Volume 69, Issue 3 Friday, October 27, 1995
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## Prez Sez

## Something about everything

Well, we're halfway through and I'm still sane (barely!).
Life has been moving along a at snails pace for me (a snail on 20 cases of Jolt). I'm, in the middle of MIDTERMS!!... which should going better for you than they are for me I would hope.
The CASA controversy continues... well not really... UW's said no, Western has essentially said no (to grad tax), and U Calgary has said no. Great! The only problem is that everyone else and their cousins have said yes. Did anyone else read the stuff!?!

There is a report circulating from the Dean's office about the Math Faculty plan. This report is important as it is the blue print for how the faculty intends to operate in the future. If you'd like to see a copy go to the MathSoc office and see if there is one lying around, or grab your class rep and get them to tell you about it, or go to the Math Undergrad Office and ask for one. The Dean will have come to yesterday's Soc meeting to discuss the document with council. I hope you were there.

Well, I'd love to just keep rambling on but I have another MIDTERM!!!! in about an hour, so have fun, be young, drink Pepsi and die because a rotting snail is in your drink. [Speaking of rambling, Ron, what is this supposed to mean? -CrakkoEd]

Ronald Servant
rservant@undergrad.math

## Free Computer Anyone?

You probably didn't know this because no one has ever advertised it (at least as long as I've been here [A whole two monthsCrakkoEd.J), but Math Society has a computer lab which you (as long as you're in the Math Faculty) have access to. It's available any time the MathSOC office is open (usually 8:30-4:30).

This lab currently has three Macs and a PC (486DX-80) with a full page colour scanner. Another computer is in the process of being purchased (probably another PC similar to the one we have). The Macs are hooked up to a laser printer that can be used for the low price of 10 cents per copy. Oh, by the way, the PC's name is TINTIN. TINTIN will be hooked up to the printer in the near future (as soon as I figure out how).

To use your computer lab just drop into the MathSOC office and tell the office worker which computer you want to use and for how long (I think you're allowed up to two hours). You're also allowed to sign up ahead of time (a couple of days in advance). If you have any questions, concerns, comments, or just want to bug someone don't leave me a message in the MathSOC office.

One more thing, your lab is currently named the MathSOC MacLab, and seeing as it's no longer just a Mac lab, I'm going to give it a new but funky name. Any suggestions, within reason - no actually on second thought reason has no bearing - any suggestions at all will be considered.

Mark Thornton
Your (sometimes) friendly Director of Computing mthornto@undergrad.math

## lookAHEAD

| mathNEWS |  |
| :---: | :---: |
| October 31 | Issue \#4 Writer's Meeting |
| November 6 | Issue \#4 Production Night 6:30pm, MathSoc (MC 3038) |
| November 10 | Issue \#4 hits the stands |
| November 20 | Issue \#5 Production Night 6:30pm, MathSoc (MC 3038) |
| November 24 | Issue \#5 hits the stands |
| MGC |  |
| October 31 November 24 | Last day Yearbook photo submission MGC Wine \& Cheese |
| Math Faculty |  |
| October 30 | 3B Info Night @7pm, MC 5158 |
| MathSoc |  |
| November 6 November 20 | Math Annual General Meeting @12:30pm in the Comfy Lounge Blade Runner @8pm, Comfy Lounge Resevoir Dogs @8pm, Comfy Lounge |
| Co-op |  |
| November 2 | Co-op ranking forms are out |
| November 8 | Co-op job matches are posted |
| CS Due Dates |  |
| October 27 | CS 246 - Assignment 3 Due |
| November 2 | CS 452 - K4 Due 10am |
| November 2 | CS 446 - Assignment 2 Due |
| November 6 | CS 360 - Assignment 3 |
| November 7 | Due 11:59pm + 1 minute CS 488 - Assignment 3 Due |
| November 8 | CS 342 - Assignment 3 Due |
| November 10 | CS 246 - Assignment 4 Due |
| November 15 | CS 354 - Project 3 Due 5pm Load Forecast To Be High |
| November 16 | CS 488 - Assignment 4 Due |
| November 20 | CS 360 - Assignment 4 Due Due $11: 59 \mathrm{pm}+1$ minute |
| November 22 | CS 342 - Assignment 4 Due |
| November 27 | CS 246 - Assignment 5 Due |
| Miscellaneous |  |
| October 30 | Rocky Horror Picture Show @8pm, AL 113 |
| October 31 | Hallowe'en (As if you didn't know) |
| November 11 | Remembrance Day |
| November 14 | Cheerios Appreciation Day |

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Your weird and wacky editors: Mala "Crakko" Krishnan, Mike "Hamme Hammond, with Brian "Calculus Cowboy" Fox
of Kitchener-Waterloo

University of Waterloo
Math Society
Math Orientation Committee
MC 3038
Waterloo, ON N2L 3C5

October 3, 1995

Dear committee members:
On behalf of the Board of Directors, and the staff and residents of Mary's Place, I want to thank you for the donation of $\$ 147$ from your Math Orientation activities. Thank you for selecting Mary's Place to receive these proceeds from your self-defense course on Labour Day.

Mary's Place provides emergency shelter, support, and three meals a day to over 500 women and children each year. Your donation will provide for the temporary accomodation of three women at Mary's Place this winter who might otherwise find themselves living on the streets.

Best wishes for the successful completion of your fall school term.
Sincerely,
DE TーMinkl
Doris M'Timkulu,
Executive Director

## mastHEAD

Why are we still here on a Tuesday night? This is the midterm hell week (it wouldn't have been if some profs had discussed appropriate times for exams in advance). But anyway, other than that...it's been relatively calm... for now... Have a great Hallowe'en! Good luck on midterms! (Sorry, my creativity for this section has been transferred to my midterm answers.)
Here are the faithful contributors and their top Canadian constitutional demand: Mark Thornton (right to eternal long hair), Brian Fox (one free use of notwithstanding clause with every video rental), Darren Rigby (that pizza with back bacon doesn't repeat on me all night), EC (freedom for squash balls from battery), Andrew Archibald (the island of Montreal becomes a province), Dave Vernest (I don't know. As a caveman, your traffic lights and cigarettes confuse me. But there's one thing I do know! This man is guilty!!), Slawek Chmiel (ban teachers from university campuses on the basis that they violate the students' constitutional right to stay awake), Chris Buchanan (Constitution? Why the hell do we need a constitution? Just give me ultimate power. Really. I'll do a good job. I won't become corrupt. No money, women ... well, maybe. Just don't tell the wife), Marco Koechli (it doesn't matter, it'll only have to be rewritten in the next 5 years when Quebec has its next referendum), Sarah Kamal (Buttercup should be our national heroine!!!), Lixin Chungphaisan (Eh? [how's that for an Optometry student-CrakkoEd]), Dale Wick (recognition of a balloon's rights and freedoms).
Thanks to Graphic Services for printing our issues and to Fed Pizza for the pizza!

Mala "Crakko, the Warner Cousin" Krishnan (No politicians should represent Markham in any way)
Mike "Hammer" Hammond (mathNEWS gets a permanent Senate appointment)

# $\cdots$ <br> A Student Chapter of the ACM 

## CSC Flash

All Calum worshippers be informed: the wretched virus that infected Our Leader is gone. Rejoice in Calum's good fortune!

Furthermore, the much-awaited CSC mouse pads are ready. These are not novelties... they are necessities. Read on for details.

## Upcoming events

Tonight is the official CSC party! If you can figure out who's giving it, you can attend. Costumes are mandatory, and will be forced upon the recalcitrant.
Many talks are scheduled, but times and places have not been nailed down. Check an MC building wall near you for details; until then, here is a rough guide of talks tentatively scheduled:

October 31: SQML and its applications (Tentative) The World Wide Web

November 2: The Web as a Cultural Phenomenon (DC 1302, 4:30-6:30)

November 6: Java and the Meta Media Project (Tentative)

## November 9: Introduction to LINUX (Tentative)

November 13: The Next Generation of Search Engines (Tentative)

November 14: Java and Metamedia

> Mousepads

CSC mousepads are now available! Convert the stale $\$ 8.00$ that has been mouldering in your pocket into a bright, shiny new CSC mousepad! Adorning this work of art is mine own handsome visage, brilliantly rendered in POVray by Tom Wrathbone. Coming soon: Calum T. Dalek seven-inch disk drives!

## Picture of the Official CSC Mousepad

[Picture? Are you kidding? The darn thing is over 4.5Mb!! What kind of quota do you think mathNEWS has??? If you really want to see this annoyingly large picture, check out the CSC homepage at http://calum.csclub.uwaterloo.ca CrakkoEd]

Calum T. Dalek

## Distinguished Teacher Awards

To nominate your outstanding professor, demonstrator or teaching assistant for the Distinguished Teacher Award, contact TRACE, MC 4055, Ext. 3132.

## Why Does MathSoc Suck?

I really wanna know

What the heck does MathSoc mean to you? Do you think it's worth the $\$ 7.50$ you pay every term? What does MathSoc do that's significant in your life?

Do you like MathSoc? Do you hate it? Could you care less?
Do you hate that blasted external director's dumb nose? Do you think all the MathSoc exec have stupid hair? Are you conscious?

If you bloody well have any kind of opinion at all about MathSoc, then we'd love to hear from you. If you think MathSoc sucks, then tell us why. If you think it's the best thing since sliced bread, you can tell us that, too. We want to know your likes, dislikes, favourite aspects of and pet peeves over things to do with MathSoc.

Who the hell are we? We are a committee of students (and one prof) interested in finding out how MathSoc can be improved to provide better, more comprehensive services to mathies. We have made it our job to find out how math students view MathSoc as it is at present, discover what they would like to see in terms of new services, etc, and to present these in the form of recommendations to Soc next term. To this end, we are going to be holding discussions with selected focus groups (past MathSoc exec, frosh, exec from other societies, etc), a general forum, and a mathNEWS survey in November to try and gather as much information as possible about what the new MathSoc (if it should even be changed at all) should be like.

We should have the survey ready for the next issue of mathNEWS, and we would really appreciate it if you would take the time to fill it out and return it to us.

So, until then, begin formulating your most educated of opinions on the issue of MathSoc and its relevance to you as a student in Math. Discuss it with your mommy. Stay up late into the night discussing war, religion, sex, and MathSoc. Get those little grey cells of yours (those paltry few that you have to spare in the midst of 'terms, ) churning over this most fascinating of topics, and when the time for the survey and forum comes around, STAND UP AND MAKE YOUR OPINION COUNT!!!

Sarah "1... 2... 3... (my opinion is counting)... 4..." Kamal Math Planning Committee

## The Warped Massacre

In the fields of golden wheat the murder stealthily creeped.
He saw there was a farmhouse near -
the glint of axe revealed his sneer.
The murderer - or he was to be
wandered along past a tree.
Now at the door of the sleeping house
the killer heaved his axe at a mouse.
"'twill be no more," the murderer grinned
"rodents to eat my food and make them thin."
Dale "notasquare" Wick

## New policy regarding the Fourth Floor Study Room

MathSoc has revised its policy on the study room on the fourth floor. Firstly, for those you who don't know what I'm talking about, there is a group study room on the fourth floor. It is split into five work areas, each with a table, several comfy chairs, and a whiteboard. Its purpose is to allow math students to work, as a group, in a productive setting. Access to this room is controlled through MathSoc. If you want to book an area, you must come to the MathSoc office, and from there the workers can help you. Below are some key pointers, and updated information.

1. In order to book an area, you must have paid your $\$ 7.50$ society fee (and not have taken it back).
2. You can book an area up to two days in advance, and an area may be booked for a maximum of two hours a day per person, or overnight (except on weekends).
3. You may pick up your key at the beginning of the booked time. If you haven't shown up after twenty minutes, the booking is cancelled.
4. You may borrow whiteboard markers and erasers from the office, to be returned by the end of your booked time along with the key.
5. You are responsible for all damages done to the study room while you have a key, even if it is not your area.
6. If your key is more than an hour late, the Resource Manager (me) has the right to bar you from the room for two terms.
7. If you lose a key, it's a $\$ 25$ fine, and it's a $\$ 10$ fine for lost borrowed materials.

I know that some of the above may sound a little harsh, but we want to make sure that everyone has the right to enjoy the rooms. If everyone can abide by these, then your studying experence will (hopefully) be more enjoyable (insofar as studying is enjoyable).

Chris Buchanan Resource Manager

## Missing Something?

Ever checked MathSoc? They've got tons of missing stuffglasses, textbooks, lab manuals from the Summer term (!) and other stuff that just may be yours! Come over and check some time!

Write your name in your books 'cause you never know when yours will be the next casualties of the MathSoc Lost and Found box!

## Grads!

Do you really want the yearbook to be full of pictures of OTHER people?
Bring your pictures to the MGC office!

## Power Hungry, Anyone...?

MathSoc Executive Nominations
Sssstep right up, ladies and gentlemen (no pushing, please) and try your luck at the greatest game on Earth! EVERYONE'S a winner!
What's this man talking about, you're asking yourself? Well, let me fill you in. I'm So-Krates Walsh, and I'm here today to offer you the chance of a lifetime! Just think... power, your own office in the MC, and a fifty dollar capital expenditure NO STRINGS ATTACHED! Sounds good, eh?

So how can I make this happen for you?
Well, suppose that you're one of them co-op folk, and you're going to be around next Spring. WELL, then, all you have to do is get yourself elected to a MathSoc exec position! Think...four months of unmitigated corru. . .er, I mean power. And all I want from you is ten (count 'em, 10) signatures of fellow mathies.

Ah, but I hear you regular-types moaning that you won't be around in the Spring. Don't worry! I'm also offering (for again, ten little signatures) executive glory for this coming Winter! What's that I hear? Jealous that the co-ops get to make money in their off-term while you're stuck here? Why, then, how's about I throw in a second term as executive, ABSOLUTELY FREE?
So how can you get in on this scam...um, opportunity? Well, you Spring-types can pick up forms starting this Monday at the MathSoc office (just think of it as your future place of business). As for you Winter sorts, well, you'll just have to be a little more patient... but hey, you've waited for years for something like this, a few more weeks won't hurt, eh?

Oops, is that a Kampus Kop over there? Well, I'll just be taking my leave now...

Matt "Snake-Oil" Walsh Chief Returning Office, MathSoc

## It's the New, Improved. . .

## Writers' Night

Starting next Writers' Night, October 31 (yeah, I know it's Hallowe'en-live with it), we'll be changing the format of the way things work that night!
Instead of the usual, "Hey, you're here to write? Pick a terminal, any terminal-and write away!", we're going to change the first part to be more of a discussion, where writers can talk amongst themselves about what stuff they think they should write about. Brainstorm for new ideas and discuss the possibilities of old ideas.
If you think this is a serious blunder, you can let us know afterwards, but we'd like to see more and more of you show up!
So, come to the first annual "Writers' Meeting"! It's October 31 at 4:30 in MathSoc (MC 3038), so you can still get in some of the annoying Hallowe'en festivities.

Mala "Crakko" Krishnan mathNEWS co-editor

## Standing Up

I heard this story a long time ago from my grandfather. It is a very simple one but I will never forget it. My grandfather was in an airport when he saw a little girl who stumbled at the stairs, fell down and cried. What would he do? Of course, he ran to her, helped her get up and then gave her a candy so that she would stop crying. Right from behind, her mother came up and said politely to him, "Thank you for your help; but next time, please let her stand up by herself."
So, now that you have read the story, you're probably wondering why I am writing this crap. Well, this story helped me over the exams. So I hope it can help you, too, if you are in the same situation as I was. I am talking about bad marks in the midterms, or even failures. Admit it, everybody has a bad mark once in a while, but the point is to learn from it and get over it. I learned from this story that if we fall, we have to stand up by ourselves. Nobody will be around all the time to tell us what to do. Besides, crying (or depression) will not improve the situation. It is fine to cry so that our anger and desperation go away temporarily. But if we don't do anything about it, it will stay (and probably cause more severe damage in the future).
In the end, I hope not to see any more depressing bodies over the midterms but encouraging faces and confident smiles as we walk into the second half of the term. So, start standing up today!

Vietchau Nguyen


FedPizza is open Wed - Sat 4pm-2am Special rates for orders on 10 or more pizzas
$\$ 1.00$ OFF Pick-up or Delivery
ᄂ - - - - Expires Oct. 28/95 - -

## More Women in Math

This week I have chosen to spotlight a woman that was not only brilliant mathematically, but a great humanitarian. First I would like to mention that another excellent source on women mathematicians is the book Women in Mathematics by Lynn M. Olsen. Second, since last week I have discovered that there is a computer server named hypatia.math. (Hurrah!) Now, let me introduce you to Maria Geatan Agnesi, the first woman math professor.

Maria Geatan Agnesi was undoubtably unique among mathematicians. She lived her life in Milan, Italy, from 1718-1799. She had the fortune to be born into a society that found intelligent women attractive. She mastered many languages in her early childhood and at age nine published a Latin discourse describing the benefits of educating women. Her father was a professor in mathematics and the Agnesi home became a hub for intellectual activity. Despite her shy nature, Maria became actively involved in the discussions that ensued in her home.

She was the oldest of 21 children and when her mother died she took on the responsibility of caring for the household. Even with this burden she continued her work in mathematics, though in a less public environment. In 1738 she published a collection of essays on philosophy and natural science entitled Propositiones Philosophicae. Her next major work was Analytical Institutions, a product of ten years of effort, which was hailed as the first and
most complete work on finite and infinitesimal analysis. Her proficiency in many languages allowed her to bring together works from many foreign sources. Her volumes were translated into English and French and were widely used as textbooks.

She became well known for her work with a curve called the "Witch of Agnesi". The name resulted from a poor translation of the Latin vertere to turn, confused with a similar word that is Italian slang for "wife of the devil". This plane curve has the equation $x y^{2}=a^{2}(a-x)$.

In 1750 the University of Bologna offered her first the position of honorary lecturer and then the position of Chair of Mathematics and Natural Sciences. This made her the first woman offered such a role. There is some controversy surrounding whether or not she accepted the position. It would seem that she did take the appointment and served until 1752, when her father died.

To the sadness of the mathematical community, with him her mathematical motivation passed as well. She turned to more religious pursuits, and devoted the rest of her life to caring for poor, homeless, sick women. She died at age 81.

On the hundredth anniversary of her death, Milan celebrated her memory, and roads in three Italian cities bear her name. She is a woman not to be forgotten.

Marni Mishna
mjmishna@undergrad.math.uwaterloo.ca

# prof QUOTES Books Are Still On Sale! 

Volume One

Come and get 'em! prof QUOTES books are waiting for you! Only $\$ 2$ ! Available at the mathNEWS office (MC 3041)! Act now! Operators are standing by...

## PMC Meeting

## Believe it or not...

Yes, I know that this is an unusual measure, but I figured, what the hell, we might as well try this once.
The almost-official middle-of-term PMC meeting is scheduled for Wednesday, November 1st at 5:30, room to be announced. (Check the newsgroup - uw.pmc. If we never say, go to the office and we'll work from there.) Anyone who cares to come out is most welcome to.

Why are we having this meeting? Why, to discuss things, of course. Specifically, we want to talk about the prospective merger with the slightly defunct Applied Math Club, as well as events for the term and possible capital expenditures. (Ooh... big words for a mathie.)

Come one, come all...

## They're Gone!!

The 11 boxes of old mathNEWS are gone! That's it, folks!

## The World Outside Math

Food Drive Results

Hey there! To all of you who haven't heard, Math came 2nd in the inter-faculty food drive competition!! The results are as follows:

- Applied Health Sciences: 421lbs of food, $0 \$$ of money donated.
- Math: 75 lbs of food, $200 \$$ of money donated.
- Engineering: 138 lbs of food, $85 \$$ of money donated.
- Environmental Studies: 16 lbs of food, $0 \$$ of money donated.

Our illustrious Prez, Ron, kindly invited Brian Vidler, the EngSoc Prez, to sport the Pink Tie and to act as an office worker at 8:30 every morning for a week as his punishment for losing to us. Viddles is in the midst of coop interviews, so we decided that the pink mohawk was a definite no-go. Ah well.
We helped those in need. That's all that matters. Thank you, Mathies, for making a difference!

Sarah Kamal External Director

## Editorial

## Hammer Goes on a Rant

It may be contrary to my nature, but I'd like to be serious for a moment. (Well, relatively.)
Students in CS (which includes both of this term's co-editors and a large proportion of students in the Math faculty) and other programs using computers are facing a crisis every week: trying to find a free terminal in this building to do assignments on. The following points have contributed to this continuing crisis.

- Thanks to the renovations of MC 3018/3022 (the Comfy Labs), there are much fewer terminals available there.
- The old WYSE terminals in MC 3006 have been replaced by xterms, but have not increased in number. New MFCF policy has made these computers the only ones that can be booked. And while I'm sure the CSC talks requiring the booking of these computers are valuable, they nonetheless contribute to the crisis.
- I've been informed that people from any faculty who take a CS course receive an undergrad.math account and don't lose it until graduation. Apparently Science students have been spotted using the Math undergrad machines for noncourse work.
Note that this point is completely hearsay; if true, though, it represents a major problem if anyone in any faculty can get a permanent undergrad.math account so easily.
- The ready availability of Mosaic and Netscape results in many people who log on to an xterm for the express purpose of surfing the 'Net. Since the various CS courses now have homepages, one can't assume that anybody using Mosaic or Netscape is automatically an offender. Unfortunately, it's difficult to determine for what purpose a person is using the Web browser without reading over their shoulder - a severe (to me at least) breach of their privacy.

No editorial, of course, can simply point out problems without giving some two-bit suggestions as to how to fix them. So what are some possible solutions to this crisis?

Increasing the number of dedicated computer rooms seems to be an obvious solution. The problem is that there aren't any rooms readily available - with the possible exception of the first year CS tutorial room. (Eliminating the first year Mac Lab would only increase the number of students requiring Unix terminals - no help there!) I've been told (but not in any official capacity) that MFCF is looking into that.
Discouraging the booking of MC 3006 is somewhat counterproductive. While it eases the crisis somewhat, it completely eliminates the ability for tutorials to take place in computer labs. (Believe it or not, it's not just the CSC and mathNEWS who book that lab!)

Retarding the use of undergrad math by students in other faculties seems an obvious solution. I don't know how widespread abuse of undergrad.math by students in other faculties is, nor do I know whether or not their accounts are permanent. However, if they are permanent, it would only seem to make sense to remove their accounts once their courses are complete. This is similar to the extra quota allocated to students in heavy programming courses which disappears after the term ends. If the problem
is indeed widespread, this solution should more than offset the extra amount of administrative headache it would entail.

The most effective solution (in my opinion), though, is also the simplest: all students should avoid using a terminal unless it is needed. This is simply courtesy; if a CS 354 assignment is due (as listed in the lookAHEAD section of mathNEWS) at 5 pm on a certain day, a student who wants to connect to the Molson Canadian I Am Online homepage should wait 'til after the assignment is due. (I'm not saying that no students should use Mosaic or Netscape; however, I am saying that coursework should take a higher priority.)

Also, I believe that we should have some sort of simple (yet official) policy regarding the undergrad.math terminals: if you're logged on and are not doing coursework, somebody needing to do coursework and unable to find a terminal should have the right to ask you to $\log$ off. While this policy is largely unenforceable, I would like to think that most mathies, seeing the reasonableness of this request, would immediately give up their terminal.

I can sum this up in one CS "rule of the road": always yield computing resources to oncoming assignments. Follow this and you might be surprised how much easier it is to find a terminal the next time you need one.

Mike "Hammer" Hammond

## Novelties Report

Cheat Shirts are in!

Nuff said.
Christina "babe" Norman

## Top 10 Reasons for Driving Co-Editors Around

[Background: We got a drive to campus to meet Hammer's 3 p.m. rapidly-approaching $C 母 O$ assignment deadline and ended up with a parking ticket.-CrakkoEd]
10. It's better than driving co-editors asquare.
9. Free adrenaline rush trying to meet a 3 p.m. deadline.
8. Discover Parking Service's new look.
7. Receive a funky $\$ 15$ bookmark.
6. Get to see the cake pan! (see the From The Desk Of article in the last issue)
5. Meet interesting characters including... CSC members
4. GREAT way to procrastinate!
3. Get to write Top 10 reasons for Driving Co-editors around. (related to reason \#4)

1. Ponder where reason $\# 2$ has gone.

Lixin Chungphaisan
my (CrakkoEd) wacky and weird Optometry-major roommate

## Revamping our image

Just this summer I went down to Harvard with my sister to visit her friend. I was astonished to find that my expectations of ivy league schools were shattered. Call me an ignoramus, but I was honestly expecting to see a few strapping young dandy's walking by wearing cream coloured tennis cardigan's and matching wool breeches whistling "Oh What a Beautiful Morning." But did I meet anyone like this? Noooooooo. Sure everything is older and better than it is here. Sure everyone is richer and smarter than everyone here. Big deal. I wasn't concerened with that. What I wanted to see were some-real life Chad's and Biff's. People who are on the sailing team or in the Porcelain club for the sole reason of pompousity. What I wanted to see were stereotypes.

Why do people love stereotyping? Hell I don't know. Shit happens! Answering this question is not the point of this article. What I'm concerned with are the stereotypes that currently exist. It seems as though most Universities in Ontario, and probably the rest of the world have a stereotype or image associated with them. Most of these stereotypes probably had some degree of truth at one time or another, but have been reinforced over the years by people like Linda Frum, and the folks down at MacClean's (thanks for your extreme dedication to the Computer Science Club guys). Obviously Waterloo has the techie-geek image. Western has the silver-spoon-up-the-ass image. Queens has the silver-spoon-up-the-ass-with-higher-marks image. Trent has that tree-huggin-granoly-eatin image, and York has that baby-sittin-for-adults image. I'm sure there is a modicum of truth to some of these stereotypes, but for the most part they're just that-stereotypes.

When you think about it there aren't that many really interesting University stereotypes. Waterloo in particular has a somewhat negative image. However, I believe that there is absolutely no reason that we can't change our image to a more exciting one. I've been looking around the campus and have noticed much potential for a change in our University image. Furthermore, to the best of my knowledge, no other Universities exude the same images that I am proposing. I present to you now an annotated list of possible modifications we could make to the University so as to create a new and superior image:

1. The corporate circus image.

Comments: Thanks to campus fest, a.k.a. Free-shit-fest people couldn't be happier. Not only are tampons and coke being showered upon us like manna from the gods, but also we now feel an even greater sense of corporate loyalty than ever before. Despite our many cultures and heritages here at Waterloo, corporate-fest has allowed us to look beyond our differences and toward a common goal of keeping North America the number one thriving economic world power.
Changes to be made:
(a) Enforce business garb for all students. All men should have short hair, side part preferable. Women should have hair neatly combed back into a ponytail. Replace knapsacks with briefcases.
(b) Stop asking governments for research grants. Start asking corporations for research grants.
(c) Stop offering courses that have no immediate benefit for Canada's economy. This of course includes the majority of math courses.
(d) Overhaul The Federation of Students and all other on campus organizations.
(e) Replace Food Services with McDonald's
(f) Rent out advertising space on blackboards and in bathrooms.
Pros: We'll all be rich! Rich I say!
Cons: What are you, some kind of bleeding heart liberal?
2. The dystopian future image.

Comments: Have you ever noticed that large portions of UW resemble sets taken from a 1970's dystopian movie. In particular, depending on where I am, the campus reminds me of the films A Clockwork Orange, Logan's Run, THX-1138, Brazil, and Rollerball.
Changes to be made:
(a) Keep all the buildings as they are.
(b) Remove all vegetation, including grass and trees. Replace it all with poured concrete.
(c) Build a huge glass dome surrounding all of ring road. Allow only authorized personnel to enter or leave the dome.
(d) Issue polyester stark white body suits to each and every person belonging to the University. Liquidate anyone who fails to comply with this dress code.
(e) Re-open all those spooky tunnels we keep hearing about and paint them white, and install high speed moving sidewalks.
(f) Replace all computing facilities with one giant supercomputer. This supercomputer will be called Proteus and will be housed in the basement of the math building where it will see to the day to day operations of the University. Anyone doubting the word of Proteus will be summarily liquidated.

Pros: Everyone will be happy.
Cons: There can be no flaws to this plan.
3. The jock nerd image.

Comments: It seems as though a University can only have a jock image or a nerd image. The two hitherto have been mutually exclusive. There is no reason for this. Working out doesn't make one any less intelligent than thinking makes ones muscles any less pumped. UW is still a male dominated University - there's enough testosterone flowing through this place to keep a major city running for a hundred years (assuming there was a simple way to convert testosterone to electricity). Of course geeks tend to eschew exercise, so in order to create the perfect jock-geek, it will have to be done in a relatively geeky way.
continued on page 10

## The Price of Beer is Falling!

An Idea for FED HALL, maybe...

Taken from The Swiss Canadian News
The computer age, and more specifically, the Stock Exchange Trading Floor, will soon reach your favourite Watering Hole. A small Teufen AR-based electronics firm, Free Time, has developed a software system that places the trading floor into the bar. A test operation is currently in place at the Restaurant "Roessli" in Steinegg, Appenzell. It works something like this: Pricing of various beverages is based on supply and demand. As an example, should a large group of patrons order Heineken Beer, its price increases with the demand; on the other hand, should nobody want Pepsi, its price sinks to a level where demand picks up again. The software even includes the purchase of options of some beverages.

Marco "The Hedonist" Koechli

## The Sock Murders - Part II

 Sock on CampusWhat started out as an innocent enough tree chopping in my backyard has now spread to become something even more treacherous and underhanded. Yep...I saw it again. This time the sock was in front of MC, once again toting its axe.
I had just finished a grueling CS assignment and was on my way home when I noticed the sock hiding stealthily among the trees in front of the building. Of course my better judgment told me to just keep on walking, but my curiosity was so compelling that I decided to stay and see what the sock was up to this time.
I found my own hiding place behind a tree and watched intently as the sock slowly crept toward its target. There were other people walking past, but apparently they didn't consider a huge sock with an axe anything out of the ordinary, and just kept on walking. I mean, it's a sock with an axe - doesn't that attract their attention at all? In any case, I remained vigilant in my observation of the enormous piece of footwear as it sneaked up on its unsuspecting victim.
Then it happened. The sock suddenly sprung at the subject of its scorn, slashing shamelessly, and then slithering back into the shrubs. But that wasn't all. . . it attacked once again, this time thrashing thoughtlessly at the thing that was the object of its thumping. Could it be? A multiple murder? I could barely stand to watch as the sock mangled yet another innocent bystander. After a few more minutes, the sock had killed all of them in the area. Then it slipped silently into the trees and sneaked away toward South Campus Hall.
I couldn't believe what had transpired. I had considered my previous experience with the sock to be just a terrible coincidence, but maybe there was something more to it than that. After all, the loss of my tree wasn't anything too disastrous, but many people liked the rock garden, and now there are only small chunks of rock scattered around the area.

Warren "The Milkman" Hagey

## prof QUOTES

"This means that everyone who was alive and halfway breathing and not thinking about sex got it right."

Kerton, ECON 101
Student: "I was a little shaky about how you got that first line from the set."
Prof: "Yeah, I was a little shaky about that, too."
Younger, C\&O 230
"It does work. Son of a gun."
Stewart, MATH 145
"I realize that this is a long weekend and you're going home to deal with your families..."

Forrest, MATH 147
"I'm on drugs and I'm going to kill you."
Davidson, MATH 13
"I will continue, to show that I'm a smartass."
Hoffmann, MATH 235
"Thank you for playing. Ding. Wrong. Next."
Beatty, CS 230
"Whoops! You know, I'm trying to make sense here, I'm trying to teach you something, and I keep blowing it."

Willard, MATH 135
"So what I have just said-for those of you who have trouble following me-is Blah, Blah, which proves item 3 and also 2."

Willard, MATH 135
"I can sympathize with you. Back in England we had all our hard stuff at the end. So for the first two years I was partying and...I crammed for the last six months. . . and looking back I wish I had worked steadily all the way through... and if you believe that, you'll believe anything."

Sivaloganathan, MATH 137
"No, no, no... let me ask someone who doesn't know so I can scream at them."

Sivaloganathan, MATH 137
[Prof starts erasing the board. Looks around.]
"Hey, wait... now where the hell did that function go?"
Sivaloganathan, MATH 137
"Does anybody know what excitable tissues are?"
Bols, BIO 230
"So, anything that inhibits energy production within the cells for an extended period of time would be BAD..."

Bols, BIO 2

## Late Night Firefighting

## Or Everything You Ever Wanted To Know About Fire Hydrants

Well, I finally got an answer to that age old question: How many firefighters does it take to turn off a fire hydrant? If you're really anxious to find out, you can just look to the end of the article, but then you'll miss the interesting story of how I came to find out this answer myself.
It was midnight, and, as usual, I was up watching the Late Show with David Letterman. The guy I live with and his girlfriend were upstairs. Then she came into the den and informed me that the fire hydrant outside had exploded! Okay ... okay ... slow down ... it hadn't actually exploded, but rather one of the caps had come off, and it was spraying water like crazy. I thought to myself, 'Gee, this might just be something worth seeing.' And the very next commercial break I made the jump from thought to reality.
Luckily enough, we live on a corner, and the fire hydrant is only about 80 feet from the intersection, which led to the exciting phenomenon of water spraying all the way across the entire intersection. This caused some problems (ie. traffic). One woman stopped her minivan and put on her hazards to warn others, but many still foolishly ventured into the raging stream of water. Apparently they hadn't considered that water coming out of a fire hydrant would have a lot of pressure, because it flipped one car right over. Ironically, the car caught on fire, but it was quickly put out by the water. Umm ... okay ... I'll level with you ... no cars flipped over or caught on fire, but a few did get very wet.

Okay, now to the main point. It was about this time that the heroic Kitchener Fire Department showed up to fix the situation. I suggested putting a paper bag over the leak, but no one seemed to like that idea. One of the firefighters thought that maybe someone could just put their finger over the hole, but that idea was also shot down. In the end, they shut the hydrant off, and put a new cap on, requiring the combined knowledge and abilities of 4 top-notch firefighters. I'm sure you'll be able to sleep better now that you know.

Warren "The Milkman" Hagey

## 

continued from page 8
Changes to be made:
(a) Power all computers and terminals via stairmasters. No stairmastering, no power.
(b) Hand out free EMS muscle stimulators.
(c) Emit gamma-rays throughout the entire campus. Note: skin may also turn green.

Pros: Neitzsche's vision of a super man will finally be realized.
Cons: Jock-nerds, like, what the hell is that?

Neil "Hey sue me, I'm libel" Hepburn

## Economics 101

## What Exactly Are We Paying For?

To all you Mathies out there, I extend a valiant salute! Yes, I am a clueless frosh with nothing better to do than to write for mathNEWS, but at least I'm not an Engineer. Like many other students, I've been wondering about where my tuition ends up after it leaves my bank account and here's what I came-up with: Paying the Teachers: 2\%

Yes, teachers really DO get paid for putting us to sleep and unfortunately, we are the ones paying them... well, ok, so it's nice and relaxing but I still prefer my small bed to those plastic chairs.

## Buying and Maintaining Equipment: 5\%

Just because we don't pay for every minute we're logged in, doesn't mean we don't pay.
Chalk: 25\%
So far, the greatest expense, chalk is the student's worse enemy. As the teacher babbles-away, you struggle to keep-up and just as you turn towards the board, you realize that the teacher has been scribbling furiously while talking and has now erased the first part of the lecture which you have not yet taken down. Teachers also have the evil habit of breaking a piece of chalk in half at least once every sentence... which means that while about $10 \%$ of a piece of chalk is used-up, $90 \%$ is eventually broken down into microscopic pieces.
Paying the Morality Guards: $18 \%$
Any and all who have ever accessed the news through the $\mathrm{U}(\mathrm{W})$ news server know that there is a crack team of moralityspecialists (composed of priests, psychologists and senior citizens) whose only mission is to spare our delicate eyes by making sure we never see or read anything offensive.

## Feeding The Great Zoggo: 30\%

As the Comfy Lounge is becoming increasingly underpopulated, The Great Zoggo, daemon of the Comfy Lounge demands more souls. To avoid confrontation with this powerful being, the Registrar's office is diverting $50 \%$ of all tuition and using it to purchase souls. I, for one, believe that this is a shame! The Great Zoggo deserves to be worshipped. I say ditch the morality crew and give it all to The Great One!

## Sustaining The Evil Netscape: $\mathbf{2 0 \%}$

Zoggo's most powerful adversary is the lesser daemon Netscape. It also feeds on souls and turns even the brightest into mindless zombies. He rules the X-terminal rooms and has no mercy for those who defy him. Netscape, although smaller, should be feared and worshipped just as much as Zoggo.

Slawek "SQueek" Chmiel

## Time-Displacement Article

Funny, it was here a moment ago.

## I'll Have The Special

WARNING: Not to be taken internally

Panic is starting to settle in. . . midterms have started, Winter is getting closer, and Waterloo might miss the playoffs. But then there's beer... and all that worrying just seems to go away...

- I've tried that stuffed crust pizza from Pizza Hut. And I got to tell ya, that stuff settles like lead in your stomach. I could actually feel my arteries clogging with every bite. My intestines were screaming bloody murder. Well, they weren't actually screaming, but you get the idea.
- Now Pizza Hut has introduced stuffed crust pizza with cheese and pepperoni (only in the US right now). When my roommates and I heard of this, we came up with some other ideas for crust stuffing. Some of my favourites were Kraft Dinner, some sort of jam (perhaps raspberry or strawberry) and lard. Can't you just imagine it? Lard in the crust. Ummm good.
- When I drive to school, I usually take Hazel Street. Now, Hazel Street (for those who don't know) isn't in the best of shapes. There are a number of bumps and the asphalt is cracking in many places. For the past couple of weeks, the city has been doing some construction. But I honestly believe that instead of finding the money to fix the entire street, the city decided to spend some money getting rid of the good patches of asphault, hence making the entire street a uniform disaster area. Apparently, the City of Waterloo thinks every one living on Hazel St. drives a tank of some kind. And another thing, why are some of the streetlights in this town so wacky?
- Ya know, if it weren't for football, I think I'd actually get some work done on Sundays.
- It's been four months since the Tories got elected in this province, and I have one thing to ask. . . when are they going to get around to opening beer stores on Sunday? Let's get this major issue resolved so we can worry about those other minor issues like welfare reform and cutting the deficit.
- For those who forgot already, this is the weekend we set our clocks back one hour. And it's about time. I'm getting tired of waking up at the crack of dawn on Mondays, Wednesdays and Fridays. For crying out loud, I'm not a rooster. Sheesh.
Don't forget... if you worked at GM in Oshawa this summer, drop me a line and share a story or two. I'm trying to compile stories, but I'd also like to know just how many of us (GM summer students) there are out there. Submissions can be made to bcfox@undergrad.math. You don't have to be in math, either. Ask your friends. Ask your neighbours. Tell them some schmuck in math wants to know if you worked at GM in Oshawa. Much appreciated. Until next time...
Brian "Eggo-man" Fox


## Happy Hallowe'en!

From your freaked-out mathNEWS staff

# The Multi-ply Teachings of Sven the Carpenter 

How about that new show "Murder One ${ }^{1}$ ?" Do you really think that they can stretch one murder out for an entire season? They tried that with O.J. Simpson - every day we heard what colour underwear the prosecutor was wearing. I only watched the news every 2 weeks, and I was still bored sick.

## Board

Speaking of board, did you ever notice that particle board makes for heavy furniture? I mean really, why don't they make furniture out of real wood? Or how about plywood? What's wrong with that?

## Would

Wouldn't you rather watch a carpentry show than actually build something? I mean with real TV you'd think it was building to something but, not with edutainment. Actually, I hate cooking-building-doing-thing-shows. Why? Because they cheat! If you ever watched them, they say "You do this and that and the other thing..." and then they pull it out, already done. And perfectly, of course. The end result is that you haven't the faintest idea how long it took, how easy it is, or whether the person knows what they are doing.

## Doing

You know, sometimes I wonder what I'm doing here. I mean I could be in Toronto, or someplace, instead of stuck in the pages of mathNEWS. I wonder what's on TV...

> Dale "ñotasquare" Wick
> Steve "Testosterone Boy" Mills

## Life Beyond the Car:

## Transportation in Transition

The automobile has been around for less than a century... yet it is difficult to imagine life without it. The pressures of rapid urbanization and industrialization are making our cities sick and our horizons full of highways. What's next?

Life Beyond the Car is a Monday evening lecture series, presented by the Federation of Students and WPIRG. Guest speakers representing a variety of interests will be addressing a number of issues, including: land use, issues of social equity, concepts for creating livable communities, the future of public transportation, cycling initiatives and the automobile culture.

October 30: Jo Ann Woodhall, Transportation Planner, City of Kitchener

November 6: Dave Banks, Manager-transportation engineering, Region of Waterloo

November 13: Sue Zielinski, Author and Transportation Planner, City of Toronto

For further information about this lecture series, contact WPIRG at 888-4882

Mathemagics

A Few Proofs Your Prof May Not Have Shown You

After a long night spent doing whatever you spend long nights doing (let's pretend it's math assignments), you may not be watching what your professor is doing all that carefully. "He's not going to make any mistakes", or "That's a perfectly good proof", you say. Well, it's not always that good a proof...

Theorem 2 $=3$
Proof Suppose $x=1$. Now we have:

$$
x^{2}=x^{3} \Rightarrow \frac{d}{d x}\left(x^{2}\right)=\frac{d}{d x}\left(x^{3}\right) \Rightarrow 2 x=3 x^{2}
$$

But $x=1$ so $\Rightarrow 2=3$.
You see? Calculus is useful. But you've probably seen that before. So perhaps you would prefer something simple, from basic algebra maybe? Well here's a nice induction proof:

Theorem There exists a smallest integer.
Proof Let $Z_{n}$ denote $\{x \mid x \in Z, x>n\}$ Now $Z_{0}$ is just the natural numbers, which have a smallest element. Suppose $Z_{n+1}$ has a smallest element. We examine $Z_{n}$, looking for a smallest element. Since $Z_{n+1}$ has a smallest element, there are only two possibilities for this element: the smallest element of $Z_{n+1}$ or $n$ itself. Since $n$ is not in $Z_{n+1}$, if we let $m$ be the smallest element of $Z_{n}$ either $m<n$ or $n<m$. Thus $Z_{n}$ has a smallest element. However, since $Z_{0}$ has a smallest element, by induction we have that $Z$ has a smallest element.

How is that possible, you ask? Well, it makes perfect sense once you consider the following theorem:

Theorem There are finitely many natural numbers.
Proof We say that an integer is interesting if there is some way it can be described in fewer than forty letters (including spaces). For example, a googol is interesting since it can be uniquely described in only six letters. We say that a number is uninteresting if it is not interesting. Let $S$ be the set of uninteresting numbers. Since $S$ is contained in $N$, it has a unique smallest element. Denote that element by "The smallest uninteresting number". However, "The smallest uninteresting number" has 33 letters and spaces. Thus it is interesting, and we have that $S$ does not have a smallest element. thus $S=\phi$, i.e. there are no uninteresting numbers. By definition, this means that every natural number can be uniquely described in fewer than forty letters and spaces. This leaves $27^{3} 9$ possibilities, or, there are less than $3^{1} 17$ natural numbers.

The following proof is for those of you who speak French. It is, in fact a clear demonstration that the language of science is not English. This result can only be obtained in French (then again, maybe that's a good thing).
Theorem On a:

$$
\pi=\frac{\text { cheval }}{\text { oiseau }}
$$

Preuve On a cheval $=$ vachel $=$ vache $\times l$ par la commutativé de la multiplication. Aussi, un oiseau est un bête àpis $(\beta \pi)$ et une vache est une bête à ailes $(\beta l)$ alors on a:

$$
\frac{v a c h e \times l}{\beta l}=\frac{v a c h e}{\beta}=\frac{\beta \pi}{\beta}=\pi
$$

## A Few Proofs your Prof May Have Shown You

In the past few weeks, all of us (frosh in particular) have been subjected to a lot of bewildering proofs. Worse, now we are trying to reconstruct them from our notes in time for (let us say it softly) midterms. Does this look familiar?

Let $x \in Z / Z_{k} \ni \operatorname{gcd}(x, k)=1$. Unclearly, $x y=1$ is a unique solution. It is not obvious that this implies that $\operatorname{gcd}(y, k)=1$. No one can see that this implies $\phi(n m)=$ $\phi(n) \phi(m)$ iff $g c d(n, m)=1$, and it does not follow immediately that $\phi(n)=n \Pi_{p \mid n}(1-1 / p)$. Any questions?

Andrew (Frosh?) Archibald

## The Ultimate Challenge

Friday, October the thirteenth. Not the most fortuitous of dates at the best of times. For a brave group of Waterloo voyagers, it was the only choice.

The intrepid Waterloorians of which I speak are very much like you and me (in fact, very much like me in one particular instance), yet different in a few fundamental aspects. They're special. They represent the highest of all high aspirations. They think they're bean curds. And they travelled all the way to Ottawa to participate in the first annual Canadian University Ultimate Championships.

Yes, Zen Tofu, that most mighty of mighty Waterloo ultimate (you know, frisbee game?) teams selflessly braved the hazards of the Ottawa's frozen wasteland for three days to bring glory and honour to the University of Waterloo.

Oh \#\$\%\&\$!!, you're thinking. Who cares?! Why is she wasting my time with this stuff?, you grumble. Why on earth should I care about this team or the blasted tournament?, you mutter.

WELL! The team, unbeknownst to you, is a very, very, significant part of your identity as a Waterloo student. This tournament in particular, in fact, is vitally important to you. It has great, grand significance in the cosmic scheme of things.

Why? 'Cos, well, you know, um, I was there.
I (glorified token female) was there, and so were Jacques, Roo, Hans, Joe, Craig, Mike, John, Chinh, Eric, Calvin, Kevin, and Jeff, making it a team of four engineers, two science guys, and, yes, a grand total of 7 students from this exalted faculty of ours!!!

This is the first year that this particular team has been playing together, so it's going to take a while for our skills to mesh and for us to become a power on the field. Our youthful glow showed on the field in Ottawa, making the other teams just so darn jealous of our shining aura that they, well, only let us win once.

Sun was in our eyes. Wind was against us. Rained too much. What a dumb game. We hate this game, anyway.

## Que Sarah Sarah

Now Sarah, let's be frank! No, I'll be Frank and you be Jim. Jimette. Whatever. Point is, I got a reBUTTal to make concerning your sagacious advice last week, detailing the wonderful adventures of Murtle and Boffo. Actually, the hordes of guys named Boffo demanded I write this, just to set the record straight. (Have you ever wondered what would happen if you indeed set a record straight? Man, the groovy grooves would stretch for metres!!)
Ahem. You say guys should put the toilet seat up. I say girls should put the toilet seat down. Do you know what it's like stumbling sleepily to the toilet in the middle of the night and being rudely jarred awake to find that instead of projecting a nice, straight stream of used-up Jolt, you end up splashing it all over the rim? Geez, at that point, you gotta actually wake up, assess the damage, and depending on how many coffees you imbibed over the course of the night, use a Q-tip or a shiwala to rectify the affects. It's no laughing matter, bipeds of the sweeter persuasion.
Essentially, what it comes down to is this... each sex needs a different configuration of toilet peripherals to most efficiently complete their tasks. So, if you've got a house with 4 guys and 2 girls, then the seat stays up. 4 girls and 2 guys then the seat stays down. 4 separatists and 2 federalists, then the former will vote to separate the seat from the toilet, and the whole point is moot.
So from all us Boffo-wannabes in the East, keep your stick on the ice, your cod in the freezer, and honey, get those skates sharpened up cause this rink rats comin' home!!
(Obscure America's Funniest Videos ref, in case you didn't get it. Don't ask me why, of all people, I chose Bob Saget as a source!!

Dave "Jethro MacGillivray" Vernest [in New Brunswick]

## ultraCLASSIFIEDS

## Master,

Did I get the position?
Slave

## !nixiL, yeH

.noisiv ym htiw gnorw gnihtemos s'ereht kniht I
.em ot sdrawkcab mees sgnihT
etammoor eihtaM yldneirf ruo Y
To the CS 360 God:
U R 2 awesome! Talk about not taking a compliment, eh? My congratulations were right, weren't they? I know.

A really stupid and pathetic CS student

## MC Renamed

I've noticed that there is an abundance of buildings on campus with something in common. No, not that the profs in them wear sneakers. In fact, these buildings are all in one area of the campus, and their common denominator is the letter ' C '. Yes, I'm talking about MC, DC, CC (now SLC), and the PAC. The short forms for all of these buildings end in ' C ', and quite frankly, I think that it leads to confusion sometimes. To remedy this situation, I propose the renaming of MC. Here are some new names I've come up with:

- Warren Hagey's Office (WHO)
- Warren Hagey Academic Tower (WHAT)
- Warren Hagey Education Nook (WHEN)
- Warren Hagey Enumeration and Remuneration Edifice (WHERE)
- Warren Hagey's Yard (WHY)
- House Of Warren (HOW)
- Warren Hagey Memorial Information Site (WHMIS)

Please make your preferred choice known to MathSoc, so that changes may be made immediately. Thanks for your cooperation in this matter.

Warren "The Milkman" Hagey


FealPizza is open Wed - Sat 4pm-2am Special rates for orders on 10 or more pizzas
$\$ 1.00$ OFF
Pick-up or Delivery
combined with any other Expires Oct. 28/95 _ 1

## Sausage Boy

Chad Brunswick looked like an average fourth-year CS student. His hair was mousy brown, shaggy, and unkempt. His eyes were tiny, blue, and bloodshot. He blinked often from the irritation of his contact lenses, which were seldom cleaned. His only pair of glasses had been shattered two weeks ago while dancing at Phil's. His face sported a three day growth of sparse lupine tufts which, combined with his hollow reddened eyes, gave Chad an almost bestial presence. In a perverse way, he enjoyed it. The crushing pressures of assignments and midterms had changed Chad, and his appearance reflected how short and fierce his temper had become.
"Why did I take Real Time?" he mumbled to himself as he wandered down the hall. People had suggested to him that taking Real Time, Graphics, and Compilers simultaneously wasn't very bright. But Chad saw the lethal schedule as the kick in the pants he needed to raise his pathetic 59.8 average. He would work or die. Kill or be killed.

Chad walked angrily towards the Comfy Lounge. The C\&D was closed, and he needed food. He hated going in the Comfy Lounge. He knew it would be full of people laughing and playing cards. Why should they enjoy themselves while he slaved in the terminal room? He wondered if they'd laugh if he slit their throats. The thought of red blood spilling forth onto the cards raised a chuckle in him. "Seven of diamonds, you owe me a beer?" said Chad in a snide voice. "No, from now on it's seven of diamonds, I slit your throat!" He grinned; that was a much better rule.
To his shock, the Comfy Lounge was deserted. Chad had been surprised no one else was working in the Mobius lab this night, but this was unbelievable. He checked his watch: 11:50. Lots of people should still be here. Sure, it was Hallowe'en night, but at least one group of slackers should be here. He wandered over to the vending machines. It didn't make any sense.
"Out of Order. Try the C\&D". Chad read the sign in disbelief, and smacked his fist against the offending machine in anger. He checked the other machines, all of which sported similar signs. "Is this some kind of joke?" he asked the empty room. "The C\&D is closed. This isn't funny. I need coffee! How am I supposed to finish Compilers without coffee?" Angrily, he kicked the offending Nescafé machine. This must be some idiot card player's idea of a joke. He ran towards the C\&D. They'd be waiting there, laughing, and he'd teach them a lesson. Bloody visions filled his imagination.

Chad skidded to a halt. The C\&D lounge was empty and as black as night. "I know you're in here, bridge maggots!" His voice echoed back at him hollowly. A soft light seeped out from under the closed C\&D doors. They were in there, he could smell them. He approached the door, grasped the handle, and pushed it violently open. A blast of sulfurous air rushed out over him, leaving him gasping and choking. The C\&D was full of acrid mist. He opened his eyes and peered inside.
"Hello, Chad."
The voice was soft, and somehow familiar. Through the mist he could see her. She was an oriental girl of average height and average weight. Almost too average. There was nothing distinctive or memorable in her. She was like the mist.
"What the hell is going on?" snarled Chad. A vicious rage filled him. He had no time for these stupid Hallowe'en games he had an assignment to do. "Why is the C\&D open? What did you do to the vending machines?"
"Relax, Chad," said the girl soothingly. "The C\&D is always open on Hallowe'en night. It's a tradition. Why don't you get yourself some coffee?"

Chad looked at the girl hatefully. She was playing games with him, and that only enraged him further. He was hovering on the edge now. Any little thing could make him lose control. Coffee. His mind grasped the concept, and set his body in motion. A big cup of coffee would fix everything. He grabbed the pot, and filled his Lug-a-Mug. The coffee had a rich earthy tone. His anger began to fade. He went over to the cream dispenser and pressed "large". The red dispenser tube bulged for a moment, and then something white and squirming emerged, plopping into his mug. A maggot.

Chad screamed and dropped his mug to the floor. It bounced, spilling coffee and cream all over his pants. He'd have to go change his clothes now. His assignment would never be in on time. He snapped his head towards the girl. She was covering her mouth with one hand as she laughed at him. "Oh, The cream must have gone bad," she said in mock distress.
"Do you think this is funny?" snarled Chad. "Do you think your little Hallowe'en games amuse me? I have assignments to do!" His hand curled into a fist.
"You're pathetic," hissed the girl, her eyes suddenly cold. "You're not going to pass this assignment. You're not going to pass any courses at all this term. You're on the edge of being kicked out of Honours, and after this term they won't even give you a BMath. You've wasted four years of your life, sausage boy. You're a loser, and a fool."
"Liar!" howled Chad. He stormed towards her, his hands reaching for her throat. "I'm going to get straight A's this term, and you can't stop me! You're the fool! You don't even realize what I am, do you?" Chad's voice lowered, turning to a bestial snarl. "You don't realize how much trouble you're in." He curled his lip back to reveal two inch fangs. His hands were clawed now, and hairy.
"Oh dear!" said the girl in mock distress. She thrust out one hand, as if to ward Chad off. "But before you kill me, shouldn't you see what you've got in your paw?"

Confused, Chad paused, and looked at his left hand. Something was between his fingers. The seven of diamonds.
"You win, sausage boy!" exclaimed the girl gleefully, "I owe you a beer!" The stainless steel scalpel glimmered red in the sickly light. "Oh, but you changed the rules, didn't you?" The girl's face was vicious now. The knife snaked through the air, opening a smile in Chad's neck. Blood splattered on the card in his hand. Chad sunk to his knees, clawing at his throat, desperately trying to breathe. Words choked in his throat, trapped in blood. He looked at her, and she understood.
"Why? Is that what you want to know? Why?" She pointed to the sausage rolls. "How did you think we could afford to sell them for a buck twenty-five?"

Christina "bat wings" Norman

## mathNEWSquiz \#3

## Available in pink for girls and blue for boys

Howdy folks... we've got just what you need to get rid of those midterm blues... No, not a case of beer. . . that's to cure MY midterm blues. . . it's another mathNEWSquiz! Now, now... let's not get carried away with excitement. You can all thank me later... but first, the answers for squiz \#2...

Song Lyrics: 1. Know Your Enemy, Rage Against The Machine; 2. Cordelia, Tragically Hip; 3. Today, Smashing Pumpkins; 4. Majesty of Rock, Spinal Tap; For Those Who Still Care: 1. Rounders; 2. Houston Colt . 45 's; 3. Shortstop, Second Base, First Base; 4. 3; ALW Musicals: 1. 7; 2. Jeeves; 3. Skimbleshanks; 4. Sam Harris; 5. Madonna.

Checking our submissions, we have... one. That's it? ONE? Geez... well, Slaves to the Gridword win the squiz prize with 4 points! C'mon down to MathSoc to pick up your prize. . . a deck of cards! And now, on with our next squiz...

## Song Lyrics

Title... Artist. . You know the drill...

1. And every Saturday we work in the yard Pick up the dog doo, hope that it's hard
2. Handguns are made for killin'

They ain't no good for nothing else
3. It's seven o'clock and I want to rock Wanna get a belly full of beer

> Live From New York. . .

1. For how many shows of Saturday Night Live was it not named Saturday Night Live?
2. What was Fred Garvin's occupation?
3. How many times has Saturday Night Live been performed outside of New York?
4. On what recurring sketch have we heard about (but never seen) shows called "Whining Is Anger Coming Through a Very Small Opening", "You're Only as Sick as Your Secrets" and "Pee-Wee Herman: There but for the Grace of God Go I"?
5. Which state issued Toonces his driver's license (and later revoked it)?

## Hockey Night In Canada

1. What year did Hockey Night in Canada begin?
2. Name the only Original Six team that has not qualified for the Stanley Cup Finals since the 1967 expansion.
3. Where did Team Canada win its only game on Canadian soil during the 1972 Canada Cup?
4. What is the NHL standard length and width for ice surfaces?
5. How many Memorial Cups have the Oshawa Generals won?

## Bonus

1 point if you can tell us what all 3 categories have in common. (The answer we're looking for has nothing to do with the questions being stupid, hard, lame, etc.)

Please note that with the more submissions we get, the better the prize will get. This time, with the one submission, a deck of cards. But with more submissions, the prize could be a soup mug, T-shirt or hat. Remember to make your submissions to the BLACK BOX or to mathnews@undergrad.math by Monday, November 6th. Sorry, but we will not accept any submissions sent by carrier pigeon or singing telegram service. Good luck!

Brian "The Calculus Cowboy" Fox and apparently Mike "Hammer" Hammond as well

## Smart Enough <br> with apologies to Sheryl Crow

Quotient groups you just can't face,
You're running out of metric space.
You're wond'ring if you're gon-na pass.
Are you smart enough to do PMath?
PMath...
<acoustic guitar music>
You're finding that there's just too much
Of rings and fields and groups and such.
You can't face the cour-se's wrath.
Are you smart enough to do PMath?

## Chorus:

Try to prove
That something is a group.
Try to prove
That groups have use!
No use!
<acoustic guitar music>
You fail to understand ideals
In rings of in-tegers and reals.
Your hopes to grad-uate are dashed.
Are you smart enough to do PMath?
PMath...
(Are you smart enough?) To do PMath.
(Are you smart enough?) To do PMath.
(Are you smart enough?) PMath.
When you fail to show that R's a ring,
When you find you can't learn an-y-thing.
Then you say goodbye to your BMath
'Cause you weren't smart enough to do PMath.

## Chorus:

Try to prove
That something is a group.
Try to prove
That groups have use!
Mike "Tuesday Night Hammer Club" Hammond

## gridCOMMENTS

## Hello, Gridders!

I was a little disappointed with the number of submissions for the cryptic and conventional crosswords last ish.

For the conventional, there were four, from Club 21, who had 2 incorrect squares (sorry, guys, couldn't find a Gore Island), from Slaves to the Gridword and Zac \& the Disgruntled AM/CS W/kers, who each had one incorrect square, and from Ian Facey with a perfect solution. More about your prize in a minute. We also had a late entry from Pamela; make sure you get your entries in on time if you want a prize!
As you may have guessed from the name of one submitter, the three symbols for the conventional crossword stood for AND, OR, and NOT, the three primary logical operators AND/OR computer gates.

For the cryptic, I received a paltry three entries. They were from Slaves to the Gridword ( 9 squares), Turbulent Open Jet ( 3 squares) and Ian Facey with a correct solution. (Plus, again, a late submission from Pamela!) So Ian claims both prizes this time: two wossnames and a novelties prize package: a "limit" Tshirt, a deck of playing cards and a UW Math mechanical pencil. Way to go! These prize packages will be up for grabs all term long (although content may vary). The only way to win one is to submit an answer.
Look for the full solution to both puzzles in uw.mathnews as well as other comments about the puzzle.
Your favorite blunt (or in one case, bunt) instruments: baseball bat/rolled up copy of mathNEWS (I guess it depends how badly you want to make your point. Oh wait, no points, these are blunt instruments...), a dead sea otter (how PC), and a yo-yo.
Now, last week, did anyone notice anything strange? For example, I never said explicitly which puzzle you should use for the circle side-game? If you look at last issue and the solution this issue, you'll see that it doesn't matter which grid you use; they both result in the same word: PERMUTATIONS.

Also strange: How many different letters did I use in the cryptic? And what might you be able to spell with those letters, repeating as necessary?
There's nothing quite so impressive in this puzzle. The cryptic has absolutely nothing strange about it. Except clue 15 Down. I was surprised to see that my dictionary lists this as (9). Most of us would write (45). (Pssst. That's a hint. Pass it on.)

The conventional has a quote contained in it. In several places in the grid an entry will not fit properly. That's because in 21 squares, two letters have been compressed into one. Reading these squares row by row will produce a quote from Terry Pratchett. In this puzzle, I have a comment to make about 16 Across.

Usually, in my crosswords, I try to avoid uncommon words, and $I$ almost never use a word that doesn't appear in a Collegiate dictionary. 16A is an exception. Although I doubt any of you are familiar with the workings of casinos (unless someone has gotten a work term in Windsor?), if you were pressed to guess at this word and its meaning, I have confidence you'd be right. No compression of letters occurs in this word.
gridQUESTION: What is your favorite light-bulb joke?
Gridby
continued from page 12
The second day of the tournament began with the delicioue smell of homemade pancakes enticing those of us lucky enough to be at John's house out of bed. (Thank you, John's mum!!) Things went rapidly downhill from there. It rained, it rained, it rained, and it rained some more. Yes, indeedy, the weather stank, the weather was awful, the weather was yucky, the weather was ewwww, and yeah, the weather smelled.
I learned something very important, though. What does crappy, rainy weather and a whole bunch of grubby, muddy guys in grubby muddy clothes give you?
Wet shoes, and a whole bunch of grubby guys (wearing blue undies) changing into marginally less grubby clothes.

And just how'd I know that they were wearing blue undies? Um, lucky guess.
(EEEEEEEEEEEEK!!!!) (Ooops. Sorry!! Nope, didn't see your blue undies, nope, nope!) (Nice rocket ships, by the way.)

What else did I learn? I learned that guys like falling down. I dunno. It's weird. Guys just seem to have this weird kind of affinity for the ground. Or maybe they just haven't figured out that they can't fly yet. Everywhere I looked that weekend, there'd be some nutty fruit-cake flinging himself on the ground just to catch a disc. I just didn't understand it!!

And that wasn't even the worst of it! After all the other team members had gotten themselves muddy to the point of being indistinguishable from the nearest dung-heap, they even had the nerve to get upset about my still being clean!!! Crazy, but true. I was moseying around in my own sweet little way, minding my own business, when I heard a very pointed "ahem."
I glanced around.
Accusing, hostile forms surrounded me, pointedly glaring at my pure, pristine knees. I backed slowly away, pasting a placating, heh-heh-nice-weather-we're-having-eh-boys? smile on my face. They loomed ever closer. I began calculating my chances against them, and decided that my hopes of winning were slim. I mean, me against a dozen? Ten, I could have handled, no problem, but twelve is just a leeeeeeeeetle bit too many! Sighing, I got down and rubbed my knees into the mud. "There! There!!! Dirty knees!! Satisfied?!?" I yelled. Sheesh!
Despite all my whining, I have to admit that that roadtrip was fun. Although, I do have to say that its timing could have been improved. Yep. Boy oh boy. What a good idea. Going to Ottawa for an ultimate tournament on the weekend before three assignments are due and two midterms is DEFINITELY a bad idea. Especially when you sit and futilely try to vaguely study in between games, and have the rest of the teams there shudder with horror everytime they pass you. "You're doing WHAT?!?"
Hah! You should have seen the looks on their faces when somebody mentioned "Newtonian Mechanics." Haha.
Anyway, I'll just end this long blathering column by saying that our team is getting better every day, and that anybody can come out and join us for some pick-up on Mondays on the Village Green at $4: 30$. You can even grab one of our most spiffy T-shirts (a steal at just $\$ 15$ ) by contacting Kevin Hare at kghare@undergrad.math, or partake of our most excellent stash of ultimate discs (only $\$ 10!$ ), too (<-Gratuitous plug!!)
Meanwhile, we're going to continue practising and competing in tournaments and having fun and changing out of our grubby muddy clothes (while wearing blue undies.)

Sarah "Didn't see a thing!! I swear!!!" Kamal

## Cipherpunks

Greetings, cipherpunks!
Let's start off this column-and-a-bit with the solutions for last issue's crypts.
CYBERPUNK Don Mac:"That room's full of wankers who a FALSEHOOD The art of storytelling is absolutely noth LOSTHISMIND The mummy fumbled the lid of the first $j$
Also see uw.mathnews for the full text of crypts 1-6 and sources.
For last issue's submissions, I got eight entries. They were from Club 21, Shawn "My Canada includes Quebec's hockey players" Stackhouse, Greg "X. N. Trick" Taylor, G.C., Eric Fung, Phage \& 2, Ian Facey, and Slaves to the Gridword.
The winner this week is Phage \& 2, by random draw! Congratulations! This week you've won the standard whatzit and a novelty prize package: a UW Math baseball cap, and a mug.
Why didn't I tell you about these fabulous prizes earlier?! Because I didn't know. But, it appears that this trend will continue throughout the term.
In this issue, the first puzzle is a normal cryptogram. In the second, I've removed all punctuation and spaces from the message, and divided the ciphertext into five letter chunks. The italicized letters indicate the position of the clue.
The third puzzle is called a checkerboard cipher and here's how it works. Instead of making a keyed alphabet, I've made a keyed square, five letters on a side. I filled the square with the normal keyed alphabet (which in a square always starts with the key, then the rest of the alphabet; it's never started halfway through), but in a geometric pattern.
These are the choices for the pattern: Horizontally, Horizontally alternating, Vertically, Vertically alternating, Diagonally, Diagonally alternating, Spirally (clockwise or counterclockwise). Look at these examples:
qUaCk quack qefmv qdFtv qaedl querl quack qMLIH
ERSBD DBSRE URGNW UBGPW UKBIP AKSIM MNOPE UNYXG
fahil fahil ashox ashox cshow Cbhow lyztr aozwf
MNoPT TPONM CBIPY CRINY RGNVY dGovx IXWVS CPTVD
VWXYZ vWXYZ KDLTZ KELMZ FMTYZ FPTYZ HGFDB KERSB
They are all filled using the keyword QUACKERS. These are the only arrangements I can use. I and J usually share the same cell of the square. Watch the differences between alternating and not.

Now I label two sides of the square with two five-letter words. Each word must have five different letters. Using QUACKERS in horizontal:
.drake
wquack
aERSBD
tFGHIL
eMNOPT
rVWXYZ
I encode the message simply by giving the coordinates of each letter. For example, the ciphertext for "The blue duck flies at midnight." is EE TA AD AK TE WR AD AE WR WK WE TD TE TK AD AA WA EE ED TK AE ER TK TR TA EE.
Some tips for solving: Begin by finding out what the labels are. What letters can occupy the first half of a pair, and which the last half? Use the hint to fill in some letters in the square. Pick out words and fill in missing letters. Try to determine which pattern I've used, then guess the keyword, or fill letters
that aren't in the keyword. (If you see ...MN??R... and you know where the P goes, the missing letters are obviously OQ.) To submit an answer to Cryptogram no. 9, send the left label, the key and the right label: waterQUACKERSdrake
7. Time's Definitely Up. (note: last 3 wds not dict.) TYHXF XNXJXL QXTFG BY XMCXLGSJX HEXFTCQ, WBVHBF YSLTNNQ OTAXG VBOOXLH VTIGSLZ CBBF CTHSXLH HB KXXC: "LB ETUNB SLZNXG."
8. Enough said. Patristocrat (SPEAKING) BLIEV ZFRES MBIUD PGIZK SPGIU IDPIO JZUVZ ZROLZ MBCVR PYKYZ OMCNM OICRB LPUGI YBUNP YBLIF ZXIGN MIUPI MYZOL CMLPK LTUZJ PVIFZ XIGNC FBZUM MTICR PYKBL ZSKLB MZJGZ KMMLS BSTCV UICGN.
9. "Where'd John go?" checkerboard (APPROPRIate) RH RO NK RS AS NH NK RK LC AS UK RK RK UH AS UK RK AC RH UC NK RC NK UC RK LS NC NK AO NH AS LK NK NH US LH AS UC LK RC RK AK RH RO NK RO LH LO RO LS US AS AK AK RC RK AK RC LH AS RH NK RH LH RH LS NK UC AS AO NS RK RS AO AK LH NS AC RK AC AO NS RK RS AO AC NH AK RH LH RK RS

Gridby




## Grid Clues (Cryptic)

## Across

1. And can't start compactor for sand. (9)
2. Rig sail, facing sunrise, toward passage. (5)
3. Apply varnish to rough cool square without help. (7)
4. Thorough search in excellent mix. (7)
5. Crazy rowdies. (7)
6. "Self-centered Wednesday after rattled uncle"-from Addams Family release. (3 4)
7. Abandon first sugar free dessert. (6)
8. A container of Pepsi explodes-it just makes annoying noise. (8)
9. Restored replicas of pinchers. (8)
10. Cinema reels lacking in iron. (6)
11. Seers with gold have keys in France. (7)
12. Writes about ropes. (7)
13. Send back salad containing Hawaii's flowers. (7)
14. Drinking establishment to fire Ms. Turner. (7)
15. Everything goes well. (5)
16. Ruler orders, "Saint Patrick Day without piñatas!" (9)

## Down

1. Permitted to be spoken aloud. (7)
2. Picture it: consuming noshies in camp-like setting. (7)
3. Ticket good to come back for match over the fall. (5 4)
4. Seat divider loses momentum, must stop. (6)
5. Punches get a bit of drink (called ' $X$ ') (5)
6. Let into Cambridge university after a day. (5)
7. A drop of tea in syrup in the ear is for bone therein. (7)
8. Seven is out of place among them. (5)
9. Bruise? Odd ones on greyhound. (3)
10. Pennies ( $1 / 3$ copper) spent on seed pods, of a sort. (9)
11. Mobs fight in MC caf. (5)
12. Hide battered hat among equipment for getting fish thrown back. (7)
13. Short actor takes one drink. (7)
14. Russian soldier sees donkey back into rooster. (7)
15. Jockey sports hint of Brut aftershave. (6)
16. Rotten liars build homes. (5)
17. Wimp (Swiss) begins yodelling. Doesn't work. (5)

## Grid Clues for Bolt from the Blue (Unconventional)

Across

1. Part of a recipe
2. Steal
3. Tool for the kitchen
4. Completely ignores
5. State not in the American West
6. One from Madrid
7. Arctic
8. World info packages shown in theaters
9. Area of a casino
10. Energetic person
11. Seal off as a building ( 2 wds )
12. Newborn
13. Author known as Papa
14. Having been through the tannery
15. Walk slower than
16. What unwelcome guests have done to their welcome

Down

1. Fresh addition
2. Sit-in attendee
3. Oxygen's was Priestley
4. Recruit
5. Vehicles follow "Pease"?
6. Muse who would most likely be held responsible for mathNEWS
7. Switch
8. Facets
9. $\qquad$ de guerre
10. He had his horse stuffed (2 wds)
11. A north African castle
12. Do 6-DOwn (CRYPTIC) again
13. Anything intensely disliked
14. Adjective for Wilt Chamberlain
15. Originating from a culture other than European
16. A tree with real bark?
17. Movie about a thief hiding out in a motel
