the only one I know to have blown-up my very first chemistry experiment. Basically it was done not so much to acquire knowledge as to familiarize us with the equipment. The idea was to put some materials on a flat piece of steel, place it on a ring above a bunsen burner, and heat it. As I recall we had a strip of magnesium, some sugar, a piece of iron, some sulfur and a few other odds & ends. The sulfur was the only thing that did anything interesting (so far). It's important to note the arrangement of the counters on which we worked. The tops had a sink off to one end and there were two gas valves for the burners, one on each side of the sink's faucet with the outlets pointing toward the sink.

Anyway, once I had successfully made the collection of stuff on the steel plate red hot and noted the results on paper it was time to clean up. Unfortunately in the process of shutting down the heat I had pulled the hose off the gas valve shortly before turning it off. The gas collected in

the sink. When the hot metal met the gas: WHOOMP! Credible observers tell

me I was standing there momentarily enveloped by a bright blue ball that stretched from the sink to the ceiling. I lost most of my eyebrows, the hair on my arms, but got a fairly good haircut once I'd shampooed the odor out.

From: mini-air <marca@wilson.harvard.edu>
1997-01-08 Food for Thought: Elegant Gooeyness

Investigator Laura Fuller writes: I am a high school senior. Here are the results of a three year mathematics experiment. Once each year I take my math homework, wrap it plastic, and scrunch the whole thing up and put it in into a cup of chocolate pudding. I take the cup of pudding to math class, and when the teacher asks for our homework I hand her the cup and say, "The proof is in the pudding." Three different teachers in three years. It gets 'em every time.

From: "Teal, Mark" <mteal@ems.jsc.nasa.gov> At my high school, all of the science classes were held in a separate building. The architects had probably dealt with students like us before. My Physics teacher junior year was very knowledgeable, but very unobservant. At the beginning of the semester, we took advantage of this by playing paper football (folding a piece of notebook paper into a triangle and flicking it between your opponents fingers used as "goal posts") during his lectures. So many people were doing this that by midterms we had to have a superbowl.

We started feeling ignored and decided to pull a prank. We were normal kids and craved attention, even the negative attention that would be attracted by playing a prank on Mr. 'S'. It started off very simple and safe, as these things usually do. The plan was just to slip a book underneath the teacher's desk on the side facing us and see if he would notice. Sitting in the front row, I was a collaborator. When the teacher stepped into the storeroom I took my partner's fairly thick physics book (we as students weren't using them anyway) and slipped it under the edge of the table while my partner exerted a considerable amount of effort tilting the table. These were all-purpose desks used for Chemistry, Biology and Physics and their wooden sides went all the way to the floor.

Upon Mr. S's return, he set his ever-present coffee cup down and continued the lecture, of course not noticing he now had the complete attention of the whole class. He also didn't notice the tilted table. No papers moved and his cup didn't slide or spill. Being good Physics students, we determined the desk did not have enough tilt. Upon Mr. S's next departure from to the storeroom (for more coffee?), we tried to slip another book on top of the first one under the side of the table. I, again, was the collaborator in charge of placement, but this time it took the entire front row to tilt the table enough, and I had to jam the book into place. After placement, the table looked very distorted, and there was an unspoken thought to use a smaller book. Too late, the lookout was waving. Quickly resuming our seats, Mr. S again set his cup down and continued the lecture. His only clue that there was something wrong was the scraping of his coffee cup sliding down the all-purpose surface. He managed to catch the cup as it cleared the edge not spilling a drop.

He first inspected the underside of the cup (looking for what? legs? rocket engines?) and then brushed the desk with his hand. Finding nothing, he stepped back and squinted at the desk, but from that angle the table still looked normal. All this time there is dead silence from us students. We still had a shot at undoing it all during his next coffee break if he didn't figure it out. One giggle would give it away. Unprompted, Mr. S walked around to the side of the table and again squinted. The jig was up. The books were in plain view so he pointed and said, "Get those books out of there!" All of us collaborators got up as the others laughed, and pushed against the desk, but the books were wedged in there good. Mr. S call "Maz" down from the back of the room. Maz was the only football player in the class. He put his back against the table and with us pushing, we tilted the table far enough to remove the books. There was a great amount of creaking and groaning from the old table and as I removed the books, there was a loud "nnnnnnnnnnnSNAP". All of us students immediately knew that a pipe supplying all of the faucets with gas had sheared, but Mr. S waited for the "shshshshshshsh" and said, "Do you hear that?" We didn't wait for permission and cleared out of the room while Mr. S investigated the source of the hissing. Outside, we got what we thought would be a non-lethal distance, but not safe distance from the science building because we wanted a good view

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From: "PINCKNEY, GREG" <GPINCKNEY@fusn.com>
I remember this one too, except a piece of white chalk was inserted into
the middle of a raw hotdog, which was then placed into the index finger
of a
rubber glove. After dipping the gloved "finger" into the liquid nitrogen
(and
commenting on how this demo could only be performed once), the instructor
then
proceeded to break the finger off at the base with a sickening "SNAP!",
revealing the white "bone" in the middle of the severed finger, and
noting how
remarkable it was that no pain was actually felt. Quite an eye opener, I
must
say!

when it exploded. It never did and we were very disappointed.

From: James A. Carr (jac@ibms48.scri.fsu)

only know the version where you smash the finger with a hammer and shatter it. The chalk is a nice touch. Maybe there is a way to combine the two ... From: GMNiehues@aol.com Liquid nitrogen can be a fun thing. In my freshman chem class at a large university, the prof was fond of demos. In a class of 300 people, something is needed to keep them awake. So one day, he has several liters of liquid nitrogen, which he was using for his demos. He did the usual freeze a rubber ball and then shatter it, shrink a balloon, etc. When he was finished, he had quite a bit left, but decided to do something with it rather than just return it to the storeroom. Since liquid nitrogen in an open container will produce a nice fog, he said to the class, "I'll just pour it in the sink here." He did, and continued lecturing. About half a minute later, there was a nice POP! when the cast iron sink cracked in front of 300 witnesses.

From: srt@aero.ARPA (Scott R. Turner) CAMPUS PRANKS

* A friend of mine at U of Chicago once calculated the resonant frequency of his dorm's stairwells, bought a test record with that tone on it and played it into the stairwells from a number of stereos. Apparently had the entire building shaking visibly before they got scared enough to turn it

off.

* I had a friend who lived in a room next to the study lounge. The night before finals, I invited him up to my room and then phoned his room, letting the phone ring until the angry mob in the study lounge broke down the door and ripped the phone off the wall.

* Ran an imaginary student for a student government position. He was named after a dog. He didn't actually make the ballot because his false ID was discovered by the administration, but he still won on write-in votes.

* I once learned the day before that a professor would be late to one of his classes the next day. I made up a "pop quiz" that was incredibly hard, and then showed up and handed it out to the class, telling them that I was a grad student the prof had sent to proctor.

* A friend and I put on surgical greens, masks, booties and so on, and then splashed red food coloring on ourselves. Then we burst into the medical library, arguing loudly, and go over to the reference copy of Gray's Anatomy. I leaf through it, peer at a picture, and point and say triumphantly "See, I *told* you it was on the left side. What are you, dyslexic?" My friend looks abashed, shrugs, and we walk out.

* One that I never got a chance to do: Wait until someone brings a cute little puppy on to campus. Then, later that day, rush onto the

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dorm floor with the puppy wrapped in a bloodstained blanket. Explain to everyone that the dog was hit by a car and it has a large sliver of glass in its side. You don't think it will live long enough to get it to a vet, so you're going to pull the sliver yourself and try and stop the bleeding. Go into your room (with the pet owner) and close the door. Play a previously prepared tape of a dog whining and barking in pain, and say things like "Jesus Christ! Hold it still! Oh, shit, I'm going to be sick. What the hell is *that*?" and so on. (I couldn't find the sound effect on the day the puppy was there.)

From: Justin Masters <jmasters@pcocd2.intel.com>

C_

I had moved from Utah to California between my sophomore and junior years. Before leaving Utah, a teacher hosted a physics "demo" to entice students to take the class the next year. One of the experiments involved a Van de Graaf generator.

I remembered that experiment and warnings made during it, when our physics teacher left the room 2 years later, and the students took to playing with another such device in our own room. I said that I would show them how it was done. I pulled off my metal frame glasses, stood on a wooden chair and placed my hands on the bulbous top. A fellow student started it up, and before long my hair stood out, making me look like a porcupine.

Well, it started with a threat to not turn the machine off. I had been told that you could get a big shock by pulling your hands off the device, and so I pleaded with the other students to turn it off before the teacher got back.

That wasn't good enough. Someone grabbed a big metal wand, used normally to discharge the static, and tried insulating themselves. Why? I don't know. Anyway, it didn't work. They started poking me with the wand, causing bolts of electricity to fly between the wand and me.

They walked behind me. Zap, Zap, Zap. They hit different parts of my head and back.

Then they stooped to a lower level. They aimed for a spot just below the waist, between my legs. You men know about this... :-)

I was getting pretty desperate, and still kept my hands firmly planted on the bulb at the top. I must have looked like a wrigglying python to this fellow student's snake charming "wand". He crept closer, trying to shock me "down there". I was getting pretty frantic, and finally reached out with one hand to swipe at his head....and a huge spark launched from my finger and struck him in the forehead. He didn't like that! Years later, at a state fair, a young kid was touching a gizmo that had little "plasma lightning" strikes reach out from a high voltage core out to the glass, where people would attract the bolts with their fingers. Apparently, this kid found that he could shock others, and started doing so. It was annoying, and probably something relating to the above incident had to be resolved. I reached out and pointed to his ear. A bolt lept out. He, for some reason, didn't want to let go of the device he was holding on to, and I continued to point to his ears. I would leave, and he'd resume shocking others, so I'd get close and give him a quick zap. He didn't understand how I could shock him, while I wasn't touching that globe. I dunno.... :-) Maybe *I* was the ground path???

C_

From:

Eric Lucas <ealucas@ix.netcom.com> FOOLISH HABIT OF SMELLING CHEMICALS

Perhaps foolishly, I've smelled quite a few compounds in my years in the lab. I just happen to enjoy smells of all kinds. The oddest was a methoxy cyclobutannulated aromatic compound that smelled exactly like cardboard. Or, more precisely, the inside of a dusty, musty cardboard box. Complete with that dry feeling in the back of the nose. Then there was the substituted vinylcyclopropyl iodide that smelled exactly like artificial watermelon flavoring. Then there's the time in high school that I found а bottle of Br2 in a prep room. (I think you probably see where this is going.) I thought, "Ooh, cool red vapors. That must smell really good." My only experience smelling halongens to that point was I2, which, to my thinking, actually did smell purple. So I thought that red bromine vapors would smell, well, red...whatever that meant. Anyway, I got a pretty qood lungful. Breathing returned to normal several hours later. Mr. Chiudioni didn't even bat an eyelash. This followed fairly closely on the heels of my ill-fated attempt to make nitroglycerine (I found glycerine, I found nitric acid, and I found sulfuric acid. Put 2 and 2 and 2 together. Got huge yellow nitric acid stain on the 12' high ceiling.) To this day, I still haven't learned my lesson--still smell nearly everything, unless I have a notion that it might be not-so-good for me.

Barry Sharpless used to publicly claim to have smelled every single compound he's ever made, and also claims to have tasted a large fraction of them. He said that the oddest smell he ever experienced was the compound (I forget what it was) that smelled exactly like a blow to the back of the head. Or maybe that was the floor rushing up at him that made it resemble a blow to the back of the head. The lesson is clear. Unless you are damn sure you know what you're doing (a Ph.D. and about 20 total years in chemistry labs of one kind or another is barely enough in my case, I'm afraid) DO NOT smell things willy nilly. I know very well I've been lucky. It just ain't worth it. Unless, like me, you feel that, because you are a chemist, you will inevitably die of liver cancer some day. Ρ_ From: Karl

Disclaimer: I didn't write this, I'm just reposting it.

My high-school physics teacher was a real ass - so my class felt a moral obligation to do whatever it could to make his life "more interesting"....

We did the usual things to his car (blocks, siphoned the gas, reported it stolen while he was out drving it, etc.). But one of our best was a pratical application of the optics lessons...

Our class was usually the first one of the day - and our classroom had a huge bank of windows along the eastern wall. Our teacher was also very precise - he used to always stack papers, especially tests, at one particular spot on his lab bench at the front of the class.

We had a test coming up on day, so the afternoon before, a group of us asked if we could use the classroom for a group study session. What teacher in their right mind would turn down students who WANTED to study? Of course, we didn't study - we rigged a series of mirrors to bounce the sunlight (remember those windows?) onto a parabolic mirror that was exactly

focused onto the spot the teacher used to stack his papers on.

Next day, teacher arrives, places test papers on desk an starts to lecture us about the test process, etc. He'd been nattering for about 30 seconds when the whole stack of tests burst into flames and tripped the lab's alarms.

Funniest part, the twerp never realized what we'd done -- he was sure it was a case of spontaneous combustion....

Written by: Bob Tremonti

From: clarence edward farrar <efarrar@startext.net> Before a chemistry demonstration, in my high school chemistry class, a student (not me) connected the gas outlet and water outlet with a section rubber hose and turned both on. After a few seconds he turned both outlets off and waited. Our teacher was very upset when he turned on the gas outlet to the Bunsen burner and got only water.

From: leipzig@qgpc.com.qa

I am a petroleum geologist and went to college at the University of Wisconsin. The cadre of geology grad students and post-docs used to all go

to the Student Union "GastHaus" to decompress after a particularly nasty week of TA'ing and RA'ing, exams, et al. We'd all take turns buying pitchers of beer, so one could down quite a few beers quite cheaply.

Although, not as cheaply as some others.

One character, who shall remain properly nameless, was a "beer scrounge". He'd show up, drink our beer, but never buy a round when his time rolled around.

Well, in Optical Petrology class, there's this little test to distinguish between low-magnesium and high-magnesium clacite, dolomite and ankerite (typical carbonate minerals); and this was to stain the polished and etched thin section with an organic dye called Alizarian Red. Well, AR is odorless, colorless and tasteless. It will also color a person's urine blood red.

So...

Properly nameless showed up one evening and proceeded to drink up a fair share of beer. Whilst he was in the head, we spiked his beer with AR. He came back and drank down a rather generous portion of beer, not knowing why we weren't complaing about his chintziness. Well, after 6 or so more

beers, nameless wanders off to answer nature's call yet again. He was semi-lit up and having just a LARGE time, laughing and joking all the way.

When nameless returned to our table, he was as white as a fish-belly, eyes as big as dinner plates and he was mumbling something about "I'm gonna die...I'm gonna die..."

We did tell him 2 days later that his beer was spiked.

From: "TDOWLING"<tdowling@lsc.org> The best prank I ever played on my chem teacher was phony mercury. I had noticed in a grocery store that there were small silvery bead-like cake decorations. They came in several mesh sizes and looked very much like mercury droplets. I went back to the store without my mom and bought a container of each size. By the time I was in chemistry class, the '70's, mercury was already recognized as dangerous. Only the teacher could use it and spills were a serious incident. By the way, I understand the confections are were made with an incredibly thin layer of actual silver leaf over the sugar pill core. Anyhow, I waited until a test day to scatter the cake decorations all over the instructor's table and sink. He took one look and evacuated the lab/classroom. The tests were inside, locked in the prep room as usual. With all the confusion it was not until three fourths of the period was over that the instructor touched one of the phony droplets with a lab spatula and discovered it was solid. I had bought an extra day to study with this little trick. C_

From: AWJimC@aol.com (Jim Cummins)

During a final exam in inorganic chem lab at Columbia, maybe forty years ago, we were all handed a dry powder and told we had three hours to determine what was in it. We knew how to do it, too. All except for one poor guy, the best student in the class, whose sample had become a carbonized bubbling mess that stank up the whole rest of the room. The instructors hung around the fringe of the room barely hiding their glee. They let the poor dupe agonize for nearly an hour, as he watched his attempts to ace the course turn to goo before his eyes, before they revealed that his sample had been an ounce of Betty Crocker Fudge Brownie Baking Mix. They told him later that they would have excused him entirely

from the final exam, but that they just could not resist the opportunity.

Note for non-americans: Betty Crocker is an imaginary woman in an apron, the symbol of a huge food-products chain. P

From: Smokey Joe (stdddm12@shsu.edu) Get cans of shaving cream and place them in liquid nitrogen until frozen. Take them out and peel off the can, leaving the solid white mass inside. Throw x number of these white masses into the cab of someone's truck. When the temperature rises, they should expand(I've never gotten to try it, myself).

From: Tragic Comic <vyperhunt@hotmail.com>
In fact, the frozen shaving cream block effectively seals the aersol in
as
well, so as it thaws, the aersol expands along with the cream. two to
three blocks can completely fill a car interior.

From: Mike Painter (mpainter@inreach.com)
My guess would be that they would thaw out and leave a puddle on the
seat.
(See Tragic Comic's remark above for a denial)

Now if you put one in a footlocker so that closing the lid pushes the button you get the proper result.

What is nice about this is that after everything clears up there is almost nothing left in the box but a few thin white lines.

From: Jim Carr (jac@ibms48.scri.fsu.edu)

My favorite was when one professor put another inside a Faraday cage at very high voltage when he was allegedly there just to help be sure the demo was done correctly, using a volunteer from the other prof's class. Instead he said "Hey, he's been telling you all this stuff is true, shouldn't he be the one inside?" ;-) I think the class was hoping he would be killed....

From: Richard Herring (rnh@gmrc.gecm.com) I recall a practical demonstration of induction. Each student was issued an iron-cored inductor fitted with a pair of 4mm sockets, a 1.5 volt dry cell, and two pieces of insulated wire, each with a 4mm plug on one end and a bare crocodile (alligator) clip on the other. The instructions were simple: connect them in series. Naturally they inserted the plugs in the sockets and took a clip in each hand to touch against the ends of the

cell. Nothing apparently happened... From: Harry H Conover (conover@tiac.net)

I love it! What a maliciously delightful bastard!

Reminds me of the time when, as a co-op student, I decided to check the resistance of the high side winding on a power company pole transformer using a hand-held Simpson 260 VOM (set on a low-Ohms scale). "Odd", I thought to myself, "the resistance is decreasing, and rather slowly." It didn't take long to be taught why the "resistance is changing", but painfully.

Lessons like these are not quickly forgotten.

Harry C.

p.s., Then there was that friend of mine who, for some long forgetten reason decided that he needed to measure the output voltage of a 15-KV, 40-Kw plate tranformer using a hand-held high-voltage probe on a meter. (This is something that actually happened during the start-up days of the Princeton-Pennsylvania Accelerator back around 1964.)

As he approached the tranformer's terminal with the probe, a corona discharge jumped to the well insulated probe in his hand, but still he dropped it. It fell to the grounded case of the transformer, the discharge followed it, and the rest is history. (When they did a post-mortem on the transformer, although its windings were once rectangular to conform with the cross-section of its core, they were now perfectly round -- all three phases!)

Ρ_

From: Chris Murray <cmurray@hrz.tu-chemnitz.deNOSPAM>
Hello group,

I've lurked in and out of this group occasionally over the last 6 months or so, but I just remembered a story that might make some of you chuckle. When I was studying Materials Science in Trinity College Dublin years ago, the whole cold fusion thing erupted. Of course the media went mad over the whole thing and public interest was huge. Out of public demand, and no doubt spotting an opportunity for some free publicity, the Physics Department decided to give a public lecture on the science behind cold fusion. The day came and the crowd was much bigger than I thought it would be, maybe about 300-400 people - students and other lecturers and I suppose people from the press. They filled the physics large lecture theatre and Ι believe the technicians even rigged up a TV connection to the smaller theatre downstairs. I was late for the lecture (as usual) and the only remaining seat in the large theatre was right in the middle of the front row. Prof. Mike Coey was giving the talk, an old hand in magnetism and superconductivity. He had even set up a little experiment on the desk in front of him, consisting of a few beakers, bits of metal, wires and a couple of thermometers. He explained that he had loaded some Pd with hydrogen and would now look for the reaction. He said that if the reaction worked, one could expect to see a temperature rise in the fusion cell over the control cell. There were little lead bricks surrounding the experiment, presumably to stop any radiation which might escape. The was a little unnerving as my seat meant that I was sitting about 5 feet from the thing! Anyway, he started the experiment and proceeded to give the main part of the talk. Interesting stuff, specially the bit about the original discoverers' experimental meltdown! The came the big moment - did the desktop experiment work!? The crowd went expectantly quiet. Mike was having a little difficulty reading the exact temperatures from the thermometers and had to stick his head right into the guts of the experiment to have a good look. Unfortunately I decided that this would be a good time to take a photo. Ι grabbed my ancient Zenith camera, switched on the flash andPOP! Poor Mike must have had a bit of a fright when all of a sudden there was blinding flash of light! It must have seemed like the whole bloody thing had gone off! The crowd were pretty amused, although I don't think Mike was too impressed.

Funny thing was that the experiment had actually produced a positive result! The temperature was higher in the fusion cell!

Pity the bloody photograph wasn't in focus!

Chris C

From: iim98jap <iim98jap@student3.lu.se>

Somehow we found what the mixture that was used for espionage (taking aerophotos during the night time) during the World War II was made of (contact me for details :). The basic idea is that it reacts quicly releasing large ammount of bright light and in principle acts as huge flash. The mixture was simple, two-component mixture and through our contacts and friends we did not have real problem to obtain the components. We maid it in remote area of summer houses some 18 km from Riga city (the capital of Latvia). Actually it was time before the New Year and we had aslo other fireworks prepared, but this one was a kind of experiment and we were looking forward to enjoy it wery much. We made quite a big tight paper package of this stuff thinking- the bigger the better, added home made ignitor and burning cord, went out (it was night, aroung 11 p.m., though there was half moon and stars on the sky, so it was not completely dark). We put the fire to the cord, left the paskage in the middle of the road and stepped well back. We were expecting some real explosion, light sparks and stuff like this, of course. The cord was burning, but it somehow took a bit longer time than we were expecting. We all (like 4 people) were following closely the smoll flame on the cord with our sights when it just became all dark. We did not hear any explosion, except small "fuh!", we did not see ANY light. The reaction was so quick and so damn bright that we all got blinded for several tens of seconds. We were blinking our eyes without seeing anything at all. That is thing that we still joke about with the friends when we met. We realised that mixtures designed for special uses do not really fot for pyrotechnics... :) Regards, Janis ++ =12.1 MATHEMATICS М

From: Candie

Pick a number between 1 and 9
 Subtract 5
 Multiply by 3
 Square the number
 Add the digits of that number together, for example, if you number is 83, you would add 8 and 3 and get 11.
 If the resulting number is less than 5, add five, otherwise

subtract 4
7) Multiply by 2
8) Subtract 6
9) Assign a letter to your number. A=1, B=2, C=3, D=4, E=5, etc
10) Pick a country that begins with your letter
11) Pick an animal that begins with the second letter from your
country
12) think of the color of that animal....

If you did this right and didn't pick something off the wall for the animal or country, you should come up with...

A grey elephant from Denmark.

(The trick is in step5. 3) and 4) caused the number to be a multiple of 9 and the sum of the numbers of a multiple of 9 is again a multiple of 9, in this case 0 or 9. Step 6 equals these situations and if you do not think of the Dominician Republic you get Denmark for number 4. The elephant is the easiest animal with 'e'.)

From: Alissa Mower Clough <teleny@server2.comm2net.com>
The Order of the Elephant is the highest decoration in Denmark.
It really is. Makes a nice comeback if someone springs this particular
puzzle on you....
M

From: "Harold E. \"Mac\" McKinney" <mcvistas@abaco.coastalnet.com>

Tell someone to write down a 3 digit number (example: 746) Tell them that you are each going to write down 2 more 3 digit numbers and add them, but before you do, you are going to write down the answer on a piece of paper and fold it up. You obtain the answer by subtracting 2 from the last digit of the first number and placing a 2 before the first digit--thus 746 becomes 2744 for the answer. Now ask the other person to put their two digits down, either both at once or in succession with you. Either way, they must preceed you. Now , whatever they put down, make each number, when added to the number you put down add up to 999. Don't do this but once with each person; they'll catch on otherwise. 746 Demo: (original number) (Their first number) 325

(your first number)	674
(their second number)	841
(Your second number)	158
Total	2744

They unfold the paper and you're a hero! Μ From: dleqc@qcunix1.acc.qc.edu Here's another math trick involving "casting out the nines": Tell someone to do the following: (1) Write down a three-digit number (where the digits are different), and keep it hidden from you. (2) Reverse the digits and write that number down. (3) Subtract the smaller number from the larger number. (4) Find the same page in the phone book as the answer in (3) and remember the first and last names of whoever is listed at the top of the first column there. (5) Close the phone book. (5) Tell you just the *first* letter of the last name. You then open the phone book to the page containing that name and announce the full name of the person. Here's how it's done: Whatever number the person selects in (1), the answer in (3) will contain a 9 in the middle and the first and third numbers will add up to 9. If, for example, the person writes down 623, this number reversed will be 326. When 326 is subtracted from 623, the result is 297. Note that the middle digit of this answer is 9 and that the sum of the first and last digits is 9. Whatever letter the person gives you as the beginning of the last name, there will be only be *one* page number in the book (unless you live in an extremely populous city!) where the names begin with that letter, have a in the middle and the first and third digits add up to 9. Find that page and read off the first name on it to the amazement of your victim. М Confuse people with the following riddle: Three friends go to sleep in a hotel. The man at the desk ask \$30 for the room. (This is old...). After they pay \$10 each and they went to their rooms, the manager comes in and tells the receptionist that that was the price for the expensive rooms. The cheap rooms the friends toke only cost

\$25 , so give them \$5 back. The receptionist thinks it is difficult to

From: arildj@edb.tih.no (Arild Jensen) A friend of mine got a hold of a large chunck of potassium metal which he brought to a party. He managed to dare another guy to make it explode. The other guy wasn't of the brightest type, and he didn't believe it would explode in contact with water. Anyhow, stupid as he was, he went to the bathroom and thew it into the toilet. Nothing happened, so he went back out again, saying to my friend "Hey, nothing happe...." BANG!!!!!!!!!! The whole bathroom was covered with smoke, and the toilet-seat was completely ruined, cracked and everything. The guy who held the party had to use the neighbors bathroom the following week, until his own one got repaired. C

From: rcousine@malibu.sfu.ca (Ryan John Cousineau) My High School science courses were similarly interesting.

We had a Science 10 teacher who wasn't usually much for science. As a demonstration, he dropped a blob of sodium into a pan of water. Very impressive. Especially when, with a "pop" the sodium exploded in front of the teacher. He did the demo for the next block with a much smaller piece of sodium...

Another good one was our Chem 12 teacher, who left some disgusting, viscous black mixture on his lab table at the front of the class. We were all busy at our desks, when all of a sudden there was a huge, loud "POP!" and the sucker exploded! Blew black goo up to the ceiling, over the front desks, down to the floor. The stuff on the ceiling never did come off, and some of the students would no longer sit in the front row.

From: lwricl@MFS04.cc.monash.edu.au (LUKE RICHARDS) My Yr 12 chemistry teacher (young guy, had only been teaching for about three or four years) told us about the time when he was at College doing his dip ed, and he was working with sodium. He was pouring the kerosine off the oil and down the sink, and there was one chip of sodium left at the bottom of the tin he was emptying (unfortunately for him). Well, it fell out, and because someone had been using the sink before him there was water in there. The sodium ignited, flared and set the kerosine on fire which then raced along the length of the sink and down the plughole with one almighty explosion. He said he had to have a haircut that night because he lost his fringe and both his eyebrows.

From: gapv64@cent.gla.ac.uk (Brian Ewins)
Yet another exploding light metal story....

C_

A friend of mine was recently doing a PhD in Chemistry in the building next door to where I am writing this... anyway, his project seemed to involve

increasingly more dangerous chemicals for no good reason.

Normally, you sign out all chemicals, and they're all accounted for at the end of the day. But, towards the end of his PhD, he opened one of his cupboards to discover a jar of Sodium that he'd got, never used, and the paperwork (it turned out) for it had since been lost.

This was *2 Kg* of sodium in a big lump.

Sodiums not very dense, that's a big f**ker.

Anyhow, the fate of this lost lump was to accompany some of the students

out to a lake in the park, where they threw it...still in its jar (that they managed to get this far at all is kinda surprising because they were all completely blootered at the time).

And then, in a masterpiece of forward planning, they got out the airgun

:o) ... 'cos they were all drunk, and the jar (now floating on the lake) was fairly thick, it took quite a few shots to break.

Surprisingly, the thing didn't explode...it just sat there burning. (obviously only the surface of the lump was reacting, but even so...) So they all sat down, cracked open some more beers, and watched the sodium light up the night. Cool.

From: Andy (e-mail adress removed) This isn't my E-mail account and my real name may or may not be "Andy".

The title I have given this E-mail is "Pranks...Science related....Sex...Fettish...mice", It is to do with science and Pranks, but I did the others just to disappoint the perverts among us.

Or maybe I didn't.

Anyway, when I was 15, and at a selective intake school, I came across this rather amazing reaction. Not by chance either, I'd heard of people being maimed by it, so I naturally decided to try it myself. And I wasn't alone, there were about 10 or 12 of us.

Ofcourse Teenage Boys don't just want to do as well as each other, they really want to be the best, but this is where the fun started.

rather reactive substances. We all know that if you put "Just a little" Magnesium Powder in a Bunsen Burner it burns with a blinding white light. Which is why everyone's Chemistry Department kept it "out of harm's way". Well basically, they messed up by informing us that our pencil sharpeners were made from a duplex structure of Aluminium and Magnesium. Good move. That ment that our class then had easy access to as many blocks of Magnesium/Aluminium alloy as we cared for. Converting it to powder only took a file and a clamp, and hence we were ready. For what? we didn't know, and we didn't care. Just so long as it made a loud Bang and was painful to look at. Experiments got bigger and bigger, until the highlight of our pyro career when we decided to wake up about 150 people over a widespread area. The filing took weeks. The construction hours, the planning days, but at last it was ready. The world's First, Last, and hence Best "G.B.M.F." The Name was simple to make up- we just took the first letters of each word in the first apt description. ("Wow!" I said when I first saw it, "That really is THE Great British Mother F*&^er!"). The night came when we were going to detonate the GBMF, it was dark, we had an appointment, and it was a nice sleepy Wednesday night. Every where was calm and tranquill. Enter three Cretins cluching bag filled with home made explosives. We intended to light it using a rather pathetic piece of Magnesium Ribbon, which, in turn, would be lit by my own Blow torch. We had found a nice little spot in a metre wide alley in a residential area. There were lots of alleys near by, which we knew from our after school smoking sessions. These would provide quick get-a-way if required. Our spot to stand was a nice sheltered spot in an alley offset by about five metres on the opposite side of the road. If there was one thing we had learned from past experiences it was that two things could go wrong with our Bangers- the Fuses and the Casing. We had chosen the best fuse so far for this- Magnesium, and our casing was made out of Plastic lids and Sellotape. More Sellotape than plastic lids, though. We laid the GBMF down carefully and placed a small Union Jack by it. Cautiously we lit the Blow torch and set off the Magnesium Ribbon. And ran like buggery. We got to our viewing point and braced ourselves. Five seconds passed, nothing.

The Reaction was that between Magnesium and Potassium Permanganate, two

Ten seconds passed, nothing.

By twenty seconds we had got bored of bracing and urged "Bob" to go and look.

Bob sneaked out of our safe haven and leaned over to look down the Alley. After one glance he saw that it hadn't gone out as expected, something far

worse. He sighed and made the disapointed report to me and "Paul" that:

"It's shit, The casing has caught fire I don't think it's going to G...". Bang would be an understatement. BANG would be an understatement.

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BBB	Вb		aAA	AAa		NNN	nNn	NNN	gG	
BBB	Вр		aAA	AAa		NNN	nNn	NNN	gG	GGGGGGG
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BBB	Вb	aA	АААААА	AAAAA	AAa	NNN	nNn	NNN	gG	GG
BBB	Bb	aAA			AAa	NNN	nNr	NNN	`G	GG
BBB	Вр	aAA			AAa	NNN	nN	In NNN	Ggg	. GG
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Is a bit more like it. "Bob" Shat one. He Legged it like a bat out of hell all the way down our Alley way, with me and "Paul" close behind. What I had heard and seen was phenominal. That flash would have been bright during the day, but on a night like this.....

As we reached the end of our alley the others wanted to keep running, but I slowed us all down to a brisk stroll as we entered the main road. As we walked past the road with the alleys in, a good ten seconds had elapsed since our brief sprint, the whole of the road was out of their houses, peering cautiously down the alley.

On the way back from our appointment, we visited the Alley. On the ground there was scorch marks (which are still there today) that reached a radius of 7 metres, with a little unburnt patch in the middle, showing the circular birthmark of the first, the last and the best GBMF in history.

We did what we aimed to achieve, We caused a commotion, we beat our rivals, and we made our mark (literally) in local folk lore. The Alley is now known amongst the younger members of our community as "The GBMF Alley", and the tale of our achievement is recited to all newcommers to the pyro world along side the all-time classics like "Paul"'s Brother's friend's Cousin who shot a Pool Ball through his friend's Frontdoor (and stairs) from across the road.

Now you've read this Urban legend down to the last paragraph, I'd like to appologise to those of you who read this on the off-chance that it may contain something about Richard Gere.

From: engine@chac.org (Kip Crosby)

С

This wasn't strictly a practical joke but it must have been a great sight... and it couldn't be done (legally) today.

My old chemistry prof got an increase in his materials budget (that's how you know how long ago this happened) and decided to replace the materials in his locker. Most of them he was able to dispose of according to standard protocols, but... he had a great big lump of sodium metal (he estimated later about 400g) sitting in light oil in a paint can. Oh bother, he said, what am I going to do with this.

He put it in the trunk of his car and drove to the lake where his outboard was docked, put the sodium carefully in the boat, and grumbled out to mid-lake...unlocked the top of the can...lowered it over the side and TOOK OFF.

About thirty seconds later he cut the motor and looked back. Straight out of the middle of the lake rose a ten-foot conical violet flame....

From: Paul Intihar <pintiha@gwgatel.jhmi.jhu.edu> Must have been a lump of metalic potassium; sodium erupts in a yellow flame, vis-a-vis the glow of a sodium vapor lamp. Now that the statute of limitations has run out, I can admit to having done the sodium trick and got a nice yellow explosion. Potassium explodes on contact with water also, and, as I recall, gives a purple tinge in the Bunsen burner flame test.

From: "Scott Jäger" <syeager@destruction.dyn.ml.org> I remember my 10th grade highschool chem 1 class. I was a prety intelligent person at the time, for my age. One day we decided to play a prank on the class, scared the shit out of the whole bunch of them. Took some potassium, a beaker, a very large baloon, and a lighter. Stuck some water, and potassium in the baker, and placed the baloon over it.. We all know that will produce hydrogen, so we let the baloon off the beaker, closed it off, and let it be passed around the room for a while. The teacher started to get curious about what we were doing (he couldn't see us doing this). We finally decided to light it up, right in the middle of a small chapter test. Letting the baloon go, someone stuck it with one of those grill lighters. The baloon exploded into a large ball of fire, and an interesting noise followed. The smartass who lit it up had no hair on

his arms anymore, and we had no grade in chem 1. ohwell.

From: iim98jap <iim98jap@student3.lu.se>

С

When we were at last grades of the secondary school (i.e.- highschool), we developed qyite sophisticated theory how to stop the school operate for at least several days. Idea was simple like that: 1) we had to obtain a piece of potassium large enought to obtain REAL rffect, 2) this piece of potassium, then would be wrapped in newspaper paper good enough not to let water to reach it immediately, 3) after wrapping it should be thrown into a closet and flushed down so it would go down the pipes The idea was that after some time water will reach the potassium, it would start to react releasing heat and hydrogen and blow up the pipes flooding the school with sewage water. The idea was never implemented. :) Regards, J. ++=13. SOURCES OF SCIENCE HUMOR ON AND OFF THE NET I need more entries on this list. To qualify it must be at least 50% about science or scientists, and at least 30% humorous. So `Surely you are joking, Mr Feynman' qualifies, and a big tome about Einstein, with one anecdote does not. (You can send me the anecdote though). A webpage with humor does not qualify either, unless it is also specialized in science. A description of at least one line and at most ten is also appreciated. NAME: Science Jokes Collection (this list) FTP: ftp://ftp.in.umist.ac.uk/pub/Text/scijokes.zip (550 k) FTP: ftp://ftp.princeton.edu/pub/sciencejokes.tar.gz (very dated) WWW: http://www.xs4all.nl/~jcdverha/scijokes/ WWW: http://www.princeton.edu/~pemayer/ScienceJokes.html (very dated)

NAME: The Science humor webring DESCRIPTION: The Science humor webring is a dedicated to humor about science or scientists. This includes all kind of sciences, physical or social. MEDIUM: Webring of WWW sites. Home page: http://www.xs4all.nl/~jcdverha/scihum/webring.html NAME: The canonical collections of jokes DESCRIPTIONS: Joke Collections. For readers of this collections the following might be interesting: Michael Cook's Canonical List of Math Jokes. There is al large overlap with this collection, but it contains some other math jokes. N. Thomson's Canonical Computer Humor Lists. MEDIA: 1 Newsgroup: Irregularly posted to news:rec.humor 2 WWW: http://www.visi.com/~nathan/humor/canon/index.html 3 FTP: ftp://ftp.cco.caltech.edu/pub/humor/canonical.lists NAME: Annals of Improbable Research (AIR) DESCRIPTION: The journal of record for inflated research and personalities [Some background: Before starting AIR two years ago we collectively started and were the editorial staff (from 1955-1994) of the Journal of Irreproducible Results. After running into major (and yes, bizarre) problems with the people who bought that name, and not wanting to see the magazine die, we left that publisher and started everythnig afresh. We are the same folks who produce the annual Ig Nobel Prizes.] I urge anyone reading this to write up your improbable research and submit it to us for possible publication. This is probably the best science humor source. - JV MEDIA: 1 Journal: Email (for automatic information): info@improb.edu Email (for editorial matters): marca@wilson.harvard.edu FAX: (617) 661-0927 Mail: AIR, PO Box 380853, Cambridge, MA 02238 USA Phone: (617) 491-4437 Price: \$23 a year, overseas \$??. (6 issues a year) 2 WWW: http://www.improb.com/ Clearly the web presence of non-web compagny. You can subscribe to the journal from here. There is some funny stuff. 3 Newsgroup: Weekly column of reports from AIR news:clari.tw.columns.imprb_research 4 Mailing list (mini-air): Overflow tidbits from AIR To subscribe, send a e-mail message to: LISTPROC@AIR.HARVARD.EDU The body of your message should contain ONLY the words SUBSCRIBE MINI-AIR MARIE CURIE

(You may substitute your own name for that of Madame Curie.) Not very interesting and getting less during the years, but sometimes they ask interesting question for the subscribers to answer; the best results are published in mini-air - JV 5 BOOK: The Best of Annals of Improbable Research, Marc Abrahams, editor, W.H. Freeman, New York, 1997. ISBN: 0716730944 Message in mini-air: It is a commendable book -- 200 or so pages long, constructed with genuine ink and paper, and containing 100% mass (both inertial AND gravitational!) Among the subjects: "Failure of Electric Shock Treatment for Rattlesnake Envenomation", "How Dead Is a Doornail?" "Furniture Airbags," and "The Medical Effects of Kissing Boo-Boos." NAME: Journal of Irreproducible Results (JIR) DESCRIPTION: Research that cannot or should not be reproduced. (The staf of this journal ran away to found the above mentioned AIR, but the journal has been resurrected since.) MEDIUM: 1 Journal: (Anybody any data?) 2 Books with articles from journal: DESCRIPTION: From: millikan.ross@ssd.loral.com (Ross Millikan) There have been two books of best of ... published. Unfortunately I don't remember the names. The first is better, but both have a number of good articles. One of my favorites postulated the law of conservation of statue arms and showed that the missing arms on Greek/Roman statues was made up in India. Book 2:"Sex as a heap of Malfunctioning Rubble" (and further improbabilities; More of the best of the Journal of Irreproducable Results)", by Marc Abrahams (Ed.), Workman Publishing Company; ISBN: 1563053128 From: gerry@mpce.mq.edu.au (Gerry Myerson) Stress Analysis of a Strapless Evening Gown, Prentice Hall Press, 1963 ISBN: 0-13-852608-7 DESCRIPTION: Here you will find an amalgam of satiric science and scientific satire. A collection of humorous short stories on a scientific theme. A couple of my favorites are: "Mathmanship", by Nicholas Vanserg, which finds humor in scientific papers, and "Terns", by F. E. Warburton, which is one big, awful pun, which I am not above enjoying. MEDIUM: Book From: "David B. Arnold. PhD" <arnold@pop1.science.widener.edu>

Selected Papers The Journal of Irreproducible Results; JIR Publishers, Inc, Chicago 1976: Dr. George H. Scherr, P.O. Box 234, Chicago Heighths, Il 60411 Improbable Investigations & Unfounded Findings (The Best of the Journal of Irreproducible Results) Ed By Dr. George H Scherr, Workman Publishing, 1983 ISBNo-89480-595-9 NAME: R.L. Weber and E. Mendoza (ed.), "A Random Walk in Science", The Institute of Physics, London, 1973. DESCRIPTION: (from the blurb) A blend of amusing and serious contributions written by and about scientists. Contents include: When does Jam become marmelade?, The transit of Venus, Heaven is hotter than Hell, ${\rm A}$ contribution to the mathematical theory of big game hunting, Life on Earth (by a Martian), A theory of ghosts. MEDIUM: Book NAME: Robert .L. Weber, "More Random Walks In Science" DESCRIPTION: Sequel to the above with subjects like: The use of small dogs in physics teaching, Syllabus for a detective story written by a physics professor, continental drip. MEDIUM: Book NAME: Robert L. Weber, "Science with a Smile" DESCRIPTION: (from the blurb) A collection of humorous stories, anecdotes, verse and cartoons touching every science. Contents include: Academic life, Classroom foibles and follies, Conferences, "Mystery, magic and medicine". MEDIUM: Book From: gerry@mpce.mq.edu.au (Gerry Myerson)

NAME: Betsy Devine and Joel E. Cohen, Absolute Zero Gravity, Fireside, 1992, ISBN 0-671-74060-1.

Anybody any more information?

NAME: Outrageous On-Line Uncle Al

DESCRIPTION: Dr. Schund and his Top Secret/Lotus Eater disclosures are wonder to behold. Who would have imagined that the extraordinary Yellowstone National Park firestorms of some years ago were initiated by an "uh oh" of an electroless gold nipple ring plater hired for a very black Strategic Defense Initiative project? MEDIUM: WWW: http://www.ultra.net.au/~wisby/uncleal.htm WWW: http://pw2.netcom.com/~uncleal0/uncleal.htm WWW http://www.guyy.demon.co.uk/uncleal/uncleal.htm Warning: Uncle Al has already be thrown from one net-site. From: "L. Paul Gilden" <lgilden@nova.umuc.edu> NAME Sidney Harris cartoons DESCRIPTION: There's at least one nice collection of Sid Harris science cartoons in print. MEDIUM: books Some books follow: Einstein Simplified: Cartoons on Science 162 pages (February 1989) Rutgers Univ Press; ISBN: 081351410X Einstein Atomized : More Science Cartoons From Personal Ads to Cloning Labs : More Science Cartoons from Sidney Harris (1992) What's So Funny About Science? : Cartoons (1977) What's So Funny About Science? : Cartoons from American Scientist (1977)'You Want Proof? I'll Give You Proof!' : More Cartoons From Sidney Harris (1990)Does anybody know more titles? MEDIUM: book There is a collection in Dutch: NAME: Sydney Harris, The ongeschreven geschiedenis van de wetenschap. (Translation: the unwritten history of science), Natuur en Techniek, Beek, 1996. ISBN: 90-73035-51-1 Is this the translation of an english book. Anybody? MEDIUM: magazines / journals: Cartoons appear in The New Yorker, Playboy, and Discover MEDIUM: A travelling exhibit touring museums DESCRIPTION: S. Harris cartoons on science has been touring museums in the U.S. and Canada since 1984, and has also appeared in several corporate headquarters. All the cartoons on view are original drawings which have appeared in such leading periodicals as Discover, American Scientist, The New Yorker, Natural History Magazine, and Playboy. All are offered for sale,

with a commission of 20% going to the museum.

NAME: Science Cartoons Plus -- The Cartoons of S. Harris MEDIUM: WWW: http://www.sciencecartoonsplus.com/index.htm Webpage with a number of cartoons, a way to contact the travelling exhibit and a link to the company that produces T-shirts with the cartoons, (COTTON EXPRESSIONS), which is also in this list.

From: paterson@mel.dbce.csiro.au (David Paterson)
NAME: The Inventions of Daedalus. (Bibliographic data anybody?)
DESCRIPTION: A collection of the best from the column that used to be on
the
last page of New Scientist.
MEDIUM: Book.

NAME: The Journal of Extraneous Scientific Topics (JEST) DESCRIPTION: JEST is a quasi-science publication edited by Rebecca Carlson and published by her husband, Russel Carlson. JEST provides a forum for science students, educators, and enthusiasts to share their humorous ideas. A normal issue of JEST contains:, two or three articles, letters to the editor, News Tidbits, "irrelevant science news", Ask Dr. Iva P. Aitchdee, question and answer column, a puzzle page, The Science is Poetry Page, Quadrant NQ (a science fiction comic) MEDIUM: 1 Journal: To subscribe to JEST for a year (6 issues) send \$5.00 for photocopying and postage along with your name and address to: JEST Subscriptions: c/o Russel Carlson --This line is important !! Department of Mathematics University of Oregon Eugene, OR 97403 2 WWW: http://www.uoregon.edu/~roc/jest/index.html Introduction and a few articles from the journal. 3 Book: We are now offering the "Best of JEST", a bound collection of the first ten issues of JEST. To order this, send \$8.00 (\$6 for copying, \$2 for postage) to the above address along with your name, address, and a request for the "Best of JEST." The first issue of JEST was published in June of 1993, and with a few exceptions is published every other month. We now offer a collection of the first ten issues is now bound and called the "Best of JEST."

NAME: The nerdity test

DESCRIPTION:

Hello, and welcome to the nerdity test. This test is designed to help you determine your nerdity quotient. In the past, someone may have watched you, or listened to something you said and then exclaimed, "You geek! What do you think you are doing?" Or maybe it's just us. In any event, we here at the nerdity testing lab were prompted to ask "just what is a nerd?" In response, we came up with this test. (This is the *interactive* version of the test in the MISCELLANY section)

MEDIUM: WWW: http://www.frontiernet.net/~jbennett/nerd/

From: sbaker@oro.net (Steve Baker) NAME: Ask Dr. Science

DESCRIPTION: Misinfotainment on science.

MEDIUM: Radio show MEDIUM: WWW: http://www.drscience.com

NAME: A.L. Mackay, "A dictionary of scientific quotations" DESCRIPTION: (from the blurb) The second and expanded edition of "The harvest of a Quiet Eye" A collection of many scientific quotations, including graffiti, lines of song and proverbs. MEDIUM: book

From: "Zine" <jrasmuss@iupui.edu>
NAME: SKEW! a journal on the rrragged edge of academe
DESCRIPTION: Online journal of satire, prose, poetry and commentarium on
academia. Worth a look.
MEDIUM: WWW: http://psychology.iupui.edu/skew/splash.htm

NAME: COTTON EXPRESSIONS

DESCRIPTION: Pictures on T-shirts. Especially the science cartoons are famous.

MEDIUM: T-shirt. Order from: Cotton Expressions, Ltd. Quality Imprinted Apparel 1640 W. Walnut Street Chicago, Illinois 60612-2522 Phone: (312) 850-2545 Fax: (312) 850-2562

MEDIUM: WWW: http://www.cottonexpress.com/ Pictures of T-shirts and order form

NAME: The Notochords
DESCRIPTION: "The Notochords: Songs of Science" Dr. Chordate and the Notorious Einsteinway perform a blend of humor and music that illustrates the wonders of science Featuring: "A Parasitic Love Song", "Ain't Nothin' but a Groundhog", "Star Wishes" and More!

MEDIUM: life appearance

Dr. Chordate and/or The Notochords are also available for to make presentations to schools and organizations at all grade levels, from local to international. Charges are generally in the \$100 to \$1000 per presentation range, plus the expenses of travel etc.

MEDIUM: book: Science Songs and Body Poetry Science Songs and Body Poetry contains the words to over 30 songs and poems. Some of the songs are set to recognizable melodies (for example, The Sounds of Science, Fifty Ways to Love Your Liver (or Lever), Ain't Nothin' but a Groundhog). Most have original melodies, which are not included in this book. But, who's going to know if you sing one to your own melody? Anyway, they are great tools for introducing science topics to those hard to reach students! Enjoy!

MEDIUM: Audio Tapes:

The Notochords: Songs of Science is an audio tape of 10 of the songs found in the book above. And even if the recording does sound like a couple of old geezers singing in a basement, it remains an excellent way of getting the attention of students or anyone else interested in the funny side of science.

Dr. Chordate: Parts Is Parts - More Songs of Science is an audio tape of 9 more original songs. The words to most can be found in the book above. They are also an excellent way of getting the attention of students or anyone else interested in the funny side of science. Remember: Music is the

interstate highway into the memory.

Audio Tapes are \$10.00 plus \$2.00 each for shipping and handling (February 1998)

Also available are T-shirts and tote bags with the Notochords logo. Copy this form and use it to make your order.

MEDIUM: WWW: http://www.tranquility.net/~scimusic Page with information about "Dr. Chordate and the Notochords". The page also has the lyrics of some science humor songs.

Order From: Dr. Jeff Moran The Master Word Works 2071 County Road 246 Fulton, MO 65251 (573) 642-9749 scimusic@tranquility.net
MPCBEA

From: Ian Ellis <ian@iglou.com> NAME: Strange matter DESCRIPTION: Cartoons on science subjects. The website also contains some pseudo-scientific articles by Nick D. Kim. The name Strange Matter was first applied to these cartoons after it was determined that when viewed, they are capable of inducing observable distortions in the local sections of the Universe. Such macroscopic perturbations to quantum reality are indeed an unusual outcome to the act of cartoon observation, so it seemed appropriate the name them in honour of one of the strangest substances known to theoretical physics, Strange Matter. After ingestion, they should be washed down with а shot of whisky. MEDIUM: WWW: http://strangematter.sci.waikato.ac.nz/index.html MEDIUM: Journal: The cartoon also appears in New Scientist PCB_ NAME: Laboratory of Laughter DESCRIPTION: List of Biological, chemical and physical jokes. MEDIUM: WWW: http://members.aol.com/eukaryote/index.html From: Jean Debord <JDebord@compuserve.com> NAME: Parodies and pastiches DESCRIPTION: A web page wich describes a number of pseudo scientific papers with some extracts. It gives references to the actual articles, which can be found in the library, or in one case on the web. MEDIUM: WWW: http://ourworld.compuserve.com/homepages/JDebord/humour.htm NAME: Tomatotopic organization in the Soprano DESCRIPTION: A pseudo scientific article about the physicological basis of the the fact that singers yell when thrown with tomatoes. Very realistic. (Do not skip the references section.) MEDIUM: WWW: http://pauillac.inria.fr/~xleroy/stuff/tomato/tomato.html NAME: A short time of history: Space Rat's search for universal truth DESCRIPTION: Adventures of a Galactic criminal with astronomy and geology jokes. MEDIUM: WWW: http://www.journalism.iupui.edu/sr/srintro.htm NAME: Science Joke of the Week DESCRIPTION: website with jokes similar to mine, but every week one different joke; for people who like their science humor with moderation. MEDIUM: WWW http://www.marshall.edu/physics/jokeguy.htmlx

NAME: Snap:Science & Technology:Science Fun DESCRIPTION: A list with references to Science Humor sites from Snap MEDIUM: WWW: http://ilse.snap.com/directory/category/0,16,-1830,00.html

NAME: Yahoo! Entertainment:Humour, Jokes, and Fun:By Topic:Science DESCRIPTION: A list with references to Science Humor sites from Yahoo. (moderated) MEDIUM: WWW: http://www.yahoo.co.uk/Entertainment/Humour_Jokes_and_Fun/By_Topic/Scie nce/

NAME: Open Directory:Humor:Science DESCRIPTION: A list with Science Humor sites from the open directory (moderated by volunteers) MEDIUM: WWW: http://www.dmoz.org/Recreation/Humor/Science/

NAME: Infoseek: Science humor DESCRIPTION: A list with references to Science Humor sites from Infoseek MEDIUM: WWW: http://www2.infoseek.com/Topic/Education/Science_and_nature/Science_humor

From: Rosemary West (rosemary@rosemarywest.com)
NAME: Hi, Technology
DESCRIPTION: Reviews and links to amusing and humorous sites about
science,
technology, computing, and related subjects.
MEDIUM: WWW: http://www.rosemarywest.com/guide/science.html
+++
=13.1 MATHEMATICS

NAME: Gary Ramseyer's First Internet Gallery of Statistics Jokes DESCRIPTION: Statistic jokes. He claims it is the biggest statistics jokes list on the net, but mine is bigger. :-) Still worth a visit. MEDIUM: WWW: http://www.ilstu.edu/~gcramsey/Gallery.html M______

NAME: A Bibliography of Humor in Mathematics DESCRIPTION: A list like this one about sources for Humor in Science (mainly mathematics). This collection has much more books than I do.

MEDIUM: WWW: http://ernie.bgsu.edu/~vrickey/info-on-me/HumorBiblio.html

From: elecyq@leonis.nus.sg (Chen YangQuan)
NAME: Humor on Control Systems
DESCRIPTION:
Mathematical Cartoons, not just control systems. Below follows the
official
description:

'Control' is being said an "experimental subject" (see, for example, D. S. Bernstein, "Control Experienments and What I learned From Them: A Personal Journey", IEEE Control Systems, vol. 18, no. 2, pp. 81-88) although only the applied mathematics motivated papers can be published in top international journals. Therefore, humor accurs. Here is a collection of control-related humors published in the IEEE Control Systems Magzine from 1984-1994 under the column of "Out of Control". Unfortunately, this column is seemingly a disturbance (periodical or, repetitive:) and thus was rejected by Control Systems since 1995. I enjoyed those humors and I believe that humor implies creativity. MEDIUM: WWW: http://ilc.ee.nus.edu.sg/control/humor http://act.ee.nus.edu.sg/control/humor http://cic.ee.nus.edu.sg/htmldocs/control/humor/index.html MEDIUM: Journal: IEEE Control Systems Magazine 1984-1994, column "Out of Control" М From: fractalier@aol.com (Fractalier) NAME: Mathematics Fun, Fact, Fiction, Function, Fantasy DESCRIPTION: Riddles, tricks and mathematical peculiarities MEDIUM: WWW: http://www.lifesmith.com/mathfun.html М NAME: Bamdad's Math Comics Page DESCRIPTION: Math related comics and cartoons from several sources MEDIUM: WWW: http://www.csun.edu/~hcmth014/comics.html ++ =13.2 PHYSICS NAME: The Physics Connection DESCRIPTION: A fresh oasis for the weary physics student. It contains excerps from "Parker's Philosophy (a physics textbook from 1850, with views which we now consider remarkable) strange physics facts and other things. MEDIUM: WWW: http://www.servtech.com/public/wkimler P_ NAME: UTC Physics Humor DESCRIPTION: Big collection of physics jokes. MEDIUM: WWW: http://www.utc.edu/physics/physicshum0.html Ρ NAME: DCC Physics Humor Page DESCRIPTION: Links to physics jokes on the net. MEDIUM: WWW: http://cyberspc.mb.ca/~dcc/phys/humor.html Ρ_ From: Ian Ellis <ian@iqlou.com>

NAME: Physics Limerics contest

DESCRIPTION: Physics Limericks MEDIUM: WWW: http://www.aps.org/apsnews/limericks.html Ρ_ From: Hrvoje Horvat (hhorvat@jagor.srce.hr) NAME: Astronomy related jokes DESCRIPTION: A list like mine but specialized in astronomy MEDIUM: WWW: http://www.open.hr/space/space/jokes.htm P_ From: Ken Wharton <wharton2@llnl.gov> NAME: The Adventures of Clebsch Gordon DESCRIPTION: A quantum mechanic pun story by Ken Wharton. The author also writes normal sf stories, which you can see in the quality of the story. MEDIUM: WWW: http://members.xoom.com/KenWharton/clebsch.htm ++ =13.3 CHEMISTRY C__ NAME: Dihydrogen Monoxide Research Divison DESCRIPTION: Website of this group, that wishes to ban this dangerous chemical. (Also see the entries in the chemical section) MEDIUM: WWW: http://www.cis.udel.edu/~way/DMRD/index.html С NAME: So you be a chemist DESCRIPTION: Stories of things that go wrong in a chemical laboratory. A good place to look when you did something stupid and wish to see worse cases. Whether this is humor or horror is a matter of taste. MEDIUM: WWW: http://fubiol.bio.flinders.edu.au/~pclarke/chem/chem.html С From: "Thomas P. Koch" <tom_koch@email.msn.com> NAME: An evening with Tom Lehrer DESCRIPTION: If you ever see the Album "An Evening with Tom Leher", buy it. He has an excellent rendition of the Periodic Table sung to a Gilbert and Sullivan Tune. The album was recorded in the late 50's or early 60's, but I have recently seen it on CD. MEDIUM: music CD C_ NAME: Songs of Cesium DESCRIPTION: The translation by Randal C. Nelson of these ancient songs praising the element cesium. MEDIUM: WWW: http://www.cs.rochester.edu/u/www/u/nelson/cesium/cesium_songs.html ++ =13.4 BIOLOGY

NAME: Aliquotes DESCRIPTION: Biochemistry humor. (You can find some examples in this list) MEDIA: 1 Journal (free!): Aliquotes Press 441 Sandlewood Dr. Oakville, ON L6L 3S3 CANADA e-mail: rogerb@microsoft.com (The paper jounal is only available in Canada) 2 WWW: existed in 1998, first half of 1999 Follow the aliquotes link to get to the journal This version is an acrobat pdf version of the paper one and appears a month later than the paper journal. From: The Journal of NIH Research (David Lewin) <jnihr@access.digex.net> From: "Toby J. Sommer" <tjs@slipknot.mit.edu> NAME: THE WORM RUNNER' DIGEST DESCRIPTION: Back in the 1960s the JOURNAL OF BIOLOGICAL PSYCHOLOGY was a double magazine. The flip side was a scientific humor magazine named THE WORM RUNNER'S DIGEST, because the chief perpetrators were working on learning in planaria... The JBP part published stuff about planaria (flatworm) experiments. Some of those were really funny. The WRD part published all kinds of funny 'science' articles, not just those about worms. I seem to recall one about the breeding of giant chickens for use by the military. There was a photograph of giant chickens serving as crew on a real army tank. I guess you had to see it. You might have to try a few (science) libraries until you find it. MEDIUM: Journal (Univ. of Minesota?) В_ NAME: Dream Technologies International DESCRIPTION: Dream Technologies International is the first and largest life duplication provider (cloning) . We maintain fully-owned labs in Costa Rica, Liberia, and Vanuatu, as well as an extensive roster of qualified surrogate birthing candidates. No wonder we have hundreds of satisfied clients. (If you do not understand from this description it is a joke, it is better

not to go there.) MEDIUM: WWW: http://www.d-b.net/dti/ В NAME: Dolly's Cloning Emporium DESCRIPTION: The sheep Dolly tells all about how she was cloned and about cloning in general. MEDIUM: WWW: http://w3.nai.net/~tdiann/dolly.htm B_ "Fausto O. Sarmiento" <fsarmien@UGA.CC.UGA.EDU> From: I also agree with the didactic effectiveness of ecological humor. A very good source for quipster material as a teaching tool in ecology is soon to be published by Gordon & Brich in Longhorn PA, from many of Dr. Eugene Odum's ecological vignettes. It includes cartoons, which is even better for the grafic appeal and the quality of the cartoonists. Good luck. В_ From: Christian Jost <Christian.Jost@EPC.U-PSUD.FR> NAME: The snouters, form and life of the rhinogrades DESCRIPTION: Besides Dr Seuss, there is also a nice little booklet by Harald Stuempke: "Bau und Leben der Rhinogradentia", or, in its english version edited by the university of Chicago press, "The snouters, form and life of the rhinogrades". Its about the mythical fauna in a small pacific island with noses evolved to serve all special purposes (jumping, diving, walking etc.). The complete biology, systematics and ecology of the group are developped and illustrated, the whole presented like a real scientific paper, with references, footnotes to disputes over certain classification details etc. I much enjoyed reading it. MEDIUM: book (Chicago Press, ? ; German version: ?) From: "Robert P. Gendron" <rgendron@grove.iup.edu> DESCRIPTION: You can find pictures of some of the snouters, including an animated gif, on my web site MEDIUM: WWW http://www.iup.edu/~rgendron ++ =13.5 EARTH SCIENCES

From: "Ron Bevitt" <nospamronbev@mcb.net>
NAME: Geological Howlers
DESCRIPTION: Extracts from geology exam papers submitted at the
University of Keele.
MEDIUM: WWW: http://www.keele.ac.uk/depts/gg/howlers.html

NAME: The lighter site of geology DESCRIPTION: Geology humor. It is small but can grow with some help. MEDIUM: WWW: http://www.earthsciences.uq.edu.au/~geosciences/jokes.html

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NAME: Geologic Humor
DESCRIPTION: Geological question and answer puns.
MEDIUM: WWW: http://www.volcanoworks.com/chris/humor.html
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=13.6 SCIENTISTS
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NAME: Richard P. Feynman & Ralph Leighton, "Surely you are joking, Mr. Feynman!, Adventures of a curious character", Unwin Hyman Limited, London, 1985. MEDIUM: book DESCRIPTION: Anecdotes from the life of Feynman. From: jvn@svpal.svpal.org (Jim Van Nuland) NAME: "What do you care what other people Think?" MEDIUM: book DESCRIPTION: Like "Surely you're Joking", it is a funny book, with much interesting science as well. +++