



Not a Nerd

## “WHICH BABY ANIMAL SHOULD WE PLANT AROUND CAMPUS TO OUTWIT THE BABY GEESE?”

Stop me if this sounds familiar: “I just need to get through this week and then everything will be okay.” Or how about, “Of course I’ll have time for my hobbies, it’s a co-op term!”

Every term, I tell myself that this is the one where I’ll finally start to take it easy, and every term, I find my schedule completely full. Like eating “one more chip” for 40 chips in a row, it snowballs until I’m up at 2am playing a game of Civilization VI, watching as the humble Canadian empire gets steamrolled by every other player in the game.

Or maybe I’m out on the town, looking at baby geese, being chased by adult geese, or plotting to introduce a new invasive baby animal species to defeat the baby geese and allow me to walk free. Introducing a new animal into an ecosystem has never gone wrong before, right? Don’t look up “Australia rabbit problem,” please.

I’m so busy, in fact, that I was going to write a **mastHEAD** comment about how I’m too busy to write a header, but as I am medically incapable of writing anything short, I ended up filling all the space with an explanation about how I can’t fill up any space.

Fortunately, I can fill up the rest of this space by describing what a great issue we have coming up! We’ve got music reviews, milkshake rankings, board game reviews, and the long-awaited return of MathSoc Cartoons. It’s packed, folks!

Happy reading!

*befuddled*  
Editor, **mathNEWS**

## ARTICLE OF THE ISSUE

Congratulations mobpsychofan. We really liked *Sorites Paradox*. (*On Returning Home*). Your style of prose is engaging and the level of thought you’ve put into writing this shows. Come by our office, MC 3030, to collect your prize.

*abstractED*  
Editor, **mathNEWS**

<b>RAPIDEYEMOVEMENT</b>	Mint
<b>SEXY_SOFTWARE_BABE</b>	people (they'd outwit me)
<b>SNOWDOZER</b>	Rabbits
<b>EPIC_WATERMAN</b>	planet eradicating grey goo
<b>WICKED</b>	Baby hamsters (but rabid)
<b>MOBPSYCHOFAN</b>	human baby (with gun)
<b>SHAHABEE</b>	My Girlfriend
<b>NO PUN INDENTED</b>	Baby Unicorns; they can stab the baby geese :))))
<b>MOLASSES</b>	ryan of also a gosling fame
<b>PINK BOMB</b>	Government drones
<b>ANDOIII</b>	baby dragons >:3
<b>WHOLE NUMBER HAVER</b>	baby geese 🐣 🐣 🐣 🐣 🐣 🐣
<b>HEADPHONES97</b>	groundhogs
<b>ERALOGOS</b>	No animal can withstand the aura of degeneracy here except the baby geese themselves
<b>TERMINAL</b>	Cessnas (aka baby planes)
<b>0.423</b>	snakes
<b>AAQSR</b>	Kittens: people would die of cuteness
<b>LARS NOOTBAAR</b>	Western Diamondback Rattlesnake (eats invasive geese)
<b>APHF</b>	Grey goshawk (eats invasive rattlesnakes)
<b>NORMALPARAMETERS</b>	Pterodactyl (kills invasive grey goshawks)
<b>SIRCUMFERENCE314</b>	Chris Pratt (kills invasive pterodactyls)
<b>__INIT__</b>	Swarm of murderous robots (kills invasive Chris Pratts)
<b>SKIT</b>	Inevitable march of time (degrades swarms of murderous robots)
<b>TOTALLY UNUNIMODULAR</b>	Nature (resurges as a result of the inevitable march of time)
<b>NAZZ</b>	grass (eats invasive nature)
<b>NIKE</b>	baby geese [goslings] (eat invasive fresh grass)
<b>KUMQUATZZ</b>	baby geese but evil 😈
<b>別</b>	garfield
<b>JEFF</b>	You're telling me you need to outwit a baby? What's wrong with you?
<b>PLATYPUSGOD</b>	Platypus (I am biased)
<b>VERDANIK</b>	Baby Horsemen of the Apocalypse
<b>CUTLET</b>	... why would you want this? 😬
<b>BLINCHIK</b>	The humble bullet ant

**mathNEWS Editor is now canonically a bottom.**

AWAB QURESHI, **mathNEWS** EDITOR FOR SPRING 2024  
ALONG WITH OWEN GALLAGHER, SARA NAYAR, ISABELA SOUZA, AND DAVID TERESI

# mathASKS 155.2

FEATURING PROFESSOR YIZHOU ZHANG

**NO PUN INDENTED: WHAT WAS YOUR SECOND BIGGEST REASON FOR BECOMING A COMPILER EXPERT?**

The magic that compilers work to transform human-readable code into efficient machine code! Every time I teach CS 444, I am amazed by how every topic in this subject perfectly blends theory and practice. Plus, let's be honest, there's something deeply satisfying about teaching compilers to a room of talented, curious students!

**YALEVOYLIAN: I JUST LOOKED AT SOME OF YOUR PUBLICATIONS, AND ALMOST ALL OF THEM SEEM SUPER INTERESTING. I'M ALSO INTERESTED, MORE GENERALLY, IN DOING UNDERGRADUATE RESEARCH. DO YOU HAVE ANY ADVICE FOR SOMEONE WHO WOULD WANT TO DO A URA WITH YOU OR IN YOUR FIELD?**

**POPCORN ROCK EATER <3: WHAT MAKES YOU LOVE WORKING IN YOUR FIELD?**

Thank you for your interest in my work and for considering doing research! Undergraduate research experiences are a great way to understand the research process, from the inception of ideas to execution, writing, and possibly getting published. You may discover if research is your calling along the way.

My work is on the design, theory, and implementation of programming languages. I find it very rewarding to work in this area: I get to build compilers, I get to prove theorems, and I get to take on challenges that concern the rest of computer science. If these sound like something that interests you, then you should probably go read some PL papers and talk to a PL prof! My advice would be to follow your passion and your talent in pursuing research. Research requires creativity, deep thinking, hard work, and good speaking and writing skills, but you can develop these abilities over time. Don't forget about opportunities such as MURA, USRA, and URF at Waterloo; they allow you to do full-time research co-ops.

**BOLDBLAZER: IS THERE ANYTHING YOU MADE THAT YOU ARE PARTICULARLY MORE FOND OF THAN OTHERS?**

My graduate students! My main mode of doing research is to collaborate with my students. I hope I've been able to help them become more effective researchers.

**PTKYR: WHAT WOULD IT TAKE FOR A NEW 3-400 LEVEL [STATICALLY TYPED] FP COURSE TO ACTUALLY EXIST? WHAT WOULD IT COVER? WOULD YOU TEACH IT?**

It actually exists, in a way; CS 442 covers some functional programming and types. But students tend to take the course in their final term. I believe students should be exposed to the ideas earlier in their education, and I'd be happy to teach this 300-level course if it existed. Students would learn elementary type theory and formal models of computation, they would learn how data structures and algorithms can be

defined in a functional style, they would learn how that can make reasoning about correctness easier, and they would learn something about what goes into creating such languages.

More broadly, I believe it is beneficial to be exposed to different programming paradigms: programming in a new language or a new type system is fun, challenges the way one thinks, and broadens one's perspective. I find it important for creativity.

**CLASSIFIED: WHAT'S THE MOST DIFFICULT CHOICE YOU WERE ASKED TO MAKE?**

As a researcher, I sometimes find it difficult to pick a problem to research. The abundance of problems one can possibly work on can be overwhelming. It's not just about solving problems; it's also about identifying good problems to solve.

**MOLASSES: I TOOK YOUR OFFERING OF CS 245 IN S22. GIVEN COMPLETE CONTROL OVER THE COURSE, WHAT WOULD YOU DO TO FIX IT?**

I feel that the majority of students struggle to appreciate the course material, and this isn't due to any lack on their part; after all, we are talking about students who may have just learned how to program in Racket.

How to make the course more engaging? Logics are in many ways like programming languages, and proof checkers are in many ways like compilers. So wouldn't it be more engaging to learn logics by using them to write proofs that can be automatically checked by a computer? Wouldn't it be more fun to learn how proofs work by building a proof checker?

**CUTLET: WHAT'S YOUR FAVORITE DRINK?**

Cortado in the morning. Green tea in the afternoon.

## N QUOTES SAID THIS PROD NIGHT

FROM DISTINCT PEOPLE

- "I know who's the evil twin... according to Hitler."
- "That's neutral to Asian-ness."
- "I would say yes and die."
- "I used to not file my US taxes."
- "Ahh! My knees!"
- "Nicole isn't even in this province."
- "There's only one femboy... not femboy."
- "Why are you making out with the wall? [Your girlfriend] is going to be jealous."
- "Not all gays are rats, but some rats are gay."

# DESIGNING MY OWN SPECTRE TILE

*IN ASHEN GRIP, LET EMBER GLOW, TO KINDLE FLAMES ANEW*

When playing Mao with *Zethar* and *Beyond Meta* on the Eclipse Day, *Beyond Meta* brought bags of beautiful-looking tiles called Hats and Spectres (as required by the game mechanics of Mao), which, in fact, are tiles that can tessellate the plane in an aperiodic, non-repetitive way. The papers that discovered these tiles are being peer-reviewed. They will be proved to resolve the Einstein Problem. I would highly recommend going through their introduction<sup>1</sup> and reading the preprinted paper by David Smith, Joseph Samuel Myers, Craig S. Kaplan (shoutout to our professor!!!), and Chaim Goodman-Strauss in 2023.

For the purpose of art exchange at Anime North 2024, I decided to design my own chiral aperiodic monotiles as giveaways when meeting other fellow artists and cosplayers. I started by constructing the SVG file of my Spectre tile on Inkscape.

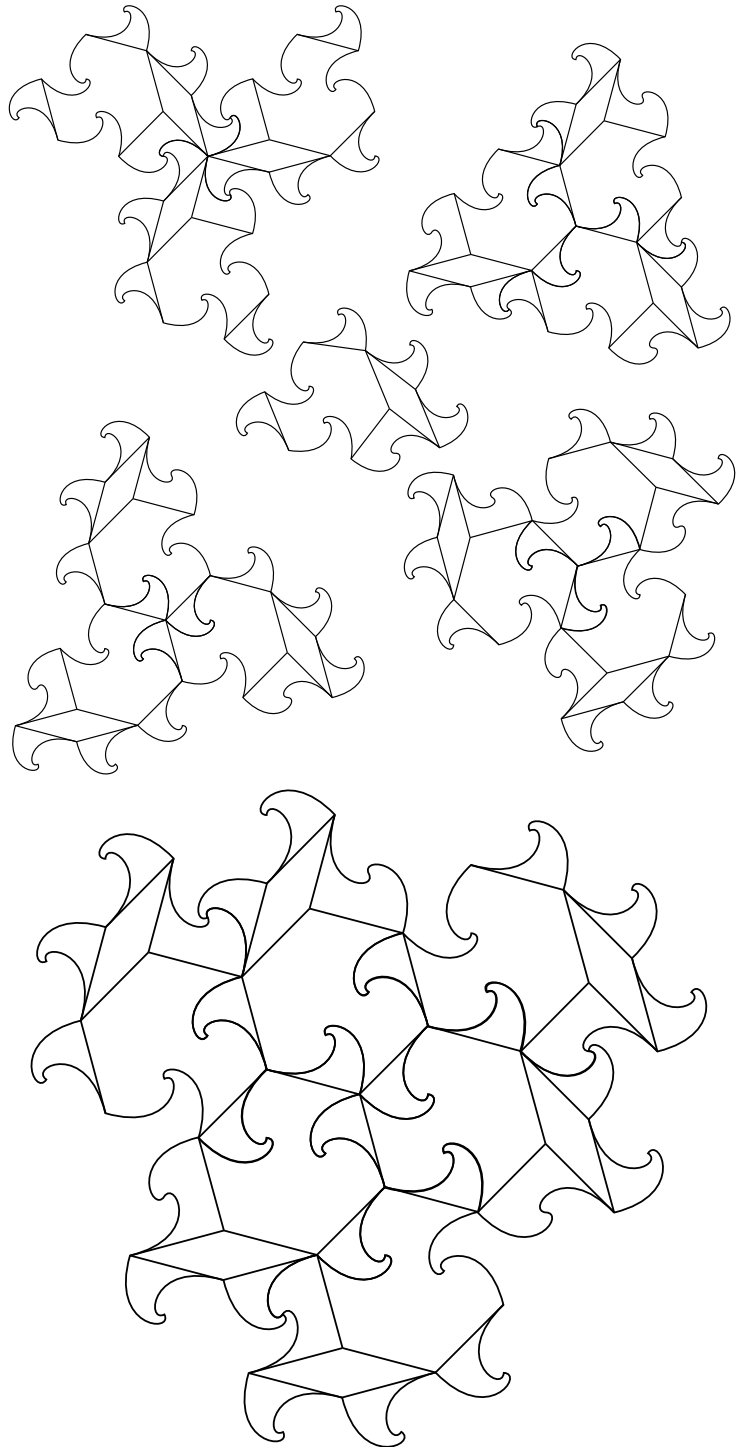
First, I needed to create the Tile(1,1) mentioned in the paper, and then curve the edges of the polygon inwards and outwards alternatively. I also added a few support lines between the vertices, which were inspired by the designs of Yoshiaki Araki (@alytile on Twitter). His script<sup>2</sup> was also a very helpful tool to determine the Bezier curve of the edges!

Next step was to load the SVG file in Blender and define the solid shape for 3D printing. The SVG skeleton can be turned into a mesh. The mesh can be further expanded as a solid model that is 2mm in thickness.

Finally, the exported STL file was loaded to the slicing engine Cura, creating a .gcode file for the 3D printer to use. I copied the gcode file to my Neptune 4 Pro printer and started the printing process. I let the machine handle 30 tiles at a time. It felt very satisfying watching the machine cooking the tiles like cookies. I can smell the pleasant odor.

To make the gift fit my character, I named my tile “flame” as I would cosplay as Joshua Rosfield from Final Fantasy XVI. Joshua is the Archon of Fire and the Dominant of Phoenix in the video game. I also found some interesting characteristics of this shape. The little tips of flame can be hooked together tightly, creating a combined pattern that is difficult to break apart. They are also very light to be carried around.

Here are the assets<sup>3</sup> for you to explore or print my design. Feel free to use them as templates for your own projects. I tried assembling these tiles in different patterns. Here are some notable patterns that only use a few pieces, but they are vibrant and vigorous as flames. I hope you *find the flame* and live a life on your own terms.



erálogos

1. <https://cs.uwaterloo.ca/~csk/spectre/>
2. <https://www.desmos.com/calculator/vh3z0qhlrq>
3. <https://github.com/zzhengzhu/SpectreDesigner>

# MY FAVORITE THING ABOUT GO TRANSIT

I am writing this article on a GO bus. This is my sixth hour today spent on our province's public transit system. I left Waterloo on a Sunday afternoon, spent an evening in Toronto, and I will be returning to Waterloo on a Monday morning. As you can imagine, I've spent a lot of time thinking about GO Transit, as a system and as an idea.

For me, GO is the ultimate liminal space. I don't own a car (I don't even have a G2), so the only way I can move between stages of my life is by getting on a GO bus. School, home, work. These things jostle for priority in my life, but the lines between them are marked by the times I step onto or off of a GO Bus.

The time on a bus, therefore, must not represent any of these. Who am I while I ride? I float on a sea of green and let the current sweep me away to the next moment.

Here's something interesting: GO has started to represent new artistic experiences. As I get older and busier and less solitary, it's started to get rarer that I can sit down and deliberately *listen* to a new album or *read* a new book or *watch* a new movie or *play* a new game. Sure, I do all of those things at home, but usually in the context of multitasking. I listen to music while I cook or walk to school, I read on the bus to the grocery store, and I play games while on Discord calls with my friends.

But when I'm on the bus, I'm *just* on the bus. There's not much I can do except indulge in distractions. I split my time on the way up to Toronto today working through the Fiona Apple discography and reading *Secondhand Time*, a book about ordinary Russians facing the collapse of the USSR. They were both great. I don't think I'd have done that today if I were at home.

I can remember the exact occasion of my first time on a GO bus. It was just over a year ago. I was living in Toronto for my first (and so far, only) remote job of my undergrad. I was coming back to Waterloo after six weeks of living on my own, in an Airbnb where people cycled in and out and I couldn't make any friends.

I originally wrote "coming back home" in the above paragraph, which should tell you something about how I felt.

It wasn't that GO Transit was my escape, per se. It was the leadup to my escape. The rattle of the bus was the drumroll before the music started. The long, straining journey becomes part of the payoff when I can finally see my friends or family or coworkers. If I could drive directly, it would be easier. Would it taste as sweet if I didn't have to work for it?

That's why part of me honestly doesn't mind the length of the trip, or the fact that I get routed along the most obscure, winding routes. I feel more closely connected to Ontario and her great people. Maybe it's not a problem that I got trapped at Square One. Maybe it's an opportunity to go to the Food District and get some nice boxed pesto and sit outside and see

everyone, living their lives. It's a chance to intersect with their lives, briefly, then cross and move forward.

One of these days I should really see what *else* goes on in the city of Brampton.

But that's not what I wanted to say about GO Transit. What I really want to say is: wow, GO Transit has really good branding.



**THE GO TRANSIT LOGO HAS UNDERGONE VIRTUALLY NO CHANGES SINCE ITS INTRODUCTION IN 1967; THIS IS BECAUSE IT IS WITHOUT FLAW.**

Look at this, man! It looks so nice. It looks like a stylized word GO, sure, but it also looks like a branching road, and it *also* looks like a pleasant collection of geometric shapes. They remind me of the green plains and hills of our great province—the very same ones I can see from the window of a GO Transit bus.

Also, did you know that GO stands for GOVERNMENT of ONTARIO? I didn't know that until I started looking into this! That's great! This logo means like 80 things in one. It's an absolute smorgasbord of meaning. Show me two people who look at the GO Transit logo and see the same thing. You can't. It's impossible.

Anyways, that's what I think about Ontario regional transit. I promise I'll get back to writing good articles soon.

Dick Smithers

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## HOW TO ADJUST TO LIVING AT HOME AGAIN

seriously someone please tell me I don't know

imissmyfreedom

# KITCHENER GO TRAIN PROGRESS REPORT

## PART 1

You hear it all the time. You're riding the GO bus to Toronto and by the second stop, the bus is full, delayed by 20 minutes, and packed with people forced to stand on the lower level. All of a sudden, the bus erupts into a symphony of "There's a train station right there," tales of Europe and Japan, and cries of "Why can't we have nice things?"

And it's true: there is a GO train line which you would much rather be on, but it only runs a handful of times each day and only on weekdays. Frustrated, you pull up the GO Transit website, and they redirect you to Metrolinx—the provincial agency in charge of transit projects—who promises you that **It's Happening™**, but with not much info on when, where or how. Is **It** even **Happening™** at all? Well, if you dig deep enough, eventually some details start to emerge. Here, I'll take you along the line from Kitchener to Toronto and show you.

### 1. NEW KITCHENER CENTRAL STATION

We all hate the old station, right? It takes like 10 minutes to walk there from the ION and then you have to walk up a muddy hill and hop over a railing. Fortunately, if you've been paying attention, you'll see a sign at King and Victoria promising a shiny new station sometime soon. Unfortunately, if you've been paying even more attention, you'll notice that that sign has been there since 2012. Still, it's not looking too bad—Metrolinx started on its share of the construction work at some point last year, and the Region of Waterloo is planning to start soon, with an estimated completion date in 2027. If you want to see some pretty renders, look up "King Victoria Transit Hub."

### 2. BRESLAU SECOND TRACK

Okay, now it's finally time to look at the cool diagram I put at the bottom of this page that I spent way too much time on. If you look between Kitchener and Georgetown, you'll see that there's about a 50km stretch with just 1 track. That's not a lot of tracks.

If you've been looking out the north window of the train soon after it crosses the Grand River, you might have noticed people starting to fix this problem. A second track is being built in the town of Breslau, between Fountain St. and Shantz Station Rd., and will enable all the fun benefits of having two tracks, such as letting trains go in opposite directions without bumping into each other, and letting fast passenger trains bypass slow freight trains. You'd think they would've figured this out a while ago, but at least it's happening now.

Construction is largely done at this point, and the second track should open for service later this year. If you'd like to see the progress not out the window of a GO train, you can take a bus to the edge of Kitchener and then walk along a terrifying, sidewalkless road to Breslau, which I have done multiple times because I am insane. Fortunately, there are plans for a potential new GO station in Breslau to be built sometime in the future, possibly to thank them for putting up with all the construction.

### 3. EXPANSION OF THE BRESLAU SECOND TRACK

Building a second track to Shantz Station Rd. is cool, but what if it went even further? That's exactly what's planned next, as soon as they get around to replacing that old bridge over the road that's too narrow to carry two tracks.

This is somewhat of a larger project than the current double-tracking, which doesn't require any bridge rebuilding, so it'll be a separate project. Metrolinx hasn't written contracts for this yet, but in a recent article, they promised that they will sometime this year.

### 4. SECOND PLATFORM AND TRACK IN GUELPH

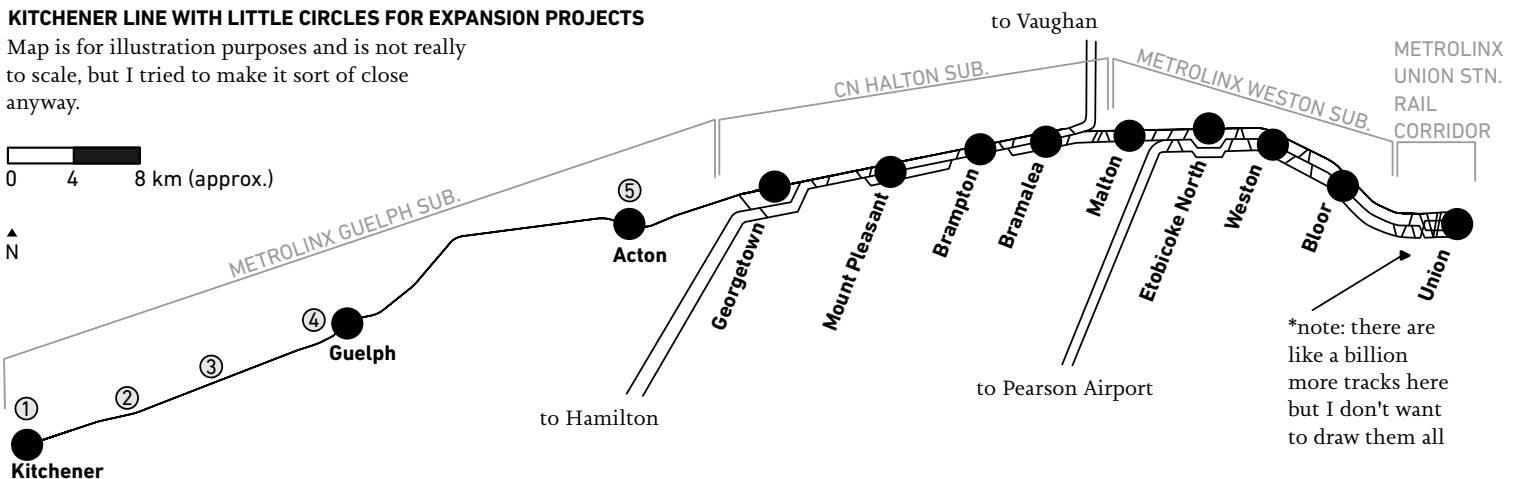
Ever been to Guelph? If not, you should go—the train ride costs like \$5 one way and takes 17 minutes, which is twice as fast as driving there. It's a little strange in some ways—at one point the train track heads straight down the middle of Kent St.—but their train station is much nicer than ours, and it's

#### KITCHENER LINE WITH LITTLE CIRCLES FOR EXPANSION PROJECTS

Map is for illustration purposes and is not really to scale, but I tried to make it sort of close anyway.

0 4 8 km (approx.)

▲  
N



getting even better with a second track and a new platform to go along with it. Construction is all but wrapped up on the second platform, and the second track that serves it is connected to the main line east of the station, but dead ends to the west. Currently, work is being done to extend that track westward to act as another passing track. I'd imagine the end goal is to link up the Breslau and Guelph sections for a long span of double track, but that's one of the things I can only speculate on here.

## 5. NEW SIDING IN ACTON

Ever been to Acton? I haven't. I have no idea what's there. Anyway, they're building another siding there for trains to pass each other.

This is convenient because Acton and Breslau are about 30 minutes apart. What this means is if you have two trains that run every hour in one direction, you can squeeze in a third train in the opposite direction that passes the first hourly train in Breslau and the second in Acton, or vice versa. Combined with the passing track in Guelph, about halfway between the two, this seems promising!



Hey, look, we're in Georgetown now! Look at all those tracks! Surely the problems are over now; trains can pass each other whenever they want. Once we get those passing tracks up and running, we'll surely have all the train service in the world. Look at Hamilton! They get a train every hour, and on weekends too! I can't wait until that's us.

Wait, why does only one track stop at Georgetown? The GO train doesn't go down any of those tracks that split off the Kitchener line, why are they on the map? What are all these subdivisions? Who's CN? Something seems a bit more complex here.

Buckle in; we're just getting to the fun part. See you next issue.

derailed

## LISTEN UP.

I've got a message for you:

215394c683a0ff1fcd4eb7d2c6b71d77

(I've hashed it to save space.)

Totally Ununimodular

I have discovered that some websites do not quite work with the raw bytes provided for the hash. <https://www.miraclesalad.com/> will have the tools you need to reverse it.

# A COMPREHENSIVE REVIEW OF MOST (DECENT) SHAWARMA IN THE KW REGION 2

OR HOW I LEARNED TO STOP WORRYING AND LOVE THE GARLIC SAUCE

Alright, let's continue.

**PHILLIPS SHAWARMA (465 PHILLIP ST.): 6.5/10.0**

This one was very promising as it's pretty close to campus, just up Albert Street. Unfortunately, it just wasn't amazing. Chicken was alright but kind of dry. I'm actually not going to say much though because it turned out I was just coming down with a cold at the time. So maybe try it yourself. I will say, though, they would not give me free tap water, which is always a red flag (they said it didn't taste good—yes, I know about hard water, that is my own decision to make)

**SULTAN'S (25 KING ST. N): 9.0/10.0**

I'm not sure if Sultan's really counts since it's so well known, but it's outside of the general campus/plaza area so I'll include it. Also, it's really good. Their vegetables are very fresh and plentiful, and so is their hummus. Meat quality is really good and the shawarma is crispy and flavorful; *that being said*, it gets dry quickly, so try to eat it as fast as possible. They also have a pretty good selection including chicken legs and kebabs which helps them stand out. In terms of combined ranking by both convenience (i.e. distance from campus) and quality, Sultan's probably wins.

**FOREIGN SHAWARMA (851 FISCHER-HALLMAN RD.): 8.0/10.0**

This was my fiery ending to my shawarma quest. I ran all the way here, starting from King and Columbia as preparation for the Toronto Marathon. It started raining torrentially halfway through, so by the time I got there I was concerningly soaked and very hungry. I kept myself motivated by imagining there was an eldritch horror that traps your soul for thousands of years chasing me. I got a mixed wrap with chicken and beef. Although the texture of the chicken and wrap were pretty standard, what actually really stood out for me was the seasoning. If you've ever been to Ghadir in Toronto, it was kind of reminiscent of that. This added a unique flair that bumped the rating up significantly for me. The poutine was also pretty good, kind of Costco-esque.

I also wanted to try Arabesque but didn't get a chance. Apparently they're quite good too. If you get to try only one of these, I would recommend 1001 Nights, but again, Sultan's is probably the best for regular consumption.

epic\_waterman

## SORITES PARADOX (ON RETURNING HOME)

There is an often-quoted paradox that asks you to imagine a heap of sand. You can remove a grain from it: it will still be a heap. Remove another: still a heap, and so on. But as it shrinks, and you get down to five grains of sand, then two, then one, at what point did your heap stop being a heap? When did you miss the transformation?

There is a paradox in you, too: somewhere on the highway heading home, in the dark cabin of the coach bus, without you even noticing—you become *her* again.

The old you, hidden away somewhere while you build yourself anew, again and again and again, for people who didn't know her. Like an old mismatched sock at the bottom of the laundry bin—you look at her and think, "I really should get rid of that," and then, inexplicably, keep hanging on. She curls up quietly in the damp corner of your rental, waiting for that bus ride home.

It's not that uncomfortable to be her again. You feel weirdly guilty over the fact, but truthfully it's a simple place to fall back into. Path of least resistance. There are bumps in the road here and there, of course. You get uncertain glances in the women's clothing aisle. You avoid looking at the skirt in your closet, the one remnant of the Catholic school uniform you can't manage to throw out. The milky-eyed old woman at the convenience store says "Have a nice day, sir" and your mother's laugh is high pitched, oddly tense. But for the most part, you can ignore the growing *he* within you, leave him behind as you get off at the bus stop near your house. Walk towards your street with your chest forward like your grandmother taught you.

He's impatient lately, though, and you can feel it. When you get home he stays coiled around your shoulders, stirring slightly. Not a heavy weight, but hard to ignore. More and more often, as you act the pantomime at the dinner table, the idle chatter cuts to silence and he snaps into focus. He grows darkly around your neck in the dim orange light of the kitchen, your family like shadows on the wall of the proverbial cave. There's a ringing in your ears: your father's laugh sounds as if miles away, and you think, suddenly, violently: *You don't know half the person I've become.*

And you want, so badly, to tell them, but you can't. They must know something—somewhere, deep down—the gaps in your time together are tangible, no matter how awkwardly you all pretend they aren't. Just another missing entry in the timeline, what you don't tell them about. Same as the drunken nights, the loneliness, the insurmountable height of the world that rises before you every morning. That world they watch you walk into every Sunday as you turn and board the bus back to Waterloo. Every time, reeling. This simple loss is already too much for them.

So when your mother tells you she likes how you've been growing your hair out back to how it was in high school, when your sister needs "girl talk," when your father proudly

introduces you as his daughter, you smile and tell the *he* around your neck to sleep.

In truth, there is no set point where the heap becomes a grain, because a heap is ill-defined. You, too, are ill-defined: a walking paradox. And this is alright for now.

mobpsychofan

## N PIECES OF LORE ABOUT mathNEWS CONTRIBUTOR HAIRBALL SEND TWEET

### COLLAB BETWEEN INSTANTPOODLES AND HAIRBALL (HI)

- First time we met, *hairball* told me they had never seen a cat. (Afterwards, provided clarification that the exception was cats on Google Images.)
- Acted like they were shot after raising their hand for pizza topping democratic vote at this **mathNEWS** prod night... social anxiety as custom per math students.
- Refers to themselves by "the" before their first name.
- Actual *hairball* quote: "Hey, put a regression on anything and I'll be interested." (*instantpoodles*: Put a regression on your mom haha.)
- Knows what a furry is (Unexpected. Delightful.)
- When asked how many friends they have: "Multiple." (Math major. QED.)
- Can taste the difference between 2% and whole milk. (*instantpoodles*: We may or may not put this to the test soon. If I manage to cough up enough coins for this.)
- Tells people they are allergic to tomatoes (they are not.)
- *instantpoodles*: Writes "N pieces of lore..." in article title. *hairball*: "Why don't you add a little gamma. A little alpha." (NERD ALERT)
- *hairball* toast recipe (pinnacle of gourmet cuisine): Four fifths off the halfway point between lightly toasted. Light layer of peanut butter. Millimeter rise, some 3D texture to it, spread over the surface area. 2 slices, each spread independently. Mutually exclusive. Do not skimp on the PB (crucial).
- The one time *hairball* texted me an emoji was in reference to me having a poor MATH 235 exam. Actual extract from our *instantpoodles* and *hairball* Discord conversation: "I mean you could've done more practice though :skull:" Brutal.
- *hairball*: "*hairball* is a modern-day prophet. Second coming of Jesus."

instantpoodles & hairball



# REVIEWING ALL CAMPUS BUILDINGS AS STUDY SPOTS

In an attempt to “get out more” whilst “locking in,” I’ve decided to study in all (most) UW buildings. Join me on this quest!

## ARTS LECTURE HALL (AL)

This sad, scary building is where I spent many a morning confused in my 8:30 AM STAT 230 lectures of past. Comforts here are scarce and exist only in the form of a peeling leather sinkhole of a couch, and the potential of Arts CnD making a return (albeit with an increase in drink prices ☺). I studied in an upstairs room which had both a whiteboard and a chalkboard! Awesome! Unfortunately, I used neither. My only comment is that it was moderately chilly.

## BIOLOGY 1 (B1)

B1 is a confusing building. I found not a single table or desk on all three floors of said building, with the exception of a singular chair-less table that seemed to be propping open a service room. I did not sit at this table. Instead, I made friends with the numerous taxidermy birds located on the third floor, and lamented their lack of freedom. After, I relocated to B2.

## BIOLOGY 2 (B2)

This was a surprisingly nice study session. B2 shares the same dual-person study tables as QNC, but without any of those distractingly gorgeous windows. A decrease in windows = an increase in productivity.

## B.C. MATTHEWS HALL (BMH)

I’m not entirely confident that I studied at BMH, but for the sake of the article, let’s say I did. The Health buildings are shockingly nice! Very airy with lots of study tables on various levels. Truly awesome stuff.

## CHEMISTRY 2 (C2)

Yet another building I failed to study in. I traversed all four floors of C2 in search of a table or a desk or even a room without a “CAUTION: RADIATION” sign on it. Unfortunately, I found nothing. That being said, I did discover a 2005 Plant Ops map in the basement which shows a labelled service tunnel passing beside C2. Alas, every door I tried to open was locked and I eventually left after a helpful janitor asked me if I was lost. I guess not everyone makes it out of the C2 basement.

## CARL A. POLLOCK HALL (CPH)

The first of the engineering buildings. I was debating pretending to be in SE in an attempt to enter the SE lounge, but I feared the Laurier crop top would give away my double-degree nature. Instead, I wandered about the first floor and was pleasantly surprised to find AC and computer labs reminiscent of MC. I felt at home.

## DAVIS CENTRE (DC)

Arguably the best building on campus. As a propagator of the Math-faculty-exclusive-DC-library agenda, I refuse to study in DC library until my dream becomes a reality. Thus, I took to the sky. The second-floor tables are a peaceful oasis mere minutes away from the chaos of the never-ending Tim’s line. To whom it may concern, please give us students access to DC floor four.

## DANA PORTER (DP)

First off, I refuse to commit the travesty of shortening DP to LIB as in the official Campus Map. Otherwise, the upper-floor DP windows provide a wonderful view of campus, if you can get past their jail-bar-like width. I had no clue that many of the middle floors were under restricted access. Who are they keeping in there???

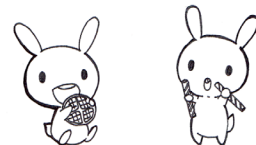
headphones97

# THE BEST TWO RAILINGS ON CAMPUS

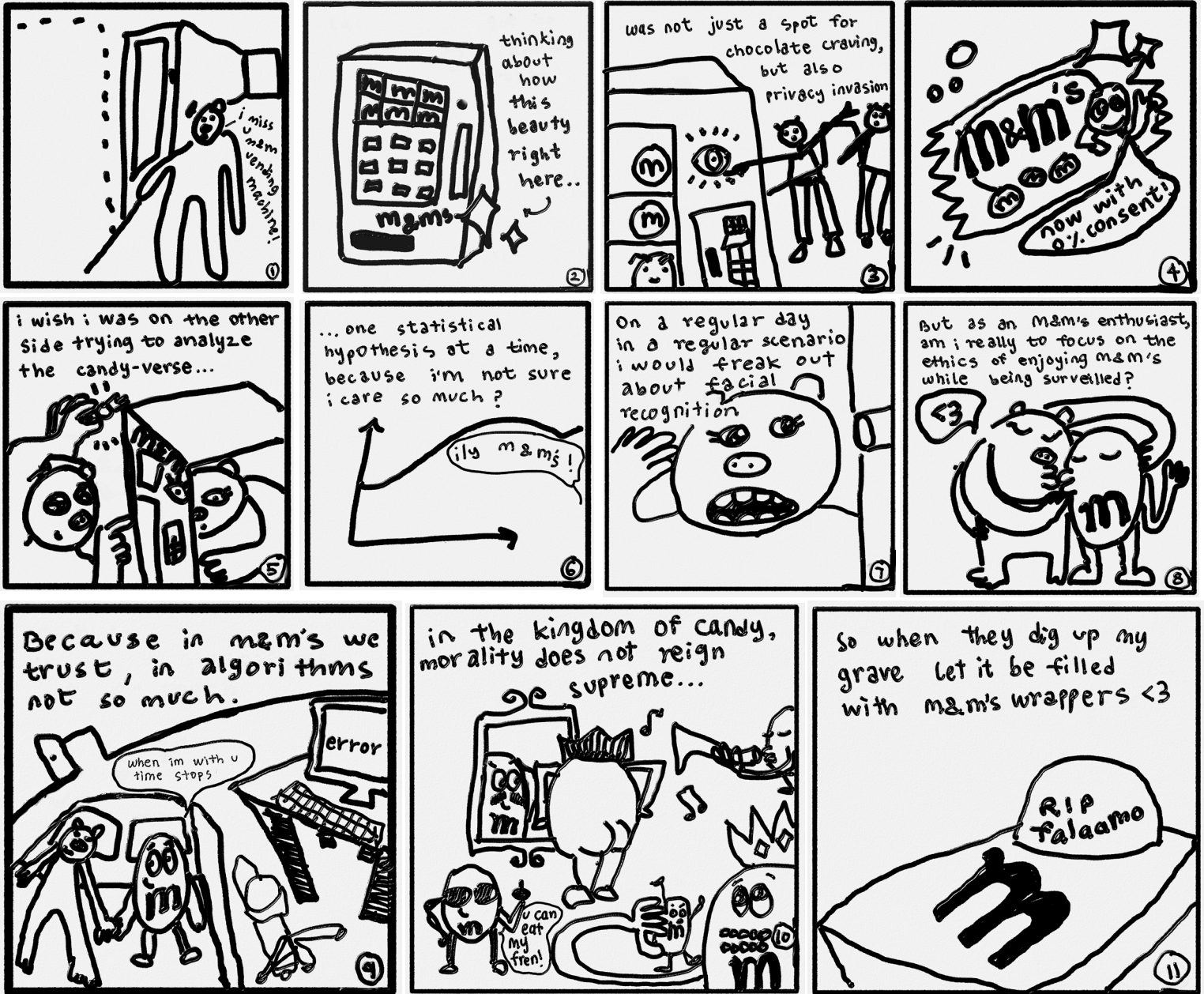
∃ a few special railings that on campus that I have kept close to my chest for quite a while, sharing with few. Those few are very indifferent, so these railings have stayed secret. But now is the time to share them with the world.

1. Walk to the front of MC, take the side entrance to the stairwell, then walk to the platform in between floors 3 and 4. Facing the stairs that lead you to floor 3, there should be a railing on your right. Firmly strike the highest segment of the railing, on its side, well above the highest support beam. The result should be a pleasant, echoing boom, lingering for several seconds.
2. Go to the stairwell of Conrad Grebel University College which leads from the end of the long hallway of the academic wing, all the way up to the 4<sup>th</sup> floor, such that it splits the two residence hallways. At the top of this stairwell, the railing curves from a slant into being level with the ground. Strike just past this curve with the heel of your hand to produce a short, vaguely flatulent, but interesting sound.

SirCumference314



# VERY LATE ODE TO M&M VENDING MACHINE FROM A PROCRASTINATOR'S JOURNAL



falaamo

## WIRELESS EARBUD PSA

BY A VERY LUCKY IDIOT

If you lose a wireless earbud, don't put on your laundry until you either:

1. Find your earbud, or
2. Check every piece of clothing you are putting in to the wash individually before putting them in.

It was very fortunate for me that the single Pixel Bud that got caught in my PJs when I fell asleep with it in managed

to come out undamaged and still functional after being put through the wash. Don't be like me — check your belongings before, not after.

Sexy\_Software\_Babe

It probably also helps greatly to not fall asleep with earbuds in in the first place but, you know what, that's not the point and it's my article so you can't tell me what to do.

# I MANAGED TO INJURE MYSELF DOING LAUNDRY

AN EXAMINATION AS TO WHY I REALLY SHOULD GO TO THE GYM

Let it be known, that on a certain Victoria Day, that I had managed to severely maim myself in the process of doing laundry, in which I bent my back downwards to gain access to some wet clothes in my washing machine, to which I was met with an excruciating and sudden failure of my back, that instantly sent shockwaves through my persons and befell many curses of agony;

And that upon finishing my task I found it impossibly difficult to move myself across my apartment; to even drag myself to bed took effort beyond compare, and the simplest task of laying down was near impossible;

Such pain had only grown after a night's rest, however, yet, finally waning, but after a few more moons of self-applied massaging of the afflicted area;

So, may others who follow my path of isolation heed my warning, and follow the advice from my mother that I often choose to ignore: for the exercise of the body is needed as much as one exercises the mind within these scholarly walls, and perchance visitations to the surface realm; or the arcane and mysterious building known as PAC is in order.



i hurt my back doing laundry. it hurt a lot.

this was really silly. please dont do this and touch grass.

andoiii

# N THINGS TO (NOT) SAY TO YOUR GIRLFRIEND AFTER SEEING HER BOOBS FOR THE FIRST TIME

SPEAKING AS THE GIRLFRIEND

- cool beans
- awesome sauce
- yippie!
- wowza
- googly moogly
- boob-tastic

shout out to *wifi x smasher* for this inspiring list

headphones9

# HOW TO STEAL JOBS FROM PHYSICISTS

ACCORDING TO A PMATH STUDENT

Before we start, I want to make something clear. I am NOT an AMATH major. I am NOT a MathPhys major. I'm allowed to be interested in several things, and physics is just one of those.

Anyways, we all know that WaterlooWorks is rough these days. The once plentiful well of software jobs is drying up, and everybody is circling like vultures, trying to pick off any jobs unfortunate enough to not require a cover letter. In these trying times, I offer a different approach: how about stealing jobs from a different major? Learn new skills! See the world (Sudbury)! Confuse physicists! Here is my step-by-step guide.

**1. Learn the appropriate skills:** Now, you might be thinking, "I'm not a physics student. I don't have time to take any of their courses." You're right. However, this doesn't matter. Here is what to learn:

- Learn Fortran. All of the old physicists will love you, and thankfully, they're the ones who are doing the hiring.
- Take STAT 231, then watch a bunch of 3B1B videos about statistics. They will like a person who can pretend to know stats.
- Watch some Feynman lectures and learn some fancy cool words.
- Take MATH 235. Congrats: you can now do quantum physics.

**2. Read their Papers:** Before you message someone, read their most recent research paper. Then, if you find it cool, learn some of the keywords and if necessary ask an AI to make sense of what is going on. This will give you the edge when cold-emailing people.

**3. Hide your Major Intentions if Possible:** If you haven't declared a major yet, tell them that you're considering AMATH or MathPhys. This will considerably help your chances.

**4. Go for the Weak Ones:** Research Professors typically have a lot of underlings available to them, and as such are much less willing to accept help from some random math major. Instead, go for the postdocs. They tend to have much more interest and passion for the work and are often *very busy*, and so they are more likely to accept your offer for help.

**5. Don't be a Basement Dweller:** If you've followed the guide so far, you should have at least one interview, congrats! Now for the interview. I know that this can be hard sometimes, but all you have to do is *act like a normal person*. Just present yourself as a mostly normal person, and the physicists (who are probably socially awkward themselves) will like you.

**6. Be ready to accept sub-minimum wage:** Wait shit

Shahabee

# profQUOTES

## PMATH 347: STEPHEN NEW

“ A student sent me an email saying they and their friends want me to go faster and do less examples. I think I’m going to ignore that.

“ We use that often in math. It never means anything.

“ Where did it come from? It came from my boundless imagination.

## CS 247: ROSS EVANS

“ Hello everyone! *[Class keeps talking]* What do I have to do to get people’s attention...? Should I—should I just start writing? *[Class keeps talking]*

“ By the end of this class, you’ll be tired of me writing code that should work, but then me going: “*Hahahaha!* It doesn’t.”

“ You come to me and you say “I don’t go to the University of To-ron-toe, I wouldn’t write  $n = n$ .”

“ If you’re in CS 246 you get this cow when you log in, and I always thought it was stupid, but last time I was teaching I got Piazza posts saying: “HOW DO I GET THE COW?” So if you want to know just ask on Piazza.

“ You’re not actually in control of your life, it’s the compiler.

## CS 240: ÉRIC SHOST

“ We’re not in MATH 239 here.

## CS 240: MARK PETRICK

“ Remember, the alligator always wants to eat the larger number!

## MATH 245: ALEXANDRU NICA

“ Ah, we blame it on engineers.

“ More elevated people call it kernel.

## PMATH 351: NICO SPRONK

“ Now my cats are miserable because I have drawn numbers on them with a marker.

## CS 860: RAFAEL OLIVEIRA

“ How many of you game?

## PHYS 242: MATTEO MARIANTONI

“ I’ve heard this theory before, and I don’t care.

## MATH 237: JOE WEST

“ *[Crossing out terms in the numerator and denominator]* Good Will Hunting moment. Good job class, we just simplified.

## ECE 124: ALBERT WASEF

“ Student: Why does this work? Prof: You’re taking me in a direction I really don’t want to go.

“ Don’t leave, I will come after you.

“ Why are you laughing?

## CS 251: ZILLE HUMA KAMAL

“ If my handwriting is messy, consider it a testament to my PhD.

“ If the TAs are feeling happy, you get a string of 100s. If they are not, a string of 0s.

## BU 362: SHIRLEY CHEN

“ *[Talking about a certain case analysis demographic]* Now, guys, I want you to target young girls.

## CO 250: VIJAY BHATTIPROLU

“ *[Proposing a graph problem about a dating website]* We make the assumption that every person forms a couple with at most one other person. I’ll leave it to you to decide if this is realistic in today’s society.

## CO 342: MARTIN PEI

“ I’m always doing something illegal.

“ No vertices touch each other at all. No edges touch each other. No touching.

## CS 349: KRIS FRASHERI

“ I used to play League of Legends. I’m a degenerate, I know.

“ *[On bad user interfaces]* It’s like how going on X or Twitter is nowadays. It’s confusing and scary.

“ I love JavaScript. You forget a bracket and your whole life falls apart.

“ You’re all going to California!... Or busting. Not that kind of busting.

“ God help you if you take graphics. I took it and I lost my mind trying to draw a triangle.

**CS 446: NASIF AHMED**

“ Let’s say Steve Jobs—is dead... Let’s say Elon Musk posts something.

**CS 492: CARMEN BRUNI**

“ Sorry, you read the paper of a dead person. You’ll probably read more from dead people, so that’s fine.

“ Elon says a LOT of stuff. Sometimes it’s true, sometimes he’s high.

“ *[Runs a poll]* Those who say yes? Those who say no? And Switzerland? Switzerland means not yes, not no.

**PMATH 352: MICHAEL BRANNAN**

“ *[Piano sounds outside]* The music is lovely, isn’t it? *[Closes door]*

**PMATH 441: DAVID MCKINNON**

“ That’s uncontroversial... as long as you interpret that statement correctly, which I assume you all do.

“ “Turns out” is a great phrase. It’s an appeal to authority that doesn’t look like an appeal to authority. “Just trust me.”

“ Turns out you don’t need a keyboard to make a typo.

“ “Character building.” That’s what everyone says before anything that sucks.

“ Any smart-alecs who say “Oh, maybe R is a set of panthers” will get 0.

“ It’s fun to imagine it’s murdered, though.

“ *[Rips paper]* No molecules were harmed when I ripped this.

“ If a ring isn’t noetherian, it probably means the mafia is making you deal with it.

“ Sometimes we need to deal with the mafia.

“ *[On the board]* Proof: Google. QED.

“ And later on in the course, you will see, “Of course, we will not.”

“ Why are we doing this? And the terrible answer is this: I’ll tell you when you’re older.

“ I am Krull. I will crush you.

# THE ECLIPSE

On April 8<sup>th</sup> of this year, hundreds of thousands of people gathered en masse in southern Ontario for the possibly once-in-a-lifetime chance to view a total solar eclipse, and I was no different. After seeing the partial eclipse back in 2017, my dad and I planned to make the short trip down to Niagara to see it ourselves. We’d booked a hotel somewhere in the area and found a location that hopefully wouldn’t be too crowded; we’d checked the weather and crossed our fingers and made the drive down two days before; and we woke up in our hotel room on the day of, and saw it was cloudy.

So, we checked out a day early, packed up all our stuff within half an hour and started to drive down to Port Stanley, where online resources suggested there wouldn’t be clouds at the time of totality, and halfway there we realized we weren’t going to make it in time. So, then, we changed course and drove down to Tillsonburg, put out our chairs in the middle of a park and waited for the moment to come.

So, was it worth all the time and effort?

I would say so. I think the experience was slightly dampened by the fact that I’d seen many pictures of a total eclipse before. I can only imagine what it’d be like if I had no idea what it’d be like beforehand. But, at that point, I knew everything about the moment of totality and what the corona looked like and the 360-degree sunset and the diamond ring effect and so on. Still, it doesn’t compare to seeing it in person. Even though all the pictures online focus on the actual sun as it gets covered, the full experience is taking in the whole thing and everything around you.

The first thing they don’t tell you about is how much colder it is leading up to the eclipse. I’d experienced it in the partial eclipse, but it was still weird to experience such a sudden drop in temperature while it was still sunny out.

The second thing they don’t tell you is how the lighting changes leading up to totality. I don’t know what I was expecting, but up until five or ten minutes before totality everything seemed normal. Then all of a sudden, the noontime sunlight turns into late afternoon sunlight, then into sunset, and before you know it, totality hits.

The third thing they don’t tell you is the colour of the sky. All the pictures online show it as black, and I was fully expecting the sky to be all dark and black, with an orange ring around the horizon. But when the time came, it was completely different to my expectations. I tried to capture it with my camera, but it just wasn’t the same. Around the horizon was still the same orange I expected. But the most memorable part of the eclipse, the part that stuck with me the most in the time after the event, was how above the horizon, the colour of the sky faded into the most beautiful, unphotographable, for-in-person-eyes-only deep shade of pure blue.

# MY PRESIDENT GOT COOKED!

When the Iranian president's helicopter crashed in the northern mountains, it took 24 freaking hours to find the cooked remains of him and others in the crash. As an Iranian, I spent the entirety of this time on Twitter (fuck Elon Musk) laughing at the jokes and memes that was coming out of this situation. You might start thinking that I am a piece of shit for feeling happy for a human being's death, I would say to that: fuck you, you are probably a piece of shit too. But also, he deserved it. If you are not one of the poor traumatized individuals from the Islamic Republic of Iran, let me enlighten you. During the summer of 1988, a series of mass executions happened targeting political prisoners and opposing ideological thinkers. Many were abducted from their homes, executed without trial, and their bodies were never returned to their families. He was one of the people directly responsible for their murder. I don't mind him getting cooked in the crash and eaten by the bears, although I think the bears won't even want to eat him.

In celebration of him turning into cooked dog food and one mullah less in the world, here is some fun stuff that came from it:

- "This time a sheep wanted to kill his son, so God sent an Abraham down." The president's name was Abraham.
- "Azrael to Raisi: Are You Lost Baby Girl?"



- Someone tweeted "I realized today that I was not depressed, just that my president had not been eaten by a bear!"

summerwine

## BEING IN CS

I've heard people have very different opinions about what it must be like being in CS, and honestly, different people have very different experiences. I know some who literally do not do any assignments themselves—they've got friends who'd be more than happy to help. I've also met others who are so freaking hard working and cracked it's crazy. They just know all the concepts already and are probably wasting time by coming to university. And then there's the third kind that wanna start companies and are fully focused on that (my personal favourite kind). Academia vs industry vs start-up is a huge decision, but I feel like most people just default to one of the first two. I love academia's work life balance and doing what you love, I love the stability and pay that industry life offers, and I love the control and freedom that a start-up would give. I have no idea what I am going to do :)

ham

## N QUOTES THAT I OVERHEARD THE GUY NEXT TO ME ON THE PHONE ON THE TRAIN SAY 8 MONTHS AGO

- "I think you need to start looking for people who are more like you. Vaguely narcissistic."
- "Gotta be honest, if there was a woman I really liked and she turned out to be like devoutly Amish, that would be a hard sell. Or like homophobic. Or racist."
- "There's one group of people who get hit by surprises more than people who don't plan, and that's people who plan for a completely different outcome."

Overall rating: weirdly insightful

normalparameters

We're really scraping the bottom of the notes app with this one folks

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In the fall of 2016, I was sitting at my desk watching YouTube videos when someone walked in and placed something on my desk. I heard the gentle thud of it hitting the desktop, looked up, and they were gone.

It was a strange-looking object. I stared at it, engrossed, confused, afraid—but curious. Where did it come from? Why was it being given to me? And who was that?

Eventually, the curiosity won, and I picked it up. There was something about carrying it around that I couldn't put my finger on. *This is bad*, I knew. *But maybe I don't have to care*.

I carried it around with me for a while. I didn't know why, or what I was expecting. Maybe people will think I look cool, holding this thing in my hand. *Just because I carry this around doesn't mean it's part of me, right?* I'm just holding on to it.

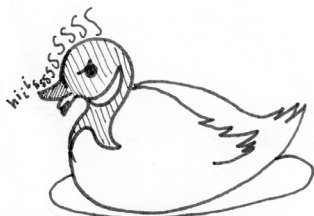
It's much more difficult to use my left hand, now that I'm always holding this in it, but it's not really an issue. I don't want to put it down—it just feels weird not having it now, and my hand aches if I'm not holding it. Besides, it's been so long now since I picked it up. There'd be no point trying to get rid of it.

It's 2020. It's been a very long time since I tried to use this hand. It's been a really long time since I thought about the strange person who gave this to me... or about the nature of what I'm holding. I never quite figured out what colour it was, or what exactly it was made out of. Has it always looked like that? It's hard to tell how my life would have been different if I'd ignored it. I've always felt like it was affecting me somehow, but I could never really figure it out.

I can't put it down. I think I want to now, but I can't. *Is it really going to be like this forever?* I wouldn't really care it was there if I could understand the fucking thing, but I just can't. I don't know where it came from or why I have it or how I got it or what it does or what it is, and I never will. And I'm never getting rid of it.

But maybe I don't need to. Maybe if I don't understand it, I'm hasty to try to get rid of it. I don't think I'll ever understand, but I know it has significance. I don't even remember who I was before it. I'm not sure how long ago that was exactly... but it was a long time. Really, it's all I've ever known. Am I even anything without it?

nazz



## TRAGEDY OF A NEW mathNEWS WRITER

In their 1A term, a new **mathNEWS** writer made their way to an out-of-the-way seat in the Biology lecture hall. They knew no one at first... nor at second—heck by the third production night they maybe knew one person? (Maybe.) Yet, by the end of the first term, they had at least familiarized themselves with many of the names (the writer names, that is—it is still not confirmed whether **mathNEWS** writers have real names) and faces that would be present every fortnight. Or so they thought. The change of the term brought new people and a new venue. What this new writer did not realize is that, due to the nature of co-op sequencing, most of the familiar faces seen in the previous term would never be seen again. Rather, they would have to renaturalize themselves again with a novel group... social interaction 😊 I thought I did enough of that in the first term. Oh well, I look forward to hopefully talking to all the people I didn't in W24, now that you're stuck with me.

Whole Number Haver

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## THE DC TIM HORTONS DOOR

Long, long ago, in a time now forgotten (pre-COVID), the Chatime at DC was not Chatime. It was a Tim Hortons (yes, I think there were 2). Sadly, being the older Tim Hortons, it was shut down to make space for Chatime.

However, the door beside it still remains, and it still asks for those who try to leave through it to use the other door, in respect of the Tim Hortons staff. The ones which are now located far, far away and care about the automatic door much more.

Do you think any new students are extremely confused by this? That we're so patriotic, we care about a door opening affecting a Tims over 50 feet away instead of the Chatime right in front of it? Maybe it costs more to replace the paint on the door than to remodel Chatime back into Tim Hortons, and they're just awaiting the cycle to conclude.

PlatypusGod

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## GEEKED UP

debugging on [linux.student.cs.uwaterloo.ca](http://linux.student.cs.uwaterloo.ca)

all day

This piece was created with the intention for it to serve as cover art for this issue. After concerns from students, some edits were made to cover up the word "intifada" and the piece was turned into a student work. This piece is not representative of the opinions of the mathNEWS editors or other writers, but rather, my own beliefs and feelings. FREE PALESTINE.

We demand:



The

student

body

has

spoken

DISCLOSE

DIVEST

BOYCOTT

We demand:



We demand:

We demand:



# N THINGS I MAY OR MAY NOT HAVE DONE DURING MEMORIAL DAY WEEKEND AS A FIRST-TIME VISITOR TO CLEVELAND

## ONLY IN OHIO

- Told the truth, the whole truth, and nothing but the truth to those valiant border guards. "No, sir, I have no firearms to declare." "No, ma'am, I am not carrying at least \$10,000 USD or CAD equivalent."
- Sampled American conservative talk radio out of morbid curiosity, but shut it off five minutes later.
- Gazed at the religious billboards. "Will you get into Heaven?" they asked. Glanced down at my dashboard, and was glad I was at the speed limit.
- Held the steering wheel in one hand and printed-out directions in the other. Still happy I didn't get a roaming option.
- Drove a little too fast along the Shoreway. Had to beat the waves of Lake Erie.
- Went duckpin bowling, as long as the machine didn't malfunction.
- Realized that the children yearn not for the mines, but for the bowling alleys.
- Lay down in the dark, enjoying the company of friends.
- Discussed many unspeakable acts. On several occasions.
- Drove along MLK Drive, with tall canopied trees, stone arch bridges, and blooming cultural gardens all around us.
- Visited the Cleveland Museum of Art and gawked at the huge broadswords. I could have totally carried one.
- Asked myself: what is Ohio?
- Played shuffleboard. Spent more time posing with the sticks than playing the game.
- Foraged for mushrooms in Nelson-Kennedy Ledges State Park.
- Ate leaves.
- Explored the crevasses that once marked the continental divide between the Mississippi and St. Lawrence basins. Cut my hand on the rocks.
- Harvested some cattails, getting slime all over my hands.
- Ate a pizza burger and a pretzel cone ice cream.
- Convinced my friend to finish his peanut butter burger even though he didn't want to.
- Watched the Amish driving their buggies down the road. Oh, Waterloo, how I have missed you.
- Drank, smoked, vaped, and tripped for the first time.
- Listened to a train pass as we played with a Frisbee by the beach.

- Sprayed a squeeze water bottle everywhere except my mouth.
- Lay down in the grass and watched the blades flutter around me, the wind pass over me, the clouds roil above me.
- Stood on the balcony, watching the storms roll by. Spent some time with an old friend, protected from the downpour.
- Walked through the rain one last time.
- Spent the evening in a board game cafe.
- Left the playing cards on the table and talked for hours instead, living away that bright, beautiful night.

verdanik

## MY PRIME MINISTER GOT COOKED

LOOK AT HOW BURNT HE IS



Shahabee

## BOOPBEEP

BOOPBEEP BEEP BOOP BEEP BOOP BOOP BEEP  
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not a robot

# GET OFF YOUR PHONE: MY GUIDE TO STOP DOOMSCROLLING

A while back, I went and watched Kung Fu Panda 4 at a drive-in theatre. Unfortunately, I failed to realize that Gen Alpha—this movie's core audience—cannot go four minutes of watching something without a Subway Surfers clip beside it.

At some point, as I sat in the car watching, I felt a sudden shame for having downloaded Instagram again. Did I want to be one of these children, watching movies like this, unable to sit for two minutes without grabbing my phone? I've deleted such dreaded social media applications in the past and have gotten pretty good at keeping my distance from them, but lately I've gone back to my old ways. Everyone I know has similar issues with their phones and doomscrolling, but don't delete social media or change their habits because they feel FOMO or that it's impossible to be off your phone nowadays—I'm here to tell you it's not.

I had a summer where I tried everything. The little app timeout thing on iPhones which doesn't actually help because you can press the "15 more minutes" button, logging out of social media, taking it off my home screen... and I can tell you that *none* of that is going to work—you will end up right back on the app. The only way to really fix your doomscrolling addiction is by deleting the apps you're going to be prone to being addicted to. Keep in mind that these apps sell you a misconception that you'll be "out of the loop" without them. They make you think that you can't get by otherwise and that you can't keep in touch with your friends, family, and the news without an endless feed to scroll through. All of this is bullshit that they use to keep you on their apps.

1. **Start by recognizing that you have a phone. People can easily reach you through calls or text.** When I first got off of Instagram, I told my friends to just reach me using my number or my Discord, and that set a precedent that is still going to this day. My friends only contact me on social media when they're sending me memes. If your friends care enough, they'll be okay with moving the group chat over to iMessage or Discord, I promise you.
2. **Delete the obvious time-wasters.** Instagram, TikTok, Facebook, Twitter, and Reddit are all apps that love using endless feeds to keep you locked in. If there's an app that has something you *really really really* can't replace, then re-download it every now and then and delete it when you're done.
3. **Social media does not actually keep you that up-to-date with world events.** Do you seriously remember anything you saw on Instagram just now? Replace your apps with sources that will actually tell you what's going on in the world. I'm subscribed to a few newsletters that help keep me in the loop—they're usually short reads and easy on the information. **The Peak** is great for daily, Canadian (and some world) news (but

their millennial jokes and obsession with AI is horribly annoying). **The Morning Brew** is a similar American equivalent. **1440** gives you unbiased world in a newspaper-like style. **The New Yorker** is also great for some deeper articles, investigations, and interviews about anything—from music and film to politics and sports. I also visit some other websites from time-to-time, like **The Ringer** (sports and pop culture), **XXL** (hip hop news), and **404 Media** (super cool investigations).

4. **Replace this newfound time you have with hobbies.** Watch a YouTuber or Twitch streamer. Watch a movie or a show. Play videogames. Go outside. Try photography. Draw something, even if it sucks. We live during a time where a phone can do so much for us that we forget it can be used for more than just scrolling. Most of your hobbies can be performed with these little things if that's all you have accessible to you. Just don't mistake the convenience of a phone to reliance.

I know it seems like overkill. I'm not saying to abandon social media. I get wanting to sit and just kill some time and turn your brain off sometimes. If you get good at the whole deleting social media thing, you're ready to take it to the next step and go back to it for a bit. Usually, I'll re-download it every week to catch up to memes people send me or whatever else is going on that I may have missed. You can also just access it through your laptop or PC so you're grounded there. Social media is also much more difficult to use on desktop because they want you to doomscroll on your phone—this makes accessing desktop versions of social media really beneficial to battling your addiction.

Lastly, learn to appreciate a slower life. I read somewhere recently that this idea of being able to communicate with people so easily and quickly is still a new concept; it used to be that people couldn't reach you for the whole day if you went out. You'd come home and catch up to your voicemails at the end of the day and that was that. Smartphones have made our expectations for constant stimulation so high that we get annoyed when someone doesn't reply to our texts right away. Unless it's work, school, or an emergency, it does not need that immediate response. Teach yourself the discipline to accept that and let go of the fears of FOMO and punctuality.

I promise you'll feel happier doing it.

uusmann



# I LISTENED TO EVERY BEACH HOUSE ALBUM

I'm back. All I do is listen to music, apparently. Dream pop duo Beach House are adored by critics and fans alike, and I can see why. Their beautiful melodies, dramatic instrumental swells and haunting vocals are practically made to be slowed and reverbed.

**Beach House (2006)**— In typical indie band fashion, we start with a self-titled debut record. And it's very nice! Rather mellow and toned down compared to the type of music that they're known for. It actually feels like you're on a beach while listening; something about the guitar work and soft drum loops. Only having experienced their more recent output before writing this, the transition was jarring, but it only gets better from here on out.

**Devotion (2008)**— Now having graduated to an actual recording studio, Victoria Legrand and Alex Scally experimented with more varied sounds and textures, yet remained faithful to the slow haziness of their debut. There is a certain fullness to everything here, a quality that will remain throughout all of their later work. Random music nerd fact: an article written about *Devotion* coined Beach House as the Gillian Welch and David Rawlings of dream pop. Goddamn, what a compliment. Not to mention casually name dropping two of my favourite country singers...

**Teen Dream (2010)**— I'm so lucky that I can exist in the same time period as this album. This is truly a testament to the talent that this band has. They take everything awesome from earlier records, flesh it out to an extreme degree, dial back on the reverb, and release ten tracks overflowing with rawness and sophistication. They have hit their stride. The sheer emotion displayed on the record hits you like a ton of bricks. I can't listen to this without contemplating if what I'm hearing is even real. Is it real? If *Teen Dream* is real, please go listen to it, I promise you won't regret it.

**Bloom (2012)**— They won't stop, will they? Another gorgeous record, this time incorporating more live drums and sliding the reverb all the way back to the top. We missed you, reverb! A lot of the songs on here transition smoothly between each other, which is something I always enjoy, even if it takes away the small breaks you normally get to digest what you just heard. It adds to the grandiosity of the record as a whole; like a gigantic hour-long statement of artistry. Not much else to say, really. Beach House are Beach Houseing.

**Depression Cherry (2015)**— Ah yes, the red one. The simpler arrangements and instrumentation present in Beach House's first two albums make a return here. It would be a bit more depressing if the band didn't evolve creatively to a very notable degree since *Devotion*. The songs hearken back to an earlier time sonically, yet maintain the ingenuity gained through the *Teen Dream* and *Bloom* years. Musicians going back to their roots after exploring new ideas always leads to a more refined creative process, and therefore more great music. Definitely the case here!

**Thank Your Lucky Stars (2015)**— Released less than two months after *Depression Cherry*, we have another modern Beach House album steeped in the rudimentary. Drum machines, lots of echoey soundscapes, repeated melodies, and more. This tends to get overshadowed by its predecessor, seen in the amount of traction some of its tracks have gotten since release (hello, "Space Song"), which is unfortunate since the stuff here is just as good. I like imagining this as a second window into the same room; different point of view, different experience. [Editor's note: this one's my favourite 😊]

**7 (2018)**— Welcome to the second wave of Beach House. After releasing a B-sides and rarities collection to clean out the closet, the band allowed themselves more freedom while working on their aptly-titled seventh album, essentially doing what they wanted without considering the music's ability to be performed live. The result? A slow and surprisingly dark record that ventures into a lot of new territory while still adhering to a signature dream pop sound. Even with a fresh set of tools, Beach House can still rock.

**Once Twice Melody (2022)**— We end with a double album composed of four chapters, released over four months. The sonic range shown in *7* is greatly expanded, and while the album is not as cohesive as some of the others, it is still unapologetically Beach House. It seems like no matter what style or genre the band is striving for, they can pull it off with gusto. And it's seriously impressive, since not one minute of this sprawling project overstays its welcome. A slew of different sounds, tempos and themes have come together to create a lovely smorgasbord. It all just inexplicably clicks.

## FINAL RANKING AND FAVOURITE SONGS

1. Teen Dream — "Silver Soul"
2. Once Twice Melody — "Modern Love Stories"
3. Bloom — "Wishes"
4. 7 — "Lemon Glow"
5. Depression Cherry — "Levitation"
6. Thank Your Lucky Stars — "Majorette"
7. Devotion — "Gila"
8. Beach House — "Apple Orchard"

JP

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## 1 WAY TO MAKE "N ..." ARTICLES WORSE

1. count and put the number [Editor's note: awful. I hate this]

0.423

# RANKING THE VEGAN MILKSHAKES AT MEL'S DINER

*I AM NOT PAID BY THEM TO DO THIS BUT IT WOULD BE NEAT IF I WERE*

Over the years, I have frequented Mel's Diner enough to have tried every available flavour of their vegan milkshakes. Why vegan? Because plant milk is better for the planet, silly. Curated in this article is every masterful taste bud sensation summed up into words.

*Note:* The Mel's Diner menu, in addition to its fucking awesome vegan menu, has extras that you can add to milkshakes for \$1, and for some of the flavours, I added whatever I thought would compliment the flavour. Like lime. You can't blame me for adding to lime.

**STRAWBERRY WITH STRAWBERRY FILLER**—Starting off safe and basic, I knew I couldn't go wrong with strawberry, although my standards for this fruit are high. My grandmother's strawberry field was simply to die for, and I still have many of her jams in my freezer. Not to mention I was born in June, prime strawberry season, so every birthday of mine is strawberry flavoured. Okay, so maybe this isn't so basic. Yet, the strawberries were straw-sized, and tasted like summer. Originally, I had this rated a 9, but had it again in December 2023 after an exam, which made it taste all the better. **9.5/10**, and if you have no attention span and stop reading now, this is the highest score. Go try it.

**CHOCOLATE**—Again, how do you go wrong with chocolate? Thickness similar to that of chocolate plant-based ice cream. Exactly what you'd expect. **8/10**.

**VANILLA**—And now, to complete the Neapolitan triad, vanilla! I am far from it, but it's there for you if you're in the mood for a classic. **7.5/10**, and maybe add your favourite filler flavour to spice it up, because vanilla goes with everything.

**CHERRY**—Surprisingly weak! I was prepared to get slammed in the face with a cherry explosion, but the explosion was more like an essence. *Essence* of cherry. **6.89/10**. Mel's, can you put a maraschino cherry on top plz?

**BANANA WITH BLUEBERRY**—I was excited for banana. As a child who was prone to getting strep throat multiple times a year, I knew my way around what they would give you for it, and the banana medicine was by far the best. The thing is, I have come to realise that banana is not the *best* medicine, but the least worst. And upon tasting this milkshake (with a blueberry filler because that is my second favourite pancake flavour), it should not have reminded me of the artificial banana-y medicine, but it did. The first few sips were fine, but then I quickly got sick of it. Just like strep throat. If you are a banana lover, though, this may still be for you. The blueberries were real, which brings the score up to the nearest whole number. Add a banana filler to make it better? **7/10**.

**CHAI**—Should not exist as a shake flavour. Rich, scrumptious, Christmassy. Only try this if you are a die-hard chai lover, of which I am not, but I tried it anyway. **4/10**.

**ORANGE**—Orange is never anyone's first choice, but is never horrible. It's always just *there*. It was good at first, but then I realised it was orange, so **7.1/10**.

**LIME WITH OREO FILLER**—On its own, I couldn't imagine myself enjoying a lime shake. Solution? Add an Oreo filler! Gods, this was a dream to the senses. Only for an acquired taste. **9/10**

**MALT**—I had this one long ago. So long ago, that I read the flavour in my notes app, thought *ew*, but then saw my rating of **8.2/10**, so it must have been yummy.

**COFFEE**—Dead dove: do not eat. **8/10**.

**RASPBERRY**—Like ambrosia! Naked flavour better than that of strawberry, but the strawberry got a higher score based on the filler I added to it plus the biased extenuating circumstances at the time. **9/10**.

**MINT WITH OREO FILLER**—Just like with the lime, add an oreo filler to enhance this shake. You've heard of mint chocolate chip ice cream, so you'll probably enjoy this flavour to the same extent. **8.3/10**.

**GRAPE**—I saved this flavour for last. Not because I thought it would be a nice flavour to end on, but because I've been dreading to touch this shake even with a ten-metre straw. Grape is the flavour of medicine and that weird stuff they give you at the dentist. So before trying this, I had to repent to Dionysus themselves for the atrocity I was going to ask the server to make. I was absolutely sure that the grape milkshake flavouring sat at the back of the fridge, untouched, for thirty or so years. The only good grape-flavoured food that I have ever liked is grape fun dip, which probably has no actual grape in it anyway.

*[devours milkshake]*

*After:* That was a surprisingly good milkshake? Nice and grapey, but in a good, lighthearted way. It was the same grape as a grape freezie, not dentist. Sour, according to my comrades, and we agreed that the grape flavour alone wasn't enough to quench. There were a few times when a sip tasted equivalent to that of a creamsicle. This pinnacle of taste could have also been achieved alongside a serving of vegan whipped cream, but alas, perfection was too far away. All in all, my expectations for the flavour were not just met, but likely exceeded. Unless I were a grape lover, though, I would get strawberry or raspberry before this one. Final rating? **6.9/10**.

All in all, the strawberry milkshake reigns triumphant, but shoutout to raspberry, which may have reached the highest score in different circumstances. Mel, if you are reading this, please add vegan whipped cream to your plant-based milkshakes, I beg of you. And just for fun, the mean was 7.64, with a median of 8.

Closing comments: Mel's knows how to do a shake, and they taste better when you're sitting next to the Blues Brothers' poster.

nike

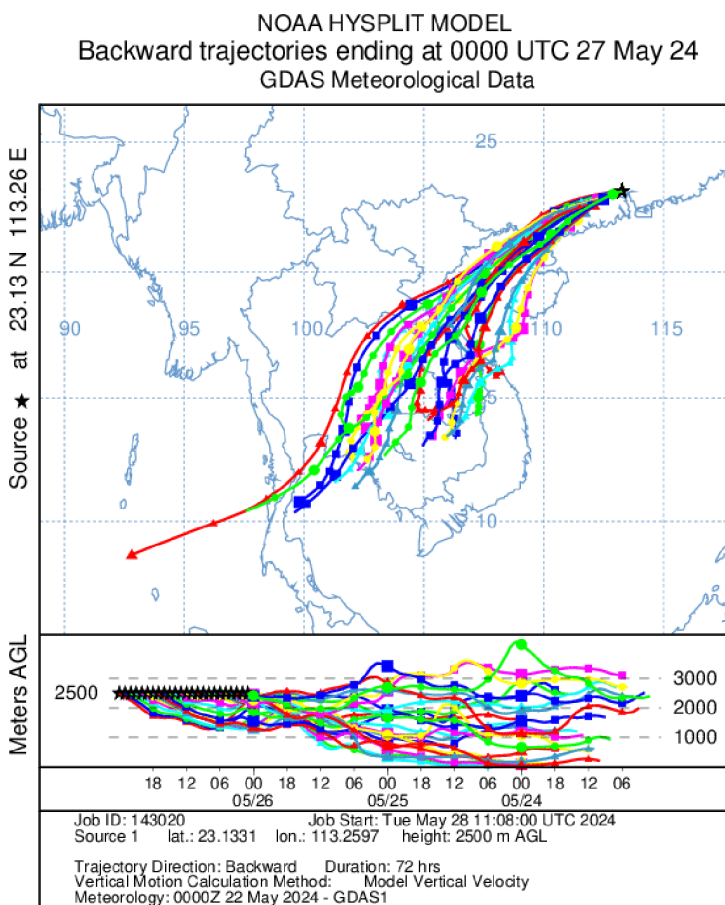
## I KNOW WHERE YOUR AIR IS GOING

### I LIVE IN YOUR FUME HOOD

Much like I can determine where your air is from, I can also figure out where it is going.

The air present at the University of Waterloo on May 27<sup>th</sup> at 7 pm (the time of this writing) moved itself off the coast of New Jersey via Upstate New York by May 30<sup>th</sup> at 7 pm.

This is shown below:



Enjoy. Figure out how to do this at <https://www.ready.noaa.gov/hypub-bin/trajtype.pl>.

QUAAAAAAAAACK

Unfortunately, University of Waterloo has very few atmospheric scientists. We are truly a water school.

## N COURSES I'M CONSIDERING TAKING NEXT TERM

### IN SOME VAGUE ORDER

I'm back in the exploration phase of my program. I'm in Pure Math, but I don't know if it's the best program for me. I'm planning to take a bunch of electives next term. Here's a list of courses I might take, under their corresponding program:

#### BIOLOGY/KINESIOLOGY

- BIOL 273—Principles of Human Physiology 1
- BIOL 130—Introductory Cell Biology (if I can't override into 273 with my IB credits)

#### DIGITAL ARTS COMMUNICATION/COMMUNICATION ARTS AND DESIGN PRACTICE

- DAC 209—Intro. to Critical Design Practices
- COMMST 101—Theories of Communication

#### KNOWLEDGE INTEGRATION

- INTEG 120—The Art and Science of Learning
- INTEG 251—Creative Thinking (sounds cool af ngl, but 120 is the better introductory course)

#### MUSIC

- MUSIC 270—Music Theory 1
- MUSIC 240—Introduction to Jazz
- MUSIC 110—How Music Matters (required for the program, major or minor or augmented or diminished)

#### PURE MATH

- PMATH 465—Smooth Manifolds
- PMATH 347—Groups and Rings
- PMATH 340—Elementary Number Theory

#### GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT

- EARTH 121—Introductory Earth Sciences
- EARTH 123—Introductory Hydrology
- GEOG 181—Designing Effective Maps

#### MISC

- AMATH 242—Intro. to Computational Math
- PHYS 121—Mechanics
- ECON 101—Introduction to Microeconomics

If there are any courses you think I'd enjoy, email me at [RecMeACourse@gmail.com](mailto:RecMeACourse@gmail.com)!

# AN INSTRUCTION ON HOW TO PROPERLY SHOWER & TAKE CARE OF YOUR SMELL

## NO HOSTILITY INTENDED

Hi, fellow nerds. For the sake of yourself and my nose mechanism's proper function, here I kindly provide detailed instructions on how to efficiently perform the basic hygienic procedure of modern humankind, so that my body and my clothes will hopefully no longer get severely contaminated after a long day of rinsing in the odour of rotten onions in the future.

1. Rinse: This is the fundamental step to prepare your skin for further deep cleansing.
  - a. Turn on your water faucet, not the one above your sink, but the one equipped in your shower cell or bathtub.
  - b. Test the water temperature with your hand before you fully submerge your body in the water. The temperature should be strictly between 98°F (37°C) and 104°F (40°C), or else you either get suffocated by steam or you get hypothermia.
  - c. Take a deep breath and mentally prepare yourself for the following critical step of your body touching the water. I know it is very hard and intimidating for a Waterloo math student, but don't be scared, millions of people do the same thing every single day, and they are still thriving and fine. If you just can't embrace your fear of water and being clean, you can find a friend you trust, and hold their hand while you gently step inside your shower cell.
  - d. Once the water touches your body parts, do a 360-degree-rotation. Imagine a cyclic group  $G$  with order 8, and denote the 45-degree rotation by  $R$ ; make your body follow the group operation, until all elements of the group are included in all your actions, i.e.  $R^1$  45-degree rotation  
 $R^2$  90-degree rotation  
 $R^3$  135-degree rotation  
 ...  
 $R^8$  360-degree rotation.
2. Cleansing: This is where you ACTUALLY get rid of the dirt.
  - a. Pick a shower gel/soap/body wash such that the scent and pH value are compatible with your body.
    - i. If your skin often sheds like a turtle shell, pick the one with more moisturizing enhancing features; if you constantly feel like you're being oiled by high-dimensional creatures, choose the one that has a more deep cleansing effect. Choose similarly with your face wash. If you don't know what either a face wash or a gel/soap/body wash is, just use dishwasher detergent because at this point you deserve it.
    - b. Put three to four pumps of body wash in the centre of your palm, or your loofah. A loofah is highly recommended. Rub your palms together until you see some foam (the action is similar with a loofah but instead you gently squeeze it with some water). Notice how now you discover a new usage of your hands other than 'type code' and 'write proofs'.
    - c. Put your hands against your skin, and create an automorphism:  $f$ : your body's surface  $\rightarrow$  your body's surface through your hands. Remember to put FORCE on your hand.
    - d. Finally, repeat 1.d. with the same automorphism in 2.c. Repeat 2 at least twice per shower.
3. Exfoliate: This step should be done at most three times a week, so distribute your frequency in a not well-defined manner of alternation. If you don't know what an exfoliation is, just use bleach and repeat step 2. Repeat 1.d. and turn off the faucet.
4. Aftercare:
  - a. Grab a towel and dry yourself.
  - b. Purchase a scented body lotion depending on your skin's material structure and body metabolism. Put approximately 5–10 mL in the palm of one of your hands, and repeat 2.c. Do not rinse this time.
  - c. Purchase a deodorant, place the body of the product on the surface of your underarm area, and build a homomorphism of your armpit with the product:  $f$ : surface your armpit  $\rightarrow$  a manifold of deodorant.
  - d. Pick a WASHED and DRIED top, a WASHED and DRIED bottom, and a HAND WASHED then MACHINE WASHED (if you live with other people hand washed only is fine) CLEAN underwear, and a pair of HAND WASHED then MACHINE WASHED (similar to your underwear) socks, put them on. You can also choose to not to be do it at your own risk of potentially being put in jail for public indecency.
  - e. (This is optional ONLY if you have an allergy or you are working or studying in an environment where your colleague is allergic to scents.) Purchase a perfume or body spray, and spray them on your CLOTHES (not directly on your skin). Hold the bottle 15–20 cm away from your clothes and press the spray, until the liquid is evenly distributed on certain critical areas of your wear, i.e. your underarm area. An actual correct way to wear perfume is spray the liquid into the area in front of you, then before the particles disperse, walk into that area and collect the particles as much as you can with your clothes. However, I consider the "proper way" too futile when it comes to the odour on a

Waterloo math student, so follow the instruction I just wrote or you might as well just drink the perfume at this point (don't actually drink it).

- f. Stop eating garlic and onions, drink less coffee, quit alcohol. They all make you STINK. (Bonus, eat more green leafy veggies.)

Let me know if you need a tutorial on how to do laundry. Thank you for reading, hope you have a odourless day.

Playboi Cardiac Arrest

## I HAVE 2,466 SONGS IN MY LIKED SONGS PLAYLIST SO IT'S TIME TO SHUFFLE AND RATE SOME

**Three Spotify ads in a row: 0/10**—Love you pooks (Spotify), but I still will not be buying premium!

And then I skipped some songs until I heard one I felt like listening to right now.

**YURiKA—Dive into the colors: 7.5/10**—This is truly the dive into the colors of all time. I like J-rock and this song is J-rock, so I like the song. I also love the second verse where you can hear a sick bassline supported by a syncopated piano rhythm on top that absolutely drives the song forward in such a satisfying way.

**bohemianvoodoo—Adria Blue: 8/10**—They adria on my blue till I think this song is nice and chill. I'm a sucker for jazzy tunes. It's got a fun bassline, interesting harmony and just overall a well-rounded song perfect for a rainy day, probably.

**t+pazolite—cheatreal: 6/10**—Rhythm gamer? I barely know her, am I right? I forgot what this song sounded like before right now. This song has hardcore influences and in the middle, there are some pitched-up vocals. Not much to say, pretty repetitive but at least it's strong.

**Camellia—Dans la mer de son: 9/10**—Rhythm gamer? I love her! A fast-paced and strong song, yet the presence of the piano and synthesizers softens the soundscape, making for an enjoyable listen. Then, a bridge that introduces new and interesting harmony, and an ending similar to the intro with sounds reminiscent of whispers. Fun!

Now you think I'm cool hehe. Also, I got an ad again so I'm done.

kumquattz

## DO YOU KNOW YUNO MILES?

Yuno Miles, the avant-garde prodigy of our generation, has single-handedly redefined modern day hip hop with his groundbreaking approach. While the everyday listener might dismiss Miles' music as SoundCloud rubbish, the discerning critic can appreciate the underlying elegance and artistry within it. But who *really* is the man under that ski mask, the one appraised as "the rapper with the greatest vibrato in the game", the independent rapper amassing seven-figure listenership? In this article, we take a well-deserved, deeper dive into Yuno Miles' mysterious personality by analyzing some of his greatest tracks.

- "Dinosaur"—in this track, Miles displays his profound, albeit unique knowledge of dinosaurs with lyrics such as "shoutout to the herbivori-saurus", "shoutout the Herrexatarasaurus" and the surprising twist "shoutout to anime, I be watching Bleach." His inventive terminology and unexpected references blend seamlessly to create a captivating listening experience.
- "Road To Riches"—Miles demonstrates his quick thinking and freestyle prowess in this track, where he navigates an offbeat rhythm with ease. In lyrics "The beat kinda off... But I'mma keep rapping 'cause the beat really ain't that bad," highlights his ability to adapt and deliver regardless of the musical backdrop.
- "Put The Money In The Bag"—this track is a testament to Miles' undisputed adaptability and creativity. Sampling the sound of a ruffling plastic bag for his beat, he crafts a repetitive yet compelling motif. The word "bag" becomes a focal point, as he cleverly rhymes "bag" with "bag", showcasing his innovative approach to lyricism.
- "Jackie Chan My Uncle"—released in February 2024, this track offers a surprising revelation about Miles' mysterious upbringing. He boldly asserts that the legendary martial artist and actor, Jackie Chan, is indeed his uncle. With lyrics like "Jackie Chan, that's my motherfucking uncle," Miles is clearly not lying. The seasoned listener knows to not question his claims, as he emphatically follows up with "go and ask my mama, ayy, Jackie Chan my uncle." It is no wonder that Miles has become such a sensation in the entertainment industry, with the martial arts legend as a key figure in his upbringing.

Clearly Yuno Miles is more than just a rapper—he's a full-blown cultural phenomenon. His off-the-wall approach, mixing humor and pure audacity puts him in a league of his own. I encourage you to dive into his tracks, and you'll see that Yuno Miles isn't just shaking up hip-hop—he's rewriting the rules of music with his own unique brand of genius.

# WHAT IF WE STOPPED PUTTING STICKS INTO OUR BICYCLE WHEELS?

## A GENTLE PLEA

You may have heard there's a new construction project on campus. Unlike its wire-fenced contemporaries at the University of Guelph and the University of Toronto, this particular structure is built of solid plywood walls that in recent weeks have become canvases for messages in support of Palestinian liberation. More than one such canvas displays the following phrase:

*From the river to the sea, Palestine will be free.*

You've probably heard it by now. You may have seen the repercussions it has had on the lives of public speakers who've repeated it. In October 2023, the United Kingdom's Labour Party suspended an MP for using the phrase<sup>1</sup>, while in Berlin, the phrase was banned outright under threat of criminal charges<sup>2</sup>. More recently, Meta's Oversight Board is investigating whether the phrase constitutes hate speech and therefore should be banned on their platforms.

Many disagree with this interpretation. They say that the "Palestine will be free" refers to greater liberties given to Palestinians, rather than the outright removal of Israel from the territory altogether. The Associated Press interviewed a Palestinian-American activist who they quoted saying "From the river to the sea is an aspirational call for freedom, human rights, and peaceful coexistence."<sup>3</sup> To many, but importantly not all, "Palestine will be free" is not at the expense of "Israel will continue to exist."

I could go on for the rest of this article about the phrase. About the use of a version of "from the river to the sea" by various relevant groups, including Netanyahu's Likud party<sup>3</sup>, the historic use by the internationally recognized Palestinian representative body<sup>4</sup>, or more recently, Hamas in the revised 2018 Hamas Charter<sup>5</sup>.

But I think it would miss the point I wish to make:

Does it matter?

When "defund the police" became a popular rallying cry in the wake of the killing of George Floyd, half of the discussion around the subject was walkbacks and position clarifications. "We don't actually want to defund the police," or "we only want to partially defund the police," or "we only want the police to reallocate their own funds internally," and many more variants thereupon. The collective consciousness chose a rallying cry that failed to represent the real intent of its speakers in the minds of the people it was intended to reach, and because of this, much discussion centered on the medium of the message instead of the message itself.

"Defund the police" distracted from the reform efforts it sought to champion. It weighed the movement down.

Other rallying cries exist for Palestinian liberation. Even something as simple as a one-word change: "From the river to the sea, *Palestinians* will be free" fundamentally shifts the focus from nations to individuals, from the definition of borders to the free movement therein.

"*From the river to the sea, Palestine will be free*" leaves an unconscionable amount open to interpretation. Precisely what does the phrase imply for the other nation between the river and the sea? Is the mechanism of freedom the same one Hamas violently employs? You may have answers to these questions, but are they the same answers as everyone around you? As everyone gathered within the walls on Grad House green?

Do you think yourself such a gifted speaker that you can convince every passerby that what they see as a veiled call for genocide isn't actually so?

I don't think you can.

There are so many other ways to phrase the call to action. We can try one that gives less breathing room to quiet endorsement of future massacres.

If we as a campus seek to stop genocide, we cannot be seen to threaten it anew.

molasses

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# BPD: THE B IS FOR BENEFITS

## IT'S NOT ALL THAT BAD

I was diagnosed with BPD two months ago, and I've been on the difficult mission of finding memes about BPD that are actually funny instead of just depressing and self-deprecating to make myself feel better. Don't get me wrong, having a personality disorder sucks. I can't predict my mood better than one of those 50-cent mood rings you got at the Scholastic book fair in elementary school. But there's gotta be a way to laugh about it, right? Or at least some way I can put a positive spin on it. This quest inspired me to write an article about how having Beautiful Princess Disorder™ has caused me to develop some good life skills.

**DISCLAIMER:** I'm not trying to glorify or romanticize BPD. It's a personality disorder that makes me feel insane 99% of the time. But, I'm also sick of seeing articles and posts demonizing it and making people with BPD seem like evil supervillains with no empathy or consideration for the feelings of others. I'm still a person above all else, so take that and let me write my silly **mathNEWS** article.

### PROBLEM-SOLVING SKILLS

Having no emotional regulation is basically a speedrun for starting fights with other people. I think within the first week of moving into my new apartment with my friends, I started a fight every single day. But, because of how easy it is to pick fights with others, I've had to learn how to solve my problems in a civil way that does not make my friends want to lobotomize me. Learning how to have a productive discussion where all parties can explain their point of view while simultaneously trying to reach some sort of healthy solution or understanding started off as a very difficult skill to learn, but because I've been somewhat forced to develop it, it has gotten a lot easier. I can now explain my own feelings without crying, and I think that's beautiful.

### BEING IN TUNE WITH MY EMOTIONS

I know why I feel the way I do, regardless of how irrational it is. I know that I'm jealous because my favourite person is hanging out with someone else. I know I'm bouncing off the walls happy because my friend told me she's proud of me for how far I've come. The feelings themselves still need a lot of work to control, don't get me wrong, but knowing why I'm feeling a certain way makes it a lot easier to try and regulate. It's 10 times easier to try and regulate and reason with myself when I know I'm angry over breaking my favourite pair of overalls rather than over nothing (I still miss those overalls).

### COMMUNICATION

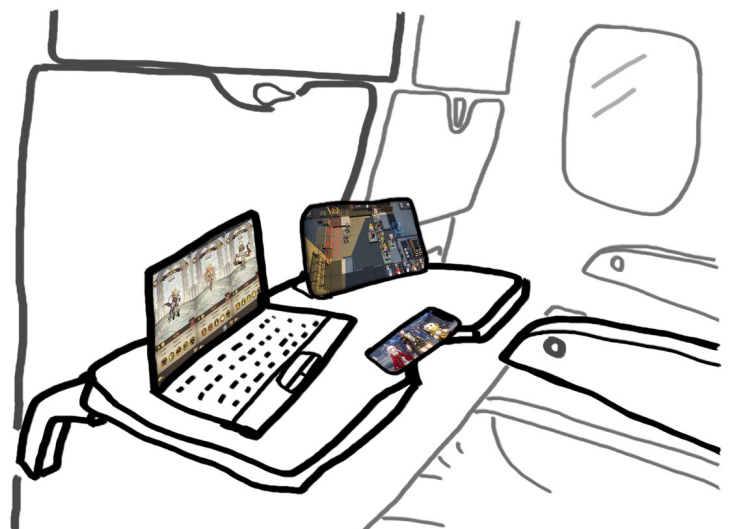
I've prided myself throughout my life on being really good with communication, and I've somehow become even better after I was diagnosed. I used to have rare moments of completely shutting off and not talking at all, where my emotions would just get so overwhelming that I physically

couldn't get the words out of my mouth without feeling like I was vomiting out my entire digestive system. But, because communication has become vital to not driving me and my loved ones insane, now I can actually express those feelings while still keeping all of my organs (I've heard those are pretty important to have, so it's probably for the best that I keep them).

I'm not perfect, and I don't think I ever will be; I still struggle a lot with BPD and I'm bound to still have my bad days. In fact, as I'm writing this I'm currently angry with one of my friends for having a life outside of me (how dare they). But that's not my point. The point I'm trying to make is that while having a personality disorder is incredibly difficult, focusing on all of the negatives has only ever hindered my progress in learning to cope. So, I guess the message here is to try and look on the bright side, even if it may seem like there isn't one. After all, the most beautiful skies come after the most thunderous storms.

wicked

## POV: YOU ARE SITTING NEXT TO A VERY NORMAL MOBILE GAME ENTHUSIAST ON A 6-HOUR TRAIN FROM MONTRÉAL TO TORONTO



jeff

# FRIENDSHIP CHALLENGE!!!

## OR HOW I LEARNED TO STOP WORRYING AND LOVE THE HEALTH FACULTY

I brought this up with some friends a while ago, and they thought it was impossible. I brought it up at production night tonight as well and writers also thought it was impossible, so this has been enough motivation for me to attempt it. The challenge:

**Befriend<sup>1</sup> someone from every undergraduate program in UW.**

No, not *faculty*, program. On their website, Waterloo boasts to be home to “100+ programs”. Indeed, looking at their listing page, the exact number appears to be 102 (their page lists 112, but a lot of those are categories for programs already given). For a 4.75-year co-op program, this means you should be making one of these friends roughly every 15 days to keep up. I’m not sure how my progress has been, so I’m going to list each one of these programs here and whether I know someone from it. You can use this for your own reference as well. I will update my status every term.

- AFM:
- Actuarial Science:
- Anthropology:
- Applied Mathematics:  (I think?)
- Architectural Engineering:
- Architecture:
- Biochemistry:
- Biological and Medical Physics:
- Biology:
- Biomedical Engineering:
- Biomedical Sciences:
- Biostatistics:
- Biotech/CPA:  (Somehow)
- CS/BBA:
- Math/BBA:
- Chemical Engineering:
- Chemistry:
- Civil Engineering:
- Classical Studies:  (Technically two programs, but one is good enough)
- Climate and Environmental Change:
- C&O:
- Communication Studies:  (Also two programs)
- Computational Math:
- Computer Engineering:
- Computer Science: My program!!! (No, you do not have to befriend every specialization too)
- CFM:  surprisingly
- Data Science:
- Earth Sciences:
- Economics:
- Education:
- Electrical Engineering:  (I am kind of assuming one of the design team people I know is full EE, which I’m pretty sure is true)
- English:

- EnvBus:
- Environment, Resources and Sustainability:
- Environmental Engineering:
- Environmental Sciences:
- Fine Arts:
- French:
- Gender and Social Justice:
- Geography and Aviation:
- Geography and Environmental Management:
- Geological Engineering:  (The dark souls of this challenge)
- Geomatics:
- German:
- GDBA:
- Health Sciences:
- History:
- Information Technology Management:
- Kinesiology:
- Knowledge Integration:
- Legal Studies:
- Liberal Studies:
- Life Sciences:
- Management Engineering:
- Materials and Nanosciences:
- Math Economics:
- Math Finance:
- Math Optimization:
- MathPhys:
- Math/Business Administration:
- Math/CPA:
- Math/FARM:
- Math/Teaching:
- Mechanical Engineering:
- Mechatronics Engineering:
- Medicinal Chemistry:
- Medieval Studies:
- Music:
- NanoTech Engineering:
- Nursing:
- Optometry:
- Peace and Conflict Studies:
- Pharmacy:
- Philosophy:
- Physics:
- Physics and Astronomy:
- Planning:
- Political Science:
- Psychology:
- Public Health:
- PMath:
- Recreation and Leisure Studies:
- Recreation and Sport Business:
- Religious Studies:
- Science and Aviation:
- SciBus:
- SFM:

- Social Development Studies: ✗
- Social Work: ✗
- Sociology: ✗
- Software Engineering: ✔
- Spanish: ✗
- Statistics: ✗
- Sustainability and Financial Management: ✗
- SYDE: ✗
- Teaching: ✗
- Theatre/Performance: ✗
- Therapeutic Recreation: ✗

It appears I am at 24/102, which is actually alright all things considered. Surprisingly, I know nobody from the health faculty. If you are in one of these programs, please strike up a conversation with me so I can get closer to my goal. Better yet, if you are a girl in one of them, you can ask me out. Unfortunately, I will not be able to cover the breadth of this list by idling at **mathNEWS** prod nights, so some wacky adventures will have to take place in the near future. Stay tuned.

*epic\_waterman*

1. "Befriend" is a nuanced term. For the purposes of this challenge, I mean that the person should know you well enough that you can strike up a conversation with them while walking by and they will actually know who you are.

## HOW TO MAKE A WORK FRIEND

**Step 1:** Someone at work who you've seen around a few times asks what your name is, anyway?

**Step 2:** Tell them your name while walking upstairs. Struggle to pronounce theirs.

**Step 3:** Walk into a large cart without seeing it.

**Step 4:** Spill water from your glass while going up the stairs.

**Step 5:** Say bye and brush it off. You'll have a chance to make new impressions later!

**Step 6:** Work for a few hours at your desk.

**Step 7:** Take a meeting from a conference room near your new friend.

**Step 8:** As you leave the room, spill some more water in front of your new friend!

**Step 9:** fuck

## N WAYS TO PROCRASTINATE

If you're anything like me, you struggle with getting things done and find yourself always rushing to finish assignments or projects at the last minute. Well friends, after extensive procrastination over these past few weeks and a bit of self-reflection, I have discovered N unique and very effective ways to procrastinate! These methods are sure to leave you wishing you had spent your time differently and wondering why several hours have passed since you last started working.

- Spend at least an hour in bed every morning scrolling on your phone
- Look up a Wikipedia page that interests you and recursively click on interesting links within the page
- Play your favourite game for an undetermined amount of time
- Go to bed and lay there (scrolling on your phone is recommended)
- Go to bed and fall asleep
- Go to bed and think about all of the people who have hurt you
- Go to bed and think about how you will never find your soulmate
- Open Instagram, Reddit, your social media of choice, etc. and continue to browse for an indefinite amount of time. If you return to work, be sure to open your phone again so that the cycle of procrastination can continue!
- Binge watch a TV show
- Make niche memes that only your friends or classmates will understand and send them their way
- Make fake Pokémon cards of characters, people, or creatures of your choosing
- Write fanfiction on your favourite celebrity or fictional character
- Watch videos on how to increase your productivity (but do not implement any of them or get back to work)
- Run around chasing the geese on campus
- Run around getting chased by the geese on campus
- Say yes to everybody's request to hang out and constantly invite others to hang out
- Join multiple clubs and participate in all of them. Even better, become a club executive so you can have important responsibilities and the chance to disappoint those around you
- Argue with a stranger or possibly a bot on social media
- Write a **mathNEWS** article
- Read a **mathNEWS** issue

Happy procrastinating!

# 24 HOURS IN UWATERLOO

## MIDNIGHT TO 8 AM

### 12:00 AM

“How is it already midnight?”

It felt like there was no end to the tasks Jake had to do. The clock was at midnight and here he was, stuck in one of the MC computer labs, slaving away at lines of code that never seemed to compile. Stupid thing. Then again, he wasn't the only one. There was some plucky first year three tables down whose laptop keys were clacking—*why did this first year even have a laptop in the first place when he was in a computer lab??*

Whatever. Wasn't his problem. The real problem right now was to get all of this done—and the sooner the better. The deadline *just* passed.

### 1:00 AM

The deadline *just* passed and Henry's already behind. This wasn't what he intended! There's only so much his fingers can type out! It's too late, he should just wait because the -5% has already been applied, he might as well sleep. But the other five courses say the sooner he gets done with this, the better.

By the time he gives up and slams the laptop lid shut, he's given up completely. Sighing, he exits the lab and heads to the SLC bridge—time to head back to V1. It's nearly 2 am, so he'll have to settle for walking this time. He passes a cleaner—there were still janitors working *this* late at night?

### 2:00 AM

There were still students working *this* late at night?

Aaron's been working here for 15 years, and he's seeing a trend he doesn't like, and not just in the world at large. These kids were staying up later, starving themselves, working to the bone and ignoring everything. He wants to take that spindly young man that just passed him and tell him he shouldn't be up this late, but it's not like he knows what he's going through. He spends the rest of the hour cleaning the SLC floors, and by 3, he's already made it to the stairs next to INews—sorry, *Flock Stop*. The young woman behind the counter stifles a yawn, and it takes all he has not to follow suit.

He could use a coffee right about now.

### 3:00 AM

She could use a coffee right now.

Emily doesn't remember what time it is or how long she has until her shift is over, but she's really starting to regret taking the overnight shift. There's nothing to do, and she can't exactly go on her phone—she forgot to charge it yesterday and now it's sitting in the back, the battery icon loading at a snail's pace.

The grey-haired cleaner's gone and passed—she sees him every night and he never really comes in. Barely anyone comes in at this hour.

### 4:00 AM

*Barely anyone comes in at this hour*, Arjun thinks when he arrives at the SLC doors. He spent the past three hours lying in bed staring at the ceiling, so he figured—hey, might as well grab a snack with the meds he's about to down. He settles for a Jamaican patty, but when he leaves, ready to go back to Renison, he decides—well, might as well sit back and relax.

So that's what he does. Sits in the Great Hall and munches away, pulling his phone up and idly scrolling. He can spot the poor guy behind the Turnkey Desk gawking at him.

Weirdo.

### 5:00 AM

Weirdo.

Some guy is in the Great Hall with nothing but a Jamaican patty. He came in at 4:00 am and for *what?* Who wakes up at 4:00 am and decides it's time for an early morning snack? It's like that Patrick meme.

Sighing, Dominic pulls his phone out and sends a text off to his roommate and best friend, and goes back to the next hour of doing nothing. His shift's almost over, anyways. He's counting the minutes and it's reached single digits.

*Some guy in the Great Hall with just a patty. tf is he doing*

### 6:00 AM

*Some guy in the Great Hall with just a patty. tf is he doing*

The first thing Brendan sees when he pulls his phone out isn't the alarm, it's Dominic's text. Ugh. He barely knows the guy but he thinks it's appropriate to blow his phone up at 6:00 am. He *needed* that time to sleep, but okay, he's up now. Grumbling to himself, he gets up and decides to make himself coffee and breakfast.

Could he be any more annoying?

### 7:00 AM

*Could he be any more annoying?*

Yousef got to sleep around 2:00 am—not because of assignments, he just went on a losing streak on Valorant and called it quits, hoping he could make up his 7 hours for 7 games, but instead he's up at 7 listening to his roommate clank pans around and the loud-ass coffee machine whirring

to life. And to hell with 7 being a normal time to wake up, this was the one day he didn't have classes—can't a guy sleep in? Drowsily, he picks his phone up and sends a text off to his girlfriend.

*morning*

**8:00 AM**

*morning*

Nasirah raises an eyebrow as she sees the text. Today was Yousef's off day, wasn't it? It wasn't like him to be up so early. Maybe his roommate just woke him up. She's almost too engrossed that she almost forgets to see the bus about to leave the stop just in front of her. Gasping, she breaks into a run. "Wait, wait!" Clamoring on just before the bus doors close, she breathes a heavy sigh as she sits back, making sure her hijab hasn't come undone.

The 31 bus stops at the terminal, then becomes the 30. It's nearly 9:00 am as it pulls into Environment 3, and she rushes through the building towards the Coffee Shop, just in time for her volunteer shift to start. "Good morning!" she says, towards her coworker.

Skit

## SKETCH 4



snowdozer

## DREAMING

Consider a film projector. It has a bulb and a reel of film, and the bulb is burning and the motors are turning and the film is going round and round. As long as the bulb is burning, its light shines through the film and the film projects its image to the screen.

Even as the day goes on and the bulb is dimming, the motors still turn and the film still runs and the images are still shown. The bulb holds on for hours and hours but at the end of the day, the bulb burns out but the motor is still whirring and the film is still unreeling.

At the end of the day, the bulb burns out. The film keeps moving, but their images stop projecting. Until the bulb is replaced the next day, the film keeps running, projecting to nothing, and that's called dreaming.

terminal

## UNWELCOME SILENCE

There are very few times you'll catch me without music in my ears or talking with friends. Silence is my enemy, the eerie echo that forces me to listen to my own thoughts.

panda1

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**UW'S BASTION OF ERUDITE THOUGHT SINCE 1973**

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# REBUTTAL TO THE OFFICIAL TIER LIST OF WATERLOO ROADS

## A LETTER BY AN UPSET READER

I recently had the great pleasure of indulging myself in the May 17<sup>th</sup>, 2024 issue of **mathNEWS**. Tragically, when I read the road tier list article by *verdanik*, I became viscerally angry. So viscerally angry that it destroyed my shrine to our esteemed president, Vivek G. It is as if the article was written by a charlatan with no taste for the subtleties of road design and urban form. Therefore, I would like to critique the tier list and propose some “improvements.” For the sake of consistency, only the roads included in the original article will be re-tiered.

### F TIER

#### NORTHFIELD DRIVE

I agree that the bike lanes are garbage, and whoever designed this road should be stripped of their P.Eng.

#### COLUMBIA STREET

Originally, Columbia was placed in the D tier. While I agree that it is the “boundary between civilization and barbarism,” I would go so far as to say it is a road of lies. According to the city, there are protected bike lanes between Phillip and King, but whoever was supposed to install them must have gotten drunk the night before and completely forgotten.

### D TIER

#### BRIDGEPORT ROAD / ERB STREET

I agree with the placement of these streets in the D tier, but I would even go so far as to say that they are proof of the mathematical illiteracy of Waterloo planners. There are three lanes in each direction east of the Ion tracks, which merge into two lanes in each direction west of the Ion tracks. Counting must have been hard.

#### FISCHER HALLMAN ROAD

I also don't know anything about it, and don't care enough to find out.

### C TIER

#### UNIVERSITY AVENUE AND WEBER STREET

The placement of these streets in the C Tier makes perfect sense. Not great, not terrible. No comments by this reader.

#### IRA NEEDLES BOULEVARD

To place Ira Needles in the F tier is an insult to this reader's intelligence. Roundabouts are the apex—the final evolution, I dare say—of traffic control. They are cost-effective, safe, and fun to whip around. While not perfect, this road deserves to

be, at minimum, in the C tier for being a shining example of ambition and creativity in a mundane sea of 90-degree angles.

### B TIER

#### WESTMOUNT ROAD

To place Westmount Road in the A tier is absurd. Westmount Road may be a “purpose-built suburban boulevard,” but it is nothing more. I enjoy, as much as the writer, cruising down such wide and carefree thoroughfares. I enjoy, as much as the writer, looking out onto the rolling hills and fields of Westmount Road. That being said, it is a boulevard, and **nothing** more.

### A TIER

#### CONESTOGA PARKWAY

I do admit that the parkway is a marvel of engineering. When I visited the University of Waterloo as a young lad (while I still had hopes and dreams), I was in awe of such infrastructure. My hometown, of comparable size to KW, has not yet invented the “urban freeway.” I thought to my young self, “Such speed and efficiency! I am sure the University of Waterloo is no different.” (This was false.) Emotional value aside, no urban freeway should ever be placed in the S tier.

### S Tier

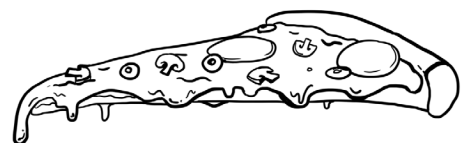
#### KING STREET

When I read the May 17<sup>th</sup> article and saw that King Street was placed in the B tier, I almost dropped my precious volume of **mathNEWS** in disgust. King Street has the ION! King Street has protected bike lanes! Sure, it may not be perfect along its entire length, but it is the closest road to multimodal enlightenment that we have. King Street is **THE** cultural and social center of KW. Let me posit a question. Without King Street, where would Phil's be?

### CONCLUSION

I believe that the above tier list is a more refined and valid analysis than that published on May 17<sup>th</sup>. While I salute *verdanik* for their opinion, they are simply wrong.

XxXRoadlover69XxX



# AN OBSERVATION AND A SUGGESTION ABOUT THE A CAPPELLA ECOSYSTEM AT THE UNIVERSITY OF WATERLOO

In my many years, I have met numerous a cappellaists. The first question I ask is “Hey do you know xy person at Waterloo? They do a cappella too.” Every time they say, “No, I am on Unaccompanied Minors, they must be on another club.” How many clubs are there? I’ve done the research, there are 6+ that are under the umbrella of the greater a cappella club:

- Unaccompanied Minors
- The Water Boys
- ACE
- The Musical InterDudes
- AcaBellas
- Full Colour
- And as many small groups would like to form each term.

I then ask a follow-up question, “Do you have an a cappella-off between all of the clubs in a drained swimming pool like in Pitch Perfect?” They respond, “No.” I, therefore, come with a humble suggestion for the powers that be that control the 6+ great a cappella nations of UWaterloo. DRAIN PAC POOL. SHOW UP AT MIDNIGHT. DETERMINE WHO IS THE TRUE CHAMPION OF UWATERLOO A CAPELLA.

Thank you for your time.

Lars Nootbaar

## HOW TO GET A FREE TAXI BETWEEN QNC AND DC

### FOR THE EXCEPTIONALLY LAZY

A few weeks ago I learned that IQC has an open tab for anybody who needs a quick transit option between QNC, DC and RAC (way in the middle of nowhere in the research park).

You can call 24/7 and request the “University of Waterloo RAC Shuttle,” just specify your source and destination! They’ll also need your first name, but they never check your ID or if you’re an actual IQC member.

Congratulations! You have just become one of the 1000 taxi trips our tuition goes towards paying each month.

Shahabee

## PARROTS AND TURTLES

The other day I googled, what is the opposite of a turtle. Because I wanted to know, because I wanted to not be a turtle, and the way to accomplish that would be to dress in the color of whatever the opposite of a turtle is. You get it. Also, no hate towards a turtle, generally I would love to be a turtle, but that day I did not want to be a turtle. Anyways, I googled it, and although there is no true antonym, some potential options given by Google were fly, parrot and cat.

Here is why I think parrots, specifically male Eclectus parrots (red parrots) are the opposite of turtles:

- Parrots talk and turtles are notoriously quiet.
- Turtles swim and parrots fly, and those things are opposites, obviously.
- Turtles are green and these parrots are red, which are opposites on the color wheel.
- Parrots are fast and turtles are slow. Of course, some turtles might be fast in the water, but some parrots might be slow if they’re bad at being a parrot or afraid of heights so I’m sure it averages out.
- Turtle shells are hard and feathers are soft.
- Turtles are sort of dull colors and blend in with rocks, whereas the color pallet of parrots ensures that they stand out.

These are just some of the reasons that parrots are the opposite of turtles. I rest my case.

Panda!Panda!Panda!

## EPISODE 62: INJECTION, SURJECTION AND BIJECTION

MathSoc Cartoons is back for the Spring 2024 Term!

Please enjoy Episode 62 of the MathSoc Cartoons series: [MATH 235 — Injection, Surjection and Bijection!](#)

Want to see the next comic BEFORE it’s released and provide feedback to help us out? Sign up to be a reviewer at <https://bit.ly/cartoons-reviewer-join-S24>.

Want to see the next comic when it’s released? Follow [@math-soccartoons](#) on Instagram and Facebook!

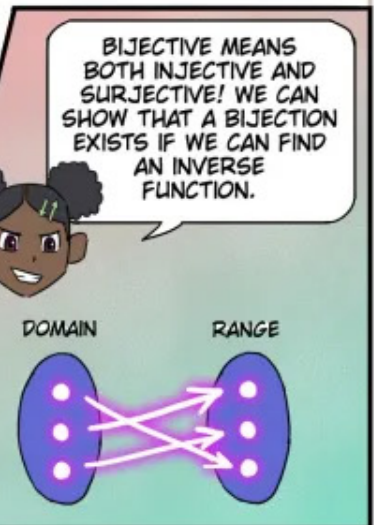
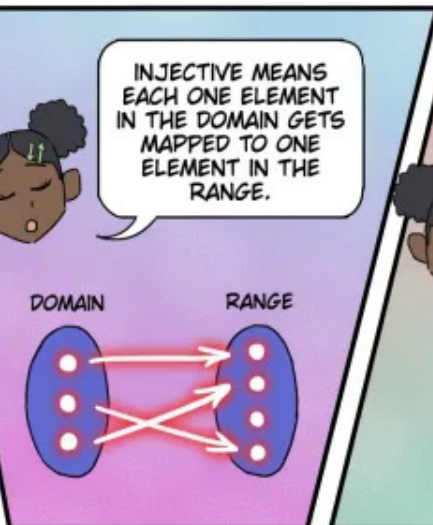
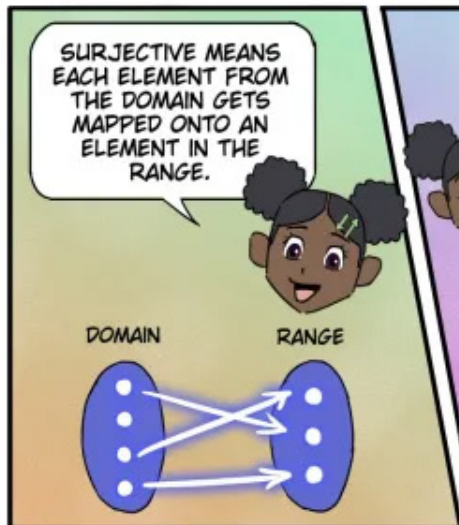
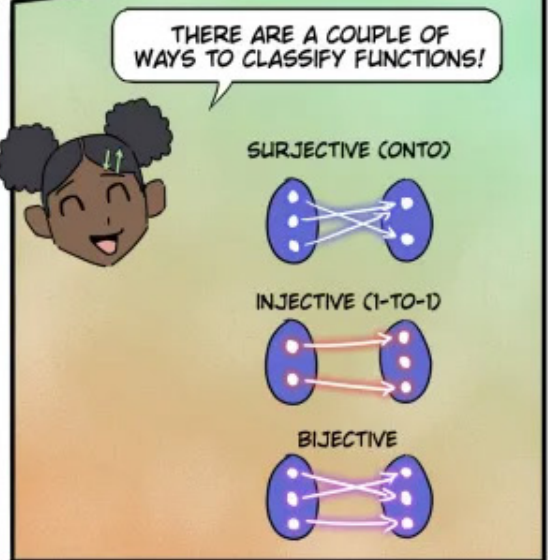
As always, feedback, suggestions, and fan art can be left on the MathSoc Cartoons channel in the MathSoc Discord server or sent to [cartoons@mathsoc.uwaterloo.ca](mailto:cartoons@mathsoc.uwaterloo.ca).

MathSoc Cartoons

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# MATH 235: INJECTION, SURJECTION AND BIJECTION

STORY BY VIVIAN DAI | ART BY JOHN ZHOU

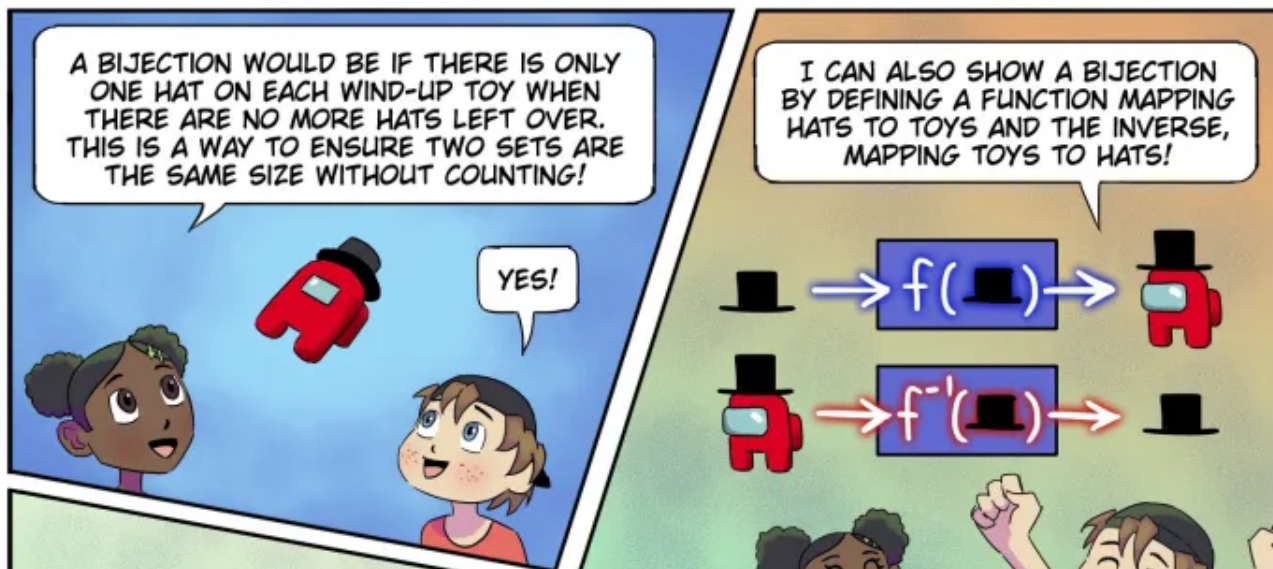




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# MATH 235: INJECTION, SURJECTION AND BIJECTION

STORY BY VIVIAN DAI | ART BY JOHN ZHOU



# SPIRIT ISLAND: MY FAVOURITE BOARD GAME

I don't really pick favourites that often. They are a lot of different ways to enjoy a book, a movie, or in this case a board game. But over the past few years, I have played something like 200 games of Spirit Island at 1–3 hours per game. I think I like this game, and there are just so many things to like about it.

From the top: Spirit Island is a cooperative board game. In it, you play as spirits defending an island from invaders. The invaders will explore out, build up and then ravage. This harms both the land itself and the Dahan who live there. You can destroy the invaders, disrupt them or even just scare them away. If you convince the invaders that they shouldn't be here before they settle in (or just wreck the island), then you win.

The gameplay itself plays out kind of like a territory control game, except a rather fuzzy one where you can occupy the same spaces on the board; until someone does something at least. You get to choose where you act, spreading your presence—you are a spirit entwined with the island and can be in many places at once—to give yourself more choices. But the invaders will only act in certain spaces, so you want to clear those spaces to stop those actions. That can play out many different ways, but that is the high-level view of the game.

Now, we will go all the way to little details for the first of my favourite things about Spirit Islands, naming. You will play as spirits like Viral Strength of the Earth or Bringer of Dreams and Nightmares, and use Enticing Splendour or Sap the Strength of Multitudes. The names do conjure up a vaguely “native” feeling to them, which is appropriate for the setting; but most of all, I just like it because I've dealt with too many games with Fireball and Chain Lightning, and a change is really nice. Why Summon Elemental when I could Rouse the Trees and Stones?

Of course, that is just icing on the cake. The cake is made of good gameplay. It is a fairly complicated cake—I mean game. That is the main reason this is a “what I like about the game” article and not me just recommending the game. (But, if you like complicated games...) It is also a coop game, so all the players win or lose together. Not a strict win, but if I am going to spend hours on a single game with some friends, I generally would rather be spending it with them than against them. And, it also addresses a lot of classic issues with coop games: there isn't a lot of downtime, the game discourages backseat gaming, and there are so many ways to mix it up and increase the difficulty with your skill. (And I am still not a master of this game.)

A particular source of joy for me is the game's balance of predictability and unknowns. You can plan ahead, but the game injects enough unpredictability into it that it isn't a puzzle. Sometimes you can sit down and work out everything with the information in front of you, and other times you kind of have to go by instinct.

That also goes into planning ahead and shaping your spirit. As the game goes on, your spirits will power up. Some of this is fairly linear, increasing the numbers on the spirit. But when you get new powers (your actions), you are given random new powers and choose one. There are some obvious synergies to guide your choices, but you do have plenty of room to shape your play style over the game.

And that's not getting into how diverse and richly themed the starting spirits are. Let's compare the base game offensive spirit, Lightning's Swift Strike, with an offensive spirit from an expansion, Volcano Looming High. Lightning has good destructive powers, but its iconic feature is actually the “swift” part, speeding up powers, using big heavy powers preemptively. Now, Volcano plays very differently. Instead of building out, it builds high, placing pieces down in the same space and building up pressure on a single mountain space.

Guess what happens next.

No, really, fix a guess in your mind.

Hint: you are a volcano.

If you guessed “You release an Explosive Eruption that darkens the sky with ash and rains fire down on all the lands surrounding your mountain,” you're right! It's awesome! The flavour of the spirits is cool, and the mechanics really back that up. Not just in the big ways, like in the example, but in many smaller ways. Rivers Surges in Sunlight “flows” outward like a river, and then floods from the areas where it is built up.

And having gone from gameplay, and how gameplay connects with lore, it's time to go onto lore.

Spirit Island is also well known for its anti-colonial themes. It is there, well executed, I think it adds a bit of depth to the game and I love the nickname “Settlers off Catan” for Spirit Island (named after Settlers of Catan, an accidentally pro-colonial game that is trying to say nothing), I find it very amusing. But when people dive into lore, we are way more likely to be chatting about the nature of spirits or trying to figure out bits of Dahan culture. I'm really looking forward to the next expansion; it should be focused on the Dahan and might have a lot more information there.

Oh, and although it doesn't grab me in the same way, the alternate history of Europe to create a greater number and variety of colonial powers—to fill out the adversary list—deserves mention for building out the world.

And that might be everything. Spirit Island: it's a good game. And there is so much behind that simple statement; the result of years of work and design. It's my favourite board game.

## CO-OP TERM'S ALL WHAT IT'S SAID TO BE AFTER ALL

So, as someone in their most-coveted “co-op term,” I really have to give this review.

So, we usually hear that “co-op terms are almost paid vacations” and, so far, there hasn't been a single experience I've had that's opposed to that saying. Having the time to relax, slow down, have fun with friends, try new restaurants, and SLEEP is something I didn't know I had been missing so much the past two study terms.

What makes it better is having people you know around campus to spend time with when you're living around. This helps with the transition of deciding how to spend time once you're off a study term as well.

In the end, so far, I've been having a great time during coop and wish good luck to all the people on/applying for their coop terms as I hope everyone can find/create some happiness and cherishable memories for themselves during this time they have as well!

watch\_it\_burn

## N REASONS WHY MORE ENG STUDENTS SHOULD TRANSFER TO SCIENCE

- more flexibility
- less class time
- only need to be in satisfactory standing or better to transfer
- you can “do a minor”
- people actually shower
- more time to sleep (optional)
- blue is better than purple
- you have time to actually touch grass
- MNS majors can steal Nano eng jobs
- better dating pool
- learn to synthesize drugs (or befriend a chem major)
- emotional support boy toy
  - additional boy toys in chem club
- you can join one of the wholesome unproblematic-SciSoc clubs
- not a dildo-worshipping cult
- science is objectively better

ilovemyemotinalsupportboytoy

## TAXES

Nothing in life is certain, except for death, taxes, and goto.<sup>1</sup> The “taxes” part is no less certain (and more annoying) if you're an international student, which gave me the pleasure of being on the phone with the CRA for some six hours in the past few weeks (around four and a half of which were spent on hold).

I didn't have any, like, startling revelations, but there were three things of note:

1. CRA agents are generally quite nice! I enjoyed talking with all three I spoke to.
2. There isn't a system in place that I could find for reporting errors in tax forms (no, not my own taxes, but forms themselves). So I got to walk the CRA agent through a set of forms to explain why it seems that a particular reference to a line number is off by one, and let me tell you, there's no feeling of power quite like asking *the CRA* things like “Now could you please open form 5013-R? As well as the 5005-S11, please. Yes, that's the Schedule 11 for non-residents. Thank you.” (By the end of this call, I felt like I was friends with the agent. Thank you for the help, Victoria.)
3. CRA agents have access to an internal reference for details about filling out tax forms that are not available to the public. I'm not sure why it's not public, because when I heard it being referred to, it sounded quite helpful... :(

Next year, if you fill out a 5005-S11 (“Federal Tuition, Education, and Textbook Amounts and Canada Training Credit (for Quebec and non-residents of Canada only)”) and you see a slight change in line number references from this year,<sup>2</sup> you know who to thank.

cutlet

1. See **profQUOTES**, mathNEWS 150.1.
2. Specifically, it seems to me that line 12 of the form should refer to line 106 instead of 105 in its instruction “Enter the amount from line 105 of your return.” This would make it match with the line numbering in the instructions for Ontario tax residents as seen in forms 5006-R and 5000-S11, and more importantly prevent the filer from wasting tax credits that come from paying tuition, which in the case of non-residents filling out this form would likely be significant amounts as international tuition is so high.

## BEESECHURGER

i want beesechurger

donald mcronald

# A CORPORATE GREETING UNPACKED

FEATURING A GRAMMAR NERD WHO PRETENDS TO NOT CARE THAT MUCH

I would like to take up some column space in this issue to discuss a common greeting that many fail to give a second thought. While not common in the daily parlance, emails fly across the corporate world day after day with the opening, “I hope this message finds you well.”

Let’s unpack this. It reflects the sender’s hopes for the recipient, which are uncertain behind a computer screen but by corporate etiquette must be always assumed positive. Almost unfailingly, the sender avoids the term “email”, instead opting for words that harken back to a (better) time before computers. And finally, the sender expresses their well-wishes for... uh... hmm...

I would say the principal point of confusion regarding this phrase comes from the confusing status of the word “well”, and with good reason. It’s one of those monstrosities of the English language, with a staggering four parts of speech it could possibly take:

- Noun: “Let me fetch some extremely hard water from the *well*.”
- Interjection: “*Well, well, well!* Look at all the baby geese!”
- Adjective: “My friend caught ligma last week and is still not *well* enough to come.”
- Adverb: “I think I did *well* on that midterm... wait, what did you say your answer was?”

I would like to nip my unfailingly contrarian readers in the bud and say outright that it is neither a noun nor an interjection. That leaves the last two, which is where the sticking point lies.

Some would suggest that the word functions as an adverb. In contrast to an adjective which modifies only a noun or a pronoun, adverbs modify basically any other part of speech. If this is the case, “well” would likely have to modify one of the verbs in the sentence: either “hope” or “finds”. For the first option, the sender is describing their ability to hope, and is emphasizing how proficient they are in the act. For the latter, their hopes are directed to the proper mechanical functioning of the company’s email services<sup>1</sup>.

Both of these possibilities are absurd; neither reflect the true purpose of including this throwaway sentence in your messages. Instead, let’s consider the possibility of an adjective. In this case, the only word that could be reasonably modified is “you”, meaning your hopes are directed towards the positive wellbeing of the recipient. This is the most coherent meaning of this phrase, and it is the correct one. It begins the message on a positive note. It leads whatever other request you need to bother this person with. And it neutralizes most of the residual passive aggression you may have left in the email. In the world of screen-mediated corporate greetings, I couldn’t think of one more apt.

I hope this article finds you well.

I welcome rebuttals in the next issue.

verdanik

1. Which might be a valid concern if you have a co-op student working in your IT department.

## MY REVIEW OF THE SPRING TERM

So, last issue I saw someone write their review of their first spring term, and I remembered that it’s also my first spring study term. As an avid hater of the heat and the sun and probably the only person with an actual sunlight allergy, I thought I should also write a review article.

To preface, I did not expect this term to go well at all and most of that was because of the climate, but honestly, it’s pretty good. I don’t have enough data because it has barely been a month, but I like the vibes.

Just to make it clear, I still HATE the heat and the sun and would much rather have -40 degrees (freeze me daddy), but other than the weather I like how people seem more... alive. They are just doing shit. I’m not the only one seen outside now. There are just things happening and it all seems very cheerful. And ofc, flowers. I recently realized that I may also like other colors (other than the snow white), which was absolutely riveting. I am learning so many things about myself. It’s quite nice. 9/10 would do it again.

0.423

## [NSFW<sup>1</sup>] OFFICE TALK

“Hey, I was thinking about joining a union.”

Totally Ununimodular

1. Results not guaranteed

**Proof: it’s obvious.**

PROF. STEVE FURINO

# I AM SUING mathNEWS FOR NEGLIGENCE IN MISPELLING MY WRITERS NAME

FOR LEGAL REASONS THIS IS A JOKE

Defendant, **mathNEWS** Editor et al.

Plaintiff: Writer andoiii

RE: Intention to Sue

1. Let it be known that on **mathNEWS** issue 155.1, that the article submitted by the Plaintiff, titled "On N opinionated claims as to why one should conduct themselves to speak hyper-eloquently", was formatted and distributed under the writers name "andoii", with but 2 i's.
2. That on re-inspection of the submitted article, that the Plaintiff had taken care to spell the name as "andoiii".
3. And that the Plaintiff wishes to press charges of negligence on the defendant to failing to spell the Plaintiff's writer name properly, with the regulation accepted 1, 3, 4, or 8 i's.
4. As the authority responsible for typesetting **mathNEWS** articles, **mathNEWS** Editor et al. owes the Plaintiff a Duty of Care to ensure that writers' names on articles are typed *sic erat scriptum*; and such carelessness in ensuring thus is reasonably foreseeable to cause damages to the Plaintiff. By failing to properly affix a proper number of i's, the Defendant fell below a standard of care expected of the Editors.
5. The Plaintiff would like to assert emotional damages to the sum of "shattering the trust between editors and writers." In addition, the Plaintiff would like to assert damages for loss in fame and glory for writing with **mathNEWS**. As the Plaintiff asserts, "this is quite an aieya moment tbh ngl."
6. The Plaintiff asserts that such damages would not have occurred but for the Defendant's negligence in failing to spellcheck the Plaintiff's writer name.

The Plaintiff officially calls upon the Defendants to respond in the form of an Editors' Footnote.

[Editor's Note: We formally apologise to the great writer Andoii. We are aware of the ramifications of insulting his majesty, Ando's, name. Henceforth, we shall be dedicating a subteam of editors to personally triple check every issue to make sure we get Anooiii's name correct. Thank you all for your support during these trying times.]

adoiii

# L THINGS I HATE AND W THINGS I LOVE

SATISFYING  $L + W = \text{THE TOTAL ITEMS LISTED PLUS } L \text{ PLUS RATIO MINUS } L$

1. Cucumbers.
2. Anime.
3. Pure Mathematics.

1. Doing assignments really early.
2. Ketchup.
3. My mental health.

Great, there's the list.  $L = 3$ .  $W = 3$ .

Also, bonus item that you get to choose which category it goes in:

1. League of Legends.

Please vote on your selections here: <https://forms.gle/aR3vcztF3i9DDETu9>



no pun indented

# N COMMUTERS I'VE SAT NEXT TO ON THE GO BUS

WHAT A GREAT EXPERIENCE PUBLIC TRANSIT IS

- A girl in maybe her 20s who spent half the trip aggressively texting someone and then fell asleep on my shoulder (I didn't know her)
- A middle-aged construction worker
- A small child (quiet)
- A small child (with iPad on full volume) (my headphones also magically died)
- An older woman who worked on her knitting project the entire time (I couldn't tell what it was but it was neat to watch)
- A guy who kept glancing at my iPad while I was finishing a commission
- A good friend
- Countless people who fell asleep with their mouths open
- A young woman eating a meal out of a tupperware, which smelled really good. (I was also eating and felt a strange kinship with her in the moment)
- No one (my least favorite)

mobychofan

# I'M BACK. DID YOU MISS ME?

I would be shocked if anyone did. I think I wrote several articles for **mathNEWS** before, but only one I can remember clearly, and it was in a February 2015 issue. Not only can I speak of before the pandemic, it is the majority of my university experience.

Here is a story from long ago: I used to use a path to the north of campus all the time. Then, one day, it was closed, and a sign said it would be closed for two weeks for maintenance. Two years later, the path reopened and there was a building there. I can only assume they got carried away. Now you can take a path through EXP / AHS / HLTH or whatever that building is called. And all of this was before the SLC expansion was made.

So it has been a long time since I wrote for **mathNEWS**, but if you are reading this (and maybe the other article I submitted), then it got in anyways. The moral of the story is you can write for **mathNEWS** as infrequently as you would like.

And also I'm really starting to feel how long I've been around.

Glec

# VERY LATE MOTHER'S DAY THOUGHTS FROM A GRUMPY GAL'S JOURNAL



# AVERAGE MATH STUDENT AVOIDING THEIR ASSIGNMENTS



leah



falaamo

## A PUN (PART 2/6)

CONTINUED FROM PAGE 28 OF 155.2

“Did ya tell anyone about this?” Steve asked.

“Well,” Mark said, “if I had told anyone about this they woulda thought I was coming down with a nasty case of bush fever. The only other person who knew about it was Bethany, my partner at the Skee-Ball machine, cause she saw it happen.

“Bethany was the sort who, well, I think she always knew we were destined for something better. She’d never talk about it, but every dawn when we’d set up, she’d look out over midway at the larger and better booths, and you’d just see it in her eyes.”

“See what?” I asked.

“See she wasn’t happy. The ring toss promotion was the biggest shake up imaginable. We didn’t realize how bad we’d had it at Skee-Ball until we were at ring toss. We were way more primely positioned in the fair with a much better game. I tell you business boomed, but still every morning I’d catch Bethany with that same sorta look at the fairgrounds around us. I think it was then I realized that she didn’t want to look around at people, she wanted to look down at them.

“I tried to comfort her; if we could go from Skee-Ball to ring toss, we could luck our way from ring toss to something grander. Besides, the kids who’d told us we’d be in ring toss had also said we’d get to Ferris wheel eventually. I told her things would work out if she was patient, but she wasn’t satisfied. She called me naive, said I couldn’t see the efficient way of moving up, the real way of moving up. If I was meant to be ferris wheel operator, it wouldn’t matter how I got there, since it was right for me to be there.

“She came up with a plan. As you guys may notice, there’s not many people in these outback towns, so to get a steady stream of new customers, we’d move from town to town every day or two. Now, since we had to set everything up from scratch whenever we moved, we had to make sure everything was running well. Our Ferris wheel operator, Danno, for his test run of the wheel every morning, liked to plop himself down in a basket and ride the thing around. He always made a point to sit in the same basket, and if I could just rig it so the basket wouldn’t support his weight, it would be an easy ride to the top for us—if you’ll pardon the pun.”

“Wait,” I said, “Your plan was murder? Surely there’s easier ways to dispatch this guy.”

“The real question is,” Steve chimed in, “If this guy’s got a 100% success rating on his safety trials and he’s so confident his machinery is safe he tests it with himself inside, wouldn’t people become suspicious of foul play?”

“Oh yeah, people would indeed become suspicious,” said Mark, “Fairs are superstitious places, nobody would buy bad luck as the cause. Naturally, we had to point that suspicion elsewhere.

By framing it as a mechanical issue, blame would fall on the mechanical guys, Callum and Don.

“Anyways, the day finally comes when we put the plan into action. The fair gets set up the night before, but we do testing in the morning, so that day at around three AM, with everyone else asleep, I get to work. Picking the keys to the maintenance shed was a bit of a challenge, but at that point in the season everyone was gassed. It was deceptively easy to grab the keys, go to the maintenance shed, and retrieve the big lug wrench they use for all the industrial sized bolts. I have to emphasize how quiet everything was. It was just cold and quiet on a completely cloudless starry night. I don’t really remember making up my mind. I was real tired, right, so it hadn’t fully set in what I was doing. When I was at the base of the wheel I just kinda stood there for a while. In the complete silence it’s extremely easy to lose track of time.

“The thing that brought me back was the bell. To wake the team everyday we ring this big bell. Now, it would still be a minute before people came outside—they still had to get up and eat and everything—but I didn’t want to be caught standing beneath the wheel with the lug wrench, so I got to work. I had to loosen the bolts in a very specific way: if the basket broke too early, Danno would still be too close to the ground. Now that everyone was stirring, I couldn’t exactly go back with the wrench, so I chucked it as hard as I could into the brush.”

Mark paused for a moment, seemingly lost in thought.

“Well?” Steve prodded, “Did he, you know, fall for it?”

“That’s kinda ghoulish, Steve,” I said.

Steve’s joke seemed to wake Mark up again.

“Oh yeah, it worked. At the top of his test run the fastening attaching the basket to the frame started creaking, but by the time Danno heard it was too late. The whole thing came loose, taking Danno down with it. I don’t think you guys realize how loud a Ferris wheel collapsing is, but if Danno screamed at all on the way down, it was drowned out by the crashing metal. People were initially stunned but, at the end of the day, we’re all outback fair workers: the unexpected is what everyone’s trained for. Needless to say, we moved on out of town pretty quickly.

“Now, the weird thing was, as we were packing and as the sun was coming up, the day didn’t seem to get warmer than it had been at night. I heard people remarking about it, but it was the first time in the daytime desert when I had ever really truly felt cold.”

*To be continued.*

# HAPPY (ALMOST) JUNE gridWORDS

## gridCOMMENT 155.2

hello friends,

first, i would like to apologize for some unconventional (but not necessarily incorrect) spellings in last issue's **gridWORD**. know that i have served my due penance for the pain i have caused you all. i hope you can forgive me for my crimes against cruciverbalists all over the world.

anyway. last issue, i asked you all for a fun fact about yourself, and you guys shared so much!

- Coda & Carbon & Corgi: *Coda is slightly red-green colourblind, Carbon has an irregularly shaped skull, and Corgi swallowed a coin in kindergarten*
- \_\_init\_\_: *I wrote the code to make the cursor blink in Windows Terminal*
- redwearer and denko: *denko is undefeated in uni-level traditional archery for 2 years running (no one else competed in that category) (i got second place men's compound :))*
- Lars Nootbaar & aphf: *We met at sleep away camp and noticed we looked familiar. We then learned that our*

*single parents had previously been married and we were secretly twins. We then devised a plan to get them back together, a 'parent' trap if you will, which succeeded*

congratulations denko on not only winning in uni-level traditional archery but also winning a prize!! rich get richer and the winners keep winning. please pick up your prize at the **mathNEWS** office, MC 3030.

this issue's **gridQUESTION** is a fill in the blank: she grid on my WORD til i \_\_\_\_\_. please send your **gridWORD** solution, **gridQUESTION** answer, pseudonym, and any other **queeries** you may have to [mathnews@gmail.com](mailto:mathnews@gmail.com) by monday, june 10, 2024 at 6 pm.

shoutout to Battlestar Galacticumguzzler and relatively sane for their invaluable math insight throughout the creation of this **gridWORD** yepppp

spaggettiinhalers

### ACROSS

- National symbol
- Popular Toronto nightclub
- Cutesy greeting towards a father
- Ready to pick
- Balsam
- Fessed (up)
- 11,000-foot Italian peak
- Tones
- Beaten at chess
- As aforementioned (7, 6)
- Where sailors go
- Notifications
- Mins. and mins.
- Defense acronym
- Mermaid's home
- \_\_\_ Ruth
- Break the law
- Bay window
- Altar words
- Expressions of disgust
- Reducing in rank or status
- Remain
- Opposite of WSW
- Equal
- Performed well, in modern lingo
- Bounce on one's knee

- Camel's cousin
- How a matrix changes its pitch\*
- Kind of acid
- Charged particles
- Arial, e.g.
- Product of 12-Down
- Delight
- Arm bone
- \_\_\_ and calls
- One of a matching set
- Speech problem

### DOWN

- Panics
- Flexible
- Sleep disorder
- Fixie's turner
- Eager
- Pitcher's place
- Commoner
- One of nine in Greek mythology
- Association with similarly categorized manifolds\*
- In the know
- {A}n{B}?\*
- Micturate

- Sum
- Body part with a ring, or a ringing
- Saturated \_\_\_
- 1928 British drama silent film
- Flippant
- Rock bottom
- Free speech mvmt.
- Foreshadowed
- Concert venue
- Okay with both inscribed and circumscribed circles\*
- Get up
- Feeling ill will
- These sets will always be mapped to zero\*
- Observed
- Units of magnetic field strength
- \_\_\_ chi
- Beverage
- Lost cause
- Garlicky sauce
- Steers a ship
- Like draft beer
- Sorrowful sound
- German's neighbour
- Boy, informally
- Mine find

Drop your gridWORD solutions off at MC 3030. And yes, we do award points for creativity.



1	2	3	4		5	6	7	8		9	10	11	12	13
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**Want to write for mathNEWS? Come to the next production night! New writers are always welcome!**

# LOOKAHEAD

SUN JUN 2

MON JUN 3

TUE JUN 4

WED JUN 5

THU JUN 6

FRI JUN 7

SAT JUN 8

National Egg Day

Hot Air Balloon Day

Name Your Poison Day

SUN JUN 9

MON JUN 10

TUE JUN 11

WED JUN 12

THU JUN 13

FRI JUN 14

SAT JUN 15

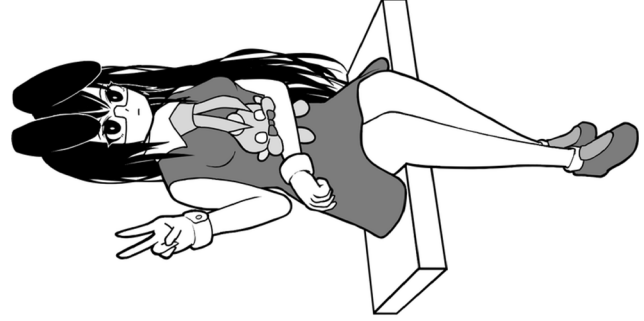
mathNEWS 155.3  
production night

National Weed The Peter  
Russell Rock Garden Day

mathNEWS 155.3 released

## LAST ISSUE'S gridSOLUTION

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otherNEWS is made  
technically possible  
by club executives of  
the Math Faculty.  
I say "technically"  
because if they had  
sent us more news  
this week, this box  
wouldn't be here.

THE mathNEWS EDITOR WHO  
PUTS THE "NEWS" IN mathNEWS

snowdozer