

math NEWS



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lookAHEAD**mathNEWS**

June 28	Issue 4 used to mop up guano
July 8	Writers light the bat signal
July 12	Issue 5 metes out justice in Gotham City

MathSoc

July 3	General Meeting
July 10	Pints with Profs

FedS

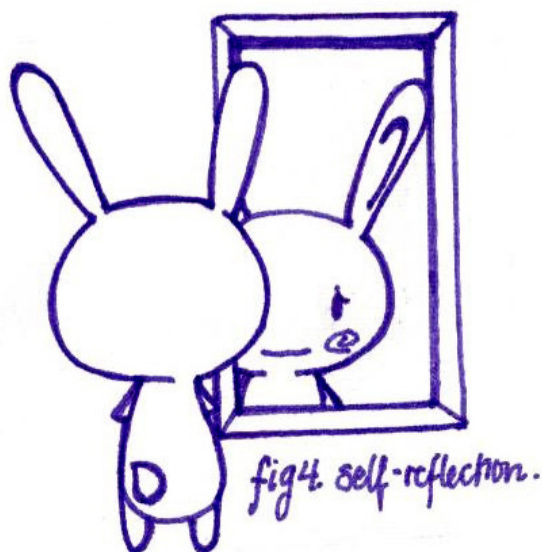
July 28	Canoeing on the Grand
July 29	FedS @ the Toronto Pride Parade
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University

July 1	University holiday: Canada Day
July 12	Drop, penalty 1 period ends

Misc

July 1	Canada Day
July 4	'MURICA



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The Fantastic Four: Julie Sturgeon (The Thing), Rachel Wiens (The Human Torch), Murphy Berzish (Mr. Fantastic), Lenny Morayniss (Teh Invisible Woman)

mastHEAD

With summer comes sports. And with sports comes angry debates about what makes a sport. Is cheerleading a sport? What about chess? Baseball? The answer to all of these, like most moral dilemmas, is maybe. I hope you have an opinion on sports, because that's all we'll talk about today.

Except I know next to nothing about sports, and likely neither do you. You spend your time watching videos of people fucking with code in *Pokemon* so they can execute arbitrary code on a Gameboy, or beating *Super Mario World* in less than 2 minutes. Perhaps you spend your time talking about the cool advances in robotics and neuroscience happening on our campus. Maybe you even spend hours reading math puns (What's purple and commutes? An Abelian grape. [I don't get it either, first years, don't worry.]) If you do these things, you might be an editor for *mathNEWS*.

The point being, we are wholly unqualified to talk about sports. Who wants to do them anyways? They're hot, and you get all sweaty and tired and gross. Especially in this heat. I'm sweating just thinking about it. Maybe it would help if we just pretended they weren't sports, and called them something else entirely. Like activities. Activities are nice things, like watching TV, or knitting, or sex. So, I ask you (and our writers), "What 'sport' isn't a sport?"

Wolverine Panda ("Tiddly winks"), youlocalWHETHERgirl ("yelling 'sports!' repeatedly"), Shay Blair ("Full-contact calculus"), wibz ("morning band"), unit ("dressage"), IceNine ("Chess-boxing"), MuffinED ("cup stacking"), Soviet Canadian ("Helicopter Jousting"), Stubbs ("American football. If it has breaks for commercials, then it's not a sport"), GrumpyOldFart ("*mathNEWS* Production Nights"), the norm ("Hot-dog eating"), Element118 ("Invading Poland"), waldo@3.LE-GASP.ca ("SportsWorld Drive"), Sylvia MacIntyre ("EVERYTHING IS A SPORT!"), InsideVoice ("Porn records"), GingerbrED ("Pooh sticks. It's a thing, look it up."), Scythe Marshall ("Debating the merits of gambling on falconing; okay, fine, track and field."), DanInTheHat ("Competitive Sore Losing"), Beyond Meta ("Reality TV Shows"), moment ("Speed pun-making"), ScruffyED ("Blitzball"), Zethar ("Apples and nectarines")

("There's this guy with a stick. And then he stands at a plate.

No not a dinner plate you asshole, a plate, like a shield or something. And then, this other guy, he throws a ball at him. A hard one. Fast. 100 Miles per Hour or something. Then the first guy, he hits it with his stick — it's not impossible, have some faith — and then he runs around until the other guy's team hits him with the ball. Yeah, you're right, it's stupid.")

**Send us your articles,
profQUOTES, Sez's and
complaints to mathnews@gmail.com. We would love to print
them!**

ObjectED

Apply for Vice President Operations of the Mathematics Society

Applications are open for Fall 2013 for Vice President, Operations.

The Vice-President, Operations is responsible for the day-to-day operations of the Society and shall:

- Oversee and manage the businesses and services operated by the Society;
- Allocate and manage the use of any space allocated to the Society; and
- In conjunction with the other Executives, arrange suppliers for the Society and ensure that the Society is stocked in any supplies it needs.

Please come by the Mathematics Society Office to fill out a form to nominate yourself. Applications are due July 5th. This is a great opportunity to become very involved with the society and help bring services to math students.

Stéphane Hamade
MathSoc President Fall 2013

MathFOC Sez

Hi Mathies!

There are 63 days until Orientation Week. 63 days until 1700 new mathies arrive to join our ranks. 63 days. That's only 9 weeks!

Get excited!

Andrew, Jenny, Sacha & Tappy
MathFOC 2013

VPE Sez

Do you like Pints? Do you like Profs? What about Pints with Profs? Come out to the Bomber at 4pm on Wednesday July 10th for some FREE FOOD. Invite your profs with invitations from outside of the MathSoc office. Invite them twice! Maybe even three times!

Ty Rozak
MathSoc Vice President, Events

Have a Happy Canada Day!

In case you didn't know, this weekend is a long weekend because of Canada Day on Monday (July 1). There are lots of really cool events happening this weekend, including events and a free concert featuring Spirit of the West and Hollerado at Columbia Lake on Monday. If you're more into Dragonette, they will be playing at the Canada Day celebrations happening in Kitchener. And fireworks! Because fireworks! Have an awesome weekend everybody!

EVERYONE Should Come to the MathSoc General Meeting

There's free pizza, and there's more.

Everyone should come to the general meeting. Everyone. I'll tell you why.

The GM is the highest decision-making power in MathSoc. Any decisions made at the GM cannot be reversed until the next GM. And you vote directly on all of the issues. So if you vote in favour of receiving free ice cream every week, and it passes, you will get free ice cream every week until the next GM where they will (probably) reverse that. (Though, in all honesty, if people really wanted free ice cream every week, MathSoc would probably do that for you. If you think this is a good idea, email exec@mathsoc.uwaterloo.ca).

If you are part of a MathSoc club, you should go. There has been a lot of talk about clubs recently (sparked by the dissolution of the CMC). There will most likely be something club-related and important on the agenda for the GM. If you care about your club, you should go.

If you can't make it yourself, you can designate someone as your proxy to vote on your behalf. But be sure to make your voice heard.

GingerbrED

FedS Sez

Hey Mathies!

The Feds General Meeting is July 16th; the agenda is currently being finalized. We will have more details for you in the next edition of **mathNEWS**!

We've been working on our individual committees in the past two weeks and we will be reviewing the FedS budget at the next council meeting (July 7th 12:30pm SLC Multipurpose Room).

Like us on Facebook for more up to date information at <http://www.facebook.com/FedsCouncilMath>

Stéphane Hamade, Elizabeth McFaul, Jesse McGinnis,
Prashant Kumar Patel, and Febrian Sidharta.

Come to the MathSoc General Meeting!

Hello Math Students!

There is a MathSoc General Meeting Wednesday July 3rd at 4pm in the Comfy (MC 3001). You should have received an email with the agenda.

Thank you,

Stéphane Hamade
MathSoc President Fall 2013

Rainbox Mathies 30

Beckoned By The **BLACK BOX**, Part 2

Last fortnight, I responded to a message from a reader about how to change negative perceptions on gender issues. In case you didn't see it or don't remember it, let's take a look at the message from last week:

"How do I explain gender issues to family/friends that just don't care? How can I explain that it's not OK to always find the topic of gender issues funny? For example, I have family members who always think that transgendered people are 'out to get laughs' and that it's OK to make fun of them. Please help! -an anonymous student"

Unfortunately, I am not in a very good position to have been able to answer the message with any level of confidence or intimacy, because I have never struggled with any gender issues personally. I don't know the right way to talk to other people about gender issues, and I worry that if I try I may confuse what is actually important or misappropriate a discourse which I feel should be spearheaded by members of the Trans* community. This is an area where I feel I should be asking questions and listening, not talking and providing advice. As a result, I got in contact with a trans* identified friend of mine based out of Guelph. Hopefully their response may be able to provide some insight that I couldn't. Here is what my friend had to say:

"Did you ever have a particular piece of clothing that you had to wear on a regular basis that you just never found comfortable? Maybe it was part of a uniform, or just something your parents made you wear to family events.

Anyway, you hated it, it never felt right on you, and you couldn't wait to get it off. Any time you told someone that you didn't want to wear it, or tried to make excuses not to wear it, that person would tell you that you look nice in it, or there's nothing wrong with it, or whatever.

Being trans is kind of like that, except the piece of clothing you dislike is the gender you're born into, and it's really really hard, and sometimes impossible to take it off. Imagine not being able to take off that itchy sweater, or that uncomfortable party

dress. It's just not right, and even if you can't quite explain why, you know something's wrong.

As for the other part, it's not just for laughs, and it's certainly not a joke. Do you laugh at people who take their shirts off on a hot day, or walk home from the club carrying their high heels because their feet ache? Of course not, because you can see that they're alleviating their discomfort. It's the same as a trans person taking off the mask and just presenting as who they really are.

Sorry to beat the analogy to death, but it's the best way I could think of to explain."

I really like that analogy myself. Hopefully it can help you, Anonymous, at getting your parents to connect with gender issues on a more personal level.

If you are queer-identified, and are looking for someone to talk to or for supportive allies, there are always resources available to you. You can learn more about GLOW centre and its offerings, including a phone line at www.knowyourglow.ca. Counselling Services is always available to you; their offices are open 8:30-8MTWTh and 8:30-5F, located in Needles Hall across from Student Awards and Financial Aid. If you need support and assistance immediately, you can call the KW Distress Line at 519-745-1166. If you'd feel more comfortable speaking with someone from a queer specific service, please contact the LGBT Youthline at 1-800-268-9688. Finally, if you have any comments and concerns about this column, including ideas on topics you'd would like to see, you can contact me at dtaleman@uwaterloo.ca.

Finally, I thought I'd take a moment to provide an update as to this column. Like I talked about last article, I was not intending to regularly produce Rainbox Mathies this term, but I was asked to write in specifically to respond to this message. Unless another specific reason to write again comes up, this will likely be the last article for the Spring term. I hope to see you all in the fall!

Until we meet again,

(define this (not cool))

N Reasons to Despise Summer

- Humidity
- Heat
- Stickiness
- Weather
- Flooding
- Storms
- Laziness
- Hazeiness
- Intense A/C
- People are gone
- Too many distractions

waldo@<3.LE-GASP.ca



WatSFic Sez

Books, HvZ, Movies and More!

Hello, Mathies! WatSFic (the Waterloo Science Fiction and Fantasy Club) is continuing to meet and host events every week.

Our various schedules are:

- We are running a book club on REAMDE by Neal Stephenson this term. If you want to participate in the next meeting, read halfway through, then meet us on Monday July 1 (Canada Day) at 6PM in Second Cup.
- We are running a short story writing contest this term. The story must be either Science Fiction or Fantasy, and is due by July 28th. Submissions should be sent to watsfic.writing.contest@uwaterloo.ca. More details can be found at our weekly meetings.
- We will be hosting another HvZ event this term, with registration through next week, and the game itself the week after. Registration will be in SLC in the vendor's alley, and in MC outside the C&D (MC 3002).
- We host bi-weekly movie nights, where we show really good and really bad Sci-Fi and Fantasy movies.
- We host bi-weekly Games Days, where we meet in the Math C&D every other Saturday to play board games. Next one will be Saturday June 29th (tomorrow) at noon.
- RPGA (for roleplaying games like D&D) every Friday at 7PM, in MC2017.
- FNM (Friday Night Magic, for those interested in Magic: the Gathering) every Friday at 6PM in MC 2034. This week's events are sealed and standard.
- General meetings every Wednesday at 6:30PM in PHYS 150. Fun times and important topics are had. Frequently ends in a tournament bracket—figures from the realms of Science Fiction and Fantasy are gathered and pitted in fights to the death, to see who will come out on top.

If you are interested in getting more information (for instance on the movies we decide on, RPGs people are starting, etc.), sign up to our mailing list at <http://www.watsfic.uwaterloo.ca/contact>.

We hope to see you at some of our events,

Daniel Resnick
WatSFic Minister of Propaganda, S13

Flash Fiction Fananza Contest!

mathNEWS is hosting an exciting new contest with extravagant and amazing prizes! To enter, simply write the best story you can in 5 sentences or fewer and submit your entry to the **BLACK BOX** outside the Comfy Lounge. The winner will receive... drum roll please... 2650 ₩ (South Korean Won)*. That is equivalently to roughly \$2.65 in Canadian currency! Wow!

MuffinED

*We'll also give you a \$5 gift certificate to the Math C&D.

N Reasons Why Today Was A Good Day

1. Fantastic USD-CDN exchange rate. I made money out of depositing an American check [*cheque for you Canadians —GingerbrED*] for the first time ever. Unfortunately, after the bank teller and I shared a moment of pleased amazement, I left my water bottle on the counter.
2. I successfully put together an electronic piece of equipment. After walking home to a 90°F apartment [*32 Celsius —GingerbrED*], I turned right around again and went to Canadian Tire to buy a fan. There's an extra screw that I can't find a home for but since the fan is perfectly functional without it and I don't have a screwdriver, I'm just going to call it a day. Until, of course, the fan explodes because that screw was somehow integral to the function of the fan.
3. I somehow managed to do above average on my midterm even though I got 4/18 on a question. The four points I did get were entirely pity points because I actually didn't do any of the four proofs correctly.
4. I don't have to juggle four midterms, interviews, assignments, and classes this week. I do have 7 assignments due that I grossly neglected doing ahead of time but I'll take this over exams any day.
5. It's *mathNEWS* production night!

wibz

This Fortnight in *mathNEWS* Arguments: What is a Sport?

A discussion on what a sport is was initiated when ObjectED enraged the present author by saying that relays, and track and field in general, are not sports. The author then called bullshit, thus creating a ruckus. Eventually, it was determined that sports/games/physical activities/e-sports defy general classifications, and that people are opinionated. Below are some quotes from the discussion, taken completely out of context and possibly misquoted.

"So, sex is a sport, if you don't think that she isn't judging you."

"If you drink PowerThirst, will it make you good at Starcraft?"

"I call a sport anything that one person calls a sport. Note: I decide who is a person, at my own whim."

This discussion finally subsided, but not before an Avenue Q sing-along, which was not related whatsoever; I just figured I should mention it.

Post-Script: "I am the man who arranges the blocks..."

Yes, this happened.

Scythe Marshall

Last of Us Review

Last of Us has been getting a lot of hype recently, even receiving perfect scores from a number of highly reputable sources (and IGN, but don't worry). Is it worth it? No, obviously not. Nothing is perfect. Is it absolutely amazing, and on the list of "Best Games I Have Ever Played?" Yes. So many times yes.

Last of Us is a survival horror game in a post apocalyptic world, exclusive to the PS3. It's also one giant escort mission, not unlike another amazing game with deep themes starring Troy Baker as a male lead (though, in my opinion, Joel is a much better character than Booker, but maybe I just found his southern accent really sexy): *Bioshock Infinite*.

Visuals: Possibly the weakest part of the game were the graphics. The game was only in 720p, which might be an acceptable trade off on the smaller storage of a 360's DVD, but on a Blu-Ray that's really only acceptable if the game was very, very long and had a lot of voice acting. While it was full of audio (we'll get to that), it also only took me 16 hours, so I'm a little disappointed. Furthermore, the lower graphical fidelity didn't stop some really shitty draw distances, tearing, pop-ins, and general glitches. The cut-scene camera was also way too jittery and detracted from some otherwise beautiful moments. That said, the animations felt pretty life like, and the overall visual style worked wonderfully. Zombies moved in creepy ways, characters had very human actions, and the world was beautiful in a sad way. Wandering through the ruins of Pittsburgh, Boston, and others is eerie, as the city is overrun with flora in stark contrast to the skyscrapers that still mar the skyline.

Gameplay: Pretty standard for a survival-horror game: you have limited amounts of stuff you can carry, and you need to make a lot of tactical decisions to not die. Trying to one-man assault a horde of zombies or a small army of humans won't work out well. It captures a certain fear and stress that fits into the themes of the game. It's easy to be afraid of dying when you have to spend a solid 10 seconds pulling a new weapon out of your backpack since you're all out of ammo for your primary stuff. These stressful "up" moments of stealth/action are punctuated by "down" moments of exploration. The down moments give you time to restock, explore the area and get a feel for the world, and really get to know the cast of characters. However, sometimes the transition from "up" to "down" can feel abrupt: after clearing a room of zombies everyone on screen will exhale, and say something like "fuck, that was intense", but after sneaking past the same group, everyone just stands up and goes on their merry way, despite a room full of deadly monsters with super hearing standing behind a small archway.

A nice touch was that your allies could not be seen/heard/felt by the enemy if you hadn't been yet, meaning you never have to worry about bad AI getting you killed (though it did lead to an awkward moment where a friend and heavily armed enemy literally collided into each other). All in all, the gameplay was fun, but I don't expect to touch the multiplayer. The gameplay worked well in context of the story and helped draw you in, but I don't see it standing on it's own in an isolated setting.

Plot: This part was very obvious. If you've seen any zombie movies in the past, at all, you can call most of the details early, and it's filled with nearly every trope in the book. It works perfectly, however. The simple plot allows the focus to be on the world and the characters, instead of complex details. Further, it worked well. The pacing was strong, and writing was tight. Nothing felt like it dragged on too long and it flowed naturally. If I wasn't such a literature nerd, I perhaps wouldn't have noticed all the tropes.

Audio: This is where the game really shines. The OST is hauntingly beautiful (if you want proof, search for it on Soundcloud. The creator Gustavo Santaolalla mixed together some samples), and I'm actually going to go buy it when I get the chance. Furthermore, the voice acting is absolutely phenomenal. Troy Baker's Joel and Ashley Johnson's (no, not Ellen Page. Stop getting confused everyone!) Ellie are both incredibly human and relatable. This is a combination of their skill and the writing, but the game hinges upon their relationship and it's evolution, and they give a performance of a lifetime. I could gush for hours about the two of them, but the supporting cast also did a fantastic job. Nolan North (did you think he wouldn't be in a video game? Pfft) gave me nightmares (no, I won't tell you his character's name, it might ruin it). While I've never heard of the actress who played Tess (Annie Wersching, for the curious), she also was amazing and Tess was one of my favourite characters ever (Remember that moment in the first episode of *Firefly* when Mal just shoots that guy because he gives no shits about anything, and we all fell in love with him? Yeah? You'll love Tess, I promise).

Overall: This game made me cry no less than five times, and I mean pouring tears. No other game has been so emotionally intense for me, and major reviews all agree. All in all, I strongly recommend it for anyone who enjoys video games as a storytelling medium, and believe they can touch on heavy subjects in a way no other medium can. And if you don't believe they can, you should play *Last of Us* to understand that, yes, video games can be storytelling art. Just play it, ok? And if you want an arbitrary number to wrap up my feelings of the game: 99%. Because nothing is perfect, but this is as close as it gets.

ObjectED

The Cat's Meow

In nature, adult cats do not meow at each other. So a cat meowing at humans is something else. Perhaps the cat has recognized that it gets good things when it meows? Sounds kinda like what people do...

Pattern Recognition is Hard

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(MathNEWS), on Twitter
(@UWmathnews),
or in person (MC 3030)!**

Miscellaneous Musical Memoranda

Many Minutes of Merriment

This is a collection of paragraphs on musical topics, each highlighted by a boldface opening sentence describing the main topic of the paragraph and designed to be eye-catching so that the reader can skim-read the article if he or she so chooses. Personally, the author would prefer that the everywhere holomorphic article be perused, but such is life.

Note: the author has read too many articles on Fangraphs written by Carson Cistulli, and thus for this article has chosen to write in a stuffy and uptight manner, or one perhaps described as 'hoity-toity', if one chooses a particular definition for the term.

Spirit of the West is playing at UW's Canada Day celebrations! Yes, this was announced Monday in the Daily Bulletin, but this is worth repeating since the folk-rock group has been a treasure of Canada's music scene since 1983. Note that while their most popular song is probably "Home for a Rest" (the reader is asked to refresh his or her memory in case of a lack of neural bridges), due to the ostensibly family-friendly nature of the celebration, hopes that they'll play it must be tempered. Other performers at the UW-and-FedS-run community-oriented event include Ottawa-based indie band Hollerado, who upon first listen are not terrible according to the handsome author's musical preferences, and a variety of children-focused programming. Note also that Dragonette and other bands will be featured at Kitchener's Canada Day celebration; the reader is kindly asked to research more information if so desired.

Streetlight Manifesto is the best band of which you've never heard, and they're going on semi-hiatus. They play some of the

Restrictive Facebook Relationship Statuses

Everybody knows that if you aren't Facebook-official, your relationship doesn't exist. But what if your particular situation can't be found in the lacking list? Is your relationship doomed to wallow in obscurity and near non-existence?

Join me in petitioning Facebook to add the following statuses to profiles around the world. Save these relationships from being sucked into the void!

- Boytoy and Player
- Arm Candy and Sugar Daddy
- Married with a Mistress/Manstress
- Forever Alone
- Prostitute/Gigolo and John/Jane
- Platonic Life Partners
- Bromance
- Mail Order Bride and Husband
- Honestly Confused

Yours in romance,

Shay Blair

best ska-punk ever played, and due to struggles with possibly the most greedy record label in existence (Victory Records, led by Tony Brummel, one of the few men as corrupt as Marlins owner-and-Supreme-Ruler and Killer-of-the Expos Jeffrey Loria) and the grind of ten years of non-stop touring, they've decided, quite justifiably, to retire semi-permanently from touring. They may make new music, but for now their show in Rochester on June 20th is the closest that the band will come to Waterloo for a hyper-extended period of time. And what a glorious show it was. The reader is asked to honour the band by, instead of purchasing the album through record stores and online via any source that is not the RISC Store and hence donating money to Victory Records and only Victory Records (as the scoundrels plunder the royalties due to the band), pirating their latest album, The Hands That Thieve.

Chris Hadfield is an exceptional musician. Well, perhaps exceptional is exaggeration, or maybe he's got space-age autotune going for him, but his rendition of David Bowie's "Space Oddity" is masterful, and "I.S.S. (Is Somebody Singing)", performed with the Barenaked Ladies and The Wexford Gleeks (a high school choir), is phenomenal. Check both of the videos out on the Youtubes.

The author hopes that the reader spends time learning about these topics on his or her own time. Perhaps this is more of a command than a hope.

Happy listening!

Scythe Marshall

Note to Self: On Entrepreneurship

Your Daily Dose of Reality

- Entrepreneurship is about more than just start-ups. Think about the girl in Civil Engineering selling organic fruits and vegetables.
- Most businesses fail. A "Calling and Copy Center"? Seriously?
- Hackathon funding is almost completely driven by externalities. Recruiters. Venture Capitalists. For-profit hackathons.
- Your master plan should never include "Win \$HACK-ATHON" as a step. n-1 of you will fail.
- Use hackathons correctly to achieve your goals. Use it as a chance to spend the weekend working yourself to near-death with your significant other, or to motivate you to just start.
- Money isn't enough. You need [customers](<http://mikekirkup.com/2013/06/10/what-it-really-means-for-a-community-to-support-startups/>).
- Find your [tennis ball](<http://web.mit.edu/newsoffice/2013/commencement-address-houston-0607.html>). If you really want to build a business to solve X, you'll take that 10% hit to your GPA.
- Hurray for Policy 73.

!able

Drinking Games

The next great sport? —GingerbrED

Drinking games has long been a pastime enjoyed by students, but has never really become a mainstream hobby. This article will provide a basic overview for those who have not had experience drinking games.

Many games can be used when drinking games, and as such, there are many variations on technique. Many of these variations relate to the method for liquefying the games. The most popular method is to blend all game components finely and mix with a beverage. This works well for card games and some board games, but can be hazardous depending on the materials the game has been constructed with. Games with metal or glass pieces may produce shards, and should be avoided for the purposes of drinking games.

Several goals exist when drinking games, the most common of which is the fastest time to drink the entire game. Other goals include maximum volume held down and points systems based on the difficulty of drinking different game pieces. In the case of larger games, one may play against an opponent, and attempt to consume the largest fraction of the game.

For those of you interested in starting drinking games, I would suggest starting by practicing with card games, then move on to larger and tougher board games, and finally adding in extra game pieces such as tokens or rulebooks. You may also consider experimenting with preference of beverage to wash your games down.

Enjoy drinking your games.

Grumpy Old Fart

How to Use the Microwave in the MC Comfy

I have noticed that microwaves have a tendency to have some of the worst user interfaces I have ever seen. Any microwave that I can't figure out in under a minute by randomly mashing buttons is badly designed. So for the good of humanity I have included instructions on how to use the microwave in the comfy lounge. It would be absolutely awesome if someone would tape this article to the microwave.

Press the button that says "Power Level". You will notice at the bottom of the display that there's a light that moved. By repeatedly pressing the power button you can control the strength of the microwave. Once you have set it to the right strength, input the time you desire and press "Start".

Alternatively you can use the pre-programmed settings on the microwave. The numbers 0, 3, and 6-9 all have various times and power levels already set. I will leave the discovering of the specifics as an exercise.

Beyond Meta

Like A Firstie

To the tune of Like a Virgin

I made it through my first year here
Somehow I made it through
Didn't know how dumb I was
'Til I failed Calc 2

Dropped the course, incomplete
Can't move on, retake in the fall
But I'll pass next time.
Yeah, I'll pass next time
I'll pass them all!

[Chorus:]

Like a firstie
Failing for the very first time
Freaking out firstie
Cause in high school,
Failing's a crime.

Gonna join all the clubs here, yeah
Everything I'm interested in
Hey **mathNEWS** looks oh so cool
Think I'll give it a spin

It's so hot in my res
Now it's cold, don't know what to wear
'Cause it never stays
Constant it'll always change
I need fresh air!

[chorus]

I got lost in MC
Just the fifth, I'm scared of the sixth
Why can't it make sense?
I'm sick and tired from
MC's weird tricks.

[chorus]

Like a firstie, ooh, ooh
Like a firstie.
Slowly going mad
When my work's due, I've got midterms, and club meetings

Oh, oh, oh, oh, oh, oh, oh, oh, oh
Ooh, Waterloo
Can't you hear my brain burst
For the very last time?

Yours in newness,
Shay Blair

Drop your Minecraft username in the **BLACK BOX** or email it to us at mathnews@gmail.com to be whitelisted on our mine**CRAFT** server (129.97.134.134).

The Best Excuse

Excuses are hard. Plus, there's that feeling of dread when you know that you have messed up, and now will need to explain yourself. Whether it is to a parent, to a significant other, or merely an associate, explanations do not always come easily. So, when in doubt, the truth is the best. For one thing, it is much easier to retain internal consistency. Cognitive dissonance is hard. It is also easier to not accidentally contradict someone else's story.

Some of you may be protesting "But what's the harm in a white lie?". The answer is that there usually isn't. In my experience, white lies don't tend to expand like the childhood stories suggest. However, there is the odd case when it spirals out of control. The Salem witch trials were started by a couple of girls who claimed demonic influence for tantrums. Try not to get people killed by your lies.

Truth is also the first step toward a mutually beneficial, or at least non-toxic solution to a problem. If one party is not telling the truth, there will still be a problem, even if a solution to the rest of the problem has been found. It may end with both parties angry, but at least there will not be the seeds of future conflict. Plus, people are generally much more understanding than is expected. Of course, if you expect this from others, be prepared to do so yourself.

I Lie To Strangers

This Reminds Me of a Puzzle

True or false: In a multiplayer game of Goldeneye 007 for the N64, the only possible way to win a "First to N points" match is by scoring exactly N points. Justify your answer.

False. With tool-assisted precision or incredibly good aim, it is possible to use the Cougar Magnum to shoot multiple opponents in the head simultaneously with one bullet, causing instant death. This is because the game does not simulate the motion of the bullet, but instead uses a ray-tracing algorithm to find its path (ignoring gravity) and then runs collision logic against every object intersecting that path (this is commonly referred to as "hitscan"). Because the only objects that stop bullets are scenery (for performance reasons), if multiple opponents intersect the path during the same frame they will all count as having been shot. Therefore it is possible to score two points during the same frame after having already scored N-1 points, or three points during the same frame after having already scored N-2 or N-1 points. Any of these cases would set a player's score to a value greater than N, and the game counts this as winning the match. The following video contains an impressive demonstration of this in a tool-assisted recording: <http://www.youtube.com/watch?v=ln1KZBVjIno>

ScruffyED

Meow

Meow Meow Meow Meow Meow Meow

About 1/3 of the mathNEWS writers

Beans on Toast

Beans on toast is delicious. It's cheap, efficient and absolutely delicious. The way the sauce is soaked up by the bread is miraculous and causes each bite to ooze scrumptiousness. But despite beans on toast being the best meal of all time, some dislike it. We call these people haters. We should actively work towards more people understanding that beans on toast is the best food ever created. Running for public office should be on our to-do list so that we can more effectively spread the message of the awesomeness of beans on toast. It should be taught in school at all grade levels. People should be encouraged to seek higher education studying the awesomeness of beans on toast.

Then, we should start demanding that all people running for public office declare their love for beans on toast. Also, beans on toast could be used as a solution to problems. "Sure the economy is tanking, it's because not enough people recognise beans on toast as the best food ever created." We'll make it the law that people must love beans on toast.

Of course, there will be people, terrible people, who try to deny the truth. They'll try to say, "People should be allowed to choose their favourite foods." They're just trying to divide us as a population, fracture our great society. As we all know, true patriots are the ones who adore beans on toast in all its forms. Some have it with cheese on top, others have it with bacon. Still more have it with worcestershire sauce and some are puritans who still have it plain.

For some reason, there are still people who deny beans on toast and its awesomeness. They are unpatriotic, detriments to society, criminals. And we should treat them as criminals. We should purge our society of the non-believers who still refuse to confess their admiration of the one true food. The lot of them are terrorists and as such do not have any rights nor should be treated with any mercy.

Besides, genocide is underrated.

Stubbs

The Toronto Blue Jays, Streakers!

That is, they won 11 straight games, not that they ran around on the field in the Rogers Centre SkyDome naked. Surprise! The chances of this are somewhat low, but it's definitely not a long shot. Perhaps if the Jays can put together a reasonable stretch before the All-Star Break, they can stay in contention. Jose Reyes should be coming back soon, etc. Also note that the AL East standings are completely absurd, currently. Five teams which are all close to or over .500, which is absolutely insane.

Also, it should be noted that while the Jays won 11 straight games and proceeded to get their butts handed them by the Rays, this is 11 more games than the Leafs have won in the last six weeks. Burn!

Go Blue Jays!

Scythe Marshall

Happy Thoughts

It's about half-way through the term and it's two thousand degrees outside. You think you failed those midterms that you didn't have time to study for. And those assignments that were piling up have now grown to be an overwhelming tower of grotesque confusion. It's times like these that it's good to take a whole thirty seconds and breath. Eat some cake. Smile. Think a happy thought. If you can't think of one, have one of mine.

One of my favourite shows, QI, often has the best ideas. One particular episode was dealing with astronomy an interesting question was asked: which moon of Saturn would ewoks live on? The answer is, trivially, Titan. Of course, Titan is the right temperature for methane to exist in gaseous, liquid and solid form, in a similar way to how water exists on earth. Just think about it for a moment. Just one moment. **You could throw ewoks into a lake of liquid fart on Titan.**

Wolverine Panda always gets a giggle out of picturing a **T-rex on the toilet, trying to reach the toilet paper with its short, stumpy arms.**

Shay Blair enjoys fire. She thinks it's pretty. Just think about how pretty somethings would be if they were on fire. Like the damn geese. Not the babies, because they're cute, but the really mean adults who block pathways and attack people. **They could just burst into flames and the world would be a better place.** Also, we could then eat them...

Bug a friend in physics or engineering. Ask them when they're going to build those spaceships so you can get out of here. **Wouldn't it be nice to be the only person on a planet?** Imagine having no responsibilities, no cares, and no people to interrupt your tranquility. You could just sit back and wait for everything to blow over.

Sure, zombie apocalypses would suck for lots of people. But if you were one of the survivors, it could be a lot of fun. You would be able to indiscriminately kill people (or is it re-kill people?) in really cool ways. Like running people over. Or decapitation. Or, my personal favourite, shotgun to the face. **Nothing beats blowing a zombie's brains out.**

Except **beer**. Because beer.

Stubbs

Silly French Phrases

I got a co-op job in Ottawa for the Fall term, but I will probably end up living in Gatineau, since it is much cheaper. I need to practice my French, so I was looking up silly French phrases. "Oh, the cow!" means "Oh my goodness", their "end of the beans" is our "last straw", and "having a cockroach" means that you're feeling lousy. I'm pretty sure these aren't Quebecois phrases, though, since they aren't religious enough.

Tabernac!

El Jengibre

Memes

In a regular bout of procrastination I found myself on sites with user-generated content. To be quite honest, I'm shocked at the popularity of memes. Memes follow the format of a picture with two lines of captions, which has turned jokes into a strictly adhered formula. This disturbs me since what makes things funny is playing on expectations, the element of surprise. Memes however are predictable and for the most part not funny at all. Humour should be flexible and not always constrained to the same topic.

This is why I write for *mathNEWS*. It's not like *mathNEWS* always uses the same format (lists), and is limited to a few specific topics (geese, co-op, meta humour, dating advice and occasionally math). Well, at least *mathNEWS* is funny right?

Beyond Meta

To The Jerk Who Found My Wallet...

I don't know who you are. I don't know what you want. If you are looking for ransom, I can tell you I don't have money. But what I do have are a very particular set of skills; skills I have acquired from my 3 terms here at Waterloo. Skills that make me a nightmare for people like you. If you give me my wallet now, that'll be the end of it. I will not look for you, I will not pursue you. But if you don't I'll.....well I don't know what I'll do, it's a wallet, it's not worth killing someone over...

BUT C'MON MANNNN. It is a wallet with no cash in it. Yeah it has my debit and credit card in it but any competent person would assume that someone who lost their wallet would cancel them right away. My WatCard had no money on it and they wouldn't use it as a bus pass because I lost my wallet on campus and I assume whoever picked it up is a student.

Literally, the only valuable thing in my wallet was my Scene points card which has a free movie on it. I worked hard to get those points. I also had a Charmander Pokemon card and an Agumon Digimon card which I will miss very much. Thank you for taking a piece of my childhood away from me.

Hell, I'm not even 19 yet so they can't use my ID if they looked like me (which is very unlikely) to buy booze or get into a club or bar. I cannot emphasize how little value was in my wallet....

Plus it's not hard to return it to me. Whoever found it knows I go to Waterloo and has access to a fair amount of my personal information. All they had to do was search me up on Facebook or leave it at Police Services but noooooooooooooo, they just had to be a jerk.

Whoever you are, just be grateful I don't go all Liam Neeson on your ass.

the norm

Russian Review: Combat Arms

For those who have played Combat Arms (CA) for an hour, or who have talked to players of the game will know of the biggest issue with this game: hackers. Ignoring the seemingly endless stream of hackers and the puny amount of power players have to remove hackers from a game, let us look towards the actual gameplay. CA has a wide selection of game modes the majority of which are standard for shooters (DM, TDM, King of the Hill, Defusal, Horde, etc), notable exceptions being Hired Guns (where you can hire NPCs to help you with your objectives), and Quarantine Regeneration (where one player starts off as a zombie and tries to infect the rest). All the game modes are fun, as they are very simple, quick, and full of action. Maps have fixed spawning areas and are generally small, include both open spaces and tight corridors, and are rather balanced so that one team does not have a simply better position.

There is a rank (level) system in the game that unlocks additional guns and gear (which make you faster/tougher/etc) for you to buy with the in-game currency (GP), although you can only own them for a limited time (7-90 days) before you have the option to re-purchase them. Expensive guns being temporary is annoying and is no-doubt included to turn players towards spending real money for NX, a second in-game currency that is required for the best weapons and purchasing weapons permanently. Do not fret though, as skill is still necessary, and I have dominated matches full of players using the best guns and gear, while using a gun that is cheap and available to all players.

If you can avoid the hackers (which are plentiful), this is a nice free Shooter that can become a time-sink for those with 10+ minutes to kill. Avoid the Steam version as it has issues launching that have not been fixed, and instead grab it from the Nexon website.

Soviet Canadian

mathNEWS Investigates the Pizza Theorem

At *mathNEWS*, our main priority is pizza. We, the editors, always strive to provide our writers with the highest quality, hottest, most fairly portioned pizza around. When we discovered the pizza theorem, we were delighted. Finally, a way to make sure that each writer gets an equal amount of pizza!

The pizza theorem states that if a disk is sliced into n sectors (n is greater than eight and a multiple of four) with equal angles through a point p , the sum of even-numbered sections will equal the sum of odd-numbered sections. That is, if you divide the pizza by taking every other slice, you are left with two pizzas of the same area. So, if two writers share a pizza in this way, they will each get an equal amount of pizza. Hurray!

Unfortunately, this theorem does not work generally with our *mathNEWS* formula for pizza division, which requires that the ceiling of three writers share a pizza. However, this theorem will work specifically if the pizza is sliced through the middle and divided into twelve equal sections... which is generally what Pizza Nova does anyway. Oh well, we tried. Maybe we'll try the Ham Sandwich Theorem next.

More Design Project Adventures

- We segfaulted while inside the JVM.
- We may or may not have encountered a bug with cp. Or ext4.
- It's really frustrating when the server restarts and kills our tests. 50 days of computation, gone in an instant...
- The codebase we inherited has very poor architecture. Allow me to describe an example:

Loosely speaking, the program has two threads. One thread performs computation while the other thread handles display and output. To communicate, the threads use Java's BlockingQueue — the computation thread puts solutions into the queue, which feeds into the display thread. If the display thread tries to take a solution out of an empty queue, it will block until the computation thread puts a solution in.

What if there are no solutions left? How does the display thread know that the computation thread is done and not simply computing a new solution? The answer is to use a poison pill: when the computation thread is done, it inserts a poison pill into the queue. When the display thread encounters the poison pill, it knows it should shut down.

Here's the original code from the display thread, simplified:

```
try {
    Solution sol = iterator.next();
    writeXML(sol);
} catch (java.lang.ClassCastException e) {
    System.out.println("Done listing solutions.");
}
```

How we refactored this is left as an exercise to the reader. Hint: Java iterators have a hasNext() method.

!bob

What To Do When You're Not Prepared For Your CUMC Talk

This article is based on personal experience. It will be outlined in a series of steps.

1. Make sure you're prepared to talk to about anything. My roommate at the time was completely unprepared to talk, despite knowing his subject area.
2. Write down quick summary on the cue cards you have. You did bring cue cards right?
3. Use the blackboard as much as possible to develop the problem and pretend you know what you're talking about.
4. Use buzzwords to approach the problem from a "unique perspective". Try to make sure it could possibly make sense.
5. Speak slowly and draw out your points.
6. Take as many questions as possible.
7. Run away once you're done.

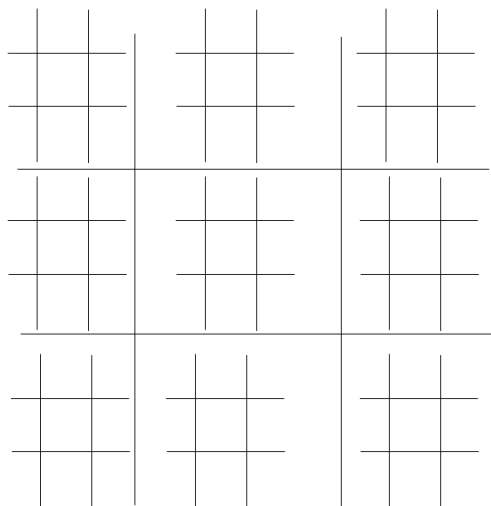
IceNine

Advanced Tic-Tac-Toe

Hey guys! remember tic-tac-toe? Remember when you learned that the game is basically solved and that every game could be turned into a tie no matter what each player decides to do.

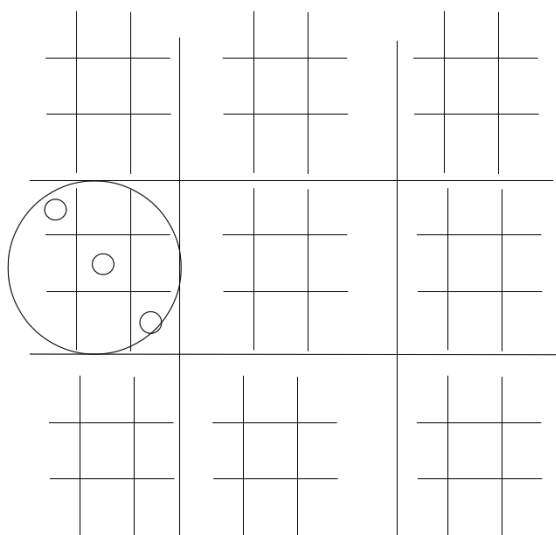
So what is the solution to this? Well it's a little game that has been called many things over the year. Understand I am not the person who made this up and it has probably been made up independently between many people over the past many years.

So what is the idea of advanced tic-tac-toe? Well its tic-tac-toe within tic-tac-toe (cue Inception BUMMMM). How does that look? Well is easier to just show with a picture.



First some definitions. There is a single “Outer grid” within every square in the outer grid there is an “Inner grid”. Ok so whats the point of this game? Well the same as normal tic-tac-toe. To get three in a row on the “outer” grid. So how do you get an “outer row” well thats simple you win an inner row.

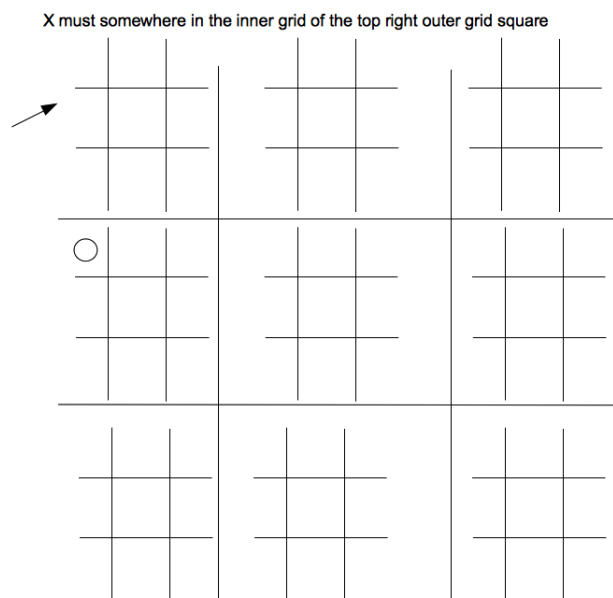
For example:



Ok, so how do you determine where you are allowed to go. Well here are the main rules:

1. The first move may go into any spot
2. The following moves must go be played within the grid corresponding to the space selected within the inner grid.

Does that make no sense? Yet again something that is easier to show in a picture



Hopefully that makes more sense. Now for the obvious question. What happens when someone forces you to go into a square that's already won. There are two possible rules for this, that significantly change the way the game is played.

1. If forced to go to go to a won outer square they may go anywhere.
2. If forced to go a won outer square the player must still play within the won square if a place exists. If a place does not exist they may go anywhere.

Now go out and rediscover the awesomeness of tic-tac-toe!

My existence is pointless.

Dafink

**Submit articles to *mathNEWS*:
by coming to Production Nights
(the next one is July 8th), by email
(mathnews@gmail.com) or
through the **BLACK BOX** in front
of the Comfy Lounge
(MC 3001).**

N Reasons Mental Health Issues are Awful to Deal With

The title speaks for itself.

- You lose your focus and all productivity levels drop (i.e. you don't want to do ANYTHING).
- The negative feelings of disappointment and sadness smack you in the face and you just FEEL awful.
- Your mood swings on you.
- Your mind goes on a journey with questionable and scary visits to destinations you never thought you'd be visiting.
- Your hormones get even more screwy.
- You end up taking so much time that you may never get back.
- Everything you were doing comes to a halt.
- You may not be able to enjoy things as you used to, or at least not in the same way.
- Everything you do is now a distraction.
- You don't understand your actions and yet you do...the conflict is ever present, has plateau'ed, and you're in no capacity to resolve it.
- Hope and resistance seem and feel futile.
- Escapism is a great power.
- Counselling and Health Services appointments can never come soon enough.

Feeling Lost in a Hopeless Place

Counting and Indexing

I've been told that my previous puzzles are too difficult; having only one nearly correct solution to last issue's "This is a Puzzle". This might have also been caused by omitting the instructions asking people to submit to the **BLACK BOX**. To account for this, this puzzle is entirely based in counting and indexing.

- (A) The number of Goldbach numbers less than the sum (B+I)
- (B) The number of Pythagorean triples with sum less than the product (FHJ)
- (C) The number of dashes in the (D+F)th letter of the Morse alphabet
- (D) The number of primes less than (E+G+H+I-A)
- (E) The number of letters in the name of the dual polyhedron to (C+G)-faced one
- (F) The number of perfect numbers with less than (E-C) hexadecimal digits
- (G) The number of digits of Archimedes' constant before the (B)th instance of (C)
- (H) The number of digits of Napier's constant before the first (G-J)
- (I) The number of distinct words in the (A-F)th complete sentence of this article
- (J) The number of ones in the binary expansion of $(C \wedge D)$

Submit your answers to the **BLACK BOX** outside the Comfy Lounge by July 8th. Your final response should be the sum of the answers to all eleven problems, and, yes, there is an eleventh problem.

moment

Algorithms, Design Patterns, and the "Real World"

The topic of this article, as the title implies, is about algorithms and design patterns and is taken from my personal experience (3rd year SoftEng), which may be full of shit. The article talks about the two subjects in terms of the courses SE 247 and CS 341, respectively, but is probably extendable. I know SE247 is different from CS 246 that most CS students take. There's probably another one about DP's in the upper years. Enough babbling, onwards with content.

Algorithms, aka CS 341, is a difficult but extremely important course for CS students. It teaches runtime analysis, algorithm design and implementation, and most importantly, helps you answer all those interview questions that will get you a co-op job with the big companies like Google, Amazon and Microsoft. Algorithms are super important and useful.

On the other hand, Design patterns, aka. SE 247 (and to a lesser extent, CS 246) is regarded as boring, useless and stupid. The general attitude towards it is rather apathetic, and no one really seems to emphasize it much.

However, in the "real world" (by which I mean a co-op job, the closest we have to being actually working), the opposite is quite true. In my experience so far working at Amazon, I've had to deal with design related problems much more than algorithmic problems. Off the top of my head, I've had to use/implement/discuss the adaptor, factory, template and strategy patterns. On the other hand, the most difficult algorithmic problem I've had to solve so far was a custom diff of two arrays.

Now, don't misunderstand what I'm trying to say: performance is important, understanding algorithms, runtime analysis and cost is also important. For example, you should know that an iterator instead of an index should be used to access a List, a HashMap provides, more or less $O(1)$ read and write (amortized), don't ever use Bubble Sort, and so on. However, you do not need to know the details or how to implement any of these because they're all done for you, stored somewhere in a library.

The truth of the matter is this: having something that is clean, easy to read and easy to maintain is much more important than improving the performance of your code slightly. Unless you work in the embedded domain where 4 extra bytes will overflow your stack and 2 extra instruction cycles means the plane will crash and burn, a small, reasonable amount of performance can be sacrificed to make the code nicer. In most cases, given today's powerful hardware, developer time spent reading, reviewing, debugging and updating code is much more expensive than cpu time spent running the code.

Being good with algorithms and being good with coding aren't mutually exclusive. Algorithms will get you a job, and design will help you keep it and get an offer to return. Make sure you pay attention in your design class.

theSMURF

Mother Nature WTF?!?!

Weather. The only career you can go into, screw up, and still keep your job. Why? Because Mother Nature is on fucking menopause! If the alternating weather and incorrect weather reports haven't annoyed you, made you exhausted, or has you carrying around a poncho, sunscreen, and a sweater then the **blistering heat when you have no FUCKING air-conditioning** will cause you to maybe go clinically insane.

Since we are students and may not be able to afford a pool, or like me, you live in a house with no air-conditioning, I've decided to give you a helpful list of things you can do to keep cool (and not go on a killing spree on your Xbox/PC/PS3/PSP/DS/Wii or on your own housemates and friends)

For Free:

- Campus (some buildings do have air-con like MC. Dude, the Comfy Lounge!)
- Find out which one of your friends has air-conditioning and make them your best friend
- If you are in a house, your landlord should have a fucking water hose, go buy a sprinkler and be a kid! University is for re-living your childhood.
- Cold showers (unpleasant but at night, DAMN! It's a great way to cool off.)
- Get your bike or car and go wash it. Get some friends, in white T-shirts(females), shirtless(both sexes),and have fun washing your bike or car with cold water
- Put some ice cubes down your friends pants or shirt, its funny and helps cool them off (get your friends to return the favor)
- The pool, we have Watcards, they are good for something, the free swimming! GO!

Complaints About the Weather

For goodness sake, it's not even July yet. –GingerbrED

It seems like we finally got that summer weather that everyone has been hoping for since it started to snow in October or November or whenever we had our first snowfall. So good, everyone's happy. Well, everyone except for me, that is. I can't stand this weather! It's too hot and humid, and I feel disgusting every time I go outside. The humidity makes my hair frizzy, and the heat makes me sweat like crazy. And I hate it. I hate summer so much. Well, okay, I guess the trees and flowers and nature is pretty, but the heat of the summer is just awful. I feel like I'm going to melt every time I leave my house. I miss the winter. When there's snow (the best thing in the world!), and it's actually cold! Yay, cold! I swear, I need to move somewhere where it's cold and snowy all year. Like Antarctica! Also, there are penguins there, and penguins are ridiculously cute. Okay, it's settled: when I graduate, I'm going to move to Antarctica and have a pet penguin. Maybe two pet penguins because they're just so cute. Yep, I like this idea.

Try not to melt in this heat!

Sylvia MacIntyre

Okay? Some helpful fun ways to keep cool! If you don't mind spending some money, here are somethings you may want to consider.

Some Cash:

- Go out and BUY A FUCKING FAN!!! Don't be so goddamn cheap that you are finding new ways to make your life hell! Literally. (Canadian Tire, giant fans. They are awesome!)
- Buy Freezies!!! Go on Tuesday to Zehrs @ Erb or Thursdays at Sobeys @ Columbia!! (Bring Watcard)
- Make your own popsicles with your favorite juice or something!! (Alcohol doesn't work)
- Buy an inflatable pool, you know the ones from when you were a kid, go get ice or cold water and fill it! Go sit in it! Get a beer or your study notes (laminated) and sit in the goddamn kiddy pool!
- Ice cream and other frozen treats that you can buy (at the mall or other places)
- Go home for the weekend, your parents love you and you should love them, they have air conditioning (if parents not available, go to a friends, preferably one with a pool)! It may cost money to go home.

There you go guys! Some ways to keep cool for free or for a little bit of money. Honestly, as students we can't afford a lot, so I mentioned things that is within your budget, or you can split the cost with friends/housemates.

Remember to drink a lot of water!

Wolverine Panda (_/_/)
(•^•)

How To Canadian

A Canadian is best described as a very polite, caring, and honest American. For more definitions see antonyms to "American". Canadians always say thank you, always move over to let someone pass, and always carry a roll of duck tape and a pocket tool. Typically this tool contains a knife, as carrying just a pocket knife would simply be improper without the matching pocket spoon and pocket fork. All men sport neckbeards of the latest fashion, while the women wear the duck-tape bound articles their male friends have repaired for them. No, these are not some weird Canadian mating rituals. Canadian mating begins with "please", ends with "thank you", and is permeated with cries thanking The Great Bear of the North. While some lack the expertise required to achieve Bear State, there are free courses offered by the government funded by taxpayer money to help educate the general public. Those who still struggle are masters of the art of the duck in the immortal words of Red Green: "If the women don't find you handsome, they should at least find you handy."

Thank you for reading,
Some Hoser

P.S. Thank you NSA for storing this article for future humanity!

Pros and cons of using LaTeX for your assignments

By “assignments” I mean ALL assignments. Yes, even for all five of my ECE courses this term*.

Pros

- It looks pretty!
- TAs will enjoy the refreshing change of marking a beautifully typeset document instead of a mess of unreadable handwriting. (Note: I have never been a TA so this pro may be a lie.)
- If you're writing a report, all the formatting is done for you. (There are LaTeX classes for work reports.) No need to mess around with Word. And don't even try to use Google Docs for formatting your report.
- Since you're a LaTeX wizard, you can immediately identify LaTeX documents, which makes it trivial to find your assignment in that huge pile of assignments.
- Digital copy of your assignment so you don't have to worry about losing it.
- You can version control your documents!
- If you're working on a group assignment and are using version control (and why wouldn't you?), you can easily merge your changes together. (Well, if you're using something like Git. No guarantees with CVS.)
- If there's something tedious and repetitive, you can just copy and paste.
- You want to include source code with syntax highlighting in your document? There's a package for that.
- You want to do something completely crazy in a PDF document? There's probably a package for that. If there isn't, LaTeX is Turing-complete, so you could write your own package.

Cons

- The download is 2.4 GB.
- You have to actually learn LaTeX.
- If you're working in a group, your group members must also know LaTeX.
- It takes you 15 hours to do your assignment. Then you waste spend another 5 hours figuring out how you can draw all the diagrams in LaTeX.
- You have to wrestle with LaTeX when it decides your figure should go on a different page, and consistently ignores your attempts to force it onto a specific page.
- LaTeX error messages are almost impossible to decipher. Underfull \hbox (badness 9001)?
- When you instinctively dive for any LaTeX assignment in the assignment pile, you get dismayed if it isn't yours — you've successfully brainwashed convinced somebody else to use LaTeX for assignments.
- Want to use some fancy library like TikZ for drawing stuff in LaTeX? Too bad, it's pretty much its own language. Time to spend another two weeks learning something new!
- You will become addicted to LaTeX and spam it everywhere you can. Even if you shouldn't.
- Do you really want to “program” your document? I mean, LaTeX is Turing-complete...

notbob

*OK, so two of my courses are coded as SE, but they're run by ECE. And I've been using Google Docs and PowerPoint for one of those courses, because I still haven't figured out how to use beamer.

Last Issue's Solution:

Y	D	V	T	M		E	E	R	P	S		S	I	L
A	I	V	T	A	S		E	E	S	I		L	E	N
D	R	V	E	H		S	G	N	I	H	S	V	T	S
G	A	T	S		N		O	O	W		D	E	C	I
		C	E	S	R	V	P		E	R	E	Y	U	T
	L	A	R	R	E	V	A		H	A	B		N	
D	I	T		A	T	R		O	T	C		S		N
E	N	A	B		N	A	G	R	O		S	T	P	O
H		B		X	A	T		I	T	E		N	I	P
	E		E	E	T		Y	A	T	E	D	E	R	
E	T	O	I	R	O		A	C	I	R	E	M		
R	T	G	T		K	O	W		W		T	A	E	M
E	L	V	P	O	C	N	Y	S		Y	O	N	N	A
W	E	M		N	A	V	N		A	R	O	R	U	A
L	S	I		O	J	N	A	B		D	R	O	T	M

The Pun-zzle

You will find no joy in this puzzle – only groans.

Each of the following phrases is a clue to a word or phrase that is a pun. For example, “A mushroom person that’s entertaining to be around (5)” keys into “fungi”. (The “5” refers to the number of letters in the word, and “fungi” is “fun guy”. Get it?)

1. You do this to bad chemistry jokes involving Group 2 metals (6)
2. What an electric Pokémon might do to you in the shower (7)
3. It was sitter day, now it's the weekend (8)
4. A tragedy of a country that loves to detonate things (11)
5. A girl in the Bible was saved by Jesus from being forced to smoke marijuana in lethal doses (6, 2, 5)
6. A swear word that doesn't mean anything but is essential to the grammatical structure of a sentence (9, 9)
7. What sex on the beach and American beer have in common, besides both being alcoholic drinks (7, 5, 2, 5)

With love,
Ender Dragon

horrorSCOPES

ActSci: You read too much about the correlation between sun exposure and skin cancer, and now are terrified of even a little melanoma.

Your unlucky number is: SPF 4500 still isn't enough.

AHS: You look outside of BMH and see all the sweaty math nerds staring in at your gorgeous, scantily clad bodies.

Your unlucky number is: 7 pairs of eyes.

AMath: Because of how hot it is, you're actually able to see the heat as it diffuses, which really helps you understand "abstract" concepts from class. Too bad you're also getting heatstroke.

Your unlucky number is: 17 bottles of water to rehydrate.

ARTS: You and your friends decide to do your own Shakespeare in the Park but do *A Midsummer Night's Dream* at noon.

Your unlucky number is: 32 degrees and you're in a horse mask.

C&O: Optimizing your walk from home to school to minimize time outdoors, you discover the best path with the least sun takes too long and you miss all your classes.

Your unlucky number is: 17 edges between two vertices.

CM: In an effort to escape the intense summer heat, you fight for a position at Environment Canada modeling ice. That has to be cold, right?

Your unlucky number is: 32 degrees in the office where you actually work.

CS: Running your suite of old computing gear is really killing your budget as the AC attempts to keep you alive. You decide to turn it off for the night, and realize your room is now a sauna.

Your unlucky number is: \$10 an hour charge to old men so they can work up a good sweat.

Double Degree: Your time spent on air conditioned buses is so relaxing, that you always miss your stop and spend more time walking back to the appropriate campus than actually riding the bus.

Your unlucky number is: 3 stops too far every time.

ENG: With Canada Day, you decide to drink patriotically on the weekend, only end up taking on a whole keg or twelve outside. You wake up with an epic sunburn two days later.

Your unlucky number is: A flesh tone of #FF0000

ENV: You point to the intense heat as evidence of global warming to your skeptical, ignorant, parents. They complain about "loss of jobs" and continue to not recycle.

Your unlucky number is: 399.89 ppm atmospheric CO₂

Grad: Your air conditioned office is so wonderfully air conditioned that you see no reason to leave, whilst laughing at pathetic undergrads.

Your unlucky number is: 77 pathetic undergrads at your office hour.

Math Bus: You figure it's the perfect time to start a lemonade stand — the best first business. Sadly, when life gave you lemons, you had demanded to see life's manager.

Your unlucky number is: 0 lemons, but 1 half decent Portal 2 joke...right?

Math Phys: You decide to construct a heat engine utilizing the absurd temperature outdoors, but sadly have nothing to convert the useful energy to, meaning it gets wasted as excess heat.

Your unlucky number is: 311.11 Kelvin. Remember, Hell is isothermal.

PMath: Group Theory, more like Goop Theory, amirite? Cuz, cuz, it's so hot. Anyone? Anyone? Bueller? No? No.

Your unlucky number is: $n!$ elements, all melty.

SCI: To celebrate Canada Day, you decide to launch rockets into the air, chock full of silver iodide. Got to rain on those silly revelers.

Your unlucky number is: 2 missing eyebrows and no rain.

Soft Eng: You aren't sure which is worse: the incredible heat or the unintelligible course that is SE212.

Your unlucky number is: 34. Your mark, and the temperature.

Stats: You try and apply sabermetrics to make some money in a Fantasy Baseball league, but you really don't understand baseball.

Your unlucky number is: 13 points for a touchdown is good, right?

Teaching Option: Days like these, you remember why you selected a profession with two months off for the summer.

Your unlucky number is: 68 Days Later, there were zombies.

Undeclared: You can't decide whether you should run the AC or just open the windows. In the end, you do both.

Your unlucky number is: \$700 dollars for July's power bill.



gridCOMMENTS

Today I realized I have more grey hairs than beard hairs.

Out of (a personal record-breaking (thanks, everyone!)) ten submissions, eight were correct; although Carolyn Galvin's "albino judge" made us laugh, NIX is unfortunately not the answer to "39D. Nix"—it's NIL. Last week's gridQUESTION was "who is the fairest of them all?" and we sought funny answers. Hence, Rhodry's "Chris Hemsworth" (who plays Thor), Katherine Tseng's "Mirror" (which "never discriminates and the reflection is fair to its beholder"), Andrew Naismith's "Though you are fair, there is one fairer still" (à la Snow White), John Ladan's (I think?) "Anatol Rapoport, because he came up with 'tit-for-tat'" (the idiom's from the 15th century, and the iterated prisoner's dilemma strategy is hardly a riot), Jasmine Leckey's "Lady Justice", InsideVoice's "hypothetical cross between Narcissus, a random number generator, and Eddard Start", and a comic bunny saying "ME" (with a signature we can't decipher) all fell short of the laugh-out-loud humour mark. Our winner is Garrett Galvin, who cracked us up with "Those guys who didn't give me a zero on my Lin Alg proofs". Congratulations, Garrett! You may pick up your prize at MathSoc.

Submit complete (or incomplete!) grids to the **BLACK BOX** (by the Comfy Lounge on third floor of MC) by 18:30 on Monday July 8th. Include your name and your answer to this issue's gridQUESTION—the funniest answer decides the winner (of a \$5 C&D gift card) in the event of a tie: "How many arts students does it take to screw in a lightbulb?" (Do give justification!)

How Advertisers are Manipulating You

I recently discovered that several customs that today are almost universal did not exist a hundred years ago. In the last hundred years advertising techniques has been refined down to a science. Advertising has profoundly affected us in ways we don't even realized.

For thousands years, women have had leg hair. And it was never an issue for dating. However at the dawn of the twentieth century, a new product was invented: the disposable razor. It was a pretty successful product however half the population wasn't buying it. There was no demand for it. So advertisers created a demand for it. They implied that armpit hair and leg hair were undesirable. It was a pretty successful ad campaign considering that it is now socially unacceptable for a lady to have leg and armpit hair.

Personally I am not okay with this. Hair is natural. It provides moderate protection against mosquitoes and is useful for self tickling. I refuse to let big corporations vilify my body so I give them money. I am not going to spend hours of my life hacking away at myself because the media wants me to feel insecure.

Beyond Meta

profQUOTES

"Come on guys, this isn't a trick question. I saved that for your quiz."

-Beg, CS 234

"I talk to Maple sometimes 'hi, how are you doing?'. I get concerned when Maple answers."

-Andre, Math 138

"The midterm is not too difficult. I wrote it myself and got 90%."

-Andre, Math 138

"There is a joke that comes with learning C++ . It is considered a rite of passage. 'You only allow your friends to see your private parts.'"

-Lushman, CS 246

"First years are so stupid, they don't know how stupid they are."

-Wagner, CO 342

"So she asked me, 'Do you think I'd look hot with nipple rings?'"

-Furino, CO 480

"For those of you with only 5 friends or less, this is awesome."

-Tompkins, CS 350

"So it goes from ooooooooo (0x00000000) to seven-fuff-uff (0x7FFFFFFF)"

-Tompkins, CS 350

"Go look at the segmentation on an Intel chip. You'll need to take a shower, it's so icky."

-Tompkins, CS 350

"They are in fact the same plane. What does that mean? Well, that's for another course."

- Furino, CO 480

"...and modulo my ability to draw with a marker on the board without a ruler, your picture should look like this."

- Furino, CO 480

"I become Associate Dean on July 1st. We are starting a university-wide review of discipline. Maybe we'll consider whipping..."

-Furino, CO 480

"But I did type this on my computer so it's my own stupid fault."

-Brown, CS 360

"I had to referee scientific papers this morning. One of them was a train ticket. The sad thing is, it isn't the worst paper I refereed this morning."

-Brown, CS 360

"Tasty is probably better."

-Brown, CS 360

Submit your grids to the **BLACK BOX** (outside of the Comfy Lounge). Don't forget to answer the *grid*QUESTION on page 17