

# *math* NEWS



*Lapras Transform*



*Volume 122, Issue 5  
Friday, July 12<sup>th</sup>, 2013*

**lookAHEAD****mathNEWS**

July 12	Issue 5 metes out justice in Gotham City
July 22	Production Night #6
July 26	Issue #6

**MathSoc**

July 22	Pi Approximation Day
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**FedS**

July 16	General Meeting
July 20	FedS Beach Trip

**University**

July 12	Drop, penalty 1 period ends
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**Misc**

July 13	WIM Wasaga Beach Trip
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Villains: Julie Sturgeon (Homer), Rachel Wiens (Dr. Evil), Murphy Berzish (Ozai), Lenny Morayniss (Darth Vader)

**mastHEAD**

It started with Scythe Marshall, who spent his weekend playing with his hair (apparently). A ridiculous number of spare rubber bands in the MathSoc office caused the infection to spread. Pig tails were tied in any hair that could support it. The only ones who were immune were the dudes with hair that was too short. A rash of hair-pulling and peer pressure ensued, but this only caused the pigtails to multiply. By the time pizza arrived, most of the writers and editors were sporting pigtails. To appease our new pigtailed overlords, we asked our writers: "Why do you like wearing pigtails?"

InsideVoice ("A reasonably appropriate outlet for my desire to be a schoolgirl."), ScruffyED ("I-it's not because I l-l-like you or anything, d-dummy!"), DanInTheHat("Because it makes me pretty, oh so pretty."), wibz ("Hair is up"), Grumpy Old Fart ("As a warning to other pigs."), Element118 ("What else is nipple hair for?"), moment ("Because wearing pig heads got me sent to a psychologist."), IceNine ("Quick food access."), GingerbrED ("To look like Pippi Longstocking or Anne of Green Gables."), unit ("Do you still beat your wife?"), !remember ("I don't always... but when I do, I don't."), Stubbs ("I like pulling BitMon's during... Anyway."), Shay Blair ("So eating bacon is hilarious and delicious."), Sarah SmArty ("Um... ew, I'd rather eat them."), BitMon ("I was interested to see if it was possible. Apparently so."), Sylvia MacIntyre ("I like feeling adorable, like an overgrown toddler."), Scythe Marshall ("Because it starts awesome trends, like pigtail parties in MathSoc and *mathNEWS*!"), waldo@<3. LE-GASP.ca ("It reminds me of the time I was at summer camp. Also... she is the one..."), yourlocalWHETHERgirl ("TAYLOR MOON!"), SovietCanadian ("It is best to have equal amounts of hair on all sides of your head"), theSMURF ("Day 47: the humans have accepted me as one of their own. They do not suspect a thing. It turns out hiding the tail is not necessary.")



Gary Oldman as Vlad Dracula

## FedS Sez

Hello Mathies,

A FedS General Meeting is being held at 4pm on Tuesday, July 16<sup>th</sup>, in the SLC Great Hall. The agenda may be found at: <http://www.feds.ca/about-us/general-meetings/>.

The main agenda item is a proposed new structure to FedS—changes to the Board of Directors and the Executive team. At a high-level, the changes include:

- Board: 11 students at-large; strategy focused; transparent;
- Executive: VP's reporting to President; President reporting to Board; 13-month terms;
- Students' Council: Policy ownership.

This is a very important decision for the future of the Federation of Students and we hope that you will all attend and voice your opinion. More information about the changes will be presented at the meeting. There will also be ice-cream sundae served at the end of the meeting in addition to a draw for a \$150 visa gift card!

Thanks,

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

## Sweet and Sour: Failing in the Fall

This fall will see some changes to faculty policy that will affect you.

At the moment, and for every course you take until Sept 1, failed courses are not included in your average. In other words if you took 4 courses this spring and achieved 20, 40, 60 and 80, your average would be 70. However, if you achieved these same marks in the coming Fall term, your average would be 53. As of Sept 1, failed courses will be included in your average. Courses with grades less than 32 or grades of DNW, will be converted to a 32 in the average calculation. This brings the faculty into line with the other faculties.

Remember, this only affects courses that you take starting Sept 1. Any courses that you failed prior to Sept 1 will continue to be omitted from your average.

Additionally, should your cumulative average dip below 60%, you would currently be asked to leave the faculty. However, as of Sept 1 you will not be asked to leave the faculty.

Please note that plans (i.e. Actuarial Science, Applied Math etc) will continue to enforce their average requirements.

Should you have any questions, please direct them to an academic advisor. They may be contacted via [mathadvisors@uwaterloo.ca](mailto:mathadvisors@uwaterloo.ca) or by dropping into MC4023.

Riley Metzger

## WatSFic Sez

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 short story writing contest this term. The story must be either Science Fiction or Fantasy, and is due by July 28. Submissions should be sent to [watsfic.writing.contest@uwaterloo.ca](mailto:watsfic.writing.contest@uwaterloo.ca). More details can be found at our weekly meetings.
- This term's HvZ is having its last day today. Hopefully you've had your chance to have fun/watch the mayhem. And remember – there's always next term.
- 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 July 13 (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 MC2034. This week's events are Modern 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

## Games Sez

Hi Mathies! Board Games Nights have moved to Thursdays now – hopefully more of you will be free to join us. Remember, we have free snacks and drinks (with more variety the more people regularly show up), a wide variety of games (seriously, pretty much the biggest games library on campus, and it probably rivals the local game stores), and friendly company. So whether you're the gaming master and want to come thrash us, or just getting into board games and want friendly people to introduce you to the medium, you should definitely come check us out: Thursdays, 6:30 PM, Math C&D (MC 3002).

DanInTheHat

**Send us your articles,  
profQUOTES, and Sez's to  
[mathnews@gmail.com](mailto:mathnews@gmail.com).**

## A Humble Proposal For the English Language

The English language has many speakers, and a good portion of those speakers do not speak English as their native language. There are many claims that English has many faults which makes the language hard to learn, from its unintuitive spelling rules to its matted vocabulary. Of those two specific complaints, much literature has been produced on those topics, but one is usually overlooked – the ambiguity of sentence structure and word meanings which obstruct the language’s intent to communicate clearly.

In order to meet the above lofty goal, the humble proposal of adopting the well-defined organizational structure of a stack to arrange one’s sentences into the English language is to be presented forthwith, and some specific details in such an implementation shall be discussed.

First, it is very apparent that the basic building blocks of the typical English sentence are nouns and verbs, even if they can be disguised as intricate noun and verb phrases. Then one observes that English verbs are very much like infix functions, which take a number of arguments, depending on the verb’s valency, and modify the sentence meaning based on those arguments; in our stack-based implementation of the English language, it makes a lot of natural sense to introduce verbs as functions with arity equal to the verb’s valency. As thus, the verb “persuades”, a transitive verb and thus has valency 2, added to the stack “... Sam her” would pop the top two items of the stack and push the sentence meaning “Sam persuades her” onto the stack. So far, so good.

There are, however, many verbs in the English language whose valency is fluid. Consider “I bet it will rain”, which has two arguments (“I” and the clause “it will rain”) versus the counterparts “I bet you it will rain”, “I bet five bucks (that) it will rain”, and “I bet you five bucks it will rain”. To account for such issues in a unambiguous manner, we need use of a grammatical function word representing the null argument in a verb, such that the function verb “bet” takes four arguments and when applied to a stack “I you (five bucks) (it will rain)” will yield “I bet you five bucks it will rain” and the same verb applied to “I (null) (null) (it will rain)” yields “I bet it will rain”.

The sample sentence above brings up two very important problems which we need to tackle: how to deal with adjectives, and how to differentiate adjectival nouns from actual nouns. The

### Four is Now Prime

Yep, you read that right. The other day I while reading my psychology textbook I came across an interesting definition of a prime number. It claimed that every integer divisible by itself and one is a prime number. I’m excited to explore the new avenues this definition provides. It means that there exists an inverse for all numbers in modulo  $n$  where  $n$  is an element of the natural numbers. This means a new frontier in bank security. Ah, the things one learns reading psych textbooks. I have no idea why the stereotype that art students can’t do math exists.

Beyond Meta

first of the two problems is easy: we simply define the adjective as a function of arity 1 which takes a noun phrase and returns a noun phrase meaning (adjective) (noun phrase). Adverbs, prepositions, and other function words like “of”, “and”, and “not” can be defined similarly. It is the second problem which is harder to tackle, and while there are many ways it can be effectively done, this implementation would suggest particles which mark nouns as adjectives, which themselves are functions of arity 1 which take a noun phrase and return an adjective phrase.

To construct a relative clause in a stack-based environment one needs to invoke the use of substacks, new sets of words whose grammatical function is to read the top element of the stack and start a new substack with the top element pushed onto the stack and will resolve as any one of the grammatical roles in the sentence as one lexical unit when the substack is empty. This, of course, necessitates the use of a grammatical particle which pushes the top item of a stack and discard the empty substack. Since the top item of the main stack might not necessarily be the first argument of the function in the substack, one also needs some sort of rotate stack particle or swap particle.

While there are many other intricacies of the English language which ought to get addressed in a more complete dossier of this proposal, one should, using everything above, be able to more easily understand complex sentences, such as the one below from Adam Smith’s *Wealth of Nations*, given that “which” is used to open a substack as above and collapses into an adjectival clause, “(swap)” is the grammatical particle which swaps the positions of the first two items in the stack, and “(pop)” pops the top item of the stack:

“Labour annual the it-nation\* every of fund which it necessaries the all conveniences life of which it (swap) consumes annually (pop) supplies originally (pop) which produce immediate the labour that of stuff which produce that nations other from purchased is (pop) or consist always (pop) is (pop).”

Much more readable, yes?

Zethar

\*Since pronouns work in English by proximity, one would need to mark what exactly the pronouns refer to, or not use them at all. Here it is marked using a clitic.

### Flash Fiction Fananza Results

Congratulations to Colin Wiens, the winner of our Flash Fiction Fananza Contest with his 1-sentence entry:

“Standing on the nose of a space cruiser destined for impact, Larry only regretted one thing: his camera wouldn’t focus for the ultimate selfie.”

In second place is another entry by Colin, a 0-sentence entry (best seen in Comic Sans):



## Hello from the Canadian Undergraduate Mathematics Conference!

Hello! Hello! Hello!... All the way from l'Université de Montréal, home of CUMC 2013! Pretty impressive echo, there. So, we're there, but what have we been doing? We've been busy enjoying student and keynote talks about all areas of mathematics, giving talks of our own (I gave my talk, on the Lagrange Inversion Formula, today! 45 minutes of 'Enumeration via Complex Analysis'), socializing with mathematics undergrads and recent grads, and exploring the city. We've been here since Wednesday afternoon, and will be returning Sunday evening, and in between we're stuffing in as much math and sight-seeing as possible! You might even say we're trying to reach a limit! Ha ha ha, I crack my DRM sometimes, I mean... I'll stop.

Make sure to talk to us about our experiences after we return! Part of CUMC is returning to your home university refreshed, with a reinvigorated enthusiasm for mathematics and the willingness to share what you've seen with those who didn't go, and we'd love to tell you about all of the cool stuff we learned! For those of you who will be around next year, consider going! Hopefully (and this is, unlike the rest of this article, \*\*not actually a legitimately true factoid\*\*) it'll be in Ontario, so it'll be nice and close.

For those about to math, we salute you!  
Scythe Marshall

## Beating the GPS

You ever just feel arbitrarily competitive against something or someone when they are only trying to be helpful? For me, I always try to beat the GPS. Unfortunately, the BlackBerry maps' GPS has me driving like a bat out of hell to beat. If you asked me a year ago how long it would take me to get home, I'd have told you three and a half hours from door to door. The damn BlackBerry app says the journey can be made in 2 hours and 45 minutes. I was very proud with myself when I made the journey in 2 hours and 53 minutes in June which was a new record for my family (and a feat that I deservedly got a lecture from my Dad for doing).

Last weekend I went home. The night before setting off I checked the car over and fuelled up in preparation for the journey. When I got home from work, I ate and went to the bathroom; I was not going to stop unless I absolutely needed to. Then I hit the road.

2 hours and 43 minutes. I shaved ten minutes off my previous time and beat the GPS. I will not say how fast I went just that it was way too quick. Now that I have done it, I will never go that speed again. It was incredibly stupid and dangerous of me.

But it felt really good to win.

Stubbs

## Zombie Theme Park

*The Walking Dead, World War Z, Abraham Lincoln vs. Zombies, Warm Bodies, Epitaph: Bread and Salt, R.I.P.D.,...*

The list goes on and on when it comes to zombie movies, TV shows, games, and books. Even at our own University we have Humans vs. Zombies once per term! This growing epidemic of entertainment is spreading like wildfire. Why?

Because zombies are cool? Daryl is a bad-ass? Michonne is the last samurai? As humans we fear death so much that we never want to die? Brad Pitt is getting old so to keep his "Mr. Smith" action hero/guy thing, we put him into a movie about an apocalypse? Or is it because we just love watching people shoot, decapitate, blow up, de-limb, and apparently fall in love with zombies?

Okay, maybe not the fall in love part, but I did like *Warm Bodies* and I'm not a chick-flick person. Ask my friends, a chick-flick by my standards is that the dude got laid for like 5 minutes, thus it's a chick flick (or there is enough heavy make-out scenes that make you wonder, "This put's a whole new meaning on 'action films'"). But seriously, *Warm Bodies* good movie! Has comedy, action, shit being shot, and the dudes best friend is a bad-ass!

For some reason zombies are a huge thing these days (I don't mind, its pretty sweet if you ask me). I want to owe a lot of credit to *The Walking Dead* TV show, but the zombie genre has been around for a long time.

Where am I going with this? Can you handle this? Are you seriously sure you won't freak the fuck out? Because, maybe you should.

*The Walking Dead* Theme Park in Detroit!

Is it just a rumor? Or is it for real? It's for real! (According to the articles I read...) The producer's of AMC's *The Walking Dead* series announced, in June, their plans to turn part of Detroit into a massive, epic theme park, based on the show. This idea isn't new. "Z World Detroit" was the original idea and it seems to have escalated due to awesome and obsessed fans. The plans are to open during the Spring of 2014. The whole point of the theme park is to give visitors a taste of what it would be like to live in a world where society has fallen apart and you must fight to survive. There will also be an option for visitors to stay in Mound Prison overnight, see what it is like to live in an abandoned prison just like Rick and his group.

Sadly, Z World Detroit is not going to happen (look it up, it was going to be awesome), but because there was such interest and support, looks like the producers of *The Walking Dead* picked it up (they could afford it). So if you are a zombie fan, specifically *The Walking Dead* fan, keep a look out for this amusement theme park.

Wolverine Panda

## Anime Review: *Attack on Titan* (*Shingeki no Kyojin*)

Imagine you live in a walled city, terrified of the gigantic monsters that live beyond. And then after 100 years of peace, they enter. They eat your mother in front of you. What do you do? If your answer is swear revenge and say you will kill all of these evil giants, you might enjoy this show.

*Attack on Titan* is dark. It examines the human condition, and tackles war on some of the same aspects as *All Quiet on the Western Front*, the notion of the other, and loyalty in the face of annihilation. I highly recommend it.

IceNine

## Come Play Minecraft

In case you hadn't figured it out yet, *mathNEWS* runs a Minecraft server. Like many Minecraft servers, ours contains cubes. It does not contain your base, a situation which should be remedied (unless it does, in which case stop reading and go back to playing Minecraft.) You should come play Minecraft on the *mathNEWS* server.

The *mathNEWS* Minecraft server is protected by a whitelist, to better exclude griefers, and protect your future castle/lair/horse paddock. To be added to the whitelist, drop your minecraft username in the **BLACK BOX** by the comfy, and wait for the next *mathNEWS* production night, at which point an editor will add you. Once this occurs, you will be able to join our miraculous server, accessible at 129.97.134.134. You should come play on the *mathNEWS* server and revel in the cube-shaped wondrousness.

Please come, I'm so lonely. Zombies make terrible company.

Grumpy Old Fart

## Re: Pros and cons of using LaTeX for your assignments

Last issue, I wrote about the pros and cons of using LaTeX for all your assignments. I also mentioned how I'm applying this technique to my courses this term, even though they're all ECE courses. One of the pros I described was: TAs will enjoy the refreshing change of marking a beautifully typeset document instead of a mess of unreadable handwriting.

It seems one of my professors agrees. For the most recently marked assignment, we had to submit a PDF. Full of code. The report weighs in at 42 pages of test output and 22 pages of (syntax-highlighted) Verilog. All typeset by LaTeX.

The feedback on the Learn dropbox was simply "Nice use of LaTeX!"

success\_kid.jpg

notbob

## Ununoctium Reviews: *Rogue Legacy*

WHY CAN'T I STOP PLAYING!?

Allow me to preface this review with the following 3 facts:

1. I am bad at skill-based games ranging from *Mario* to *League of Legends*.
2. I am good at strategy games like *Company of Heroes*.
3. The only rogue(ish) game I have played is *FTL*.
4. This game is a skill-based rogue-like.

If you haven't gathered yet, I am bad at this game. I die earlier than most and this is primarily due to my inability to jump well (a la *Mario* style). But I love it. I don't have a clue why so let me get right into the meat of this review.

The game is a 2D platformer like *Mario* where you play a character with a sword and a spell. Your character has a mana and health bar, along with up to two genetic traits. The traits are all gimmicky in that most of them significantly impact gameplay but none in an overpowered way. Some examples are: Irritable bowel syndrome, where your character farts periodically when jumping. Nostalgia, where the game is sepia-tone with film reel effects around the edges. Dwarfism, you are half regular size but you can fit through small tunnels. The game takes place in a randomly generated castle. The actual gameplay is pretty much *Castlevania* (or so I have been thoroughly told \*cough\* ObjectED \*cough\*). Things flying at you from all directions until you kill whatever is sending it at you. The boss fights are legitimately hard and even though it is a rogue-like, there is a mechanic whereby you can replay the same map at a penalty to try bosses multiple times. In the castle you earn money and when you die you can upgrade your manor which unlocks new abilities, traits, and skills. (It's almost like having a nicer manor leads to better selective breeding \*wink, wink\*. There is an easter egg where the last thing you can unlock is 'beastiality'. Good luck finding it.) To enter the castle you have to pay your entire fortune to Death and when you die you play as one of your three descendants.

The game's premise is that your ancestor killed the king and cursed his family. As you explore the castle you get a sense of his journey from the pages of his diary. It is a pretty good read. I'm sure there's more to the plot but it is a rogue-like and plot is rarely present. It also breaks the immersion with witty cultural references. I caught the references to *The Breakfast Club*, *Naruto*, and *Skyrim* but probably missed many others.

It's cheap and fun so go buy it!

Ununoctium

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

## For and Against: Charizard

The next generation of amazingly awesome Alakazamally cool Pokemon are set to make an appearance in October. BitMon and I (Stubbs) feel like we've got hit by Surf and are caught up in a wave of excitement. We are especially Hydro Pumped for the new fairy type classification. However, after an evening of pizza, video games and beer, we have come to an impasse which we had a calm, cool-headed debate about. (Just kidding, we fought with nerf weapons to the death.)

Should Pokemon (specifically Charizard) be reclassified for the next generation?

For: Charizard should be made a dragon. Charizard looks like a dragon. He can fly, breath fire and has the temper of a woman on her period. With razor sharp teeth and claws, reptilian in origin, he has all of a dragon's stereotypical characteristics. Even some of his moves are dragon specific: Dragon Claw, Dragon Pulse, Dragon Rage, and Outrage. His original Japanese name is based on the word dragon. And, I mean, COME ON!!! Just look at him! At the end of the day, what it comes down to is this: if you bumped into one in real life, would you scream like a little girl and run away? - Stubbs

Against: It's important that Charizard remain a fire/flying type Pokemon. Charmander is a starter and it makes that much more sense to put a fire with grass and water for an adventurer's first Pokemon. Besides, how the hell is a water type like Squirtle supposed to hurt a dragon with bubbles? It is also important to remain consistent within the world of Pokemon. Charmander and Charmeleon are fire types. So Charizard should also be fire type. Whereas Dratini and Dragonair are a dragon types. So Dragonite should also be a dragon. Also, fairies are super effective against dragons and we need a badass to fight them. Besides, Stubbs was really drunk and didn't know what he was talking about. - BitMon

Remember kids, alcohol is always the answer.

Stubbs and BitMon

## Dead Bodies Found Floating in Local Pool

*Don't drink the water*

Authorities were called to a grisly scene yesterday as dozens of bodies were found floating in a backyard pool. Mrs. Porter, the owner of the pool, was distraught, quoted as saying "This is terrible. I just cleaned the pool, and now the filter is clogged again!"

Entomologists identified several of the bodies as belonging to *M. Domestica* and *V. Germanica*, though other bodies were too degraded to identify. The insects have now been removed from the pool and disposed of in the lawn.

Grumpy Old Fart

## Why I Stopped Using WordPress

*For My Personal Blog, Anyway*

- Lots of people use it, which makes it an attractive target for hackers.
- I have no idea how to lock down a vanilla installation from remote code exploits, let alone one with fancy plugins and themes.
- It feels like there's a new update every second week, and every installation I have is at least two minor versions out of date.
- I'm always afraid that I'll lose my database since my el-cheapo shared host makes backing up the database a pain.
- Even though my static content generator has been unmaintained for a good year, I can move to a new one at my own leisure — since the code runs only on my laptop and only when I change the content.
- Static content generators output websites that are just HTML, folders, and media assets. No server-side code — it reminds me of websites from 1998, except that the navigation links are actually consistent from page to page.
- Serving up static files is insanely inexpensive compared to starting up a PHP process — I've spent an average of \$0.19 (yes, 19 cents a month) to host my blog for the last six months.

!able

P.S. I feel like the (now professor) who wrote the old **math-NEWS** production system was ahead of his time. It used to output static HTML for webbing issues — but it was this strange interaction of Perl 4 and LaTeX that few, if any, of the current undergraduate students know how to work properly.

## N Frustrations of a MathSoc General Meeting

*Waldo found 4 and a half hours of entertaining productivity at a General Meeting not too long ago.*

- Lack of volume
- People talking too fast
- Amendments on amendments on amendments of a particular motion
- Paid vs. Non-paid is still a hot topic
- Deferrals are complicated!
- Robert's Rules of Order strikes again!
- We get to vote on whether or not we want to vote or not
- When in doubt, form a committee!
- Don't we all wish we were English majors?
- One vote makes ALL the difference
- Semantics and pedantics are hard to deal with
- Quorum can be very hard to maintain
- It feels good to try and make a difference, even though your motion eventually got defeated
- Proxies! Glorious proxies!

waldo@<3.LE-GASP.ca

## N Not-Words That Should Be Words

“A word is a thought spoken.” This wiseful obsernotion, fake-quoted by William Shakespeare, perfescribes this nlist, complete with wishword and definition.

- Fantabulous: Fantastically fabulous
- Anymuch: Much of anything
- Emphanition: Emphasize you know the definition
- Leaderly: to be like a leader
- Pogative: A positive result that is negative, or the reverse (ex. Positive for herpes)

### I Get on the Comfy Couch

*A tribute to the Comfy Lounge, to the tune of "I Get On With My City" by Young Jeezy*

[chorus]

I get on the comfy couch, on on the comfy couch  
I get on the comfy couch, on on the comfy couch  
I get on the comfy couch, on on the comfy couch  
I get on the comfy couch, on on the comfy couch

When they see me in the Comfy they say Isis pro'lly broke as shit  
Been here for a week or so but haven't hit the shower yet  
Me I'm on the couch, shit, that's right I'm near the far wall  
Trying to catch some z's at night before the campus cops are called

(Hey man have you been here long?)  
Yeah man I've been here long

I've a pillow from the SLC  
Some food from the Math C&D  
Yo that's not a napkin, I use that as a blanket  
If I sleep without it I will roll onto the carpet

Move that couch over, dawg, and let me make a double bed  
It's obvious I should have ate 'till I got myself super fed  
I hate it when I'm hungry and I know I need to sleep instead  
The Comfy is really great but there's things better left unsaid

Yeah I'll sleep on that couch, 'cause my house is a rust shack  
Drag my friends along with me so they can watch my backpack  
Fall asleep, wake up when my friends hear my alarm chime  
MC Comfy is the best 'cause it helps me get to class on time

Inside: couches, outside: balcony,  
Pockets full of change I found 'cause people don't dig properly  
Don't know why you're laughing dude, I ain't trying to tell a joke  
This **mathNEWS** article is the realest shit I have ever wrote

People always asking me if I got an address  
Don't get caught without one, memorize it nonetheless  
So drunk passing out, can't remember the home route  
So broke, so poor, catch some z's right on the floor

- Kleeping: Sleeping on a keyboard
- Shoobs: Show your boobs
- Forgetaming: Forgetting someone's name that they've told you multiple times
- Readouncing: Pronouncing a word like it's spelled and being wrong
- Epicosity: Epic-ness

Yours in insanifun,  
Shay Blair

### Continuing Adventures from our Design Project

*Thank God it's almost over.*

The code we inherited is not actually multithreaded. ``thread.run()`` executes the code in the current thread, not a new one. We changed it to ``thread.start()``.

Can anyone explain what the following error means?

```
*** glibc detected *** java: corrupted double-linked list
```

We've had to install 550 MB of software in our home directories on the CS undergraduate servers, because we needed newer versions of Ruby, Java, libxml2, and libxslt.

GitHub had a five-minute outage last week. We only know this because our workers tried to pull code from GitHub and failed. (Our workers fail fast by design.) See error below:

```
error: inflate: data stream error (incorrect data check)
fatal: serious inflate inconsistency
fatal: index-pack failed
```

We somehow managed to get GCC to segfault. Not only that, but GCC claims that “the bug is not reproducible, so it is likely a hardware or OS problem.”

```
/usr/include/c++/4.6/bits/locale_facets.h:1077:16: internal compiler error: Segmentation fault
Please submit a full bug report,
with preprocessed source if appropriate.
See <file:///usr/share/doc/gcc-4.6/README.Bugs>
for instructions.
The bug is not reproducible, so it is likely a
hardware or OS problem.
```

On a happier note, we came up with a truly marvelous idea to optimize our algorithm. It's so simple, and it seems like nobody else has done it yet! (Maybe because it doesn't actually work.) Unfortunately, this margin is too small to describe our idea.

Isis

!bob



## My Week

*This article has been censored for national security.*

When asked by a friend how the previous week was, I realized I didn't know. After extensive research, I believe I have pieced together what happened:

Monday: After leaving my work, I proceeded to go home. I later ventured to campus and braved a swim in the PAC, then went back home.

Tuesday: I heard over Facebook and OMG UW (let's be real, who watches the news?) that a suspected crime was committed in the PAC while I was there. Pretty confusing, considering I didn't notice anything.

Wednesday: Under the guise of speaking to me about the suspected crime, the police called me into the station. I was told the crime was a complete falsification, and they needed my skills for a special mission, codenamed [CLASSIFIED]. It involved geese, engineers, Campus Pizza, and [CLASSIFIED]. With the fate of campus at stake, I lent them my CS skills, my ability to [CLASSIFIED], and my ability to do [CLASSIFIED] anywhere in [CLASSIFIED].

Thursday: I had to call in sick to work to perform the mission. I headed to [CLASSIFIED] for my final debriefing, grabbed my flashlight, [CLASSIFIED], red [CLASSIFIED], dildo, and [CLASSIFIED]. After making sure I [CLASSIFIED] the [CLASSIFIED], I was captured by rogue engineers and interrogated about the Math faculty and the Mathies' plan to [CLASSIFIED]. I escaped by singing the Pokemon theme song, and when they were distracted by belting it out I ran out the door.

Friday: I retrieved the [CLASSIFIED] from [CLASSIFIED] in [CLASSIFIED]. I [CLASSIFIED] a lot of [CLASSIFIED] in [CLASSIFIED]. And I saw Johnny Depp!

Saturday: I stayed at home, had a nice dinner, and watched a movie.

Sunday: I was called in for a final debriefing. From here on it gets a little fuzzy and I can't find anything. They must have done something to erase my memory, because come Monday I had no recollection of this, and was only able to recover the memories I did by getting a [CLASSIFIED] from [CLASSIFIED] and [CLASSIFIED]ing.

Yours in epicosity,  
Shay Blair

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

**Proof of Hall's Theorem →**

## Lazing on a Sunday Afternoon

As opposed to rewriting the lyrics to the Queen song, instead we shall discuss certain activities performed by the author on this Sunday past. Admittedly, these activities are made possible due to having significantly more free time than any undergraduate math student legitimately has, but that's okay!

Activity 1: Being rained on! That is, if it storms hard in the summer, it's utterly refreshing to throw on light clothing (bathing suits, etc) and run around outside in the rain, as long as you're not liable to be struck by lightning. That's a good thing to avoid. In any case, this is a great way to cool down in the disgusting heat; not so much the humidity, due to the whole water thing, but oh well. When you're thoroughly soaked, wrap yourself in a towel, have a nice drink, and decide what you're going to do with your hair. This leads to...

Activity 2: Wear pigtails! That is, tie your hair in pigtails. They're cute, and in the summer, they allow your neck to breathe more than keeping your hair down, though not as much as keeping your hair off your neck completely. Of course, this works much better if you have enough hair to have pigtails longer than about an inch, and if you actually have two elastics. The author has recently entered a state where both of these conditions are now satisfied, and so is content with the state of his hair. Upon obtaining pigtails, the last step is...

Activity 3: Play video games on emulators! That is, set your computer's drivers up so that using Project64 to play N64 games is not painful (ie. configure your computer to accept PS3 controller input via USB cable), download the three N64 Bomberman games, and spent N hours playing! All the fun. To be fair, this was instead of doing productive things like writing a CUMC talk, etc, but that's okay. Sort of.

Hopefully I've given you ideas for things to do when you actually have free time again (say, August, post-exams?). As an aside, the *mathNEWS* writers decided to take up Activity 2 en masse during Production Night, prompting the *masthead* and various other amusements during the evening.

Hooray for experimenting with one's hair!

Scythe Marshall



## Shopping with Females

Stores are designed for females. They are designed to interest them for hours, to make social events of the experience, and, most importantly to the store, to persuade them to part with their money. Unfortunately, these things make shopping hell for the odd time that a male is dragged along. Let's face it, the best that could happen is that we end up standing outside the shops holding all the bags for a few hours.

The worst that could happen is we are forced to enter. When we first walk in the first thing we look for is the exit, the second is a safe place to look. And by safe place, what I mean is a location in the store that if we are caught looking at we won't be thought of as perverts. The ceiling and floor are my personal favourites. However, if we simply stare at the floor we could be made fun of by the females for being "uncomfortable." Other safe places to look at include mannequins that aren't yet wearing any apparel and those pictures they hang up high on the walls. However, if we stare too long at these, we end up looking weird.

Some stores are just assholes. And by this I mean their placement of lingerie is evil. After females finally decide to purchase merchandise and make their way to the checkout with us in tow, as a group we have to stand in line. Stores that put lingerie right by the checkout are run by the devil. Suddenly all the females are no longer distracted by pretty clothing and we are in the most uncomfortable part of the store. Even worse is if they put the lingerie section right in front of the male bathroom. Seriously, they're out to get us.

Once in a while though, we come across a store with a male drop off point. We really do love those. They are amazing. I was dragged into a (Something) Twenty-One store with the most amazing man-zone. It was a walled off room from the rest of the store. Black walls with leather jackets hanging from them. Black leather couches and a big-ass tv tuned to american football. For the two hours we spent in that room, the three of us guys had a blast. More stores should do that.

Also, your butt doesn't look big in that.

Stubbs

## Stubbs: The Man Your Man Could Be

Hello mathladies. Look at your man, now back at Stubbs, now back at your man, then back to Stubbs. Sadly, he isn't him, but if he stopped using his Canadian accent, and used a British one, he could sound as sexy as him. Look down, now back up, where are you? You're in a calc test with the man your man could sound like. What's in your hand, back at me. I have it, it's the pencil you're about to ask him for so you can hear his sexy voice, and imagine that you're asking him for other sweet things. Anything is possible when your man sounds like a Brit and not a Canadian. He's on a Charizard.

BitMon

## faithSort

```
/*
 * Input: unsorted array arr of length len
 * Output: sorted(?) array
 * Runtime: O(?)
 */
int* faithSort(int* arr, int len)
{
    /* Dear Lord,
     *
     * Thank you for this array that you have
     * given us, blessed be thy name.
     *
     * In all your might, sort this array,
     * such that each element is equal or
     * greater than the previous one so we may
     * continue to compute on this data.
     *
     * In your everlasting glory,
     * Amen.
     */
    return arr;
}
```

God works in mysterious ways.

theSMURF

## N Reasons to Love the Horrible, Muggy Weather We've Been Experiencing

Always having to carry an umbrella because you never know when it'll start pouring outside, waking up in the middle of the night all sweaty and gross, and things taking forever to dry are all valid reasons to hate hot humid summers. However, there are definitely many positive aspects to this weather that can benefit everyone. If you look hard enough, at least. (Notice: in order to connect with our largely Canadian audience, I have succumbed and have begun converting Fahrenheit units to Celsius)

- It could be worse. In Bangkok, not only does it reach over 40°C, the air pollution traps all the hot air in a stifling bubble around the city.
- It has made for a lovely and lush environment around campus that I promise you will miss during the upcoming 7-month winter. Not that I, as a math student, ever get to see it.
- It encourages trips to the pool/lake/any body of water where you can submerge yourself in and cool down. I expect to start seeing sun-kissed, bronzed skin around the math building soon, or peeling, red, and burnt skin depending on the action your skin takes after sun exposure.
- Revealing clothing. Need I say more?
- Our friends from Dubai and other desert and tropical climates have finally thawed out and are functional again.

wibz

## Re: Beans on Toast

I'm sure most people read in the last *mathNEWS* a fellow writer's opinion on beans on toast (if you don't remember, please pull out the old copy now for reference). Little do people know, that article came out of a half hour conversation with me. My fellow writer has gone about enforcing his ideas in the most boorish way possible. To sum up for those of you too lazy to listen to instructions, basically the point was kill ALL the the beans-on-toast haters!

Now, in the original conversation, I felt it my duty to argue for peace and acceptance of people who prefer other foods. For example, I see nothing wrong with someone who would forgo beans on toast for a lovely marbled grilled cheese, as I am wont to do. I would like to make it clear I am not a hater here, just being accepting and avoiding labels like a postmodernist. In this article, however, I will drop that argument because I'll just be repeating myself pointlessly as I stand on my soapbox. So instead, I'm going to argue how my fellow writer's scheme is going to ultimately fail and what he should do instead.

His first suggestion is to have "all people running for public office declare their love for beans on toast." While this is an important step to make, it is much, much too hasty. First of all, you have no power. It doesn't mean anything at this point. And, I mean, when was the last time somebody listened to a politician? No, if you want to really spread a message, you need to start subtle. Really subtle. Like subliminal message subtle (although their effectiveness is questionable and should not be solely relied on). What you should do is establish a status. How you do this is too dependent on the situation to describe in exact details. I highly suggest incorporating it into art, newspapers, books, and basically just make it so ubiquitous that nobody can think of living without beans on toast. Even if they don't like it, they can't avoid it. And because of peer pressure, they won't say anything. They may eventually succumb to groupthink and even though they actually wouldn't like it if the suggestion wasn't there. It at least works in theory.

**2324 0780 5147 0047 2500 7829  
0365 7300**

2110 0804 2515 2720 1410 2618 1334 2325 3618 3232 4042  
5037 5026 4129 4235 5833 4738 4058 4256 6440 6047 5764  
5060 5053 4965 5752 7362 6475 5771 6069 7582 6888 8566  
6880 8170 9291 7874 7985 8384 8498 8696 0384 9000 9006  
1496 1101 0808 9515 0006 0413 1621 3104 0304 1818 4358  
7979 8200 0104 1515 3543 4861 6181 9696 1530 4264 6969  
8997 0202 2029 3337 4954 5463 7979 9907 1212 3241 6173  
7807 0229 5836 8065 3083 6759 4510 2861 2255 1555 1040  
9590 0008 2142 8584 9105 1548 9601 2142 7542 7748 9178  
5304 0704 3672 0345 9221 4459 9585 3035 6804 4577 7697  
9176 7085 5519 8494 0309 8785 7055 1932 7791 9706 1869  
4956 2241 7173 4683 9173 7637 3520 9912 3626 2323 6967  
2590 7070 3771 4962 8682 4904 1293 9421 7894 0645 7752  
5628 2987 7364 9245 6246 6286 1878 4947 0454 8927 3814  
8779 3784 2236 9276

6734 6192 9417 5256 8208 1341 7192

At this point you can pass laws and have people running for office who would pass such laws. It's easy to pass a law, but hard to change a mindset. That's why you need to change the mindset and you'll have little to no objection to changing the law. Change the law without the mindset and if you get a crazy enough riot, you would maybe have the opportunity to kill haters. However, you will more likely end up with bad press and maybe even dead. And you cannot lead a revolution when you're dead.

The next step is retention. My fellow writer seems to have given little thought to this step beyond kill ALL the beans on toast haters! What will happen is either your population will die out, people will consider the people dying for the right to have their own favourite foods martyrs and secretly join the other side until a ruler wins a battle by eating something other than beans on toast after envisioning it in a dream and he reverses all the laws, or a subgroup will rise up and beat you at your own game with a smarter strategy.

So, retention is important. After all, even with all the acceptance, people will eventually get tired of it. The most effective method of course, is to add a bunch of tasteless additives to the beans and/or bread that are slightly addictive. This has many benefits. One is that because the people are addicted, they will keep eating them. If the additives are potent enough, they may be transferred to fetuses and have the next generation addicted to beans on toast before they're even born. Also, people who don't like it who are just fed one portion under the guise of, "You won't know until you try it," will become addicted and have to eat them. There are other methods, but why try them when this is so effective?

If you think this sounds like the strategy McDonald's uses, it's not copyrighted.

Sarah SmArty

## BitMon: The Sexy Beast

BitMon is a CS Major with so much more to offer than the typical programmer. He has amazing hardware with the drivers to back it up. But don't worry, he's so gentle, his software is refined and bug free.

A pilot who likes a good time, BitMon is always down for mid-night adventures, whether a simple coffee run or something... longer. If you enjoy climbing trees, BitMon is also your guy, since he is an accomplished climber.

Incredibly smart and funny, he has encyclopedic knowledge of many subjects as well as being fluent in many languages. Quite the outdoorsman, BitMon has spends his free time chopping firewood for the log cabin he built himself.

And damn, he has a good ass.

Stubbs



## Travelling is Hard

I am travel paranoid. Going from Toronto and back has only proved that to me. Despite my permanent residence being in “The Regional Municipality of Durham” (aka, Durham), I have actually never travelled the entire distance via public transit, having only been picked up in Mississauga in Square One or at McCowan Station.

So Sunday, needing to travel both ways in the same day resulted in me absolutely needing to formalize travel plans by Wednesday at the latest. And by “finalize travel plans” I don’t really mean “find out an approximate route and maybe some times,” I mean like “find every possible departure time of each of the several methods of transportation and put them all into my google calendar including every subway departure time in a half an hour interval.”

Also entertaining is the fact that if I don’t know anything about the area, and have to rely on someone else’s sense of direction, it’s very likely that I’m not going to trust them unless there is a consensus of  $n$  people for  $n > 2$ . I also included walking time in my calendar, and the normal bus to campus that I’m pretty sure I should know by now. For a one day trip to Toronto, I ended up with six “walking” events, two for GRT, five for two types of GO bus, approximately twelve subway departure times, four for a ferry (two in each direction), and one for the Fed Bus. The thing with the Fed Bus is that there is literally one option, the cause of some travel paranoia, and whose site is down the day before and the morning the trip so one of our party couldn’t come with us.

tl;dr, travelling is stressful.

yourlocalWHETHERgirl

## Adolescent Geese Rebel

*Parents wonder “What is wrong with this generation?”*

Waterloo, Ontario— With the recent breeding season complete, and the young geese now entering puberty, there has been a sharp upturn in the number of incidents recorded involving newly adolescent geese. Parents have been reporting unruly behaviour, including attempts to intimidate all humans and experimentation with flying to “get high”. Elder geese have been complaining about large mobs of teenaged geese getting into all the lawns and mowing it in an inconsistent fashion.

Complaints have also come from humans. Students report being asked repeatedly by some adolescent geese where they could “find some good grass”, or sometimes where they could get “weed”. Concerns that the younger geese have been getting into drugs have surfaced, with a corresponding call for increased drug education for animals.

Your intrepid reporter, and part time goose hisser,

InsideVoice

## Dat Facebook Photo

*No, ma’am, I haven’t been drinking the Kool-Aid.*

Lounging on a deck chair, wine glass in your left hand. Looking over an azure-coloured swimming pool, with sparks of sunlight glimmering throughout. In the background, a modest-sized apartment building, some foliage, and an over-exposed sky. In the foreground, on a small table, lies a stainless steel bowl, filled with ice, more wine glasses, and two bottles of white wine.

If you just looked at the Facebook photo from this Bay-Area pool party, you’d think that this would be a pretty accurate description of what happened. But it’s not. It’s a fabrication. The photo is real; the scenario described is not.

As we walk into the pool area, management starts yelling at us that “glass isn’t allowed near the pool”. Panicked, the interns try to come up with a plan B. Someone decides that disposable plastic transparent cups are good enough for the pool-side wine. The subject of the photo, though, is obsessed with getting that perfect shot with wine bottles sitting in an ice-filled steel bowl — so a bit more scrambling, someone’s camera comes out, and snap, snap, snap. I decide I’ve had enough — I know that the wine glasses will soon go back to whomever’s apartment, and the plastic cups filled with alcohol will start flowing, and maybe people will actually splash around in the pool. Before anyone can stop me, I run to the bus stop and take the next bus home — it’s not like I know how to swim, anyway.

As interns for big tech companies in the valley, you’re probably doing pretty well. You’re given subsidized housing with other co-ops and interns, a pretty fat pay-cheque, and really awesome access to food<sup>[0]</sup>. You don’t need to stage Facebook photos to show off how “baller” you are. I wanted to be friends with you because I liked you as a person. I still do. But not like this.

The next time you’re taking photos for Facebook — please, be authentic. Capture that extemporaneous quality that makes you who you are. It’ll take you one step closer to maximizing happiness.

!able

[0] Whether it’s on-site cafeterias, catered lunches, or fancy restaurants within walking distance of the office.

**Submit articles to *mathNEWS*:  
by coming to Production Nights  
(the next one is July 22<sup>nd</sup>), by  
email ([mathnews@gmail.com](mailto:mathnews@gmail.com)),  
through the **BLACK BOX** in front  
of the Comfy Lounge (MC 3001),  
or under the door of our office  
(MC 3030)**



## horrorSCOPES

**ActSci:** You see that MathSoc is in need of a VPF for the fall term. Hoping to strengthen your resume, you send in an application. *Your unlucky number is:* 20 hours of MathSoc-related work per week. The exec don't have it easy.

**AHS:** You're excited for Tough Mudder in Toronto this September, so you decide to up your training by hitting the gym between classes. This doesn't leave you much time to shower. *Your unlucky number is:* 2 empty seats on either sides of you. Your BO is strong, bro.

**AMath:** You decide to apply what you're learning in Fluid Mechanics at Pints with Profs. You drink so much you call all your profs "Navier" or "Stokes". *Your unlucky number is:* 2 spilled drinks. Note to self: beer is a Newtonian fluid.

**ARTS:** Now that your job at a summer camp has finally started, you can make money like all your friends in co-op this term. Only, you're now stuck out in Perry Sound with nothing to spend your money on. *Your unlucky number is:* 76 km from anywhere interesting.

**C&O:** You get your Graph Theory prof drunk at Pints with Profs, and are shocked to learn that you are on your prof's Make-Out Graph. *Your unlucky number is:* 2 edges away from your prof. Ewwwww.

**CM:** After convincing everyone in your class to go to Pints with Profs, you realize that there aren't enough of you to even fill a table. *Your unlucky number is:* 7 students a year. Why do you still get **horrorSCOPES**?

**CS:** It was raining all through the CSC Goes Outside event last week, so you decide to try going outside on your own. You decide to risk it without checking the weather forecast. *Your unlucky number is:* 5 minutes in a downpour. But it counts as a shower right?

**Double Degree:** You manage to convince one of your Laurier profs to come to Pints with Profs to see how the other half lives. They are suitably impressed with the drinking prowess of Waterloo professors, and decide to drink shot for shot. *Your unlucky number is:* 1% blood alcohol content means no class tomorrow!

**ENG:** EngPlay is next week. Your part this term is quite large, and you're nervous that you'll forget your lines. You have a few pre-show drinks to calm yourself down. *Your unlucky number is:* 4 beers too many. "What were my lines again?"

**ENV:** You are thinking about switching into Knowledge Integration. You ask some KI majors in your year about what the program's all about. *Your unlucky number is:* 30 different answers.

**Grad:** You were hired by an "old school" prof to perform calculations using only a pencil and paper. How hard could multiplication be? *Your unlucky number is:*  $45934 \times 439280 = 17$  wrong answers.

**Math Phys:** After getting back your midterm marks you've decided to create your own laws of physics. You decide to base it in the world of Fast and Furious. *Your unlucky number is:* 8 movies spent falling for Vin Diesel.

**PMath:** You attempt to replace all variables in your assignment with superheroes and find yourself arguing over whether superman should multiply with Spider-man. *Your unlucky number is:* Batman is defined as Spider-man minus Superman.

**Sci:** You're asked for the 400<sup>th</sup> time what you plan to do with your future. Your plan no longer extends beyond passing this terms' exams. *Your unlucky number is:* 15 conversations about how "at least it's not a math degree".

**Stats:** After seeing all the trailers for Despicable Me 2, you try to calculate the likelihood that a minion shares your name. *Your unlucky number is:* 86.7% likely it is completely random.

**Teaching Option:** You took a class to get ahead without realizing it needs volunteer hours. You curse your future summers off for the first time. *Your unlucky number is:* 20 hours "helping" educational Youtubers.

**Undeclared:** You play video games while you decide which of the many events happening this weekend you should attend. *Your unlucky number is:* 30 levels and you're still not wearing pants.

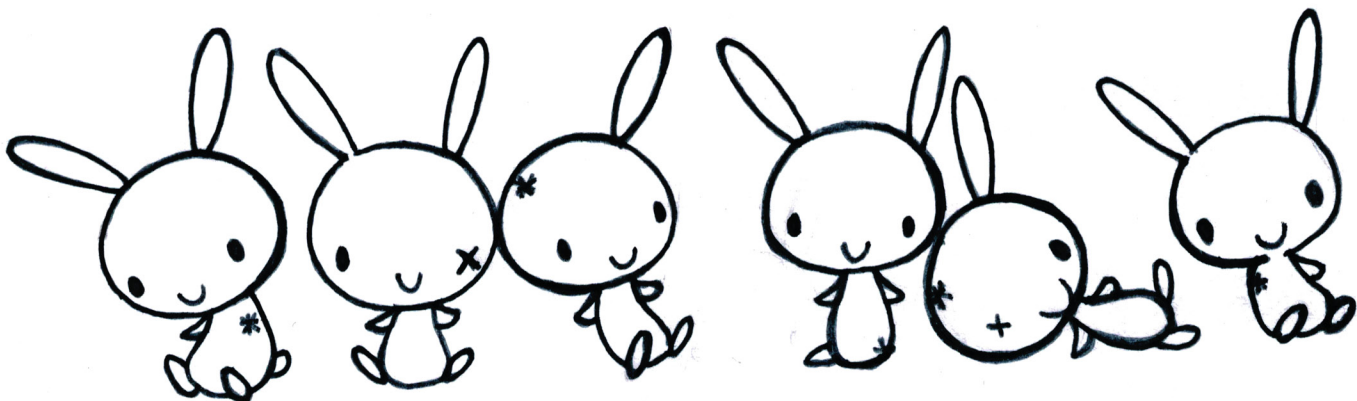


fig 6. A perfect number of imperfect bunnies.

## *prof*QUOTES

“Actually, this is getting pretty morbid to cut the eyeballs off the happy face graph.”

Hare, Math 239

“Yesterday I went to the bank to negotiate my mortgage. That’s about as grown up as you get kids.”

Tompkins, CS 350

[on the Konigsberg bridge problem] “There is an engineering solution: you build a bridge.”

Hare, Math 239

Prof: “Knock knock”

Student: “Who’s...”

Prof: “Interrupting cow! MOOOO!”

Tompkins, CS 350

“Since it is true in the example it must be true in general. We’ll call it a theorem.”

Hare, Math 239

“I rarely teach; I lecture. I hope you learn and you hope I teach.”

Tompkins, CS 350

“Basically, a graph is Facebook. I should call this Facebook theory.”

Hare, Math 239

“Look at this diagram. See, it’s not something I made up.”

Tompkins, CS 350

“Due to instructor laziness,  $\alpha=\beta=\Gamma=1$ .”

Hare, Math 239

“If it’s too damn high, you ain’t doing a good job.”

Tompkins, CS 350

“Hamiltonian, Eulenan, ehh, they’re both dead, they won’t know.”

Hare, Math 239

“My OS prof, who was quite a hoot, went to Africa to shoot rhinos or something.”

Tompkins, CS 350

“You can think of it like buildings... You can go from the science building to Needles Hall. If you’re unfortunate, to the math building and then back to Needles hall if they mess you up again. Then you’re finally done for the day so you can stop going to the Registrar’s Office.”

Hare, Math 239

“Do you want your operating system to be a communist?”

Tompkins, CS 350

“Maybe by the time I retire I’ll explain concepts so hard it’ll make a nose bleed.”

Tompkins, CS 350

“The Student Life Centre’s important. They have sushi... all things center around sushi.”

Hare, Math 239

“It would be awesome if I got a nose bleed.”

Tompkins, CS 350

“Walks can be infinitely long except for our class. At some point, you’re done for the day. You don’t come to my class an infinite number of times over and over again.”

Hare, Math 239

“I think I feel like some of your kernels, because I just want to crash.”

Tompkins, CS 350

“How clean are your friends? You might want to evict your dirty friends.”

Tompkins, CS 350

“You’ve been wasting all your time in classical mechanics.”

Cory, NE 232

“I don’t know if ‘accessing’ your friends is the right word.”

Tompkins, CS 350

“It’s no fun to end class early so I’ll continue lecturing anyway.”

Cory, NE 232

“I don’t understand the big deal about MacLauren series, I think it’s some nationalist battle with the Scots and the English since Taylor is English.”

Stastna, AMATH/PMATH 332

“If we had a room where there are physicists and computer scientists, they would both say they know what a Hermite polynomial is, but they disagree on what it actually is... The math building and the physics building are always separate from each other so they can’t talk to each other.”

Cory, NE 232

“This is possibly the most useless definition in undergrad math.”

Stastna, AMATH/PMATH 332

“You guys self aggregate; The nano program – you self assemble!”

Cory, NE 232

“It’s for completeness anyway, you could just write ‘1. Complex analysis is awesome’ and you’d get a checkmark.”

Stastna, AMATH/PMATH 332

“The arguments we used to show this are completely circular, but they’re consistent.”

Cory NE 232

“The usefulness of rock-paper-scissors-lizard-spock is.... it’s not useful, who am I kidding.”

Pei, MATH 239

"Do you run on reason? Ask any parent of a teenager how reasonable they are."

Furino, CO 480

"Lines, surfaces, volumes. To get to degree 4, you need to smoke something special."

Furino, CO 480

"After that, immense pain."

Furino, CO 480

"If you prove that, I want you to meet me in a dark alley with a baseball bat. That's how fame and fortune work."

Furino, CO 480

"He goes to the local bar to pick up a countess — 'Hey, I can solve cubic equations.'"

Furino, CO 480

"Move along buddy, you're disturbing the goats."

Furino, CO 480

"I've got a collection of quarks at home. Wanna see my quarks?"

Furino, CO 480

"Now I feel stupid. My wit is definitely in need of sharpening."

Furino, CO 480

"I'm rejected not only by my students but also by my cats."

Furino, CO 480

"Draw a circle with an H, call it capital theta."

Poulin, AMATH 353

## Last Issue's Solution:

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

## gridCOMMENTS

Fianchetto

In my ambition for word length I was forced to give up symmetric pairs of words; some are themed, some are not, hence the consolatory stars. Incidentally, my favourite chess opening is the Barcza system.

All but one of six submissions were perfect (sorry, Katherine) and many answers to last issue's **gridQUESTION** "How many arts students does it take to screw in a lightbulb?" implied some number of credits being awarded for lightbulb installation—am I missing something here? Jasmine Leckey's "2i arts students in this thought experiment" was quite cute, but Shumiao Wang's "101: 1 to screw in the lightbulb and 100 to protest tuition hikes" takes the cake for making me laugh and reminding me I still haven't paid. Congratulations, Shumiao! You may pick up your prize at MathSoc. I hope the editors don't forget to include your excellent drawing (*On page 2! —MuffinED*) of Gary Oldman as the fairest (Dracula) of them all.

Submit complete (or incomplete!) grids to the **BLACK BOX** (by the Comfy Lounge on floor 3 of MC) by 18:30 on Monday July 22<sup>nd</sup>. Include your name and your answer to this issue's **gridQUESTION**—the best answer decides the winner (of a \$5 C&D gift card) in the event of a tie: "What's a nonstandard usage of toilet paper?"

unit

**If you have awesome art that you would like to see in *mathNEWS*, feel free to drop it in the BLACK BOX**

## N Ways to Make Yourself Feel Better After an Exam

I'm sure most of us have had those horrible midterms that make you just want to curl up and cry. If you haven't, then you're the luckiest person in the world, and I'm incredibly jealous of you. I know midterm season is over, or almost over, but finals are coming up, and it's possible that finals might make us cry. Here are some ways to make yourself feel better after a particularly bad test or exam.

- Eat lots of chocolate.
- Get hugs from all of your friends.
- Complain to everyone you know about how badly you probably failed.
- Eat lots of ice cream.
- Cry. A lot.
- Spend a day in your pajamas.
- Curl up in bed and sleep.
- Eat lots of candy.
- Do something you enjoy, and don't get to do very often.

Sylvia MacIntyre

*Across*

1. Letter starter
5. Grosss!
9. \*A notation
11. Burning branch
13. \*Tower
14. Sunshine summoning song
16. 54A, e.g.
18. Rime
19. Claudius to Old Hamlet
22. Null
24. \*Hetmans?
26. 49A
29. Deployed
30. Uninvited picnic guests
32. Filmmaker Jacques
33. Skilful
34. “\_\_\_\_\_ Mother Brown”
36. Wilhite says /'dʒɪf/
37. Blood Beryl
39. Why do cats purr?
40. Wine with Chandon
41. Surgical loop
44. Avec vieillesse
46. Train food?
48. Id and a go-with
49. Kitchen helmet
50. Fractal crucifer
53. Francis is the first of these
54. Słowianin
57. Chemical compound
58. \*Unpalatable pal?
59. Tokyo of yore
60. Helves and heads

*Down*

20. Augurous, in a good way
21. Totter partner
23. Eigenval. product
25. Francisco preceder
26. Small ox
27. Tiered tower
28. \*Brilliancies
31. Cloudy (like a Crab?)
35. Trudeau's elephant
38. Rug sucker abbr.
40. One word, many notes
42. Abstinent
43. Ossicle houses
45. General Public License
47. Not the musical group of eight
51. Quote
52. Scandinavian capital
53. Black simile
55. (A homophone of an anagram of) slack
56. Dined

## This Week's Grid:

1	2	3	4		5	6	7				8				
9								10			11			12	
13					14				15						
			16	17								18			
19	20	21					22				23				
24					25		26					27		28	
29					30	31					32				
33				34					35			36			
37			38			39					40				
41				42	43				44	45					
			46				47		48						
49				50			51		52						
			53								54	55	56		
57						58									
							59				60				

Submit your grids to the **BLACK BOX** (outside of the Comfy Lounge). Don't forget to answer the *grid*QUESTION on page 15.