CHRIS NEAL...KEEPIN' IT REAL

*look*AHEAD

ISSN 0705—0410

This is the ISSN that never ends. Yes it goes on and on my friends. Some editor started writing it not knowing what it was. And he'll continue writing it forever just because this is the ISSN that never ends. Yes it goes on and on my friends. Some editor started writing it not knowing what is was. And he'll continue writing it forever just because this is the... oh to heck with it!

The Ultimate Troublemaker: Joe Collins
And his minion: Nav Chandrani

*mast*HEAD

New Editor, Same Great math*NEWS*

The last time I took over a school newspaper... it died. Thankfully, we're receiving reports that my high school has finally called off their attempts to resuscitate it. But before you come chasing me with big pointy objects, please know that *math*NEWS will remain the Bastion of Erudite Thought that it always has been.

If you didn't notice last week's Imprint, I invite you to explore the crossword and compare its previous solution to the current puzzle. My production staff found it most amusing, and hence felt compelled to answer the question "What is a *really* epic fail?" Their answers, in the form of pizza-eating thoughts: MJB ("Travelling 35000 km around the world and missing the first *math*NEWS meeting of the term"), Ajnu ("The Bush administration... *palmface*"), snippet ("The sex lives of the *math*NEWS editors"), The Hee Ho ("Not serving the King"), Lich ("Not being able to come up with a better answer for this"), Thor ("My life's dream to fly arond the world in a biplane solving mysteries with my own wisecracking anthropomorphic animal companion"), James ("Not curing AIDS or at least finding a vaccine for it"), AngelEX ("Calling 'Rape' a war tactic and saying that it can only be done to women and children. Nice job, The Imprint"), Brucey-π ("The Chris Neal Presidential Tour of Other Societies").

As always, a huge thank you to Graphics for doing all of the work but receiving none of the credit, to the pizza place for feeding my staff, and to my UI assignment for keeping me up all night. And of course, thanks to Angelo for having not checked my qualifications before giving me this job. Mwahahahaha.

InsidED ("The Purple Underground – R.I.P. old student newspaper")

Write for *math*NEWS!

It's bloody easy!

So you've picked up this Bastion of Erudite Thought, and you asked yourself the obvious question.

"How can I write for *math*NEWS?"

Well, I'm glad you asked, because writing for *math*NEWS is so easy that a monkey can do it. In fact, there are many ways that said monkeys can do it:

1. Come to production night. Here you can hang out with the other *math*NEWS-ites, write your articles, and then be rewarded with pizza. Our next production night is a week from Monday (26 January).

2. If you can't come to production night, email your articles to us. Just send your email in plain text form (or tagged if you know how) to mathnews@student.math.uwaterloo.ca. Don't forget to put "Article" in the subject somewhere.

3. If you want anonymity (and I don't see why you would), you can drop your articles in the BLACK BOX outside of the C&D.

Help us to make this publication bigger and better than ever! Otherwise, I am going to have to write filler. I do not like white space in my *math*NEWS, so make it go away! If you have the best article in a given issue, you will win a $25 gift card for HMV.

InsidED

Prez Sez
Wait! We actually elected Chris Neal?

Hey Mathies and welcome back to another term of University. I suppose I should introduce myself to anyone who doesn't actually know me but still reads this! My name is Chris, rumour has it I like walks on the beach. I'm a 4B Operations Research student and I am stoaked to be your society's president this term!

My goals for the term are pretty simple. I want to investigate club funding, and make a few tweaks that I feel will benefit both Math Students as a whole and the clubs themselves. Additionally I want to make MathSoc a more transparent organization, I want you (the student) to know be able to know exactly what's going on, and know how to get that information! I'd also like to work on relations between MathSoc and other organizations like FEDS or the other societies.

By the time you have finished reading this, it will be the end of the First MathSoc (hopefully) Annual Frost Week! This week we had cotton candy, a clubs day for the MathSoc clubs and affiliates, and even a movie night. I just want to go out there and thank all of the volunteers, Directors, and other Exec for their hard work, and especially Maria for all of the planning. It was amazing to see all of you out there, and if there's anything you want MathSoc to do for you, seriously, tell us! (It's sort of why we exist...) One thing I did that I'd like to report on would be the "Chris Neal Presidental Tour of Other Societies". Myself, Aaron, and everyone's favourite Angelo, went on a tour of the societies around campus. Turns out only SciSoc and EngSoc were open.

Half of the societies we saw were confused, the others were excited to see us.

So you're probably thinking to yourself, how can I get involved with MathSoc? Well, Maria, our VPAS, is probably looking for TONS of volunteers and would be excited to meet each and everyone of you! Additionally, I'm trying to make MathSoc Council Meetings more open and transparent by publicizing them more, that means, when you see that pretty sign for a MathSoc Meeting, come on out, I don't bite. And before I forget, did you want to be a class rep? Have you ever wondered how? Nomination Forms are outside the MathSoc Office, come by and pick one up. Finally, of course, if you have any questions, comments, or concerns, by all means send me an email or come see me in my office hours in MC 3039 on MWF 12:30-1:30, W 2:30-3:30, or just stop by and ask for Chris. Trust me, I'm open to anything, and I'm committed to making you experience this term better than ever!

Also join our General Use Mailing List! How you ask? That's as easy as type `http://www.mathsoc.uwaterloo.ca/cgi-bin/mailman/listinfo/announce` into your trusty web browser and signing up :-)

Chris "Brucey-π" Neal
MathSoc President Winter 2009
`prez@mathsoc.uwaterloo.ca`

VPF Sez
Money is funny!

I have the pleasure to welcome you all to the fun and exciting term that lies ahead of you. For starters, we have a spanking new website that has been up and running from the beginning of this term, and what's good about it? Well, EVERYTHING! To keep track of all the events we have to offer, please look under the announcements tab which has an on-going calendar of everything that Mathsoc has in store for you.

In more VPF-related news - did you know that Mathsoc partially funds its math students for recreational activities that are held with Campus Rec? So, you mathie sport players, what are you waiting for? Grab a form from right outside the Mathsoc office and drop the forms off in my mail-box, and you'll have the funding available by the end of the term. By now, you would have probably seen posters about this in and around the MC, and if you *haven't,* we really have to learn a thing or two from the marketing students about how to get people's attention.

So, if you have any questions about this funding procedure, feel free to send an email in my direction. And this is all that I have to contribute to *math*NEWS for this edition.

Ajnu (not Anju) Jacob
Vice President, Finance
`vpf@mathsoc.uwaterloo.ca`

*dissed*CONNECTIONS

I see you every day on the bus. And and in your office. And in bed with him. I can't take it anymore! Please come back!

Disgruntled Ex

VPAS Sez
Hey Everyone!

I just wanted to introduce myself to all of you. I'm Maria and I'm the VP, Activities and Services for MathSoc this term.

I hope you enjoyed the cotton candy, novelties side walksale, clubs/committees day, games night, movie night, and our Math-Soc info night this past week. It was our first annual FROST WEEK!

This term, we have a bunch of new and old activities planned for all of you. They are all very awesome and fun and we hope you will all enjoy them.

Feel free to stop by the MathSoc exec office and say hello! Please feel free to let me know any comments you may have about the activities and services MathSoc provides for you.

Maria Christina Greco
MathSoc VPAS Winter 2009
`vpas@mathsoc.uwaterloo.ca`

New MathSoc Website

I hope that by now, you've all been on the MathSoc website to check it out! It has a BRAND new look with GREAT new features! Take a look and let us know what you think with our online poll/comment submission.

`http://www.mathsoc.uwaterloo.ca`

Your MathSoc Executive

403 White Space Forbidden
404 Filler Not Found

Math Orientation!

Details! Details!

Welcome back, awesome math students, to another term of education! This is your official report from Math's Federation Orientation Committee (FOC for short) telling you about some awesome things that we will be having in the next couple of weeks!

First of all, orientation applications are available now at `http://www.orientation.math.uwaterloo.ca/2009` with the deadline for first round interviews January 23rd, so be sure that you apply early! Any math student is allowed to apply, and all are encouraged! We want quiet people, we want loud people! We want all the help that we can get to make orientation a great welcome to first years and an amazing experience for leaders!

Also, we will be having a feedback session on Tuesday, January 20th, open to all math first years who attended orientation. We want to hear what you liked about the week and what you want us to improve! Time and location are to be announced, but keep a lookout for posters on the 20th!

Also, feel free to contact us by e-mail (see below) or you can stop by the orientation office. It's in MC3048 and we usually having someone around midday on Tuesdays and Thursdays! Have a great term and we are looking forward to seeing your application!

Michaelangelo Finistauri, Theresa Power
Abeer Rahman, Piraveena Tharmalingam
Math FOC 2009
`orientation@math.uwaterloo.ca`

ElseWhen

Welcome to the first installment of ElseWhen of this Winter Term. We open this article with an issue twenty-five years ago, from the year of the city 1984. The issue in question being Vol.34, No.1.

Mr. Look

Wanted (Not Wanted) is a collection of miscellaneous classifiieds of dubious origin. ;) Briefly summarized:

- **Shy?** I'm not!! - Call me anytime for insults, verbal abuse, coarse language, heavy breathing,and hacking coughs. Diner's Club and PAC Cards accepted. 556-DUMB
- **Grok** - Yes, you too can GROK. Just 15 minutes a day can give you a lifetime mental asset, maybe even an extra limb or two. Call Bob at 884-4200
- **Big** Brother is watching YOU.
- **Big** Brother's Mom is watching BOTH of you.

In Other News:
- Lotto 6-49 for UW!
- Wanted - 3 curlers.
- "Alligator Pie" is showing in the Humanities Theatre.
- Blatant Filler! - What did you expect?

This Filler Is Brought To You By

Me

Because my ego needs to be fed

AngelED has retired

It's about fucking time

All good things must come to an end; however, there is no explicit statement for when bad things come to an end. So a jackass like me is left with little to say. There comes a time when I must pass on the torch, but being the jerk that I am, instead I decided to just throw it at someone and watch as the flames consume his soul *[I had a soul? Since when? — InsidED]*.

I'd like to say that I enjoyed my time as an editor, but then I'd be lying. I had a lot of fun, I made some good friends and probably insulted more than half of you unjustly. So instead of thanking all the wonderful things that I gained from this experience I will apologize to the people who I didn't get the chance to thoroughly offend:

- Ducks
- Homunculi
- The Imprint
- The Imprint's mother
- Saved by the Bell
- Engineering
- You
- Your mother
- The Iron Waste-of-Paper

Don't think of this as the end so much as the beginning of the end. I'll still be around this term in case anyone from The Iron Warrior decides to take another stab at *math*NEWS. Other than that, I'm pretty much graduated and ready to start climbing the corporate ladder on my knees and train an army of zombies so that I can finally get to live out the end of my days in a zombie apocalypse. So, with this sardonic note, I leave *math*NEWS in the hands of InsidED. Oh, and I'll still be doing the covers for a while. Deal with it.

AngelED

Software Orientation 2009

More fun than a barrel of monkeys!

Hello, fellow Softies!

We are your SE Federation Orientation Committee (or SEFOC), and we are just giving you a heads-up that Software Engineering Orientation Leader Applications are now... (drumroll please) OPEN!

As Orientation Leaders, you will help to shape SE Orientation for the incoming Class of 2014 *[Wow, that makes me feel old — InsidED]*. You will help us with the planning and execution of the week, which this year is from 7 to 13 September.

Whether you loved Orientation Week and want to do it again, or you didn't like Orientation Week and want to make it better, we are looking for YOU! Each and every one of you can bring a great experience to the incoming class.

All the information you need, as well as the application form, are available online at `http://www.softeng.uwaterloo.ca/orientation`. Applications will close on 28 January. You can also email us with any question you may have about SE Orientation. We look forward to reading your applications!

Akshay Balakrishnan, Joe Collins, and Ray Tang
Your SEFOC09
`softengfoc@gmail.com`

Interesting Math

Something for you to think about during your cab ride

When the great mathematician Ramanujan was bed–ridden late in his life and his mentor Hardy visited him, Hardy told Ramanujan that he had ridden in taxicab no. 1729. He remarked that the number seemed dull, to which Ramanujan immediately replied: "No, it is a very interesting number; it is the smallest number expressible as the sum of two [positive] cubes in two different ways."

Ramanujan's brilliance aside, Hardy took this intriguing property and (as all good mathematicians do) generalized it. Let the nth taxicab number, denoted Ta(n), be the smallest number that can be expressed as the sum of two positive cubes in n distinct ways. Hardy and Wright proved in 1954 that Ta(n) exists for every positive integer n. Their proof converts into a program that generates numbers expressible as the sum of two positive cubes in n distinct ways, and then taking the least element of the set of all numbers expressible as the sum of two positive cubes in n distinct ways. However, the program does not explicitly *find* the smallest such number; it only finds a possible one, and thus it is not, in general, easy to find the taxicab numbers. In fact, only the first 6 taxicab numbers are known:

Ta(1) = 2
Ta(2) = 1729
Ta(3) = 87539319
Ta(4) = 6963472309248
Ta(5) = 48988659276962496
Ta(6) = 24153319581254312065344

I leave it as an exercise to actually find the n ways of expressing the number. Of course, we can still generalize this notion. Who says we need two cubes? Or even cubes at all? We define the generalized taxicab number indexed by k, j, n, denoted Gta(k, j, n) is the smallest number which can be expressed as the sum of j k^{th} positive powers in n distinct ways. Notice that Gta(3,2,n) = Ta(n). I could only find one nontrivial generalized taxicab number, found by Euler:

Gta(4,2,2) = 635318657 = $59^4 + 158^4 = 133^4 + 134^4$

Not surprisingly, finding Gta(n) is much harder than finding Ta(n) in general. For example, Gta(5,2,n) is unknown for any n at least 2.

Here's another way to make the problem more interesting. Let's

*math*NEWS in the Morning

For those of you unaware, which should be all of you, *math*NEWS has expanded its operations and now has a "news" broadcast called "*math*NEWS in the Morning"! For all of you eager to take a look at what we've done so far, we have one segment uploaded to `http://youtube.com/mathnews` already! I'll be looking for people wanting to be anchors and field reporters and are willing to participate so you can let me know if you want to be involved by e-mailing the *math*NEWS edtiors! `mathnews@student.math.uwaterloo.ca`

Also, I guess somewhat introducing myself, I was just The Hee Ho, but now I've levelled up and evolved into... The Vid-Hee-Ho ED!!! Prinny, doods! I will be working extra hard to make sure that you get all the asinine fluff that *math*NEWS has and putting it in video form. So with a Hee and a Ho, it's away I go! :D

The Vid-Hee-Ho ED

go back to Ta(n). Recall Ta(3) = 87539319; but notice 87539319 = 27*3242197 — hence it isn't cube–free. Can we find a cube–free number with three representations as the sum of two distinct cubes? Voljta discovered the answer to this question is yes, a solution is 15170835645. For four representations, Gascoigne and Moore both found a suitable cube–free number.

This of course leads to the natural generalization: Can we do something similar for the generalized taxicab numbers? Ok, so for the number I gave it seems pretty pointless, as 635318657 is factored as distinct primes 41*113*241*569. If you'd like to work on it though, find some other generalized taxicab numbers and see if this idea extends nicely.

Vince's problem of the issue: Ok, to be honest, I didn't have time to think of a great problem — so I'll just use a problem Faisal Al-Faisal posed: Suppose X is a topological space. If every compact set in X is closed, does X necessarily have to be Hausdorff? (The converse of this statement is a well–known fact from analysis/topology.)

Vince Chan

MathCooks!

More like Math pours water into stuff

Disagree all you want, but my favourite part of winter is curling up on a couch in front of a fire or a TV with a nice cup of hot chocolate. Mmm... who doesn't like hot chocolate? Well, you're weird, you hear me? Honestly though, I never thought making hot chocolate would be a science in itself. Maybe it's because I've traditionally done it one way and until recently, I never bothered trying other methods. Here's my previous way of doing hot chocolate:

You will need...
- A cup (big mugs are nice!)
- Hot chocolate mix...
- Hot/Boiling water
- Milk/Cream

Simple enough, right? According to my tin, it tells me to either place the powder in and pour the water over it, or pour the hot water in and then spoon in the powder (And stir like mad). I call shenanigans! Every time I pour the water first and then the powder, it gets really messy as the powder goes everywhere, and I have yet to get it to dissolve fully in the water, so the bottom always leaves a bunch of gooey mess. (Maybe I'm just a really bad cook?) Ditto goes for the powder in first method... So I decided to try something new!

Here's what I discovered: Spoon the powder into the mug (all 2-3 spoonfuls that you want). Then, add as much cold milk/cream as you wanted in your hot chocolate. Stir until it looks like a gunky mess. Finally, pour hot water in to fill the rest of the way and stir gently until you feel like it's mixed. Strangely, this method seems to get rid of the buildup at the base of the cup as the hot water and the milk mix together with the gunky chocolate bits to deliver what I contend is a superior tasting cheap cup of hot chocolate. Seriously, I know it sounds like bull, but try it out sometime. If I'm wrong, you're welcomed to find me and slap me or something. Hmm, wait, maybe not...

Chocolatey Panda

HorrorScopes

You laugh because you don't think its true…

ACC: Your past will come back to haunt you after a night of enough drinking to kill a family of four. The only thing worse than finding out who the father is is finding out who the mother is. All I'm going to say is that alcohol does weird things to you…

Your lucky number is a family 10 years sooner than you wanted.

ACTSCI: Now that everyone finally got over denying the recession, you are beginning to lament the impact it has on your money. Sad people do sad things, and then insurance companies have to pay out sad money to sad survivors. Don't worry though, things will pick up and then good times will be had by you.

Your lucky number is 64 life annuities that you wish you sold.

AMATH: There are all sorts of fun and exciting things that don't await you after you finish your degree. You need a masters for that, so be sure to look forward to more years of school. It just never ends for you!

Your lucky number is 2 degrees for the worth of 1.

BBA/BMATH: It's always unfortunate that when new degree requirements are added just when you thought that you had your courses planned. Now you have to take a course of how to handle situations like a recession. The final project involves jumping off of a high riser.

Your lucky number is 50 points for style.

C&O: You have skeletons in your closet and they're starting to come out. They may not be zombies, but they are definitely part of the undead. As a mathie you shouldn't rely on your physical attacks - holy spells work best. You just have to worry about the roll for fear.

Your lucky number is a 6+ on a D6.

CM: The stars see uncertainty in your future, but not so much in your pants. Good things *** to those who wait. All night long if necessary. Just remember to be patient or else you'll miss out and have to wait until the next iteration. In 3076.

Your lucky number is the best 5 minutes of your life.

CS: You've found a wonderful solution to suffering in the economic crisis! You will be prosperous, you will have many skills and talents, and your name will be known throughout the land. The is until you realize that succeeding in WoW isn't the same as succeeding in the real world. At least, outside of UW.

Your lucky number is level 80, take that, Lich King!

MATH BUS: Jobs are getting harder and harder to find. Fortunately for you, you are more competent than most students from other schools. At least, thank the UW name for that. Be sure to catch a job quickly because before long employers are going to realize that UW students are just as lazy as the other new hires.

Your lucky number is 50 years of riding on fumes, so to speak.

MATHEMATICAL WHATEVER: I don't know whether you're Mathematical Sciences or Studies anymore; however, I can imagine that if you're in this field then you probably don't study. Consider yourself lucky. I'm not going to give you a reason for that, though. Luck is an illogical concept enough already.

Your lucky number is a LUCK score of 12.

PMATH: The nature of your heavily theoretical studies leave you feeling unprepared in case of a zombie invasion. You have the skill set to prove that your defenses will be effective; however, you lack that practice to be able to implement it. Know that you will be first.

Your lucky number is 35 billion zombie friends.

SE: Your star sign has be excommunicated so now is a great time to create a new persona. Find all of the best traits about your friends and then make them your own! You'll feel like a brand new person, but everyone will know that you're just an empty shell. Open an X-session and run "Fill up" to make you feel better.

Your lucky number is the nothingness within you.

STAT: You begin to realize that you end up doing more work than you have to. You spend all of your time taking thousands of samples only to be somewhat sure about the same things that engineers prove with three tries. Lower your standards a little bit and try to relax.

Your lucky number is happy hour nineteen times out of seventy billion.

UNDECLARED: You're waiting for your GPA to be high enough to get into ActSci, but don't hold your breath. The competition is fierce, but you needn't despair! You can always just go into STATS. They'll take anyone!

Your lucky number is 0.5% too low to get in.

AHS: A change of season always brings a change in people. You find yourself feeling restricted now that you have to wear pants. Find sexually active ways to keep warm without pants, but remember that you can't get away with that stuff in public. At least, without me.

Your lucky number is 4, which is the minimum for an orgy.

ARTS: All of your friends from other faculties are busy doing actual work and now you feel all lonely. Don't despair because your friends will need encouraging to go out and get incredibly hammered. Practice getting drunk so that you can lead by example. Just not in a straight line.

Your lucky number is 99 bottles of beer on your floor.

ENG: Do not be afraid of adversity. Things get more challenging, but you will have the strength to overcome it. As your progress in your studies you find that you now need more than three cases to prove by induction. Masters students need to be able to prove things for as many as 4 cases! It's okay. It's doable. Trust the mathies on this.

Your lucky number is $\min\{n, 4\}$.

E: Just because you're the ones studying the environment doesn't mean that you should take responsibility for the current state of the weather. Let me blame you instead. You're the ones that are causing more harm than good! You're the ones who make the air unbreathable and trees die! Salvation lies in math.

Your lucky number is e. Pity you don't know what it is.

SCI: Your field is constantly changing, evolving and growing. Instead of finding ways of keeping up to speed, you should work on a method to freeze development so that you never have to worry about something new. Then spend the rest of your life studying your amazing discovery by causing a premature ice age.

Your lucky number is 1 Kelvin and no life on the planet.

OTHER: The Moon is in Ares and the Sun is in Prison for indecent exposure. This means that you will be greeted by an unexpected visitor in the shower. Now may be the best time for you to update the locks on your chastity belt.

Your lucky number is 5 quickies from lovers long gone.

The Hee Ho

Dating advice from the single girl

For those of you who are old and remember the single guy, I think we can all agree that it was a very jerky move leaving *math*NEWS to spend time with a girl from Arts! However, his dating advice was indispensable and we need someone equally wise and with deep insight to take over. Fortunately, there's me. For those of you who are new, prepare yourself for the best dating advice you will ever get customized for Mathies. Guaranteed to get you a partner within 2 weeks or it's free *[It already is… — InsidED]*!

Dear Single Girl:
This is my last term on campus. Ever since first year I've been in love with a girl who I met on moving day. I instantly knew she was the one for me. All of a sudden she tripped over her shoelace and her bags went flying in the air and burst open, all her stuff flying onto the cold cement. It was the perfect opportunity and I helped her out and everything was going awesome. It was the best day of my life! Problem is, we haven't really spoken since except for the awkward smile in the hallway. I'm scared I'm never going to see her again after this term and will lose her forever! Please help.
-Desperate

Dear Desperate:
You're stupid. Why are you hung up on one girl when there are plenty of fish in the sea? Especially someone you don't even know! Get over it. But for some reason I doubt that's going to happen. So get some balls and ask her to the Math Grad Ball! If she says no, you'll probably never see her again saving you the awkwardness and embarrassment of having to see her again. If she says yes, it's what you wanted all along! Its a win-win situation.

<div align="right">Single in CO</div>

The Joys of Never Having to Leave Your Bed

It's 1 am, you're watching movies in your bed with the monitor across the room. Your movie ends but you're still not tired so you decide to watch another. What do you have to do? Get out of bed, go to your computer, select the movie, hit play, climb back into bed and spend 15 minutes trying to get comfortable and warm again.

What do I have to do? I have my trusty laptop right next to me which controls my movie player. I can pause when something comes up. I can choose any movie from my computer I want. I can control volume, time, almost anything important from a remote device.

Sure, this might be a little bit unnecessary but think about it on the large scale: *dream sequence* You're hosting a party, blaring the music when the song changes and everyone seems to hate it. You pull out your iPhone and *BAM*, hit next track and everyone starts having a good time again. Problem solved.

There are perhaps tens or dozens of applications for remote controls for your computer. Why you can even play WoW at 3 frames per second from an iPhone through these remote tools.

<div align="right">Apocrypha</div>

If I could stop time…

Since Hiro Nakamura doesn't know how to be an assclown

- While writing a test I would wait for someone to turn the page, stop time and then erase everything that they've done.*[But if we have learned anything from Dexter's Lab - doing this will burn the paper — abortED] [Would that not make this even more amusing? — InsidED]*
- Go to the mall, stop time and then move people's cars to other parking lots.
- Appear for a job interview, stop time and then attach a police warrant for the arrest of someone to their resume?.
- Go to a Britney Spears concert, stop time and then switch the tracks so that her lip syncing is off.
- Take a girl out on a really nice date, stop time and then leave her somewhere.
- Pour many bottles of vodka into the swimming pool.
- Wait for someone to dive into a swimming pool, stop time and then drain it.
- Go to a play, stop time and switch everyone's pants.
- Host a video game party and then switch everyone's controllers in the middle of a match.
- Wait for someone to start a sentence with "I'm not racist, but…" stop time and then drop kick them in the face with my ENERGY LEGS.
- Go watch the Simpsons movie, stop time three minutes into it, leave the theatre, cry for a bit and then move on with my life.

<div align="right">Angelo</div>

New Zune DRM Feature a Success

Microsoft has finally solved a 427 year old bug that has perplexed makers of Digital Rights Management software since Pope Gregory XIII added a day to the calendar, allowing people to listen to music longer than their licenses should normally allow. On December 31st, Zunes across North America refused to turn on to reduce the risk that unauthorized music would be listened to without paying for a special 366-day license.

Microsoft was quick to deny early rumors of a virus spread through the device's wireless connection, pointing out that the transmission requires the antennas of two or more Zunes to be within a few meters, something that outside of Seattle's Kirkland suburb is statistically impossible.

Microsoft spokesman Jim Bale reported that consumer response has been mostly positive, with the slight exception of a tiny minority of music pirates who congregate in areas such as Slashdot and coastal Somalia. Bale claims music pirates who take music from sources such as "byte torrents," "I are sea" and CDs to trade them for drugs and terrorism are disproportionately users of the Zune, mainly because most honest people have never heard of one.

All Zunes resumed working January first, after a series of reboots; 35 000 Xboxes also stopped working but this was only a co-incidence and well within normal behaviour for the Xbox. Insider sources in Microsoft added "HAHAHAHAHAHA wow".

<div align="right">staceyj</div>

And the winner is…

Not you. Now suck it up.

*prof*QUOTES
Will they ever learn?

They [the tutorials] may or may not be useful. It's the TA who gives the tutorial.

<div align="right">Lam, SE 465</div>

Symmetry...it's what makes "roses are red, violets are blue, the human head weighs eight pounds" not work so well

<div align="right">Leung, PMath336</div>

You don't have to do it in your head. Come up to the board and we will mock you through it.

<div align="right">Leung, Pmath336</div>

Who thinks you can do this? (refers to example in class)...Alright, well it seems about even (vote). Well I will prove it. I mean not prove it and leave it as an exercise...oh isn't teaching fun.

<div align="right">West, AMath250</div>

How do you make sure it works? You test it and hope it works. What if it doesn't work? You change things at random and test again.

<div align="right">Bishop, ECE327</div>

If you're going to hack my into home computer to get the midterm, please be aware that is an academic offense. Please also be aware that I don't keep my midterm on my home computer.

<div align="right">Bishop, ECE327</div>

Having computers design themselves sounds a bit like Terminator.

<div align="right">Bishop, ECE327</div>

If you want to start a bar fight among programming geeks, just ask them what the definition of "type" is. I've seen this happen - except not in bars but on Internet newsgroups.

<div align="right">Lhotak, CS241</div>

Everyone did well on Assignment 9. So, go and play in the snow a bit...and then go back to Assignment 10.

<div align="right">Lhotak, CS241</div>

Wait, didn't I just change that to make them equal? What just happened?... I have NOT been drinking.

<div align="right">Lhotak, CS241</div>

You know, in Asian countries when you ask the class a question, everyone just stares at you with dummy faces. Then I came to Canada and the US and noticed the same here. It's the same everywhere!

<div align="right">Fang, Chem266</div>

It's that time! Time to bust a rhyme!

<div align="right">Terry, SE382</div>

You always need to flush.

<div align="right">Terry, SE382</div>

Je ne comprends pas. Probably the most common question.

<div align="right">Nash, FR151</div>

Has your prof said anything quotable? Send it to us! Email it to `mathnews@student.math.uwaterloo.ca` or drop it in the BLACK BOX outside of the C&D.

The Unlucky 7
Ways to steal my identity without insulting my intelligence

This is for the idiots who think they are being clever by pretending to be my bank.

7. **Pick The Right Bank.** If you pretend to be a bank about which I don't care, then obviously I won't care about you. Noob.
6. **Practice Your Use of the English Language.** If your spelling and grammar make it look like you failed first grade, you clearly don't work for this bank, and I'm not giving you my info. Noob.
5. **Add Basic Error Checking To Your Forms.** For example, your forms should know that "Your Mother" is not my Social Insurance Number. Noob.
4. **Make Your Links Unidiotic.** Please put the bank's name *somewhere* in the URL. Or at the very least don't make it obvious who your ISP is. Noob.
3. **Call Me By Name.** Do I seriously look like I need to be addressed by "Dear Sir or Madam"? Can you not tell the difference between the two? Noob.
2. **Test Your Links.** There is little more embarassing than having your email link leading to "403 Forbidden". Noob.
1. **Don't Bother Trying.** I guarantee that you're not going to get anywhere. Noob.

<div align="right">InsideR</div>

Thor's CS Problem of the Fortnight
Getting you ready for Google, since 1822.

This Fortnight's Question: Describe a short program that would determine at runtime whether the program stack is growing up or down in memory.

Last Fortnight's Question: Describe a simple way to tell if a computer uses big-endian or little-endian byte ordering.

Its Answer: Ok, so you do get credit for pointing out that sys/param.h usually will have a macro defined called `__BYTE_ORDER` to let you figure this out at compile time. However, a dynamic check is really what I was looking for here. A simple test at runtime for endianness is to declare a long containing the number 1, then casting it to a char* and back. Here's an example in C:

```
int am_big_endian()
{
  long one = 1;
  return !(*((char *)(&one)));
}
```

<div align="right">Thor</div>

I've Learned Everything I know about Relationships from Seinfeld

That's it, there's no punch line.

<div align="right">Apocrypha</div>

Police Busts UW Drug Operation

After years of collecting evidence, the KW police department has finally made the decision to move in on the drug operation at UW. "This is a very secretive group", said constable Whatshisname. "The people involved in this are detached from the outside world; they produce and consume their own narcotics. Any surplus can easily be sold to students. This is why the outside community does not take much notice, and that's why we had to wait for so long to gather enough incriminating testimonials".

Drugs were originally used by the math department for academic purposes, as one professor claimed to get intuitions from using powerful drugs as early as 1998 (1). It is also common among professors who need help to visualize higher dimensions and other mathematical figures (2). The use of drugs was popularized by the CS department. They even went as far as altering their compiler to analyze the programmer's code to determine whether or not he is on drugs (3). At first, the supply was limited, but certain drug lords quickly expanded their production capacity by turning to the chemistry department. Huge drug dealing profits were made. One chemistry professor referred to that time period as his 'crack years' (4).

What the professors didn't smoke, inhale, or inject, they sold to students. Many became addicted. Not much later, entire lecture halls were filled with students on drugs (5). Police did not consider the possibility of these students being intoxicated at the time because many of them looked no different than they did normally. Consumption has increased all around, especially in the CS department. Professors even started to take drugs when giving lectures (6). Students were getting very creative in obtaining money to buy drugs, as one has said: "Fulfillment is overrated. I pawned it for more drug money." (7)

Most of the people involved in the drug operation could not be reached for comments. For the ones *math*NEWS did manage to reach, no coherent responses were received, although we did get a very nice picture of ten thousand equations in a hundred thousand variables (8).

The KW police department would like to thank *math*NEWS for keeping an archive of the evidence. When asked what measures will be taken to protect the editors and people who have submitted *prof*QUOTES from reprisals, constable Whatshisname gave the reassurance that they have everything to fear: "at least we're not releasing your names, so it won't be *too* easy for the profs to get you."

Lich

Editor's Note:
See the testimonials for yourself in the *math*NEWS *prof*QUOTES archive. The ones listed below are referenced in the article by number.

1. Tenti, AMath361, v76.2: "Under the influence of powerful drugs, I get an intuition."

2. Chisholm, STAT331, v106.4: "You probably need some hallucinogenic drugs to see what it looks like."

3. Becker, CS241, v105.4: "Your compiler should go Hey! Whoever wrote that was on drugs!"

4. Bissonnette, Chem355, v96.4: "I taught the particle in a box model in Chem 121? That must have been during my crack years."

5. Best, CO370, v91.3: "I'm getting spacy looks; are you all on drugs?"

6. Pretti, CS134, v87.2: "This is a good opportunity for me to take my drugs... [leaves and returns 5 minutes later] ... It's amazing how good this stuff feels."

7. Unknown, v106.5: "Fulfillment is overrated. I pawned it for more drug money."

8. Furino, CO350, v102.2: "The second issue is that drawing a picture of ten thousand equations in a hundred thousand variables requires some serious weed."

The Hee Ho's Half-Assed Music Review

Seventh Wave by Grimskunk

Hee ho, music lovers! The Hee Ho here-ho to bring you some interesting ideas for music to listen to over the course of the term. This fortnight, I'll briefly discuss Grimskunk's debut album *Seventh Wave* and why you should avoid it at all costs! Stylistically the band isn't bad. They actually are quite good, have a decent rhythm, but they suffer from wanting to whine about relationships. Grimskunk is a rock group dedicated to whining about their girlfriends. All I have to say is one of their songs names is "Victim of Maturity".

Time to say something good about the band. They have two songs that are actually somewhat decent. They aren't anything special, but are somewhat catchy. The first is called "Comatose" which is a bit of a whiny, morose song that sounds sorta nice and the other is the title track "Seventh Wave", which is a fun song with lyrics which make no sense, but aren't about a bad relationship. The cool thing about Grimskunk is that their album is available in both English and French! So if you don't want to laugh at grown men who cry about relationships from when they were in highschool, then I'd suggest the French version. Not one of the better indie artists that I've found, but still okay.

The Hee Ho

Not quite a *prof*QUOTE

But it's close enough

[Student at back of class] Can you please turn your microphone up? I'm sometimes having trouble hearing you.
[Prof takes microphone off and continues lecturing]

Akon, ECE354

To the Mathematics Students at the University of Waterloo

Recently there has been a growing trend in the western world: that everyone, after completing secondary school, should head to University and attain a measure of higher learning. Such education is pursued in order to attain a better position in the workforce and live the western cultural ideal. This trend has set in motion an alarming series of ideas, curriculum changes, University policies, and cultural philosophies that stand to destroy the meaning of a Baccalaureate degree as we now know it, turning it into a professional certification, similar to one earned at a College. The crisis that this philosophy is preparing us for is much deeper and far reaching than most will admit, and will certainly lead to dire consequences for all mankind.

In the course of this term, I intend to elaborate on the causes and ramifications of this idea, how it currently manifests itself, and what you, my fellow students, can do to help save what it means to go to University and earn a University degree. There will be some who will claim that this stance is reactionary and outdated, and that the changes occuring are simply a natural consequence of the free market. To some extent this is true, the free market's invisible hand is present here, but the reason for it coming is the very thing that it is about to destroy.

Therefore, it must first be made clear what properties of a Baccalaureate are desireable. First and foremost a traditional University education has been broad: opening the mind of the student to new ideas and methods of thought, and providing them satisfaction for their many curiosities, leading to an inquisitive, well-rounded, and far reaching world view that enables the student to innovatively solve problems and act as a good will liason to other cultures and entities. Second, a University education has taught at a 'meta' level, insulated from current fads in any specialization. It has provided a student with the ability to adapt to new trends and blend them with his knowledge of the standing and timeless ideas within the field. This made a graduate an ideal worker, one trained to be retrained and adapt, able to work in any sort of culture and bridge that divides our species is so fond of creating.

The demand for such a worker, one in essence trained for anything and able to apply a specialization broadly, caused businesses to offer better jobs to such people. This demand has not gone unnoticed, and as the number of people earning Baccalaureate degrees increased, the number of quality careers available to people without such degrees decreased, leading to the belief that "one must go to University to have a good career". So far, there seems to be nothing wrong. The apple begins to sour when one considers the ideal of the "American Dream", if you will, that if you are an American (Westerner really, the United States is not alone in this problem) and you work hard then you are *entitled* to the good life: a well paying, stable career; a wife (or husband) and kids; a house; a car; all the "good, pleasant things" that make us civilized. This ideal has grown and been implanted in the vast majority of those living in the western world. The problem with this is that a mind cannot be opened by hard work alone, and without an open mind, one cannot meet the desired criteria above. However, Universities are pressured by businesses to maintain student output, as well as by the desire for financial survival, so as the proportion of the student body that believes that their hard work alone should see them through to paradise, the University becomes pressured to make this true, for fear of losing its steady funding in the form of a large student body.
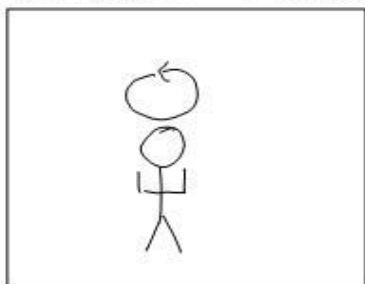
At this point it should be quite apparent the beginnings of the crises we face, though you may not be aware of the depth involved. The driving forces have been identified, but I have yet to explain the lack of opposition. There are still quite a few particulars to be discussed, so I, as foreshadowed above, propose to discuss the following points in a series of papers:

- The dangers of the entitlement idea of the American dream.
- The current manifestation of these changes in the curriculum.
- Those able to act against such changes, and how to contact them.
- The utility of the two most general lessons of a University degree.
- The unviability of rote as a method of learning said lessons.
- The problem of businesses unaware of why they desire workers with a University degree.

It is my hope that through this discussion an understanding can be cultivated in the minds of the current Mathematics undergraduate population (if not the student body at large) as to their reasons for enrolling, and to establish an understanding with the current Faculty that the current state of affairs is unacceptable and that the curriculum must change immediatly to counter such alarming trends. So I conclude with a question that I suggest every undergraduate prepare a good answer to: Why are you here, at the University of Waterloo, and what do you hope to accomplish?
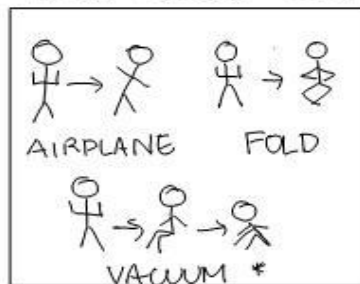
Socrates
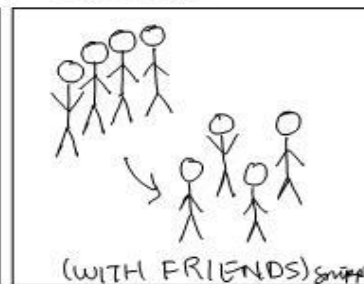

DANCE MOVES FOR WINDOW MANAGEMENT GEEKS

ROTATING CUBE   WOBBLY WINDOW   THE MINIMIZE   SCALE + SWITCH

AIRPLANE   FOLD   VACUUM *   (WITH FRIENDS)

* SUGGESTED MUSIC: TUBTHUMPING

Why Goths Suck

I don't think there's been a single group of people in all of human history quite as annoying as Goths, and there certainly hasn't been a group that sucked more. Vandals come close, but Goths reign supreme in the sucking category. Pretentious, violent, and just generally annoying, there simply isn't anything I like about Goths.

Of the two types of Goths, both manage to annoy me, and the list of famous Goths is a list of famous people who suck. Take Theodoric I, for example. I mean, why would you want to support that wussbag Flavius Aetius against Attila? I have news for you, Theodoric: Attila was far more awesome than you could ever have hoped to be. His freaking nickname was "the Scourge of God". What's your nickname, "Raven Darksoul Nightcastle McPansywater"? Just give up and die (in battle against the Huns, specifically).

In fact, the whole thing with the Huns is one of the reasons why I don't like Goths. All the Huns wanted to do was conquer the world, but the Visigoths just had to meddle (at least the Ostrogoths get **some** credit here). The Huns had brilliant cavalry tactics years ahead of their time. What did the Goths have? Nothing, that's what. And what about the Roman Empire? Here we have one of the best empires ever known, spanning the world in its glory. And then it was ruined by Goths (and Vandals [and Huns {but Huns are awesome}]). Hey guys: Rome was totally cool. Your stupid little 6th century kingdom has **nothing** on it, OK? So thanks a lot for messing everything up. And of course, they are total posers. First they're invading Rome (263 AD), then they're all supportive of Rome (376 AD), and then they're sacking Rome again (410 AD), and then they support **and oppose** Rome at the aforementioned Battle of the Catalaunian Fields (451 AD)! Hey Goths: make up your minds!

The only good thing that the Goths ever did was getting conquered by the Umayyad Caliphate in 711 AD. I have to at least give them credit for that: they accepted the fact that they sucked, so they gave up and vanished. I, for one, am glad that there haven't been any Goths in over a thousand years.
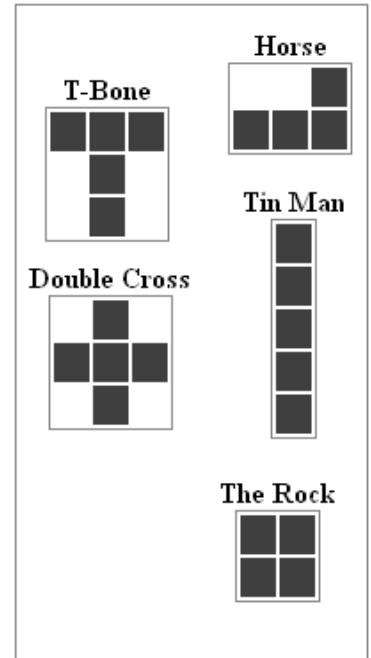
Thor

Puzzles Courtesy euri.ca

SigInt

The precious 10x8 grid that we call home has been infiltrated. Signals intelligence tells us that the following agents are somewhere nearby, all they can tell us about their locations is

- How many squares in a row or column are occupied
- They've been ordered to disperse so they aren't touching, not even diagonally.
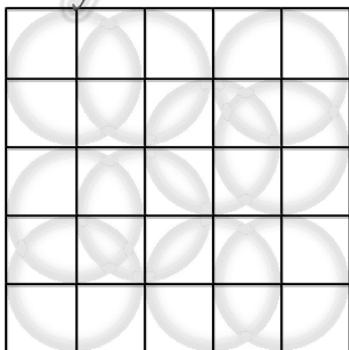- Remember: they can rotate.

Drywaller

"Listen up. Our client isn't picky, as long as each square has the right number of walls surrounding it. Sounds a little tricky, but we didn't get to be the #3 drywall outfit in town by being lazy."
Also:

- There's a wall around the outside
- They want exactly 12 rooms

2	1	1	2	3	2	3	3	1	2
1	0	1	2	3	2	2	3	2	1
1	1	2	1	2	2	2	3	4	3
2	2	1	1	2	1	1	1	2	3
2	2	1	1	1	0	0	0	1	2
1	1	1	1	1	0	0	0	1	2
1	1	1	1	1	0	0	0	1	2
2	2	2	2	2	1	1	1	2	2
3	4	3	3	3	2	2	2	2	2
2	2	2	2	2	2	2	2	2	3

Umbrellas

Place the following 10 squares on the 10 circles so that the overlapping numbers match up.

2 4	1 1	4 9	0 5
4 7	4 9	7 6	5 6
1 6	0 7	2 7	5 9
8 9	1 6	5 0	6 2
7 8	7 4		
0 1	6 2		

$25 HMV Gift Certificate

Yes, I'm just giving them away.

As promised earlier, I will be rewarding the best article of a given issue a $25 Gift Certificate to HMV.

This issue's winner is Lich, for while we knew that there was drug use in our faculty, we had no idea that it was this rampant. You can pick up your gift certificate from the workers in the MathSoc office.
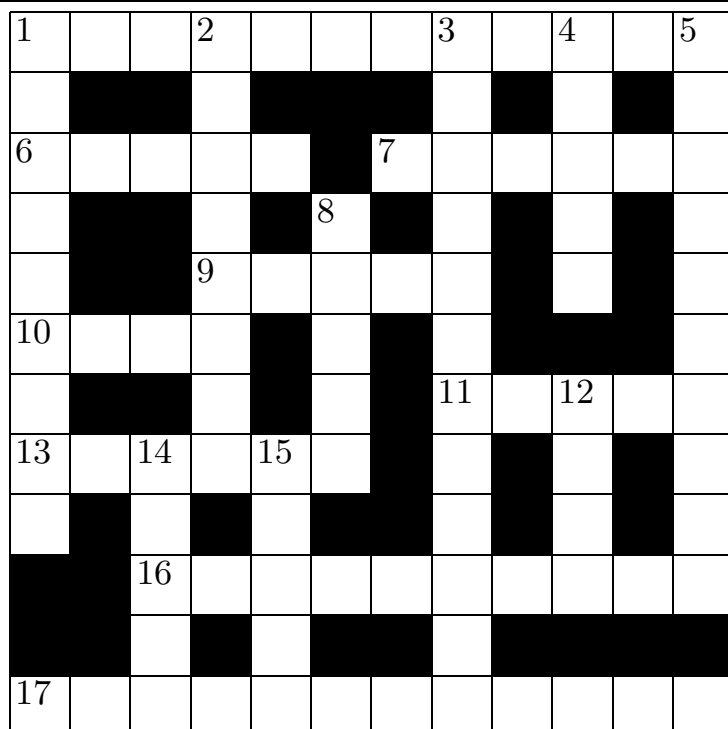
InsidED

*grid*COMMENTS

We have solutions!

In the spirit of the Imprint's attempt to make things easy on you all, we're giving you the solutions with our gridword this week! Huzzah! As a result, this is simply a contest for who has the best answer to our *grid*QUESTION. As always, winner gets a $5 C&D Gift Certificate.

This week's *grid*QUESTION: ?

Love you all!

Megaton Panda

~~This~~ Last week's solution:

C	R	Y	P	T	O	G	R	A	P	H	Y
A			R			A		O			E
T	R	A	I	N		A	T	W	I	L	L
A			N		R		A		N		L
C			T	A	I	N	T		T		O
O	M	N	I		N		O				W
M			N		S		U	N	C	U	T
B	A	N	G	L	E		I		L		A
S			U				L		E		I
		C	E	R	E	A	L	B	O	W	L
		H		E			E				
F	R	E	U	D	I	A	N	S	L	I	P

dy/dx=0

1. CO487 subject.
6. Real timers play with it. (One of my friends loves it!)
7. Does as one sees fit. (2 words)
9. Corrupt.
10. Someone who can do everything: ____potent..
11. Full-length (as in movies).
13. Wrist ring thing.
16. Something to eat your Trix with.
17. Making a "my mom" joke instead of a "your mom" joke.

dx/dy=0

1. An a-"maze"-ing place in Paris.
2. Chinese people invented it: _____ press.
3. French dish turned into animated feature.
4. Gesture to accuse.
5. Delicious species of fish. (2 words)
8. To wash without soap.
13. Psychic Miss.
15. A specific market (in terms of targetting).
16. Attracted unsuspecting victims.

*math*NEWS*mail*BAG

The Spam Edition

*math*NEWS receives spam on a regular basis. This week, we feature a pretty desperate girl who can't figure out whether her name is Olga or Evgenija. She says that she does not know me and that I do not know her, and that she wants that to change. Frankly, I want it to stay that way. An excerpt:

"Agency Acquaintances in Cheboksary gave me your e-mail address. To me explained that you very good person *[you clearly haven't met me — InsidED]* and you very much approach to me. I have come to Agency to find the future husband from other country. Why from another country? Because I have been very much disappointed with Men from my country and now I search my life in abroad. I has tired to be lonely and to carry spend all days equally. I want to love and to be happy! I asked myself a question why I can not it. And I come in this agency with such the request that they have helped me to find the person for that I will happy. Yes certainly I have paid some money that has found the person for me. But what is it the money in comparison with love? Nothing. It is simply emptiness. Love is the most important feeling in a life, without which our lives grey and empty. I shall not speak how many I have paid. I hope that you will understand me. I love my professional though In Russia it is not as well appreciated as in other foreign countries. I love an active way of life but time not suffices. I look like on my father because he gave your life to rescue the little girl..."

WOAH! Your father gave MY life? Who said that he could have my life? That probably explains your man problems if that's what you're continually telling people.

InsidED

Whitespace BEGONE!