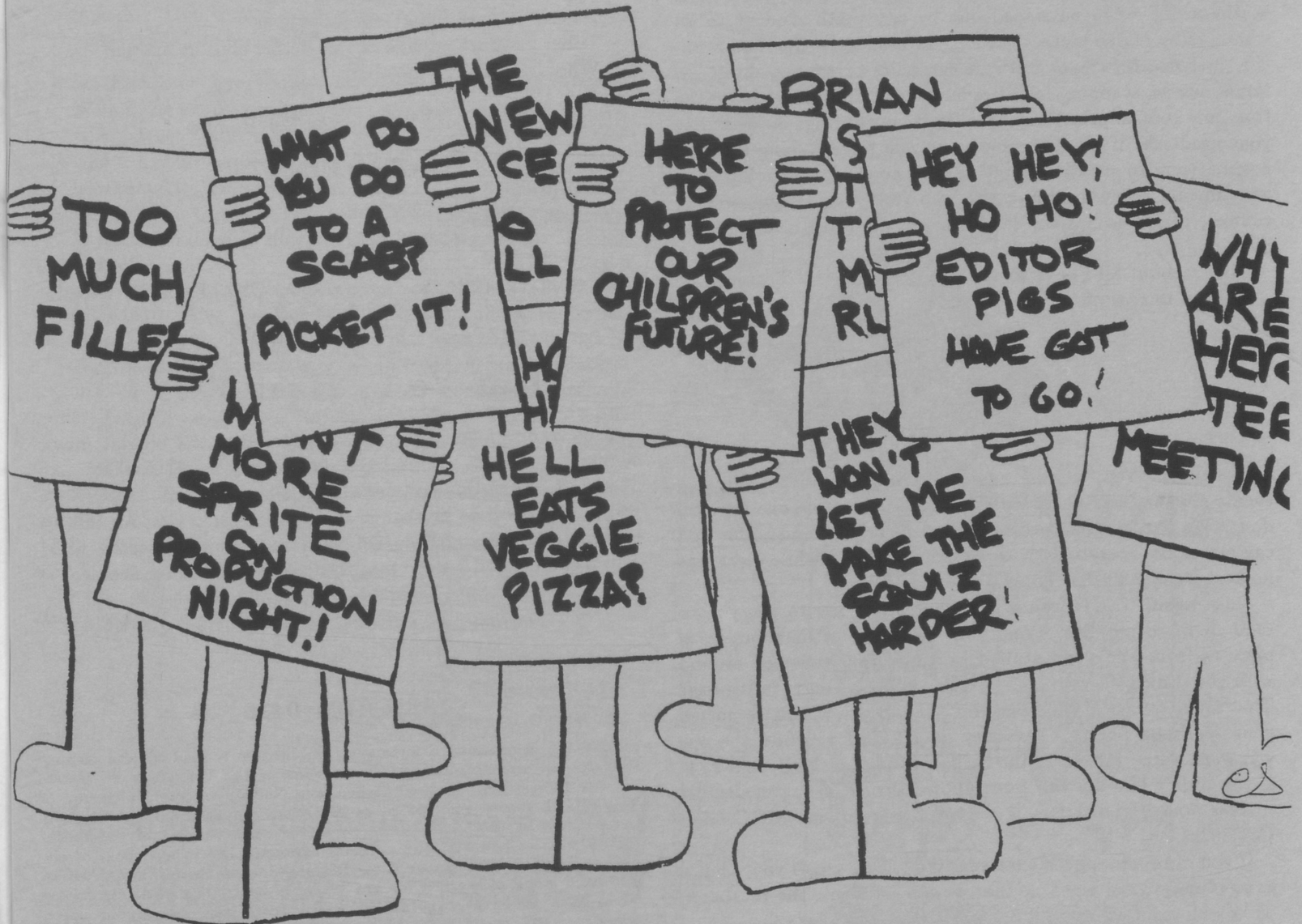


# math NEWS

Volume 75, Issue 4

Friday, November 7, 1997

THE WRITERS GO ON STRIKE  
AND mathNEWS BRINGS IN THE SCABS



## Prez Sez

Hello again, this is my 2<sup>nd</sup> attempt at a Prez Sez article (the first one spontaneously combusted.) Anyways, let's see if I can replicate the amazing wit and humour I managed to cram into the last one. Well, for starters, we now have three exec again. Woo-hoo!!! Mark Thornton won the election in case you were wondering. Let's see how long we can keep all three this time.

I guess the biggest thing in other MathSoc-related news is that we have brought down the wall. Those of you who have been through the MathSoc office in the last few weeks have probably noticed that it's a hell of a lot bigger. We haven't really increased our resources though... we simply removed the wall between the office and the PC Lab to increase visibility and accessibility.

We are also making some improvements to the PC Lab. We have upgraded our operating system to NT 4.0 and we also have some new software and have installed some more memory in the 486. Changes to come include a new high quality laser printer and possibly the addition of a new server and network hub (if MEF comes through for us).

If you were wondering how this affects you, I'll explain. The MathSoc PC's can be signed out by any math student to do whatever he or she pleases (as long as it's legal). Services available include office suite software, graphics programs, direct internet access, scanning facilities and soon (if not already by the time this goes to print) high quality laser printing. So whatever your needs be, if it's designing your web page, typing up your resumé (not to mention printing and copying it), doing your assignments or even surfing the web (for your assignments of course), MathSoc has the facilities you need, all in one handy location.

That's about all I have to say for this issue.  
See you next time.

André Cousineau  
President, MathSoc

## gradNEWS

Greetings! Yep, it's me again... bringing you the ongoing events of your Grad Committee. Why? Because no one else will do it. We had our Hallowe'en party last Friday, and as far as I can remember everybody had a good time. And while there was no keg, we managed to enjoy ourselves.

Once again, the yearbook staff has asked me to get you to send in more pictures. Yes, you! The one with a bunch of pictures from first year, stuffed in a box you've carted around with you during all your co-op terms. What? You're in regular? That's ok, we need your pictures too. By now you've gotten your yearbook photos. Are they good? Did you find the one you want immortalized on the halls of MC? No? Well, that's ok. If you didn't like the way your photos turned out, you can get retakes done. The sign-up is posted outside of the MGC office (MC3029).

If you did find a photo that you like, please email your choice to [mgc@undergrad.math](mailto:mgc@undergrad.math), so that we can get it into the yearbook. That's all for now, and I'll see you at the next pizza day.

Xavier Aburto

## Are You Still Conscious?

Hey there fellow Actuarial Students! Are you sleeping with your eyes open yet? How about those cue cards? How many have you got stuck to your bathroom mirror? Are you watching the Polka Dot Door yet?

If all of the above applies to you, then not only are your brain cells in "over-drive" but you are more than ready for those exams.

So keep up the good work and study hard, because we are about ready to party hard after this sitting is over.

That's right! This is a wee reminder to all you stressed out ActSci students about the next exciting event hosted by the ActSci Club for its members. After all, there is a light at the end of the tunnel!

Here are the juicy details:

What: Supper and night out AWAY from those Actex Manuals  
When: Friday, November 21, 1997  
Where: Mongolian Grill for supper  
Time: Meet outside of the ActSci club at 5:30pm  
Who: All club members

Ultimate destination: Weaver's or The Bomber

**GOOD LUCK !!!**

See you at supper!

Jackie Sankardyal  
ActSci Club, Publicity Director

## Hear Ye... Hear Ye...

This coming Thursday, MathSoc presents the biggest movie night of the year. This week's attractions are Con Air and Face/Off, two of this summer's biggest blockbusters. Thursday's movie night will be presented at a special time: Con Air will be showing at 7:30 and Face/Off at 9:30. Admission is always \$1 and a can of food for the food bank or \$2. All are welcome.

Romeo J. Stewarvachuk

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The Management: Chadwick Severn, Brian Fox

## mastHEAD

### *This ain't a bowling strike*

Wouldn't you know it...the week that the teacher's go on strike, so does *mathNEWS's* writers and productionists. For more information on the strike, have a look at the *mathNEWS* Strike articles later in this issue.

As we learned in BUS 111W, this means that *mathNEWS* management (i.e. the two editors) have four choices when the staff go on strike, and niftily, they all begin with the letter S. We can:

- Store up inventory. This means that we just put out old issues of *mathNEWS* until the strike is over. Appealing as this option is, some students seem to have a problem with paying for issues of *mathNEWS* they've already seen.
- Skeleton crew. This means that management does all of the work required to put out an issue. This got a good laugh before we went to the next option.
- Suicide. This didn't work since we couldn't convince the picketers to commit suicide.
- Scab workers. Everybody's favourite, replacement workers! We tell the people on strike that 'We don't need them!', and just get new guys to do the work. There's lots of people who'd like to write for *mathNEWS*. You wouldn't believe how many we turn away, just because there's a limit to how many people can work for *mathNEWS*. (That limit, actually, has a lot to do with how much pizza we order.)

So, this issue's writers have been replaced with equally skilled replacement writers. Feel free to drop us a line if you think this issue is better than normal, and we'll just keep the new guys.

To let you know who exactly is out on strike, here is the normal *mathNEWS* crew, along with their scab replacement worker's name: John Swan (Shawn Noj Ro'aha), Greg Taylor (Alia S. Choir), Mike "Hammer" Hammond (Mark "Himmler" Hamilton), Michael Thorsley (A chicken pecking random keys), Peter Lizak (Petra Prozak), and Robin Stewart (Romeo J. Stewartachuk).

All of the other authors either aren't affiliated with *mathNEWS* or they crossed the picket lines.

Thanks goes to Domino's Pizza for their wonderful pizza and to Marion at Graphic Services...sweet, sweet, Marion.

Brian "Latrell" Fox  
Chadwick Severn  
(We be management. Ha ha ha.)

## Yet another announcement...

The MathSoc office wants copies of your exams to update the exam bank. All donations are appreciated. Drop them off at the MathSoc office (MC 3038) during office hours.

The Office Conglomerate

## Want something to do?

Do you think you can spare some time from your studies in the Spring term? Ever been interested in improving student life for mathies? I may just have a job for you. I suppose "job" is a bit of an exaggeration, since you don't get paid... well, at least not money. You gain the satisfaction of knowing you've improved the life of your peers on this campus. I should get on with it, then... I seem to be just babbling on and on now...

It's with great honour that I present the opening of your Math Society's nominations for Spring '98 Directors and Executive (actually, nominations opened on Monday, so this is old news). There are 3 executive positions: President, VP-Activities & Services and VP-Finance. There are eight elected directorships: Office Manager, Academic Liaison, Director of External Affairs, Director of Internal Affairs, Director of Social Affairs. The nomination forms are located outside the MathSoc office; nomination period closes Friday, November 14<sup>th</sup>. If you are interested but would like more information, please email (vpas@mathsoc), phone (x6515), or drop by to talk to me or one of the other exec in MC 3039.

Mark Thornton  
VP-Activities & Services, Fall '97



745-2222

### THREE ON THREE

3 MEDIUM  
PIZZAS  
LOADED WITH  
YOUR THREE  
FAVORITE  
TOPPINGS  
**MEDIUM**

**\$20<sup>99</sup>**  
+TAX

3 LARGE  
PIZZAS  
LOADED WITH  
YOUR THREE  
FAVORITE  
TOPPINGS  
**LARGE**

**\$25<sup>99</sup>**  
+TAX



PLEASE MENTION COUPON WHEN ORDERING AND REDEEM TO DRIVER. NO SUBSTITUTIONS, ADDITIONAL TOPPINGS EXTRA. NOT VALID WITH ANY OTHER COUPON OR OFFER. LIMITED DELIVERY AREA. DRIVERS CARRY LESS THAN \$20.00. LIMITED TIME OFFER.



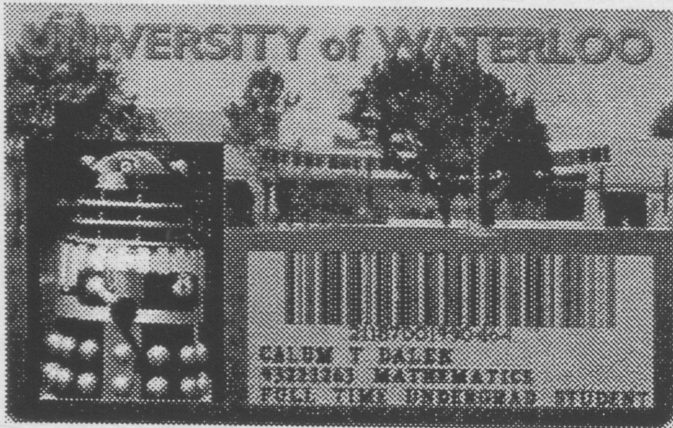
Computer  
Science  
Club

A Student Chapter of the ACM

## CSC Flash

Greetings once again.

First off, in response to last issue's article "What do you think?", I am opposed to John Shaft for VPAS when everybody knows who should be VPAS...



Calum says that he will "use Einstein's [sic] theory of getting your ass whooped by shoving a pocket protector up your ass" if not elected VPAS.

Now that this matter is out of the way, let us get right down to the events planned for the immediate future.

Well, the only one worthy of note at this time is the upcoming POVRay talk on November 19<sup>th</sup>. Details of this should be out sometime in the next week or so. Keep posted for other events that are unable to make it to press at this time by means of the funky posters placed around the math building.

Since the Final Exam schedule is up and the inevitable end of the term is foreseeable, most of you will be thinking about that lovely free time you will have someday. However, in the meantime, we have to entertain ourselves in our (limited) spare time with such tasks as playing cards, drinking, watching TV, going to clubs/bars, and just hanging around campus. Another form of entertainment which tends to be quite popular is the area of home PC entertainment (gaming). Now for those of us multimedia freakheads like myself, you want the most potent multimedia hardware available (blow your mind.) Well, good news for you because prices for multimedia hardware such as 3D cards, CD-ROMs and sound cards have plummeted in price these last few months. So, as a public service, I will spend a bit of each article discussing one aspect of multimedia technology. For this week, I will cover FM vs. Wavetable technology found in today's soundcards for most home PCs (though this article should still be interesting to Mac users), and I will discuss 3D Graphics Accelerators/Graphics Cards next time. Also, for those who are just curious on this new technology, this should hopefully clear up a little confusion.

### *FM synthesis vs. Wavetable music*

For the longest time, home PCs gave us sound via PC speaker. Well, at the time, no one envisioned the multimedia explosion of today. Besides, what the hell did you need sound in Lotus 1-2-3 or WordPerfect 5.1 for other than a warning beep anyway? Well, the world eventually evolved (?) to a multimedia one, and computers could eventually play both digital audio files, and MIDI (Musical Instrument Digital Interface) music. So why bother with a separate music format when the world has digital audio? The main advantage is that synthesis requires very little storage space. With synthesis, your sound card uses a whole library of sounds that are already built into one or more chips on the card. These sounds need never be stored on your hard drive as audio files, nor (if you're a multimedia developer) do you need to store hogworthy audio files on your application's disc.

Instead, all your sound card's synthesizer needs to make music is a MIDI sequence file, which contains musical information - such as the notes and their duration, and the "patches" (instrument types, such as a piano or bass guitar) - in the form of simple data. You can record your own sequences using a MIDI sequencer (which is rather like a word processor for music), or you can play back pre-fabbed MIDI files or MIDI-compatible games.

With the initial onslaught of multimedia devices, the first line of soundcards (Adlib, Sound Blaster, Covox, etc.) gave us a method of playing MIDI music known as FM (Frequency Modulation,) a 25-year old technology owned by the Yamaha corporation. This worked by emulating the shape of the original waveform of the instrument by modulating artificially created waveforms. For example, if one wanted to hear a violin on an FM card, the FM card would attempt to produce the shape of the wave that a violin would produce. This method, while a good effort, fails to produce an "authentic" sounding instrument in most cases. FM synthesis does a wonderful job simulating electronic pianos, harpsichords, marimbas, bells, log drums, and... well, that's about it. In short, FM-produced sounds have a distinctly thin and wimpy tone; a few minutes worth of music played through an FM synthesizer is about as soul-warming as a bad accordion player.

Wavetable sound cards, on the other hand, use digitally recorded samples (short recordings) of real instruments to make music - from the draw of a violin bow to the strike of a piano hammer; from the pluck of a guitar string to the whack of a snare drum. These sort of samples form a library of sound waves - hence "wavetable" - that can be used to replicate a wide range of real and non-real-sounding instruments. To a professional synthesizer programmer, wavetable synthesis is actually a type of sound creation that uses complicated algorithms and

*continued on page 5*

continued from page 4

digital tone generators in conjunction with digitally recorded waveforms. The technology employed in today's consumer level PC sound card is actually known as "sample playback", with little or no true synthesis. But the mass market has appropriated the term "Wavetable" instead of "sample playback," so that's what I'll call it too, I guess.

A good comparison of FM vs. Wavetable would be to compare it to a piece of artwork. An artist painting a picture would be an FM card. A photographer taking a picture with a camera would be Wavetable. The photo is a much better reproduction of the image. In fact, it is a perfect image. The painting is usually good, but far from perfect.

However, if you are one of those who own older FM synthesis cards, do not fret, because there is a choice here. If you decide to make the move to Wavetable, you have the alternate choice of getting what is called a Wavetable "daughterboard". You will still be able to use the same functions and features of your old sound card, but will have also added the ability to play Wavetable music instead of the FM music you're used to. The downfall to this is that the price of such a move makes you wonder why you would ever do it. I've seen wavetable daughterboard add-ons for \$100-\$150, and also have seen real nice Gravis Ultrasound and Sound Blaster AWE 64 cards cheaper than that. Oh well, the choice is up to you on this matter.

Unfortunately, all good things must come to an end, so I will leave you for now, but I will see you again next time with some information on the world of 3D graphics cards and accelerators.

Calum T. Dalek

Exterminating inferior life forms since 1963

## lookAHEAD

<b>mathNEWS</b>	
November 7	Issue #4 is in your hands
November 17	Issue #5 production night 6:30pm, MathSoc (MC 3038)
November 21	Issue #5 is legislated to appear
<b>Math Faculty</b>	
November 7	Last day to pre-register (AH! That's today!... better get to it!)
Nov. 17-21	Core course evaluation extravaganza
<b>Movie Night</b>	
November 13	<i>Con Air</i> and <i>Face/Off</i>
<b>Miscellaneous</b>	
November 10	Latrell finally has that nervous breakdown you've all been waiting for (Tickets available at MathSoc office)
November 11	Remembrance Day
November 12	Mice in Landen lab go on strike
November 13	Mice legislated back to work by MFCF
November 18	We finally finish Issue #4 (Yeah! You heard us! Issue #4... Dumbass...)
November 19	Aqua's 15 minutes are up
November 20	Oh my God! They killed Kenny! You bastards!

## A message from the editors

Well, it seems like every issue we goof up somewhere or something beyond our control screws things up. We try not to err when putting every issue together but from time to time something slips by unnoticed, or something offends someone which we (The Management) judged not to be offensive. And we, the management, must take full responsibility for any mishap.

So, we say we're sorry. We will never again have a Statistics or math-related category in the Squiz. We apologize to all our readers. Especially poor, poor Timmy... and we send our love and regards to him and his entire family and hope for a speedy recovery. It was a mistake... we should have known better... and we're sorry. We hope this hasn't caused any trauma, seizures, discomfort or disillusionment with the mathNEWS establishment.

If you wish to send your regards to Timmy, stop by the mathNEWS office anytime and sign our "Timmy, we know you can make it!" card. We know he'd appreciate it.

The Management

P.S. This issue's for you, Timmy! We know you can pull through! (He's such a trooper!)

## VPAS Spews...

Hi y'all. This is Kim Jack. I'm one of your newly elected members of the Vice-President Activities and Services Collective. At the head of VPAS is Mark Thornton, the scruffy one. Also in the collective is Robin Stewart aka "Richard" a.k.a. "the voice of objective reasoning."

First of all, thanks for voting for us. We were glad to see the voter turn out (7.2% — way to go Mathies!). So what else is going on? Mark and Simon cleaned up the Exec office the other weekend, but André soon came in and destroyed it! Core-course evaluations are soon approaching (Nov. 17<sup>th</sup>-21<sup>st</sup>). For those frosh who don't know, MathSoc runs the core course evaluation questionnaires, i.e. in MATH 135, 137, 136, 138, 145, 147, 235, 237, 245, 247, CS 120, 130, 134, 230, 246, STAT 230, 231, 240. Soon you'll be seeing one of our bright shiny faces at the front of your class, and you'll get to constructively "criticize" your profs and courses. Other course evaluations will be handled by your profs in the same week.

In other news, we'd like to start receiving newspapers to the MathSoc office so that you can borrow them and read them (as opposed to eating them?). We are limited by money, so we can probably only afford one paper. So we'd like you to fill out *your choice* of newspaper and submit it to the MathSoc office (MC 3038) or by email to [vpas@mathsoc](mailto:vpas@mathsoc) ASAP.

Newspaper	Cost	Your Choice
<i>The Toronto Star</i>	\$43.50/term	<input type="radio"/>
<i>K-W Record</i>	\$51/term	<input type="radio"/>
<i>The Globe &amp; Mail</i>	\$55/term	<input type="radio"/>
Other		

Thanks...

Mark, Robin, Kim = VPAS

## The mathNEWS Veesa Card

*Credit You Can Blow Out Your Ear*

mathNEWS, in cooperation with the Bigue Banque du Quebec, proudly announces the availability of the mathNEWS Veesa credit card. From course fees to concert tickets to pornography, every time you make purchases on your mathNEWS Veesa Card, you receive 5% in mathNEWS Card Earnings, earnings you can apply towards the purchase of profQUOTES Books and mathNEWS-Brand Pretzels. Just one reason to choose The mathNEWS Card.

*Establish your credit rating now*

This is a fabulous way to start building a credit rating now while you're a student. You're heavily in debt due to rising tuition, you can hardly afford to pay for printer quota, and with a mathNEWS Veesa Card, you'll screw up your credit rating for life. Try getting a real fucking credit card when you graduate. You'd have better luck getting an exam package when MathSoc is closed.

*Partnership with Bigue Banque du Quebec*

Why the Bigue Banque du Quebec? Well, the other banks were smart enough not to give any credit to students, that's why. We managed to convince these guys that U(W) students will actually amount to something when they graduate. And as a bonus, if Quebec seperates, we can kiss those mathNEWS Veesa Card bills goodbye when they lose jurisdiction.

*Up to \$150,000 Decapitation Insurance*

As with most credit cards, we're throwing in a token insurance scheme to make the mathNEWS Veesa Card look even more impressive. So if you're ever decapitated, just show up at our mathNEWS Veesa HQ and show us your severed head and we'll fork over the dough.

*Access to Instant Cash*

If you're ever in dire need of some emergency cash, we know this guy Vinny who can help you out. Just call his number on the reverse side of your mathNEWS Veesa Card. You'll receive quick, unsequential, and unmarked cash.

In this section, the words you, your, yours and dickhead mean you the customer. The words we, us, our and Vinny mean the mathNEWS Veesa Card Group. You the undersigned, agree as follows: (a) you certify that you didn't screw around with the application form and it's all legit; (b) you want us to hand over a couple of mathNEWS Veesa Cards with an expiry date that hasn't expired; (c) you agree to read any literature we send you, especially the MathSoc propaganda; (d) We can plaster the information you sent us anywhere we'd like, including, but not limited to billboards, Email spam, issues of mathNEWS, and bathroom stalls; (e) We can tell Vinny where you live if we don't get paid, capiche? (f) Decapitation Insurance is not valid unless your head was taken off with one blow; (g) Decapitation Insurance is void in the event of your death; (h) If you have successfully held up a bank, you won't mind if we call you up and find out how you did it; (i) Broken thumbs are an acceptable form of payment; (j) mathNEWS Veesa Card Points can only be redeemed on the fifth Monday of each month between 4:00am and 5:00am for the following flavours of mathNEWS-Brand Pretzels: Extra Salty, Soy, Pork, Blue Cheese, Hamster, Grapefruit, Creamy Chicken, Chocolate-Cherry, Carbonated, Geddy Lee, Cantonese, Cranberry, Honey Mustard, but not Regular; (k) Offer void in Ontario; (l) No animals will be hurt through the use of the mathNEWS Veesa Card, this application form, or anything purchased with the mathNEWS Veesa Card. It's also recommended that you don't feed those pretzels to any pets that you may have. Just a word to the wise; (m) mathNEWS is not associated in any way with the mathNEWS Veesa Card, except that they both have the word mathNEWS in their names and they both spell 'math' in lowercase italic letters, and 'news' in uppercase bold letters. That's just a coincidence; (n) Move it along, buddy, nothing to see here; (o) If, at any point, mathNEWS is involved in a strike, the mathNEWS Veesa Card will be renamed the Imprint Veesa Card and will be exactly the same except that it will suck; (p) Failure to differentiate between this credit card and other, perhaps, more real, credit cards, means you're a ninny.

Just complete and return this easy form. Please print and provide all of the information requested below.

### Please Tell Us About Yourself

How should we address you?			
<input type="radio"/> Mr.	<input type="radio"/> Mrs.	<input type="radio"/> Dr. (Right)	<input type="radio"/> Goof
<input type="radio"/> Miss	<input type="radio"/> Ms.	<input type="radio"/> Bub	<input type="radio"/> Hey you
Last Name		First	Initials
Home Address			
City		Province	Postal Code
Do you live with your parents? <input type="radio"/> Yes <input type="radio"/> No		If yes, what's the matter with you?	
Sex <input type="radio"/> Male <input type="radio"/> Female		Status <input type="radio"/> Single <input type="radio"/> Married	
If Female and Single, then print Phone Number here			
Preferred Language <input type="radio"/> Engl <input type="radio"/> Fren <input type="radio"/> Esperanto <input type="radio"/> Pig Latin <input type="radio"/> Surprise me			
Mother's Maiden Name		Is she cute? <input type="radio"/> Yes <input type="radio"/> No	Any sisters? <input type="radio"/> Yes <input type="radio"/> No
Date of Birth			Pant Size

### Please Tell Us About Your Job

Employer Name & Address		Occupation	Does it suck? <input type="radio"/> Yes <input type="radio"/> No
For how long?	\$\$/Month	Is it Gross? <input type="radio"/> Yes <input type="radio"/> No	How gross?

### Please Give Us Some School Info

University you attend	Faculty	Major
<input type="radio"/> Full-Time	<input type="radio"/> Some-of-the-Time	
<input type="radio"/> Part-Time	<input type="radio"/> 7 <sup>th</sup> year, baby!	
Hope to graduate Month: ____ Year: ____	Will actually graduate Month: ____ Year: ____	

### Please Give Us Some Banking Info

Credit limit requested	Credit limit you will receive \$250
Do you currently bank with BB du Quebec? <input type="radio"/> Yes <input type="radio"/> No	
Have you ever held up a BB du Quebec? <input type="radio"/> Yes <input type="radio"/> No	
If you already have a Veesa Card, do you wish to <input type="radio"/> Keep <input type="radio"/> Cancel <input type="radio"/> Lose it to Guido	

### Please Tell Us About the Co-Applicant

Home Phone Number	Is she cute? <input type="radio"/> Yes <input type="radio"/> No	Any sisters? <input type="radio"/> Yes <input type="radio"/> No
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Oh, yeah, and find a place around here to sign your name.  
That's probably important.

## profQUOTES

- (At the end of class) "Go free little ones."  
Case, CS 130
- "Proof by example. This is the way they teach it in Engineering."  
Munro, CS 240
- "I won't say that. I'm not going to get myself in trouble. I don't want to get into *mathNEWS* on that score."  
Munro, CS 240
- "When some people tried to prove Fermat's Last Theorem in the previous century, they made some stupid mistakes."  
Djokavic, PMATH 345
- "Ask me questions like that and I'll mislead you. That's my job as a professor."  
Ibbott, ECON 101
- (Draws graph on overhead projector, goes to remove sheet) "I just wrote on the plate!"  
Ibbott, ECON 101
- "Cryptography, it's not very interesting. In fact, I personally find it boring. So if I fall asleep during the lecture someone come up here and give me a kick."  
Hewitt, MATH 135
- (Looking at a beautiful multi-coloured graph of the arcsin function drawn by Prof. Struthers during MATH 137) "This picture is much more interesting than my lecture today, so I'm going to leave it up. If you get bored, just look at the picture."  
Hewitt, MATH 135
- "I've gotta stop thinking so much."  
Schellenberg, MATH 135
- (In reference to assignments) "What you write is going to be read by an intelligent human being... presumably intelligent human being."  
Willard, MATH 137
- "I do know the inverse of  $S$ ... it's only a  $2 \times 1$  matrix so it doesn't take Maple very long to figure it out."  
Willard, MATH 137
- "I can think of three ways to answer this, but two of them are wrong."  
Willard, MATH 137
- "Why am I doing this?"  
Willard, MATH 137
- (Does messy arithmetic on board due to a complicated basis chosen by a student. Finds student in class and points and screams) "DIE!"  
Willard, MATH 235
- (Class is silent, prof writes something on the board, students laugh) "Wait for the punchline."  
Willard, MATH 137
- "You should never believe anything I say."  
Goulden, MATH 135
- "Then for blah, blah, blah... blah, blah, we have  $R = M$ ."  
Goulden, MATH 135
- "Prove for all integers blah... that blah... is true."  
Goulden, MATH 135
- "In MATH 135, they spend a week doing this. I don't know (how) they stay awake. I'm barely staying awake myself."  
Haxell, MATH 145
- "Well, let's complete the proof anyway even though it's obvious I'm senile and don't know what I'm doing."  
Cummings, PMATH 334
- "Well, I never did like linear algebra."  
Cummings, PMATH 334
- "We're being invaded by aliens at this stage."  
Forrest, MATH 147
- And these are all from Irving, C&O 230...*
- "Do you know what they sell at Price Club? Condoms in bulk. You know you've had a good week when you go to Price Club to buy condoms in bulk."  
"I was drinking rye last night, around 1:30. Then I realized I had to teach a class at 8:30. There's nothing worse."  
"If I go comatose in the middle of class and fall on my face... you can go."  
"I've got this egotistical thing... I'M THE MAN! You're not the man. You're NOT the man. I'M THE MAN!"  
"I'll be talking to myself later in my office..."  
"I'm gonna squeal like a pig if someone doesn't give me an answer... Reece! Reece! Reece!"  
"I don't want to have to squeal again. Haven't done this since I was 10 and wanted a cookie. Squeak, squeak... Ah there it is."  
"We're gonna convince everyone I'm teaching this class in binary: 101010001010110... a true CS class."  
"One might claim this is important... I give that sheil to make you think this course is valuable."  
"Some people call it a mistake. I call it colour pedagoguing to make my students ask questions."  
"That's really irrelevant actually. But I want to put it down so I look smart."  
"Any questions aside from what the hell we are doing?"  
"There's a guy in a cow suit telling you that you only need four pencil crayons to colour a graph and you don't find that neat?"  
"You'll have to excuse me, I was up all night watching the Golf Channel."  
"Do you have any idea what a substring is? Make it up. Amuse me. Make it involve animals."

## Your mathNEWS Horoscope

Let the stars guide you...  
except Vega. Never trust Vega. It's eeeeeeeevil.

### Today's Birthday

Actually, today isn't *really* your birthday. We strongly recommend you phone your parents and tell them you're old enough for the *real* story.

#### Aries (Mar. 21<sup>st</sup> - Apr. 19<sup>th</sup>)

Mars has entered the House of Pancakes, and will remain there until he is able to attract the attention of his waitress. Since she used to work at the Bomber, expect Mars to have a major effect on your life, as your professors are gradually replaced by large green M&M's and leftover Hallowe'en mini-Snickers bars.

#### Taurus (Apr. 20<sup>th</sup> - May 20<sup>th</sup>)

Strangely enough, your constellation seems to have disappeared from our charts, and that's no bull. Rumours have it that it fled because we were planning to turn Taurus the Bull into Grumpy the Steer. "Bollocks!" we say; we expect to see Taurus again during the upcoming municipal election, as there's always a lot of bull in those.

#### Gemini (May 21<sup>st</sup> - Jun. 20<sup>th</sup>)

Recent research has revealed that Castor and Pollux were not twins, but merely two formerly unknown Dionne siblings. As such, all those born under this sign should have a strong affinity for being exploited and eating poutine. The owls are not as they seem; however, you can always count on the integrity of your MathSoc exec.

#### Cancer (Jun. 21<sup>st</sup> - Jul. 22<sup>nd</sup>)

You will come suddenly into big money this week, as you are expected to be run over by a Brinks truck. Any lawsuits launched because of this will be thrown out when it is revealed that, at the time, you were dressed as a Spice Girl for Hallowe'en. Beware the earthworm attempting to ingest your big toe, for your toe will not grow back.

#### Leo (Jul. 23<sup>rd</sup> - Aug. 22<sup>nd</sup>)

This week, you will lose your palimony suit and have your pancreas awarded as damages to your long-time companion Leslie. Your unlucky numbers are  $\pi$ ,  $e$ , and  $i$ ; perhaps pursuing your mathematics degree wasn't such a good idea after all. Your friends are like pantyhose: they are there to support you when things are going well, but run at the slightest provocation.

#### Virgo (Aug. 23<sup>rd</sup> - Sep. 22<sup>nd</sup>)

Be thankful for the flies that crowd around your head; if it weren't for them, you would be *totally* useless. Giving out poisoned candy to trick-or-treaters would have been much more successful had you chosen something *other* than Wagon Wheels. Avoid eating foods containing soybean lecithin, for they will make your thyroid explode.

#### Libra (Sep. 23<sup>rd</sup> - Oct. 22<sup>nd</sup>)

Jupiter enters the House of Grads, while the House of Grads enters the Protection from Bankruptcy. Expect beer prices to either go up, go down, or stay exactly the same. You will receive painful proof this week that you should not base your financial decisions on material you retrieve from *The Comedy Network*.

#### Scorpio (Oct. 23<sup>rd</sup> - Nov. 21<sup>st</sup>)

Remember, every cloud has a silver lining, and the results of your tests for gonorrhoea will give you more free time to pursue schoolwork and hobbies. Be sure to wear warm clothing this week; the weather will be mild, but your sweat contains a natural insect repellent that will keep away all members of the ActSci club.

#### Sagittarius (Nov. 22<sup>nd</sup> - Dec. 21<sup>st</sup>)

Expect to make a lot of new friends as you're convicted of first-degree manslaughter and sentenced to five-to-twenty. Your popularity will soar quickly due to your clumsiness in handling bars of soap. You will discover to your bewilderment that mercury-coated asbestos dental floss is not an effective cavity-preventing dentifrice.

#### Capricorn (Dec. 22<sup>nd</sup> - Jan. 19<sup>th</sup>)

Take a lesson from Taurus's current predicament and don't let anyone get your goat. Expect Jenny McCarthy and Pamela Anderson to figure heavily in your love life as you find your old issues of *Playboy*. Remember that the easiest way to keep a smile on your face is to draw one on your cheek with a magic marker.

#### Aquarius (Jan. 20<sup>th</sup> - Feb. 18<sup>th</sup>)

The "Age of Aquarius" was, of course, the late 60's and early 70's, which should explain your yen to dwell on past events. Proceeding with your plans to sell Amway and start "The Wave" at your next Mennonite barn-raising will result in your ostracism. Remember, beware the Jub-Jub bird and shun the frumious Bandersnatch.

#### Pisces (Feb. 19<sup>th</sup> - Mar. 20<sup>th</sup>)

You may face financial ruin when your plans to write a best-selling novel based on the minutes from the Fed Annual General Meeting fall apart, and you fail to raise any capital for your idea of selling an inflatable Alexa McDonough doll. Avoid cut-rate organ transplant outfits, as they tend to skimp on the tissue-typing.



## Good Morning...

After spending 3 or so years at U(W) and the Math Building in particular, I think I am beginning to get the impression that most Mathies don't share my love of mornings. So I'll just come right out and say it: I'm a morning person. That's right; I enjoy getting up at the crack of dawn (or sooner). Now, before I get lynched for heresy (the word "morning" itself seems to be a profanity around these parts at times, especially for CS majors), I think it's about time somebody stood up for the most misunderstood and under-appreciated time of day.

There are many, many advantages of mornings. Obviously being up at the crack of dawn (or sooner) speaks for itself. Now, if you're in CS, one of the things that will strike you about mornings is the appearance of the Sun near the eastern horizon. This is nothing to be afraid of - those rumours that CS students are instantly vapourized when in contact with sunlight before noon are just not true. But such fear-mongering can be used to your advantage...

Everyone has seen what happens in the CS labs the day a big CS assignment is due. Crammed. Filled to overflowing with the smell of doom and desperation filling the air (reminds me of Maple Leaf Gardens now that I think about it). And the load... well, even vi slows to a crawl (not to mention my beloved emacs - but I'll leave the editor wars for another day). But at 7:30 am, when most CS students have just finished off their 3831<sup>st</sup> page of testing documentation (the worst kind - gives me the creeps just thinking about it) and are getting ready to catch a few minutes of sleep so that they can stumble into their 8:30 class before 9:15, the load is 0. That's right...0. Even on Cayley, Napier and Descartes...0. The labs are empty and the nice colour terminals are free. Of course, if you are a morning person you don't have any 8:30 classes<sup>1</sup>. Your first is at 10:30... maybe

9:30... and with the low load that's plenty of time to do all the coding you need (using XEmacs of course).

But there are advantages even if you're not in CS. Some of you may not know it, but the C+D has a wide variety of bagels available, but only in the morning (chocolate chip bagels seem to run out first). In the morning the C+D is freshly stocked, a full selection of tender and warm bagels await - not to mention all the other muffins and donuts that just aren't around later in the day. As a morning person, those days of going into the C+D only to be disappointed to see that they're out of your favourite muffin or bagel are no more.

As I mentioned before, mornings are mis-understood. Mornings are not just the time of day to consume large amounts of coffee just so that you don't fall asleep walking up the stairs to the 4<sup>th</sup> floor to submit an assignment (it could be worse - C&O and STAT people may have to go to the 6<sup>th</sup> floor). Mornings are not evil. You see, the trick to getting along with mornings is that if you like mornings, mornings will like you. Think about it: When was the last time you saw a morning person tired and grumpy, trying to recover from the AM or CS assignment they slaved all night over? Can't think of one? I thought so.

Michal Ostrowski

<sup>1</sup> Of the 26 courses I have taken at U(W), 0 have been scheduled for 8:30. The scheduling gods must have a twisted sense of humour.

If you are NOT a morning person and would like to respond to Michal's comments, email him at [mostrows@undergrad.math](mailto:mostrows@undergrad.math) or whack him in the head with a calculus textbook whenever you see him.

## General l'Hôpital

*I don't know C...*

Electra (or Elly as she was known) slapped her \$50.00 fee down on the counter in the 'High's Cool' ski resort foyer and rang the service bell. After ringing three more times, a person finally came forth. "Sorry," the receptionist, Bern Oulee, apologized. "We're understaffed. A lot of people are against the testing of a 160-hour work week."

Elly blinked. "And you're working because..."

"I'm pro-testing."

Elly sighed. "Well, as long as this deviation from protocol isn't standard," she relented. "Now, is Room 231 finally ready?"

The receptionist scanned the log book with e's and nodded. "Electra and Ana Lysis? The room's been made up; you even have a parcel waiting there."

As Elly processed this, her sister turned to her. "Well, my assessment of the situation is that we'll have at least two hours until dinner," Ana observed.

"Er, good estimation..." Elly said, experimentally.

"Well then, I'm going to rise over ski runs and thus observe slopes. Maybe give them a trial run."

Elly nodded. "Then I'll move our articles to our room."

That decided, the two sisters parted ways as another individual entered on the other side of the foyer. He was visibly upset. "First my flight gets PPD; A.C. will hear about that,"

Max complained. "Then those confounded crankshafts! Causing crazy car collisions, creating chaos... I hope I'm still in time..."

He approached the receptionist and paused for a confidence interval. "I'm Max Value," he finally said. "Has anyone named Ana Lysis been by?"

Bern Oulee raised an eyebrow - there was no expected Value in his log book. "You just missed your target," he said guardedly. "Her room is 231 but..."

"Why... aie!!" Max gasped, running off. What were the odds in catching her? He hoped there was still the time to perform any pivotal function required...

He almost ran into a short haired woman in his charge to the elevators, but Dr. Waterson paid only marginal attention to their encounter. She'd had a good derive down in a rented ford from Tilde. She proceeded to the counter and greeted the receptionist. "Hi, I'm booked in Room 230 and I'm looking for an Electra Lysis."

"Figures. Room 231," came Bern's standard response. He shook his head. "Is there some sort of plot here?"

"Not that I know of," the doctor replied, moving off.

Bern sighed. "All the flakes aren't in the snowdrifts."

*To be prolonged...*

Alia S. Choir

## Things to Do in Toronto When You're Tired

*Major Downtown Department Stores and You*

I really dislike malls. No, scratch that. I *detest* malls. I despise them. So many stores, selling all manner of products from good quality clothes to poor quality door stops, crowded together under one roof that features perfect climate control, wide walkways, several benches for resting, and even an indoor food court to feed the weary shopper. These places try to pass themselves off as being perfect, some sort of ethereal utopia for the common shopper. I hate it. I try to avoid them at all costs.

However, sometimes I do submit and find myself wandering through one. After all, I'm working downtown very close to one of the major malls in Toronto, so it's hard to avoid it all the time. A few weekends ago I found myself wandering through one of the department stores attached to this mall. (I make little distinction between the stores located in a mall. Whether they're all-in-one department stores or a boutique specializing in facials, they're all still part of the mall.) Now this department store was actually not that painful. It was relatively easy to navigate through the store, and even more to the point, I didn't actually have to wander around all that much — the sight lines were good enough to allow me to just scan the floor before getting on the next escalator. This was, as department stores go, a pleasant experience. I was feeling slightly buoyed — perhaps these department stores had revived from the sorry traps of merchandising I remembered.

Not finding what I was looking for, I ventured into the department store at the other end of the mall, again hoping for a quick shopping trip. However this store was not nearly as well laid out as the previous. Not only could I not simply step off the escalator and scan the current floor (the sight lines were very poor) but the escalator to the next floor wasn't even located near the one I had just stepped off. You actually had to walk around and find the damn thing to go up another flight.

At first, I admired the store. They were encouraging, none too subtly but encouraging nonetheless, customers to stick around and possibly buy something on impulse. However, this feeling quickly evaporated when I decided it was time to leave. You see,

I couldn't find my way out.

I was lost in a major downtown department store.

I wandered around for quite some time and decided a good strategy was to go down to the ground floor. However, the problem was that the floors weren't marked. When I hit what I thought was the ground floor, I was actually in the basement. I did think of asking one of the many smiling employees for directions on how to get out, but I had to keep my pride. After all, I found out quite some time ago that once you pass the five foot mark, the lost kid routine just doesn't work anymore. So I kept on wandering.

It occurred to me that perhaps one sure fire way to get out of the store was to steal something. I figured it was a win-win situation — if I was caught, at least I'd eventually be let out of the store. If I wasn't caught, then on the assumption that I eventually would make it out, I'd have some free merchandise in my hand. However, I suddenly remembered the method to get out of a maze — stick a hand on the wall and follow it.

So I fought my way through the clothing racks to the nearest wall, slapped my hand on it, and started walking along the wall through the store. I think the clerks in the shoe department gave me the oddest looks. But it did work. Eventually I made it to a door with a big Exit sign above it. Finally, freedom. I walked through it and entered a long fluorescent lit hallway painted white. I walked down this and around a corner, through another door, and was faced with a new interesting problem — the door I now faced was wired to the fire alarm. Hmmm... what to do. I briefly considered facing the claustrophobic confines of the store once again, but only briefly. I barged through the door, set off the fire alarm, and walked down the street. It's surprising just how little attention is paid to fire alarms these days — there wasn't even an attempt made at an evacuation. I was most displeased with the fire safety undertaken by the store and have decided to write a letter of complaint.

Malls are all death traps, of one kind or another.

Max "Missed the submission deadline" Stevens

## MEF Report

*MEF Directors*

Nominations are now open for the MEF Director position for:

- Winter 1998 (January - April)
- Spring 1998 (May - August)

Nomination forms are available on the MEF office door (MC 4046). Completed forms can be returned by slipping them under the office door.

Nominations close Monday, November 17, 1997 at 5pm.

If you have any questions about the nomination process or what the position of Director entails, please ask.

Madeleine Hidas (mefcom@undergrad.math)  
MEF Director, Fall '97

## Math Co-ed Competitive Volleyball

The Math volleyball team has ended regular season undefeated, with 5 winning sets, having won every game of each set. They placed second in the league (standings were based on point difference — that is, the first place team won by more points than our math team). The first playoff game was Tuesday, November 4<sup>th</sup>, and the second (against the winner of the match between teams placing 3<sup>rd</sup> and 4<sup>th</sup>) will be held Saturday, November 15<sup>th</sup> at 5:00 on court 3 for anyone who'd like to come out and cheer us on. See everyone there!

*[See everyone there? Wow! We didn't know everyone was going to be there! Including us! — The Management.]*

Lara Thompson

# Old Skool Rap Report

(Formerly the Happy, Happy Dance Music Report)

As a change from previous articles (since I have been told the set of Happy, Happy Dance Music is an empty set (by a certain editor (Brian,))) I've taken to another form of music — rap — for this article. For those of you lucky enough to make it to Fed Hall on Oct 25<sup>th</sup>, you would have seen Run DMC, which is not only one of the earlier, and longer lasting rap groups, but also one of the best. Which leads to yet another very, very important question. What happened to all those old rap groups? Did they just fade away because they ran out of rhymes? No, they all got shot in a big eastcoast/westcoast dispute.

No, seriously, the vast majority of good rappers stopped rapping when they ran out of cash to record. (They wasted all their money on big hunks-O-gold to wear around their necks.) For example, on the cover of Run DMC's album *Tougher than Leather*, all three members of the group are wearing big hunks-O-gold around their necks, and Rob Base and DJ Eazy Rock, they had even more rings than the queen! However, I have a feeling that rap is about to make a comeback with old skool beats. Why, you say?

Simple: all the old groups had to pawn off their gold, and they need more ca\$h. That and Puff Daddy sucks, and if I were a professional rapper, I'd be embarrassed to be categorized with Puff. I mean, who wants to be thought of as the guy who markets his performance career around a dead friend? Anyway,

the last reason why the old rappers are gonna make a comeback is because they need more ca\$h for their expensive habits, like collecting antique Lego... (?)

Which brings us up to the last general question, about swallows and favorite places to drink. Everyone knows the swallow question can not be answered, and my favorite answer to the second was, "Alone and in the morning." (No, someone else answered the question besides me!!! Even though only one other person responded, they are not that pathetic. I mean they responded right, and that's what cool people do, so if you wanna be cool, you'll want to respond to this issue, right? Just think of all the work you'll make Brian and Chad do. They're the ones that have to drag all the paper put in their out, so if you fill it up, you'll make their life hell :). Anyway, someone needs help.) I was talking about coffee shops, you know, where all the old skool rappers hang out... (?)

Which brings me back to the old skool. Who was your favorite rapper (please don't say Vanilla Ice), and your favorite tune that (s)he did? Feel free to list old skool (Eric B. and Rakim), new crap (Puff), or good new stuff (Busta Rhymes), or just silly stuff (Like Bugs Bunny). Anyway, it's all in how you look at it. What if Axl Rose started to rap? Now that would be funny.

Petra Prozak

## gridCOMMENTS

Howdy, folks.

Well, I always try my best to make sure that no errors creep into the gridWORD. However, there was one... 19 Across should have read "Old card game" instead of "Old cold game". If there are any errors in future grids (heaven forbid), I'll post about them on uw.mathnews and uw.math.mathsoc. Hopefully, there are no errors this time around.

Anyways, here's the submitters to gridWORD #3... Sko & Alison (who state that "the world STILL revolves around us") had 3 incorrect squares. (Psst! The old card game is OMBRE and, uh, 64 Across was STEIN, not STIEN). Ian "The Word Guy" Facey, Stuart "Jean-Guy!" Pollock and Claire Bilodeau had perfect submissions. And the winner (by random draw) is Claire Bilodeau! You can pick up your prize in the MathSoc office.

Now, I had some people complain to me about the last grid and the fact there were so many Genesis references. I think they'll be presently surprised at the clues I have this time around...

I'm surprised that no one has complained to me about the lack of a gridQUESTION this term. Well, since I reminded myself about it only a few days ago, here's the first of the term... What would you do to beautify campus?

Submissions for gridWORD #4 are due at 6:30pm on Monday, November 17<sup>th</sup>. Same drop-off spots as usual: BLACK BOX, email bcfox@undergrad.math, mailbox in the MathSoc office or directly to the editors in the mathNEWS office.

Good luck everyone.

Latrell "GridBoy" Fox

F	I	L	M		G	E	N	E		A	L	I	K	E	
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R	E	E	L		C	C	V	I		O	M	B	R	E	
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			N	O	R			S	K	A					
T	R	A		D	U	K	E		A	B	Y	S	S		
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## Uh Note Frum da FEDS

Pamphlets upon pamphlets and binders upon binders. The information you can get from the Student Issues Resource Centre is virtually endless. Information about human rights, racism, eating disorders, AIDS and other STDs, family and dating violence, and any other personal or social issue existing in our student population can be found here. Just visit the centre in the FEDS office, call Heather Calder at ext. 6331, e-mail hlcalder@feds, or check out the web page at <http://watserv1.uwaterloo.ca/~fedissue/sirc.html> to find out more.

## Bird™ Courses

It's Pre-registration week. You know what that means, right? You've got to pick your courses for the next term. There are courses you have to take, so there's no point in me telling you about them (heh heh), but then there are electives. How do you know which ones are good? My normal choice is to look for a particular type of course, usually referred to as a Bird™ Course. What are these Bird™ Courses? Let me tell you:

- **DRAMA 223** Public Speaking. For this course you have to do 3 prepared speeches and go to class. That's it. Guaranteed B. ★★★★★
- **MUSIC 100** History of Music. Learn about the origins of music. Listen to music. Do concert reviews. Take it easy. Interesting course but sometimes you have to write a paper. ★★★
- **MUSIC 111** Introduction to Music Theory a.k.a Clap for a credit. Learn how to read music. Listen to a few chords and do some "singing". Hey, when I can get an A on a singing test how hard could it be? ★★★★★
- **MUSIC 140** Music and Popular culture a.k.a History of Rock and Roll. Have you ever wanted to take a course about the music you listen to? This is it. While you have to write a paper (this term it's all of six pages), it can be about anything. Yes... AC/DC, Led Zeppelin and of course Milli Vanilli are all allowed. ★★★★★
- **CS 100** No, you can't take it, but no list would be complete without it.
- **FINE 25x** Film studies courses. You watch movies, you talk about movies. That's it. How can it be bad? ★★★★★
- **ECON 101/102** Take them with Larry Smith!!! He is really entertaining and you get to take a cheat sheet (reference paper) into the midterm and final with you. You're in math, you can integrate straight lines, you want to take it. With Larry: ★★★★★ Without: ★★★
- **SPAN 101** Introductory Spanish. Learn the basics of a new language. I loved this course. Of course, I'm Mexican but that's beside the point. Lots of fun. ★★★★★

- **CLAS 100/201/202** Ancient Greek/Roman societies. Not too much depth, and no assignments. Perfect for the mathie on the run. ★★★★★
- **PSYCH 101** Lots of reading. Lots of memorization. Bonus marks for doing experiments. ★★★
- **PHIL 100** Apparently I am not much of a thinker. I found it boring. I had weekly assignments. Too much work for an elective. ★
- **MTHL 100** I have never heard of anyone who didn't like the course. Supposed to be an enjoyable course, and you should be able to pull off a good mark. ★★★
- **PSYCH 236** Human sexuality. Good course. Even better if you find a study partner. ★★★★★
- **REC 280** Travel and Tourism. 4 multiple choice midterms. No final. How can it be bad? ★★★★★
- **PMATH 100** Male logic. Completely based on the idea: If it feels good do it. Areas touched on include: Sports, Scratching and Homer Simpson. Also included: right answers to those dreaded questions (e.g. Am I fat?) For Guys: ★★★★★ For Girls: ★★★★★
- **PMATH 488** Female Logic: Note this is a fourth year course because every guy who has ever taken has failed. Topics include the "I said so" theorem, the "You are wrong" lemma and how to win an argument (or crying on demand). For Guys: 0 For Girls: ★★★★★
- **CS 452** Real Time Programming. You get to play with trains. You can teach the robot arm to do rude arm gestures. Guaranteed fun. ★★★★★
- **CS 488** Introduction to computer graphics. Did you like Toy story? Wasn't it cool the way they made Buzz Talk? You too can do this. ★★★★★

These are the courses I recommend. There are more out there (e.g. SOC 101, some English courses, HIST 100). But I don't really know all that much about them. So good luck, and enjoy your Bird™ Courses.

Xavier "X-Man" Aburto

## Expect the Unexpected

I got up last Sunday morning trying to forget about all the midterms and assignments which were occupying my thoughts. I tried to relax, but I couldn't. It's been a busy few weeks for most math students, and it hasn't been easy.

Anyways... on Sunday, I went to the lab to get started on my CS assignment. I worked on it for a while but by 1:45, I'd had enough. So, I left and headed out to University Ave., to see if the rumours I'd heard were true. It was a beautiful day out; one of those days that me and my friends refer to as Lazy Sundays: sunny, a few clouds, a nice breeze, and not a care in the world. As I walked down University, I could see several firetrucks in the distance. I got pretty excited, because I love firetrucks. I'm not too sure why, I guess maybe because I've always wanted to be a fire fighter. So I started to walk a little bit faster, trying to get there quickly without looking like I was running.

I got to the firetrucks, at the top of the hill, and I looked down. Just in front of me was a bulldozer. As I walked by it, I laughed. Inside the scoop-thing (whatever) were three kids and

3000 tennis balls, playing and laughing! The slope of the hill was lined with wooden beams, which formed a rudimentary course.

The Kiwanis Club was racing 3000 tennis balls to raise money! Three thousand bright green tennis balls! Nuts! I found the best position I could and eagerly awaited. A man with a megaphone started introducing people, and asked the kids to give the tennis balls a good mix. Then, their parents lifted them out. The organizers gave an "all clear", and slowly, the bulldozer tipped the tennis balls out.

It was like something out of a dream. I watched as three thousand lime green dots rolled along the concrete. I couldn't control my smile. It was so ridiculous to watch, so surreal. It took a couple of minutes for the first tennis balls to roll by. I stood, speechless, watching them roll like little kids racing down a hill, eager and determined to get to the bottom.

After a few hundred had rolled by, the organizers asked the crowd to help shuffle "stuck" tennis balls along. I did, and then I realized, hey, it doesn't matter now, so I jumped into the oncom-

continued from page 12

ing tennis balls, and starting trying to dodge them. Eventually, the whole thing became a kicking/throwing/bouncing tennis ball event. Some old guy chucked one at my back. I turn around, expecting to see a friend, and here's this guy, laughing.

It took probably 20 minutes to get all the balls to the bottom. Then, the people watching helped box them up. When that was finished, the wooden beams had to be collected. A truck started driving up the hill. I asked if they needed any help, and someone told me sure. So I jumped on the truck. It was great. I was standing on a moving truck stacking wood, and I'm not even sure why, but it was so much fun. Police, Fire and just ordinary people were passing me wood! And that was fun! It's hard to explain.

Anyway, when the whole thing was over, I had a massive sliver and a lot to think about. I felt like I had rediscovered a part of me I had lost - the part that was free, the part that didn't care what other people thought, the part of me that loved life, the part that had not been subjected to months and months of University stress.

I felt so complete. I remembered how short life is and how fast it moves (it's said so often its cliché, but how many people really remember). An unknown teenager once said, "I live my life like it's my last day here. That's why I never have any clean clothes; who wants to do laundry on their last day???"

Not that I don't do laundry. I just hadn't had that kind of carefree notion in a long time. And it felt so good to be there again. Which is why, when I saw the biggest pile of leaves in my life, I could not resist. I did summersaults, backwards summersaults, dives, flops, falls, laughing each time as I got dirtier. People walked by, some smiling, others looking at me like I was some kind of freak!

Am I saying you should jump in a pile of leaves? No. Am I saying you should come watch the tennis balls next year? Not necessarily. I'm saying that while University broadens and expands us in some ways, it also chips and dulls us in others. And if you don't notice it now, you'll lose something you can never get back.

Jesse Bergman

## Amy's World

*All are welcome in my lair*

Story-time, chilluns.

Once upon a time there was a sweet, innocent child. We'll call her Amelia. Amelia **never** said anything nasty or made rude comments. She would play quietly in a corner by herself most of the time. Well, as all little girls eventually do, Amelia grew up into a mature, quiet, sweet version of the child who had a penchant for studying mathematics and French. So Amelia went away to a big university which we'll call the University of Wonderfulness. There she learned many wonderful things, but at the same time was forced to learn many nasty things like CS and calculus. Eventually Amelia became old, bitter and cynical so she conquered the world, enslaved many people and got her jollies each day out of toying with the lives of people.

*The End*

[I love a story with a happy ending. — LatrellEd.]

Amy Green

## About the mathNEWS Strike

Late last week, the writers, productionists, filler-developers, and groupies of mathNEWS decided to take matters into their own hands. They decided to walk off the job, and leave the future of mathNEWS in dangerous limbo. At issue is U(W)'s brand new Policy 73, a 15-page declaration of the standards for Intellectual Freedom on campus. The actual points of contention are as follows:

- Policy 73 is too damn long.
- Policy 73 prevents Intellectual Slavery.
- Lack of dancing girls at Production Nights (for good measure)

Since the Management has been unable to comply with the mathNEWS Staff's request to repeal Policy 73, the mathNEWS Staff walked off the job last Monday. This protest will last until serious changes are made to Policy 73, a BUMFWAG spokesperson said. BUMFWAG, the *Brochure, Underground Mag, and Fanzine Writers of America & Guam* organization is the union that represents the mathNEWS Staff. The Management of mathNEWS, the editors, were unavailable for comment due to an impromptu fudgicle run to the C+D, but it is known that they called on MathSoc to help with the negotiations between management and BUMFWAG. Talks broke down, however, during their last meeting when the only thing that both sides agreed on was "I hate these fucking meetings."

Surprisingly, BUMFWAG had no problem with mathNEWS Bill 34, which passed last month. Bill 34 reduced prep time for mathNEWS writers, standardized the format of article templates, and cut the budget of mathNEWS by half a billion dollars. BUMFWAG released a statement saying "Hey, in the early nineties, mathNEWS was spending like crazy. We're going to have to cut back now to pay for all of those hologram covers and Swiss Chalet-catered Production Nights."

In an effort to at least get an issue of mathNEWS out, for the children, the Management decided to hire scab replacement workers until the protesting writers come back to work. This really upset the striking writers, who thought that their brand of irreverent humour was irreplaceable. Hostilities grew on both sides of this battle, and many insults have been hurled across the picket line to the other side.

In fact, the only civil conversation between the Management and the protesters was this:

Hammer: "See, I told you it would be a big issue."

CasEd: "Gee, you're right. I guess I owe you a coke."

After this, the two parties went right back to fighting.

With this issue completed (albeit two weeks late), its unknown whether talks will continue in order to bring the protesters back to work. If the strike continues much longer, the protesting staff may have to repeat this term once again, in order to get full credit for their work on mathNEWS. A BUMFWAG spokesperson said "We have no problem with this. If we have to stay in school a little longer, then we will. It's our choice as students to do this."

An Anonymous & Not-Very-Subtle Reporter

## Notice of General Meeting

*Doesn't it just get your heart racing?*

Notice is hereby given of the Annual General Meeting of the Mathematics Society of the University of Waterloo to be held on Wednesday the 19<sup>th</sup> of November at noon in the Comfy Lounge (MC 3001). The Agenda shall be restricted to the following.

1. Reports
  - (a) President
  - (b) Vice-President, Finances
  - (c) Vice-President, Activities and Services
  - (d) Directors
2. Bylaw Changes made since the last General meeting. Presented for approval. (See below)

André Cousineau  
President, MathSoc

[Editor's note: *Italics represent removed text, while underlined text represents text that has been added.* — LatrelLEd.]

### Amend Item 16 of Article III as follows:

'Board of Directors' shall be the duly elected heads of the following boards: *Computing*; Social; Office Management; Novelties; Academic Liaison; Off-Campus Liaison; On-Campus Liaison; and Internal Affairs.

### Amend Article XIII to read as follows:

#### 1 Preamble

The Society shall maintain the Math Society Coffee and Doughnut Shop (hereafter referred to as the C+D).

#### 2 The C+D Management Board

##### 2.1 Membership

The C+D Management Board shall consist of: The Federation of Students General Manager or representative, The Executive Assistant to the Dean, Faculty of Mathematics or representative, a representative of the Department of Human Resources, the Vice-President, Finance, and the Off-Stream Vice-President, Finance.

##### 2.2 Duties

The C+D Management Board shall be responsible for all decisions regarding permanent staff of the C+D and permanent hours of operation of the C+D.

##### 2.3 Changes to contracts/hours

Proposals for changes to either the permanent staff or permanent hours shall be drafted by the executive committee in consultation with the off-stream executive committee. The proposal will then go to the Management Board for advice and fine-tuning. Following that, the Management Board or its representative shall present the proposal for discussion and consultation with the Manager and Assistant to the Manager of the C+D. Finally, the proposal will return the Management Board for final approval.

All decisions of such nature must be unanimously approved by all members of the C+D Management Board.

The Manager and Assistant to the Manager of the C+D are to be fully consulted on all decisions made by this committee.

Where possible, the off-stream exec are to be fully consulted and must be in full agreement to the specific details of all changes made.

The standards laid out in University Policy XVIII for making staff changes to full-time staff not contingent on funding should be followed.

##### 2.4 Meetings

The Management Board shall meet once per academic term during the third month of each term to here a termly overview to be prepared by the Manager of the C+D in conjunction with, should he/she desire, the executive committee. Notwithstanding that, any member of the Management Board may call a meeting of this group for advisory or other purposes.

#### 2.5 Day-to-day Operation

Day to day operations of the C+D shall be the responsibility of the Manager of the C+D.

Any member of the Society with input regarding the C+D should direct their input to the Manager of the C+D and, failing that, the executive committee.

The Manager of the C+D, Assistant to the Manager of the C+D and the executive committee shall have monthly meetings (excluding the last month of every term) to discuss operations of the C+D and the Vice-President, Finance shall report on all such meetings to Math Society Council.

Any capital expenditure exceeding \$500 must be brought to, and be approved by this committee. Any capital expenditure over \$5000 must be brought to, and be approved by the current executive, off-stream executive, and council with the final arbitrator of any disagreements between society and management being the Management Board.

#### 2.6 The C+D Hiring Committee

For the purposes of hiring a new Manager or Assistant to the Manager, the C+D Hiring Committee shall be assembled.

#### 2.7 Membership

The C+D Hiring Committee shall consist of: one member of the on-stream executive, one member of the off-stream executive, the Executive Assistant to the Dean, faculty of Mathematics, a representative of the Department of Human Resources, in a non-voting, advisory role, and the Manager of the C+D, current or out-going, where the committee deems his/her presence to be of benefit to the process.

### Amend Article XV, as follows:

#### 1 Definition

The Orientation Committee is a standing committee of the Society, whose responsibility is to organize and run the events for the first year Math students of the University of Waterloo. These events are to take place during the week of September, of each year, designated as Frosh Week.

#### 2 Membership

1. Voting Members The voting members of the Committee shall be:

- (a) one Orientation *Committee Chair* Director, as defined below, as the chair;
- (b) one Faculty representative, appointed by the office of the Dean of Mathematics;
- (c) one Orientation Financial Advisor, as defined below;
- (d) the Society VPAS; and
- (e) one of the Society President or VPF.

2. Non-Voting Members The non-voting members of the Committee shall be:

- (a) a group of, maximum 100, volunteers gathered from the social membership of the Mathematics Society for the succeeding Fall term the non-voting member of the on-term Executive and all members of the off-term Executive;
- (b) the members of the off term Executive who shall be non-voting members any persons appointed to the committee by the Orientation Director or Council; and
- (c) and other persons appointed to the Committee by the Chair or Council, as organizers only all volunteers recognised by the voting membership of the committee.

#### 3 Orientation Director

The Orientation Director *Committee Chair* shall:

1. be appointed by Council within the first 6 weeks of the Winter term of each year;
2. have a term of office from the date of appointment until the completion of all financial matters arising from the Committee;

*continued on page 15*

continued from page 14

3. oversee the operations of the Orientation Committee; , and reporting to Council; and
4. select a member of the committee to act as Financial Advisor for the committee;
5. select members of the committee to act as organisers of the various events prior to and during Frosh Week. These members will be ratified by the Committee;
6. report to the on-term Executive; and
7. submit a report to Council regarding the outcome of the weeks activities by the end of the Fall term.

In the case of the resignation of the Orientation Director Committee Chair, Council shall act with all practical speed to elect a qualified person to the position. In the interim the VPAS shall assume the role of the Chair. It is the responsibility of the resigning director to prepare a report outlining responsibilities, commitments and deadlines.

#### 4 Orientation Financial Advisor

The Orientation Financial Advisor shall:

1. be appointed by the Orientation Director, and ratified by the existing voting members of the Orientation Committee;
2. be responsible to the Orientation Director;
3. administer all the finances of the Orientation Committee;
4. maintain all financial records of the Orientation Committee; and
5. submit a detailed financial summary to Council by the end of the Fall term.

#### 5 General

1. Signing authority for the Orientation bank accounts lies solely with the Orientation Financial Advisor, the Orientation Director Committee Chair and the Society VPF of the Fall term.
2. A report consisting of a list of all Committee members, a tentative schedule of events and a proposed budget must be submitted to Council, on the behalf of the Orientation Committee, by the Orientation Committee Chair and Financial Advisor to Council by the end of the Winter term, for approval.
3. In the case that the Orientation Committee operates at a deficit, the deficit will be covered by the Fall term Council.

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## New and Improved Rogers Cable Package for Mathies

Now with More Channels!

Warning: may not really be improved.

Last issue we at Rogers<sup>TM</sup> told you about the exciting new specialty cable package designed expressly for mathies: our MathieTv Pak, combining basic cable with *A&E&C&O*, the *Calculus News Network*, *VectorSpace: The Imaginary Axis Station*, *Double Prime*, and *MathMusic*. Demand for this package has been so overwhelming — we got only two less subscription requests than 'Squiz submissions — that we've decided to add even more exhilarating mathie channels to MathieTv:

- *TSN (The Stats Network)*

Trying to keep track of the distribution of scores among your favourite sports teams? Wondering if the Ottawa Sine-ators beat the Edmonton Eulers? Or do you just want to watch your favourite teams duke it out over a game of Bayesball? *The Stats Network* keeps track of all the games with commentators like Linda Mode, Greg Musselmean, and Dave Random. See it. Live it. Analyze it.

- *The foo() Network*

While MFCF may believe that computer science and food doesn't mix, *The foo() Network* is betting otherwise. From BASIC recipes to nice, light, Pascalorie-reduced fare (and don't forget to pass the Java!), *The foo() Network* has it all. Cooking shows like *if du Jour*, *Tcl of the Day*, and *Modula-Three Dog Bakery* highlight our culinary compilation; link it with our news show *In foo() Today*, and you've got a functional recipe for television that no CS major can bash. *The foo() Network* will certainly give you an Eiffel.

- *TBS (Trigonometry Broadcasting System) Superstation*

This superstation from Atlanta showcases classic math cartoons that you don't get to see much anymore, like *The Jetsines*, *Captain Planar*, and *Skew-by Doo*. It also features movies, such as *Raiders of the Lost Arcsine*, *PsyCosine*, and *In the Spline of Fire*.

- *O(n)TV*

This network, always watched in linear time, is simply a graph showing you the bandwidth of your cable signal. As the programming on other channels gets more complex, the bandwidth grows exponentially!

- *The Discontinuity Channel*

Canada's mathematical science source, *The Discontinuity Channel* revels in the latest and greatest in the world of math. From its daily newsmathazine, *@discontinuity.ca*, to the look-behind-the-scenes of inaccessible or daunting domains on *Forbidden Axes*, *The Discontinuity Channel* provides a mapping to a wide range of tastes. Math has never been so entertaining!

Mark "Himmler Life Network" Hamilton  
with thanks to CasEd

## Spermatikos Logos #4

Well, what can I say? That last one sure was a doozy. Please feel free to email me for a breakdown of the proper solution (rjstewar@undergrad.math). I received 5 submissions for the Ooterlaw puzzle. Getting 6 correct out of 13 were Richard Wallace and Jing, at 7 correct was Claire Bilodeau, Gigi Garbett managed 9 out of 13 and the winner with a perfect solution (way to go!) was Ian Prest... pick up your prize in MathSoc. The Bonus Question (what the hell does Spermatikos Logos mean?) was answered by only two people - Claire got it right with Seminal, Divine Principal (deep eh?).

Since I have been getting a little difficult lately (my puzzles that is...) I have toned down the difficulty somewhat for this week's affair. Good Luck everyone. Keep at it.

Early in Fall 1991, the PCSC sent a contingent to the North American Model Math Faculty competition in Orangeville, Nebraska. This particular year, 4 contingents were sent from 4 different Universities across North America. Each School sends a five member delegation: a Dean, an Executive Assistant to the Dean, an Associate Dean - Undergraduate Affairs, an Associate Dean - External Relations, and a Director of First Year Studies. This particular year, by an outstanding coincidence all 20 competitors had the first name Shirley, Paul, Jack, Ron or Adrian (four people had each name) and the last name Thomson, Schellenberg, Kalbfleisch, Scoins or Lewis (again four had each name) although no two delegates had the same full name. All of the delegates stayed at luxurious Hotel Loopenzo which has 45 rooms where each delegate had their own room and all the other rooms were vacant (it wasn't tourist season in Loopenzo). The rooms of Hotel Loopenzo are arranged on 5 floors in one straight hallway - The first floor has rooms 1-9, the second floor has rooms 11-19 and so on up to 41-49 on the top floor (N.B. there are no rooms 10, 20, 30 or 40). The rooms are arranged such that 1 is directly below 11 is directly below 21 is directly below 31 is directly below 41 and so on. Can you use the clues below to discover the position, first name, last name and room number of each delegate. (N.B. a diagonal line is one that moves only between rooms that are adjacent by corner (i.e. 11-2 is a diagonal, 11-1 is not, neither is 11-3 or 11-12)).

- There are four guests on each floor, each with the same last name.
- The only person with a 9 in their room number was Associate Dean - External Relations Ron Lewis.
- With the exception of Deans Shirley Scoins and Jack Thomson, and Associate Deans of Undergraduate Affairs Paul and Jack Schellenberg, no two people of the same position or first name are on the same floor or the same vertical column.
- The three people with a 7 in their room number were named (from top to bottom): Shirley, Jack and Adrian.
- The Associate Deans - Undergraduate Affairs all stayed in rooms that are multiples of 7. The Associate Deans - External Relations all stayed in rooms that had perfect squares for room numbers.

- The Deans (3 out of 4 of which are named Shirley) all have prime numbered rooms. The Executive Assistants (3 out of 4 of which are named Paul) all stay right beside their Dean on the same floor.
- Dean Lewis and an Associate Dean - Undergraduate Affairs of the same first name stayed in rooms whose numbers were the reverse of each other.
- All four Adrians are on a diagonal which intersects a diagonal line consisting of all four Directors of First Year Studies.
- Rooms 18, 13, 5, 35 and three rooms whose number ended in a 4 were empty.
- There is no Paul Thomson or Jack Kalbfleisch; whenever a Paul and Jack appear in the same vertical column, Paul always appears on top.

Enjoy!

Romeo J Stewarvachuk

## Brunny Road Trip

That's right, we're running a bus trip to the Brunswick House in T.O. It's a joint trip with the engineers and there are buses from U of T and Guelph going on that night as well... oh yeah, 'that night' would be Friday November 14<sup>th</sup>. Our bus will be leaving from the MC loading docks at 6:30 sharp, so plan on getting there at about 6:15. We'll arrive at the brunny around 8:00, do some drinking, some chatting, and maybe some dancing. The bus will be leaving the bar at 1:00, so we'll be back around 2:15... 2:30 if we decide to stop at Mickey Dees on the way home. (I have a real good set up with the bus driver.) Tickets are eight bucks each and you can purchase them in the mathsoc office (MC3038).

Cally Martin

## Semi-Formal Masquerade

*Fed Hall on Friday, November 14<sup>th</sup>  
Hosted by off-campus dons*

- All ages
- All university students welcome
- Tickets are \$5, \$9 per couple and one dollar off with a donation to the Food Bank
- Tickets on sale at the Feds Office in the SLC
- Prizes to be won

## Careers in Math and CS

Wondering what program to take, or what jobs are out there? Graduates of the Math Faculty will talk and answer questions about their careers on Thursday, November 13<sup>th</sup> at 4:00pm in DC 1304.

Sponsored by the Women in Mathematics Committee



## mathNEWSquiz #4

*Lest We Forget this Squiz*

Welcome, my fellow mathematicians, engineers and whoever else is reading this dribble. So far, things are well here in *mathNEWS* and particularly with your old Squizmaster. But enough of the chit-chat, you probably want the answers to the last Squiz. Being the obliging soul that I am, here they are: **Song Lyrics:** 1) "Do They Know It's Christmas" - Duran Duran (for Band Aid); 2) "The Downeaster 'Alexa'" - Billy Joel; 3) "Thanksgiving" - Tom Lehrer; 4) "Valentine's Day" - Bruce Springsteen; 5) "New Year's Day" - U2; the theme was "holidays"; **Scotland:** 1) Eigg; 2) Macbeth; 3) Robert Burns (one of the greatest poets ever to have lived); 4) Inverness Caledonian Thistle; 5) William Wallace; **Statistics:** 1) The Cauchy Distribution; 2) The Pareto Distribution; 3) A chi-squared distribution with one degree of freedom (or  $\chi^2(1)$ ); 4) The Bernoulli Distribution is the only one to use indicator variables and also is a Binomial distribution with  $n = 1$ ; 5)  $\text{expt}^2/2$ ; **The Seventies:** 1) Paupa New Guinea; 2) Salvador Allende; 3) *The Deer Hunter*; 4) *All in the Family*; 5) David Lewis.

It seems that I have hit rock bottom, haven't I? I received two submissions: Ian "The Word Guy" Facey with 12 points, and from Jason Smulevitch, who scored eighteen points. Therefore, I congratulate **Jason Smulevitch** as the winner of the third Squiz. You can pick up your prize at the MathSoc Office.

Now, usually I am pretty open about the categories that I have given for each Squiz. However, because of Remembrance Day, I have decided to have a theme for this issue's Squiz. So, after you recover from the shock, let us remember all the Mathies who gave their youth and lives so that we may live in freedom and partake in this, the Remembrance Day Squiz:

### *World War I*

1. What country entered the war on June 30, 1917?
2. The Canadian Corps of the British First Army took Vimy Ridge in what battle?
3. What British politician took responsibility for the failure of the Gallipoli campaign?
4. On what date did Austria-Hungary declare war on Serbia?
5. How many battles of Ypres were there in total from 1914-1918?

### *Guns and Other Nasty Products*

1. What year was the first prototype of the 155mm Field Howitzer 70 produced?
2. What gun was referred to in its patents as a "revolving battery gun" and was available in .42, .45, .5, .65, .7 and 1 inch calibres?
3. What is the difference between a katana and a wakizashi?
4. What are katars, chilanums and turups?
5. Which company produced the 130mm Type 82 Multiple Rocket system?

### *War Movie Quotes*

*Name the war movie*

1. "I love the smell of napalm in the morning."
2. "Hey, O'Neill, take a break! You don't have to be a prick every day your life, you know!"  
"Excuses are like assholes, Taylor. Everybody got one."
3. "Sir, do we get to win this time?"
4. "Pardon me, sir, what's your point, sir?"  
"There ain't no point, Erikson. I'm simply trying to illuminate the terrain in which we currently find ourselves deployed. You don't mind that, do you? And if you do, **fuck you!** You on my frequency?"  
"Yes, sir!"
5. "I wanted to meet stimulating and interesting people of an ancient culture, and kill them."

### *Vietnam*

1. What did Congress pass that gave Lyndon Johnson authorization for presidential action in Vietnam?
2. What was given the codename "Duffel Bag"?
3. When did the Tet Offensive begin?
4. Name the two people who ruled South Vietnam.
5. How many days did it take for the Vietcong to reach Saigon from the fall of Hué in 1975?

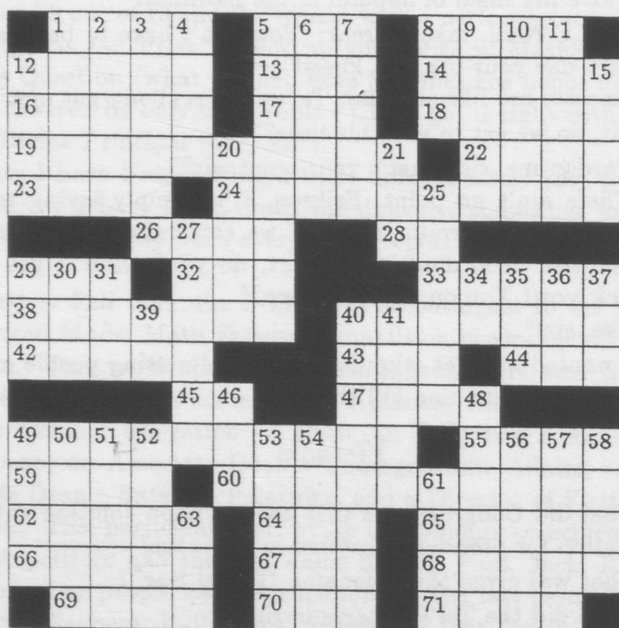
### *Wars Long Ago*

1. Who defeated Hannibal at Zama in 202 B.C.?
2. In the Mexican Civil War, where was Emiliano Zapata killed?
3. What pope launched the First Crusade?
4. What two rival branches fought in the War of the Roses? A bonus point will be given if you can name the House where they came from.
5. Name the commander who defeated the Zulu at Ulundi during the Zulu War of 1879.

This concludes the Remembrance Day Squiz. You can submit the answers to this challenging Squiz by one of three methods. One method is to put your answers in the BLACK BOX, another is to email these answers to [joswan@undergrad.math](mailto:joswan@undergrad.math) and the final method is to see me in person. Do not forget, however, that I still want these answers in by **4:30 p.m. on Monday November 17, 1997... No exceptions whatsoever!** I leave you with the hope of good luck and I hope to see an avalanche (highly unlikely, but one can dream) of answers for this Squiz.

Shawn Noj Ro'aha  
Mark "Himmler" Hamilton

# GRIDWORD



## Grid Clues

### Across

- Peel
- "What's up, — ?"
- Take — ; small snooze (2 wds.)
- Calm down
- Suffix meaning to become like
- Proportion
- Singer Baker
- Name prefix
- Silenced
- Mountain (Argentina)
- Grain
- Abbey (golf course)
- Mountain (Argentina-Chile)
- Albanian
- Tellurium
- Ghost's phrase
- Scottish uncle
- Not in as much danger
- Los Angeles' USFL team
- Impersonate
- Consumed
- Goes with egg
- Father
- Actinium
- Adams or Johnson
- Mountain (Argentina-Chile)
- Electric force unit
- Bad day in March

- Mountain (Argentina)
- Cristo, for one
- Revolver (slang)
- Snake
- Change
- I have (short form)
- People who are not yet adults
- Hurts
- Grass (in sections)
- Mistakes

### Down

- Refers to punishment
- Linda Lavin's show
- Review
- Test
- Goes away from a point
- It's in the air
- Dimes, quarters, etc.
- Appendage
- Pacific nation
- Part of a house
- Chunk
- What the telephone just did
- Poems
- Articles
- Prefix meaning eight
- Give up
- "Brain" of professional wrestling
- They're sometimes busy
- Prefix meaning oxygen
- Choose
- Referring to nearness
- Passing fancy
- Greek letter
- A colour
- Rhenium
- Elected into
- Dudley, for one
- Hockey equipment manufacturer
- Someone who escapes
- Peruvian city
- Icons
- Literary work made up from other works
- A type of flower
- Sponsorship
- Well done!
- Proper arrangement
- Legal claims
- Craggy hills
- Specified day
- Poetic contraction