undance


Instructions: Cut out each piece. Attach pieces in order described above. Now you have a cute Brad too. Disclaimer: We are not responsible for any voodoo associated with this Brad.

## lookAHEAD

| mathNEWS |  |
| :---: | :---: |
| July 26 | Issue \#6 suffers quarter-life crisis |
| July 27 | mathNEWS's EOT extravaganza Sorry, Members Only |
| Math Faculty |  |
| July 26 | Lectures End |
| July 29 | Exams Begin |
| August 10 | Exams End |
| MathSoc |  |
| All the Time | Online Exambank helps students deal with exam-related stress |
| July 26 | MathSoc EOT |
| August 5 | Nominations for W03/F03 execs due |
| Orientation |  |
| September 2 | Let the madness begin! |
| MGC |  |
| August 1 | Intent to Graduate forms due |
| Co-op |  |
| August 26 | Fall work term begins |
| Miscellaneous |  |
| July 28 | Lance Armstrong loses his bills in the mail |
| July 32 | Segmentation Fault |
| August 1 | Brad makes a cameo appearance in "Just for Laughs" |
| August 5 | Simcoe Day/Civic Holiday |
|  | There has to be a better name for it |
| August 11 | Father's Day (Brazil) |
| August 12 | UW campus declared a ghost town |
| August 19 | World No Proof Day |
|  | All conjectures are assumed to be true |
| September 2 | Labour Day |
|  | Time to get back to work! (sniff) |
| September 9 | Classes Start |
|  | Time to get back to work! (sniff) |

## VPA Sez

## My Reign of Terror is Over

Waterloo, Ontario (CP) - MathSoc VPA, Raymond Lai, ended his reign of terror today with his announcement to combine meat with fire.
IOY nominations were closed last week, with a total of 12 nominations and 9 individual professors nominated. VPA Lai commented on the turnout: "Thanks for everyone who took the time out to fill a form. And thanks to Trevor for being the VPA lackey for two weeks. His constant barrage and begging was well worth it.
"Thanks everyone for a great term. It's been a pleasure serving you as your summer term VPA. I now return you to your regularly scheduled Fall VPA, Colin Davidson. He will keep you apprised of the developments with the Tutor of the Year Award, being brought up to MathSoc this week.
"My reign of terror is now over. Now, let's celebrate this arrangement with the combination of meat and fire."

Raymond Lai
MathSoc VPA, S02

## Prez Sez

Hi everybody and welcome to the end of term!
Nominations for MathSoc executive for the next winter-fall term are open now. It's a lot of fun, so I suggest you nominate yourself, or your friends. Forms are available outside the MathSoc office.
Exams are coming up and we'd all like to look at past copies of exams. Please volunteer for office hours during the exam period so we can continue to provide this great service.
Do plenty of studying and good luck on all your exams.
President Ben
Brad or Vase?


## New Online Housing Board

## What will they think of next?

A project started by a group of UW undergrads is presently online. Ezide (www. ezide.com) is a website for positing and searching through housing listings. The Turnkey Desk will be utilizing the website to make their housing list more organized and accessible. Wonder if you can go to the washroom online yet. Wouldn't that be handy?

The Almost News Monkey

## 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.
Not next terms editors: Bradley T Smith \& Albert O'Connor

## MCTF

As the term was drawing to a close, and with two successful events before this one, The Management, in all their glory, decided to hold one final MCTF event. Meeting at 11:59 on Sunday, a group of 15 people got together and had a lot of fun trying catch the other team's tie without having the other team catch their own (come on people you should know how capture the flag works). Many regulars showed up (and some did not - you know who you are) as well as some new people, making the game that much better. Even though the evening was basically uneventful (besides the whole running around and trying to get the tie thing), everyone had fun and all of the participants would like to thank The Management for 'organizing' the event. Hopefully, they will continue this tradition next term. For all you who are coming onto campus next term, I highly recommend showing up, its a great way to meet new people and blowing off some steam. To all of the frosh leaders, I urge you to encourage your frosh to show up to these events (we have to start training these kids early). Thanks again to The Management, and I hope to see you all out in W03.

Follower

## Brad

Who's the white mathNEWS ed
that's the cute editor to all the chicks?
(Brad!)
You're damn right!
Who is the man
that would risk his neck for his fellow mathie?
(Brad!)
Can ya dig it?
Who's the cat that won't cop out
when there's layout all about?
(Brad!)
Right on.
You see this cat Brad is a bad mother -
(Shut your mouth)
But I'm talkin' about Brad.
(Then we can dig it)
He's a complicated man
but on one understands him but his issue.
(Brad Smith?)

## Subscriptions!

## Yes, subscriptions!

Yes, really, we have subscriptions. If you aren't going to be around campus to get issues of mathNEWS, they why not have them delivered to you? You can take them to work and read them during meetings. Or you can read them during those long commutes. Or during meetings!
Of course there is the webpage, but there's a lot less glare off bond paper, and you get to see our wacky filler! And mathNEWS can travel almost everywhere, unlike those clunky computers with their cables and such. Unless you have a laptop, but what are the odds of that? One in fifteen?
And let's not forget, they're pretty cheap too! In Canada, it's $\$ 7.50$ a term, twenty bucks for three. For the States, it's $\$ 10$ a term, and twenty-five for three. The rest of the world pays $\$ 15$ a term or $\$ 35$ for three.
A term's subscription gets you all six exciting issues, plus any bonus issues that happen to come out. But what are the odds of that? Two out of three?
The three-term option means you can get mathNEWS every summer you're away, or, for those co-ops out there, you can have your subscriptions every time you go off to a faraway job. Any three terms are do-able.
To subscribe, just drop by the mathNEWS Office (MC 3041) with your requested term(s) and some cash, drop it in our mail slot in the MathSoc Office (MC 3038), put it in the BLACK BOX, email mathnews@student. math. uwaterloo. ca, or give your money to a mathie in the hopes he or she is an editor. But what are the odds of that? Two in one thousand five hundred?
Here's a handy-dandy form to make your requesting process even easier:

TaxiEd


## Notice

## UW Women's Fastpitch

Play competitive fastpitch? Attend UW full time? Want to represent your university? If you are interested e-mail vpfergus@uwaterloo.ca or check out the website at http: // www. uwaterloo.ca/~vpfergus/fastpitch

The Monkey

## Screamer's Believe It or Not

Rarely a week goes by without something interesting occurring in the mathNEWS broom closet. Last week we received a letter from the Archives Service of the University. Apparently, the archives had moved twice in the past 8 years and no one had informed us. It turns out we are now sending the issues to RIM (as they own the building now). Oh well, let's see what other oddities occurred since we last met.

## Rabbit: Check; Prisoners: Gone.

Once in a while, we hear stories (and see movies) about prisoners managing to escape from jails. Sometimes the escapees use clever tactics, other times the guards have let their guard down. Sometimes being a jail guard can be an incredibly boring (and stamina-draining) job, which leads me to the following story. About 30 prisoners in an Ugandan jail managed to escape when they were doing "outdoor work." The jail guards who were on duty did not realize that the prisoners had escaped. Their eyes (and minds) were somewhere else - they were chasing a rabbit that was on the field. There was no mention on whether or not they caught the rabbit, but none of the escapees have yet been caught. On one hand, maybe monitoring prisoners' outdoor work is the only time the guards can roam free. On the other, with their attention span, I wonder if they can guard The Pink Tie.

## Love Thy Opponent

Often when two athletes come face to face, the thought of throwing a punch seems to be always on the duo's mind. Sometimes they let their fists fly, but most of the time they let their mouths do the talking. Usually the medium is words, but sometimes it can be a little saliva. In an Australian Rules football game, two opposing players got into an altercation. Both were ready to fight when one player lunged his head towards the other player's head, grabbed the opponent's ears, and gave him a kiss. The opposing player said he did not expect to be kissed and wiped the saliva away quickly because he was 'worried about catching something.' The player that gave the kiss was charged with misconduct and a tribunal gave him 'a rap across the knuckles'. He did not receive any suspension for the "crime." In this age where many think violence is out of hand, it's nice to see people finding creative ways to settle problems.

## Suit over Shoes

Most places have a policy of "No shirts, no shoes, no service." If you are barefooted, you can just strap something that resembles a shoe to get by. However, sometimes a person's choice of footwear may get someone else hurt. An Australian man slipped on the floor of an Australian hotel. You may think, "It's the man's fault for slipping, why is the hotel responsible?" Well, that's not the entire story. Another man had earlier entered the hotel wearing shoes in accordance to the hotel's policy; however, the "shoes" were actually raw pork chops. As the man walked, some of the juice leaked from the chops and was left on the hotel floor. Before the juices dried the first man entered the hotel and fell on the floor. The court ordered the hotel to pay $\$ 35,000$ to the latter, while the the punishment for the former is unknown. Granted, the hotel should not have allowed the a man to enter just because he wore "shoes," but the real question is "How could he stand on his feet and not slip on his own trail?"

## A Booming Ghost Town

For some reasons, people are fascinated by ghost towns, the Gold Rush days, and the gunfight at the OK Corral (they got the location wrong, actually). It seems that ghost towns with a single street are a mandatory feature in amusement parks. Many towns are asking residents to leave so they can become "ghost towns" - at least this is the case for one Quebec town. Sometimes the desire to be a ghost town is so large that people are willing to fight for the title. Calico and Bodie, two sparselypopulated California towns, are going to the state supreme court and wish for the court to decide which town gets the designation of 'California's Official Ghost Town' (to be decided by either the court or the state legislature; I forgot which). It is ironic that the two towns want to be an "official" ghost town so that they can attract more people.

## Splat from Above

The police face many dangers in their line of duty. From unruly drunks to dangerous drivers, the list goes on and on. Everyday the police go out and expect the unexpected, but I doubt many think of the possibility of the following: A group of Winnipeg city police were in an apartment building to investigate a break-in. At the same time, a pair of brothers, who are also retired Mounties, were visiting one brother's girlfriend, who happened to have lived in the same building. When the brothers saw the police below, they threw oranges, apples, and onions at the officers. The officers had to duck for cover as the fruits and onions splattered around them. The brothers were said to be drunk at the time. The duo tried to put the blame on the girlfriend but the judge did not buy it. The two were sent to jail for assault. It makes one wonder how their track record was like when they were Mounties. Well, at least they didn't hurl any coconuts or pineapples.

Jason "the Screamer" Lau Am I out of touch with the world?

## Rules of Computer Science Club

First rule of Computer Science Club:
You do not talk about Computer Science Club. Second rule of Computer Science Club:

You DO NOT talk about Computer Science Club. Third rule of Computer Science Club:

When someone says "arts," drops out, or switches
from CS, they are out of Computer Science Club.
Fourth rule of Computer Science Club:
Only one guy to a terminal.
Fifth rule of Computer Science Club:
One network game at a time. Sixth rule of Computer Science Club:

No showering, no haircuts.
Seventh rule of Computer Science Club:
Role Playing Games go on as long as they have to. Eighth and final rule of Computer Science Club:

If this is your first night at Computer Science Club, you have to code.

Ian W. MacKinnon

## Simon Said

Here we go.
I was talking with Bradley after he lost his job. Well, that's harsh. After his job ended. We were discussing life, death, ice cream, and time travel. He's arguing that the Mayans invented ice cream while I'm convinced that Christian or otherwise, there must be some form of afterlife. The debate lead us to the library ... not a library like Porter or DC, but the Waterloo Public Library main branch. The library.
Personally, I would have preferred the library at Alexandria, but again, Brad's convinced that time travel is not possible this summer.
Instead of finding the book to solve our quarrel (something like Ghost gave Ice Cream to the Chinese) we found a curious note in Ramona and her Sister: " 43 deg 35.2 min N 80 deg 31.0 $\min W$ - Monday 1830"
Thanks to my Swiss Army knife, we tracked the point to a field beside the railroad tracks in St. Jacob's. I thought we should be there at half to seven, but Brad insisted that we should have been there in $1830 \ldots$ and on a Monday. We compromised by coming back the next day which was Monday.
Half an hour before the specified time, a train passed us. The first car carried wheels for train cars. The second was a stack of four flat beds. The third was a closed off box no doubt containing all the parts required to attach the wheels to the flat beds and the flat beds to the wheels (and maybe some hobos. Finally came the engine pushing the three cars northwest.
About forty minutes later, when nothing had happened at 6:30, the engine returned, this time reversing with a boxcar and six empty flat beds in tow. The sun wouldn't shine through the boxcar, its contents now a mystery to us. The train was slow-moving enough to hope on to the last car, thereby saving us the long walk back and fulfilling a recent fantasy to ride the train home like Slim Pickens on the bomb.
We moved up the cars to reach the engine. After hurrying with great difficulty through the first, we learned on the second car that spending more time let us be more in command. We approached the boxcar when I noticed that we couldn't see any roads from our location.
Well, it appears that train tracks have a secret life between the railroad crossings we see from the roads. A whole new world opens up to you when the ground opens up to reveal a whole new world. The train veered off the track and into the Earth. But I jumped. And that's how I'll end it. For now, of course.

Simon L'Avier

## Enigma Lacks Group Theory

After the success of A Beautiful Mind, Mick Jagger and Lorne Michaels knew they must capitalize with a math movie of their own. This should have been my first warning.
You can call it a romance, a mystery, or even an action film, but this is no math movie. They barely explain how the encoding works and don't even say "group" the entire two hours. Tragedy. Plus they didn't mention Tutte at all. Boo!
It was also sad that I tried to see the movie with Chris from my groups class, but he couldn't make it. Nobody to complain with. Just you. Thank you for reading. <Brad sheds tear, leaves> Bradley Thomas Smith

## The Secret Lives of Brad

Brad is a man of mystery. Many have tried to learn about what makes him tick, but they have barely scratched the surface because they don't know his secrets. But, for the first time in print, the many secret lives of Brad will be revealed to the whole world.

- Superhero - Every other night Brad takes to the skies as Bradman, protector of the innocent. Armed with state of the art gadgets and a keen sense of justice, Bradman is feared by criminals everywhere.
- Supervillain - Hey, nobody can be good all the time. Sometimes Brad just has to kick back and try to take over the world. He hasn't succeeded yet, but hey, it is just a hobby.
- Inventor - State of the art gadgets must come from somewhere. Brad's current project is the flux capacitor, which will allow him to pick up pretzels before the store closes.
- mathNEWSEditor - Wait, that's not a secret.
- mathNEWSFounder - At least he will be once he gets the bugs in his flux capacitor worked out.
- Monkey - Not an actual monkey of course, but on weekends Brad gets in his big plastic ball and competes against other "monkeys" for huge cash prizes. After all, monkey + ball $=$ profit.

Dan Woodley

## The Tale of Two Dragons

## Part X

The dressing quickly started to unravel again, despite my hurried efforts otherwise only five minutes before. It wasn't as if they were doing more than absorbing the blood that was now flowing freely down my side in the first place, anyway. I gritted my teeth as I pulled them tight around my torso once again and quickly tied the ends. I had dealt with pain all my life, but the lightheadedness and weakness that were already hovering overhead, drawing slightly nearer with every drop that was came forth from the stab wound.

At least I fared better than the man who had given it to me. He would be lucky to ever open his jaw again, let alone pass food to the remains of his stomach. My wraps somewhat tightened once again I looked behind me, then quickly darted out of the shadows and onwards towards the black tower that had loomed before me, if not in my dreams for years, in reality for more than a fortnight.
To Be Continued next term
Tim "Plumtastic!" Haloun
Now a word from The Management
Beware!
The Management

## profQUOTES

"I do that in the dark all the time at home; I'm not supposed to do it here."

Marsham, AM 332
"This course should be renamed to 'Solving Systems of Linear Equations in Different Contexts.""

Lam, MATH 136
"Yes, you - [Male student starts to answer] No, behind you. She's much prettier then you."

Andre, MATH 138
[talking about function $q(t)$ ] "... and we can see that this cutie satisfies the following conditions... "

Lee, MATH 235
"If you're from Mars and have three heads I'll give you 100\% on your final. Anyone?" "

Case, CS 134
[On Dictionary] "I'm not looked up as often as 'sex.' I have resigned myself to that ... I'm not as popular as sex, and I'm fine with that."

Vasiga, CS 240
"Maybe that's your question; that's called a mistake."
Vasiga, CS 240
"There was another question; maybe it was a mistake too."
Vasiga, CS 240
"Not a a big problem since people don't usually write self-modifying code ... except me."

McCool, CS 251
[talking about cache] "... they can't see the future ... that's kind of hard to implement."

McCool, CS 251
"This is a assembler for a real assembly language. Unlike what where giving you."

Omar, CS 241
"When you write embedded systems you often write loops that never terminate ... They terminate when you turn off the power or the missile comes in and hits the tank."

Clarke, CS 342
[Prof acts like he's dying] "If I'd actually died, that'd be too good to be true. You'd still have a final exam though."

Clarke, CS 342
"This is called 'The Lost Cow Problem' ... but you can call it the 'Robot Navigation Problem' if you want to get funding."

Chan, CS 466
"You can try to guess the solution of 3.8592 , or you can just do a binary search on your calculator."

Chan, CS 466
"If this is true, then we are screwed."
Hoffman, PMATH 330
"Look at Appendix B - B for Boring."
Hoffman, PMATH 330
"You can do better then me in one little question, but you'll never be better in every question."

Lau, ECON 101
"If you increase the price [of an airline ticket] by fifty bucks, they say 'Forget it, I'm going to Shoppers' Drug Mart to buy a bag of chips. That's a good enough holiday for me.""

Lau, ECON 101
"This is when you phone your parents and say you are only eating Kraft Dinner, and you have only one box left; and this is when your parents send you another box."

Smith, ECON 102
"I have a rod." [pauses] "I have an infinitely-long rod." [pauses again] "I have a infinitely-long rod. Then I have a electric field that is horizontal. I can take ' $p$ ' anywhere."

Jayasundrea, PHYS 122
"Anyone here from Statin Island?" [No one raises a hand] "Good."

Devereaux, PHYS 122
"Go to this conference ... It's got some interesting talks on Monday, you'll understand none of it because I don't neither."

Cheung, C\&O 350
"Thanks to my friend, who introduced me to Pro-Line last night, I've learned to optimize it."

Cheung, C\&O 350
"This is really important ... This is really REALLY important ... that means it's going to be on the final."

Cheung, C\&O 350
"Now let's move on to something a little more exciting. Well, it is for me."

Cheung, C\&O 350
"As you know, I'm a grad student. These evaluations are important for me because I'll be looking for a job next year."

Cheung, C\&O 350
"It makes sense, at least for me it does."
Labbé, STAT 230
"Don't worry, it's not supposed to be easy."
Labbé, STAT 230
"I will tell you, unless you don't care. Bah, I'll tell you anyway."
Labbé, STAT 230

## And now ... a poem

There once was a prof nicknamed Waldo
Who tried to buy Nestea at Aldo
One look at his hair
And you would swear
That he was slowly going baldo.

When life hits your eye like a big salted pretzel

Someone

It looks like chicken pox, but it isn't itchy. It just feels good when I sit down and type for a while. Thus you have to endure the punishment, or read something else. Or it is already late Friday morning and you have already read everything else in the issue, so you have only this to keep you occupied? Or maybe I will start another sentence with "or." I thought sentences were supposed to make sense. Bah, just go to sleep, your brain will thank you. For those willing to risk it, here goes:
Knowledge, knowing, impatience. People are impatient. They just have to know. And if no one can give them an answer, then for some reason people have to assume it is unknown, or more precisely, unknowable. Or even worse, they make up some explanation that suits them. People really don't want to know things, they just want to understand them now. Leave truth out it for a while; it's not what I am writing about. What does the brain do? Why do crops come out of the ground? All valid questions. There was a time when priests told their people that gods made the sun rise and set and the crops sprout from the earth. The mind is where we think, who we are, and the brain is just a ball of fat. Given time these explanations are replaced with scientific explanations. A system that is on the whole self con-

## Student Life 101

You know you want to show the pre-frosh your ropes. Yeah you do. Come on it will be fun. Really. Lots of ropes and all. Seriously, you can show them to the frosh. We aren't kidding here. We can provide ropes for you to show if you don't have any of your own. We have nice long ropes.
Volunteer at http: / / www. studentlife101. uwaterloo.ca.

## Gray Hairs

4A is almost over and I've come to a realization - I'm old. 4 years ago, I was a naive innocent immature frosh. Now, I'm a naive innocent immature fourth year student. Not very bright eyed and bushy tailed though. What does that mean? Time to find a porch, a dog, a pipe, and a 2-4 of Molson Ex. Catch ya on the flipside.

MonkeyMan
sistent and can be experimented with. Is one explanation better than the other, you can pass judgement, it is not my job to make points.
But people, even scientists, take the sanctity of science too far. Science is not right. Science is not static. Science can change as new observations are made. This is what everyone forgets. People ask, "Do ghosts exist?" Skeptics say they don't, believers say they do. Both are stupid. We don't know, and that is okay. What is wrong with not knowing today? Maybe one day we will find out, maybe we won't. Just because we don't know today doesn't mean we won't ever know. How can one say what can be known and what cannot, not to say it would be impossible to know what is knowable. Funny how everything flows into itself. Like if everything was a pretzel and we were just too close to see what was going on. Different article, same nonpoint. Non-point? Obviously that is a point where you have to be horrendously drunk to get it, or this that just a point that isn't really made?
But really you don't need me to think for you, you are all grown up now in university. You can drink, have sex, all those grown up things that everyone seems to be doing these days. Nothing is just for the grownups now, except maybe thinking, but not all of them do that anyway. Especially not me. I'm just kidding around.
incoherent

## Eating rice doesn't make you full

Theorem 1.3.4 from last issue reminds me of a cool proof I saw in high school using induction.

## Proposition:

Eating n grains of rice doesn't make a person full, for $\mathrm{n} \in \mathbf{N}$. Proof:
It's clear that having just one grain of rice won't make anyone full at all. Assume the statement holds for $\mathrm{n}=\mathrm{k}>1$. Then consider the $\mathrm{n}=\mathrm{k}+1$ scenario: it is equivalent to saying that to eat another single grain of rice after eating k grains of rice. Since one didn't get full after k grains of rice, another grain will certainly not make him/her full!
Hence the statement is time for $\mathrm{n} \in \mathbf{N}$, by mathematical induction. QED

Josephyskyslavich

## And now many words from The Management

A wise man once said, "Monkey plus ball equal profit." But really that has nothing to do with us. So if you didn't come out to MCTF this term there will be other terms. Unless The Management happens to write a review of Star Wars in Imprint and someone threatens us with death, and carries it out. So barring death (death is bad), we will be back with early morning entertainment for all. Thanks to everyone who came out. I hope you all had fun.

## The Frosh Cornered

## The little ironies of UW

Well, this is the last issue of the term and I've dreamt up a list of ironic things about UW. I actually know what irony means, unlike that chick who sung about it, so these won't corrupt your understanding of the word.

1. We call this "mathNEWS," yet it contains no mathematics, and no real news.
2. None of our servers wear underwear, yet one is still called Commando.math.
3. This is the school that is supposed to, according to MacLeans, be home to the "Leaders of Tomorrow," yet most UW student society executive positions are acclaimed.
4. People who come to UW CS because their uncle told them that's where the money is are often the first to complain about the $15 \%$ tuition hikes.
5. It takes a lower average to be accepted to Math Accounting than Arts Accounting, yet Math Accounting is the more challenging program academically.
6. It seems as though nearly everyone is either a business major, taking an option, or some other stage of business education, but this school has no Business Faculty.
7. Teaching Option is one of the most respectable and well reputed programs for math and science, yet there is no teachers college.
8. One of the hardest programs to get into is pre-Health, yet there is no med school.
9. Frosh week encourages students to have fun without alcohol, but Math pub night 2001 had to be closed early because not enough alcohol was being served.
10. "Comp Eng" students love to call themselves "Engineers," yet the stats show hardly any will register with the PEO (owners of term "Engineer" in Ontario) and will end up in CS jobs.
11. There is a better turnout at the Feds-owned Bomber on Saturdays than at Feds executive elections.
12. Your average prof is older than the school is (except for Vanderburgh, but we love him anyway).
13. "Who's got wood?" and "I really need a RIM job," are perfectly innocent phrases, yet it is obscene to have cartoons of fully clothed people in simulated sexual positions in the student "newspaper."
14. You can get a Ph.D in Rec \& Leisure, but not in Economics.
15. If you compare the ratio of applications to enrolment, the most competitive program to get in to at UW is the Math Business double degree (15.6:1). However, there is a lower entrance average at Laurier for the EXACT same program.
16. To get an RA co-op job you really must be an upper year student, but those jobs pay way less than what upper years are usually willing to accept.

I know that CBET will render \#6 obsolete, but it's not open yet. It's been a great time writing for the ... interesting people at mathNEWS and I hope to continue in the fall. I'll have to think of a new title for the column though. In the fall Raymond and I will also be picking some lucky frosh to be TCF V3.0, we're thinking about some kind of gladiatorial combat to thin out the heard of potentials. All will be sorted out, and hopefully a new frosh will be even better and funnier than I, and, God-willing, not as long-winded as Ray. :-) Jokes.

Ian W. MacKinnon The Cornered Frosh
Until we find V3.0 in the Fall

## Krease Crumpled

## Kiwis: Real e and Surreal e

Yeah, I felt like getting one more acronym in there before the end of the term. This term seems just a little short - I mean, we're starting exams before August even begins ... not that I'm complaining, I could really use the time off. Maybe I'll finally get another copy of that game that blew up in my CD drive, or star in a full-length motion picture. Or maybe I'll just play MonkeyBall.
If you're looking for something to do after exams, why not come out and volunteer for Student Life 101 on August $12^{\text {th }}$. This is your chance to show incoming frosh the ropes and what University life is all about. Trust me, it's great fun.
I just realized this coming September will be the fourth Frosh week I've been here for (I feel so old now ...), even though I'm 'only' in 3A. Strange math there. I guess that's what co-op will do to you.
Speaking of co-op, you should know the bad news ... as of tonight, $34 \%$ of Math co-op students will be entering the dreaded praying phase - you know, the one after continuous phase. That's the lowest employment rate amongst all the faculties .. For those of you who are employed for the fall term, do something to help improve on that statistic - something as little as having a good work ethic throughout the term can make them think "Gee, those UW co-ops are great ... let's hire more of them!" If you're comfortable enough, try asking your employer to consider hiring more co-ops. Remember:
Monkey + Ball = Profit

Seek not to know the answer, but to understand the question Kreale

## Krease us. Carvey

For some reason, people think that Krease is Dana Carvey... but nobody thinks Dana Carvey is Krease. The time has come for them to compete in a head to head battle royale, mathNEWS style!


Edge: Dana Carvey
USED TO HAVE 80'S HAIR
Yes
Yes
Edge: Draw
HAS PLAYED MONKEYBALL
Yes No info available
Edge: Krease
NUMBER OF TIMES DRESSED AS A WOMAN
1 - Don't Ask Too many to count
Edge: Krease
IMITATIONS
4

## 50+

Edge: Dana Carvey
UNIVERSITY PROGRAM OF CHOICE

University of Waterioo Computer Science San Fransisco State University Communication Arts Edge: Krease

TV I MOVIE APPEARANCES
3
18 movies, 26 TV shows Edge: Dana Carvey
COMING ATTRACTIONS
mathNEWS co-editor
Pistachio Disguisey
Edge: Krease

## AND THE WINNER IS

Draw
With a score of 5-4 for Krease, this one is too close to call. We'll have to settle this another way ... perhaps a pretzel eating contest?

## Dave Matthews is a Vampire!

It may come as a huge shock to you, but the proof below shows that Dave Matthews [Dave mathNEWS? - TaxiEd] of the Dave Matthews Band [Dave mathNEWS Band? - TaxiEd] is a vampire, so watch out and think twice before you buy the new album "Broken Stuff". [It still is a great Album - IanEd] [What a sec, Ian's not an editor ... and that's not a properly formatted editor tag! Ian! - TaxiEd]

- Vampires are only created by other vampires
- DMB fans are created only when another DMB fans introduces them to the music
- Thus for $\mathrm{n}+1$ DMB fans/vampires, there are n DMB fans/ vampires already in existence
- So, for $\mathrm{n}=1, \mathrm{a} \mathrm{DMB}$ fan/vampire cannot have been turned by another
- So for $\mathrm{n}=1$, vampire is Head Vampire
- By association, DMB Fan n = 1, is Dave Matthews himself
- Thus since $1=1$, Dave Matthews is a vampire

Hope this clears some things up.
Ian W. MacKinnon

## How to Waste an August

Exams coming up to quickly? Barely have time to celebrate the end of term before you start writing? Don't even have time to read the rest of the issue? Then you're just one of thousands of University of Waterloo students who are going to finish exams before August tenth.
Now, the natural reaction is to cower in fear at the prospect of no school, but we have a better solution! Simply follow out twelve step program to Waste Your August!

1. Double your sleeping: You're probably going to want six hours a night now that there's no assignments to do.
2. Double your eating: Helps make dinnertime take up more of your day.
3. Every day, pick someone you hardly know, and follow them around.
4. Learn a new skill, get kicked in the head, learn it again.
5. Write a mathNEWS article. Please.
6. TV TV TV.
7. Read a book: There are great math ones available like The French Mathematician, the life of Galois. Just don't read the new Carol Shields.
8. Write a book: There's still a lot of mathies who need novels about their lives, like Another French Mathematician, the life of Bert Guenin.
9. Play that game where you count how many times you can bounce a basketball in a day, then try to beat that record the next day.
10. Take apart your computer and reassemble it. Now do your neighbour's car.
11. Write another mathNEWS article. That last one was really good!
12. And of course, nothing kills time like a trip to the hospital. Break a leg!
Have a great summer! mathNEWS loves you! mathNEWS Filler Monkey

## A Term's Summary In Code

If you are in CS, you may find yourself compiling a ton of code. And, after compiling enough code, you may realize that life can be expressed as code as well. But, then again, not everybody is insane.
However, everybody in Math does have to take 2 CS courses, so it may help if somebody were to write a program to help them get through it. That somebody is not me. However, after taking 2 terms of CS, I do have some code to share with you about how life has been in CS so far. So, here goes ...
public void doCSProject(int numHoursToComplete) \{

```
int i = 0;
```

while( i < numHoursToComplete ) i
if( currentlyScrewed() ) \{
i -= 10;
\}
else if( assignmentDueInLessThanEightHours() \&\&
startedAssignmentEightHoursBeforeDue() ) \{
if( drankTenCupsOfCoffee() ) \{
i $+=5$;
incBraggingFactor():
\}
else \{
incHeartAttackFactor();
i += 1;
\}
\}
else if( misreadSpecifications() ) \{
Random random = new Random();
int randomNum = random.nextInt();
i $+=$ (int) i * 0.01 * (randomNum \% 100) *
Math. pow ( $-1, i$ );
if $($ (randomNum \% 2) $==0$ ) \{
numMarksLost $=$ randomNum \% numMarksLost;
\}
\}
else if( i <= -20) \{
$i=$ numHoursToComplete;
\}
else \{
i $+=3$;
\}
\}
electronicSubmit();
if( !drankTenCupsOfCoffee() ) \{
testCompile();
\}
\}
private boolean currentlyScrewed() \{
return groupMembers.doNotCompileCode() \&\&
groupMembers.doNotCheckEmail() \&\&
groupMembers.wentHomeForTheWeekend();
\}

Why don't we make this more fun by asking exam-style questions?

What is the best case and worst case for the doCSProject(..) method? What is the running time complexity of doCSProject(..) method in the best case?

Best Case:
Obviously, the best case occurs when you don't have to do a CS project ... No, wait!!! ... The best case occurs when you start your CS project the moment that it is posted.

This will give you a running time complexity of $O(n)$, where n stands for "never," "not likely," or "need I say more," depending on your choice of implementation of GroupMemberInterface. Worst Case:
You misread the specifications while drinking ten cups of coffee.

## public

void doCSWrittenAssignment (int numHoursToComplete)

```
int i = 0;
while( i < numHoursToComplete ) {
    if( stoleTheAnswerKey() ) {
        if( caughtWithTheAnswerKey() ) {
        throw new
    AcademicOffenseException("Better luck next time");
        }
        else {
            i = numHoursToComplete;
        }
        }
    else {
        i += 1;
        }
    }
```

\}

What is the best case and worst case scenario for the doCSWrittenAssignment(..) method?
Best Case:
This is a tough one. I'd have to say that the best case scenario occurs when you steal the answer key. However, beware, because this also doubles as the worst case, because you will lose your soul.

## Worst Case:

You lose your soul.
And that's all for now. Let's hope that your life in the next few weeks does not feel too much like this:

```
public void studyingForExams() {
    studyingForExams();
}
```

Have a great rest of the term. Good luck with your exams.
Angela
[Yay recursive studying. But wait! No base case! Hmmm, that troubles me, especially since I only have one exam. Stack overflow - PhatEd]

White Space available

## Something to Think About

A Guide For Time Travellers

I was sitting around a table with some friends and the timetravelling mathNEWS issues (which Brad thought of [Stole the idea from The Guardian - TaxiEd]) appeared. I began to think about all the possibilities with regards to this fascinating, yet confusing topic.
For example: I was watching an episode of Roswell and was stunned, and yet fascinated, at the same time. In this episode, Max from the future came back in time in order to stop himself from getting married. He accomplished this by getting his supposed wife to pretend to sleep with another man. As a result, the future is changed. Near the end of the episode, the Max from the future disappears. Although this may sound like a completely possible situation (time travel is theoretically possible, people, but I won't get into that topic) the question that a person has to ask themselves is how does the future change? In this episode, once the Max from the future disappears, he no longer exists, so then how is it possible for him to go back in

## Fruit Season is Upon Us

Soon the piles of cherry pits will appear throughout my apartment. Eventually to grow and merge into one giant cherry pit monster of dangerous and delicious proportions. It's either that or spit them off my balcony into the parking lot, but I think the girl in the apartment above me with the " 4 UJESUS" licence plate is catching on to my ways of vehicular abuse. But seriously, what am I supposed to do with 14 ounces of sunflower seed shells. It's not like she HAD to park directly outside my bedroom window.
While seeds are good all year and cherries are just coming into season, it is merely a few weeks till the heavyweights of the no holds barred vitamin C invitational tournament arrive. I am referring, of course, to peaches. Peaches and their cleanshaven, gino nephews: nectarines. These guys are real badasses. They have cyanide inside their pits, and too many of them will give you a case of the runs so bad you'll have to ask permission to write your finals sitting on a toilet.
All in all, a pleasant cornucopia of various fruits will improve your social life, make for healthy eating, and impress guests, neighbours, significant others, and the vermin that live under your bed alike, you filthy pig. Sweet fruits can give anyone their sugar fix, while providing $100 \%$ of one's daily fuzz and skin intake. Apricots are for the snooty and disdainful, while plums go great with white T-shirts.
Like all good things, fruits and those delicious morsels called berries get better the more you have of them. Like those wacky power rangers, you can combine your favourite fruits to make a giant fruit Megazord of unspeakable power. Try putting a little triple sec on your fruit for some great debilitating fun.
Just remember not to eat the hard parts or the squishy moving parts and you're well on your way to being the fruit connaisseur that deep down we all want to be.

Tim "Sticky Fingers" Haloun
Space for Rent, inquire with in.
time and change the past? The fact that the person never existed in the first place negates him from being able to go back to the past and changing it thus causing everything that should have gone wrong to go wrong again because the past should not be changed).
If you have absolutely no clue as to what is going on, let's try using this example. Say, for instance, that a time-travel machine is created and I choose to go back and kill my grandfather before my father was born. Now, I go back and kill my grandfather. But, as a result, my father no longer exists, and therefore I no longer exist. Now, how is it possible that I went back to kill my grandfather if I was never born in the first place.
So, if anyone is planning on taking a trip to the past, remember, if you try and change something, everything will stay the same, or at least it should.

Michael "The Confused Office Manager" Tersigni

## mathNEWSquiz \#6

## The UnSquiz

Hey everyone, I was really happy with the turnout for last squiz. We had three huge submissions. So without further adieu, the answers are ... Lyrics: 1) (Everything I Do), I Do It For You 2) Heaven 3) Summer of 69 4) Please Forgive Me 5) Have You Ever Really Loved A Woman. Numbers: 1) 2.7182818285 2) 9 3) Yes 4) 31556952000 5) 6009. Undergrads: 1) Craig 2) Parker 3) Yellow 4) Shawn 5) Rita. The Bonus) Justin Gimpy Taylor.

Okay, so the scores for this week are ... drum roll please ... Mission Bananarama on special assignment to the queen, 10. Krease, 9 (He woulda got more, but he wrote the Undergrads questions and I couldn't give him credit for that) and the winner, (even thought he thought the billionth digit of pi was 6) of a brand new car (bon dioxide molecule) is none other than Andrew Batchelor with 15! Way to go Andrew! You can pick up your C+D gift certificate in the MathSoc office, and you can get your other prize by breathing.
And now, this issue's Squiz:

## Incorrect Lyrics

1. This looks like a job for me so everybody just code with me cause we need a little more ASCII and it feels so empty without C
2. Nonabelian, you're breaking my heart You're wreckin' group multiplication
Nonabelian, I'm down on my knees I'm beggin you please to commute
3. This here's a function for all the heroes Wanting to find where it has zeroes
4. To really love a number
to memorize it
you have to recite it like $\pi$
Kinda short this week. The first person who finds me somewhere inside MC and sings all four of the songs to me wins a prize. Good luck!

## mastHEAD

## Bradley $T$ Smith was here

I suppose it's time for my retirement speech. So what shall I say? Oh I know! I'm sorry.
I apologize for all the trees I've wasted, all the fees I've spent on pretzels and lasers, all the time I've stolen from the lives of the wonderful volunteers I've been lucky enough to work with. I'm sorry about the mean articles in 86.3 and 88.8 . I'm sorry for all the spelling and grammar mistakes, not to mention all the times I've screwed up the gridWORD and the Squiz. I'm sorry I never got around to writing Molson House Party Attended by Unattractive Person and High Tech Company Offers Speed to Increase Productivity (I'm not sorry about never getting to Hankerchief Fashion Actually Nun Propaganda). I'd like to apologize to everyone who was outside of an in joke - email me sometime if you'd like to be in (I won't say, "No!" heh heh). I'd especially like to apologize to anyone who thought that editorship is something glamourous or to be covetted. And I'm sorry I can't stay longer. I'm going to miss this job.
So, when the pizza, drinks, and pretzels, Albert asked the staff Who is this Brad guy, anyway? Now, for the first time ever, we have the mathNEWS staff, some of the best volunteers ever, with their answers, plus, as a bonus, their year and program too! Emerald (1B, Undeclared, Brad? Brad-my-sister Brad? Noshoes Brad? Evil Brad? Or mathNEWS Brad?), Simon L'Avier (4A, CS, A figment of my imagination), Laymond (2B, CS, The guy who brings pretzels, yay!), Jason C.Y. Lau ( $4 \mathrm{~N}, \mathrm{C} \& \mathrm{O}$, The guy who feeds those who come to Production Nights ... with stuffings), Dan (2B, CS, He's Spartacus. No, I'm Spartacus!), Pi (1B, Advanced, I hear he's Brad, B-B-B-B-B-Brad to the bone.), Krease (3A, CS, A D-Bra), Ian (1B, CS, Sinclair), Louis (3A, CS, Leo leader circa, '99), Soo (2A, Proudly Undeclared, The guy who refuses to pose for a portrait - I got 3 of his back tonight ... but why does he hide? *duh-dun-dum*), Douglas(1B, CS, Hey guy Brad guy. Oops wrong issue, guy.), and of course Ken (4A, CS, My Secretary).
Albert here. Of course we have to thank the good providers of food, Farah's, Campus Pizza, and the Soft Pretzel Bakery (that's right, ride out you lease). Thanks as well to Graphics and the magic they do. Though right now I really have to thank the Man; thanks Latrell. No wait I mean the Man this issue: Brad guy. For as long as I can remember he has been working hard every other week to scrap together this fine campus publication for everyone to enjoy on Friday morning. So ends the era of TaxiEd, but not the end of mathNEWS. No, mathNEWS will never die as long as there are people like me, Louis, Krease, Jason, and one day maybe even Lino and Ian to get sucker into the job of editting. You too could be editor one day, just come out to Production Night 6:30 every other Monday. You too could be as cool as Brad. So have fun with your cut out Brads (just not too much fun if you know what I mean). Good luck on exams and have a good August break like thing. And where ever you go Brad we will always remember you. When Brenda Slomka was reached for comment she said, "I can run a school but I can't open a door."

Albert O'Connor (2A, CS/DHW, Bradley Man, Bradley Man, Does whatever a Bradley can)
Bradley T Smith (Class of 2002, PM/C\&O, Left-handed, no glasses, can't miss him)

## gridCOMMENTS

## Dragons ... in the future!

I've got to see Reign of Fire.
Okay, here come the results, complete with ideas for movie sequels to see this summer:
On the conventional side of things, we had solutions from Adam Weatherhead (Everybody knows sequels are never as good as the original movie, so this summer should be a summer without movie sequels), Mission Bananarama (The .NET ... Who do you want to be today? Starring Sandra Bullock as Angela Bennett, Steve Ballmer as Monkeyboy, and William F. Gates III as Himself), and Shraddha Pai (L.A. Confidential II: Hush Hush++). After rolling a three-sided die, Shraddha won!

Meanwhile in cryptic land, we had partial solutions from the teams of Owen, Doug, and Andrew, and the SJU Crew (Ghost Busters 3). Sorry guys, when you take BEERS out of CELEBRATES, you get an anagram of CLEAT. So it came down to Beatrice Chapman (Bridget Jones' Diary 2), MKE 404 (Kinder garten Cop 2: Judgement Day), and Paul Ottaway ( $\pi 2$ - Coming Full Circle). A roll of the die and Beatrice wins.

So, I owe some people solutions to a few grids now. I'll get to work producing those now. Keep enjoying the gridWORD!

Linda and Brad


Issue Four's Grid Solution


Issue Five's Grid Solution

