# Volume 96, Issue 4 Friday, November 5th, 2004



Midterms? US Election? You Tell Me.

## **look**AHEAD

mathNEWS						
November 5	Issue #4 hopes it hasn't failed its					
	midterms					
November 15	Issue #5 Production Night					
	6:30PM, Mathsoc (MC3038)					
November 19	Issue #5 marches intrepidly forward					
Math Faculty						
November 5	Last day to withdraw from a course					
MathSoc						
November 6	Charity Ball					
November 8	Instructor of the Year nominations open					
	(they close November 19)					
November 15	Post-Midterms Party for First-Year					
	Students					
MathSoc Movie N	Night – 2 movies, 2 dollars					

MathSoc Movie Night – 2 movies, 2 dollars							
November 11	King Arthur and Troy						
November 18	Butterfly Effect and Sliding Doors						
MGC							
TAT 1 1	n: 1						

Wednesdays Pizza dav We need help with the yearbook!

Email mgc@mathsoc.uwaterloo.ca for details Also, send your photos for the yearbook to: math.grad.committee@gmail.com

Со-ор								
Abandon all hope, ye without jobs								
Miscellanious		_						
November 11	Rememberance Day							

## **SASMS**

### Short Attention Span Math Seminars!

That's right, it's SASMS time again! For all ye newbz: the Short Attention Span Math Seminars are a sequence of student-run talks about random nifty math topics, hosted each term by the PMAMC&OC. They usually run 15-20 minutes in length (although some require 2 blocks), throughout two crazy evenings involving math and food (an excellent combination!). Be there, or be... non-Euclidean... o O

This term, the PMAMC&OC is joining forces with the CSC; so all you computer scientists, complexity theorists, software engineers, etc. are encouraged to attend (and give talks too)! The mere appeal of the gargantuan conglomerate of acronyms in "PMAMC&OC/CSC SASMS" should be enough to convince you to go. Booya!

The call for speakers is on; sign up to give a talk today! Any and all who are interested in blathering on about any pseudorandom subject of spontaneous interest you might be interested in blathering on about, should email Alex (mtsay@uwaterloo.ca). Please mention your topic of discourse, if possible. Frosh are especially invited to give seminars!

November 17-18, 2004

5:00 - 10:00 PM

MC 5158

Remember kids, you can't go wrong with something that rhymes with 'spasms'. Yay spasms!

Michael Biggs

## mastHEAD

#### Surprisingly Long

I should really leave myself more time to write these, because then I could pontificate on something worthwhile, rather just throwing down the first thing I can think of in some kind of stream-of-consciousness-like writing.

Editorial comments of some kind of this space would probably be worthwhile. If you read the last issue, and read this issue, you'll see that there's been lively discussion about the MathSoc ExamBank. If you have any thoughts on the matter, we're more than happy to accept letters and submissions. Write them on pieces of paper and drop them in the BLACK BOX in the 3<sup>rd</sup> floor, drop them off in the mathNEWS mailbox in the MathSoc office. oremail vour thoughts mathnews@student.math.uwaterloo.ca.

Also in this issue, the UW-DIG presents a very interesting proposal that I expect will generate a response from either John Beatty or Ken Salem or both (nudge, nudge, nudge). And some people write some funny things, and I make fun of Dark Matter again. Oh, and we've got puzzles. Man, do we have puzzles. One might even say that we've got them out the wazoo.

It's usually the job of the people who go to claim our food on Production Nights to come up with a mastHEAD question for our trusty production staff. When I asked my erstwhile companion Emerald what she came up with for this week, she got saucy and responded with, "What's your favourite thing to not make up your mind about?" This is what our staff responded with:

Lino (the mastHEAD, I think), Michael (I can't decide), Alex (When to do work... is there really a good time?), Latrell (Showing up for Production Nights), Andrew (which instance of sychost is more insidious), DanS (Life), Diana (top or bottom), Snuggles (inside or outside), Jos (MONEY, MONEY, MONEY), Mark (The undecided vote), Kaitlyn "Half-Pint" (Judging the actual distance of 30km). Dave and Aaron "SquirrelToken", while present, declined to answer, citing indescision.

My enormous thanks to Karen Ertel, Laurie Weiler, and the rest of the crew at Graphics for putting up with us, even after all the screw-ups, those fine people at Campus Pizza for the 'za, Eve, the cake girl with glossy lips, and my landlord Steve, for letting me keep my room over the winter.

> Emerald (en-dash or em-dash?) Eric "inkEd" Logan (which one of us is in charge really)

PS — It seems the word "breastacular" is going to stay out of this issue...[D'oh! - inkEd]

#### ISSN 0705-0410

mathNEWS is normally a fortnightly publication funded by and responsible to the undergraduate math students of the University of Waterloo, as represented by the Mathematics Society of the University of Waterloo, hereafter referred to as MathSoc. mathNEWS is editorially independent of MathSoc. Content is the responsibility of the mathNEWS editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or mathNEWS. Current and back issues of mathNEWS are available electronically via the World Wide Web at http://www.mathnews.uwaterloo.ca/. Send your correspondence to: mathNEWS, MC3041, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to userid mathnews@student.math.uwaterloo.ca on the Internet.

Overlord and Overlady: Eric Logan, Emerald Kushnier

## mathNEWS mailBAG

Dear Sir

I wish to express you my best regards.

I have the liberty to inform you that I am an Iranian student, very interested in "MATHEMATICS" magazine.

I found your Magazine "MATHNEWS: A NEW WEEKLY PUB-LISHED AT THE UNIVERSITY OF WATERLOO" very interesting and beautiful and informative.

It would be appreciated if you send me your magazine regularly.

Thank you in advance and wishing you success.

My address is as follow:

Mr. Medhi Ebrahimi

House No. 4.

Shahid Rahim Alley, Imam Street,

Post code: 77819-48148 Kuhbanan – Kerman – Iran

With best regards,

Your's sincerely,

Mehdi Ebrahimi

Dear Mr. Ebrahimi,

mathNEWS offers overseas subscriptions for the low price of CAD\$15 for four months, or CAD\$35 for a year. If you send us money, I'd be hard pressed to not send you issues.

That begin said, I have a feeling you're digging us out of some archive somewhere, as you have discovered our full and formal title, and thus are unlikely to see this response. Sorry. But for when you do find this, I decided to go the extra step and actually publish our barcode, too, which is something we never do!

Our full title is funny because we are neither new nor weekly anymore. But it's not like we use it for anything anyway.

Eric "inkEd" Logan

## How To Regain Your Dignity If You Are Dark Matter

- 1. Notice that *math*NEWS had the audacity to slag you in their latest issue because you dared to publish.
- 2. Devise a devious scheme where you will challenge the editor of *math*NEWS to a variety of Math and Physics tasks.
- 3. Realize that, as a Mathie, he will very likely school you at those events.
- 4. Replace scholarly challenge with a dance-off.
- 5. Publish challenge in your next issue.
- 6. Confront *math*NEWS editor in person. When he tells you he has not seen your latest issue, promise to send him a copy, and then fail to follow through.
- 7. Become more incensed when *math*NEWS makes fun of your challenge in their next issue.
- 8. Realize that you will never get your dignity back until you can take a good-natured ribbing.

inkEd THBBBPTPT

## **Absoluts**

## Come celebrate GIS Day!

On November 17th, between 1-4 pm, the University Map & Design Library and the Faculty of Environmental Studies will be celebrating GIS Day. GIS Day is a nationwide event to promote awareness and appreciation of Geographic Information Systems (GIS). The doors will open to UW students, faculty and staff across all faculties to showcase real-world applications of this important technology.

1:00-4:00 Posters, Map Gallery and Open House (refreshments too!) - ES1 Courtyard
1:30 GIS demonstration: showcasing real world applications - ES1, room 221
2:30 UMD Library workshop: digital data

availability - ES1, room 246.

Please feel free to attend all or part of the day's activities as your schedule permits.

The Courtyard will be open between 1-4 pm showcasing: US students' GIS projects, UMD Library's digital collection, and knowledgeable staff and students to answer your GIS questions.

Please RSVP at gisday@fes.uwaterloo.ca

Eva Dodsworth UMD Library Extention 6931

## Write for mathNEWS!

It's bloody easy

You may have noticed that this rag is full of articles. Since the editorial staff doesn't generate material by posterior extraction, we rely on submissions of readers like *you* (yes, you, and for goodness sakes, do that in private!)

We're not particularly choosy here at *math*NEWS. Our criteria for publishing material is pretty simple: your article should be informative, interesting, insightful or funny. Long, rambling, pointless material is out. So are in-jokes, rants, and flamebait (no lawsuits, please.)

If you have a modicum of writing skill, feel free to submit. You have many options:

- Write it down on some paper and shove it in the BLACK BOX, conveniently located on the 3<sup>rd</sup> floor of the MC between the C&D and the Comfy Lounge. If you type up your article and print it off and then put it in there, we will be very upset, because you should...
- Email it to mathnews@student.math.uwaterloo.ca with the word "article" in the subject line. Alternatively, you can...
- Drop by Production Night! Write an article, and while you're there, help us with the proofreading and editing of the issue. All are welcome! The date of the next production night is given in the *look*AHEAD of every issue.

See, isn't that simple? Perhaps you're the next great Hemingway, Atwood, or Davies, just waiting to be discovered [Or maybe you can just write better than this hack... — inkEd]. Submissions for a particular issue are due by 6:30PM on Production Nights. Submit, submit, submit!

Eric "inkEd" Logan

## Prez Sez

Welcome to another exciting issue of Prez Sez, where this week we'll talk about upcoming elections and the MathSoc Annual General Meeting.

Nominations for next years Math Soc executive are upon us. Nominations for the spring term have already been opened. You can pick up a nomination form outside the MathSoc office.

Nominations for the Winter and Fall term will be available outside the MathSoc Office during the tenth week of class.

Nominations for Math Grad Committee Chair will be open on the ninth week of class. If you are interested in chairing the group of people that plans exciting things like Grad Ball, Pizza Day, the Yearbook, and social events for 2006 grads, then this is the job for you!

The MathSoc Annual General Meeting will be happening sometime during the last two weeks of November. More information will be coming on this issue.

As always, if you have any questions about anything I've talked about, feel free to e-mail me at prez@mathsoc.uwaterloo.ca.

Lino Demasi Math Society President

## Five Left Dead in Religious Skirmish

Two Federation of Students members and at least three representatives of the ESA rebel movement were killed in an early morning attack on the SLC Tuesday. Reinforcements from the nearby Federation stronghold, Fed Hall, were too late to prevent the slaughter, but were able to provide some medical assistance to the survivors.

The Embassy Students' Association, a militant organization affiliated with Pentecostal Assemblies of Canada is dedicated to the Christianisation of all Federation held territory, claiming a historical precedent stemming from the brief historical period where portions of Waterloo were used as a Lutheran Seminary. A low intensity conflict has existed for months, with the ESA declaring war on the Federation of Students last week over charges of "misuse of power" in purported overtaxing of ESA's followers.

The University of Waterloo campus has become fractured in recent years, with faith based militias controlling more and more ground since local strongman, Dr. James Downey, lost control in 1999. Fortunately, other extremist Christian groups have distanced themselves from the ESA's violent tactics. The Campus Crusade for Christ, best known for a spate of religious vandalism in support of their enigmatic leader, nineteenth century poet and suspected sexual deviant, Lord Byron, has released statements condemning the killing on its website. When reached for comment, the Hindu Students Association made a long winded speech about belonging to a different religion, but no, they weren't violent either.

This incident is the worst clash since Federation storm troopers had to be called in to clear the WPIRG compound of armed Chomsky supporters in 2002.

# UW Co-op Students at United Way

The annual United Way fundraising campaign involves many organizations and individuals in Kitchener-Waterloo and area. This year, two of UW's own co-op students, Tara Keogh (3rd year Social Development Studies) and Chris Fanaberia (3rd year Science and Business), are working on the campaign at the United Way of Kitchener-Waterloo as members of the United Way Loaned Representative Team.

The term Loaned Representative refers to an employee who is donated to United Way by an organization for the duration of the annual United Way campaign, and/or a person who is hired by United Way with costs paid through sponsorship from a local area organization.

This is the first time that co-op students have ever been Loaned Reps at United Way of Kitchener-Waterloo, and Penny Rolinski, Campaign Director says they have been "very, very pleased" with the way it has worked out so far. Some of the campaigns have already come back over-goal, which is good news for United Way, whose objective is to raise 5.3 million dollars over three months. For the students, it has been an equally beneficial experience. "Every day is a different co-op experience," says Tara, as they have had the opportunity to work side by side with seasoned professionals, and interact with different CEOs and organizations during the campaign. Chris feels that it has been a very rewarding experience, allowing them to "give back to the community" and "become more knowledgeable about the agencies in the area". Such enthusiasm and positive attitude has greatly aided the students in a position that requires a tremendous amount of responsibility, including giving presentations to as many as 500 people at once and managing, on average, 40-50 individual accounts.

Many UW students have shown an interest in working in the humanitarian field, however there is often insufficient funding in these organizations to create co-op positions.

This exciting opportunity was made possible by the collaboration of UW's Office of Development, Co-operative Education & Career Services, United Way of Kitchener-Waterloo, and a generous contribution from Steve and Eve Menich, private donors who stated in a letter of support that, "the vision shared by UW and United Way adds meaning to community service that is a cornerstone of our democratic society and culture."

Part of the vision is that this pilot project will someday be able to extend to other United Ways in larger city centres, allowing more students to help communities across the nation.

# Could Reading Week Be Changing?

Do you like reading week the way it is? Do you want a full reading week? Do you not care either way?

There is a proposal to change reading week for math and engineering to be the full week other faculties have instead of the few days that it is now. YOUR input is important. Please e-mail prez@mathsoc.uwaterloo.ca by Monday, November 8th with your feedback on this issue!

## Elsewhen

It Was All About Beer...

Welcome back to the *math*NEWS stacks when I reach into my red volumes and come up with ten year old material that happens to be interesting and/or funny. Volume 66, No. 4 was billed as the "Responsible Drinking Issue" because, in the words of Steve "Flipper" Shaw, "...some university students are incapable of drinking responsibly, particularly at my parties."

inkEd

#### Prez Sez

Marco C.A. Koechli returns for his fortnightly update on the state of the Society. An AGM was held, and a new Constitution was adopted at said AGM. Pub Night was held at the Bomber, and there was much drinking. The showing of the *Rocky Horror Picture Show* was a great success, and Marco makes a terrible woman. Also, a undergraduate rep is required to the new Faculty Strategic Planning Committee.

#### Top 10 Actuarial Science Pick-up Lines

- 10. Is that and SOA calculator in your pocket or are you just happy to see me?
- 9. My father owns an insurance company.
- 8. Actuaries do it without risk!
- 7. Baby, my love for you is endless like a perpetuity.
- 6. Your cubicle or mine?
- 5. I am a close friend of Prof. Harry Panjer.
- 4. Of course I won't tell anybody about tonight. I am like an exponential distribution I possess the memoryless property.
- 3. Since the begining of the night, my interest in you has compounded continuously.
- 2. I love the way your hairline emulates the p.d.f. of a normal distribution.
- 1. If you have an urn with 5 red marbles, 4 blues, and 3 whites, what is the probablility of you coming home with me tonight?

Tom "I'm a client, too!" Peng, ASC Prez

## profQUOTES

"The meat is hard... Maybe we should do vegetarian proofs, skip the meat."  $\,$ 

Munro, CS 134

"We're marking your exams today, and you're providing us with a lot of entertainment."

Munro, CS 134

"The primary emotions are fear, anger, happiness, disgust, sadness, surprise, and a fanatical devotion to the Pope."

Bulman-Fleming, PSYCH 101

"...and this is not gender-specific; Bob could be a woman.

Bennett, MATH 135 [Shades of Blackadder... — inkEd]

"In this situation, we need only consider the postive values of zero... uh, let me repeat that..."

Zorzitto, MATH 137

"I hate numbers!"

Wainwright, ???

#### Repentant Young Frosh

Sarah Kamal returns, this time as the Repentant Young Frosh. She's sorry about calling math guys weenies. To wit:

Math guys do NOT, I repeat, **DO NOT** resemble weenies in any way! I apologize profusely if I, with the comments from my last article, hurt or traumatized any of the decent, unsuspecting weenies out there. Weenies are great!! Weenies are wonderful!!! Weenies are fine, upstanding examples of the evolutionary cosmic way of things!!!! Math guys don't even come CLOSE to the blessed state of weeniedom. MATH GUYS ARE NOT WEENIES!!

She goes on to call Math guys OxyMorons, mentions that there is really neither math nor news in *math*NEWS and suggests it be called BeerNSexNBaldJokes, and threatens to shoot herself if she ever understands all the jokes in *math*NEWS or if she fully understands the Safe Sex section of the Feds Handbook. So there. Also, she encourages people to give their old exams to MathSoc so the Exam Bank can stop sucking.

#### Otherwise

- The ActSci Club announces some talks, a trip to LaserQuest, and they're almost out of hats.
- Calum T. Dalek, Chairbeing of the CSC, announces that Poesy Chen donated a computer, the CSC has a new 1 Gigabyte drive in Calum, ACM Regionals are approching, and thanks Ian Golberg and Amber O'Hearn for hosting meetings at their apartment
- Prices on coffee go up in the C&D [Amusingly, it looks like the prices are still the same now... inkEd]
- The mastHEAD asks: What's your favourite drink? [My favourite answer: Fuzzy (my navel) inkEd]
- Chris "Ziggy" Norman gives the Top 12 Ways to Get Drunk (Number 8: If it ends in 'ol', drink it!)
- Old *profQUOTES* are dug up, all dealing with alcohol.
- Tomas Tocek reminds people that drinking is not necessary to have a good time.
- Mike Holmes expounds on the Down Side of Drinking
- Danny Gardiner takes up space.



## **Letter to the Editors**

Dear mathNEWS editors,

I was disappointed with the article "MathSoc Exam Bank Considered Useful," authored by Scot Nyback in his capacity as a MathSoc volunteer, in response to Professor Ragde's article, "MathSoc Exam Bank Considered Harmful." It was an inappropriately flippant dismissal of the very real and legitimate concerns raised by Prof. Ragde, and I certainly hope that Mr. Nyback's article does not represent an official view of the Mathematics Society.

In Prof. Ragde's article, he lists a number of problems with the exam bank as an explanation for why he no longer wishes to cooperate with the exam bank. The problems he describes are so blatantly obvious that I've encountered them as well after only a year as a graduate teaching assistant. Moreover, Prof. Ragde's views are likely held by a number of other faculty members — but he did the courtesy of expressing his views so that MathSoc now has a chance to address them. Addressing his concerns would likely increase faculty participation in the exam bank, which is vital to its success.

In a fallacious argument-by-analogy so complex as to make Plato look sophisticated, Mr. Nyback claims that MathSoc should not be responsible for students' misuse of the exam bank. This is nothing more than a distraction from the fact that there are things MathSoc can do to make its exam bank more useful for students by providing the service in a way that is less likely to be misused. For example, exams could be accompanied by a list of tips on how they can be used as effective study aids. Irrelevant exams could be aggressively culled. Exams that are considered too easy shouldn't be included at all. Or MathSoc could move away from offering an "exam bank" in favour of a "practice problem bank," in which students can choose relevant questions to make up their own practice exams. I'm sure any reasonably creative MathSoc volunteer could come up with a number of other possible solutions.

It would have been nice if, instead of becoming defensive when criticized, Mr. Nyback had examined ways of fixing the problems leading to the criticism. Speaking as someone who's contributed exams to MathSoc, and who would like to continue doing so in the future, I would be curious to know what steps, if any, MathSoc intends to take to address the concerns raised in Prof. Ragde's article.

Craig Sloss Candidate, Master of Mathematics

## Today's News Yesterday

As many of you readers know, our neighbours to the south happened to have a pretty major election this past Tuesday. It also happens that *mathNEWS* is written on Monday nights. Luckily, we just happen to have a device here that can see the future, and knows the outcome of this election (no, it's not one of those electronic voting machines that the Republicans have rigged to automatically disenfranchise anyone who votes democrat). With this device, I am now able to write news that is appropriate for this Friday, even though to me it's Monday:

We, as denizens of this planet we call Earth, are all totally and completely screwed.

## *prof*QUOTES

(After wishing the class luck on MATH 135 midterm) "I just want to remind you about the Counselling Services available..."

Struthers, MATH 135

"Calculus-based answers are not acceptable."

Struthers, MATH 135

"Ok, now if I'm Austria, how many ways can I attack Spain without going through France because France is bigger than me and can kick the shit out of me?"

Verstraete, MATH 239

"It's very hard to do. Well, I read that it was very hard to do, so I didn't bother trying."

May, CS 234

"Since I started teaching, I've lost twelve pounds from running around."

Wolcowicz, MATH 235

"I got a C in fourth grade arithmatic. No, wait," (counts on fingers) "fifth grade."

May, CS 234

"The third verse of our rap is about standard deviation, after a few remarks (mostly inapropriate) about your mother, of course."

McLeish, STAT 230

"Radar cooking... doesn't that sound sexy?"

Smith, ECON 101

"My first-year calculus students have a midterm tonight. This morning I had two students who talked to me about transferring to arts. I mean, it was a good idea. They're so young."

Struthers, STAT 230

"Okay, so I'm going to change this ostream to an istream... istream, ustream, we all stream for istream!"

Kaplan, CS 246

This is an embarrasingly small number of *profQUOTES*! Your profs say more silly things than this over a two week period! If your prof ever says anything funny, silly, or plain old stupid, scribble it on a peice of paper and cram in the the BLACK BOX, conveniently located between the C&D and the Comfy Lounge on the 3rd floor. Tree-huggers can email them to *mathNEWS@student.math.uwaterloo.ca*. Whatever you do, we can do better than this! SUBMIT, SUBMIT!

## **Dungeons & Dragons Tournament**

A D&D v3.5 Tournament will be held on Saturday November 20. Put together a team of five, and for only \$50 the whole team can have a day of fun! Pre-register your team now, before the spots run out! A large variety of prizes, worth over \$300, will be available. For more information, visit http://watsfic.uwaterloo.ca/tournament

Waterloo Science Fiction Club

## **Building a Better MathSoc ExamBank Together**

First and foremost we would like to give recognition and commendation to Mr. Sloss and Professor Ragde, not only for contributing to student life in the past, but for taking the time to attempt to be a positive influence on current and future students as well. MathSoc will always appreciate feedback, suggestions, and concerns on any of its various services. We believe that some reasonable and valid points were made, and would like to take this opportunity to declare an open meeting at 2:30pm on November the 12th in the MathSoc Exec Office (MC3039) to discuss possible enhancements to the ExamBank. This is an open meeting, and as such any and all people who are interested are more than welcome to attend. At that time we will examine the issues already brought up and anything else any participant wishes to discuss. That being said, certain comments made by Mr. Sloss require further examination.

Scot Nyback specifically opened his article with "Prabhakar Ragde just brought up a number of very good points" and we feel it is unfair for Mr. Sloss to claim that he offered an "inappropriately flippant dismissal". We are discussing an issue, not the people involved. Please let us all remember that everyone is only trying to do what they believe is best: to help the Society and the student body at large. There is no need to indulge in personal attacks.

A number of useful suggestions were made by a variety of people; however, it is important to deal with the conceptual proposition of obliterating the ExamBank in preference of a "practice problem bank". We feel that a great deal of benefit is gained from exams being available in their entirety, instead of simply individual problems: it allows students to get a feel for their timing, as the time limit is a real concern for many students; it allows students to gain a sense of flow and have more of an ability to recognize an easy exam versus a hard one. Additionally, it presents the complete picture of the exam as presented in a previous offering of the course. Obviously courses might change, but no exam is presented problem by problem they are presented as a complete set. The contextual information is lost when considering a "practice problem bank", and many of the potential misuses pointed out are contextual issues (age of the exam, easy/hard exams, curriculum changes). It is interesting to note that this is not uniquely a service provided by students. The University obviously supports the concept of an ExamBank, as they run their own version, the Graphics ExamBank (which goes so far as to profit off students seeking information).

To clarify Scot's hammer analogy we offer the following: consider the classic "Guns don't kill people, people kill people" argument; the obvious retort being that it is people with guns that kill people. The reality of the situation is that a balance is necessary. Where as a handgun might be a reasonable tool, an assault rifle is not. The fault lies with the person (guns don't goto jail), but that doesn't mean that we must ignore gun legislation. Similarly, misuse of the ExamBank is the fault of the person, which is not to say that we can't make it easier to use it correctly. Scot implies with his hammer analogy that the ExamBank is a reasonable tool with the potential for harm, but that the good benefits outweigh the possible harm. Mr. Sloss and Professor Ragde seem to liken the ExamBank to an assault rifle. Now before anyone starts getting into a 2nd Amendment discussion, let's step back from this analogy.

The whole issue seems to come down to a question of the benefits offered by the ExamBank's exitence, compared to the possible harm done by its misuse. We fundamentally believe that at its heart the ExamBank is a good thing and that it should continue to exist. That being said, we will strive to improve this heavily used service to better aid students. It is obvious that it can be used responsibly, as so many students already do so; however, we must improve the service for those few unfortunates who misunderstand the concept and suffer as a result of it.

MathSoc will make an effort to ensure that the ExamBank retains its useful properties while minimizing the potential for misuse. To that end we will be having the open meeting on November the 12th at 2:30pm in the Exec Office (MC3039), at which point we will examine not only the issue, but what further steps we can take to remedy the situation.

We will leave you with a reminder for those of you that wish to use this great service: check out http://www.mathsoc.uwaterloo.ca/bank\_index.php or come on in to the MathSoc Office (MC3038) where our volunteers will be happy to help you. And please, bank responsibly.

Diana Chisholm MathSoc Vice President, Academic

## **November Mathie Holidays Wanted**

Booooo. It's the beginning of November and there are no holidays coming up to write about (i.e. mock mercilessly). Hallowe'en and Thanksgiving have come and gone and Christmas isn't for another month. So with no holidays to talk about, I'm gonna make up my own. So prepare to mark your calendars, because here are your November Mathie Holidays:

- November 5. Take A Mathie To Work Day: This is something we could use, or should at least make mathies around the world feel important. It's like having a Co-op placement for a day, except for, you know, without the pay or credit or anything.
- November 8. Indefinite Integral Day: Have fun and enjoy yourself. At least once, be the area underneath someone's curve.

- November 12. Karel Day: Do not turn right, turn left only.
  Do not move until you have looked ahead. For added fun,
  pick up some objects then drop them.
- November 18. Linear Transformation Day: This holiday is so great, it's like having two Linear Transform Days, both on November 9, or a Linear Transform Day on November 7 and another one on November 11.
- **November 25. Submission Day**: Submit! Submit! You will submit today! Oh yeah, don't forget to Test Compile.
- November 29. Differentiating e<sup>x</sup> Day: Nothing happens today.

So there you have it, a whole whack of holidays for November. Now go out and celebrate or something.

## Cryptic 101

An introduction to Cryptic Crosswords

The number of submissions for last issue's Cryptic Grid were outnumbered by non-submissions by 1199:1. While this is a fascinating statitistic, it is not desirable! As a result, the CryptMaster has taken it upon himself to create a crash-course in cryptic clue cracking. This is your novice guide to cryptics.

The fundamental principle of a cryptic clue is that it is composed of two distinct parts: The definition, and the wordplay. Both parts suggest the same word, which is the solution to the clue.

The definition is like the normal crossword clue to the word, but it hidden within the clue. Fortunately, it is always located at the very beginning or very end of the clue. It usually is one word, but can be an entire phrase. The definition can be a rather vague association with the answer, as you will see in the examples provided below. The word play is the rest of the clue. It clues the same answer as the definition, but using one or more forms of letter/word tricks. Good cryptic clues do not have any extra or redundant words. Frasier Simpson, who writes for the Saturday Globe, is a well-known writer and follows this policy. The rest of this article is dedicated to those tricks and examples (all from last issue).

- 1. Hidden word. The simplest form of cryptic clue, where the answer is hidden right in the clue! Look at 21 Down: { Happy in the late draw (6) }. Here "happy" is the definition, and "in" what I call the action word: the word that directs the reader how to proceed. In this case, the answer is "in" what follows. Thus, we find in bold: "thE LATE Draw", elated = happy. At this point it is important to note that "in" doesn't always mean a hidden clue. Keep reading to see why.
- 2. Anagram. Another fairly simple cyptic clue is the anagram, where all the letters are given in the clue, you simply have to rearrange them into the answer. Try 11 Down: { Hospital got new scientist (11) }. The definition is "scientist", and "new" is our action word. "New", "old", "broken", "fixed", "arranged", "mixed", etc. are all examples of action words that signify an anagram. Here, we take a new version of "hospital got" to get a "scientist". You could try rearranging those letters to see if you can find it. No? The answer is pathologist.
- 3. Double Definition. Sometimes there is no wordplay, and the rest of the clue is simply another definition. If the clue is only two words, it is almost guaranteed to be a double definition. Sometimes longer clues will also be definition. Now take a look at 29 Across: { Most aware of smallest angle (7) }. Here, the two definitions are "Most aware of" and "smallest angle". Try pausing for a moment and see if you can find the word that means both. Give up? It's... acutest.
- 4. Synonyms. Quite often words are used in wordplay to represent other words. Often words are replaced by only letters than represent them in every day life ("empty" becomes "e", small becomes "s", etc.) Somtimes words are used to represent themselves! Try 25 Down: { Co-op student in migrating bird (6) }. Definition is "co-op student", "in" is just "in", and a migrating bird is a "tern". "in"+"tern" = intern = co-op student. Now you might be thinking: "How was I supposed to know that?" Well, you weren't

- exactly. There are many migrating birds. But this one happens to make the entire clue make sense, and thus you know you have the right answer. It wouldn't be cryptic if it didn't take work!
- 5. Homonyms. Sometimes the action word will direct you to listen to how a word is pronounced, or more oftern, to listen to how a synonym of a word is pronounced. The answer will be a homonym of this synonym. An example is best, so let's look at 1 Down: { Seafood body parts, say (7) }. The definition is "seafood" and the action word is "say". Try "say"ing some body parts. One of them is bound to sound like a kind of seafood. Have you got it? Muscles sounds like mussels, which is the answer.
- 6. Puns. A question mark at the end of a clue means that solving this clue will either take a stretch of the imagination (further than normal!), or will actually be a pun. These are usually combined with other simple wordplays. For a great example, try 23 Down: { We hear kisses with flowers? (6) }. The definition is "flowers", and the action word(s) are "we hear". A homonym clue! What synonym for "kisses with" sounds like "flowers"? It's not too hard, now that you know its a pun. Well, you kiss with two lips, which sounds like tulips. Get it? I hope you found that as funny as I did.
- 7. Complete clue. An exclamation mark informs the reader that the entire clue is BOTH the definition AND the word play. This is rarely used, but can be quite interesting when it is. There are no examples from last issue, but two issues ago one of the clues was { Become a couple!? (8) }. This clue was both a pun and a complete clue. Here we go, prepare to groan. Become a couple means together, but become a couple for a guy is the same as TO GET HER...
- Construction. Now comes the complicated part. Many action words direct you to rearrange the words or synonyms you have created using the above rules to finish the clue. The majority of cryptic clues use this technique, combining the above, and having OTHER action words complete the answer. Words like "after" direct you to move some letters to the end. "up" can mean you write a down clue upside down. "in" can mean you physically put one word inside another. Let's look at a big clue and see it all fall together... 20 Down: { Sun up stores chance without small check of subtleties (7) }. Our definition is subtleties. Our action words are "up", "stores", and "without". This is what we do... follow carefully... "sun up" in a down clue is "nus". "stores" tells us we're going to put something into "nus". That something is "chance without small check". A small check is "ch", a standard abbreviation. So "chance without ch" is "ance". Have you kept up? We "store" "ance" in "nus". Can you see where we put it? nuances = of subtleties.

That last example was just one way that cryptic clues can become quite intricate. You will learn, only by doing, how all the clues fit together. I will gladly answer any questions in the future about the grid. Until then, happy solving!

> David Wheatley ConMaster

## **Latrell Space**

Part 1: Warrior football season in review

I'm a big fan of Warrior football. From my time as a student, continuing into my alumni years, I've followed this team since 1995. I've seen a lot of great moments. I've seen a lot of heartbreaking moments. And I've seen a lot of bad moments. Lately, it's been more bad than great.

Last year's team finished 8th with a record of 2 wins and 6 losses followed by a drubbing at the hands of McMaster in the playoffs. This year, the OUA eliminated two playoff spots, so only the top 6 make the playoffs. Another 8th place finish won't do; gotta improve and win more games to make the dance this time. The Imprint has been offering the equivalent of fluff when it comes to football summaries this year, so I offer my own review of the 2004 football Warriors season (listed by opponent, record at time of game, and final result):

#### At Ottawa [0-0] (L 25-24 in overtime)

Didn't see this game, though I thought about making the drive to Ottawa. First game of the year can sometimes be a crap shoot, but tell me this: how does one lose by a single point in a shootout overtime format? How is this possible? Isn't it automatic to score at least one point in Canadian rules football when you start from the opponents' 35? Oh well, they get a point for the overtime loss. Maybe this will help out later on.

#### At McMaster [1-0] (L 55-17)

Second game of the year was against the four-time OUA champions. Definitely a challenge... and not made easier by giving up an 108 yard TD run in the first quarter. At least the score was better than those 57-10 and 70-7 back-to-back drubbings at the end of last season to these same Marauders. Didn't see this game either; maybe that was a good thing.

#### York [0-2] (L 55-33)

Home opener! Nationally televised game! Two winless teams! A 2pm start! Rock and roll!

Started the game by going up 11-0. That's good! Then gave up 55 straight points. That's bad. On national TV (well, the Score) no less. Hmmm... that's going to throw a wrench into those off season recruiting plans.

Curious play: In the second quarter, Waterloo was forced to punt in the shadow of their own goal posts. They were already down at this point, and the smart play would have been to concede a safety for 2 points and kick from the 35. Instead, Waterloo punts it away, and York returns it for a touchdown. Genius!

#### At Queen's [0-3] (W 17-14)

Better effort in this game. The offense did squander a number of opportunities to blow the game wide open. Defense took a holiday in the last quarter. But the team held on for their first win, so something positive to build on.

#### Laurier [4-0] (L 44-3)

Ugh. Well, there goes that momentum.

As in the York game, Waterloo found themselves punting in the shadow of its own goal posts... so did they kick it away this time? Nope... they concede the safety! Right on! Good to know the coaching staff is learning.

Alas, not much else about this game other than:

• Waterloo seemed to do much better on 2nd down than on 1st.

- A number of times I was scratching my head wondering "who's covering that guy?" as Laurier receiver after Laurier receiver is wide open.
- The Laurier fans were jerks. However, their program was in the dumps as recently as two years ago, so I can understand their new found cockiness. At least they have a coach who knows how to turn things around. Still waiting with the guy we got.

#### Western [3-2] (L 57-14)

3-2? Oh, I see: those 2 losses came against Mac and Laurier. Quite the forgettable game. After 8 minutes, Western was 14-0. Perfectly good Saturday night shot to hell. Interesting quote from the Imprint on this one:

"I guess the Warrior crowd had not been to a football game lately. They were the quietest crowd I've ever seen; save for the yellow shirt clad super-fans."

Uh, I've been to three of them... there hasn't been much to cheer about. Bad team playing on a chilly Saturday night on a holiday weekend. Yeah, I wouldn't cheer that much either. Which brings this up: who's the genius that keeps scheduling home games for 7pm on Saturday nights? And on the Thanksgiving weekend no less? Do they really not want people to show up for these games?

Classic quote from Coach T. after this one:

"It's one day at a time, one player at a time and one play at a time. Football can't be changed around like instant soup. I think we'll get where we want to get, but we all want to get there quicker."

Huh? Methinks this season is almost lost now.

#### At Toronto [0-6] (W 34-6)

Arrived at this game late. When I got there, Waterloo was up 14-0. When I sat down, I was treated to some pretty sloppy football by both teams. But in the end, Waterloo got the win against an inferior opponent, and the Warriors were still in the playoff hunt going into the final week.

#### Windsor [2-5] (L 40-7)

This was another one of those inexplicable 7pm Saturday night games. However, this played to Waterloo's advantage. It was the last game on the OUA schedule, and the results of the early games gave Waterloo this scenario: win and you're in. Yeppers, that point for the overtime loss early in the season may just help us out.

Waterloo was leading after the first quarter 6-3, but then the Lancers steamrolled the Warriors after that. There were a number of "who's covering that guy?" moments (like in the Laurier game), and the Windsor receivers made some unbelievable catches. Once again, a perfectly good Saturday night shot to hell.

Waterloo finishes 2-5-0-1, eighth place in the OUA, and out of the playoffs for the first time in ten years (or so).

So what should the team do now? Well, I got a few ideas... I'll go on about those next issue. Till then, I'm...

Latrell

## **UNIX Sucks!**

(at our school)

Have you ever tried to use UNIX in the undergraduate labs here at Canada's prestigious University of Waterloo Mathematics Faculty? It's glorious! You sit down at a beautiful big screen in the 2nd floor labs or a nice new flat panel on the 3rd floor thinking, "wow, I'm at the best computing university in Canada; this should be amazing". You use a magical thing called a 'chooser' to select a hostname from a list. It asks you for your user name and password at an ugly grey screen. You think, "they are really covert about this UNIX thing, they don't want people who can't login to get jealous of what we have here in Math". Suddenly, the login window disappears and you are left with the same grey background... you think, "What the? How much do I pay to come here? What is this crud?". You then think, "Oh... maybe it's not the school that is at fault. Maybe UNIX sucks".

If you are lucky you have run {Net,Free,Open}BSD or Linux on your home or work machine and know that those UNIXish systems don't suck. Maybe it's Solaris that sucks? (nope, nice try though).

If you have knowledge of X-Windows then maybe, just maybe, you can build a new window manager and rid yourself of the cyan windows and grey background that are so ugly. If you are a documentation reader then possibly you have discovered the MFCF faq that gives you some basic help for customizing your X environment.

For many though this is too confusing and time-consuming. What does this mean? You, a student at Canada's top Mathematics/Computer Science school, are doomed to using an ugly UNIX interface. Once you are done here, you will probably think, "sweet, I'm never using UNIX again". (Score 1 for Microsoft, 0 for the Unixes)

Well guess what everyone, there is a group of students (yes students like you), working to fix this problem. To make our UNIX labs look how they should, like the top Computing University in Canada. Our plan is as follows:

- 1. Make an interface that is visually appealing and easy to use. UNIX should not be ugly. Look at KDE, Gnome, Fluxbox (and others)... we can do better than TWM. TWM is a piece of software that is circa 1988. TWM is no longer developed: come on, we are the best in Canada for what? Why is our tuition so high again?
- 2. Allow easy access to a wider variety of utilities that students can use to get their work done. The Open Source software space is huge... we should have more tools that make student life easier.
- Replace individual Solaris boxes with minimal load balancing capabilities (who actually uses hostselecti), with a self-balancing OpenMosix cluster based on commodity PCs running Debian Linux.
- 4. Complete the cluster and hand it over to the MFCF/CSCF as a gift. Political and manpower issues seem to plague the MFCF and the CSCF. Maybe we could kick-start an upgrade of a computing system that is in serious need of some revitalization.

We are the UW Debian Interest Group (UW-DIG). Come to our next meeting about X-Windows and the cluster we have now:

November 15th @ 6:00pm - MC4058 http://www.uw-dig.uwaterloo.ca/

Colin Bell

## Denying Your Genealogy 101 - Moving Back Home

Week 4 - Dealing with doubt

One day, gentle reader, you will find yourself in the position I found myself a few weeks ago (after the events leading to my cute but short column last issue). Filled with doubt about courses and my social life, I thought to myself, "Is this really the life I want to lead? Is this really the path that's right for me? Can I honestly show my face on the third floor come next term?"

Well, after answering with a fairly certain NO, I learned the extent to which one can be e-threatened in this glorious Age of Technology. With promises of draggings-back and beatings galore, and witnessing at least one tough friend more than slightly upset, I decided to deal instead of run.

In the meantime, I sorted out some excuses against leaving. So if your midterms come back with a bill from the math faculty for red ink, don't panic. Here are some generic, good reasons to stay:

- If you switch schools, you have to learn how to get around a new campus.
- An entire new wardrobe of University gear is more than a little pricey.
- It will take at least three major family gatherings (and you've just missed Thanksgiving) to make sure all your extended family know and don't ask the awkward "How's Waterloo?" question.

- No more writing for/reading mathNEWS. (This should be reason enough.)
- You'll be frosh again/for an extended period of time.
- Moving... ugh. Packing and unpacking SUCK.

If these aren't enough to convince you, but you know you want to stay, try to CREATE a reason to stay by doing any or all of the following:

- Get yourself a significant other that is on stream with you or continuously stays in Waterloo.
- Get an awesome part-time job in town.
- Sign a year-long lease.
- Sign an intent to graduate form even if you are frosh. I've
  heard that you are stuck finishing whatever you specify
  on those things.
- Be elected to any position on campus Feds senator, MathSoc prez, FOC, etc. - that requires real commitment.
   FOC is especially effective, as you are locked in for 10 months of the year.

No one said this would be easy. And if they did, you have this columnist's permission to HIT them.

Half-pint

en route home from Waterloo, where she is certain she most definitely belongs

## **US Election in Recount Mode**

Florida actually decided this time

A new tradition is forming in the US: recounts. This time. the "swing-state" of Ohio is in recount mode, with new electronic vote machines the main culprit. There was also a large group of Caucasians who, for some reason, were left off the ballot. When asked why the caucasion population was excluded from voting, election representatives simply responded, "Well, we have to be fair... last time we denied African-Americans the right to vote, it's the Caucasians' turn to not vote".

It is incredibly funny how a country such as Canada, who elected the Liberals to a minority government just this past summer, can have electoral results within hours of when polling stations close, whereas countries that tout themselves as "technologically advanced" (see http://go.hrw.com/atlas/ norm htm/usa.htm for more details) can screw up with something as simple as counting the number of pieces of paper with "Bush" or "Kerry" on it (sorry Ralph, not enough support for you to make it here.) One wonders how this is done. I believe they follow the "stairway" voting approach: simply toss the contents of a ballot box down a set of stairs and use the set of ballots that land on the n<sup>th</sup> to determine electoral statistics.

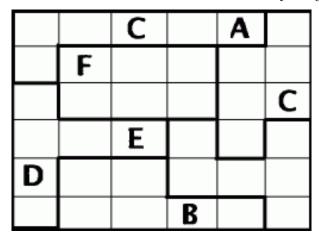
Mark "Beatlemaniac" Toivanen

## BYOB Jr.

Due to the overwhelming success of this little beauty in its various appearances, we are happy to announce the birth of BYOB Jr. this 6 pound 6 ounce baby puzzle will be appearing bi-weekly in a mathNEWS near you.

The image shown has six shapes with six squares each. Place the letters A through F in the squares such that each row, column, and sub-block contains each letter exactly once (only one letter per square cheaters).

**Baby Snuggles** 



## The UW Distinguished Teacher **Awards**

To nominate your outstanding instructor, contact:

Teaching Resources and Continuing Education (TRACE) Of-

MC4055, ext.3132

trace@admmail.uwaterloo.ca

http://www.adm.uwaterloo.ca/infotrac Nomination deadline: First Friday in February

## **Sweeping New Changes Down** South

Today is a day that shall go down in history as possibly one of the oddest in U.S. politics everywhere. Amidst all these recounts that are plaguing these results, today George W. Bush held a press conference telling the world that he and John Kerry are in fact the same person. At which point Kerry-Bush activated his running-mate-fusion machinee and combined Edwards and Chenev into the terrible VPminator, who then went on a rampage causing death and destruction to all around, unless of course they were the rich and powerful friends of Kerry-Bush and the VPminator.

Kerry-Bush also went on to announce some sweeping new policies. First it was announced that everyone who voted against the two major parties was being rounded up as a terrorist because, "Anyone who voted against our two party system is against America's freedom" and, aparently due to a clause in the Patriot Act, the FBI was able to (and did) monitor each ballot, and was at that very point in time rounding up those "terrorists" in the population and sending them to America's new prison (since Guantanamo wasn't large enough) for these "freedom haters" in Rhode Island, only to sink the entire place.

Meanwhile, for the foreign policy for the next 4 years, Kerry-Bush has plans to eliminate terrorist states worldwide, and revealed some proof that OPEC itself harbours terrorists, and has vowed to end this by invading each and every one of its member countries. He also declared that Canada is a communist state, and vowed to bring "freedom" here as well, especially Alberta, but hey, may as well get the whole country at once.

As a precautionary measure, students are encouraged to come and take cover in the MC as the American military possess no weapon that can breach the exterior walls of this most imposing building on campus.

DanS

## Solutions to Issue #3's GridWord

	, L U	LLI	<i>7</i> 11		•	UU	uc	•	U	•	,,,	u	V	ı u
$\mathbf{M}^{\mathrm{T}}$	o	$_{ m I}$ $^{ m R}$	$s^{T}$	$T^{U}$	$\mathrm{E}^{\mathrm{R}}$	$N^{E}$		$\mathbf{A}^{\mathrm{E}}$	$_{ m L}^{ m N}$	$G^{F}$	$E^{O}$	$\mathrm{B}^{\mathrm{R}}$	$R^{C}$	$\mathbf{A}^{\mathrm{E}}$
$\mathrm{U}^{\mathrm{H}}$		$\mathbf{M}^{\mathrm{E}}$		$_{ m R}^{ m D}$			$\mathrm{C}^{\mathbf{A}}$			o		$\mathbf{A}^{\mathrm{E}}$		$_{ m S}^{ m T}$
$\mathbf{S}^{\mathbf{Y}}$	$_{ m L}$ $^{ m I}$	$A^{E}$	$^{\Gamma}$	$o^{D}$	$M^{S}$		$o_{B}$		$P^{T}$	${ m A}^{ m R}$	$_{\rm S}$ I	$s^{F}$	$\mathrm{E}^{\mathrm{L}}$	$\mathbf{s}^{\mathrm{E}}$
$s^{R}$		$_{\mathrm{G}}^{\mathrm{C}}$		$o^{E}$	$\mathbf{A}^{\mathrm{U}}$	$T^{C}$	$ m_{M}^{H}$	$\mathrm{E}^{\mathrm{R}}$	$\mathbf{A}^{\mathrm{E}}$	$_{ m L}^{ m S}$		$_{\rm S}$ I		$_{ m I}^{ m R}$
$E_{O}$	$\mathbf{x}^{\mathrm{T}}$	$\mathrm{E}_{\mathrm{H}}$	$M^{E}$	$P^{R}$	$T^{S}$		$_{\rm B}^{\rm O}$		$T^{T}$	$_{ m I}^{ m E}$	$G^{\mathbf{F}}$	$\mathrm{E}^{\mathrm{L}}$	$R^{O}$	$s^{N}$
$_{\rm L}$ $_{\rm I}$		$_{ m D}^{ m O}$	$_{\rm I}^{ m Y}$	${ m s}^{ m S}$	$_{ m H}^{ m T}$	$\mathbf{w}^{\!$	$\mathbf{A}^{\mathbf{R}}$	${ m s}^{ m S}$	$_{ m H}^{ m H}$	$\mathrm{E}^{\mathrm{E}}$	$_{ m R}^{ m L}$	$_{ m S}^{ m L}$		$\mathrm{T}^{\mathrm{A}}$
$s^{D}$			$\Gamma_{\rm E}$		$\mathrm{E}^{\mathbf{A}}$		$T^{S}$		$^{\mathrm{E}}_{\mathrm{O}}$		$_{\mathrm{E}}^{\mathrm{Y}}$			$ m _S^L$
	$\mathbf{s}^{\mathrm{F}}$	o	$_{\rm L}^{ m S}$	$_{\rm E}{}^{ m S}$	$M^{I}$	$_{ m N}^{ m L}$		$^{\mathrm{T}}$	$_{ m L}^{ m R}$	E	$^{\mathrm{B}}$	$ m v^{E}$	$_{ m E}^{ m S}$	
$N^{Q}$			$D_{O}$		$A^{N}$		$\mathbf{E}^{\mathbf{W}}$		$o^{B}$		$T^{A}$			$^{\rm O}$ I
$\mathbf{U}^{\mathbf{U}}$		$_{\mathrm{T}}^{\mathrm{O}}$	${ m A}^{ m R}$	$_{ m U}^{ m G}$	$T^{A}$	$o^{N}$	$_{ m L}$ I	Co	$G^{A}$	$_{ m I}$ $^{ m L}$	$\mathrm{E}^{\mathrm{L}}$	$\mathbf{S}^{\mathbf{Y}}$		$R^{N}$
$\mathbf{A}^{\mathbf{A}}$	$^{\Gamma}_{ m D}$	$\mathrm{U}^{\mathrm{V}}$	$\mathbf{M}^{\mathrm{E}}$	$_{ m N}^{ m R}$	I B		$_{ m A}^{ m G}$		$_{ m I}$ $_{ m L}$	$_{ m N}$ I	$R^{L}$	$o^{A}$	$\mathbf{A}^{\mathrm{C}}$	$\rm D^{S}$
${ m N}^{ m R}$		$^{\mathrm{L}^{\mathrm{E}}}$		A	$\mathrm{C^L}$	$\mathrm{U}^{\mathrm{L}}$	$T^{W}$	E	$^{ m L}$	$\mathrm{T}^{\mathrm{L}}$		$o^{C}$		$_{\rm E}$ I
$\mathrm{C}^{\mathrm{T}}$	$L^{U}$	$_{ m I}$ $^{ m R}$	$\mathbf{M}^{\mathrm{T}}$	$_{ m B}^{ m L}$	$s^{E}$		$E^{A}$		$T^{S}$	ΕI	$\mathrm{s}^{\mathrm{G}}$	$T^{H}$	$\mathbf{E}_{\mathbf{E}}$	$ m_R^D$
$\begin{bmatrix} \mathbf{T} \\ \mathbf{M} \\ \mathbf{U} \\ \mathbf{Y} \\ \mathbf{S} \\ \mathbf{S} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{N} \\ \mathbf{C} $		$P^{\overline{D}}$		$\mathrm{E}^{\mathrm{L}}$			$\overline{\mathrm{D}}^{\mathrm{M}}$			$R^{E}$		$\mathbf{H}^{\mathrm{T}}$		$E_{\rm E}$
$_{ m S}^{ m T}$	$_{ m I}$ $^{ m R}$	$s^{O}$	$\overline{\mathrm{T}^{\mathrm{U}}}$	$\mathbf{E}^{\mathbf{S}}$	$ m_R^E$	$\mathrm{s^R}$		$^{\mathrm{I}}$	$\overline{\mathrm{o}^{\mathrm{N}}}$	${ m N}^{ m S}$	$^{ m I}$	$\mathrm{E}^{\mathrm{S}}$	$ m_N^T$	$\mathrm{D^{S}}$

## mathNEWS BYOB #4

#### Break Your Own Brain - For Fore Four Fourity Four Four

BYOBeriffic. BYOBtastic. BYOBarama. Alright, so I'm trying to conserve space as my single person conspiracy attempt to get BYOB down to a single page was foiled again. So ends this intro paragraph. Which is good, because the answers are threatening to go on strike if they don't get two hour lunches and a higher salary cap.

#### Missing Letter Puzzle

32	29	04	01	24	21	06	32	03	34	35	01
30	31	02	03	22	23	07	11	27	28	80	30
12	09	17	20	28	25	24	14	16	15	23	19
10	11	18	19	26	27	13	20	22	21	17	18
13	16	36	33	05	80	25	29	10	09	26	12
14	15	34	35	06	07	36	05	33	04	02	31

Sum Enchanted Evening

2	1	3	5	6	4	7
6	26	5	35	3	37	1
1	2	6	3	4	7	5
4	31	2	36	7	39	6
3	6	7	2	5	1	4
5	38	4	26	1	24	2
7	5	1	4	2	6	3

Mathemagical Multiplication

- 1.  $186 \times 39 = 7254$
- 2.  $297 \times 54 = 16038$
- 3.  $345 \times 78 = 26910$
- 4.  $594 \times 27 = 16038$

Just three submitters this week, which is ok, I'll forgive the rest of you on the condition that you submit for this issue — otherwise, it's punishment time. Our periodical submitter Adam Weatherhead once again submitted a correct answer, to a single question, and scores 1/3. Mark Johnson and x-Tyger both got the 6x6 squares and Mathemagical Multiplication, and both got close to Sum Enchanted Evening, with Mark's solution breaking the "no more then one instance of each number per column" and x-Tyger not getting all the sums. Gotta give the edge to Mark in this one for his tiebreaker. So Mark, come on down to MC3038 (MathSocian Moral Obliteration Centre) to pick up your C&D gift certificate.

# Award for Distinguished Teaching by a Student

Nomination deadline is the second Friday in February. Need futher information? Contact TRACE at ext. 3132 or visit http://www.adm.uwaterloo.ca/infotrac/ taaward.html

Sponsored by TRACE and the Graduate Studies Office

As always our tiebreaker is to submit a riddle/puzzle/brain teaser along with full solution, and in the event of a tie, our favourite will win. This has the added benefit of already getting a jump on solving the next BYOB, as well as the sheer pride of having your pride and joy published in the National Library of Canada. Answers must be in by 6pm on November 15th. If you like putting your hand in strange boxes, you can drop it off in the BLACK BOX between the C&D and the Comf. If you prefer the glow of your computer screen to sunlight, you can email us at mathNEWS@student.math.uwaterloo.ca. Or If you prefer an occasional mauling you can submit to me in person.

#### Three Four Fours

There are four sets of four numbers each. Each set uses the same function (with each problem A, B, and C using a different function). Determine the missing number.

The top right, top left and bottom left numbers sum to the bottom right. So the missing number is 1.

A)				6 9	
B)				2 4	
				14	

#### Four See

Example: Math The Answer: The Aftermath

1. Either weigh or whey

2. ABCDEFGHJMOPQRSTUVWXYZ

3. Fairy, Wolf and Duckling

4. comp144etence

#### Four Threes, from One to Forty-Three

Mark Johnson brings us this doozy. You must create an equation for each integer from 1 to 43, using exactly four 3s and as many of the operators +, -, /, \*, !,  $^$  as you like. The 3s can also be concatenated to form 33, 333, 3333. Each equation must use all four 3s, but can have as few or as many of the operators as you like.

Another two weeks, another edition of [insert loud booming voice here] Break Your Own Brain!!! For those of you wondering about the questions in last weeks outro, no-one killed him, he was just a drug hallucination (check out the comment on IMDB, it's freaking hilarious), and the beef is in my pants. Submit Submit Submit, or I'll come to your house and shove live chickens through your doggy door.

Master Snuggles

I really am tempted to get a masters degree, just for the title

## Having to fill spaces like this one can be a real drag

## *grid*COMMENTS

Another issue, another headache?

Okay, so I was tired enough to have trouble coming up with **clean** words for the *grid*WORD for this issue. Oops. And eventually, I got a fierce headache from learning new dirty words and promptly let the CryptMaster take care of his own dirty work (so blame him this issue, not me!) Anyway, I am still capable of compiling a conventional (thankfully) and marking submissions. So, without further ado, the winners:

- *Conventional*: Travis Willard & Chris Hutten-Czapski (see following paragraph)
- Cryptic: Diana & Catherine ("Hookers and beer.")
- Honourable mentions go to the following submissions...keep it up!
  - Conventional: Catherine Hicks ("Mmmm...kindling")
  - Conventional: Paul & Jen (Jen: "Spend \$1,000 per week on Paul." Paul: "Spend \$1,000 per week on Paul. And beer.")
  - Conventional: Snuggles ("It was just one night, I didn't know there was a camera.")
  - Cryptic: Mike Huang ("One gawks, Pan")

Travis Willard & Chris Hutten-Czapski get an award for the longest, and most thought-out answer to the *gridQUESTION*. They wrote, "Play DDR. For life. (\$1,000 gives approx. 83.3 hrs. of play per week [at an assumed average play length of 5 min]. With alotting 8 hrs per night for sleep, that leaves 4.095 hrs per day for meals, bathroom breaks, and quick showers in liquid nitrogen.)" Apparently, our friends Travis and Chris enjoy DDR. A lot. Too bad you don't win \$1,000 a week for life, eh? On the plus side, you, and Diana & Catherine each win a \$5.00 gift certificate for the C&D. Please come by the MathSoc office (MC 3038) to pick up your gift certificates sometime this week.

And now on to this week's gridWORD. Once again, any complaints go to the CryptMaster when it comes to the Cryptic, since I had basically nothing to do with it! Complaints about the conventional, on the other hand, can come straight to me. I'll set them right (with a mallet to someone's head, probably.) \*grin\* Solutions can be submitted to the BLACK BOX between the C&D and the Comfy, or you can submit them directly to the ConMaster, if you know who the ConMaster is (some people do this).

Make sure to answer the *gridQUESTION* this week to break any ties, which is:

"Who will eat my unhappiness?" There, I managed to avoid anything about birthdays in the gridQUESTION, go me!

ConMaster

I often find myself wishing that my writers would write just a little more, because then I wouldn't have to do things like this

## mathNEWS Squiz #4

A Life in Math

Hello again my squizzing-shaped compatriots! It's been two weeks since the last installment of this adventure in squizzing, but it's here now, you can calm down. Slow that breathing down, calm yourself. Go get a non-caffeinated beverage, find yourself a seat and prepare for the best math quiz experience known to UW, and maybe the world!

If you caught the last issue, you might be interested in the answers to last squiz, they go as follows:

Actor/Actress: Rachel Weisz, Gene Hackman, Laurence Fishburn, Dianne Wiest, Jim Broadbent

Voices: Marconi, oscilloscope, Migurk Effect, schizophrenia Imprint: Adam Johns, Hitoshi Murakami, Morgan Grainger, Phil Weiner, The Chevron

Congratulations to Catherine Hicks with a score of 8/15, you're this weeks winner! The glory is all yours! You can also pick up your gift certificate at the MathSoc office anytime. Now, let's move onto to this week's questions:

#### Degrees of Separation

We name the degrees, you name the UW math prof

- 1. BA Western 69, MA Western 71, Ph. D Western 75
- 2. BMath UW 67, MMath UW 68, MSc Berkley 70, Ph. D Berkley 71
- 3. BA Saskatchewan 68, MSc Toronto 70, Ph. D Toronto 73
- 4. BSc Kings College 96, MSc Dalhousie 97, Ph. D Rutgers 01
- 5. BMath UW 81, Ph. D UBC 86

#### Famous Mathematicians

#### Name that Mathie

- 1. One of India's greatest mathematicians, worked on partial sums and products of hypergoemetric series.
- 2. Used methods of successive approximations to show the existence of solutions of ordinary differential equations.
- 3. His work in 830 gave us the work "algebra".
- 4. This mathie is best known for his work in topology and a two dimensional surface with only one side.
- 5. Which mathematician laid the mathematical basis for the theory of relativity and studied 'geometry of numbers'?

Ρi

## Constant or Confection

- 1. Who has calculated the most digits of pi to date, and how many do they have?
- 2. What is an alternate use of a pie-cooking device conceived by the Soviet resistance in the 1950's?
- 3. Which Chinese mathematician calculated the rational approximation of pi to 355/113?
- 4. What pie is made out of liver, kidneys, and heart?
- 5. When and where was the fruit pie first mentioned in print? Best of luck to all of you squizzers! I look forward to reading the many attempts sent the to BLACK BOX (outside the C&D) or to the *math*NEWS e-mail inbox (at mathnews@student.math.uwaterloo.ca)! TTFN

Val & GCM



#### Conventional

#### Across

- 1. state strongly
- 5. betrothed
- 9. drug users
- 10. with distrust
- 11. tonsil removals
- 13. Nutcracker heroine
- 14. Toronto gallery
- 16. heavily burdened
- 17. "To protect and
- 18. arid, desert plants
- 20. curve
- 21. supped
- 24. teeth cleaner
- 27. first
- 28. "Stand By Me" suckers
- 29. genetic anomalies
- 30. lampoons

#### Down

- 1. sudden or severe, usually in response
- 2. final solo in composition
- 3. adaptation
- 4. artist's tool
- 5. original French currency
- 6. work report section
- 7. sugar coated
- 8. mixture of peptidases (try Google this is hard!)
- 12. enthusiastically
- 14. accounting club
- 15. Lord of the Rings evil
- 18. metal used in some batteries
- 19. 2-4-6-0-1
- 22. not one or the other
- 23. dislikes strongly
- 25. dances in grass skirt
- 26. formal festivities

#### Cryptic

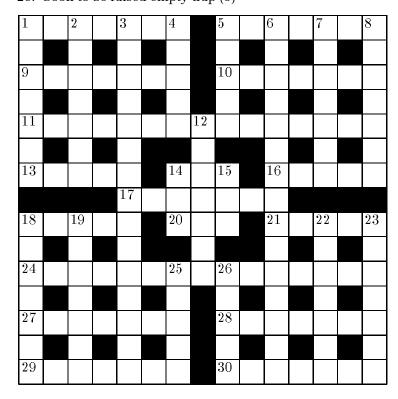
#### Across

- 1. Clear Eastern Time protection (7)
- 5. Tipsy Eric & Joe celebrate (7)
- 9. Speaks in favour of another round (9)
- 10. Graduate studies paper doctor (7)
- 11. Disrespecting Libya after left net in a sense destroys resolve (15)
- 13. Grips fragile plant (5)
- 14. Time backs our existence (3)
- 16. Advertisement it carries: National Stock Exchange (5)
- 17. Dam' mon! I almost smuggled some smelly chemical (7)
- 18. Canine prize fighter (5)
- 20. Building blocks returned together with another (3)
- 21. Gate protects small chest (5)
- 24. Letters from Suncor: "Respond-en ce soir!" (15)
- 27. Tiny axe induced nervousness (7)

- 28. Tardiness stresses to excess, say (7)
- 29. Fashion wraps: German is a tailor (7)
- 30. Makes certain Ensign holds steady (7)

#### Down

- 1. In addition, insects are swarming Sid (7)
- 2. Someone who imputes blame accrues problems (7)
- 3. Nicer elastic bands worn by Nebraska children (15)
- 4. Rates new self-defense weapon (5)
- 5. Money makes puree (5)
- 6. It can be shown a Scottish river follows, just if I can... (15)
- 7. Win Di gossamer drapes of some colours (7)
- 8. Out of order? Pry cent, altering until unrecognizable (7)
- 12. City raises breakdown function: could have this property(7)
- 14. Good grade to parent organization of doctors (3)
- 15. The Apocalypse begins to justify the means (3)
- 18. Chamber creates cause to be enamored (7)
- 19. Copying old relationship mistake before castrated animal is caught up in anger (7)
- 22. One who withdraws formally recedes anew (7)
- 23. Scent precedes badly set gun (7)
- 25. Sounds like a French country is owed (5)
- 26. Soon to be raised empty trap (5)



## mathNEWS has a Barcode?

Well, since we do have a real ISSN, *math*NEWS is technically supposed to have a barcode, technically located on the front page of every issue. For those interested, here it is:



inkEd