

## Prez Sez

Contrary to what Matt said last issue, it wasn't that my article was late, it's that I didn't write one (I kind of didn't have time).

It's been really busy around here lately, but it's been a lot of administrative stuff that you probably don't want to hear about, so this article's a bit short.

## Update on tuition increases

As you know, the provincial government announced that Universities could increase tuition by $10 \%$, and that they would start examining which programmes would be deregulated quite a while back. They're still trying to make that decision. As is usual with the government, it's taking its sweet bloody time making a decision. What this means is that it looks like our pocket books have gotten off the hook for once. The meeting of the Board of Governors is on the $7^{\text {th }}$ of April, and the administration is only going to be able to ask for the $10 \%$ increase that the government was going to allow across the board. Even though the deregulation announcement is expected within a few weeks, there still needs to be a consultative period which follows the announcement before any requests for additional tuition increases are brought before the Board. When the Vice-President, Academic and Provost was asked at the Senate meeting on Monday whether or not such a request would be brought to the Board at its June meeting (the last opportunity to increase fees for the Fall term), the Provost said that it was "most unlikely".
I guess things can go right once in a while.

## So, are all my fees going up?

No. I know this might be a bit hard to believe, but one fee is decreasing; the Student Services Fee will be decreasing from $\$ 89.87$ to $\$ 80.18$.
No, I'm not joking. Really. It's just the way that the fee works. It'll also go down again next year (unless the Athletic Fee is rolled into the SSF, but that's another story).

## Speaking of fees, I hear that there are going to be changes to the payment procedure.

That's right. The Registar's Office would like people to pay their fees by mail. This would reduce/eliminate the line at the PAC each term, and make things happier for everyone. In order to do this, two things are being proposed.
The first is that fees be due by the last business day before registration (so the Friday before Frosh Week in the Fall, and the Friday before the first day of classes in the Winter and Spring).

But so what, you say. So I'm late a day. Oh no! Well, this is the second part. The current late fees are the same as they were twenty years ago (really, drop by my office and look in our 1978/79 calendar). So they'll be updated. What's being proposed is $\$ 50$ for the first week, and $\$ 20$ per additional week.

## Other noteworthy stuff

The Feds General Meeting is on the $25^{t h}$ (which is a Wednesday) at 7:30, in the Multi-Purpose Room in the Campus Centre (that's Student Life Centre for you younger folk).
The new lounge furniture finally arrived (well, most of it anyway). Go sit on it; it's good for you.

We're looking at getting a new photocopier. It'll be digital have a paper-feeder, collate, and it'll do duplex copies. Cool, huh?

We'll be discussing a bunch of bylaw changes at the next Coun. cil meeting. Most of them are just cleaning up stuff, but the big one is the introduction of a new Vice-President position: the Vice-President, Academic.

Well, that's it. Off to another meeting.
Chris "God, I can't believe tomorrow's Campus Day"
Buchanan

## gradNEWS

WOW! If you missed it you suck! The Grad Ball rocked. I'd like to take time now to thank Trevor, Gina, and Chantal for the outstanding job they did planning the event. Kathleen did a great job with the centerpieces, and Shawna's paintings added a special ambience to the hall. Jon Gall found us a great DJ, and Pavan was a terrific MC. Special thanks goes out the Men's Bathroom Committee... the stalls were perfect! To the people who decorated, kudos for getting up that early on a Saturday, and to those who cleaned up a huge "Thank you" as lots of us were just too "tired" to be of any use at the end of the night. Congrats to Chantal Bray and Graham Crate on winning the Alan George Award. Congratulations also go out those who won the door prizes.
Have you RSVP'ed for the Wine and Cheese yet? Today is the deadline so if you are planning on coming, please email mgc@undergrad. math and let us know. If you lost the invite, it will be held from $3-5 \mathrm{pm}$ on Friday the $27^{\text {th }}$ at the University Club.
We had our Rock climbing trip, and it was a blast. (By now you must be wondering if we have ever had a bad event. Simple answer: NO! We rock!) Thanks to Ben and Carol, our busy social directors, as well as to everyone who came out. My arms were only sore for 2 days afterwards. How did the rest of you do?

We are still looking for an idea for a grad gift. If you have any ideas of what we could do to improve campus, please email us at mgc@undergrad.math.

That's all for now.

> Your always responsible Co-Chairs Xavier "I never get hangovers" Aburto
> Rachel "He's lying" Nieuwland

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The new Number 2: Matt "So-Krates" Walsh

# $\cos$ Science Club <br> A Student Chapter of the ACM 

## CSC Flash

Greetings, mortals. If you're looking for an explanation for the conspicuous absence of my words of wisdom from the last of mathNEWS, keep looking. It amuses me.

## And in CSC News Lately

No doubt you've seen/heard this somewhere else, but hey, this is my space, and I'll use it as I damn well please. The team I sent to the $22^{\text {nd }}$ ACM International Collegiate Programming Contest World Finals placed third. They solved 6 of the 8 questions in 1026 (penalty) minutes. Notably, this placed them first among North American teams, with Charles U. in Prague taking first, and St. Petersburg U. taking second.
Did you catch the recent talk on Lambda Calculus?
No, then how about the one on Threads?
Oh well, sucks to be you.

## Other Random Notes

Voting has begun on the date and location of this term's "D Dinner. See the whiteboard nearest leela. Standard ${ }^{\wedge} \mathrm{D}$ voting rules apply.
Has anyone but me noticed the abundance of uniform, colourful litter gracing the halls of this institution? Ever stopped to wonder who picks up all that crap? Just thought I'd ask...
<evil grin>
<sinister chuckle>
<maniacal laughter>
<sudden silence>
<paper being folded, folded, folded...>
C\# (Chopin)
The Art/Design Contest failed miserably! As punishment, well, as I speak (write), my minions are preparing for your demise. In mere days, you and your kind will be wiped out in the mother of all battles. On the off chance any of you have the intelligence to fathom the most shallow of my thoughts, here is a clue as to the nature of your demise: "CKVR Sunday night. Beware the penguins."

Calum T. Dalek

## Course Evaluation Week

This is a reminder that over the course of next week, the course and professor evaluations for core courses will be held. Instructors of other classes have been asked to run their evaluations during this week.
Make your voice heard! Be in class to fill in your evaluation form.


## Pink Tie Pledge '98

The Pledge Drive Continues...

The Pink Tie Pledge is currently at $\$ 19,800$ but we need a much higher rate of participation to reach our goal of $\$ 64,000$. If you have yet to make a pledge, please turn your pledge card into the MGC office within the next two weeks. If you have misplaced your card, or haven't received one in the mail, you can pick one up outside of the MGC office or at the cashiers in the Right Angle Cafe. Remember, the Pink Tie Pledge is an excellent opportunity to give a little back to the department and university from which we have all benefited. As if this wasn't enough, there is even more incentive to pledge this year...

Xavier \& Ben's Challenge: If more than 50 people pledge to this year's drive, Xavier Aburto (our beloved MGC co-chair) will shave his head. If more than 100 people pledge to this year's drive Ben Breen (our beloved MGC social director) will cut Xavier's hair in any way he wants (and believe me, Ben has a very good imagination). If more than 150 people contribute to the drive, Xavier will have a chance to have some fun himself and cut Ben's hair in any way he wants. The comic relief will come in handy during exams, so be sure to keep the pledge cards coming!!

Do you have a challenge that you would like to issue to this year's grads? Let me know by e-mail at: rsrivast@undergrad.math.uwaterloo.ca

Watch the Pink Tie Thermometer outside of the Right Angle Cafe for current statistics on the pledge and watch the drive heat up!!

Raman Srivastava
Pink Tie Pledge Director '98

It doesn't have to Make Sense
That's why we call it filler

## Restaurant Review

East Side Mario's

Welcomed by Lady Liberty as you walk in the door, East Side Mario's provides a New York charm in the heart of University Plaza. The atmosphere is classy but without any hint of pretention. The walls are well-decorated with tin cans, photographs, neon signs and other assorted New York-ana. One section has a distinctly upscale motif, with small chandeliers and black-andwhite photographs. Televisions are lightly sprinkled throughout the dining hall to give the cutomers added stimulus without the pedestrian "sports-bar" aura. The music is a mixture of today's hits and yesterday's classics and is at the perfect volume to permit intellectual conversation with one's guests. For those not fortunate enough to be dining with fantastically intellectual companions, televised trivia (NTN) is also provided. Either way, you can stuff your brain before stuffing your tummy.

For openers, the unlimited garden salad is divine. The vegetables are fresh and are augmented by the dressing which is velvety, yet unyielding. For those on a tight student budget, the unlimited nature of the salad allows to it play the dual-role of appetizer as well as dessert. Main entrées are also accompanied with bread which is soft, full of flavour and best enjoyed hot. The menu has a wide selection of Italian dishes as well as popular North American options, like burgers and nachos, to satisfy the less-adventurous palate. Several vegetarian options are also available for those so-inclined. The entrée of choice was the Pasta Casalinga. Deliciously seasoned with a strong pesto sauce and assorted peppers, the soft noodles peacefully acquiesce to the thinly-sliced chicken. Unlike many pasta dishes around campus, the Pasta Casalinga is not light on flavour.

There is no doubt the East Side Mario's is a popular spot. Hurried wait-staff enthusiastically scurry about, amidst the hubbub of the Saturday evening skirmish. Around $U(W)$, a happier looking wait-staff never have I before seen. The employees are full of smiles and are eager to please. When they all gather around to sing to some unsuspecting birthday girl, it actually seems like they enjoy their jobs. The erudite staff are well in tune with the intricacies of the assorted gastronomical fare.

The prices at East Side Mario's are very reasonable. The entrees go for about nine dollars and with the unlimited salad, bread and bottomless drinks, one could take the entrée home and eat it the next day for lunch. For you poor souls who live in village, East Side Mario's must be a welcomed change from the mundane food items and plain atmospheres of Food Services. East Side Mario's even takes WATCARD and since the prices are roughly the same, it is no surprise that it is one of the favourite dining locales near campus.

Congratualations to East Side Mario's for providing a sublime dining experience that is busy, yet never precocious.

Asterisk Rating $\star \star \star \star \star \star \star$ (out of seven)
Jonathan Ezer

## Please don't burn this mathNEWS

People might talk, after all

## What is in a name?

Shakespeare asked this questions centuries ago and in spite dom? the time that has passed it is no less valid now than it was then ex

People often ask me why I am called Blue. I have had some people tell me that they know, which I can only say I find amus ing since I have never told anyone the reason for the choice di $\mathbb{R}$ that name. I usually answer "It is a long story," which usually satisfies most people that they don't want to hear it or that ! have no intention of actually telling the story. I have no inten. tion of telling it now, but I do intend to tell of something that! have come to realize in the last year.

When I changed my name, I did so, in part, as a reminder to myself that I wished to change myself. It had little to do with other people. Yet I have found another reason why my change of name was one of the most profound acts of my life.

In my mind, the name I had lived with before was a name that had attached to it the whole of my life to that point. Everything wrong and right, and everything that anybody else that had shared my name had ever contributed to it. In some ways this was great. Coming from a large family meant that it was very hard for me to get lost in my home town. I imagine for some if is kind of cool having the same name as someone famous, for : while. I'd guess that most of the Charles Mansons of the world wish that their name wasn't so famous.

Changing my name allowed me to do something I neve thought of. It allowed me to make the name, and thus the persona behind it, stand on its own. Blue is a name which is now recognized among an ever growing number of people. In many cases those who know me as Blue do not even know that! have another name. Thinking on this gives me some measure of sig pride. In the same way that a rich man might wish to be loved for himself and not his money, a famous actor might wish to be hired for more than just his name, I too, have found that I can succeed by any name.

The answer then, is that a rose by any other name can in fact smell as sweet.

## Thinking about Graduate School?

The Faculty of Mathematics is holding an Information Meeting on graduate work in the mathematical sciences:

> Wednesday, March 25, 1998
> 3:30 p.m. - MC 5158

- Why undertake a graduate program?
- How do you know if you are suited for graduate work?
-Where can you obtain information on programs?
- What financial assistance is available?

Department representatives from Applied Mathematics, Com. binatorics and Optimization, Computer Science, Pure Mathe sp matics, and Statistics \& Actuarial Sciences will be available with pl specific information about their programs.

> All Students Welcome
> Refreshments will be Served

## prof QUOTES

"This is a Gaussian integral... We all know how to solve this explicitly, or at least we know how to look it up."

Chen, PHYS 359
[Regarding class on the last day of lectures] " I ll be here...I didn't wanna be, but I'm a professional... but I'll be pouting."

Vaghan, ECON 102
"I taught at a college about 150 years ago. I was teaching calculus to these air conditioner repairmen."

Forrest, MATH 148
"In that case, we have a problem if we think we can do anything intelligent with this."

Forrest, MATH 148
"Inflation is not so bad that your salary's going to need 64 bits in the near future."

Becker, CS 241
"The human sitting at the terminal may have gone for coffee. He may have died."

Becker, CS 241
"It switches between users so quickly that it seems like you have the whole computer to yourself. . . as long as there isn't an assignment due the next day."

Becker, CS 241
"The reason I say sketch is because I'm just going to move my hands a lot."

Mendivil, MATH 136
"People can be really creative, so I'm telling you in advance, control yourselves."

Cutler, STAT 333

## USENIX and You

Did you know that the USENIX Association is interested in helping students attend conferences on a variety of topics? Visit my web page at http://math/ ~rblander/usenix/ to find out how you can apply for a grant from USENIX so you can attend a conference related to your area of study. This program really works! $\mathrm{U}(\mathrm{W})$ has a good record of sending one or two students to almost every conference. Upcoming events include the Conference on Object Oriented Technologies and Systems in Santa Fe this April, and the general Technical Conference in New Orleans this June.
They're also interested in student-authored papers, and in sponsoring research projects. Get all the details, including application forms, on my web page.

Robyn Landers [MFCF] rblanders@math. uwaterloo.ca USENIX Campus Outreach Representative
"Of course now I've talked so much you no longer have a clue what I'm saying, but let's continue."

Cutler, STAT 333
"The object of university is to take stuff that is simple and easy, and turn it into stuff that is complicated and hard."

Cutler, STAT 333
"You could think of it as a derivative, if you don't think of 'derivative' as a dirty word."

Cunningham, C\&O 350
"[Dantzig] is pretty old, but he still has most of the major properties of being alive."

Cunningham, $\mathrm{C} \& \mathrm{O}$
350
"What is a subspace? Is it a horse?"
Zorzitto, MATH 136
"I'm gonna stay here and converge; you can go to the moon! I , don't care!"

Zorzitto, MATH 138
"What kind of a rabbit did we get a hat to pull that rabbit out of?"

2 Zorzitto, MATH 138
"That takes brain cells to remember, so we don't want to do that."

Rosehart, GEN E 123
"We're now moving to page two of the formula sheet. Nobody get confused."

Rosehart, GEN E 123
"If you don't understand why it's undefined, go ask the mathies."
Rosehart, GEN E 123
"Why are you here? Go to the bar!"
Zorzitto, MATH 136
"This isn't $100 \%$ mathematically correct, but it works wonderfully."

Rosehart, GEN E 123
"Being a young male, you put the can of sauce on the saucepan without opening it."

Fitzgerald, SCI 238
"... and secondly, where the heck are half of you during lectures? I'm getting pissed off at only talking to half of you... I don't expect an answer to that."

Oldford, STAT 231

## Are You Happy to be Here?

With rising tuition, lack of student loans, and impending deregulation, there is a lot of unhappiness about university. This makes it interesting to see your answers to the following survey:

1. Do you believe that a university education will play an important, beneficial role in your life?
2. Are there students whose barriers to university are not financial?
3. Was there a person who especially helped you achieve your goal

Not surprisingly, most people answer an emphatic "Yes!" to all of these questions. Now you have a chance to fulfill your beliefs.

There are high school students who will not be coming to university. They may be more than smart enough, but are experiencing difficulties because of situations outside of school. They need the help of a strong role model and friend to support and encourage them. You can be that special person who makes the entire world of difference to someone who desperately needs it.

BUDS is a student-run organization that pairs university students as friends/role models/supports/confidants with high school students in danger of dropping out.

BUDS is working with Frontier College, a hundred-year-old literacy magazine, as well as other community organizations like Big Brothers.

## lookAHEAD

| mathNEWS |  |
| :---: | :---: |
| March 20 | Issue \#5 runs for Québec |
|  | Liberal leadership |
| March 30 | Issue \#6 production night |
|  | 6:30pm, MathSoc (MC 3038) |
| April 3 | Federation of Students attempts |
| Math Faculty |  |
| March 23-27 | Course evaluation week |
|  | If you only go to one class... |
| MathSoc |  |
| March 24 <br> March 25 | GO! (the gameshow, not the boardgame) |
|  | $6: 30 \mathrm{pm}-9: 30 \mathrm{pm}$, Comfy Lounge |
|  | Euchre Tournament |
|  | 7:00pm, Comfy Lounge |
| MGC |  |
| March 27 | Grad Wine \& Cheese |
|  | Don't forget to confirm! |
| Movie Nights |  |
| March 26 | Clerks and Chasing Amy |
|  | Starts at 7:30pm DC 1302 |
| Miscellaneous |  |
| March 20 | Olivia's Coffee House |
|  | 8:30pm-1:00am, Ground Zero |
|  | \$3 cover - proceeds to Mary's Place |
| March 25 | Matt's Real Analysis 2 assignment due |
|  | Sucks to be me |
| March 28 | Let's-All-Be-Cool Day |

The pilot project pairings begin in the fall of 1998 at a local high school. If you would like to try and create a turning point in someone else's life and want to light the spark that would allow them to achieve all that they could and should achieve, then join us in our project! There will be an information session for potential mentors on the $19^{\text {th }}$ of March. Interviews will be held from the $21^{\text {st }}$ to the $23^{\text {rd }}$ of March.

Plans for the pilot include comprehensive training sessions for volunteer, a homework circle to help with academic difficulties and a support group for the mentors.

If you are interested in knowing more about BUDS, they can be reached at (519) 888-4567 $\times 5757$ or you can drop by the BUDS office in MC 4046.

Yaacov Iland
BUDS Public Relations Coordinator mastHEAD
Hard Rain Gonna Fall
Hello all. Welcome to another edition of the Math Faculty's most talked about periodical. At the moment (Editorial Standard Time) it's 1:30 Wednesday morning, and I'm not even close to done. Trying desparately to remember why I wanted this job two years ago...

So I'm sure most of you noticed the vast numbers of protofrosh wandering the halls of our fine building on Tuesday, parents in tow, partaking in Campus Day. Somehow my office here managed to become a tourist attraction; I got to sit in here and work while groups of people came by and stood in the hallway outside, some random student explaining what mathNEWS is all about. Wow. Some of you people have pretty strange ideas about what we're here for.
Speaking of strange ideas, what was with those green-frosted cookies at the C\&D? I see 'em, and I'm like, OK, it's St. Patrick's Day, so they've got cute little cookies. And I do mean little. But I bought one anyway, even though I found out at the cash that they cost the same as the regular ginormous cookies. I didn't know that green food colouring was so expensive.
So anyhoo, in the wake of the Feds restructuring and all that, our bunch of staffers for this issue came up with some businesses that they'd like to see the Federation run: Brian Fox (What else... Casino Waterloo!), Mike "Hammer" Hammond (Legal Swiss brothels), Chris McGuire (The Feds' own wrestling organization - the WWFeds), Michael Thorsley (Federation of Students Solar Neutrino Observatory), John Swan (A computer lab that actually works and doesn't lose your files), Richard Bilson (A cheap accessible copy centre, centrally located on campus), Jodi Moran (The Sunshine Mortuary - "Especially for Mathematical Suicides") and Corey Gaudette (A team of crack assassins, for those especially awful profs). Michael Brown and Kurtis McClellan were also about, but apparently they don't care or something.
I'd better get back to work. Thanks go out to Marion at Graphics Services for the issue printing, and Gridby, Hammer and especially CAS for this weeks special big feature article. Catch you on the flip side,


## AMWF Results

First thing I want to say is thanks to all the folks who submitted wrestlers for the inaugural card of the AMWF. We got a great turnout, 22 wrestlers, much more than I expected. If you didn't join and still want to, you can e-mail me at regaudetoundergrad.math and I'll send you all the info you need to join.
For the inaugural card I thought a bunch of singles matches just wouldn't cut it, so I threw everyone in a Royal Rumble! Here are the results, along with some post-match comments from the winner, and also from the leader of the m.N.e: Hollywood Latrell.

The 22-Man Royal Rumble:

- Supermathie and Buddy started out.
- Hick O'Death entered at 0:02:00
- Supermathie threw out Hick O'Death after an earringer in 0:02:40
- Buddy threw out Supermathie after a spinning mule kick in 0:03:27
- Windsprint entered at 0:04:00
- The DE-Master entered at 0:06:00
- Jim "Hitman" Martin entered at 0:08:00
- Buddy threw out DE-Master after a powerslam in 0:08:22
- El Turd entered at 0:10:00
- Buddy threw out Windsprint in 0:10:36
- Matt "Blackheart" Walsh entered at 0:12:00
- Buddy threw out El Turd after a Samoan Drop in 0:12:07
- Icor the Icon entered at 0:14:00
- Stan Broderick entered at 0:16:00
- Icor threw out Jim Martin in 0:17:14
- Sly "Joy Toy" Morolto entered at 0:18:00
- Icor threw out Stan Broderick in 0:18:58
- Rob Roy entered at 0:20:00
- Icor threw out Sly Morolto after a forearm smash in 0:20:08
- Matt Walsh threw out Buddy in 0:21:35
- Lucky entered at 0:22:00
- Matt Walsh threw out Rob Roy in 0:22:19
- Icor threw out Matt Walsh after a bodyslam in 0:23:53
- The Gnome entered at 0:24:00
- Lucky threw out Icor after a belly-to-belly suplex in 0:24:33
- Lucky threw out The Gnome in 0:24:42
- John "Ice Man" Winters entered at 0:26:00
- Pylon of Death entered at 0:28:00
- John Winters threw out Pylon of Death in 0:28:15
- Whoop-Ass entered at 0:30:00
- Dean Pylonko entered at 0:32:00
- Gold Patboy of Egypt entered at 0:34:00
- Pylonko threw out John Winters in 0:34:15
- Snuggles the Dangerous entered at 0:36:00
- Mike "The Hammer" Hammond entered at 0:38:00
- Pylonko threw out Snuggles after an enzuigiri in 0:38:06
- Mike Hammond threw out Pylonko in 0:39:58
- Hollywood Latrell entered at 0:40:00
- Mike Hammond threw out Latrell after a suplex in 0:41:46
- Whoop-Ass threw out Lucky after a dragon suplex in $0: 42: 30$
- Whoop-Ass threw out Mike Hammond in 0:43:29
- Whoop-Ass threw out Patboy after a jawbreaker in 0:48:04
*** Whoop-Ass wins the 22 -man Royal Rumble! ***
Now let's get some comments from the winner: Whoop-Ass! You faced off against seven men and came out on top, what do you have to say?

Whoop-Ass: Everyone knew I was going to win the rumble, and of course I dominated. Those punks in the mNe were destined to lose once they came face-to-face with the Whoop-Ass! m.N.e: I'll fight you anytime, anyplace, anywhere! I'll have a can ready with your name all over it!

Truer words have never been spoken! Now let's hear from the leader of the m.N.e: Hollywood Latrell. Latrell, there seemed to be a bit of dissension between you and Hammond, what's going on?

Hollywood: Let me tell you somethin', brother. This is no dissension in the m.N.e. You can read whatever you what into all this. Me and Hammer are like brothers. But in the heat of battle, you can lose focus and only start looking out for number one. Now listen up. You know and I know and all those m.N.eites out there know that in the m.N.e we're all one big family. There's no dissension. There's no infeuding. Because with the m.N.e, you're in the m.N.e for life, brother!

Icor "King of the Hamsters" the Mighty

## Mini Movie Review

Good Will Hunting

An excellent movie! I'm not going to bother explaining why because I don't think I would do the movie justice. Although I will say one thing: Matt Damon is in the movie, and this should be incentive enough to go see it.

Karen "2 Points" Clark

## Come to the Coffee House!

Tonight at Ground Zero, 8:30-1:00


It's oh-so-satisfying mathie trivia!

"Uh, the stand-by sign is upside-down."
"Where the hell did they put the sofa?!?"
"Can someone fix the damn stand-by sign, please?"
"I guess we need to do something about the players sitting here waiting to play the game."
"Howdy! I'm Wanker. First off, how many players are there?"



If you're playing solitaire, you'll need to check your own answers. Simply continue picking answers until you get the correct answer for each question. You win if you are in the plus at end of the game.

Since there are only two of you, you'll both have to check answers. Alternate back and forth until one of you gets the correct answer for each question. The winner is the player with the highest total at the end of the game.

Choose one person to be the host. The host will cover up the 4 choices for each question. When the choices are revealed, the first player to slap the table gets first crack at guessing the answer. The host will check the answers. The winner is the player with the highest end total.

## INSTRUCTIONS INSTRUCTIONS INSTRUCTIONS

"Every correct guess adds the dollar value of that question to your purse. Every wrong guess will deduct that dollar value Each player gets only one crack at each question, unless there's only one or two players. If you have lots of players, you can gel out the screws as well. If think another player doesn't haves clue what the answer is, turn in your screw and force them to answer! If they get it wrong, they lose the dough, but if thes get it right, they get the money, and you lose the dollar value? "To check answers, look at the number in brackets after the answer of your choice. Then check the answer section on Page 13. The comment will let you know if you're right or not."
"Also, keep in mind that this is game is a lot more fun the someone (usually the host) reads the questions, answers comments, and jingles out loud."
"Let's fade to black, and players, please watch your fingers."

Because math trivia never goes out of style,
And because you demanded its return,
But mostly because we couldn't think of anything better...

"Hey, hey! It looks like we have ourselves at least one player!" -That means it's time to play the game show where yada and yada collide. Let's get started!"

Na-na-na-na-na-na-one!
Zen \& the Art of Power Series
\$2,000 Coun

Which of the following is NOT transcendental?

1. e (2)
2. $\ln 3$ (52)
3. $\pi$ (30)
4. 1 (27)

So, you thought the Wayne's Wortd phenomenon has, well, waned? No, there's another sequel planned...and this one's in cyberspace! Which of the following symbols couldn't represent in a program that oh-so-intelligent retort, "WOT1"?

$$
\begin{aligned}
& \text { 1. } \sim(11) \\
& \text { 2. } \neg(49) \\
& \text { 3. \# (22) } \\
& \text { 4. ! }
\end{aligned}
$$

Ooo-eee-ooo-eee-oooh...five

## So, What Else Is New?

\$2,000

Lucien Bouchard goes nuts and decides to make Quehee linearly independent. To do this, he can do what?

1. Make sure every Quebecer has a direct line of sight to the capital. (3)
2. Make Quebec an empty province by killing everyone. (55)
3. Bisect every Quebecer in half. (20)
4. Rant and rave and complain and bitch until he gets his own way. (40)

She had a butt that wouldn't quit All I could think of was six

I wish I could see
Good ole number three

## Math Rocks

$\$ 3,000$
Coun
In which of the following songs does the singer claim to be a Mathie?

1. Say Yon'll Be There, Spice Girls (34)
2. Remote Centrol, Age of Electric (6)
3. Opporthinies, Pet Shop Boys (43)
4. She Binded Me With Science, Thomas Dolby (10)
"Take a break, everyone except player one! Player one, you're about to play"

"For each word you see, you'll have to decide whether its a famous mathematician, a computer language, or both."

"Simply make a mark on top of either the one key for math guy, the two key for language, or the three key for both, and do this for each word. After, check your score at Answer \#35."

Zip-a-dee-zip-a-dah-seven

## noun

## Turing Effel <br> Pascal Cantor Perl <br> Lagrange <br> Descartes


"I just hope I never become a famous mathematician. Chances are I'd be turned into a fancy new object-oriented programming language and computer students around the world would curse my name until the day they die. 'Hey! Let's name this Visual Logo program after Chuck, the famous mathematician from $\mathrm{U}(\mathrm{W})$ that discovered that weasels always travel in a palindrome fashion!' No thanks, baby."
"And, on that pleasant thought, let's get get started on Round 2 , where all the dollar values are doubled!"

Which of the following words can be made from the name of the curve described by this equation:

$$
\begin{aligned}
& y=\frac{1}{2} \\
& \text { 1. bipolar (51) } \\
& \text { 2. papole (87) } \\
& \text { 3. bar pal (17) } \\
& \text { 4. playboy (7) }
\end{aligned}
$$

I like to whine, whine, whine about nifty number nine

## Rof <br> StaT

When the clectronic classroom finally happens at Waterloo, you'll be able to watch TV in class. Of course, it'll be dull TV, kinda ilie the Golf Chamel. But I digress...Which of the following TV shows would you most likely NOT see in your STAT 231 class?

## 1. My Tree poissons (14) <br> 2. Full enuss (42) <br> 3. BAYESWatch (43) <br> 4. Melrose LAPLACE (50)

Zigga, zugga, ten

You've made a movie about a bus that is rigged to explode if its rate of acceleration changes. You have to come up with the most appropriate title, so, what do you do? WHAT DO YOU DO?

1. Gall it SPEED. (36)
2. Call it Velocity airioctiy. (8)
3. Call it THE JERK. (46)
4. Call it The bus that couldn't SLOW DOWN. (39)
"Okay, now you're all going to have to look closely at the following picture."

## Dit-dit-dit-ditta-eleven



Control Freaks \& Users Who
\$2,000
This little snapshot sorta reminds us of a novel, and sorta doesn't. Put it all together and what do you get?

1. Windows 2001: A Disk Space Idiocy (16)
2. Windows 1984 (33)
3. Microsoft Word of Warning (1)
4. Real life (25)

Wabba-dabba-dabba-twelve

## The Beriftr Series

## $\$ 6,000$

Complete this sequence:
says, ___ fear, dose.

1. tray [32]
2. ate (13)
3. sank (4)
4. dy (45)

Drink Lots of Ovaltine
Eat Lots of Jumping Beans Thirteen

## To Hell With Doctor-Patient

\$2,000

| To Fell With Doctor-Patient <br> Confidentiality <br> "Silbject suffers from delusions about standing on shoulders of giants. He is very contrary; every action seems to require an equal and opposite reaction from him. He has a penchant for alchemy, possibly caused by cranial trauma from an errant frit." Which famous mathematician is this? <br> 1. Rene Descartes [26] <br> 2. Isaac Newton (29) <br> 3. Carl Friedrich Gauss (38) <br> 4. Georg Cantor (5) |
| :---: |

## Achoo! Fourteen!


"And I do believe that we are now at the end of our game! So, use those amazing mathematical brains of yours and figure out what your scores are. Be sure to buy a beer for the winner. Until next time, remember, YOU DON'T KNOW MATH!"

Credits
Chalk-Inhaler
Chadwick 'Oy!"' Severn
Feather-Lifter
Darren 'Gridby"' Rigby ?

Potato-Eater
Mike 'Hammer"' Hammond
"Let's roll the commercials!"
<woman with sexy, breathy voice> "Hi, I'm Jen. And I know what you like. You like MathSoc exec, don't you? You know what? I'm a MathSoc exec, and I'm waiting here for your call. We can discuss <breathy emphasis> Robert's Rules of Order. Or maybe you can second my motion. Call me at 1-976MATHSOC. Don't you think it's worth $\$ 5.99 /$ minute to sit in on a MathSoc meeting? Call me." <man with official-sounding voice $>$ Must be a MathSoc member to vote, and a masochist to participate.
"Chocky the Chipmunk here, with a brand new taste treat for all you CS majors out there. It's my new Chocky the Chipmunk Extra-High-Caffeine Mathie Cola! It's great for those late-night assignments, and keeps you up longer than a bowl of my crappy breakfast cereal! Best of all, because it's Mathie Cola, it's pink and tar-ty! So c'mon out and try it!" -Uh, Chocky, the doctor said that I should stay away from caffeine..." "Hey, kid, who do you trust more, some quack or Chocky the Chipmunk?" "Um, you, I guess." "Good for you, kid. Have a cola." "Oh, wow, thanks, Chocky! <glug, glug...thud> "Kid? Kid?" <voiceover> Chocky the Chipmunk Extra-High-Caffeine Mathie Cola, now available at fine CBD's everywhere.

Beeeeeeeeeeep

## Knowledge is Arbitrary

Einstein once said, "Creativity is more important than knowledge." It is unfortunate that today's educators are not heeding Einstein's words.

For those of you who are in your fourth year and took PSYCH 101 back in your first year of university, how much of it do you remember? If you're like most people, vague recollections of Freud, Piaget, and Pavlov might spring to mind, but not much else. This is where the error in education lies. A course like PSYCH 101 asks you to memorize a set of arbitrary facts, regurgitate them on the final exam, and then they are allowed to fade into the wasteland of your brain. You might as well be asked to memorize $\pi$ to a thousand digits.

PSYCH 101 is not the only culprit. Far too many courses at university merely give students practice at memorization and regurgitation. They do not teach critical thinking skills, and they do not teach the student how to learn and how to evaluate what they have learned.

Suppose Professor Phony of the Biology department decides to teach a course on alien physiology. For the moment, ignore the details of how he would successfully convince people of the legitimacy of his teachings. These are minor details, and not relevant to my point.

For the duration of the semester he describes the internal workings of a never before seen alien life form. Students flock to his course, and it is a major success.

He continues teaching this course for several semesters, at the end of which he reveals that everything he was teaching was false. So now we ask the question, was the course a complete and total waste of time for the students who took it?

This depends on whether or not the professor was simply teaching an arbitrary set of facts, or whether he was teaching his students to think abstractly and critically. This is the difference between memorizing $\pi$ to a thousand digits and understanding a

## ANANANANANAMANA

## The Great BARBU Tournament

## A Fundraiser

There will be a 24 -Hour BARBU tournament on Saturday, March 28th starting at 6 pm in the Comfy Lounge (MC 3001).
For all who are interested, it's a fundraiser for Mary's Place. We are also hoping to be able to raise funds to buy a 7' Hamster Ball for Corey. (For the full story, stop by the Lounge and ask...)
There is no entrance fee, and the game's easy to learn. We guarantee you a fun time. (Hey you can get to see me at 5am after having consumed large amounts of coffee. What could be more amusing?)

For those of you who don't want to play, but still want to take part, you can be involved in other ways. Any contributions would be welcome, of course, as would your picks on who's going to win/lose/sleep. Who knows, you might win something...

If you'ld like more info, or if you want to sign up, you can e-mail me at gngarbetQuwaterloo.ca.

Gigi "the Instigator" Garbett
series expansion of $\pi$ and how it arises. Most students will have forgotten anything Professor Phony taught in his class if all they did was memorize facts, and the course was a waste regardless of whether the material was false or not. If, on the other hand, the students improved their critical thinking skills in the context of what was presented, then even though the material may have been fabricated, the course was not a waste.
What the above example shows is that knowledge is arbitrary. This is not to say that knowledge is useless. It would be impossible to teach critical thinking skills abstractly outside the context of concrete knowledge. As well, one needs to apply one's creativity and critical thinking skills to some field of knowledge.

University educators need to take more novel approaches towards teaching. Instead of putting up sets of facts on overheads for student consumption, they need to motivate the students to get at what is behind the ideas. It's fine to know what Freud thought, but what I really want to know is why he thought that and how he reached those conclusions.

Knowledge is arbitrary. Creativity is not.
Robert Danek

## Beaten by a Penny

A couple of weeks ago, I took part in the Bernoulli Trials, an unusual math contest in which all the problems have true or false answers, you're out if you get two questions wrong, and the winner is the person who lasts the longest. Given the boolean nature of the answers, I decided to make things more interesting by pulling four pennies out of my pocket, and trying to see how I would have done if I had relied entirely on their advice (true for heads, false for tails).

The first two questions were difficult, and I was one of the seven people who dropped out after the second round. One of my pennies dropped out as well, another after the third round, and the third after the fourth round. The final penny lasted a whopping 6 rounds, beating many of $U(W)$ 's top mathies. If I had followed the advice of that last penny instead of relying on what I thought I knew, I would have done much better than I did.

It was an interesting reminder of the value of humility. We normally associate that word with people who refrain from brag. ging, but its meaning goes much farther. Being humble means being open. It means listening seriously. It does not mean saying "Yeah, whatever" to everything we're told, but sincerely considering what we're hearing, instead of dismissing it immediately based on what we think we know for sure. There is very little that we really know for sure, and often a lowly penny can teach us a great deal, if only we give it a chance to speak. No matter how good we get at what we do, there will always be some things that we will not be able to do on our own. If we are offered help, let's make sure our pride does not get in the way.

Ondrej Lhotak

## Why There's So Much Filler

'Cause Mathies are too damned longwinded

## YDKM2 Answers

Aren't you lucky that we felt like publishing them

1. A word of advice: next time you play this, don't pick this answer again.
2. E? Oh. Uh-uh. (Aw.)
3. Yeah, but which capital? In any case, that is wrongo.
4. Sank? Looks like your score just sank.
5. Georg Cantor died alone in a mental hospital at age seventythree. I bet he's your personal mathie hero. Guess what? It's still wrong.
6. First of all, give yourself a pat on the back for picking a song about masturbation. Now, let's see. The song starts, "The difference between us is negative one." Keep picking wrong answers, and your score will be a negative one, too.
7. Cool your jets, stud. Wrong kinda curves.
8. No! There's a more important thing to acceleration besides velocity.
9. If you can't tell the difference between your computer and a real person, then your computer has passed the Turing Test. Of course, if you can't tell the difference, you just failed your very own intelligence test.
10. Good heavens, Miss Sakamoto, you're wrong!
11. No, that's not. Er, I mean, it is not... do I not? Well, in any case, that's not right.
12. Very cute, but that's pretty far away from the right answer.
13. The words are homonyms of $16,8,4$, and 2 in French, English, German, and Spanish. You must really know your international tongues.
14. No-na-no-na-no-no!
15. Yes-ya-yes-ya-yes-yes!
16. If Bill keeps producing his software every 3 years, this one's next. But in 2001: A Space Odyssey, it's the computer who goes mad with power, not the guy behind the computer.
17. You're drunk, aren't you?
18. Oh yeah, that's the stuff. And I've got a really wonderful proof that you lucked out on this answer; unfortunately it won't fit in this margin.
19. That's such a good answer, you win a free car!
20. That's won't gain independence, but it sure does sound like fun.
21. But, but, he ain't got no edges! That so wrong! Wrong! Wrong! Wrong!
22. That's right! The octothorpe, or the number sign, or the pound key, or the hash symbol... geez, it's got some sort of identity crisis going on here. Well, one thing it's not is "not".
23. You are incorrect, I think, therefore I am... dropping your score.
24. "Hey, look, isn't that the Statue of Liberty?"
"Congratulations, you just passed the touring test." <vfx: bicycle runs over your number>
25. Although this may be true, there's no novel in here. Though I'm pretty sure real life would be pretty novel to you.
26. Hey, isn't that putting Descartes before da horse? <rimshot>
27. $i$ is the square root of negative 1 , of course, and is the only one that can be the solution to a polynomial. It's not transcendental, it's algebraic.
28. That's such a bad answer, you're going to have to just give up school.
29. Yep, congrats on understanding the gravity of the situation.
30. If not pi, at least you have egg on your face.
31. I don't think you're going to like this one, bub. No.
32. Please put that tray in the upright position so that we may lower your score.
33. Big Brother is watching in George Orwell's 1984, and Billy Boy makes Windows 98 so a couple of extra digits gets you home.
34. "If you put two \& two together, you'll see what our friendship is four." This does not a Mathie make.
35. For every right answer, add on $\$ 500$ dollars to your score, while every wrong answer should take off the same amount. The correct numbers, in order from top to bottom are, 3,2 , $3,1,2,1,1$.
36. They already made that movie! And the bomb was tied to the speed, not the acceleration!
37. This is a hyperbola, from which we can make 'parole'. But then with our criminal system, who can't?
38. C'mon, don't you know by now that Gauss is never the right answer?
39. Homer got it wrong, and so did you.
40. No, he does that all the time, not just when he wants something.
41. No, the turning test has to wait until your computer goes or its driver's licence. Let's hope it doesn't crash. <rimshot>
42. How could you possibly go wrong with those cute and talented Olsen twins? Well... you just did.
43. "You can tell he's educated, he studied at the Sorbonne, doctored in Mathematics, he coulda been a don." You're right!
44. See score. See score plummet. Plummet, score, plummet!
45. Nah. This answer's all wet.
46. Yep! The Jerk is the measurement of how much the acceleration is changing minute by minute.
47. You betcha. The wolf is one regular graph.
48. "Oh no, Mitch! Look! It's their score! And it's going down!" <toilet flushes>
49. This particular symbol is used in symbolic logic. But we knew you were a little leery about logic when you chose Waterloo, right?
50. Yep, that's right, Laplace has no place in your STAT 231 class. Don't you wish you had no place in your STAT 231 class?
51. Yippee!!! You're way off! <whimper, sob>
52. Well, you died on this question, but maybe you'll be reincarnated as someone smarter.
53. "Yes, that's right"
"Really?"
"No, not really. I was teething." <squeak>
54. NOT!
55. That would work, since an empty set is linearly independent.
56. No, no, no. The Gauss was for gradeschoolers! If you had to take that one in Grade 11, that may explain why you're doing so well at this.

## What Could We Achieve?

Have you ever taken a good look at the University? I mean a really good look. No, not the bricks and windows that make up the buildings. In your life you will see many places that have bricks and buildings and trees. What I am trying to get you to do is to look at the people around you. Go ahead. Take a minute and look up from this paper and stare at some people near you. They look pretty bored sitting here in class or walking around with their heads down don't they? Now look closer. Do you see it?

Here we are sitting at one of only a relative few places in the world where the brightest minds of a generation are gathered. So what, you say? Microsoft gathered a bunch of brains together and look at the monstrosity they created. My point is this: In the few small acres of the University campus, we have people who are geniuses in almost every area of human interest, from those who can design a house to those who can build it to those who can tell us the environmental impact of building it to those who can decorate it and fill its halls with music. Just think of the talent that is here. And yet what do we do in our spare time?

Have you ever wondered how some companies come up with a solution to a major world problem? They spend lots of money attracting the right people to work for them. Then they spend a whole lot more paying those people to spend countless hours working on a project. Finally, they spend a little bit more on machinery and equipment to see if the ideas actually work. It seems like the hardest part is buying the people's time to think up ideas.

What could happen if at Universities across the world, people devoted just a fraction of their spare time to solving real problems. Are they the most qualified in the world to work on them? Certainly not. Is any one of them likely to solve one of these problems by himself? I doubt it. So what good would this do?

Picture this. A group of two undergraduate chemists in MIT think they are on to a new formula that will improve the power output from batteries. This could have all kinds of practical applications. They post their ideas, thanks to the power and
convenience of the Internet, and a chemist at Guelph (Moo U!) sees that their idea is really close to what he'd been thinking about yesterday over lunch. (Okay, give the guy a break. After all, he is a chemist at Guelph; you didn't really think he spent his lunches thinking about his cute lab partner, did you?) Fired by this new knowledge he races back to his lab and works all night, not only duplicating their formula but improving on it slightly. Meanwhile, two friends who are engineers, one in Simon Fraser and one in Waterloo have been talking about battery powered cars and how they'd be so much more feasible if only the power output from the batteries could be raised. Bingo! You have some real stuff happening. I can see the headline now; 12 Undergrad Kids and Some Spare Parts Cause Stir In Automotive Industry, followed by: Gas Company Stocks Plummet.

This still seems like a pretty commercial venture for the technically minded. What about a better protein providing plant for farming in desert climates or a more efficient design for cheap housing or simply a better way to clean behind the stove when you move into a student-owned house? The possibilities seem endless.

What if there was a place set up where you could do this? A place where ideas were posted for free that you could piggy back on and then post your own ideas there. A place where you could meet people that had the skills you needed to know if your idea would work. A place that could take the spare time of 100,000 students and the results of countless cramming for midterms and turn it into even one real world solution. Imagine what it would look like to have "Did tech support for two years... oh, and helped solve world hunger." What could so many people, devoting only a little of their time to a project they believe in, achieve?

Will we ever know? Does such a place exist? If not, what are you going to do about it?

Feedback to blue.enigma@unforgettable.com
Hoping for a better tomorrow,

## Life in the Slow Lane

## The Top 10 Things People are Tired of Hearing

Hello, dear, wonderful readers! This is the Subliminal One, suffering this week from a lack of interesting stuff to comment on. It's that really slow time, when the hell that is midterms has passed us by, only to leave the bigger hell that is finals bearing down rather quickly on us in its wake. Hence, I find myself in the peculiar position of having nothing to rant, complain, or bicker about in my life. So, I finally acknowledge the existence of the outside world, and thusly present:

The Top 10 Things People are Tired of Hearing
10. "So, Mr. President, you really didn't have sex with that intern, huh?"
9. "Please, please, Mr. Charest? We promise Mr. Chrétien won't bite!! Please???"
8. "The Toronto Maple Leafs are sooooooo close to that last
playoff spot..."
7. "El Niño is once again wreaking havoc..."
6. My Heart Will Go On
5. "Titanic is still raking in the dough at the box office..."
4. "I'd like to thank the Academy..."
3. "It's not so bad being single." (Oh, come on! Like you didn't know I was going to mention that!)
2. Fran Drescher's voice

1. Anything having to do with Microsoft, Bill Gates, or Windows

That's all for this week, people. See you next time!
Chris "Mr. Subliminal <The DE Master will have his revenge!!>" McGuire

## Canadian University Bridge Championships

This past weekend at the University of Toronto, seven teams from four schools gathered for the 4th annual Canadian University Bridge Championships. $\mathrm{U}(\mathrm{W})$ has finished second in the event twice, but had never won. Waterloo sent two teams to attempt to capture its first national championship.
Waterloo Black was the heavy favourite going into the event. The team consisted of:

- Colin Lee (4th yr. Math)
- David Halasi (1st yr. Laurier student)
- Danny Miles (2nd yr. Math)
- Kevin Purbhoo (4th yr. Math)
- Drew Gillen, non playing captain (5th yr. Biology)

Also playing in the event was Waterloo Gold:

- Michael Brown (2nd yr. Math)
- Jehran Chua (3rd yr. Math)
- Edmund Fok (4th yr. Engineering)
- Richard Gallant (2nd yr. Math)
- Gaston Tsang (3rd yr. Math)

Waterloo Black cruised through Saturday's round robin, finishing on top and easily qualifying for Sunday's final. Waterloo Gold came close to making it to the final but came up just short.

Final Round Robin Standings:

| Waterloo Black | 130 |
| :--- | ---: |
| Toronto C | 115 |
| Toronto A | 112 |
| Queen's | 94 |
| Waterloo Gold | 86 |
| Toronto B | 56 |
| McGill | 37 |

In Sunday's final, Waterloo Black met University of Toronto "C." U(W) took the early lead and led by 15.5 at the half. However, a heartbreaking second half saw $U$ of $T$ reel in Waterloo Black and end up winning the national title, 72-58.5.
Congratulations to both Waterloo Black and Waterloo Gold!
Danny Miles
Bridge Club Prezident

## What Might Have Been

This was board \#5 of the second set of 16 boards during the 32-board final against $U$ of $T$. Sitting East was Kevin Purbhoo and I was sitting West.

| Vul: none Dealer: E | North |  |
| :---: | :---: | :---: |
|  |  |  |
| West | $\diamond$ ? | East |
| - A 82 | \% ? | - KJ53 |
| OAK109643 |  | $\bigcirc J 8$ |
| $\begin{aligned} & \diamond K 2 \\ & \& 4 \end{aligned}$ | South | $\diamond$ AQ 64 |
|  | - ? | \% Q 85 |
|  | 0 ? |  |
|  | $\diamond$ ? |  |
|  | 4 ? |  |
| North East | South | West |
| (Kevin) |  | (Danny) |
| $1 \mathrm{NT}^{1}$ | Pass |  |
| Pass 2 ${ }_{\text {d }}$ | Pass | 30 |
| Pass 3NT | Pass | $4{ }^{\mathbf{3}}$ |
| Pass $4 \mathrm{O}^{4}$ | Pass | 60 |
| All pass |  |  |
| Opening lead: $\diamond \mathrm{J}$ |  |  |

${ }^{1} 11-14$ high card points
${ }^{2}$ Game-forcing Stayman
${ }^{3}$ Gerber (ace asking)
${ }^{4}$ One ace

I win the opening lead in hand with the king. Good start for me! If I can find the queen of hearts or have the queen of spades onside, I make. There are also other squeeze and end play chances if I can't drop or pickup the queen of hearts. I play off the ace and king of hearts, and sure enough left hand opponent shows out. Darn, should have finessed.
I cross to dummy with a diamond and cash the other high diamond, pitching my losing club. I then play a low club off of dummy, right hand opponent puts up the ace, and I ruff. I then play another heart, lefty pitching a high club and righty winning her queen. She then fires back a low club.

Here is the end position:

| East | West |
| :--- | :--- |
| \&KJ5 | \$A82 |
| 0 Void | $\diamond 643$ |
| $\diamond 6$ | $\diamond$ Void |
| \& Q8 | \& Void |
| Lead: $\& 6$ |  |

I could hope righty has just played away from her king of clubs and pitch my losing spade. Of course, if lefty has the king of clubs, as it certainly appears, I have just lost my second trick and have gone down. So I ruff the club. I then play off my trumps, but to no avail.

At trick ten, I pitch my queen of clubs from dummy, and righty then pitches her king!! Ahhh!! I should have let the club ride up to the queen. At trick twelve I am left with my last resort,

# Artificial Intelligence 

An Economics Lesson

In recent history, some countries have been oppressed by their economic system. Under this system, all citizens are forced to work for a single master. They are not allowed the freedom to follow their aptitude and vocation. They must change their beliefs so that their master is the most important thing in their lives. Any outcry against the system is denounced at the very least as misguided and in extreme circumstances as subversive and even traitorous. Yet the saddest circumstance of this oppression is that the oppressed do not even know that they are such. They believe themselves to be free, even though their lives are completely controlled and determined by the demanding and ever-present master. What backward society, what strange economic system is this? The master is money, and the system is none other than the much-adored capitalism.
I am a communist. So I believe in the restriction of freedoms? No. Quite the contrary. I wish for people to be freed from their responsibility to make a living, find a decent career, to work like slaves at a job they hate. It is so often forgotten that communism is an economic system, not a political system. People who attack communism are quick to cite the the few examples the world has seen of the implementation of communism on a large scale, such as China, Cuba, and the former USSR. They point out the tyranny of the leaders of these countries, and the poverty and lack of freedom of the people. These are indeed the characteristics of the kind of communism the world has seen to date. It is unfortunate that these are the only examples we have to consider, since they quite naturally lead one to believe that what one observes in these societies are inherent characteristics of communism. In fact, they are inherent characteristics of a dictatorship, and the two are not one and the same.
The vital difference between communism and capitalism is that capitalism has an essential flaw and communism does not. [Didn't you just say that a true communist system has never been implemented? How can you say that communism has no flaw when it's never been tested? - $\Sigma E d$.] That is, even in theory capitalism can never achieve what it should. Under capitalism, there is no escaping the reality that someone must always be poor. No matter what arguments are made regarding the ability of the individual to achieve success under capitalism, there is no denying that not everyone can simultaneously succeed in a capitalist society. We so often hear the outcry to give to those less fortunate, and to increase government spending on the poor. But for some reason no one will admit that this attempted elimination of poverty is impossible without a change in our economic system. Poverty should be unacceptable to an educated and ethical society, and so capitalism can no longer be viable.

There are two reasons that communism on a large scale has failed in the past. The first is that it has, in the past, been arbitrarily imposed on the many by the few. The essence of communism is the wish to share with one's fellow human beings. Of course, when sharing is forced it is no longer sharing. The success of communism depends on the willingness of each member of society to participate in the system. The people in communist societies of the past naturally rebelled against communism just as they would rebel against any system of beliefs imposed upon them without their consent. The only difference is that
communism shows the effects of the discontent of its followers more readily than any other system, since it relies so heavily on the voluntary participation of its adherents. So the communist societies of the past disintegrated very quickly into dictatorships entirely lacking in freedom. This is why it is so essential that a successful communist society be democratic.

The second reason for the failure of past communist societies is that the world was not yet ready for a completely developed communist society. There always have been, and always will be, essential tasks that are not fit to be done by any person. Yet these jobs must be done. In the past, this situation was remedied by forcing some members of society to perform these tasks either through physical force, as with slaves, or otherwise, as in the recent past when people were forced by poverty to take on this type of work. But today we have the possibility, for the first time in human history, of removing the burden of this work from all of humanity. Technology has provided us with mechanical slaves - computers and robots. These machines allow us to edge closer to a completely communist society, by releasing people from the menial tasks that they would otherwise be obliged to perform in order to keep a communist society functioning.

The evolution of our economic system from capitalism to communism has already begun. Even the paradigm of capitalist societies, the United States, has begun to implement more social services and control more of its businesses. Society needed to mature before we could begin to realize that there are flaws in our economic system. And as technology takes over more and more of the menial tasks that support civilization, humanity will be freed from labour and able to expand its horizons even more. There are no longer any barriers to the development of this ideal state. The progress from capitalism to communism is so natural that it is hardly noticeable. Before long, what was once considered the enemy of freedom will be its champion. And we will all be the communists that we once so dreaded.

## The One Who Watches

continued from page 15
the spade finesse. There is no justice. The queen is also off side. I went down one on about an $80 \%$ slam (without the club lead.) As it turns out, if I make, Waterloo Black would have won 11 IMPS on the board. Instead, we lost 11 IMPS. This 22 IMP difference would have won UW the national championship! Who said, "There is no luck in bridge??"

There is a way to make this hand on the lie of the cards AFTER I ruff the six of clubs in my hand and come to the following five card ending:

| East | West |
| :--- | :--- |
| कKJ | A 82 |
| 0 Void | $\diamond 54$ |
| $\diamond 6$ | $\diamond$ Void |
| $\&$ Q | $\&$ Void |

Can you find it?? (Answer will appear in the next issue)

## Spice Profs

## Pure Math your life!

You've heard of the so-called "Spice Girls". You've seen the Applied Mathematics Wrestling Federation. Now experience the best of both worlds. Meet the Spice "Pure Math" Profs! Who is this exciting group? You asked for it...

## John

Known as "Evil-Clown Prof". Rumour has it that this prof lives in the sewer and whispers to children, the only ones who can see him... oh, wait, that's another story. Actually, this prof makes up for asking his MATH 146 class to invert a four-by-four matrix by marking very kindly on the exam. Makes us Spice-watchers happy.

## Brian

The sweetheart of the group, he's nicknamed "Baby Prof", not only for his childlike face but also for his kindness to failing students. OOPS! There are no failing students in this favourite's classes. Baby wants to be every student's friend, and who can argue with all those bonus marks? Just watch what you say about his beloved Baire Category Theorem.

## Cam

Nicknamed "Hairy Prof", and not for nothing, if you've seen him in a t-shirt. His catch-phrase: "Any questions on the course material?" This prof loves to be known as the Academic Uncle of the famous Andrew Wiles. But as a part of the Spice Profs, he's achieving fame never known by Andy. Beware his D-word: Diophantine.

## Vladmir

Affectionately nicknamed "Smarty Prof". This cutie-prof is well known for his stories of oral math exams, told in that widely imitated but never perfected wonderful Russian accent. Recently heard convincing his class that he aced every course in university without ever attending a class! A role model for us all. Yet he still says it's "eesea to creeticize boook, not so eesea to write boook". You may think you know what you're doing in his class, but beware of the words: "I theenk, ya, that the fiiinal, weell be eesier, ya, eesier, than the last assignment."

## Dragomir

This prof is also known as "Scary Prof". If you don't already know why, you don't want to find out. With him, you'll get double the notes and half the marks of any other class. This prof loves to write proofs consisting entirely of unconnected mathematical symbols. Also known as "the one who never smiles".

[^0]Mathematician's Ode (Two's Really One)
Here's the guys that we idolize
They're the best, pass the test
Cause we know
They can show
That two's really one...
Lebesgue Hilbert Banach Fermat Euler Gauss Cauchy
(Descartes Newton Fourier Cantor)
Ascoli-Arzela, Weierstrass Cayley
(Abel Leibniz Euclid Taylor)
Riemann Baire Heine
Zorn Poincare Bernoulli

## Wanna Be

If you wanna be our favourite
You gotta win the Big E!
If you aced the Descartes, It was too easy...

If you wanna work for CSIS
Pure Math is for you
Else you'd better double major
Pure Math jobs are few...

And finally, their theme song:
Math World
When you're feeling
In the know
We will make your
Arrogance grow
Solving, proving
It'll be a breeze
All you need is
Euler and Cauchy
Brainers of the world
Pure Math your life!
Every boy and few girls
Pure Math your life!
People of the world
Pure Math your life!

As a group they are outrageous, but you can catch them appearing solo all the time. Want more? Check out Algebraic Number Theory every Monday, Wednesday, and Friday at 3:30 in MC 4039 to see Smarty Prof at his best. Or try Baby Prof on Monday, Wednesday, or Friday at 9:30 in 4064 for a little firstyear advanced section. Either of the guys is sure to please. . . you won't be disappointed. Pure Math your life!

# The Pseudo-Expert on Statistics 

## Part IV: Statistics Outside Statistics

Recalling last issue, I took some time off to complete tasks that had been neglected by yours truly. Luckily for my faithful readers, I have completed my tasks and have returned to normal ( $\mu, \sigma^{2}$ ). As well, my article promised my audience a look at how statistics impacts the other departments of this fine faculty we call Math. So, to all those who consider mathNEWS the finest publication in Kitchener-Waterloo, I shall fulfill my duty.
In the world of $U(W)$ Mathematics, there are three types of students. Some of these students would never take another statistics course for the rest of their life after the trauma of STAT 231. Other students have realized that statistics is not their calling but nevertheless brave at least one upper year statistics course. Then there are those who really love statistics and subject themselves to such delights as STAT 333, STAT 433, STAT 443 and STAT 450. It is painfully obvious that I am of the third type of student. However, the other two types of students need not worry. The reason for relief is due to the fact that statistics is actually quite useful. Yes, whether you are in Actuarial Science, Combinatorics and Optimization, Pure Math, Applied Math or Computer Science, one can apply statistics to one's field. Being the demanding and sophisticated readers that you are, I will most likely need to prove the abovementioned point to you. Worry not, for the Pseudo-Expert will tell all.

## Actuarial Science

When students trek to the sixth floor of the fine ol' Math and Computer Building, they notice that most of the offices are occupied by professors either from the field of Statistics or Actuarial Science. This is neither coincidence nor accident. There is an excellent reason why the sixth floor is often filled with statisticians and actuaries. You see, although Actuarial Science and Statistics are two separate disciplines, there are some very common bonds. [For one thing, they're in the same department. $-\Sigma E d$.$] Risk theory, loss functions, birth and death processes$ and waiting periods are covered in both of these fields. In fact, actuaries use the same distributions that statisticians know and love. Also pay attention to the consistent methods of calculating expectation, variance and moment generating functions that actuaries use; these are remarkably similar to the statistician's. However, do not even think about putting statistics and actuarial science in the same field. These two disciplines are quite different in their methods of presentation. As well, actuaries tend to have tables already made for life expectancy of a " $n$ " year-old person under all conditions (for $n>0$ ). Statistics does not have this, nor do they need it. Finally, whereas the actuary will deal with either property, people or money, statisticians will work with just about anything.

## Combinatorics and Optimization

Many students think that statistics and C\&O don't exactly mix. I would like to say that this just isn't so. There is a couple of good examples that I can give to you. One such example is in Shannon's Theory, a wonderful item taken from C\&O 331. In this theory, we are given a discrete symmetric binary channel. Shannon's Theory basically determines the channel capacity and also determines if a coding scheme can have an specified error
probability. In fact, coding theory also uses probability to determine how reliable a coding scheme is. So, coding theory can make use of statistics. Another example comes from graph theory. In graph theory, the concept of probability is used, but in this case it is a bit more complex. Yes, one can make weights of edges between nodes variable, but that is not all. Graph theory is useful in discrete Markov Chains. Many statisticians will use graphs to determine if the state specified is absorbing or transitional. Finally, we can use statistics to calculate waiting time between nodes for a digraph.

## Pure Math and Applied Math

Of all the departments in Mathematics, Pure Math and Applied Math equally employ the least amount of statistical material. In fact, our great editor informed me that the only evidence of statistics in Pure Math is the "well-shaped" set. [Except that I wasn't quite so pompous about it. $-\Sigma E d$.] This concept requires one to study probability theory and is quite intricate. However, the "well-shaped" set is well worth learning about. As for Applied mathematics, some theories use statistics but I have yet to see them. But to all applied mathematicians out there, I will cover them in a later article.

## Computer Science

It is not surprising that most Mathies will flock to CS (the CSC is another matter, but I digress...), for most employment opportunities happen to be in this discipline. But the computer scientist need not worry, for even statistics can help him. One such example comes from the classic course CS 134. Do you remember that assignment you did on simulation? Well, here is a shocking surprise for you. Statisticians actually cover simulation in probability theory. In simulation theory, the distribution of choice is the poisson (if you want to be discrete) or the normal distribution (if you want it to be more continuous). As well, queueing theory uses the poisson or normal distribution. Finally, if one is required to create a random number generator program, you will be glad to know that you can use statistics to make it happen (just use the uniform distribution).

So, as one can plainly see, statistics has plenty of uses. No matter what faculty you are in, you can find many applications for statistics. Of course, the abovementioned is just a small sample of what glories statistics can offer. After all, if I was given free reign to list all the applications statistics has in mathematics, I would have a book slightly smaller than your MATH 136 textbook!

John "The Pseudo-Expert" Swan

## 25 Years Ago in mathNEWS

cranking out the first edition while caffienated to our eyeballs we're still wondering if we should mention the end of the war. never again such an opportunity...

January 25, 1973


## gridCOMMENTS

Cryptic Guy

Well, only two correct solutions this time: Claire Bilodeau and DeBaCLe. DeBaCLe mentioned that the American letter distribution is different than the one I was using - so if someone is working on it later - there are 2 "g"s and 9 " o "s. The winner (by random draw) is Claire. Pick up your prize at the office.
This is project week, so no fancy tricks. Note: I really can't spell, apparently, and I made the entire grid only to figure out that I misspelled 19 across. Sheesh!

Doug Becker

## Conventional Guy

Welcome to this week's gridWORD, boys and girls. Hope all your midterms have gone okay so far, and that you're all ready for your $\mathrm{f}^{*}$ nals. As to last time's submissions, we had two; one from Ian "The Word Guy" Facey, and one from Claire Bilodeau. Claire had one error (LIPID is not a European capital), and Ian had none. Hot dog, Ian is our big wiener this week.
Now, our gridWORD is once again conventional, because I put off thinking up anything unconventional until it was too late to do it any more. So here I am on production night (yet again) coming up with a gridWORD as fast as I can. Hope y'all enjoy it.

## Tim "Just a Conventional Guy" Coleman

## 25 Years Ago in mathNEWS

Always a Classic

[^1]
## I'll Have The Special

9 out of 10 math students couldn't care less whether I wrote another article... it's been proved!
After a considerable absence due to writer's block, I have returned to the pages of this fine publication to once again torture you with my opinions on the events of today and anything else that's on my mind.

- First, let's start off with some predictions. The Blue Jays will contend this year in the American League East but will not make the playoffs. The Maple Leafs will make the playoffs (only because the most of the Western Conference sucks) but only barely and will get eliminated very quickly in the first round. But you better enjoy it while it lasts. Because when the Leafs move to the Eastern Conference, they ain't seeing the playoffs for a while. The Toronto Raptors will not contend, will not make the playoffs, and be on the first plane outta here once the season ends. Thanks for coming out! See ya in November? Oh wait, you'll probably be locked out or on strike come November. That's okay. We'll find something to amuse ourselves with until both sides iron out their differences. But some advice: Don't choke anyone during the negotiations. It'll make you look bad.
- There's someone out there in need. Never gets any attention. Never gets any respect. It's almost like no one cares. Or wants to care. Your help is desperately needed, especially in cash form. Give generously today. Highway 407 needs it.
- And speaking of being in need, I could use some free stuff, too.
- Augusto Pinochet recently resigned as head of the army in Chile. For those who don't know history, he was head of the army when they overthrew the Chilean government in 1973 and was dictator until the late 80 's. So I guess you think he's going to settle down and enjoy his retirement, right? Well, there's still the problem of a lot of Chileans who would like to see him prosecuted for human rights violations during his tenure as Chile's leader for stuff like people being arrested without reason, people disappearing, people ending up dead, that sort of thing. Well, it turns out he's not quite retiring. Ya see, he's got a new job already lined up: senator for life. Pretty nice, eh? He had it enshrined in the constitution just to make sure the job was his when he wanted it. And it has one nice perk to it: He'll be immune to prosecution as long as he's a senator. So that'll be until he's. . dead! Wow! How convenient. I could see how a family member of someone who was murdered when he was leader would be a little pissed off. They've already started the protests. But don't worry! The water cannons are out in full force.
- So... did you pick Rhode Island, Valparaiso and Washington in your NCAA basketball tournament pool? If you said yes, you're lying.

Well, that's all for me this time. Maybe I'll have something to say next issue, too! Wow... that would be impressive. Till next time...

## Spermatikos Logos \#4

A few members of the PCSC went on a vacation to California to watch an episode of the Price is Right in person. Miraculously all nine of them managed to get to contestants row. Among them were six men (Benny, Craig, Dave, Ernest, Frank and George) and three women (Ana, Irma and Jane). Use the clues below to determine match players with the games they played and the prizes they won. See explanation of Price is Right rules at the bottom.

1. The first four contestants in contestants row were (from left to right): Dave, the man who won the cabinet, the woman who played hole-in-one, and George. All of these people got out of contestants row.
2. There were two game winners in each half of the show. The man who won the luggage lost his game.
3. Ana replaced Irma in contestants row. Benny's replacement won a spa in their game.
4. The last three items up for bids were a stove, luggage and a watch in that order.
5. The players of the first and last games were in the showcase, both of them overbid so neither won. One of them went home with only a cabinet.
6. The winner of the TV played Hole-in-One and won.
7. Jane (who replaced dave in contestants row) was to Frank's left in contestants row for two rounds of bidding, Frank was not in contestants row at the end.
8. Hole-in-one, Bullseye, and Lucky 7 were played consecutively in that order (although there may have been a showcase showdown in the middle somewhere).
9. Ana won a trip to Zaire in her game.
10. A car was won in Lucky 7, the person who won the watch also won Hi-Lo.
11. Squeeze play was played in the first half. The Spa was won in the second half.

The Price is Right is played in two halves. Any half of the show contains three rounds and a showcase showdown. At the beginning of the show four contestants are called to contestants row and then round 1 is played. To start a round an item for bid is presented (the six in this episode were a a stove, a cabinet, a VCR, luggage, a watch and a TV in no particular order). The contestants in contestants row all bid on the item, the closest bid without going over gets the prize and gets to play a game (the six games in this episode were Hi-Lo, the Grocery Game, Bullseye, Lucky 7, Squeeze Play, and Hole-in-1 in no particular order). During a game a player has the opportunity to win a prize (a truck was one of the prizes that was won in this episode). At the beginning of all subsequent rounds a new contestant is called to contestants row to fill the empty seat. At the end of each half a showcase showdown is played with the winner advancing to the showcase. At the end of the show, the two showcase players bid on large prize packages (called showcases). The closest bid
without going over wins the showcase.
As always please submit your answers to me via email or into the blackbox.

Bonus Question: Consider a game played on a 10X10 unit board. There are two players, white and black, each with 100 chips 1 unit in diameter. Play is as follows: White plays a chip anywhere on the board, then black, then white and so on. All chips must be played completely on the board, but can be played anywhere (there are no marks on the board).

The first player who cannot make a legal play loses. Chips can of course not be moved once played. Define a strategy for the white player which is unbeatable.

As always, Enjoy folks,
Robin "Hoisting his own petard" Stewart

## Cryptogram

Buenos Dias to our devoted followers. We would like to begin this installment by once again kissing the feet of those who submit for no reason other than to get their names mentioned! The lucky ones this issue are: Maria Andrusiak and Simon South, both with perfect solutions. Special kudos to Mr. South for his unusually beautiful submission. Truly a work of art. And once again we managed to place a lone letter in someone's name. Thanks to Ms. Andrusiak for pointing that out. We'll stick to more famous persons in the future. The correct solution submitted by Mr. South and Ms. Andrusiak was:

He who confronts the paradoxical exposes himself to reality. -- Friedrich Durrenmatt

This week we are branching out into new and better things - see our other article elsewhere in the issue - and so we once again opt for a short (but sweet) puzzle.

C sjtmwa tk bwm kboz tw lqb gbatmk. -- Cjtklblzm
We're sure our devotees will break the speed record with this simple saying. But we hope you will enjoy the process. Your clue is: m equals e. Enjoy, and Auf Wiedersehen!

The Avengers

## 25 Years Ago in mathNEWS TELEGDI: UPHILL BATTLE

It seems that there is a movement to undermine Andrew Telegdi, newly elected Federation President before he even gets his foot off the ground...

It looks like it's going to be an uphill battle, but Telegdi does have one thing on his side that some people seem to have forgotten-student support.

February 16,1973
(Telegdi is now Member of Parliament for K-W)

## mathNEWSquiz \# 5

Wow! Lots of submitters this week. Andre Cousineau and the 'Bad Sectors both got 45, Keith Palmer got 44. Claire Bilodeau and Jean-Guy! both got 42, Chris Lobban had 41, The Co-op Guys slipped to a score of 40, Ian "The Word Guy" Facey got $39 \frac{1}{2}$, Elrond with 32, Corey T. Bruns submitting from Colorado got a score of 31 and finishing off the pack, Michael "I Might Get em all. Yah" Palmer had $15 \frac{1}{2}$. By random draw the winner is The Bad Sectors (thanks to Mr. Buchanan for selecting the winner by random number). Hope you can all do well on this week's Squiz. As a special bonus, can anyone tell me who is the Puttymeister?
Last weeks answers: 1) Titan 2) Atlas 3) Promethesus 4) Helen 5) Hector 6) Odysseus (Ulysses) 7) Penelope 8) Homer 9) horses 10) Ni 11) sleep 12) tortillas 13) four, six is the back of the White House 14) Fe 15) Pb 16) Macedonia 17) Carthage 18) salt 19) St. Bernard 20) Dalmation 21) Manx 22) Artic Char (apparently a type of trout) 23) deoxyribonucleic acid 24) 46 25) Norma Jean Mortenson (later Baker) 26) Catholics and Protestants 27) Nero 28) 11 (there was no $0 \mathrm{BC} / \mathrm{AD}$ ) 29) anno-domini 30) Bashful, Doc, Dopey, Grumpy, Happy, Sleepy and Sneezy 31) Dasher, Dancer, Prancer Vixen, Comet, Cupid, Donner and Blitzen 32) Doric 33) No. Green hurts him, red only messes him up. 34) International Business Machines 35) SMITHERS (though there were several answers accepted) 36) water tanks 37 ) twenty fifth 38) John Alcock, Arthur Brown, Albert Read and two others in 1919 39) Yuri Gagarin in 1961 40) Brian Warner 41) St. Patty's Day and Pisces 42) Chemical Brothers 43) Julius Caesar 44) Mount Batten 45) Eighteen 46) Warp - lengthways, weft - crossways 47) After its discoverer 48) Musical instruments 49) Lego 50) Danish for "play well", Latin for "I build".

1. Who the only horse who beat Man O' War?
2. What was the name of Sherlock Homes' arch enemy?
3. E.T.'s favorite candy?
4. Film star Grace Kelly married the prince of this country?
5. Who's biggest hit was "My-Ding-A-Ling"?
6. Who'd Time Magazine choose as Man of the Half-Century in 1950?
7. What colour shirts do science officers usually wear on board the Enterprise?
8. What was the working title for West Side Story?
9. What organization took to placing Bibles in hotels and schools?
10. What detective's death was chronicled in the Agatha Christie novel Curtain?
11. What are the four lands in Disney World?
12. What are the four lands at Paramount Canada's Wonderland?
13. Who was killed in a DC-6 crash on September 18, 1961 in Northern Rhodesia?
14. Where did Jan and Dean say there were two girls for every boy?
15. How many tiles are in a Scrabble game?
16. Who was the blonde girl in the cartoon show Scooby Doo?
17. He was the driver for the Canadian bobsled team that tied for gold at the recent Olympics.
18. If you were a Stranger In A Strange Land you might know what it means to grok. What does it mean?
19. This is the only playing card which has a "right side" up for all four suits.
20. This is the longest street in the world.
21. The Kentucky Derby, The Belmont and this race make up the triple crown of horse racing.
22. Baja is known as one of the premier locations for this type of racing.
23. This type of nut bearing tree holds a prominent position in druid religion.
24. This is the 16 th card of the Major Arcana in a Tarot deck.
25. If you check to see how Mary Poppins "measures up", this is what her measuring tape will tell you.
26. This is the name of Snoopy's brother.
27. In snooker, this colour of ball has the highest value.
28. The real name of Mark Twain.
29. This is what mark twain means.
30. This spring flower is associated with the charity drive for cancer.
31. These are the two types of big cats that actually like swimming.
32. Do bulls get angry when they see the colour red?
33. These are the two dates during the year when you change the time on your clock.
34. What is the name of the famous Canadian who set up the system of standard time zones?
35. What did God create on the fifth day according to Genesis in the Bible?
36. What country gave the Statue of Liberty to the United States?
37. Which German general was known as the Desert Fox in WWII?
38. On Night Court, what is the name of Harry's favorite artist?
39. What is the real name of the pub used in the opening shots of Cheers?
40. What two famous rock icons died in a plane trip with Buddy Holly?
41. What other rock star gave up his seat on that same plane?
42. When was the wreck of the Edmund Fitzgerald?
43. Who sings a ballad about this event?
44. What two words in the English language have three double letters in a row?
45. What one single-syllable English word has four consecutive vowels?
46. Where and what is the world's largest basilica?
47. Where and what is the world's highest basilica?
48. On October 26, 1881 John "Doc" Halliday and these three brothers faced off in Tombstone against a bunch of outlaws. Name the brothers.
49. Where in Tombstone did the fight take place?
50. Has the "hot line" between the Soviets and the Americans ever been used? If so, when?

Make sure to submit your questions for this week by March $30^{\text {th }}$ at $6: 30 \mathrm{pm}$. Submit by either stuffing entries in the BLACK BOX or delivering them in person to the mathNEWS office or the mathNEWS mailbox in the MathSoc office. Good Luck!

Squizmaster Blue


## Across

1. shattered awl is a meal plan
2. commercial Boston school allows entrance
3. stylish not fully formed babe
4. specialized worker blackens without recline in chair
5. cut a fluttered white bird
6. cast many cups sloshed with ale's fundament
7. healthy glate rock missing topsoil
8. peer backwards for long times
9. tutors without male is confounded level
10. bird westward endless heart
11. shun one with zebra head in new table protectors
12. positive talk sounds uncultured
13. hush is broken and lacking harsh premier fish
14. retain on paper are lacking mashed style
15. all without a acid bubble
16. almost an earl yet lacking something
17. soft beam request
18. wood chopper muddles past one
19. agree with early start for pit
20. relent outcome
21. wrote "caged"

## Down

1. respond to shattered box
2. pretends wrecked "noble" beast
3. upwards leap sounds a strip
4. flying target lost on duty
5. cure misheard and misspoken is in parallel
6. might container
7. fish fixates
8. asp heredity for hamster ball
9. befuddled all niter causes sluggish behaviour
10. social charm, I with broken rod military planner
11. reclines unfurled kills
12. burn a letter
13. harden and say if so without a distraction
14. mostly native triangle country
15. follow short communication work
16. now so dismembered faint
17. start begging for temporary giving to mash
18. scream sounds barely living
19. hear a correct ritual
20. yet another widening nook
21. Beer with heart of hay containers

## Grid Clues (Conventional)

Across

1. Very flexible
2. Prepare for growing
3. Foot covering
4. Habitual spasm
5. Two-dimensional
6. Scratched into
7. Face
8. Prepare meat in an oven
9. Fortune-telling cards
10. Finale
11. Brought to an end
12. Decorative noose
13. Pointed weapon
14. A small tax or levy
15. Bucket
16. Useful for 21 Across
17. Cold white stuff
18. Possess
19. Vied for by actors
20. Rear of a boat
21. Window coverings

Down

1. Rubbery substance
2. A blunt weapon
3. A narrative poem
4. Garlic (Fr.)
5. Tie down
6. Feminine pronoun
7. Go into
8. Go without eating
9. Lodging establishment
10. A cause of damage
11. Carry on?
12. Dotted cubes
13. Brother
14. Unit of liquid measurement
15. Involuntary movements
16. At no time
17. Unusual characters?
18. Anger
19. Cement pond
20. High
21. Age of the "opry"

[^0]:    Word on the grapevine is that the guys will be doing an impromptu concert on April 1. Should be a hot show, considering their cutting-edge fashion-plate style! Here's some of what we might hear:

[^1]:    Editors:
    The latest mathNEWS is undoubtedly the greatest single piece of collective tripe to yet come forth. The fact that I am helping to pay for this waste of good paper disgusts me to no end... Once again, you have demonstrated your supreme lack of ability. It's enough to make me want to pick up ENGINEWS.

