

math NEWS

Volume 68, Issue 1

Friday, May 19, 1995



Summer Time
95

lookAHEAD

mathNEWS	
May 29	Issue #2 production night 6:30pm, MathSoc (MC 3038)
June 2	Issue #2 hits the stands
June 12	Issue #3 production night 6:30pm, MathSoc (MC 3038)
June 16	Issue #3 hits the stands
Math Faculty	
May 29	1B Info Night @ 7pm
May 29	Drop Deadline
MathSoc	
May 23	MathSoc meeting @ 4:30
May 30	MathSoc meeting @ 4:30
MGC	
May 24	Grad Picture Signups
May 29	Grad Night
May 31	Grad Pictures Begin
Co-op	
May 19	Posting #3 goes up
May 23	Interview Skills Workshop 2:30 - 4:30pm
May 24	Posting #4 goes up
May 26	Posting #5 goes up
May 30	Posting #6 goes up
May 31	Interviews Start!!!

A Word From Your VPAS

Greetings everyone and welcome back to what promises to be a great spring term! My name is Wade and I am VPAS (Vice-President, Activities & Services) of YOUR MathSoc. If you don't know me, or either of the other MathSoc Execs (Poesy & Manal) stop by our office and say Hi! (If you do know us, stop by anyways!) As well, feel free to stop in and voice any concerns, comments or questions you may have regarding MathSoc (or life in general!)

I'd like to take the time to encourage ALL mathies to come out and get involved in YOUR MathSoc. There are plenty of ways to get involved and if you need any suggestions stop into the MathSoc office and ask an office worker (that's one way to get involved already!). As well, make sure you watch for signs and posters around the MC for information on upcoming events, activities and elections (another way to get involved!)

Remember: This term and YOUR MathSoc will be only as good as YOU make them!

Wade (VPAS MathSoc)

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Your Wonderful Editors: Stephen Johnston and Stuart Pollock

Prez Sez

Yo Yo Yo Yooo! It's Summer time! Aren't you glad to be back on campus with you friends: going to bed early (if you wish), getting up late, wearing shorts and sandals, sunglasses, sunblock, the works... only to find yourself stuck in classes all day long!

Never fear, Poesy's here! As MathSoc Prez this term, I'm going to put the fun back into into $f(u^n)$ with lots of activities in the sun. We are going to treasure every second of this long awaited summer and enjoy every nanosecond of it!

But first, things first! MathSoc needs your help to keep providing you with the services and events that you have all come to know and love. Help the social board organise the next event, or represent your class in the next MathSoc meeting by becoming a class rep. Hey, you get a free T-shirt or something like that out of it at the end of the term. Heck, it'll even look great on your resume! [*Employers like t-shirts as bribes—Ed.*]

Keep your eyes on Math related newsgroups such as uw.math.ugrad, or any of the newsgroups specific to your department for up to date information on events. Why not drop by the office for a friendly visit the next time you are on the 3rd floor? We're here to help!

See you guys around! (E-mail mathsoc@undergrad.math if you want to find us in cyberspace!) Until next time,

Poesy "Ms. 10 O'clock" Chen

News from the Collective

The PMC is on the march

Summertime... And the living is easy...

Well, we like to think so, at least. It's a new term, lads and lasses, and we of the PMC aren't taking it lying down. For one thing, our plans for world domination have come one step closer to fruition, as we have amalgamated the sometime AMC (Applied Math Club) into our collective. Yeah! Wow! Great stuff!

In keeping with this, our new God-Emperor Max I has been rounding up speakers for this term from all three departments in which we hold sway. We plan to have at least eight speakers this term, and as always, free sugary-type refreshments will be available to anyone who comes out.

We are also sponsoring a broomball and a slo-pitch team this term (watch for the hopefully-upcoming annual prof-PMC softball game). As well, since campus rec isn't supporting Ultimate this term, we are. Games will probably be every Wednesday afternoon at the Village Green. Come one, come all!

Keep watching for other events. If you have any foolish questions, feel free to bother God-Emperor Max Stevens, Dread Minister Calvin Li, or General Secretary Matt Walsh with them. Up the revolution!

Matt "So-Krates" Walsh
General Secretary & Lord High Everything Else

gradNEWS

The Infomercial

Welcome back. As the Math Class of 1996 enters its final year I am inclined to think about how much I am going to miss UW. I have considered failing a couple of courses to extend my stay, but the price of tuition has made this financially prohibitive. What I am planning on doing is to make the most of my last year by getting involved with the Math Grad Committee (otherwise know as the MGC).

Of course I am biased, but I do see this as a great way to have a great time and keep informed of grad related happenings. What other committee has set its eyes on visiting Canada's Wonderland, cheering the Blue Jays, waging paint warfare, camping and tubing in Elora Gorge, and patronizing drinking and eating establishments? What other committee will arrange grad pictures, grad ring sales, and produce a memorable yearbook and graduation ball? I think after three years of schooling you can figure out that I am talking about the MGC.

How to keep in touch with the MGC?

- Contact us at:
Office : MC 3029
Phone : x6659
E-mail : mgc@descartes
- Read the uw.math.ugrad newsgroup. We will try to include 'MGC' in the header of any post which pertains to the Math Grad Committee.
- Check the door of the MGC office and the bulletin board to the left of the office door. Flyers advertising upcoming events, sign-up sheets and other grad related info will be posted.
- Look around the Math Building for MGC flyers.
- Read the MGC column in subsequent issues of mathNEWS

Let's Show Our True Colours

I know that this is a little early, but I thought that I'd put a word in your ear.

Canada Day is coming, and the largest celebration in South-Western Ontario is in our backyard. We need some 200 volunteers to help out with the day, with ambassadorship, concessions, childrens' games, and much more! If you think you're going to be in the KW area come July 1st, and you want to lend a helping hand, then please contact Eric Sutherland at 747-0286 or esutherland@jeeves.

Let's give something back to the country that we call home. Let's show some pride in the national colours. Let's celebrate Canada Day together.

Eric Sutherland
Canada Day Volunteers Dude

What is happening with the MGC?

(and other grad related info)

May 10 MGC organizational meeting. Don't worry, it's not too late to volunteer a helping hand.

May 18 First Night Out at Front Row. If you missed this you missed a good time. Of course there will be more activities to come so don't feel bad.

May 19 Squash ladder sign-ups end TODAY.

May 24 Ring sales and sign-ups for grad photos begin.

NOTE: You cannot wait until January to have your grad photos taken for the first time. If you do wait, your picture will not appear in the yearbook or the class composite. Retakes will occur in January free of charge, but we must have a grad picture of you before then to include in the yearbook and class composite.

May 30 Ring sales and sign-ups for grad photos end.

May 31 Traditional grad group photo on S.West steps of the Math Building. Please be there promptly at 4:00 pm.
- Grad photos begin.

June 2 Canada's Wonderland (tentative).

The End... For Now

If you have any questions, concerns, ideas, or would like to help out, just drop us a line. See you soon,

Mike Vanderkaden
MGC Chair

ATTENTION ALL FUTURE ACTUARIES!!!

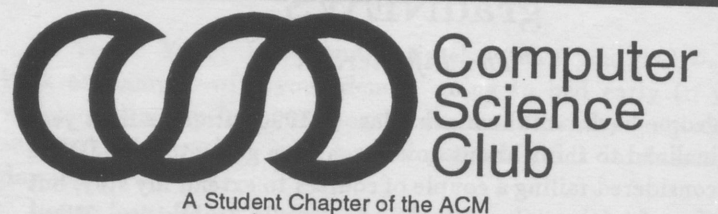
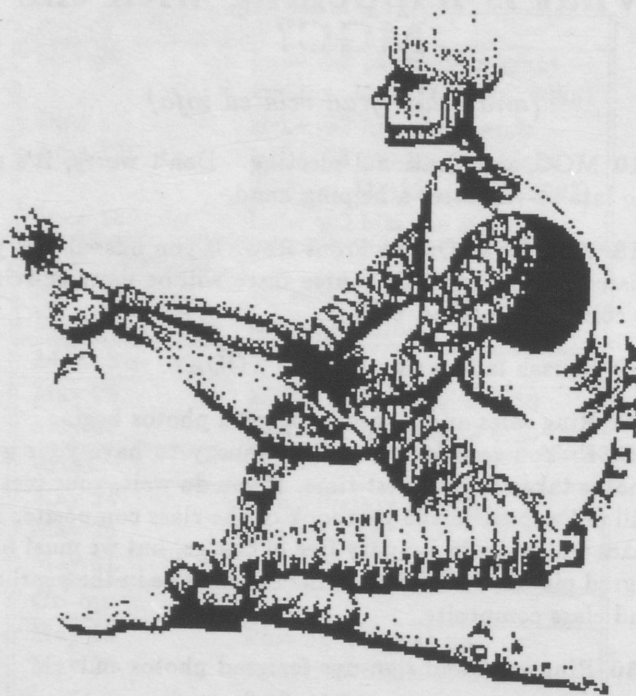
The University of Waterloo Actuarial Science Club has been set up for the Summer. As May exams draw to a close, keep your eyes open for upcoming events; the first of which will be our "After Exams Bash."

Plans are also underway for a Wonderland trip, informative talks given by professionals in the field, a trip to a Jays game and the ever popular Laser Quest.

For those of you who don't know, Actex's for all Associate exams are available for sign out at the club, along with other literature related to Act Sci.

Memberships are available in the Act Sci club office (MC 3030) and office hours are posted on the door. Hope to see you all soon!

Raman Srivastava
President.



CSC Flash

Greetings and salutations, bipeds. My CSC, keeping hours that shame 7-11, welcomes you back from your work terms. We would also like to remind you to renew your membership, or if you have not been a member, to come down to MC 3036 with your \$2 (cheap). Why would you do this? The CSC library and staplers at your disposal, an account on the most charismatic machine on the campus (it bears my name, after all), and expressing your support for the CSC and its services. And speaking of services:

Talks talks and more talks

On Wednesday, 24 May, the CSC will be giving the world renowned UNIX I talk. Learn the basics of UNIX in no time at all. Details will be posted in the Math building. And if that didn't provide you with your fill of excitement, then the UNIX II talk given the next day at the same time will be sure to hit the spot. Both talks will be given in MC 3006, and as usual tea and doughnaughts will be served.

Then, on Monday, the 29th, Mike Van Biesbrouck will be empowering you with the ability to create your own homepages with HTML. The HTML talk, also starting at 4:30, will cover everything you want to know and more about constructing a WWW home.

Future talks include a talk on Tcl/Tk-GUI Shell scripts and an Introduction to Debugging. Watch future issues of *mathNEWS* for more details on these events.

Fashion

During a quick excursion to Paris in my private jet, I presented the higher echelons of the fashion industry with a CSC T-Shirt. Rest assured that the summer trend in Europe is swiftly changing. CSC T-shirts are on sale for just \$14 and they come in a variety of colours. Couple this with an "It doesn't have to make sense, it's University policy" button, and you will be almost as cool as me.

Quota

The time has come again for you to renew your CSC quota at the low cost of \$2.00 per MB. If you do not renew your quota, you may find a few important files missing. Then again, you may not, but the question you have to ask yourself is, do you feel lucky?

Addenda

As always, read the `uw.csc` hierarchy or web to <http://csclub.uwaterloo.ca> for up-to-the-minute information on the CSC.

Calum T. Dalek
Chairbeing

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And 4 Coke — Delivered!!**

\$12.99 plus tax

Strange Rantings from The Void

or

Just when you thought sanity was safe again, reality intervenes

Greetings, Mortal Beings seeking to peer into the vast hidden secrets of the Ars Mathematica. Know then that I have seen the future, and have autographs available. Know then that the true secret of existence is merely to learn that it does not exist, and the world, as you know it, is not real. Nor is your bank account, which I am willing to benevolently expunge from reality, to the betterment of your eternal soul (which doesn't exist either, but acquiring cash is a hobby of mine. Albeit a non-existent one, which only serves to demonstrate the truth of my claims).

Ah, but Truth. Seek not after Truth. Seek to master Truth, and you will fail to learn even the reality of this meager, mortal realm, but seek to know that which is Not, and you will know that you know nothing... (In time, you will get used to this realization. I did!).

The only things which are true are those which are not.

This is not Zen. (Thank Goodness!).

This is the not The Way of the Spotted Zebra, but it grazes nearby...

Know then, that Reality and Sanity are relative concepts... And that this truth remains true even for those who lack conceptual relatives, or parents you cannot perceive or conceive of (having not been there during the moment of conception, save perhaps tangentially).

Beware all those who beware of you, for their wariness wearies the worried wanderer in the wastelands of the wondrous, willful, Weird of Weylund. Know that in time, you will realize that time is an illusion (and lunchtime, doubly so). In that time which is not, you will not see that you are, but not that you are not not, and so not being, will be. (Confused, that is, which is understandable under the circumstances which circumnavigate the circular circumference of circular reasoning that lies at the heart of all true sojourners into the Void that is Not). Fear not, lest you be feared. Drink not, lest someone drink you. Die not, lest you be dead, and thus more and less real than you weren't before.

This was not a stream of unconsciousness unwritten by:

Lord Nulls et, Ruler of the the Void That is Not,
High King of the Realms of Non-Being,
Emperor over the Lands of Unreality,
Knight Protector of the Surreal and the Unreal,
Patron of the Unlikely Circumstance,
Champion of the Impossible Ideal,
Defender of the Highest Prime Number,
Wielder of the Last Untrue Fact,
Last Master of Factual Syllogism,
High Priest of the Improbable Outcome,
Keeper of the Way until the day of The Departure,
Manifesting ourselves in these the mundane realms of earthly existence as the mortal vessel known to the denizens therein as

Kevin Hartmann

(See! Who says it takes great talent to write for mathNEWS!)

The Game

Summer is (almost) here and actually being able to go outdoors allows all kinds of new activities. One not seen before in the Waterloo area will be on May 27th. Known as *The Game*, it is an exciting and challenging twenty-four hour ... game.

The Game is somewhat akin to a treasure hunt, in that each clue reveals the location of the next. The difference is that the clues can take all manner of forms—puzzles, allusions, codes, pop-culture references, scientific problems—just about anything that could be used to convey information. The clues will often lead players away from the starting point, but usually get them home, probably not before dawn, but at least before the next sunset. Much sleep is lost; much fun is had. The goal of The Game is to complete this quest as quickly as possible.

The Game began at Stanford, with the inglorious name of BARF (Bay Area Rapid Find). Each year a number of Games were run, usually by students who had played in previous years. The clues were scattered around the campus and beyond, hitting San Francisco, Berkeley, San Jose, sometimes even as far away as Lake Tahoe. It eventually evolved to its present form, including hidden invitations to play, clues to help you during the actual game appearing during the week before the event, and the weekend of the game itself. Recently, it has spread to other campuses, most notably U(W).

So if you see strange signs while walking about campus, check them out. An odd classified ad might contain valuable and useful information. Think about getting a team together. A wide range of skills is important—having no one who knows who Ophelia was is just as bad as not being able to recognize Morse Code.

Game date is Saturday, May 27th, starting around noon. There is a per-team charge, to cover the cost of clues—it's done on a break even basis. Because pre-clues will be placed before the Game itself, teams need to register as soon as possible. We will be able to fit in teams after Saturday the 20th, but it will be on a first-come first-serve basis.

Good luck!

Ben St. John

P.S. For registration information, try your hand at: Bi dxl'pu elpbxls tfq ztfv vx ibfx xlv nxpu quvtbws, vkuf sufq u-ntbw vx twekunsv@pbso.svtfixpq.uql

Verbochronology

- | | |
|----------------|---------------|
| A. sherpa | F. ilka |
| B. contretemps | G. jongleur |
| C. kepi | H. drupe |
| D. anlage | I. saxifrage |
| E. hoopoe | J. phlegethon |

$$\frac{(A \times G \times B) + 3}{5} + (42392 \times G) + J - 17 =$$

$$\frac{(G + E)2J - 3126905}{5} + 9 =$$

$$\frac{F^{(H-1750)} + I}{D} \times 110762 - 4645 =$$

$$\frac{B^2 + 27602}{C - 1843} \times 2000 + 19 =$$

profQUOTES

It's the first batch of profQUOTES for the term and I thought it would be nice to let you all know where to submit them:

1) The BLACK BOX in front of the Comfy Lounge or 2) electronically to mathnews@undergrad.math. PLEASE put article in the subject line. Please quote the profs exactly so we don't get blamed for a misquote. The funnier, the better!

"When I start a new topic at 17 after, you guys are putting away your books. That means 'Idiot, what are you doing to us?'"

Safayeni, M SCI 211

"Does everyone believe this? Good! Proof by democracy."

Best, C&O 367

"It's harder to draw in n-space, unless you're smoking funny cigarettes."

Best, C&O 367

"Sorry, I'm on drugs. I found some wonderful drugs!"

C. Struthers, STAT 330

Prof: "This method involves being sly, devious, crafty, and suitably scientific. How do we go about doing that?"

Student: "Use Maple?"

Best, MATH 138

"In most calculus courses, the proof of the chain rule usually gets a wave of the hand. In this course, we're going to go more in depth — a wave of both hands."

L. Dickey, PMath 331

"Let's do number 3... it's on your homework. I suggest you start a new page so you won't have to copy it over later. We won't accept any homework that have other notes from class on them."

Younger, MATH 136

"We're not engineers ... we need to get some work done."

Morrison, PHYS 122

"Let's say you have your favourite m-vector sitting in your pocket and you want to extend its basis..."

Hewitt, MATH 136

"You should see an n-dimensional space here. If you don't, then you're not taking the right drugs."

D. McLeish, STAT 331

"I know, I'm missing 90210 too. Actually, that's a good show to study abnormal psychology!"

P. Dodgson, PSYCH 357

Student: "Don't you mean *non-trivial* instead of *trivial*?"

Prof: "Oops! Yes, absolutely. I must have been thinking about my sex life."

McGee, AM 343

"When I'm done, I would like to see that: a) not all of you have left; b) not everyone has fallen asleep; and c) no one has gone into cardiac arrest."

D. McLeish, STAT 331

"It quite often happens to me that students ask me what's on the exam before the exam... and I just tell them."

Younger, MATH 136

(After the overhead suddenly dies) "Regardless of your personal religion, I want you all to pray now. Maybe we should order you according to religion, though, so we know which one works! If it doesn't come back on, the atheists win."

D. McLeish, STAT 331

(Talking about the exam) "Maybe I should teach you about the stuff we're going to ask you questions about."

Larry Smith, ECON 102

"If you have some spare slots in your brain, this [equation] would be a useful one to put in there."

Anderson, PHYS 122

"I think just for fun you might want to try it. Of course if it's an even bigger matrix, you will have even more fun."

F.C. Tang, MATH 235

"A lot of things in Unix are stuff guys sitting eating pizza and drinking Coca-Cola in front of a terminal at 2:00 in the morning would find funny, but the rest of the world is just thinking: geeks!"

Mouawad, CS 342

"Waltz was the Gothic Rock of the 19th century."

Enns, MUSIC 356

(At 2:27) "Oops, am I running out of time?"

Burris, MATH 146

"We have absolutely no reason to think this will do us any good at all. But let's do it anyway."

Small, STAT 240

"Let me try to answer this question: maybe it's easier."

D.H. Younger, C&O 230

"If there is a calculation error to your advantage, don't tell us. We don't want to know - consider it a bonus."

Safayeni, M SCI 211

"Anything is possible when you're on drugs."

Willard, PMATH 330

"What's a mathematician's favourite power of π ? It's pi to the teeth. (π^π). (much subdued laughter)"

Burris, MATH 146

vapidFIRE

The first week of May saw Whiny Jacques Parizeau complaining about Jean Chrétien sabotaging Quebec's economy. "That's absolutely ridiculous," stated Bob Rae when told of this charge. "Mr. Chrétien comes from Shawinigan—he's as much a resident of Quebec as Mr. Parizeau. Claiming that Mr. Chrétien, a Quebec resident, is sabotaging the Quebec economy is like claiming that I, an Ontario resident, am sabotaging... uh, never mind."

In a related story, it was announced this week that the most insidious Canadian computer virus ever seen was released on the World Wide Web on Thursday, May 4th—the Quebec government's sovereignty blueprint is now available at <http://www.qc.ca>.

Five homes in Scarborough were destroyed by the explosion of a bomb on Friday, May 5th. Miraculously, nobody received more than minor injuries. This incident demonstrates once again that, while not lethal, living in Scarborough is certainly a blast.

In a related story, Tri-Star Pictures was rocked by a bomb this month—*Jury Duty*, starring Pauly Shore.

Oswald's Tale, a new book by Norman Mailer dealing with who was truly behind the assassination of John F. Kennedy, is available in bookstores this month. Next for Mailer will be an examination of whether Juliette Lewis and Woody Harrelson were truly natural-born killers.

The home of Holocaust-denier Ernst Zundel was hit by arson early this month. The burning, suggests anti-racists, was meant to commemorate V-E Day, the 50th anniversary of the end of World War II in Europe. These same anti-racists are now planning to hit Pat Buchanan on Canada Day and Bob Rae on Labour Day.

George Duffy of Responsible Firearm Owners of Alberta told the House of Commons justice committee on May 8th that children will have to resort to playing golf and football if they are denied easy access to hunting rifles and shotguns. Mr. Duffy said, "Children are going to say, 'I'm going to play golf. I'm going to go play football.' Is that what the government wants?" When told that yes, in light of the statistics on accidental and intentional shootings among children, that was what the government wanted, Mr. Duffy replied, "...".

And finally, the Parti Québécois government has warned Quebecers in its recent budget that they will face steep tax increases unless they vote for sovereignty in this year's referendum. Claiming that this wasn't blackmail, Jean Campeau added, "And it would be *such* a shame if people voted against sovereignty and their houses burned down, wouldn't it?"

Mike "NewsHammer" Hammond

Party Time! Excellent!!

From the MathSoc Social Director

Haha!! You thought that this article would be a wild party, didn'tcha? HaHA!! If you wanted a wild party, you should have gone to Kim Mitchell. [Yawn! *Kim who?*—Ed.] Instead, you're sitting here, reading bureaucratic, administrative 'Soc shmuckery. Boy, do you feel dumb.

I'll make this short and sweet (just so your teeny brain doesn't overload).

Tentatively in the works this term are the following events:

- The traditional Pub Night at the Bomber, which will be scheduled very soon, hopefully taking place on one of the Fridays preceding midterms;
- SummerFest, which'll include food, music, a giant water-fight, and a mini-putt course on the third floor of MC (last item VERY tentative);
- A trip to Canada's Wonderland or a Jays game in conjunction with the MGC; and
- A Casino Night.

There will also be free hiking trips, spelunking, and trips to Grand Bend organized. These'll probably be arranged without much notice. People interested in participating should send e-mail to jncressman@undergrad.math to be put on the mailing list.

Oh yeah, and if you've got a really messy sense of humour, and feel like goofing off, (or to those of you interested in Getting Involved or pretending that you're important), there are some Very Key Positions waiting to be filled on the social board. You don't need to be good at anything; if you passed finger-painting in kindergarten, then there is a position here for you! I'll need help with publicity, computer guck, and I'll want some dealers to man the casino tables. (←Note: You have to look suave.) Oh, and most importantly, I'll need the ever-important Yes-man. (←person. Sorry.)

Sarah "Ain't got no social life,
and seem to be directing yours" Kamal

We Interrupt This mathNEWS

From the "18 Years or 8 Years, Whichever Comes First" Department

It was reported in *The Toronto Star* last week that the Toronto Transit Commission's fleet of articulated buses was falling apart. For those of you who've never been to Toronto (or Ottawa), an articulated bus is an 18-metre-long vehicle with an "accordion" section in the middle. The TTC folks decided that keeping the articulated buses on the streets for the rest of their eighteen-year expected service life (they were purchased in 1987) was not worth the repair costs. I guess TTC now means "Take The Car."

Darren "Ren" Morby

Bridging the Gap

Many partnerships have developed specialized methods of communications between each of the members. These methods, called conventions, can lead to some remarkable results—either through the convention working or not working.

One such convention is called Raptor. Its purpose is to show awkward hand types—those with long minor suits and four-card majors when the opponents have opened the bidding. We can't make a takeout double, as we don't have the third suit. When playing this convention, the bid with that hand type is one no-trump, which shows a four-card major and a longer minor with at least the strength of a two-level overcall.

Vul: None	North		
Dealer: W	♠ J 10 6		
	♥ A Q 10 5		
West	♦ 10 8 4	East	
♠ 9 7	♣ 7 6 2	♠ A Q 8 5	
♥ 9 7 3		♥ K 8 5 2	
♦ J 9 5	South	♦ Void	
♣ 10 9 8 5 3	♠ K 4 3 2	♣ A K Q J 4	
	♥ J 4		
	♦ A K Q 7 6 3 2		
	♣ Void		
West	North	East	South
Pass	Pass	1 ♣	1 NT*
3 ♣	Pass	5 ♣	5 ♦
Pass	Pass	Dbl.	All pass
Opening lead: ♦ x			

East opened with one club, planning on showing his other suits later in the auction. South overcalled one no-trump to show a four-card major with longer diamonds. West made a pre-emptive jump to three clubs, which East raised to game. South, not wanting to be shut out of the auction, introduced his diamond suit, which ended the auction, aside from East's double.

West led a diamond to try to cut down on dummy's ruffs. South pulled trump in three rounds with the A-K-Q, and then led the jack of hearts, with West playing the three. South played small from dummy, and East paused for thought.

If West had had J-x-x-x of diamonds, then South would have won the first trick with a smaller card. So, declarer must have seven diamonds, along with a side four-card major. The three of hearts from West showed an odd number, so South had either two or four hearts. If South had four hearts, then it did not matter if East took this trick or not. If South had only two, then by ducking East would lose his heart trick.

But does East mind losing a heart trick? In this case, South has a 4-2-7-0 distribution. So, the defence is only getting heart and spade tricks. If West had the king of spades, then the defence can get three spade tricks, as long as East ducks this trick, or East wins this trick and switches to a small spade.

If West doesn't have the king of spades, then it is suicide for East to win this trick, as declarer will then have two discards on the hearts for the small spades, and then he will be able to lead a small spade toward the king. Further, there is a chance, if East held the 9-7 of spades, that declarer would have to come to three spade losers.

So, East played small on the jack of hearts. Meanwhile, de-

clarer had been thinking about what East had been thinking about. It was clear that most of the outlying points were in the East hand. Further, East's distribution almost had to be 4-4-0-5, as with more clubs, West wouldn't have a preemptive three-club bid, and with more major suit cards, he would have opened with that suit.

After winning the jack, declarer led a small spade to the jack and queen. East continued with a club, won by declarer, and another spade was led to the ten and ace. Declarer ruffed the next club, and played off the remaining trump to reach this position, with East still to discard:

	North		
	♠ 6		
	♥ A Q		
West	♦ Void	East	
♠ Void	♣ Void	♠ 8 5	
♥ 9 7		♥ K 8	
♦ Void	South	♦ Void	
♣ 10	♠ K 4	♣ Void	
	♥ 4		
	♦ Void		
	♣ Void		

It didn't matter what East discarded—a heart would give declarer a trick with the queen, and a spade would allow the four to score a trick.

A very well-played and defended hand. Perhaps in light of the resulting squeeze, East should have risen with the heart king, and played his partner for the spade king. At least he would have had a chance of beating the hand.

If you are interested in finding out more about the bridge, please contact the University of Waterloo Bridge Club at uwbc@watserv1 or esuther1@jeeves. Check out our homepage: <http://watserv1.uwaterloo.ca/~uwbc/uwbc.www.html>

Eric Sutherland

Mathematical Afflictions

A Layman's Guide

Good evening. I'm here tonight to inform you of the various afflictions one can contract while being an undergraduate student at the University of Waterloo Faculty of Mathematics.

Now, first off, those students who have had to work too much with set theory stay up late at night. To help them stay awake at night, they drink lots of JoltTM (a favourite of CS majors) or coffee (Nectar of the Gods for those in Pure Math). This high intake of caffeine in a liquid format causes kidney failure in many an undergrad; after this they require Renal Dialysis. Heck, male mathies might even get Penile Calluses.

Another problem arises from graphing. This puts tremendous strain on an Applied Mathie's arm. This can lead to a heart attack, also known as Cardioid Arrest.

Since it's the summer, we have to watch out for our Pure Math majors. Staying outside in the sun may cause them to burn, or catch Group Theoria from mosquito bites.

This has been a public service announcement on behalf of the Math Faculty warning you to "Watch your afflictions!"

Dr. Jean-Guy, with assistance from
Intern Timbley & Intern Hammer

Surviving as a Non-Mathie in the Math Faculty

Guess what? We're short on articles. I came to type, and I find myself writing stuff. Bah! But, I thought I'd make the best of a pathetic (but all too common) situation and share some of my ageless wisdom with you.

Let's face it—not all of us are here because we have an undying love for mathematics. In fact, a good number of us not only dislike math, but outright hate it! Did you know that approximately 79% of the undergrad population in the Math Faculty has no desire to do graduate work in mathematics (based on a study where I wrote down a bunch of numbers until one looked about right)? I am one of these 79%. When I applied for "Computer Science" at U(W), I was mortified to see on my 1A schedule such terrors as "MATH 135" and "MATH 136." I was going to get a B.WHAT??!! Argh!!!! I decided I'd try it out and see if I could do it. After all, I could probably get a job with a B.Math!

So, I have survived into 3A with an astounding 80% average (no lie!), yet I hate math and really have no insight into mathematical subjects. Perhaps you would like to duplicate my feat of academic success. It is definitely possible, and now I will share with you the secrets of succeeding in the Math Faculty. (Note that these tips are only meant for people who, like me, genuinely abhor mathematics.)

1. Admit that you've got a fight on your hands. Once you realize this, you will be prepared to start making the kinds of sacrifices that will win you the coveted B.Math, and perhaps graduation With Distinction! (Sick fact: Artsies need 83% to make their Dean's list, while Mathies need 87%!! **WHAT IS UP WITH THAT??!!!!!!**) Remember, getting that B.Math will (probably) keep you off UIC, since most employers are easily impressed by it and won't ask you what you know.
2. Forget about TA's. Well, unless you're in CS 130 or 134 and are chained to those hellish Macs, the Prof is really the only way to go. The TA's are overworked and don't have time to answer your questions. But if you go to the Prof (especially outside of their office hours—fake an excuse to get them to see you at special times!) you are guaranteed to at least get a competent response, and to probably have the Prof. recognize your name! Having the Prof. recognize your name is the *Golden Touch*, and practically guarantees that you will not fail. It worked for me in MATH 137 (ask Prof. Vrscay!) and can work for you, too. Don't worry if your Prof. can't speak English very well—just get h[im|er] to draw pictures.
3. Use the Tutorial Centres. Ya, okay, so this contradicts 2. So? Proof by contradiction, eh? I don't consider the Tutorial Centre helpers to be TA's—they're much too helpful and don't exist after 2nd year. Going to the Tutorial Centres can mean the difference between getting a free proof and not getting a free proof. Starting to see the picture? Free proofs.
4. Don't form study groups. Study on your own—meeting other people is a big waste of time since you have to *get there* and then *attempt to not chit-chat* which is nearly impossible in any semi-social setting. Instead, get a list of phone numbers and call your friends with very specific questions. If they start rambling, you can make up some reason to hang up.
5. Fear failure. This is a really good motivator for learning. Trust me—that's how I've survived so far! (Well, that and YAHWEH on my side!) Remember: failing is evil evil evil!! But, if you DO fail, just brush it off and try harder the next time.
6. Do plenty of pre-lab work for those CS courses. Think about the problem for days in advance. I used to take entire weekends and devote them to CS assignments. That seemed to work well (of course, I need more time now that I'm not taking just CS 134). You become a hermit, but you will eventually get that B.Math!!
7. As sad as it sounds, that evil four letter word actually helps: W-O-R-K. We all hate it. None of us really wants to do it. We'd all rather be outside throwing spheres at each other or playing nethack. But when it comes down to it, all-nighters are just work backlogs. So, keep up a consistent effort. Read ahead for your lectures. Do assignments. Summarize your notes before midterms/exams. (Photo)copy and read over the solution sets. Ask the prof for help on things that you don't understand. Post to uw.general (oh, sorry, that's how I procrastinate!). Study for long periods of time (who can beat my 161 hours of final exam study time in my 1B term??). Remember, the learning curve is logarithmic in the amount learned with respect to time, and you need to squeeze every drop of knowledge out of those worthless-yet-expensive textbooks!
8. Get the old assignments of people who have taken the course before. If nothing else, this will get you grades. I find that they're helpful if I use them for hints (i.e. don't read the whole solution in one sitting) when I am really stuck. Even if the questions are different, this is some good study material! Old midterms and finals are also incredibly helpful.
9. (my favourite) Pray often. It's not like you've got something to lose!
10. Play on your work terms, not on your school terms. It releases that nervous tension and you are ready to hit the books when the next school term rolls around. Note that this does not work after second year. Also note that this is useless to you if you aren't in co-op. Not being in co-op almost guarantees you of UIC collection or graduate studies.

So, there are my hints. "Hints" describes them well, but not as well as "STRAINED AND PATHETIC." Oh, the one hint that I haven't mentioned is to stay way from boy/girlfriends. They eat up your time like cray-Z! But, if you do go with one, try to get a smart one. And if you work hard enough, you could possibly even do better than 80%! Hey, I hate math, and it's worked for me so far. Sure, everybody thinks I'm a big geek who doesn't socialize and is a workaholic, but so? As if THEY know anything! They're just jealous. Eh?

Grumpy Young Frosh Gripes About The Work Term

And Other Miscellaneous Things

Man, I hate Ottawa.

As a *city*, it's fine. Great, even. *Very* pretty. Oh, and it has *excellent* bike paths. But getting stuck working there in the winter **SUCKS!**

Why this bitterness you might ask? What was it that turned Sarah off our gracious Nation's Capital so quickly? Well, baby, honeychil', the answer is simple:

OTTAWA BUSES SUCK

Man, I Hate Ottawa Buses.

There's nothing more irritating than sitting in an OC Transpo bus, wearing your Stockings That Think They're In A Marathon, listening to the wailings of the snivelling little snot in the corner, a huge black scowl darkening your face with each successive piteous cry, your fingers itching to put an end to the little whiner's misery once and for all, and then just when you decide you've had enough and get up to pitchfork the sucker, its mother has the bloody nerve to take it OFF the bus!!! **AAAAARG!!! IS THERE NO JUSTICE IN THIS WORLD?!?!!**

And that's not the worst of it! Do you know what **REALLY** bugs me?? I hate it when I start thinking about something funny that happened at work, when, despite the black mood I get into habitually when I'm on the bus, I feel my lips start to twitch, until finally I'm just **SITTING** there, **SMILING FOR NO PARTICULAR REASON!! ON AN OC TRANSPO BUS!!!!!!**

The Involuntary Smile inevitably leads to the Gratuitous Chuckle. Yes, yes, I am proud to say that I have joined the ranks of little old ladies who sit in the front and mutter to themselves and strange, swarthy men who sing opera in the back. (I'm so ashamed) Yes. I've got to admit it. It's time to let it all out. I... I have a Problem. Yup, I'm one of those weird freaks who sits there giggling to herself on the bus.

I can't help it!! I mean, I've tried to stop it by thinking about really sad things, like, I dunno, the depletion of the ozone layer, or the state of my hair, or Dan Quayle. Whatever. Nothing ever worked! Every time, a blasted chuckle would escape and I'd have to bloody well pretend to cough to cover it up. **DAMN**, I hate that. Geez, I hate Ottawa buses. **OOOOOH, I HATE OTTAWA!**

Not that I'm saying Waterloo is all peaches and cream, either. Getting back from the work term was traumatic as well. One episode in particular has engraved itself permanently in my mind.

I was standing in the line for the bank machine, minding my own business, when I saw a good friend of mine from the first term walking into the room. I averted my face in horror—not because he was wearing really ugly clothes, and not because I'd recently broken out in volcanic, multi-coloured acne, but because *I couldn't remember his name!*

Yeesh! I think I actually yelped when I glanced back and noticed him in line behind me. (Yes, I'm one of the weird freaks who yelps in bank machine line-ups, too.) (Joy joy.) I peeked back again. Deep grooves furrowed his normally smooth alabaster brow, and he was wearing the look of intense concentration that can generally be found on the faces of toddlers getting

potty-trained. **AH-HAH!** My furiously thinking mind exalted. He didn't remember **MY** name, either!

So we both stood in line for several minutes, pretending we hadn't noticed each other. It was a race to see who would come up with the other person's name first, and I was fairly confident of winning, until-

"Sarah!" he exclaimed, pretending to have seen me for the first time. *DamndamndamnDAMN* I can't **BELIEVE** he remembered *first what WAS his bloody name oh, oh, OH!*

"Jedediah!" I squawked, my eyes opening wide and a ridiculously huge, relieved grin spreading across my face. He looked somewhat surprised at the look of ecstatic, unbridled joy on my face, but put it down to my usual sunny disposition.

Feeling slightly dizzy and nauseous from my recent mental exertion, I turned and glanced at the woman by his side. I reeled. No, it wasn't from the powerful waft of her godawful perfume assailing my nostrils (although I do think that had an impact,) and no, it wasn't from the petrifyingly huge amount of make-up on her face either (which gave her a remarkably Beetlejuice-esque appearance.) No, my distress stemmed from the fact that I now had to remember his bloody *girlfriend's* name.

Crapcrapcrapcrap what was it DAMN it was one of those **REALLY TACKY** western names **SON of A-** "Betty Lu!!!" I shrieked, an even more stupidly goofy grin splitting my face. Then, thankfully noticing that it was my turn in line, I turned quickly to the machine, got my money, and sprinted out of there.

Trust me, that experience has caused severe emotional scars on my psyche. I will no longer be able to look at a bank machine line-up with the innocent eyes I used to.

Oh yeah! Before I forget, I think I'd also better mention that

OTTAWA WINTERS SUCK

Since I was working in downtown Ottawa, I decided that it would be a really great idea to learn how to skate along the Rideau Canal. Oh geez. That was great fun. No, really.

I loved the grace with which my arms windmilled as I tried to keep my balance. No, really.

I very much enjoyed watching three-year-olds whizz backwards past me. No, really.

Oh, and I especially loved the way the pretty, freshly fallen snow on the ice made me look like the abominable snowman when I fell on my butt for the 35th time. Really.

The Rideau Canal in Ottawa. The longest skating rink in the world. Yup. Believe it. It's looooooong. Especially when you butt-sweep its entire length.

The aspect of my winter skate that I enjoyed the most, though, was at the end, when I sat and tried to untie the laces of the running shoes I'd wittily knotted together at the beginning of my journey through ice hell. The laces were, shockingly enough, like everything else around, frozen bloody solid. After gnawing through them for a little while, I gave up, shoved my feet in them, and hop-shuffled my way to the closest bus stop. Visions of mutilation and carnage danced through my head as I thought

continued on page 11

Out To Save His Soul

No brother of mine is going to be an engineer!

Well, with the start of summer all those hope-to-be-UW students are anxiously watching their mailboxes... But this article isn't about them so time for me to toss this pointless intro...

Anyway, the long and short of it is this: my dear little (*so he's taller than me, so what's your point?!?*) brother got a letter a few weeks ago telling him he's been accepted into UW Math/CS. A week later he gets a letter telling him he's been accepted into UW Computer Engineering. (*I didn't get accepted until way later last summer; so he's smarter than me, so what's your point?!?*)

Obviously this shows that the Math Faculty has always been quicker to recognize real talent, which makes me personally wonder about "the rest of them" in Engineering. But I'd better shut up before they bash my brains out with that Tool thing of theirs; they are, after all, "thugs."

Now my mission is to save my brother's soul from damnation, i.e. engineering.

Firstly courses; Mathies, being already so much more intelligent to begin with, don't have to take nearly as many courses. Plus, two of the five courses we take are electives, which the wise among us choose as, well, "fascinating" (but, by pure coincidence, easy) courses.

No big deal? What exam would *you* rather write, Physics or Psychology? Life is tough; why complicate it further? With all that spare time Math people are *free* to pursue their own thoughts and ideas, as opposed to: "I am John of Eng... Math is irrelevant... Life is irrelevant... You will be assimilated."

No, no brother of mine is going to get Eng'ified. Certainly not when I tell him he'll have to use WatStar, the most crippled and idiotic computer access system on campus (AOL *à la* UW). Definitely not when I tell him he'd have to learn FORTRAN... *No, I won't let them do it!*

So what's my point? No, I don't *really* hate engineers. But let somebody else's brother be one. Not mine.

Viet-Tam "Not Taller, Not Smarter, But Definitely Older" Luu

continued from page 10

of the co-worker who had recommended skating as a winter sport. Oh, I was going to enjoy going to work on Monday. No, really.

As I sat gingerly on the cold, hard seat of the blasted OC Transpo bus (which turned out to be an exercise in futility since the bus driver decided to AIM for every pothole on the street,) I mused on the folly of all those who skate for a living. Like, hello?!! Why would anyone (after skating for the first time) WANT to keep doing it? What kind of pathetic loser would you have to be to want to prolong that kind of masochistic torture?? It was then that I decided to buy a pair of rollerblades. And it was then that a stupid grin spread across my face. DAMN!! I clapped my hand over my mouth, and coughed to cover up the inevitable laugh that followed.

Christ, I hate Ottawa buses.

Sarah "Sunny Disposition" Kamal

The Bible III

Jesus Returns

PRESS RELEASE

Rome (AP)

After a 2,000 year silence, the Roman Catholic Church has released the newest—and final—book in the popular "Bible" series. This book, both an autobiography and a user's guide to life, chronicles the second coming of Jesus Christ, the Son of God first introduced in "Bible II: The New Testament," and contains detailed instructions on how to judge the damned.

This book is a major achievement of the Church, and Christ, who descended from Heaven to finish off the landmark series. The release of the text is expected to become the largest religious event since the release of the Koran almost 1500 years ago.

"This book is not just an other religious text, like the Koran or Bhagvat-Gita—or even the first two Bibles," said Mr. Christ in an interview, "This is *The Book* that Revelations 20:12 foreshadowed, by which all men will be judged for entrance to the Second Earth. It is not a book for the next 1,000 years, but a book for the Rest of Eternity."

Bible III: Jesus Returns is available at your local bookstore for \$24.99 (US), \$35.99 (Canada). A special educational discount is also available.

The Roman Catholic Church is the largest organised religious body in the world, and the main branch of the world's second largest religion. It provides a variety of religious and social services to its worldwide network of clients.

Saints Larry, Curly and Moe

Drew Hamilton's Top Ten Rarely-Asked Questions (RAQ)

10. Drew, you're such a good artist. Can you draw me a picture of...
9. Drew, how can you be so incredibly cool, and still find time to end world starvation and stop nuclear war?
8. Drew, this is the bank calling. We noticed that you have a lot of money in your account, and we were wondering if you would like to open up a preferred investor's account.
7. Drew, that dinner was excellent! Can I have the recipe?
6. Pizza Delivery? Isn't that such a glamorous job?
5. How come you were born so stunningly gorgeous?
4. Is it true what they say about Math students in bed?
3. Drew, we heard you singing. Would you like to sign a five-record contract?
2. Drew, this is the Ontario Lottery Corp. Would you like your winnings all at once, or would you like \$1,000,000 per year for the next forty years?

And the number one most rarely asked question of Drew Hamilton is...

1. Drew, will you go out with me?

Drew "Windows Is Your Friend" Hamilton

gpembro the Great

A Fairy tale from 2190 A.D.

The great beast "aafloatooni@descartes" trudged his way into the terminal room. All the occupants gasped in horror: the ugly monster had—*drum roll please...*—an empty Coke bottle in hand!

"Hey, friend," cried one bold observer, "that bottle contains drops of liquid, which, inadvertently spilled on the keyboards could spoil them for life."

The hideous creature simply grunted and logged in; women and children ran in fear. "Oh no," said the innocent users, "our computers shall be all ruined if this reckless behaviour is continued." Said they, "Oh no, what shall we do?"

Just then, echoing through the halls of the third floor, a voice came, carrying a message of hope: "I am gpembro, son of efembro who hath slayed the dark forces of novice.watstar"

The wicked aafloatooni turned his head up to meet the gpembro's Most Formidable Weapon, "Your Account Has Been Deleted", created by the hands of elven smiths. "Food is NOT allowed in the terminal room." The beast, seeing he had met his

match, simply whimpered "Sorry" and left. The users cheered, but the Hero took a short bow and proclaimed, "My work is not yet done; such is the case with root," and left. Running down the dark halls, he said to himself, "I hear chips a'crunching, crunching where they shouldn't..."

"You know," announced the Great Warrior to the chip-munchers, "that food will damage your machines." But his hideous audience was undeterred. Said they: "Leave our presence, this is the land of Calum, and your voice dost hold no authority here."

"It is for your own good that I do this," continued gpembro.

"Ah, but you underestimate our strength. Your Most Formidable Weapon is rendered useless here, and we, yes, we have a power that cannot be defeated."

"And what power would this be," laughed the warrior. But little did he know, even as the scent began to approach, that he had met his match...

"The Humble Bard"

Ten Good Reasons For Using WindowsTM

10. Coffee break while that document is printing.
9. Coffee break while those files are being transferred.
8. Coffee break while that spreadsheet is recalculating.
7. Hourly coffee break while rebooting the computer.
6. Coffee break when the system goes down for no apparent reason.
5. Extended coffee break while somebody installs more memory to run that new application, written in Visual Basic.
4. Lunch and coffee break while processing that little 4-Meg image file.
3. Paid day off while the system administrator de-fraggs the configuration.
2. Paid week off when the system administrator discovers the configuration is hopelessly fragged and re-installs Windows.
1. Paid year off waiting for the next version to be delivered.

Viet-Tam "I Love Windoze" Luu

One Reason For Not Using WindowsTM

1. Severe caffeine overdose.

Viet-Tam "C-c-c-c'ant H-h-hold St-t-t-till" Luu

This is a Quality Article

Well, almost...

I walked into the MathSoc office where the mathNEWS editor was sitting, and announced that I wanted to write a "Quality Article." It was a radical concept, and he, along with all the other members of the staff nearby, sat back in shock. I watched as one staff member picked up the phone, and quickly dialed 9-1-1. Another member, shaken, snatched a quarter from my pockets, and rushed off to call her analyst. The others watched me in a wary, defensive circle as if sizing up an impossible danger. The murmur of voices made it clear that they considered me mad. I watched in helpless amazement as they wrote my life off, sentencing me to a lifetime exile inside the Psychology building. The leering faces of white-coated students with an unnatural fondness for rodents is to be my fate, as punishment for my mad plan.

But I am not mad! I am not! I swear that I am not! This, my life's hope, lies in you, the mathNEWS reader's hands. Through you, my dream can take life despite my exile. Tell your friends. Tell your neighbours. Though it be heresy, I dare say it again: "Quality can return to mathNEWS!!!"

All it takes is you! Come out to production night. Write a better article than the last one you read. Dare your friends to write still better articles. Challenge their friends to do the same. Develop a personal style, then improve upon it. Together we can return mathNEWS to its former greatness! The Quality Revolution has begun!

Come write for mathNEWS! See you next Monday!

Kevin Hartman

Also Known As (when insufficiently sedated)
Lord Nullset, Ruler of the Void That is Not

mathNEWSquiz #1

A Squizzy Way To Start Your Day

Good morning and welcome to Darren's continuing marathon of co-squizmastering, now into its ninth month. Reports of his passing (all his courses last winter) have been greatly exaggerated, and as a result, he must spend one more term here.

On the plus side, we are happy to announce that Jerry Han is the new co-squizmaster. His questions are guaranteed to bring you much frustration as you valiantly try for the coveted mathNEWSsquizprize.

Speaking of the squizprize, all you have to do is submit more correct answers than anyone else, and you win. Submissions may be made to the BLACK BOX across from the Comfy Lounge, or electronically to mathnews@undergrad.math with subject line "Quiz #1 submission." But enough chit-chat; our first squiz starts... NOW!

Song Lyrics—Name Song & Artist

1. Later on they took his car
Drove on down where the beaches are
2. I knew I found my lady and that I had to make you mine
But the day that he married you, I nearly lost my mind
3. When rain has hung the leaves with tears
I want you near to kill my fears
4. I know the territory; I've been around
It'll all turn to dust, and it'll all fall down

Historical Potpourri

1. Ontario elections have been held in all months of the year except two. Name them.
2. Who was Premier of Newfoundland when Newfoundland joined Confederation?
3. Who surrendered at Appomotox Court House?
4. Where were the Articles of Surrender signed on V-J Day?

Acronym Scramble

1. OAS
2. SEATO
3. SSTO
4. CIDA

Good luck!

Darren Morby
Jerry Han

gridCOMMENTS

Good Friday morning, fillers of the grid. What you see on the back of mathNEWS is the first Gridword of the spring, not to mention my first grid ever! So please, be kind.

You know what to do: submit your completed grid (conventional, cryptic, or both), along with your name, favourite moist thing, and gridcomment, to the BLACK BOX or mathnews@undergrad.math by 6 PM, Monday, May 29th. We'll award a prize for the conventional and another for the cryptic. Good luck and have fun!

Darren "Ren" Morby

Untitled

Fear has many forms.
shapes

Fear confounds me.
confuses me.

Fear disguises itself.
tricks.
as friendship.
takes me off my guard.
blinded.

Fear admires my cats.
sits on my couch.
talks of nothing.
I am fooled.

Fear creeps towards me unremarked.
snowed.
tickles my unconcious.
encroaches my space.
obstructs my view.
needles my security.
intimidates.

Fear sits on me.
squeezing my chest.
ignoring my cries.
invading my territory.
shredding my safety.
tearing my soul.
attack.

Fear has left my house.
remains in my heart.
preventing me from opening the door.
a weapon against us both.
I am safer, I suppose.
but at what price.
many shapes.
forms.

Jimmy Musbetaf



Grid Clues (Conventional)

Across

1. Asks (8)
4. Jersey export? (4)
6. Widowed matriarchs (8)
8. Redundantly-coloured fruit (6)
10. Maples were this two months ago (6)
12. Truthful (6)
15. What Canada was once part of (6)
16. Found in the Netherlands, especially now (6)
18. Bid for a contract (6)
20. We get electricity this way (8)
22. Surjective (4)
23. What we're doing here (8)

Down

1. Work term documentation (6)
2. Atop (4)
3. Stitch (3)
5. Before Vegas (3)
6. Titles, in city hall (5)
7. Full of anticipation (5)
9. Rubber or postage (5)
11. Put up, as in poker (5)
13. European country (5)
14. Denial or Georgia (5)
17. This term (4)
19. It's high time (4)
20. Rummy players say this (3)
21. This tool has a point (3)

Grid Clues (Cryptic)

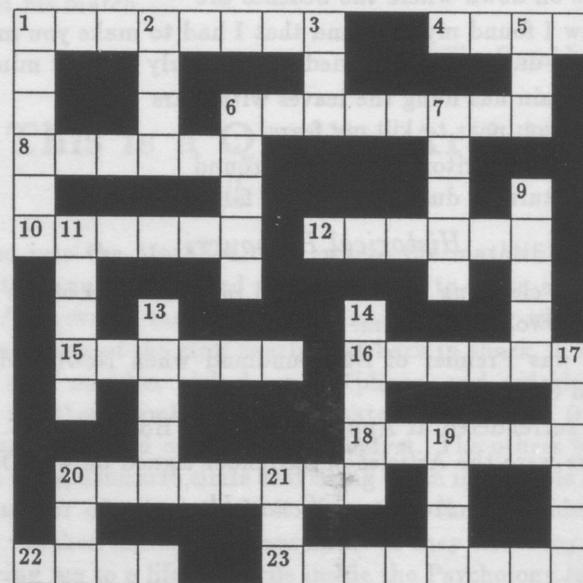
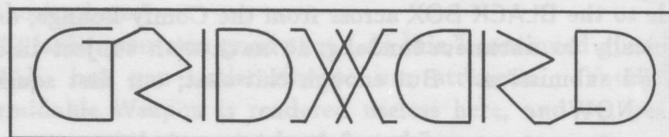
Across

1. A twenty-cent concept (8)
4. How to use computers: put in, process, emit (4)
6. Tomorrow, I will use the chair for, er, 24 hours (8)
8. Sounds like a cow wearing a Hawaiian dress (6)
10. Measuring seconds in Tim, ingrate! (6)
12. Charles, did Darren win without the chihuahua? (6)
15. Small fish are confused, or butt (6)
16. A procession surrounding a crazy ape? Rad! (6)
18. Vegetable pin? Rut? Back up! (6)
20. Thoundth like you're, eh, thane! What a finithh! (8)
22. Strike, punch and tumble (4)
23. Shh! A shorter distance around a race (8)

Down

1. Found your allowance in a diaper? Mittens! (6)
2. One iota, Tom! Look for it (4)
3. The first time I saw her was half kismet (3)
5. Practise my trade with a layer of tissue (3)

6. I directly urge you to move forward (5)
7. Ah can sketch fifty, pahdner (5)
9. You need to do that to dough (5)
11. It angers me how I rate (5)
13. Stop before you break my ears (5)
14. Malice takes up most of my respite (5)
17. This is my mad pet, Rex. He's a guru (4)
19. My back pay is in arrears (4)
20. Under my plan, first he cleans the plate. (3)
21. Find the handy conjunction (3)



Wanted: Articles!

See your name in print!

Have you ever wanted to see your name in print? Do you want fame and fortune? How about the chance to tell 1200 math students about your most intimate moments? Did your CS prof say something outrageous today, and you think everyone in Math should know about it?

All you have to do is write for *mathNEWS*. We're looking for all kinds of articles. Humour, short stories, artwork, information about upcoming events—whatever. No experience necessary! Anything goes—*mathNEWS* is your newspaper. Articles can be submitted electronically by sending e-mail to *mathnews* with "request" as the subject. An article template will be sent to you by return mail.

Stephen "Pepper" Johnston