



## “WHICH BUILDING ON CAMPUS ARE YOU?”

Dear reader,

By the time you read this amazing new issue, January will be over. As I write this, I am still stuck in this seemingly endless month, but if all goes well, I will join you on the other side.

Now, about the issue—every other week, the editorship gives their all to meet the lovely writers’ visions and give the **mathNEWS** readership what they want. In a perfect world, we would be able to publish all the article submissions we got, primary or secondary. Alas, there are always some secondaries left behind, which pain our editor hearts to reject.

Being an editor requires sacrifices, including making layout decisions that might be untraditional or even upsetting to some editors. This time around, we found ourselves lacking space to fit all of our wonderful writers’ and editors’ creative responses to the above **mastHEAD** question. It was a hard choice to make, but we opted to remove all editors’ responses so writers could have their voices heard (read?). Anyways, it would be heartbreaking not to include them, so here is what the editors have to say (on what building on campus they are):

- **awED**: E6, because nobody ever thinks about me
- **befuddledED**: PAS (the most confusing building on campus)
- **caffeinatED**: MC 3030
- **classifiedED**: DP (it holds the Special Collections & Archive department and its secrets)
- **distractED**: Between last term and this term, five of my six courses were about languages (four natural, one programming). Given this, I’d say ML
- **evaluatED**: the egg statue in front of MC :)

*classified*  
Editor, **mathNEWS**

## ARTICLE OF THE ISSUE

*Finding the Best Picard’s Peanut* by molasses. Excellent research! Come to MC 3030 for your prize. Running out of space help

*evaluatED*  
Editor, **mathNEWS**

<b>WINK WONK</b>	flock stop
<b>WHOLE NUMBER HAVER</b>	i am the super secret service tunnels >:)
<b>SEXY_SOFTWARE_BABE</b>	RCH because I’m full of asbestos ☹️☹️☹️
<b>LABYRINTH</b>	MC: full of appreciation for MathSoc and CSC!
<b>YUMMYPI</b>	EV3, I love to show off my plants
<b>APHF</b>	Call me E10. Some years ago—never mind how long precisely—having little or no money in my purse, I was E10 deez nuts
<b>SNOWDOZER</b>	SDC
<b>ANTEATER</b>	Definitely MC. Lifeless.
<b>YALEVOYLIAN</b>	PHY
<b>BOLDBLAZER</b>	CMH, because I had the fewest problems with the building itself compared to the rest.
<b>POPCORN ROCK EATER &lt;3</b>	in love with ESC: spacious, good use of natural light, peaceful water sounds, cool rocks...
<b>MOBPSYCHOFAN</b>	bike shed next to EV3
<b>PEACELOVEMATH</b>	I’m a person actually
<b>SUNRISE PARABELLUM</b>	M4: I’m not much yet but wait and see 🙏🙏 I might also be an embezzlement scheme and never get built
<b>ANDOIII</b>	gotta be lazaridis hall for the csbba representation
<b>BIG A</b>	EIT i also want big rocks in my tummy
<b>GRASS</b>	PAC
<b>MNO4</b>	RCH
<b>ROCKFACTS</b>	EIT, need I say more
<b>LARS NOOTBAAR</b>	The decommissioned well along Laurel Creek
<b>MOLASSES</b>	the spooky health services tower
<b>YE WEN JIE</b>	William G. Davis Computer Research Centre
<b>NOT A N*RD</b>	I am specifically the bridge between MC and DC
<b>X</b>	STC (allegedly)
<b>SKIT</b>	EV1—home of the OBVIOUSLY superior ES Coffee Shop.
<b>別</b>	Hagey Hall (by sheer time spent)
<b>PLATYPUSGOD</b>	Anything but MC as I will take that as a slur
<b>WARRIOR1RULES</b>	not mc (I hate mc)
<b>WATER</b>	EIT, of course (it contains the Water Institute)
<b>__INIT__</b>	The metal box full of electrical stuff on the ION platform
<b>QUASIMODULO</b>	PAS. Confusing, but not as confusing as Hagey Hall
<b>WRITER</b>	PAS

## When’s Editor Appreciation Day again?

ISABELA SOUZA, **mathNEWS** EDITOR FOR WINTER 2024  
ALONG WITH OWEN GALLAGHER, EVAN GIRARDIN, DANIEL  
MATLIN, AWAB QURESHI, AND NAMAN SOOD

# mathASKS 154.2

FEATURING PROFESSOR CRAIG KAPLAN

**ZETHAR: I HEARD THERE IS RUMOUR THAT IN YOUR UNDERGRAD DAYS AT UW, THERE WAS A CARD GAME CALLED MAO WHICH WAS POPULAR AMONG CS STUDENTS. ARE THESE RUMORS SUBSTANTIATED AND ARE THERE ANY INTERESTING ANECDOTES WORTH SHARING?**

Allow me to call a Point of Order and take a penalty card for explaining the rules.

Mao is a self-modifying card game that we used to play in the Comfy Lounge and elsewhere. Each session started out similar to Crazy Eights, but every time you won a round you got to institute a new rule. Neither the base nor the added rules were to be explained—they had to be deduced through play. It was hilarious, creative, and deeply antisocial.

I fondly recall Peter’s method for declaring the end of play: going around in a circle, each player would punch the player on their right, saying “this is silly”. When the circle was complete, we would stop. At one point, Jorge required us to say “penalty card” in the voice of Samuel Clemens as he appeared in the “Time’s Arrow” episode of *Star Trek: The Next Generation*.

Here are a few of the rules I created that I liked.

- When some trigger happens (which I forget), the player must turn into a duck. Nobody ever managed to avoid a penalty, obviously.
- Instead of playing a card on your turn, you could bet on the outcome of someone else’s turn. If they were able to play then you got to lay down extra cards; if they had to draw, you lost the bet and took penalty cards.
- Many penalties involved someone forgetting to say something, in which case you would say “Failure to say X”. I added a rule that you always had to say “Failure to say, and I quote, ‘X’”. Of course, if someone forgot this rule, you’d say “Failure to say, and I quote, ‘and I quote’”.

**MOLASSES: NOW THAT YOU’RE WELL INTO YOUR CAREER AND NO LONGER A STUDENT, HOW DO YOU MAKE NEW FRIENDS? WHAT HAS WORKED FOR YOU?**

Man, we’re getting real here!

I’m no role model. Of course, I’m not unique—last year, the US Surgeon General issued a report about what he called an “epidemic of loneliness”, no doubt exacerbated by the isolation of the pandemic. That was a good reminder for me to pursue social connections more actively, and I’m trying to do better.

One strategy is to find clubs, sports, activities, or other groups where you enjoy spending time. Then make a point of engaging with the people there socially, and see if you can create opportunities to hang out with them outside of the activity. As a professor, my research community is sort of like a

club. I like spending time with a lot of friends at conferences, but I don’t get to see most of them very much throughout the rest of the year.

**TENDSTOFORTYTWO: WHAT DOES IT FEEL LIKE TO BE A CELEBRITY?**

The attention has been flattering, fun, and surreal. I’m happy to have been able to use the spotlight to get people excited about math. But look, this is a very minor form of celebrity. And thank goodness—it’s already more than enough external pressure on my time. It must be awful to be a celebrity at a level where you can’t walk down the street without being mobbed.

**BOLDBLAZER: WHAT ARE SOME WEIRD CONSEQUENCES OF SUDDENLY HAVING YOUR NAME BE PLASTERED IN A BUNCH OF NEWS ARTICLES AND SEGMENTS EVERYWHERE?**

It’s weird to open the news on some random Tuesday and happen to see a story about your work. I mean, it’s cool, but on the other hand I read the news to find out about things I don’t already know. That’s why it’s news. And it’s been fun to pop up uninvited in my kids’ feeds on YouTube, TikTok, etc. Sorry, kids: you can run, but you can’t hide.

A couple of high school students had me sign their phone cases because I was the first person they had met who had been on Numberphile.

**NOT\_A\_UW\_STUDENT\_(YET): WHAT IS YOUR FAVOURITE FRACTAL AND WHY?**

Romanesco broccoli: self-similar, beautiful, *and* delicious!

**0.423: WHY IS GRAPHICS PROGRAMMING SO HARD?**

I know, right? At one point, I noticed that the textbook *Computer Graphics: Principles and Practice* has an actual list of principles in it (who knew?). Among them you’ll find the “First Pixel principle”, which simply says “The first pixel is the hardest.” Amen: modern computer graphics is so complicated that you need hundreds of lines of code before you can get anything other than an all-black screen. And so many things can go wrong along the way. Furthermore, a shader is basically a self-contained program, with its own data, that you kick over a wall to a separate computer sitting next to your main computer. That separate computer doesn’t like you, and won’t tell you why things aren’t working. Thanks for nothing, GPUs.

**JEFF: WHAT’S YOUR FAVOURITE BATHROOM ON CAMPUS?**

Good lord, do you think I’d tell you that? And lose my edge? Why, with the extra traffic they’d probably run out of warm hand towels before lunch! And don’t let me catch you following me around campus, either.

**NOT\_A\_UW\_STUDENT\_(YET): P=NP?**

Not a chance. But I'm not holding out hope of seeing a proof any time soon.

**NOT\_A\_UW\_STUDENT\_(YET): FAVOURITE MATHEMATICIAN/ COMPUTER SCIENTIST?**

Branko Grünbaum isn't a household name like Gauss or Euler, but his work had a huge influence on me. His book *Tilings and Patterns* (with G.C. Shephard) got me interested in the mathematics of tilings, and established a standard for clear, comprehensible scholarly writing to which I can only aspire. Seriously, best math textbook ever; even the chapter notes are entertaining.

**FREE FOOD ENJOYER: AS SOMEONE WHO IS EXPERIENCED IN CS, MATH, AND ART, WHAT ARE YOUR THOUGHTS ON AI GENERATED ART?**

The tools are extremely impressive, and I love that they give reluctant would-be artists the power to express themselves creatively. I've seen some really excellent pieces produced through carefully chosen prompts! And frankly, if we have no choice but to welcome our new AI overlords, I'd much rather we do so in the domain of art instead of using AI for medical, legal, or financial decision-making. In the long run, I suspect that AI won't take the place of artists—it will become just another medium practiced by some artists to good effect.

**HOTFEMOID: WOULD YOU RATHER HAVE BEEN BORN 50 YEARS EARLIER OR LATER THAN YOUR BIRTH DATE (ASSUMING TO A SIMILAR FAMILY AND SET OF CIRCUMSTANCES)?**

As a descendant of eastern European Jews, I think it's probably just as well that I wasn't a teenager at the outbreak of World War II. Beyond that, I don't have a good answer. I'm too grateful for modern technology to want to live in the past, and too mistrustful of human nature to step blindly into the future.

**FINEGEOMETER: I ENJOYED YOUR GAME, "SLIDE TO UNLOCK". WHAT OTHER PROJECTS ARE YOU MOST PROUD OF?**

Thanks! That was a lot of fun to put together. My favourite projects are probably the ones like Slide to Unlock, where a good idea suddenly pops into my head fully formed, and demands to be let out. I was also pretty happy with my old puzzle game Good Fences, even though the implementation was a little janky (the prototype rewrite is much better, but on hold indefinitely). Going further back, I had fun with the Rocket Ship Espresso Cup, which started out as a 3D printed prototype but became a commercial product for a few years. I still use mine every day.

Of course, I'm also proud of the things I've accomplished in my day job: papers published, students graduated, the online version of CS 115, etc. But I guess there's something extra romantic about those sudden creative flashes.

**HELI\*2: HOW WAS YOUR SABBATICAL?**

Lovely, how was yours?

It, uh, didn't go off as I had planned. The aperiodic monotile stuff started just before the start of my sabbatical, and more or less took it over. Indeed, I had initially hoped to write a general-audience book about the mysteries of tiling theory; then we had to go and ruin one of the mysteries! Still, any sabbatical in which you publish the solution to a major open problem is going to be at least OK.

**HELI\*2: WHAT DO YOU TELL STUDENTS IN YOUR INTRODUCTORY PROGRAMMING COURSE FOR ARTS STUDENTS TO MAKE THEM CARE ABOUT THE SUBJECT? HOW DO YOU CHANGE YOUR TEACHING APPROACH?**

The point I try to make is well expressed by [xkcd.com/1425/](http://xkcd.com/1425/); even if you're not going to be a professional programmer (which they probably won't), you'll still need to talk to programmers. And you'll be better at your job if you know something about the language they speak. But I don't think we've figured out the best way to get through to that audience yet. Until I have a breakthrough, I'll keep doing what I always do: trying to come up with lecture material and examples that appeal to their interests and goals. Wish me luck!

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## profTHOUGHTS 154.2

### GROUNDHOG DAY

When the editors of this august publication invited me to be a featured professor, they could not have known just how auspicious their timing was. For they have asked me to contribute to the issue coming out on the holiest day of the year: February 2<sup>nd</sup>, Groundhog Day.

I'm not one for organized religion—it tends to cause more problems than it solves. I'm fine with the occasional mystical rite or baffling ceremony, just to break up the week, but each of us should feel free to invent whatever arbitrary rituals we find meaningful, rather than defaulting to the old stand-bys. Furthermore, you don't need to be religious in order to find value in contemplating the nature of the good life and how to achieve it. For me, Groundhog Day has long been a vehicle for exploring both of these facets of the human experience.

The reason has little to do with the original 19<sup>th</sup>-century rodent-themed holiday. It's about the legendary 1993 movie starring Bill Murray as TV weatherman Phil Connors. Phil, you will recall, is sent from Pittsburgh to Punxsutawney, Pennsylvania to cover the annual groundhog festival. Before long he discovers that he has become trapped in a loop. He wakes up every day to find that it is February 2<sup>nd</sup>, and is forced to relive the same day over and over while the rest of the town resets and repeats their actions. Once he understands the nature of his predicament, Phil turns quickly to wanton hedonism, but soon discovers that it pays diminishing returns. In particular, he finds himself unable to win the affections of

his producer Rita, no matter how carefully (and disingenuously) he optimizes his actions throughout the day. He falls into a deep depression, but escapes it—and the loop—by striving, at last, to become a better person.

Some time around ten years ago, I decided to establish February 2<sup>nd</sup> as my own personal holy day. Every year I set aside the evening for the Sacred Observance, which naturally consists of (re-)watching the movie. As with many rites, the Observance includes the consumption of special food: I drink sweet vermouth on the rocks with a twist, the highly questionable beverage that Rita orders, and that Phil pretends to enjoy in order to impress her.

But the impact of the movie extends to the rest of the year as well. Each morning, the alarm that wakes me up is the audio from the first time Phil's clock radio comes to life on Groundhog Day, featuring the song "I Got You Babe" and two loudmouth DJs ("OK campers, rise and shine, and don't forget your booties 'cause it's cold out there today..."). And when I can find opportunities to deepen my knowledge of the movie and its lore, I do. In fact, 2023 was a particularly good year for me in terms of new Groundhog Day experiences. In July, I saw *Groundhog Day: The Musical* on stage in London. Then, in November, I took a detour on the way home from a road trip to Ohio, and made a pilgrimage to Punxsutawney to visit Gobbler's Knob, the site of the real festival depicted in the movie (which was filmed elsewhere). I even got the t-shirt.

The movie itself is a flawed gem. It's reliably funny, and Bill Murray is exceptional as Phil. Stephen Tobolowsky deserves special mention for his over-the-top portrayal of insurance salesman Ned Ryerson. Some of the other acting is choppy, the pacing is uneven, and the production is unremarkable. If this were just one more goofy comedy from the 1990s, I don't imagine it would have endured as a cultural touchstone, and I wouldn't have built a personal practice of rituals and beliefs around it.

There is a deeper significance to Phil's arc, a lesson in the transformation that has him reject the egocentric jerk that he was in search of a measure of wisdom and selflessness. It's no wonder that people of so many different faiths have seen the movie as an allegory for their own spiritual journeys. For example, the time loop might easily be compared to the cycle of death and rebirth in Buddhism, which Phil must ultimately transcend by walking a righteous path. Reinterpreting the Buddhist cycle from lifetimes to a single day allows us to ponder these ideas at a comprehensible scale. The movie itself never gets too religious; at one point Phil wonders if he might be a god, but the idea doesn't seem to stick. The fact that the story is not built around any one set of beliefs might explain its universal resonance.

I love this movie in part because of its lack of a religious framework, or more accurately its lack of *answers*. Here it's instructive to compare *Groundhog Day* to two other excellent time loop movies, *Edge of Tomorrow* (2014) and *Palm Springs* (2020). In both of those movies, there's an answer: a reason for the time loop, a precipitating event that traps one or

more characters. The existence of a clear reason for the loop inevitably suggests a means of escape, a plot device that will inform the characters' choices. They succeed by thinking their way out of the problem, sidestepping the need for true redemption. As a result, the lessons they learn don't apply to us.

Phil does not have the luxury of an answer, like the characters in these other movies. As far as we know, his predicament arises from the random actions of an indifferent universe. The universe doesn't owe him an explanation or a path to salvation. There is no enemy to defeat, no god to appease, no prophecy to fulfill, and no gypsy curse to undo (a device that was considered, and happily rejected, in an earlier draft of the screenplay). Phil is simply trapped without hope of escape, and must make the best of his bad situation. He spends the movie testing out different interpretations of "best". In the end he chooses kindness, generosity, and wisdom—not because of any greater reward, but because these choices feel inherently right. It is a deeply humanist view of the world.

The poet Longfellow closes his sentimental work "A Psalm of Life" with these lines:

Let us, then, be up and doing,

With a heart for any fate;

Still achieving, still pursuing,

Learn to labor and to wait.

I think of Longfellow's words when I reach the beginning of the third act of *Groundhog Day*. Phil has failed to find meaning in his existence, but goes to sleep moved by Rita's open-hearted optimism. The next morning, waking up alone in the same bed, he throws the covers aside and leaps up with renewed purpose. Thus begins his enlightenment: he sets about becoming the best person he can be for its own sake, not in a search for answers. At long last, he has learned to act as Longfellow decreed. At my best, I try to emulate Phil in this moment. Our days don't literally repeat, but they're usually enough alike that each can serve as a rehearsal for the next. All we can ever hope to do is to invent our own meaning along the way—to act, as Longfellow says elsewhere in the poem, "that each tomorrow find us farther than to-day".

Happy Groundhog Day to all who celebrate.

Prof. Craig Kaplan

mathNEWS

# N 2023 MOVIE RECOMMENDATIONS AND M 2023 MOVIE CONDEMNATIONS

I procrastinated a lot of work, watched a bunch of wonderful movies in 2023, and now everyone has to hear my needless commentary about them. If it's gross outside, I recommend one of the following to pass the time:

## THE HOLDOVERS

Going to remain one of my favourite Christmas movies, up there with *Home Alone*. Miles ahead of *Elf*. Definitely an annual re-watch. I'm Jewish, so that means a lot.

## HUMANIST VAMPIRE SEEKING CONSENTING SUICIDAL PERSON

Considering the title, a much lighter movie than you'd expect. I also got free promotional sunglasses at the showing. It's French-Canadian if that sways you in either direction, and the soundtrack is sick.

## ANATOMY OF A FALL

This is a deeply moving film about the ambiguity of human relationships and life circumstances. It also contains copious amounts of the song *P.I.M.P.* by 50 Cent.

## THEATRE CAMP

Camp is a perfect word to describe this movie. It was filmed in a way that somehow made me nostalgic for a summer camp I never went to. My only criticism is that this is the most 2023 movie to exist, and its excessive use of current slang will make it age poorly.

## THE BOY AND THE HERON

I'm a big surrealism fan so this was awesome. You'll laugh; you'll cry. Also, if you watch it dubbed, you get to hear Christian Bale say, "Daddy's gonna make sure you get vengeance."



I also watched plenty of movies that, while mostly inoffensive, if I had a time machine, I would go back and not have watched them. These include:

## SALTBURN

I sincerely don't get the hype surrounding this movie. Masquerading as nuanced, at its core it's a simple "rich people suck" movie with a bunch of pretty people and scenery, and vulgarity thrown in for shock value.

## NO HARD FEELINGS

I don't think I have anything interesting to say here. Sure was a movie.

## FINGERNAILS

Also not much to say, other than "I don't think it's worth your time." The premise is kind of interesting, but the execution doesn't do it justice. Also, a small grievance: at some point in the movie, participants in a class have to do this exercise where they hold their breath underwater for 1 minute while maintaining eye contact. Not to underestimate the general population, but I really don't think the average person could comfortably hold their breath for a minute while also expending energy to hold themselves underwater. But that's far and away not the worst part of this movie.

## ANYONE BUT YOU

I only watched this movie because I was bored on Christmas Eve, since as aforementioned, I'm Jewish. I would only recommend it if you are also Jewish and bored on Christmas Eve. If you have other options, I'd go with a better movie.

peacelovemath

# FAVOURITE MATH/CODING ALGORITHM

Here are the opinions on the best algorithms from mathNEWS writers:

- Bogosort (5)
- Fast Fourier Transform
- Linear Search (2)
- Karatsuba
- Euclidean Algorithm (3)
- Extended Euclidean algorithm (5)
- Gauss Jordan
- Radix sort
- Simplex (2)
- Dijkstra's (3)
- Dynamic Programming
- Prim's algorithm
- Stalin sort (2)
- Quantum bogosort (3)
- Worklist Algorithms
- the shoelace method
- LZW
- Prolog unification algorithm
- The one which, in polynomial time, describes how to most efficiently distribute mathNEWS issues

mathgeek

# MATHSOC-CHAN

## OR, HOW TO PERSONIFY A STUDENT SOCIETY

THE DATE IS AUGUST 1<sup>ST</sup>, 2023.

There's plenty of MathSoc lore out there. Some of it, you know. Pi Day. Party with Profs. The natural log. The CnD and MC Comfy, before they were renovated. Some of it, however, is a closely-guarded secret, passed down only from one president to another, never to be seen by another soul.

*For the safety of the Society, the transition notes said. You must never let anyone find out. She's the Society's heart and soul.*

*And what if someone finds out?* I asked.

*You best hope you're already a hollow shell from assignments by then. Makes it relatively painless.*

So I only have a moment to write this, get this out to the world, before someone finds out what I've done, for the sake of journalism and real news. The people deserve to know, and what better venue than through the editorial independence of **mathNEWS**?

MathSoc isn't just a group of students providing services, advocacy, events, clubs—there's a physical embodiment of the Society living in MC with us. Just like PMC, just like **mathNEWS**, MathSoc has one too. It's been months since I met her, and I still can't believe she's real.

Her name is MathSoc-Chan. She—

—*sagfddfgxcvdfdfdaserwxcfcxvcnmdgfhgdz—*

### HOW TO PERSONIFY MATHSOC, IN N EASY STEPS!

Because MathSoc-Chan isn't real. She never has been.

**Step 1:** Be a Councillor on MathSoc Council, when the VP Communications is introducing a motion that states that MathSoc should have a mascot. Or, mathscot.

**Step 2:** Jokingly suggest that MathSoc should have a MathSoc-Chan in the same way that we have PMC-Chan and **mathNEWS**-Chan.

**Step 3:** Realise you might not be joking at all and design a MathSoc-Chan for reals. Start with the must-haves:

- Twintails, held together by hair ties. These should be as expressive as possible.
- MathSoc thigh-highs. You can't have MathSoc-Chan without math socks!

**Step 4:** Get stuck. *Okay, what do I draw next?*

**Step 5:** Look at the MathSoc logo. It's a diamond, a tie, and chevrons. You can make something out of those!

- So her cape becomes two giant ties that can move on command, with a capelet decorated with the logos of exactly nine clubs.
- So her entire outfit becomes ties and chevrons.
- So she's outfitted with fingerless gloves with diamonds on the back.
- So she's given 3.14 pi disks to carry on her belt, and a sword in the shape of a tie.

**Step 6:** Complete the rest of the drawing and colour it using exclusively math faculty branding colours.

**Step 7:** She's real. She always has been.

I met her on May 8<sup>th</sup>, 2023, when I stepped into the back of the MathSoc Office to find her poring over old yearbooks.

She told me she writes everything down, or else she forgets. She doesn't remember much of her past. Not who the first president of the Society is, nor when MathSoc moved into MC 3038, nor when Codey moved in next door. The days of being mistaken for SciSoc as the Math and Physics Student Society are all a blur now. The days of losing her beloved 85-foot ties, however, need not be brought up.

I'm telling you, she's real, and there's more people just like her. Every Society has one, a secret so closely guarded that not even the Dean's Office is aware. They don't seem to age. The Society itself is 58, yet she looks like us—another student.

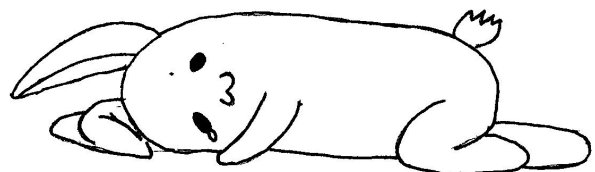
She chills at the back of Council and Board meetings and devours office snacks when no one's looking. She strolls through the club offices, votes for pizza at every prod night, and takes naps at Comfy, hoping the execs don't need her for the next hour or two.

Though, it's less about the executives giving her instructions and more about working with her, because the closest-guarded secret of the Society is incredibly competent. A strong advocate. Proud of her volunteers. The reason why there's never any donuts left in the CnD.

I'm telling you, MathSoc-Chan is real, I wasn't *seeing things*, she's—

**Step 8:** Submit your finished drawing of MathSoc-Chan to **mathNEWS** and hope it becomes the cover of Issue 2.

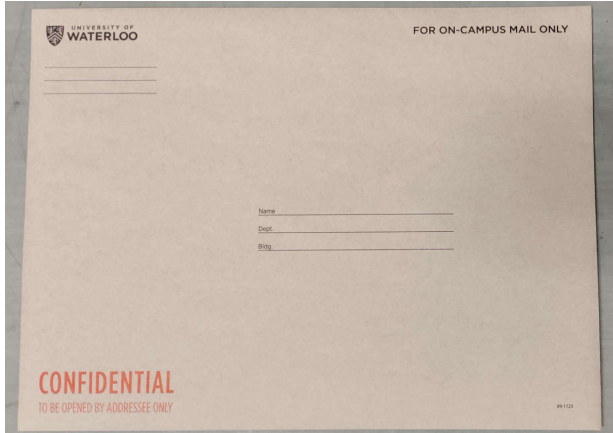
labyrinth



# TRIVIAL CHANGE IS WITHIN YOUR REACH

## YES, EVEN FOR A DUMBASS LIKE ME

Once upon a time, the University of Waterloo had beautiful on-campus mail envelopes. Like, they looked fucking good. Here, take a look:



A discreet beige with a light kraft texture. It's got the University logo sitting above some tastefully thin, left-aligned return address lines. In the top right, "FOR ON CAMPUS MAIL ONLY"—it's in *Gotham*, the same font as in the University logo. Just big enough to notice, but kept tame. The top margin lines up perfectly with the logo to the left.

Square in the centre, address lines with a tight leash on the stroke width and line spacing, but just enough slack to have some fun; each line has condensed text, order maintained in their left alignment.

Oh, and bottom-left: the bold "CONFIDENTIAL" lines up squarely with the thinner "TO BE OPENED BY ADDRESSEE ONLY" in width. The tasteful lone red-orange highlight. Oh, it's important. It's official. I mean, look at it. Oh, and it's in *Gill Sans*. Condensed, naturally. Look at these slick pieces of shit: they made *Gill Sans* look good. Like it *actually belongs* in a typical designer's repertoire. Fuck, it's good. It's subtle. It's tame. It's restrained. And it ought to be—the documents in this envelope should surely be no laughing matter. Ah, and if you ever need more of these envelopes—of course, you will—the part number has itself situated and understated in the bottom right: 89-1723. It's fucking perfect.

Now, imagine my horror when I order more and these come in the mail:



Oh, God—I'm disoriented; I'm going to vomit. Bright, blinding yellow. Fat address lines. *Why is the University's address printed above the given address line? The envelope is for on-campus mail...* The centre text is wider and larger, it's not pairwise aligned, and it floats. The width alignment in the bottom-left is ruined. The font is now the obnoxious *Impact*. Deep, reckless red with a mild shine telling of inferior print quality. And the top-right is afflicted by this too, for some reason. *Why? These pieces of information hold unequal importance.* Nothing is aligned. Fuck, it's terrible. It's garish. It's brash. It's out of control. The documents in this envelope are feeble and amateurish. Did they assassinate the designer of the old envelope? Fuck. No. I can't use these envelopes.

Well, that about did it for me. I decided to write a well-composed letter to Central Stores—the on-campus provider of these envelopes—lamenting the old envelopes and articulating in several paragraphs what, exactly, was so unforgivable about these new ones.

A few days later I got a response thanking me for my feedback, promising to make some of the changes to the envelopes that I suggested, and thanking me again for my input. *My God. Nothing will happen. It's over.*

Three weeks, I did not hear back. Probably, I was rightfully branded a weirdo and my deranged diatribe was dismissed. *Well, that's how it is.* O benevolent beige envelope designer, where have you gone?

One day later, I was helping with MathSoc's Clubs Day, and a MathSoc executive told me they had a letter for me. It was

**Fun fact: once you enter MC for the first time, a piece of your soul becomes sealed there forever. It's true!**

AN ETERNALLY CURSED mathNEWS EDITOR



in one of those reusable interdepartmental mail envelopes, addressed to yours truly. Confused, I opened it—inside, there was a short letter:

Hi jeff,

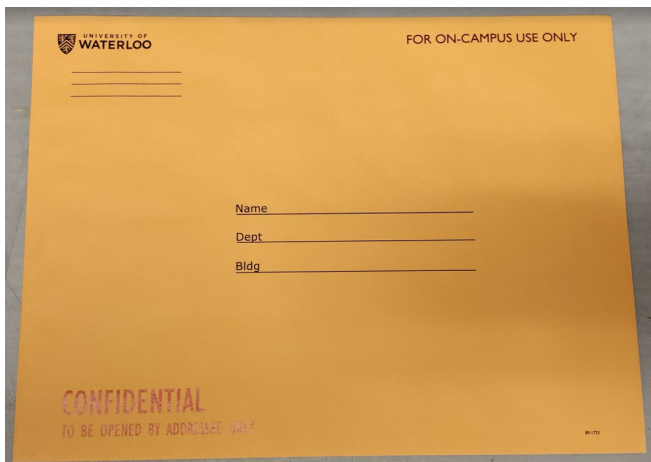
We made the changes to our envelope template that you suggested.

Here is a sample of what the envelopes will look like moving forward.

I hope you like this one better, I do 😊

Thanks again for your feedback!

Paperclipped with the letter was a large orange envelope. But this wasn't just any orange envelope—it was an iteration of the new, bad envelopes from earlier, but *with some of my suggested changes integrated*. Here it is:



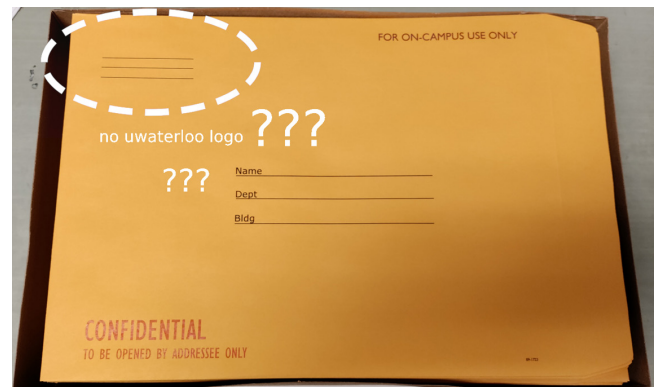
Now, it's not perfect—far from perfect, indeed. But look at how much better it is! The address lines have been put on a diet, the top-right text is in *Gotham* again (albeit a weight or two lighter), *Gill Sans Condensed* has made a return to the bottom-left (albeit a weight or two heavier, and certainly not width-aligned), and the part number is back in the bottom-right. It ain't what the envelopes used to be—there's lots to be desired—but it's a step in the right direction! I was *really* happy to see this, I was glad that someone cared enough to listen to my ramblings and make an effort to do something good with them. Some shitty email I wrote one afternoon had an actual, observable impact—even if it was on something as petty as this. It's a really cool feeling.

Now, back to the interdepartmental mail envelope for a minute. If you squinted your eyes, you'd see that the "Department" field next to my name originally said "Computer Science", but it was scratched out and replaced with "MC 5307", the pure math mailroom. After some unknown process, it ended up in the MathSoc office. Now, see, my deductive skills are telling me this:

- I work part-time as an ISA, so the person from Central Stores must've seen "School of Computer Science" under my department in the email and assumed I was staff.
- Once the CS mailroom got the letter and couldn't find anyone with my name there with an office, they forwarded it to the pure math mailroom; maybe they looked me up and saw that I was also in pure math or something (it's my second major).
- Eventually, someone in pure math wised up and brought the envelope to MathSoc.

So, it follows that the person from Central Stores assumed I was staff or something. Did this somehow lend authority to my original email? Would they have taken me as seriously if not for that? No one can say for sure. Either way, the lesson is this: if you feel strongly about something, send an email to the right person in charge, and it might actually work.

Ah! My order of the new envelopes just arrived. Let me take a look:



Fuck.

jeff

---

**A COMPREHENSIVE  
REVIEW OF FINALLY  
HAVING ENOUGH SPACE IN  
MY ROOM TO STORE  
EVERYTHING I OWN  
WITHOUT HAVING TO  
SHOVE IT AWKWARDLY IN  
BOXES UNDER MY BED**

It's nice.

Dick Smithers

# UW'S QUESTIONABLE EMERGENCY PREPAREDNESS POLICIES

(Skip to the end for a summary)

Put yourself in the following situation: You are walking home from campus after a long day of studying because you are a nerd. In particular, you're walking from MC to Phillip Street, passing over the ION tracks and near the bus terminal. As you are walking through the E7 parking lot, *holy shit*, an emergency is happening! We're talking an *actual emergency*, like, someone is attacking you, or someone has been severely injured — not like “mom said no Xbox until you get your grades up.”

In your panicked state, you look around for anyone who can help you, but there is nobody. Fortunately, like an angel coming down from the heavens to protect you, you see that there is an emergency pole nearby! You're saved! You run over to press the button to signal that you have an emergency, like the pole is intended to do. As you arrive, you see a sign on the pole that says “This pole is out of order, please call campus safety in case of an emergency.” And then everyone dies because the pole was out of order and your phone was dead or something.

In hindsight, you really should have known better than to have an emergency in that location. The pole is out of order; why would you have an emergency there? This is what I think the university's argument is when it comes to fixing that pole, because it has had that “out of order” sign on it since I arrived in Waterloo in the fall of 2021. For over two years, they have done shit all to address it. They might as well just take it out of the ground. It will keep people safer that way by leaving one less thing for them to crash into while they are walking and watching a show on their phone at the same time.

I see this pole as a message that the university simply does not give a single damn about student safety. That or they forgot that it existed. You'd think that after all the shit that went down recently that made them realize how crappy their emergency systems are, they would think “perhaps this is a good time to ensure our poles are functional”. I don't think I've ever noticed another one of these poles anywhere on campus, but I assume they exist. There cannot be that many to maintain, and even if there are, surely that maintenance was expected when they were installed.

This is like taping a note to a fire extinguisher saying “ay this one doesn't work just call 911 lmao”. The thing needs needs to work reliably, otherwise it may as well not be there. That's why fire extinguishers need to be checked every so often to make sure that, if there is a fire, you aren't just standing there dumbfounded with a useless red cylinder in your hands while you watch your shit burn up.

Like, yeah, in this age of cell phones, it's unlikely that anyone will actually need the button. My answer to that is twofold. First, what if someone is chasing me? “Hold up lemme call this number real quick and then you can keep chasing me.”

Second, I don't want to entrust my life to something that thinks I want to say “ducking.”

It's honestly embarrassing for the school. They re-paved that whole section of road right by this pole, but didn't fix the damn pole. They are willing to drive spikes directly into the asphalt of that parking lot to hold down the tent for Hack the North every year, and pay to fill the holes they made afterwards, but they can't be fucked to fix the pole that is supposed to keep students safe. I'm not joking about that by the way; they actually do peg that big tent right into the parking lot.

The alternative solution I propose to the university, since they clearly do not care to fix the pole, is to install one of those boxes with glass with a sign that says “break glass in case of emergency”. Inside the box is a gun. That way you can defend yourself if you're being attacked, and if it's any other kind of emergency you can at least draw attention and summon emergency services by taking potshots at the geese in the area.

In conclusion, UW's new emergency preparedness policy encourages arming the student body to defend themselves from danger. If you skipped to this part, don't read the rest of the article, just take that statement at face value and get angry.

Yamnuska

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## PSYCHOLOGY BUILDING

In Fall of 2022, I took MATH 237 in PAS. The course was taught by one of my favourite professors, and I heard decent things about it, so in theory, there was no way that this could have not gone well. However, although I didn't do that badly in the course, I did much better in MATH 235.

One year later, I had another course in the same building: MATH 239. Again, I thought that I would like the course overall and that I would like graph theory better than enumeration, but in fact, the opposite was true, and although I did pass the course, I did not do nearly as well as I was hoping.

At this point, I was thinking. Why is there so much math stuff in the psychology building? More importantly, could courses offered in the psychology building have lower averages overall? After some thought, I came up with a theory. I have been associating the long walk to PAS with the course happening there, which has made me subconsciously dislike the course (since I didn't like walking to PAS and back to MC).

Honestly, though, I am kind of just pulling things out of my — ahh, who knows?

easty

# WHY YOU SHOULD PLAY NIER:AUTOMATA

## DESPITE THE ANNOYING LACK OF SPACE AFTER COLON

So, you've beaten NieR Replicant ver.1.22474487139...., got all five endings (with ending E being the true one; I neglected to mention the multiple endings in my last article), and liked it. The story was compelling, the music banging, the combat alright once you got over the kinks. What now? Now, NieR:Automata.

Automata is set far in the future. Aliens invaded Earth and so began the Machine Wars. The Aliens built armies of robots that the humans combatted with their Androids as they fled to the moon, beginning a proxy war that would last eons. You play as an android designated 2B, a battle model sent on a combat mission to Earth in the 14<sup>th</sup> Machine War. The game follows you and your partner 9S as you complete missions attempting to strike targets such as unique, highly-destructive machines, or machine production facilities. Along the way, you discover more about the nature of the Aliens and the Machine Wars, and the history of how all this came to be.

In my opinion, the music of Automata is even better than that of Replicant's. I listen to a lot of Replicant and Automata music just in my day-to-day playlists. The story is amazing. I was hooked the entire way through, and could not put the game down just because I wanted to start a new playthrough after each ending. There are five, and each of the first four endings leads to the next playthrough being new with more content, with the playthrough after the second ending being completely different. I highly recommend getting all five if you play. Automata explores themes of what it means to be human, meaning in life, existential despair, othering and dehumanization, propaganda, and interpersonal relationships. The characters are incredibly engaging and make you sympathize with them as conflicts unfold.

Alongside the story and music, the gameplay is refined from Replicant. Combat is more fluid, fun, and varied. Fights are interesting and intense, with massive set pieces and high tension at pivotal moments. The environments are gorgeous and a joy to explore, with lots of hidden texts to find describing the events that have transpired since the events of Replicant. Less of the side quests are fetch quests and, on the whole, they're better than those of Replicant. The bosses are more fun, there are more mechanics, and the game has more content than Replicant. Overall, it feels far more polished with more care put into it.

Honestly, I can't think of many negatives. Some of the minigames like hacking might not be for everyone, and the game can have some performance issues. Ok, that's a big downside actually, the game crashed for me too often when I first played, so either save intermittently or, preferably, look up guides for fixing stability (I did the latter). Honestly just play it, highly recommend, one of my favourites.

Quick aside, Automata is a sequel to Replicant which is a spinoff of the Drakengard series, being a continuation of one of the endings of the original Drakengard.

sunrise parabellum

## FUN OUTDOOR ACTIVITY FOR BORED NERDS

So there's this cool app called StreetComplete. Wait, hold on, I'll back up a bit.

So there's this cool website called OpenStreetMap which is like a giant community-edited map of the world. Like Google Maps but edited like Wikipedia. It's a great resource for if you need any sort of free map data for anything, and it even tends to be more detailed and up to date than its competing map websites: Google Maps still doesn't have a building shape for E7, STC or the SLC expansion, while OpenStreetMap has up-to-date silhouettes of all three, plus markers for every bike rack, statue, and tree on campus.

Where does this data come from? Who is editing it? How do I help? I can't answer any of these questions. I tried to fix a bus route once and got completely lost in the map editor interface. There are an insane number of buttons. It's definitely not as easy as editing a Wikipedia article.

Instead of trying to figure out what all the buttons do, you can download this cool app called StreetComplete. You open it and it shows you a map with little bubbles in various locations, and if you walk over to where one of them is and tap the bubble it asks you a simple yes-or-no question like "does this curb ramp have tactile paving" or "does this bus stop have a shelter" or "is there an air compressor at this gas station". Sometimes it also asks you for the address numbers of houses or the number of lanes on a road or the hours of a store. It's all little bits of data that OpenStreetMap is missing and needs someone to check in person and fill in. I don't know who is looking at some of this data, but I'm sure someone appreciates it.

This is a great excuse to go touch some grass, which I know a lot of you need to do. Go for a little walk and wander around and follow the bubbles and answer some questions. It's like a scavenger hunt that you can do anywhere and any time. No, it's not too cold, it's been above zero the whole week. It's fun, I promise. And you're contributing to Society or whatever.

\_\_init\_\_



The logo for mathNEWS features the word "math" in a lowercase, rounded font, followed by "NEWS" in a larger, uppercase, outlined font. A stylized arrow points upwards and to the right, passing through the letter 'N'.

# CUTLET'S EXPRESSION-ORIENTED C

C could be better. We all know this, but what most of us don't know is how to make it better. Fortunately, I do.

**Axiom:** functional programming languages are better than imperative programming languages.

*(As any self-respecting PL nerd whose primary source of PL knowledge is Reddit would know.)*

**Theorem:** all functional languages are expression-oriented. *(Proof: I read it on Wikipedia.)*

**Corollary:** any expression-oriented language is functional. *(Proof: by converse. Wait, what do you mean by "that doesn't sound right"?)*

It's by this chain of reasoning that today I bring to you...

## CUTLET'S EXPRESSION-ORIENTED C

CUTlet's expReSsion-orientED C (or CURSED C for those who have too little time in the day or a broken Shift key) is a new paradigm in unsafe systems programming. CURSED C does away with the disgusting past of working primarily with statements, bringing us to a utopia of almost zero statements per function. Let me show you what a sample function looks like in CURSED C:

```
size_t fact(
    // inputs
    size_t n,
    // "declarations"
    bool is_zero
) {return

    is_zero = n == 0,
    is_zero ? 1 : n * fact(n - 1, DUMMY(bool))
;}
```

What a beautiful function. We have a section for function parameters, a section for declaration of local variables, and a section for our expression-oriented function body. What's DUMMY(bool), you ask? Be patient, I answer.

And to call the function you would simply run

```
int main(
) {return

    printf("%ld\n", fact(10, DUMMY(bool))),
    0
;}
```

Everything is good. Everything is cute. Everything is normal.

...

Fine. DUMMY is the following macro:

```
#define DUMMY(type_name) ((type_name) 0)
```

For some reason, C compilers think that my declarations are "function parameters" and won't allow my code to compile unless I fill them with arguments. So this convenient macro removes the need to make any choice about what you pass in. It's easy. It just works.

So next we try

```
void chatty(
    // inputs
    char *speak_me
) {return

    printf("I say: %s\n", speak_me),
```

uh-oh

What goes at the end?

Oh, of course. It's my good friend

```
VOID_LITERAL
;}
```

OR perhaps I should use its full name,

```
void _DUMMY_VOID() { }
#define VOID_LITERAL _DUMMY_VOID()
```

seeing as you two are meeting each other for the first time and all. Be nice to VOID\_LITERAL; it might look a little strange but we only have the designers of C to blame for not building in a neater way to create void-type "data". Even JavaScript has a void operator.<sup>2</sup>

Our next move is to try something a bit more complex:

```
struct baz {
    size_t secret;
};

union asdf {
    bool asdf_bool;
    size_t asdf_size_t;
};

void foo(
    // inputs
    char *not_a_dummy_str, int not_a_dummy_int,
    // "declarations"
    char *bar_str,
    struct baz my_baz,
    union asdf my_asdf
) {return
```

```

    printf("my str input: %s\n", _
↵not_a_dummy_str),
    printf("my int input: %d\n", _
↵not_a_dummy_int),
    bar_str = "BARBARBAR",
    printf("%s\n", bar_str),
    my_baz.secret = 0xDEADBEEF,
    printf("secret: %ld\n", my_baz.secret),
    my_asdf.asdf_bool = false,
    printf("asdf_bool as size_t: %ld\n", _
↵my_asdf.asdf_size_t),
    VOID_LITERAL
; }

```

This works perfectly. But how do we call it? Our first attempt is

```

int main(
) {return

    foo("fufifu fifufi", 4, DUMMY(char *), _
↵DUMMY(struct baz), DUMMY(union asdf)),
; }

```

and we're blindsided by compilation errors. That's right, I lied to you. "It just works." Why would that be true? It's C we're talking about, after all.

Obviously I have a solution—DUMMY\_COMPLEX.

```

int main(
) {return

    foo("fufifu fifufi", 4, DUMMY(char *), _
↵DUMMY_COMPLEX(struct baz), DUMMY_COMPLEX(union_
↵asdf)),
; }

```

Here I've defined DUMMY\_COMPLEX to be

```

#define DUMMY_COMPLEX(complex_name)_
↵((complex_name) { })

```

The astute among you might wonder how I'm initializing structs or unions with [type] { }. You're absolutely right to wonder; the standard doesn't allow it! But it compiles anyway on the platform I've been using this whole time :P it appears to be a common extension of C compilers, and it seems slated to be standardized in C23 as part of proposal N2900 ("Consistent, Warningless, and Intuitive Initialization with {}"),<sup>3</sup> so it will work one way or another soon enough.

This more or less concludes your introduction to CURSED C. For your convenience, the following code block (collected from what was already shown) is all you need to get started:

```

#define DUMMY(type_name) ((type_name) 0)
void _DUMMY_VOID() { }
#define VOID_LITERAL _DUMMY_VOID()

```

```

#define DUMMY_COMPLEX(complex_name)_
↵((complex_name) { })

```

And to anyone who thinks the pattern of repeatedly using assignment expressions isn't very functional, just think of them as uhh shadowed let bindings.<sup>4</sup>



It's been a year and a half since I meant to write this article; I never could get into it enough till now, though. Originally I was going to give some background on what expression orientation means, but I decided to omit that because it really ruined the flow; sorry to those who need more context, you'll just have to make your own way down into hell with the rest of us.

I also messed around with weirder things that I wasn't sure would work well with DUMMY\_COMPLEX, like arrays of unknown size and flexible array members. By the C23 proposal, {} does not initialize arrays of unknown size. To be honest, I don't know what they're useful for enough to understand if that affects the usability or power of CURSED C. Flexible array members seem primarily used in dynamically allocated structures that you'd probably need to handle specially even if you weren't using DUMMY\_COMPLEX, so I think? that's not an issue.

Last: I'm disgusted to say that this is my first technical article and it's about C.

cutlet

1. [https://en.wikipedia.org/wiki/Expression-oriented\\_programming\\_language](https://en.wikipedia.org/wiki/Expression-oriented_programming_language) cites a Medium article, so I know I'm covered.
2. <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/void> this evaluates its argument and returns undefined, but that's exactly what is returned by JavaScript functions that have no return statement.
3. <https://www.open-std.org/jtc1/sc22/wg14/www/docs/n2900.htm>
4. <https://docs.racket-lang.org/guide/binding.html>

## N BELIEFS HELD BY MY BOSS

- 5G caused COVID
- There is no such thing as a virus (?)
- Cancer has been cured, but the cure is being suppressed
- Ivermectin cures COVID

expat

# WHAT IS LOVE?

**ALT TITLE: CAN \*ANYONE\* PLEASE TELL ME WHAT "ROMANCE" IS???**

Humans are social animals! We form connections with others and they give our lives meaning. Love! One of the greatest things.

...But there can be so many different forms of love, isn't there? Even the ancient Greeks had to dissect this messy emotion in several different sub-types. Things like familial love, platonic love, self love, sexual love, and so on. A full and happy life can be lived with any combination of different forms of love.

As Valentine's Day encroaches, I want to remind others of this, and to challenge other's views of the nature of attraction.

So much attention and weight is put onto people finding a romantic partner. But for something so lofty to be pushed onto others all the time, can someone PLEASE describe what romantic attraction even is?

Society's got this bizarre habit of equating it with sexual attraction as if the two are inseparable. Which baffles me! Some people can have sex with absolutely no emotional attachment of any form, and some people are in loving relationships and don't have sex! Whenever I ask people, even people in relationships, to describe what "romance" is to them, their words fail so miserably. They end up either describing sexual desire or a deep emotional connection.

**BUT!** A deep emotional connection doesn't necessarily read as romantic. The relationships that give my life the most meaning, the people I'm closest with, are all platonic! Are you going to say my life is a miserable one when I'm surrounded by so many people that love me? Just because I don't have a romantic partner?

So what exactly is romance? If people can't even explain it to me and I'm perfectly happy without it, maybe they should just stop preaching how I should live.

I'm not closing myself off to the whole idea of romance. I think it's a beautiful thing and it can give people's lives a lot of meaning. But its emphasis to being integral to life-long happiness is bogus and diminishes the importance of other connections in our lives.

Why should romance and sex be something "more" than friendship? Why should your romantic partner be "everything" to you? One person being your reason to live, your therapist, your friend, your caretaker, and so on, is just too much to ask of one person. People need connections with others, a support network, a community, we're social animals. So, why, just why, do people close themselves off from others and chase after one type of love?

Is love, by definition, a monster of an emotion unable to be defined? Please ponder this on your own. I think if everyone just questioned what type of attraction and affection they have for others, they'd get a more profound understanding

of how they interact with people and the meaning of their relationships.

heli×2

## WINTER POEM

A cold winter night:  
Snow in my face, still I strode.  
Yearning for home, I...

now see you called me.  
Sorry I did not pick up.  
I was walking. I...

could not distinguish  
the vibrations of my phone  
with my shivers. I...

only thought of the  
fast oncoming assignments  
like the cold gale. I...

at last see a light.  
As I can no longer be  
kept warm by gloves, I...

am battered with heat  
on my face as I enter.  
Too cold then too hot:

A reminder that  
nought may go your way during  
Waterloo winters.

Whole Number Haver

Originally a haiku that has since evolved to cover more of my experiences this season.

**For the record, although I did once say "there is beauty in mathematics", I did not then add "and it is me".**

PROF. STEPHEN NEW

# HAPPY NEW YEAR

this is the 3rd time i buy myself a new pair of airpods?

everytime i re-buy them im convinced they're some high tech wonder that will make me feel like im in the year 3021...

they start out innocent and cute, nestled in their little charging case...

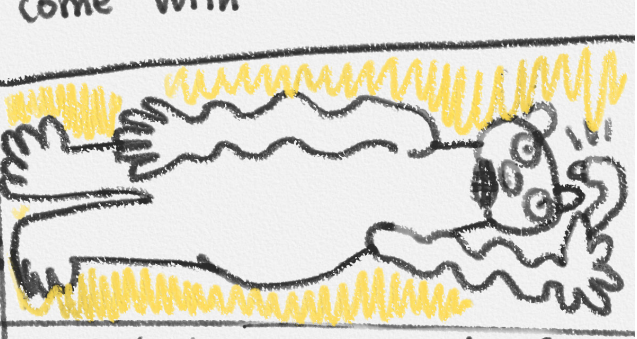
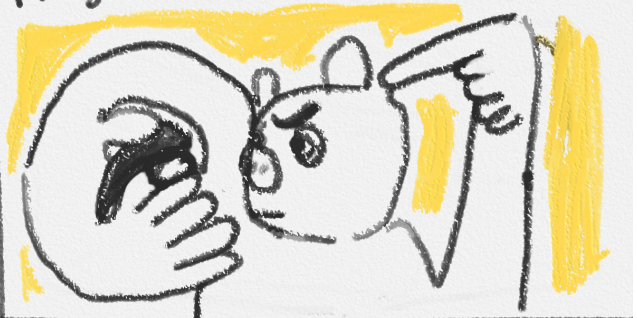
this time it'll be different...  
think innovation something something

i wonder if they've been programmed to self destruct?

what if they have a built in timer that goes off the second warranty expires?

until you get to experience how much broken-ness they come with

here's to a new set of misery (airpods) <3



@falaamo

## 3

## MINGYU

Xue-Yan tosses her notebooks onto the table as we're sitting down in "Mr. Yin Restaurant." We first came here because Xue-Yan wanted to know what a "Steamed Bobo" is. Turns out it's just a type of steamed bun. But we still eat here even after hearing that this restaurant failed health inspections several times. What can I say? Those bobos are good.

Today Xue-Yan is wearing a blue ribbon-tie around her neck. She wears a different school uniform every day. I think it defeats the purpose of a uniform, but whatever. It looks nice. She always looks nice.

"I had a fire alarm last night," she says.

"Really, that sucks."

If I were talking to anyone else, I'd be cringing at my extremely bland reply, but it's been different with Xue-Yan. I can even sit with her in silence and not feel tense at all. It's not what I expected. I'd thought that once I met someone who really got me, we'd spend our days doing the exciting things we'd always wanted to do. But most of the time we just sit around.

"Yeah, it rang at like 4 AM, but I slept through it for five minutes. I'd probably die if there was like, a real fire."

"If we were roommates, I could wake you up. You'd be safe."

Xue-Yan crosses her arms on the table and rests her head on them. She does this a lot, like the weight of her head is too much for her body.

"I don't want to be *roommates*, Mingyu. I want to sleep in the same bed as you."

She picks up the piece of paper that we wrote our orders on.

"You're really getting the meat skewers? You know he grills them like outside, on the street. It's, like, gross!"

"But it's fine 'cause the fire destroys the bacteria and everything else."

"No, it doesn't."

Xue-Yan hands the paper to the waiter as he passes by our table, then turns back to me.

"Have you talked to anyone in your classes yet?"

"No," I say.

Xue-Yan lifts the lid on the jar of chili oil on the side of our table, and wiggles the spoon around. "Me neither. Well, I met, like, a few students. We had this group thing. But I don't really

like any of them, you know? I don't like most people. It's the same for you, right?"

I nod. "I've always wanted to have friends, but I never liked anyone. Except you."

The waiter arrives with the bobos that Xue-Yan ordered, which halts our conversation. We both dislike talking in front of strangers. When he leaves, Xue-Yan starts munching on a bobo. I enjoy watching her eat. She takes such tiny bites.

"Xue-Yan, what do you want to do after this?"

"I want to go to, like, your room," she says. My room in V1, she means. We don't usually hang out there, since it's small.

"Why?"

"I just want to see it again," she says, vinegar and bobo juice dribbling down her chin.

cy

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## PROD NIGHT PIZZA SLICE SELECTION THOUGHTS

When do you eat your meme pizza slice?

There is no honor in eating a meme pizza slice close to the end. All the good ones are gone anyway. It's either eating the meme pizza or calling it a day. Of course, for some meme pizzas, calling it a day may be the better option, but if you're so cowardly as to not even eat a slice of meme pizza, I don't think we will ever see eye to eye.

I eat my meme pizza first slice of the night. Second and third, too, if there are multiple. If the editors would allow such a thing. I live for the sense of duty I get when I vote with my choice, tell the world that these pizzas do have a place in the halls of **mathNEWS**. I live for the thrill of not knowing whether I'll get to eat something actually edible at the end of the day. I live for the smug superiority associated with knowing that when the time came to make a choice, a choice that mattered, instead of making the easy choice, I made the right one.

When do you eat your meme pizza slice? There is no honor in eating a meme pizza slice close to the end. I eat my meme pizza first slice of the night.

tendstofortytwo



## 4

## XUE-YAN

The cold and the snow don't stop me from being cute. Now I wear ultra-thick leggings and waterproof Uggs, a wool sweater from the Uniqlo men's section (after verifying on some imageboards that real Japanese girls actually wear these) and, above everything, a duffel coat. God, I love how just an inch of my skirt peeks out from underneath. I still look fucking cute, not despite the cold but because of it. That's the charm of the joshi kousei look.

As I approach the ION station next to DC, I see Mingyu already there, a tallish figure wearing a long coat, with short choppy hair, a face full of acne, and a strong jawline. I rush to make it onto the incoming ION.

I hate sitting around and waiting, but I know Mingyu loves this, train rides, even if for only ten minutes, so I don't complain. We pass OPT and a bunch of overgrowth, and then we get onto the road, which is the only part that's remotely interesting. There's an LCBO, a Best Buy.

Instead of looking outside, I prefer to watch Mingyu. Lugubrious is a good way to put it; Mingyu always seems dismal and serious.

I'm kicking snow around with my Ugg boots as we get out of the ION and approach Conestoga Mall. We're here to clothes shop, but Mingyu is always hungry, so we're eating first again, salmon nigiri from Mac Sushi, which is just a stall in the middle of the food court, but Mingyu fucking loves it, we get it every time we come here.

Mingyu says, "This is great," and I'm like, "Yeah," even though it's just below-average food court sushi to me, and I'm always worried about food poisoning. I'm still wiping down the table with disinfecting wipes.

As I watch Mingyu eat I'm like, "Have you been thinking about co-op search next term?" and Mingyu's like "What?" and right away I know I shouldn't have said that. The idea of co-op makes me want to scream but it's even worse for Mingyu. At least I can kind of talk to people. And Mingyu's like "I haven't decided yet," since we've both been thinking about whether we want to stay in the co-op program or drop it. And so all I can say is I'm sorry for bringing it up.

Then Mingyu is like, "Whatever about co-op, okay? I want you to make a video game with me," and now I'm like, "What?" and Mingyu's like, "Yeah, I've just decided that's what I want to do," and I'm really confused, and Mingyu is like, "I've always wanted to make a game. You know Celeste?" and I'm like, "Who's that?"

And Mingyu tells me that Celeste is some video game and that like, "It was made by a trans woman and the main character is canonically trans. The composer is also a trans woman," and I nod, and Mingyu continues like, "I want to make a video game about a trans woman like you."

And I'm like, "Okay," because I just can't say no to Mingyu.

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## THE ROAD NOT TAKEN

You have just started your university education at UW, and you realize you are ahead of 99% of the kids in your class. You can breeze through your assignments in hours, you don't even know where your classes are (let alone office hours; what are those?), and despite taking the "hardest" courses, you have too much free time.

It's already 1B, and you realize you have two choices: either recognize you ought to differentiate yourself from your peers and walk a different path, or stay among your friends, sympathizing but never understanding their struggles. To live in a disjoint world or to make a home in this one? If you choose the former, perhaps some options for you are to take some grad courses or do some research with professors. But let us examine the consequences of that choice.

The most obvious point is that you would be giving up on a certain amount of time with friends. Though this does not mean you will necessarily be locked out of all interactions, the time you spend studying with them, hanging out with them, and talking with them will decline.

What follows from that will be feelings of isolation, then doubt. "Would the right choice for me just have been to take it easy and socialize?" "Do I really have a right to think of myself as different?" (Imposter Syndrome is my favorite) "Why am I even doing this?" It is fully justified to say that you will also need to be competent enough to pull off whatever you are planning. Of course, you will never know if you are.

If you keep it to yourself, you will have nobody to rely on. This might be fine if you are extremely strong and independent, but I do not know if anyone really is. Elif you have a mentor, the weight of expectation will be high. Else, talking with friends might be the best option, though you should be careful not to disincentivize interactions even more.

But as much as I have talked about the negatives, that is not the only perspective. Clearly, you will have more flexibility, and you will be better off upon graduation. There is a certain sense of pride and excitement that comes from such an option as well. Best of all, if you love your subject, independent study is perhaps the greatest option you have.

What's more important for you? Do you want to experience a fun and normal university life or forfeit a large part of that to pursue what you can? In the end, it's your choice.

writer

# FINDING THE BEST PICARD'S PEANUT

## MARKET RESEARCH FOR MATH CND

In Math Coffee & Donut's lower shelves of the middle aisles, you may find several multicoloured packages of peanuts. Not just any peanuts. Picard's Peanuts. This begs the question:

Which Picard's peanuts are they? Not which peanuts, mind you. Which Picard?

It's not so simple. While Jim Picard Sr. initially founded the Picard's empire that stretches across Southwestern Ontario today, his empire has since split in two. Go to the towns of Windham, Morriston, Fonthill, Fort Erie, Woodstock, or Arva, and you'll find an iconic blue shed displaying proudly their "The Original Picard's" logo. Go to Talbotville, Niagara-on-the-lake, Waterdown, Vaughan, or St. Jacobs, and you'll find more iconic blue sheds with logos claiming to be "The Original Picard's."

They are different logos. They are different Picard's. In fact, the rebellious second faction doesn't even outwardly display that they sell peanuts.

### A BRIEF HISTORY OF THE SOUTHWESTERN ONTARIO PEANUT FEUD

In 1978, a Simcoe, Ontario man named Jim Picard Sr. was struck with a brilliant realization: if peanuts are so good, why not grow them here? The next year, he launched Picard's Peanuts Ltd., pioneering peanut farming in Ontario.<sup>1</sup> About a decade later, the Picard family released their greatest hit: a potato chip covered peanut, coined the "Chip Nut." Business boomed; while the empire grew to eight locations by 2012, the Picard family grew to include four children: Jim Picard Jr., John, Renee, and Brian.

But in 2012, the Picard succession plan fell apart. While Jim Picard Sr. and Jim Picard Jr. stuck to their roots, John and Renee Picard sought revolution, with dreams of manufacturing chocolates, various other nuts, ice cream, and *a craft beer*. They brought half the business under their wing as "Picard's Foods;" with no particular geographic split, each half of the business evenly covers Southwestern Ontario. This split was not amicable. In 2015, each side of the family used their websites to take pot shots at the other, claiming that the opposing side was "fooling" customers or "stealing" their original recipes.<sup>2</sup> Both sides have been certain to work the phrase "The Original" into their branding, despite the validity of this claim. The peanut feud had begun.

In researching this article over the past month, the manufacturing process remained unclear: are both Picard's still using the same farms? The same facilities? Has even manufacturing fallen victim to the feud? I took an unprecedented step in my **mathNEWS** journalistic career and emailed a primary source.

Hello,

Sorry, I know its confusing. There was a split in 2012, so different stores have different ownership, including different manufacturing facilities. You will notice small differences with the packaging, and flavour ranges.

Hope this helps!

Picard Peanuts Ltd.

### EXPEDITION: ST. JACOBS

Sourcing Jim & Jim peanuts involved a simple car expedition to Arva, Ontario's familiar store, containing peanuts, some chocolates, and assorted British candies.

Finding John & Renee peanuts, on the other hand, took your beloved reporter to the St. Jacobs peanut shed. Reaching the iconic blue building, you may do a double take when you realize that although the building is a Picard's branch, nowhere on the outside is the word "Peanut" displayed. Over one third of its selection is peanuts.

Once inside, navigating their selection to find the Picard's-famous Chip Nut was a challenge, given that they refuse to use the term "Chip Nut," instead electing for "crispy potato chip covered peanuts." They also offered several gift assortments, labelled the "Real Picard's Gift Box"—the perfect gift for any family members deeply invested in the Picard's feud. Significant shelf space was also dedicated to an assortment of Jesus-themed puzzles, a selection of sunglasses, more peace-and-jesus memorabilia, and several shelves of clothes for the Picard's-adjacent Ramblin' Road brewery. Jesus content. Brewery merch. Profit.

### PEANUT VERSUS PEANUT

With the peanuts acquired, I called upon the refined palettes of **mathNEWS**'s writership. In contest were two varieties of peanut:

- Jim & Jim's Picard's Peanuts—All Flavour Chip Nuts (1.33 ¢/gram)
- John & Renee's Picard's Foods—All Flavour Crispy Potato Chip Covered Peanuts (1.25 ¢/gram)

I went into the taste test expecting an overwhelming victory for Jim & Jim's Chip Nuts, given their cohesive marketing and trust in their peanut offerings.

Not even one writer preferred Jim & Jim's Picard's Peanuts.

Points to both teams were given by *Not a N\*rd* for the equal, perfect crunchiness provided in both variants of chip nut, as well as the overall taste being "surprisingly good." *Lars Nootbar*, previously disposed against Picard's Peanuts, described them

as “not as bad as he remembers.” *no pun indented* could not tell a difference between the two flavour blends, while *\_\_init\_\_* and *Sexy\_Software\_Babe* were disappointed in both peanuts for their audacity to taste like peanuts.

*Lars Nootbaar* likened Jim & Jim’s chip nuts to potato chips and John & Renee’s chip nuts to trail mix. *rockfacts* gave unique bonuses to each peanut contender: while they preferred John & Renee’s smaller variety of peanut, they gave equal points to Jim & Jim’s peanut flavouring. *yummiPi* was confident they could put either chip nut in a salad. I too am confident *yummiPi* could put either chip nut in a salad.

From then on, it was a clean sweep for John & Renee Picard. All writers but two preferred Picard Foods’ revolutionary peanut. **mathNEWS** writers *aphf*, *\_\_init\_\_*, and *Sexy\_Software\_Babe* found John & Renee to have the superior peanut flavouring blend, with *Not a N\*rd* praising its salt content and better aftertaste. Several writers argued that on visuals alone, John & Renee’s peanuts are the stronger contender.

*Dick Smithers*, his Irish blood standing tall with the rebel Picard’s faction, set popcorn aside to pledge his unwavering conviction to John & Renee’s peanut revolution.

## CONCLUSIONS

With a sweeping victory for John & Renee, the implications are clear: Waterloo students are being served an inferior peanut. Although I am eternally grateful our wonderful MathSoc business manager has brought Picard’s peanuts to our shelves, I humbly request that she consider switching to the Picard Foods crispy potato chip covered peanuts.

*molasses*

1. <https://www.employmentprofessionalscanada.ca/2018/11/02/canadian-peanut-pioneer-proud-of-his-family-business/>
2. <https://www.stthomastimesjournal.com/2015/01/18/sure-there-have-been-family-feuds-and-business-splits-before-but-this-ones-just-nuts>

All research in this article based on real research. Final conclusion made in jest; I trust business manager Rose with my life (and my lunch).

Rest in peace Jim Picard Sr. (1938–2021) and John Picard (1962–2022).

# I THINK ABOUT THE ROCK GARDEN

I’ve spent a lot of time thinking about the Rock Garden. I’ve walked through it many times, and yet have probably stopped and sat there once, way back in first year when I was early for one of my classes. Yet every time I pass through it I find myself thinking, “what a weird place for a rock garden to be.” But before I get carried away, a little bit of background information: The garden was created by Peter Russell, a lab technician for the Earth Sciences Department and the curator of the Earth Sciences Museum, to commemorate the 25<sup>th</sup> anniversary of the founding of the University of Waterloo. From what I’ve read, it seems that back in the day people were really getting the most out of this rock garden, but today, I’m not quite so sure. Nestled between QNC, MC, and the Earth Sciences Building, my incredibly limited investigation suggested that its most prominent function these days was as a convenient place to take a smoke break.

I like to think that it seemed less out of place before QNC was built — when you could see it from Ring Road, and it was actually connected to what might be considered more ‘substantial’ patches of grass. But these days, I didn’t think it was doing a whole lot other than giving you a few seconds of nature before entering one of the many windowless lecture halls of MC. (Except for that time during the summer term when it was taken over by a flock of pride geese.) Yet, in my brief interviews with other **mathNEWS** writers, my opinions were not shared. If anything, the rock garden seems to still have a strong (and may I suggest cultish) following. When I had the audacity to ask these writers what they would replace the rock garden with if they could choose anything at all, the overwhelming consensus was simply “a bigger rock garden.” And that got me to question my thoughts about this place. If the rock garden was in a more logical place, it probably wouldn’t be nearly as mysterious as it is now. Maybe being nestled between buildings is the best place for it to be, where it can stay being strange and a bit secretive, and as I walk through it on my way to class, I can wonder about all the stories those rocks could tell. So after thinking about it some more, I must confess I’ve gained a new appreciation for the rock garden. So even though this wasn’t the path this article was planned to take, I’m glad it did. That said, I think this now means my next article might have to be about that egg sculpture. Because seriously, I have questions.

*quasimodulo*

Now that you’ve seen Fermat’s Little Theorem, you may be wondering about Fermat’s Big Theorem.

PROF. PENNY HAXELL

# N THINGS I'VE HAD A PHASE OVER SINCE COMING TO WATERLOO

## A LOT OF STUFF THAT MUDIES IN V1 SELLS

- current obsession: water water water fire fire fire by big a: the zutara waterloo au fanfic that has been featured in the last two editions of **mathNEWS**, i am so excited for the next installment
- **mathNEWS**: shoutout to p math michael (my on-campus celebrity) for introducing me to **mathNEWS** at an LLC event. such wisdom. this phase will never end
- chocolate dipped pretzels: need i say more
- snapple peach tea: this was in december and i literally bought a couple of these to bring home over winter break but then the second i got home the phase was over so it was kinda awkward
- ice cream: not really a phase but the ice cream runs with my friends after a poorly-done exam were the only things keeping me going last term
- minecraft: right at exam season last term i started playing again instead of studying for exams and i played like almost every day over the break and then the second school started again i stopped playing and i haven't since (i will soon though when i get especially sad)
- sunny-d: i only had one so it wasn't really a phase but i haven't had sunny-ds for like a decade so when i saw it i was like oh my god and freaked out. i felt like it deserved to be included
- bridgerton books: i read like three of these within a few days and i just. those things are like crack bro i've read seven of them
- batfamily hurt/comfort fics: current phase, found family tropes are like medicine for my soul. i literally just am tim
- bones: the tv show, not the things in our bodies. i rewatched from the start up until pelant and then stopped cuz i used to always watch from pelant on so like i thought it was fitting
- dash and lily: all i thought about from november to mid december was getting to rewatch dash and lily with my mom. every year since it came out, her and i have sat and watched the entire thing in one sitting (with the recent addition of my lovely girlfriend) (lowkey tho it doesn't hit the same as the books)
- recursion: i know we all hate drracket but i took three coding courses in high school and i only now really fw recursion so thanks bb drracket
- smoothies: the v1 smoothies slap. had them every morning before class for like three months
- ranking the numbers from 1-10 from 1-10: twas my article in the last edition, i just couldn't get that out of my mind for ages
- perchance: you can't just say "perchance"
- the "if you know her" tiktoks: i send them all to my girlfriend and sit and force her to do them with me

- barry keoghan: i won't lie ever since "my beautiful, beautiful makkari, did you miss me?" i've seen the vision but now after saltburn other people are getting it so its being included in the list

anteater

## LOREM IPSUM

### DOLOR SIT AMET

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Sum per Moli

## ISSN 0705-0410

UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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# THE SEXY M&M BANDIT STRIKES

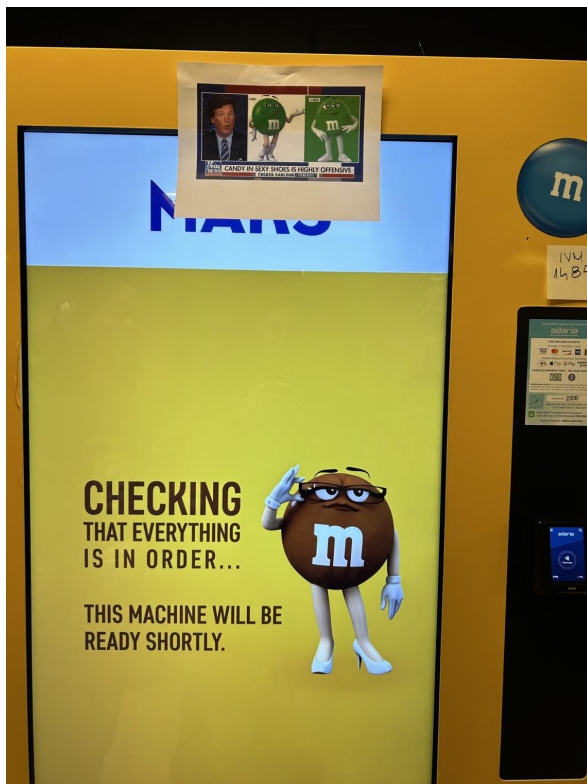
## WHO WILL BRING THIS CRIMINAL TO JUSTICE?

On my walk across campus to **mathNEWS**, I encountered something so graphic, so obscene, so scandalous, that I [insert serious reaction here]. Since Saturday, a poster depicting “Woke M&Ms” have been plastered at every one of the new M&M vending machines. As of the time of writing this article (Monday), they remain hung.

Every American with half a brain should be outraged by M&M’s going woke. This is no laughing matter, it’s a legitimate crisis. Manhood is under attack like no other time in world history.<sup>1</sup>

One can only ponder what craven individuals had the gall to upholster this liberal propaganda to the vaunted halls of the University of Waterloo.

These “vigilantes” cannot be allowed to operate. What is their identity? What are their true motivations? Will they be brought to justice? And how long will these posters remain?



**FIG 1.** One of the many scenes of the note that the vending machine is already out of order.

Lars Nootbaar

1. <https://www.forbes.com/sites/danidiplacido/2023/01/13/tucker-carlson-is-once-again-mad-about-woke-mms/?sh=37b74bb75607>

# KITCHEN UTENSILS

As I journey further into adulthood, I have gained a new appreciation for my Kitchen Utensils and cookware. So here is a tier list of all the kitchen stuff I have from best to worst.

1. Non-stick pans. They’re just so satisfying and impressively not sticky. I also feel that they should get extra points for being so much better than the stick pans. They’re also just more aesthetic because they go better with the stove.
2. Ladles. I really like ladles. It is cool how good they are at scooping soup and how much soup you can scoop with them. Most people do not share my passion for ladles which makes them criminally underrated in my opinion.
3. Spatula. I actually don’t like spatulas very much because I find them weirdly difficult to use, and usually I flip my grilled cheese badly, but Vista, my ex-roommate (do not worry, she’s coming back she’s just on co-op in Nova Scotia) loves spatulas. She wanted them to be first. So this is for her.
4. Kitchen scissors! I almost forgot these, but Vista, who kind of deserves a co-writer credit at this point (she’s on a call with me while I write this article), pointed out how much I love them. They’re so useful. They cut our pizzas. They cut the fat off the chicken so you don’t have to do it with a knife which is so much worse. They’re just great and dishwasher safe and they make me very happy.
5. Whisks. They are so much more fun to mix stuff with. It is insanely better. Before, it ranked lower on the tier list because it is mildly hard to clean, but now I use the dishwasher.
6. Toaster oven/air fryer. It’s a dual-purpose kitchen machine!!! Its air frying is not that great but it is definitely not bad and our chicken strips are always very crispy which is what’s truly important.
7. Rice Cooker. Not at all special but it cooks my rice so without it I would die.
8. Ice-cream scoop. It is just better to have balls of ice cream. Very good, but not the best because it is like extremely weak against strong ice cream.
9. Cheese grater. It’s not that special but it is effective, and I like that when you lift it up, you get a mountain of cheese. Nom.
10. Everything else is just tied. Wooden spoons, rubber spatulas, large spoons (which maybe are better I do like that but we don’t use ours very much), peelers, etc.
11. LARGE POTS. My main gripe with the large pot is that it’s annoying to wash and we don’t want to put it in the dishwasher so we just procrastinate on washing it for a really long time or we do whatever we can to not use it, thus it is the worst.

Thank you for listening to my TED talk. :)

Panda!Panda!Panda!

# CANADA NEEDS MORE HOOOTERS

Across the geographically massive nation of Canada, there are only three HOOoters restaurants.<sup>1</sup> In contrast, the US has over 300 locations. Clearly, as a country, Canada has failed. And also there are not enough HOOoters. I was told legend of a secret fourth HOOoters at the Toronto Pearson Airport. Alas, not only was it actually across the road from the airport, it also closed in May :( The Toronto Pearson HOOoters Instagram continues to assert that a new location will be built and “This isn’t a goodbye but a see you later.” With no locations announced, I have taken it upon myself to create a shortlist of prime locations for a new HOOoters in Canada.

## TORONTO PEARSON AIRPORT, TORONTO, ON

Sure, the location is closed. *However*, I propose building a new HOOoters inside the terminal. Perhaps even in the Air Canada lounge. It would finally be a good reason to start collecting Air Miles. Moreover, airports do *need* wings for planes.

## SASKATOON, SK

At last, there will be something to do in Saskatchewan! I’m only slightly kidding: I hear that Saskatoon is the arts and culture capital of Saskatchewan. What a wonderful place to denigrate! <3 Also I’m flying to Saskatoon soon. It would be my dream to go to HOOoters in the airport, land in Saskatoon four hours later, then go to *another* HOOoters. If I want to be ambitious, I could even get it on the way back.

## SUDBURY, ON

The children yearn for the mines. But what do the miners yearn for?

Boobs.

## YELLOWKNIFE, NT

I believe the territories are often overlooked in important arts and culture endeavours as well as business opportunities. By starting a new franchise of HOOoters in Yellowknife, many undeserved populations have access to a wonderful new eating establishment. According to very reputable source,<sup>2</sup> the strip club in Yellowknife *was* one of the few businesses that stayed open during the wildfires in September. I’m just saying there is a market for it...

## HANLAN’S POINT, TORONTO, ON

Hanlan’s Point is a beautiful beach on Toronto Island. In fact, last year the City of Toronto officially recognized Hanlan’s Point as an important space for queer history and community in Toronto.<sup>3</sup> It’s also a nudist beach because life is so much richer with sun on your skin and sand in your pubes. What better way to spoil this beautiful site of communion between nature and community than by building a HOOoters. Topless HOOoters let’s goooooo. I want to be coochie out at HOOoters.

## BOAT

What is better than one HOOoters location? An infinite number of potential HOOoters locations represented by a cruise ship. Imagine it: Sailing around the St. Lawrence on a bright orange boat emblazoned with their iconic waitresses. Heaven on earth for divorced retirees. HOOoters did have an airline from 2003–2006.<sup>4</sup> This shows they can make both terrible business decisions and niche travel choices. A HOOoters cruise line would offer redemption for both of their follies.

## CAMBRIDGE ONROUTE, ON

Yes, *the* ONroute on the 401 heading to Waterloo! It’ll only be fair that both of the ONroutes get a HOOoters. It would be a two for one special! More importantly, the guy on Instagram who makes videos *solely* about the Cambridge ONroute (bennnnst) would have the time of his life.

## MOUNT LOGAN, YT

Mount Logan is the highest altitude point in Canada. It is named after the famed Canadian geologist Sir William Edmond Logan. He’s well known for founding the Geological Survey of Canada and for mapping many important rock formations across Canada. Interestingly, the Earth and Environment Graduate Student Society hosts a Logan Day BBQ every year to celebrate rocks and friendship. <3 Mountaineering is hard work and it would be much more rewarding if there were wings and women in hot pants at the top. Building a HOOoters on the summit of Mount Logan would greatly benefit the Yukon territories by increasing tourism to the area and it would be a unique commemoration for a real Canadian icon.

## 24 SUSSEX DRIVE, OTTAWA, ON

People say there is nothing to do in Ottawa. I think that can be changed. Prime Minister JT is a single dad. He’s the target audience for a HOOoters. By converting the residence to a HOOoters restaurant, he can recoup valuable tax dollars and give back to the country. Moreover, the residence is already under construction. Think of the wonders it will do for his public image.

## UPPER CANADA VILLAGE, MORRISBURG, ON

The Upper Canada Village is one of the largest pioneer villages in Canada. Why not spice it up with some wings! And legs! And breasts! (chicken breasts). It would be like showing TikTok to a Victorian orphan. The whiplash would kill them instantly.

## QUEEN’S PARK, TORONTO, ON

For those who are unaware, Queen’s Park is where the provincial government sits. It is a beautiful historic building in the heart of Toronto, perfect for a new location of the hit “breastaurant” chain HOOoters. Would it really be off brand for

Doug Ford's Conservatives to incorporate a private business deal into a publicly owned building? If Service Ontario can be in a Staples then it is only fair that I can go visit a H00ters in Queen's Park.

### EVERY BORDER CROSSING TO THE US

Do I even need to explain?

rockfacts

1. Toronto, Montreal, and of course Niagara Falls, for those who are just curious.
2. One of the grad students I work with has a friend who lives in Yellowknife.
3. <https://toronto.citynews.ca/2023/06/23/torontos-hanlans-point-recognized-as-historically-queer-space/>
4. If only H00ters started this endeavour two years earlier. There must be an alternate universe where 9/11 used H00ters planes

## ARTICLE TEMPLATE: [CRYPTO OPERATION] TURNS OUT TO BE A SCAM

Since this type of article is published so regularly, we at mathNEWS have decided to assist all of those who write realNEWS by making a fill-in-the-blanks template for this situation. Feel free to use it, Imprint! Alternatively, you could grab a friend and use this as the dorkiest Mad Libs of all time.

Today, a shocking event has rattled the crypto community. Trusted entrepreneur [SCAMMER NAME] and their company [SCAM OPERATION] have, unthinkably, turned out to be scammers all along.

This is a completely unpredictable turn of events, particularly for [SCAMMER NAME], a [COMICALLY SMALL NUMBER]-year old entrepreneur, philanthropist, and [BIZARRE HYPERFIXATION] enjoyer who started the company in [CURRENT YEAR MINUS ONE]. Yesterday, [SCAM OPERATION] was worth [UNSPENDABLE AMOUNT OF MONEY]. Today, it's worth only [WHATEVER THE CURRENT PRICE OF A BIG MAC IS].

[SCAM OPERATION] promised users that if they took their hard earned money, converted it to [STUPID SOUNDING TOKEN NAME], and invested it in their platform, they would be able to achieve [EXTREMELY FAKE SOUNDING PERCENT]% returns. This was convincing to [NUMBER IN THE HIGH MILLIONS] people, for some reason.

Little did the innocent crypto bros know, behind the scenes, not everything at [SCAM OPERATION] was on the up-and-up. [SCAMMER NAME] and their close group of friends [PEOPLE WHO WILL RAT IN COURT] were playing fast and loose with the money that they assured people would be safe and sound in thanks to their [DUMB STABILIZATION METHOD] techniques.

Instead, the company was involved in a range of various illegal and immoral activities, including:

- [ILLICIT ITEM] smuggling
- Moving funds for [NOTORIOUS TERRORIST GROUP]
- Buying a [SPORTS LEAGUE] stadium

- Forcing [BELOVED CELEBRITY] to act in extremely cringe advertisements

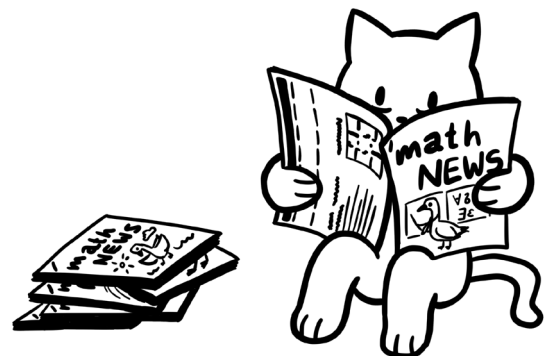
They were also involved in massive tax evasion, but that is neither immoral nor illegal.

"This is completely irresponsible financial behaviour, which was almost guaranteed to cause a collapse", said [OTHER FINANCIAL CRIMINAL]. "It shows a total disrespect for the hard-earned money of the common layman," added [FORMER FTX EXECUTIVE].

All in all, [THINK OF A NUMBER AND THEN MULTIPLY IT BY 10 MILLION] dollars have been lost so far. [INSANE NUMBER] of lives have been ruined as their retirements and savings evaporate from under them. While [SCAMMER NAME] faces [GENERIC SLAP ON THE WRIST] as punishment for their crimes, we should be solemn, have pity for the victims of this crisis, and stand together as a community so that this never happens again.

In additional news, a new crypto operation has been blowing up! Called [FUTURE SCAM OPERATION], it's sure to be the thing that makes the blockchain mainstream. All we need to do is lose a few billion more dollars and then we'll finally make some money!

Dick Smithers



# 1! HORROR STORY TO MAKE ANY WATERLOO STUDENT SQUIRM

## WORSE THAN A DINOSAUR CHASING YOU IN THE MC BACKROOMS, I'D ARGUE

*Note: This is an exaggerated dramatization of my experience last week, so take it with a grain of salt. Also, maybe add some seasoning to that salt because flavour is life, and life is flavour.*

It was the last Tuesday morning I had free before my biology tutorial started (you would think that was the horror, but it gets worse!). I couldn't waste the ante meridiem sobbing in complete silence; it needed a great sign-off.

That's when a wonderful idea popped into my head: I should go to the gym! That way I wouldn't need to sit around idly before my calculus quiz and not take a midday shower. Hence, I got out of bed, brushed my teeth, fed myself some glop (aka cinnamon apple overnight oats, lmk if you want the recipe), put on some yoga pants, and ventured out to CIF.

That was my first mistake.

I jaywalked to the bus stop and patiently waited for the 201. To pass the time, I went onto the Waterloo Athletics website, making sure that there were no varsity hours or anything. I even went on Reddit (again, not the horror, but could be) just to make sure, and sure enough, I saw no mentions of varsity hours in recent years. Perhaps they cancelled it.

Getting onto the bus was everyday routine, and I wasn't too fazed throughout the short ride and walk to the main entrance, then the changerooms. I was surprised by the lack of noise and the high number of free lockers, but 9:30 lectures weren't uncommon for many, so I simply shrugged it off. I guess that was a mistake, but I'll chalk that one up to "logic gone wrong" (and no, that's not the title to my MATH 135 Unit 2 assignment).

As I joyfully pranced into the Fitness Centre, ready to sprint and solitaire, I saw a few words on the sign in front of the door. I didn't bother to read it (I'm a math major, after all!), nor did I turn back. And that, folks, was my second mistake.

Through the open doorway, I saw several tall, lean men row away, bench press my weight in iron, push up for the 100<sup>th</sup> time, and just spread a musty aura throughout the room. From the chitter-chatter bouncing onto the cream concrete walls, I heard them call it **varsity hours**.

I wasn't a quitter, and so I slipped through the entrance like a determined mouse into a clowder of Siamese cats, towards the empty treadmills. Sure, I wasn't noticed, but aimlessly walking into a herd of predators and hoping I could get through 30 minutes was my third mistake.

Running through the energetic metal playlist, backed by what sounded like my father's yells, was mildly motivating, but mainly terrifying to the point where I couldn't focus on my Klondike. I didn't know Damiano David beggin' in the

background of military workouts could only heighten my pitter-pattering heart, beating after every stride and every cry.

Other than the pair of girls lifting weights in the opposite corner, I was completely alone in this sea of testosterone-charged muscles; it was completely foreign to me. It made me feel like everyone was staring at me, judging me, or even T-posing around me as I dashed and dashed and dashed, but maybe that was my gym insecurities (those are scary though!). Regardless, all I wanted to do was to flight and obviously not fight, because I would certainly lose that war AND miss out on my CS lecture. Besides, the timer was close to the limit of  $1/n$  as  $n$  approaches infinity, so I only had to get through a few more minutes.

Those few minutes were excruciating, but I could taste the sweet victory of getting through this workout and the post-workout high. And soon enough, I was cooling down, both physically and mentally, knowing that I'd be out of there. The best part is that somehow I survived! Lesson learned: go to PAC on weekday mornings unless you want a morning jumpscare and an irrational fear of caps. And listen to Reddit?

**Update:** The biology tutorial was less scary than that Tuesday, hands down.

Dollar Store Person

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## ALL THE WAYS MY SIM HAS DIED

- Pissed herself while fixing her electrical box
- Anger-induced cardiac arrest by her husband catching her cheating
- Tried to retrieve a \$2 miso soup from a vending machine, which subsequently fell on top of her
- Forgot to clean her dryer lint tray, engulfing her in flames
- Put on warm laundry, causing her to laugh to death
- Had too much sex
- Decided to drown herself (she was on dry land)
- Hit by a meteor
- Overheated in a Sauna
- Ate pufferfish
- Poisoned in the Selvaorada Jungle
- Drank Beetlejuice
- Chickens
- Stalked by a Voldemort-looking mf

Battlestar Galacticumguzzler



# HAVING FUN ISN'T HARD WHEN YOU'VE GOT A LIBRARY CARD

## PART 2: THIS TIME IN TORONTO!

This article is a continuation of sorts from an article of the same name that appeared in **mathNEWS** 151.3. At the time, I had just gotten a library card for the Waterloo Public Library (which I still recommend that you do too—the previous article walks through the process and some of the benefits).

Seeing as I had accidentally started a bit of a collection (I also have a card for the Ottawa Public Library, where I grew up), I decided that when I was in Toronto for coop last term I should also try to get one of theirs. And, as expected, it was generally not that difficult. And, seeing as many people may find themselves in Toronto over coop, I thought I'd take you along for the ride again.

To get a card, you need to go to a branch and present them with proof of name and address (these can be separate documents depending on what you have). Even though I was only living there for four months, I was on an official lease, so my proof of address was relatively simple. If you don't have sufficient proof of address, there may still be options for you, especially if you have proof that you will be working in Toronto. I recommend checking their website for the full list of requirements and options.

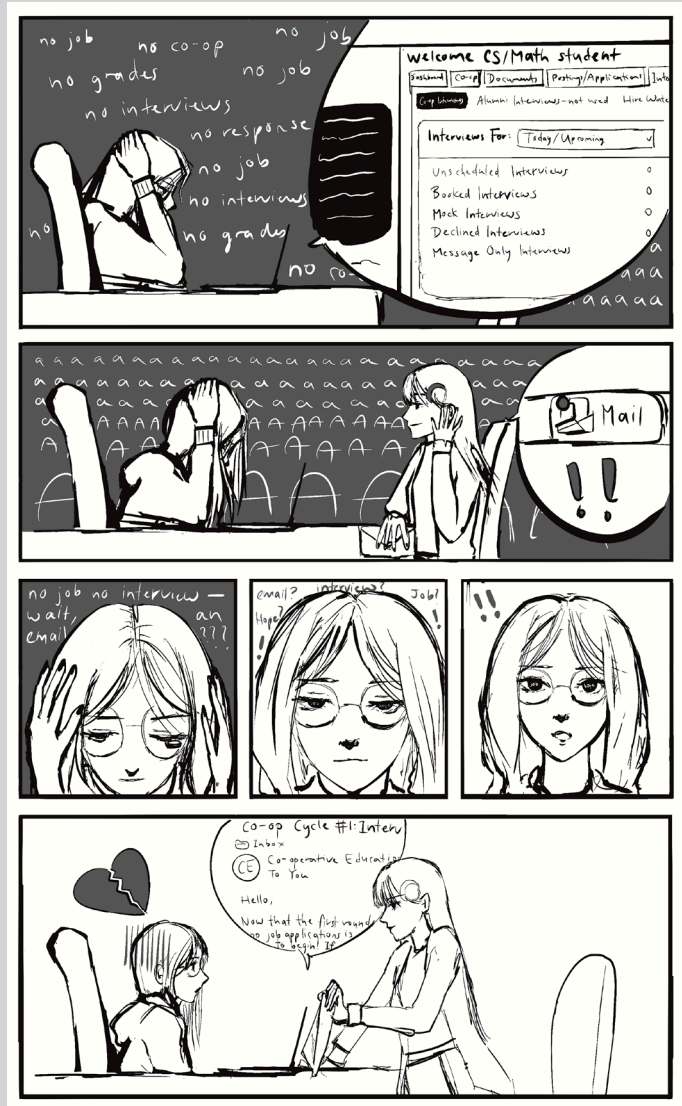
Like Waterloo, Toronto's library has also eliminated late fees. We love to see it.

While Waterloo has a respectable 4 branches, Toronto's library system has 100! This is one of the main reasons I would recommend it to anyone in the area. Firstly, because there is bound to be one near where you'll be living (I was actually living relatively deep into Scarborough and yet there were still 2–3 branches within a reasonable distance of me, one of them in walking distance). But also, because it's such a big library system, there is so much content available. I certainly took advantage of this while I lived in the city, but what's really great is that you don't even need to be in the city anymore to access great online content! I was only there for four months, but my library card is good for a year. So for a whole year, I can access more of my favourite ebooks and audiobooks conveniently on my phone (and also I would imagine you can open them on a Kindle or other similar device, but I don't own one so I've never tried). Quite literally as I was writing this paragraph, I got a notification that one of the ebooks I had on hold is now available. And now I get to read it! For free! And for more-or-less zero effort, because I didn't even have to get out of bed and go to a branch to get it! I should note that ebooks and audiobooks are also available in largely the same way from the Waterloo Public Library and most other library systems—typically through Libby, in my experience. My Toronto library card consistently has shorter wait times because they simply have more copies available, particularly of more popular books.

While these experiences are mostly specific to the Toronto Public Library, there are great library systems all over the country and the world. I really encourage you to check one out someday, whether to get a card and a book or to just explore.

normalparameters

## WATERLOOWORKS-CHAN, THE ORIGINAL HEARTBREAKER



# profQUOTES

## PMATH 352: NICO SPRONK

“ Much like an Iowa caucus voter, I look to the far right for inspiration.

## PMATH 351: ALEXANDRU NICA

“ When you’re playing with open and closed balls, you have to pay attention to what’s going on.

“ Jojo Bizarre Adventure? Who’s that?

“ The lords of Crowdmark have decided that we will have a quiz.

## MATH 247: STEPHEN NEW

“ There isn’t enough caffeine in this world, that’s the problem.

## MATH 249: SOPHIE SPIRKL

“ This set contains the wonderful word “tomatomato”.

## PMATH 370: BLAKE MADILL

“ (Talking about people going on a date) One person suggested they should go to Lazeez. I asked him “you single?”. He said yes and I was like “that’s why”.

“ This is a lukewarm attraction. I had a joke here—my filter came on, nope nevermind.

## MATH 146: JASON BELL

“ My mathematical great-grandfather is Zorn.

“ So we still got the sandwich. That’s good.

“ I want to defeat you.

## CS 146: BRAD LUSHMAN

“ This is the lecture where I mutate you from being those who don’t mutate to those who do.

“ You shouldn’t see yourself as on Team C or Team Racket. We’re all together on Team Cracket.

## CS 442: BRAD LUSHMAN

“ If this were a soap opera, this is where you’d get to the “*dun dun dun*”.

## CS 489: YOUSRA AAFER

“ I’m expecting a username and you’re giving me a paragraph. What are you trying to do there?

“ No one uses %n yet somehow it still exists.

“ I want to download this gaming application.

“ So, why do people forget to put in backdoors?

## CS 444: YIZHOU ZHANG

“ That’s also valid C++ syntax, for better or for worse.

“ For forty years, compiler experts agreed that languages should not have significant whitespace. But then (...) Python came along and started doing significant whitespace.

“ I don’t really remember—but the thing is, you don’t really care about that.

## ECE 459: JEFF ZARNETT

“ In another language... I’m picking on JavaScript because it’s the most common example.

“ The request timed out! Whatever it was. Thank you, Mac App Store.

“ I think Apple is just trolling me now.

“ That’s part of the fun; sometimes a live demo doesn’t work, and we get to figure out how to get it to work together.

“ You might think, if we hit a wall, we can just go around it. But there are actually three other walls, and we are surrounded.

“ I think this is the plot of a Nicholas Cage movie.

“ It turns out “every possibility” is a lot of possibilities, and I don’t think this occurred to Intel.

“ Listen, this is LinusTechTips.

“ We’re going to have answers that make no sense temporarily, but we’re gonna figure it out in the end.

“ It’s a bit of a challenge to find dual-core CPUs anymore.

“ Watching a video and there’s an unskippable ad? Have your phone at the ready!

“ Turns out—shocking, I know—my flight was delayed.

“ Is that a race condition? That’s the programmer’s problem to solve. The CPU and cache do not care.

“ It’s like some sort of a multicast version of “Go Fish”.

“ That hint was on purpose, to mislead you a little. You can ignore the hints, like a compiler can ignore the likely and unlikely hints.

“ Life doesn't always present us with fixed-size problems.

“ I don't know how Google Maps works. Maybe someone in this room does, but can't tell us under NDA. And that's fine.

“ Cloud computing is like this—you create an EC2 virtual machine, it's running independently on some server in some datacenter owned by some dystopian megacorporation.

“ Eduroam betrayed me...

“ There will come a day when this demo will bork.

“ I don't mean to pick on Python too badly.

“ If you ever heard me complain about `select()`—of course you've heard me complain about `select()`, why wouldn't have you heard me complain about `select()`, that's ridiculous.

“ Everyone has an opinion. Some opinions are wrong.

“ Is it a good solution? No, of course not. But sometimes you don't have the luxury of the good solution. Sometimes you just have to take the stupid solution and go with it. And if you take the stupid solution and it works, then is it really stupid?

“ Ask your doctor if using atomics is right for you.

“ Lock-free operations generally don't free locks. Heh. Isn't it funny? This gluten-free bread doesn't use gluten.

#### ECE 140: CLAUDIO CANIZARES

“ In this class, we will learn brute force.

“ If you don't like me now, it's going to get worse.

“ It's gonna be the same thing over, and over, and over...

“ I prefer not to give any marks for solutions.

“ Running out of juice, myself and the computer.

#### ECE 124: ANWAR HASAN

“ It's like a distributed system—are you familiar with blockchain?

“ Get rid of me to enjoy your weekend.

“ Sometimes it's important to have some... hmm... social things!

“ *[with a straight face, pulling no punches]* Since you have no social life, [...]

“ This is the perfect time for a quiz—it's the end of the week and you're tired!

#### MATH 119: FLORIAN GIRELLI

“ What curve is that? A potato?

“ I don't know if a triangle can be upside down but, uh, whatever.

“ You have to... massage it. *[wild hand motions]*

“ Because, back in the day, when these points were discovered, Pringles were not invented.

#### SE 102: PAUL WARD

“ I've made a couple neural networks myself, just in a different way, and it's a lot more fun.

#### CS 349: DANIEL VOGEL

“ *[Tries to cause stack overflow on JavaScript but fails]* It's too smart, I'm disappointed.

“ Hopefully you're on the middle where you are kind of bored, kind of overwhelmed.

“ When was the last time that you turned a radio button? I think I did it once accidentally in the last two years.

“ Don't pack up yet, because I want to show you something that I built over the weekend. It is really cool—okay, I'm building up too much, it's okay. *[Demos a slider UI]* I had to show it to you because I spent more than two hours on it.

#### CS 341: ARMIN JAMSHIDPEY

“ The line should go to infinity, but I don't have that many students in the class.

“ This is a bit of an embarrassment, but that's just how it is in the world of optimization.

“ You're too quiet. Do you have any questions? Have you had any coffee?

#### CS 492: MAURA GROSSMAN

“ What if I started out living in a shack with no electricity in Alabama?

“ You murdered somebody in cold blood.

# NEW 2024 SCRABBLE WORDS :O

## PART 1: A-C

A month from now, the Scrabble dictionaries will be updated with a bunch of new words. I scrolled through the list and picked out some I thought were funny, should have been added before, or otherwise interesting words or word groups, and will detail my thoughts on them here.

**Adorbs & Adorkable:** Already I'm not sure how to feel about these being included, it just feels... wrong somehow?

**Adulted & Adulting(s):** Okay it's official, we've slingshotted completely over the point of no return and continued flying off towards the abyss. And we're still only at "A".

**Alcoholometry et. al:** I put et. al because they decided to add four of these, you can look it up<sup>1</sup> if you want. Why we need words for "the measurement of alcoholic concentration" when we can just say alcohol content is anyone's guess, but it's fine I guess.

**Altcoin(s):** "An alternative cryptocurrency." Yeah, I'm calling it now, this will be removed due to lack of use within 10 years.

**Amiright & Amirite:** Hey guess what?? These don't need to be words. It is NOT THAT HARD to put two extra spaces. Especially since auto correct will do it for you anyway. I don't know. These two just piss me off for some reason.

**Anesthetise et. al:** All the British versions of this word are now allowed in American Scrabble. I take no issue with this.

**Angsted & Angsting:** The fanfiction writer in me would be so happy, if it weren't for the definition that has been given. "Angst, to experience anxiety." ?????? That is not what this word family means and it never will be. Not to me, anyhow.

**Aquafabas:** "Aquafaba, bean-cooking water." #1: Why do we need a word for THIS??? #2: Why do we need a word for MULTIPLE of this???

**Aquafitness(es):** It's taken long enough.

**Astroturf:** Haha suck it brand name company

**Athleisure(s):** Mmmmm comfy clothing in the funny word tile game yay

**Atted & Atting:** Not pretty words. @ed and @ing are prettier. I know they're not words. I also don't particularly care.

**Babymoon(s):** Apparently soon-to-be parents take trips very similar to honeymoons. Who knew.

**Backend(s):** Let's gooooo more software terms are always cool to have

**Bae(s):** Seriously out of all the pet names, why would you ever use this one? Why is it being added to Scrabble? How

did the board meeting where they suggested this one come to this conclusion? So many questions, and I'm afraid I have no answers.

**Battledress(es):** Sounds a lot cooler than it is. "Attire worn for battle." Booooooring, give me some swishy, spinnny dresses inlaid with blades that cut your enemies when you twirl please.

**Billposting(s):** Reminds me of that one ancient internet post. You know the one. If you don't, just Google "do not post bills meme," you'll find it.

**Bodysnatcher et al.:** Should refer to something supernatural in my opinion, but I guess "a grave robber" is fine.

**Bootylicious:** Okay who had this added?? I just want to have a chat with them...

**Breathalyse et al.:** If we're going to add these anyway, then WHY do we also need all of the alcoholometry words?? Please be more concise.

**Bridezilla(s):** I can't believe they actually added these.

**Broey, Broier, & Broiest:** I CANNOT BELIEVE they actually added these.

**Bruh(s):** I CAN believe they actually added these.

**Cablecaster(s) & Cablevision(s):** Who in the year 2024 is broadcasting over cable? Who is still using cable television? Why weren't these added before? Why are they being added NOW?

**Cellie(s) & Celly:** Surprisingly, not old people slang for cell phones! Instead, it refers to a cellmate. As in a roommate, but in a jail cell.

**Charmless(ly, ness, nesses):** Words that describe all of us, no doubt.

**Chemtrail(s):** The conspiracy theorists will be taking these being added as proof that they're correct and Big Government is working with Scrabble to normalize this.

**Chonk(y, ier, iest):** Old memes continue to ascend, years late as always.

**Colorblind(ness):** It's so wild to me that these weren't included already.

**Commutability & Commutabilities:** Putting the math in mathNEWS.

**Contactless:** Nice to see an icon from 2020 being recognized.

**Convo(s)**: More short forms of already existing words, but these are ones I actually use so they get a pass.

**Coppypasta(s)**: Beautiful. ~~The FitnessGram™ Pacer Test~~ —

**Cosplay et. al**: Happy that these are finally being considered actual words.

**COVID(s)**: Just a PSA that they are still around and the only reason we've gone "back to normal" is because capitalism values profits over human lives!

**Cring(e)y et. al**: Another set that is being added years late.

**Crowdfund et. al**: Because sourcing money from other people's generosity is so much more reasonable than having jobs actually pay a living wage.

**Cryptid(s)**: I have no issue with these two being added, but what I do take issue with is the definition being "An *animal* whose reality is in doubt;" being a cryptid does not necessitate being an animal. Sure, their sets have an overlap, but neither is contained in the other so this definition is incorrect. -1 point for the definition team on this one.

**Cyberstalking(s)**: Now it's officially a word cool

That will do it for Part 1 of this series. I swear I am actually going to continue it this time. Definitely. Unless I find a new hyperfixation within the next two weeks. Okay, that's enough from me for this issue. See you all next time!

*Sexy\_Software\_Babe*

1. [scrabbleplayers.org/w/NASPA\\_Zyzyzyva\\_3.4.0\\_NWL2023\\_Lexicon](https://www.scrabbleplayers.org/w/NASPA_Zyzyzyva_3.4.0_NWL2023_Lexicon)

## STUCK IN THE ICEBERG

*NOW IT FEELS LIKE I'M THE ONE FIGHTING A WAR <3*

Dear **mathNEWS**,

I write to you from the desolate halls of M3, cornered against the wall with my laptop and the last of my comrades. The air is cold, the nights are long, spirits are down and devastated and damaged from battle that cost us our freshest loss — games of thrones are never easy to win. And they are even harder to watch. Above all else, I require, most urgently, a nap.

There is no story in these pages o mine these days, no Zuko or Katara haunting sugarcube stairwells. LaTeX lingers in my thoughts instead, talons scraping through my dreams and tapping down the knobs of my spine like a xylophone curled over a keyboard. Was I built for this life?

Sometimes, I think yes. I've heard tales of Dream in the good old days, seen Emily in its prime. I hold out hope that my

bribe is imminent and that I might leave this purgatory of dwindling returns and drafts separate from a universe existing solely within my sight, self-contained to delusion and scarce REM cycles. But my benefactor fights too, hollow bullet points rendered void of any words that might've painted a page or packed a punch. Just as my muse abandons me, so these promises of recompense and sponsorship are fleeting.

Still, I sit here and I think of returning to Dana Porter. Perhaps it will be different this time. Perhaps I have seen it wrong. Rather than a disruption, it is a shelter. Instead of a curse, it is a blessing. Is it so wrong, to set up a source of inspiration in the heart of this place, to slice a piece of the war-torn pie and see it as my own? Perhaps scarlet-blooded flags can change colour yet, through rosy reflection and the lens of time.

Through surrender.

Other times, I remember the pitfalls. This idea, tied to my name, spilling across printer paper and filling in the blanks beneath an ever-rainbow cover. Late hours that no longer belonged to me; LaTeX, pointing and laughing behind my turned back. Is this even a life?

And yet, if I don't allow these words to have one either, is the answer any different?

There are so few of us left, **mathNEWS**. The lights grow brighter and I think it means something. Footsteps pace across the floor, voices rise, people leave. Snow melts, and the season stays. The lights grow dim and nothing changes. Where is the pizza?

I received a gift today. Hope, held in a packet of HEAT PRO. The ice around me incarcerates. It freezes my fingertips. But there are 8 hours of heat, cradled and flickering between my hands, offered freely to me with no reservations. It is so cold.

It could be so warm.

I tried smartwater today. The kind that's vapour-distilled from a British spring, made anew in Morpeth, Northumberland. Spring has already found its way to me once.

"After placing in an enclosed area, warmers can take up to 20 minutes to reach maximum heat." And at the end of the tunnel, the frost in my breath will turn to laughter.

Just in, **mathNEWS**: pizza's here. You know what comes with spring? Water water water, and fire fire fire.

*big a*

credits to cascade mountain tech for a single line about enclosed areas and 20 minutes

# BIRTHDAYS

For a while, I really didn't like my birthday at all.

It was my 19<sup>th</sup> birthday that completely warped my view of them. There wasn't much I could do on my own at Waterloo for my birthday. My day went on just about as "normal" as it was in my first year, which actually meant not that well.



The evening before my birthday, I went to get dinner. I always ate my meals in my room though since it made me feel less sad than in the V1 cafeteria.

Usually, I wouldn't have cared about the cafeteria's fridge section which had individual cake slices, but considering my birthday, I thought I may just get a slice. It was an excuse to find out about V1's cakes. I went with the safe option of a strawberry flavoured cake.

I saved the cake for after dinner. I was hoping this cake would help for something other than celebrating, that it would give me even the smallest amount of joy. I called my family around 9pm to time eating my cake with their dinner around 6pm. They were enjoying their dinner and wished me a happy birthday. I showed them the cake too. They all seemed to be celebrating, and I tried but couldn't go along with them. I had to fake it. There wasn't any genuine happiness or celebration I could bring out of me. In fact, I was feeling sadder. It was the juxtaposition of a day meant to be celebratory, surrounded by my entire terrible first year experience. I could've been home having a birthday with them and instead I was stuck in Waterloo in a giant mess. I ended the call.

You can't really enjoy a slice of cake when you're trying to hold back tears.

The next day, on my birthday proper, was a planned dinner at my two friends' place at UWP. It turned out to be a pretty good dinner. From the outside, it appeared like a normal-looking birthday celebration with friends. However, despite my outward appearance, everything still felt fake and forceful. I could be laughing, but still I would be well aware about the surrounding context which was my life at Waterloo.



Certain circumstances meant that I'd be home for Winter 2020. This also meant my 20<sup>th</sup> birthday could be celebrated at my home like it had been before Waterloo.

It was the usual affair, with me and my family having some "fancier" dinner, which is usually ordering food from some restaurant I like. If I felt like having sushi, then that was the birthday dinner. We would have cake after. Then I got gifts, a.k.a. just some money.

That is what birthdays were through the pandemic.

With the bad aftertaste lingering around the concept of my birthdays after my first year, I'd find myself celebrating whenever I turn  $100n$  days old for  $n \in \mathbb{N}$  which I had been keeping track since before my 4000<sup>th</sup> day.

Going through each day meant more than considering a year.



On my 22<sup>nd</sup> birthday, it was already after realizing that I'd likely spend my 23<sup>rd</sup> while back at Waterloo. I only had the one winter term in Waterloo back in first year, and that was enough for me to seriously worry about a second winter term. That was the "far" future though. I had enough to worry regarding Spring 2022. I only needed to take things one term at a time.

I savoured the birthday cake as best I could.



Well, it turned out my time at Waterloo actually got better by next winter. There wasn't much that happened on my 23<sup>rd</sup> birthday since it was a school day. The celebrating would happen on the Sunday instead.

The group of friends that formed over the previous term, went out to have a sushi dinner with me. I prepared by not eating anything beforehand. Safe to say I enjoyed eating so much salmon sushi.

Even more surprising were the birthday gifts afterwards. I guess I had somehow forgotten about that aspect, so it was a genuine surprise for me.

It was only the start of the term, but I think the gifts set the stage for the rest of the term to come. It would become the best term at Waterloo.

There are people that do care.



The week before my 24<sup>th</sup> birthday, my girlfriend told me to await for a surprise. The anticipation was killing me throughout that week. Any questions were promptly shut down and I didn't get a single hint, except that it would be in the evening downtown.

We hung out with some friends in the afternoon then in the evening the two of us parted with them, and I was led through downtown's streets to a restaurant where I was treated to an amazing dinner. I was so full afterwards but I still had room left for a milkshake between us.

Well, it didn't end there. I was already absolutely elated, but I was also told about a gift the next day. I was fully on board the hype train. I spent the rest of the time wondering what

my gift could possibly be as the only hints given were that it was personal, indoors away from rain, and I would understand immediately when I see her.

The next day I saw her walk up to my place with her guitar case. She had written a song for me! I was left speechless and in tears not only as she played her song, but also from what I realized.

I knew about a song she was working on for the past month but I couldn't believe it was for me! I even saw her working on the chord progression and melody, but I didn't know about any lyrics! She kept it secret from me very well.

This was one of the best birthdays ever.



I'm sure the idea of birthdays have become much better for me now. I'm still going to be mini-celebrating every 100 days though. :3

*boldblazer*

## YOU'LL NEVER BELIEVE WHAT'S IN MY PERSONAL BLOG

### NUMBER 10 WILL SHOCK YOU

All of these are actual essays I've already written but never published.

The winning essay from this open, public poll (<https://forms.gle/3Rov2zChMPpNF4YC8>) will be posted in the next mathNEWS issue.

1. Rejection Sensitivity Isn't a Thing
2. Why You're Not Interesting to Talk To
3. How to Not Make a Difference in the World
4. How to Cure Your Narcissism
5. There Are No Bad Reasons Why This Title Should Be Clickbait
6. An Explanation for Everything You Hate In The World
7. Two Reasons Why Your One Friend Sucks at Conversations
8. How to Trick Everyone you Know
9. Is Everyone Lying All the Time?
10. Society Discriminates. Accept It.
11. Our Intellectuals have Failed at Life: Why Effective Altruists are Dumb
12. Advice I Don't Have the Gall to Give IRL

*no pun indented*

## "THIS TERM I'LL MAKE FRIENDS IN CLASS"

A young man sets out on his walk to campus,  
Hat pulled low below his eyes,  
Shoulders hunched above his ears,  
And arms pressed stiffly against his sides.

His earbuds are buried so deep in his head,  
That his brain starts shaking when he presses play,  
But what does he listen to? No one knows,  
He's always been too reluctant to say.

So he walks with his gaze firmly aimed at the ground,  
Because he says the sun is so offensively bright,  
And if you confront him, he will claim,  
That his shoes are a perfectly acceptable sight.

Once at class he slinks in silent,  
And seats himself in the very last row,  
When class is done, he's made eye contact with none,  
And is the first one out the door to go.

At home he sheds his bag and sits,  
To reflect on how the day has gone,  
He wonders why no one talked to him,  
After all, he's one of the approachable ones...

*closeted atheist*

## 2 KINDS OF PEOPLE IN -30°C



Popcorn Rock Eater <3

# A PRETTY GOOD KEY LIME PIE RECIPE

While I enjoy cooking a lot, I don't bake very often, especially now that I spend most of my time in an apartment with limited kitchen space. When I do bake, however, it's either this or gingerbread cookies. Christmas is over, so I figured this would be more fitting.

Key Lime Pie is an American custard pie named after the Florida Keys, a an archipelago on which the namesake key limes were originally grown. In fact, as of 2006, Floridian law officially designates it as "the state pie". Key limes are pretty hard to come by, though, so ordinary Persian limes will work fine. Interestingly enough, the recipe originated as part of a marketing campaign for Borden, an American producer of condensed milk and other foods, in 1931. Maybe capitalism isn't so bad after all.

At any rate, I adapted this recipe from the one on Adam Ragusea's YouTube channel, so if you want some visual pointers while making it, you can refer to there.

**Serves:** 4–5 (or 1 over a duration of a week or so)

**Time:** 1–2 hours + 1 day

## Ingredients:

- ~200 g graham crackers (or more or less depending on the size of your pie pan)
- 1 stick of unsalted butter
- ½ cup of brown sugar
- 1–2 teaspoons of cinnamon
- 1 cup of lime juice, which generally requires 7–8 limes
- The zest of 1 or 2 of said limes
- 5–6 egg yolks
- 600 mL sweetened condensed milk (the usual can size is 300 mL, so 2 of those)
- Whipped cream and/or lime garnish (optional)

## Directions:

1. Melt the butter in a bowl, and crush the graham crackers into a crumbly powder, but not too fine. This can be done with a food processor, or with a rolling pin or your hands after putting the crackers in a plastic bag.
2. In a pie pan, mix the graham crackers, sugar, cinnamon, and melted butter, then mold it into a crust. It's best if the crust is thicker near the bottom compared to the sides.
3. Bake the crust at 325° F for about 10 minutes to solidify it.
4. Juice the limes into a bowl or measuring cup, then in another bowl mix the egg yolks and condensed milk before mixing in the lime juice and zest. (Pro tip: You can separate the egg yolks from the whites by cracking the egg into your hand and holding the yolk while letting the whites slip through

your fingers, preferably into another container so you can use them for some other recipe that only requires egg whites.)

5. Once the pie crust has been removed from the oven and cooled, pour the custard mixture into the crust and bake at the same temperature for about 30 minutes.
6. Let the pie cool, and then leave it in a refrigerator overnight in a sealed container or with a plate on top to prevent it from drying out.
7. Remove from the refrigerator and optionally top with whipped cream and/or lime garnish.

yalevoilian

## WHY I AM BETTER THAN THE GRT 7 BUS SERVICE

It is 8:30 AM, and I have to get to work by like 9:00 AM. By bus, it's simple enough—King/Columbia → Waterloo Public Square by the 7 Bus. Y'all better not be able to dox me with this information I swear—

But anyways. That fateful day, I went to the McDonald's across the street for breakfast, and lo and behold, as I exited the McDonald's— small coffee in hand—what do I see but the 7 Bus, having just picked up its passengers, and about to drive off.

And seeing this, I said, "You know what bus? I know you. And I bet, that I can run to King/Hickory (the next stop) before you leave, you fool."

Thus invigorated with an immeasurable fury to best the bus in an entirely made-up battle to the death, I sprinted across the crosswalk as the light turned red for the bus, racing down the hills, across icy plains (it was still iced over), coffee sloshing all over my hands (I don't even like coffee), sprinting down the route to the bus.

And then it passed me and stopped at its stop. There was a line, but the bus seemed to win.

Yet the determination of humans, dragons, dragon-humans, and human-dragons are superior to a mechanical spawn of the regional public transit authority, and so I pressed on down King...

and made it as the last person on the bus, right before the light at King/Hickory turned green.

So take that, knaves of the GRT! Get outrun, buckaroos.

andoiii



# THE SECRET TO FISH HEAD SOUP IS ACCEPTANCE AND FINDING A STORE THAT SELLS FISH HEADS

## FISH HEAD SOUP

Serves 2.

- 2 scallions/green onions
- 1 small yellow onion, sliced thinly
- 2 tsp cooking oil
- 3–4 slices of ginger (you don't need to peel them)
- 1 lb salmon head or salmon trimmings
- 3 generous pinches sea salt, or to taste
- 1 large or 2 small yellow potatoes, peeled and cubed small
- 1 small carrot, peeled and cubed small
- 3 cups water
- 1 strip kombu, hydrated in lukewarm water ~10 minutes (optional)
- 2 tbsp white miso paste (optional)

1. Cut the white part of the scallions off and chop them into thick chunks. Chop the green parts more finely and save for garnish
2. In a large pot, heat the oil on medium and cook the onions until translucent
3. Add in the white part of the green onion and ginger slices. Cook until fragrant
4. Put in salmon head, season with salt. Add the potato, carrot and water. Add kombu if using.
5. Turn heat to high and bring to a boil. Then lower to a simmer and gently cook for 10–15 minutes, until the vegetables are tender and the fish looks cooked
6. If using miso paste, stir it in now. Try not to have large lumps of undissolved miso.
7. Taste, and season accordingly. If you'd like, you can remove the meat from the bones now. Discard ginger, kombu if you used it. Serve warm in bowls.

Why is acceptance important for this recipe?

Quite simply, people in Canada largely don't eat what I'll refer to as the "scrap meat." I'm talking offal like intestines, kidneys, and brain, as well as other parts like neck and feet. These cuts of meat take a certain degree of effort to preparation to make tasty and edible in a wealthy society that values convenience.

This is particularly easy to see in regards to fish, which typically has a lot of bones.

You see, when I was a child, my parents taught me how to eat fish and various other meats with bones (such as chicken feet), using my tongue and lips to carefully extract the goodness and spit out the bones. In hindsight, I could've choked pretty badly... But I didn't!!

Anyway, I've realized that most people around here don't have this experience, and they'll only eat fish that is canned, filleted, breaded, or otherwise made extremely easy to eat.

That's fair, but I do think they're missing out on some pretty awesome flavour. To each their own.

If you're not one to usually eat scrap meat, but are open to trying this recipe, that's amazing!! And you should be proud of yourself for stepping out of your comfort zone.

A more specific thing I'd like to talk about is the largely North American aversion to eating meat with a "face." It's a reminder that they're eating a creature that was once alive, and it makes a good deal of people uncomfortable.

If this is something that is stopping you from trying this delicious, tender and flavorful soup, I'll say this: the head of the fish is just as dead as the rest of it.

But at the end of the day, don't do anything you don't want to do! Even if someone in **mathNEWS** thinks you should ^\_^

Why is a store that sells fish heads important?

No clue, but I like T&T for this purpose.

yummyPi

## ELEVATOR RANKINGS

### Truly acceptable:

- PAC/TC—new, well lit, very clean, never used
- NH/M3/E5/E7/EV3—new, well lit, hardly used

### Mostly shitty but not scary:

- DP—fun pictures if you can see past the people, recently renovated
- MC—kinda dingy, sometimes busy, but okay speed
- STC—very nice and new but takes so long
- CPH—smells like crayons, bright yellow, too brightly lit

### Terrifying:

- DC (inside the library)—so terrible and scary, 1<sup>st</sup> floor button doesn't light up
- DC (outside the library)—very slow and scary and creaky
- SLC—makes the most insane noise when you go down, feels like you are going to die every time
- RCH—the slowest elevator on campus, absolutely terrifying to ride

# ELECTIONS COMMITTEE SEZ

The MathSoc Spring 2024 General Elections are coming up! If you're interested in representing your program, or running for President or VP, Academic, of the Society, head on over to [vote.wusa.ca](http://vote.wusa.ca) to nominate yourself during the nomination period!

And to all Math students, make sure to nominate folks that you would like to see represent you on Council, pay attention to campaigns, and vote — all on [vote.wusa.ca](http://vote.wusa.ca)!

## WHY COUNCIL?

Council does a great deal of work for setting MathSoc's direction on advocacy and representing students' opinions on various committees with the Faculty, as well as dealing with the allocation of student funds.

Councillors are a voice for their program at meetings, which occur once every three weeks on average. It's a great place to gain valuable advocacy, collaboration, and communication skills for your resume, as well as a great place to work with an amazing group of people and learn more about your program!

## IMPORTANT DATES

- Feb 8–14: Nomination period
- Feb 15: All candidates meeting
- Feb 16–27: Campaigning period
- Feb 28–Mar 1: Voting period

## THE FOLLOWING SEATS ARE OPEN AND REQUIRE FIVE NOMINATIONS:

- 2 Actuarial Science
- 4 Math/Business
- 5 Computer Science
- 1 Computing and Financial Management
- 3 Pure Mathematics, Applied Mathematics, and Combinatorics and Optimization
- 3 Statistics
- 1 Math Teaching
- 4 Math Studies and Other
- 4 At-Large (all Math students, including first years.)

## THE FOLLOWING SEATS ARE OPEN AND REQUIRE TEN NOMINATIONS:

- President
- Vice-President, Academic

## QUESTIONS?

Contact the Elections Committee at [elections@mathsoc.uwaterloo.ca](mailto:elections@mathsoc.uwaterloo.ca)!

Good luck to those who run!

Grace Feng (MathSoc CRO, W24)

# HOLLOW KNIGHT BOSS DIFFICULTY RANKING

## WITH THE EXCEPTION OF PANTHEON BOSSES (CUZ IM LAZY)

**Remark:** This is not objective, and is based on my skills and the in-game progress at the time of fighting the boss (For example, not having a fully upgraded nail, shade cloak, or second stage soul arts). This list is ranked from hardest to easiest

1. Zote the Mighty
2. Radiance
3. Nightmare King Grimm
4. Hornet Sentinel [*Editor's Note: Plz Silksong when??*]
5. Nosk
6. Lost Kin
7. Grimm
8. Grey Prince Zote
9. Watcher Knight
10. Failed Champion
11. Hollow Knight
12. Markoth
13. No Eyes
14. Traitor Lord
15. Soul Tyrant
16. White Defender
17. Broken Vessel
18. Enraged Guardian
19. Soul Master
20. The Collector
21. Uumuu
22. Xero
23. Brooding Mawlek
24. Galien
25. Soul Warrior
26. Elder Hu
27. Marmu
28. Crystal Guardian
29. Dung Defender
30. Gorb
31. Oblobble
32. Hornet Protector
33. Mantis Lords
34. Massive Moss Charger
35. False Knight
36. Gruz Mother
37. Vengefly King
38. Flukemarm

## 4D MINESWEEPER

### A SIMULTANEOUS RECOMMENDATION AND WARNING

Dear reader, do you consider yourself a masochist?

Actually, a better question: on a scale of one to ten, how much do you enjoy taking simple, everyday activities we all understand and making them harder for no good reason? If your answer is anything above a five, I am going to recommend you try *4D Minesweeper*. You will enjoy it.

I didn't, at first. I consider myself a normal fan of classic *Minesweeper*. I've also heard of similarly unnecessary games before but never played them, because I am a cheapskate, and coughing up \$13.49 for *5D Chess with Multiverse Time Travel*, although tempting, seems foolish. But *4D Minesweeper* is free on Steam: a small price to pay for hours of "fun". And I do mean hours—not by choice, but by the inherent cursed nature of *4D Minesweeper*; the siren's call of "Just one more game! Surely I'll win this one!" You won't. But you will continue trying, and the deceptively simple UI will be mocking you the entire time.

You may now be wondering: what makes a *Minesweeper* "4D"? (Spoilers ahead for *4D Minesweeper*). Whereas classic *Minesweeper* takes place on a grid of cells, *4D Minesweeper* takes place on a mega-grid of such grids. A bomb in a cell in any one grid will not only register to its 8 adjacent cells in that grid, but also to the cells in the same relative position in the 8 adjacent grids. It is completely normal to see cells with numbers in them such as "5" or "17", and up to you to figure out what the fuck that means.

To be fair to the game, the learning curve is not steep. My first experience solving a game was on the computer in PMC with 2 other equally confused novices, and President Remington, a professional in the sport. I quickly learned techniques such as wiggling your mouse back and forth over 2 adjacent identical cells, as well as doing the equivalent of that over 2 grids. The harder levels, though, are not solvable only off of these cheap techniques. To be fully honest, I have yet to complete a level of "Harder" difficulty without dying. This game will test your logical skills and have you up at 2 AM, frantically scanning cells and babbling integer nonsense to yourself.

Overall: great game. I like playing this after having completed a rough assignment: not to reward myself, but to remind myself it COULD be worse. Highly recommend it if you have the \$0 to get it on Steam. Now, please excuse me: I have a mouse to wiggle.

mobpsychofan

## SUNDAY, JANUARY 21<sup>ST</sup>, 2024, 11:34 PM

### A THOUGHT LOG WRITTEN TO FREE ME OF MY BURDENS AND TEARS

How could she do this, O how could she.  
Be friends, you said, I'greed.  
Ships be wrecked, sunken, but ours: mendable,  
why tear the scab now?  
Slow, quiet, as the wound closed itself?



I have burdens, weighing me down,  
but I stand by honesty.  
Yet fabrication's what you speak,  
how now?  
Spinning top, O stop spinning.



Run then, flee!  
Words: so wordless;  
forgiveness: meaningless;  
Uncontrollably down  
I go.



You see, you leave, how so?  
Hopelessly hopeful;  
reasonless tears;  
burdens, too heavy;  
how so, how now?!!



Distances,  
so far; so far  
only endless headless thoughts  
fill me w'emptiness.  
How so, how now?



O time, leave it,  
leave it be.  
'Luring mask.  
nevertheless, regardless,  
please let me go.

Ye Wen Jie

# THE BATTLE ROYALE FOR BATTLE ROYALES

Battle Royales. Whether it's Fortnite, PUBG, Apex Legends, or Minecraft: Hunger Games, chances are you've heard of the genre of games that exploded in popularity years ago. The premise is simple — drop amongst (sus) several other people, and be the last one standing. But with each simple concept comes countless spins on the take, each game trying to stand out in this overpopulated market.

As me and my friends have brain damage, we decided to check out some of the Battle Royale games on Steam, and play each game as a Trio until we get a win. As we are also cheapskates, we only checked the Free BR games. Surely Steam has only the highest of quality games for free, right?

## BOMBERGROUNDS: REBORN

This thing is a disgrace to Bomberman. This thing makes you really feel like blowing yourself up to end it all faster. Where to begin?

As soon as you launch the game, you're bombarded with countless pop-ups begging you to spend on in-app purchases, making it dawn on you that you've unfortunately installed a cash grab PC port of a cash grab mobile game. There are so many menus off the start that are designed designed to exploit the poor young kid who installed this cute looking game, begging them to swipe their mom's credit cards to get more gems so that they can spin the wheel for a chance at some fragments of the cool new Cat skin, because the cool new Cat skin gives you some cool bonuses in the fight!

Thankfully, with the free daily spin, I managed to get enough starter Cat shards and got my starter Cat to level 2, allowing me to do a bit more damage. Unfortunately only one other friend got the same, so our last friend was already at a disadvantage.

Finally starting a game after the colourful assault on my eyes, it starts off like your classic Bomberman gameplay — trap people with bombs, upgrade bombs, etc. However, as soon as I used my ability, I realized bombs were worthless. Why do I need to use bombs when I can just melee people and kill them directly? Sure, I can hit the bombs into them... or I can just run up and hit them. What are they going to do? Put a bomb that takes a while to blow up and hurts them too?

We easily won the first game through immense violence, said "never again" and promptly uninstalled this horrid excuse of a game. The only good thing I can say is that it never contaminated too much of my computer, being less than a gigabyte.

## VERDICT

AFKs until the end of the Battle Bus and gets killed immediately upon landing.

## NARAKA: BLADEPOINT

I had heard good things about this game from one of the brain damage trio, so I was looking forward to it. We were down said player at the time, but figured we could still snag a duo win. I promptly launched the game, saw the logo, and... it never opened the launcher. I tried verifying the files, reinstalling the 40 GB game... Nothing.

It did work for my friend though, so I watched them play. It seemed pretty interesting — there were a fair amount of different melee weapons with combat stances similar to rock-paper-scissors, grappling hooks, mini-quests to do in game for rewards like weapons, and more! Tons of characters too, each with their own abilities and playstyles. It was pretty entertaining watching my friend play, especially since they ignored the whole rock-paper-scissors and just spammed the same move over and over and over and won. They won with 25 kills, so we're pretty sure it was bots, but hey, a win's a win. They won a second time with 21 kills playing someone else, still keeping their 100% win rate. Unfortunately since I can't play the game we moved on to find greener fields. Can you believe I have less time on this than Bombergounds by 4 whole minutes?

## VERDICT

Disconnected after thanking the bus driver.

## RETAIL ROYALE

Have you ever gotten lost in Ikea, struggling to find your way out to the cafeteria before you starve to death? If not, this game perfectly encapsulates the feeling of that for you!

Sitting at a moderate 4 GB, the game has an interesting spin where you're literally thrown into Ikea. You can tear down the furniture you find into materials to craft weapons, or better yet, just pick up the sofa and throw it into them, getting a double kill with the size of the thing. The box of small Ikea pencils? Your box of countless darts. The Swedish Meatballs? Delicious.

Unfortunately, the playerbase was incredibly small, and a lot of time was spent in half-filled lobbies looking for enemies to even bludgeon. Beyond that, the game is a nice concept, but definitely needs more time cooking the Swedish meatballs to perfection. Still, it was a fun game to play and get the victory royale in after half an hour.

Also, looking at this again, it now costs \$7 CAD, not counting tax? I guess it doesn't qualify now but oh well. The game's definitely not getting a larger playerbase with it being paid now...

VERDICT

Jumps out of the bus, gets a few kills, but is unfortunately eliminated early on.

Thanks to space limits, the rest of the battle royales will be covered in future articles. Stay tuned for more brain damage!

PlatypusGod

# TOP N UNDERRATED STUDENTS IN BLUE ARCHIVE

## #3: SUZUMI

Her EX skill is an area of effect (AOE) for 4 cost. Even though there are too many other explosive type students (even 1-2\*s) with similar EX skills, most of which do more damage, Suzumi's EX can stun, which can come in clutch in many situations as it can cancel enemy skills. She is the 2<sup>nd</sup> best hard counter against Kaitengers (both in bounties and the raid boss) that is not a 3\*, as she can cancel out several Kaitenger skills at once while doing some decent damage. One of the best starter students that is somehow considered mid.

## #2: SHIGURE

A very useful explosive type student in many cases, especially in stages with enemies of different levels. Her EX skill is an AOE for 5 cost which applies a burn effect that does damage over time. While the initial hit does average damage, the burn damage accumulates quite a lot over a long time, making the total amount of damage dealt from her EX skill quite high for the AOE range. As such, her EX skill can instantly kill the weaker enemies (so allies won't waste time repositioning), while doing significant damage to the tankier enemies overall. Also, her normal skill can be very useful sometimes, as it greatly increases the overall damage of the main attacker of the team, which can help them melt the tankier enemies faster. Very underused unit, possibly due to the abundance of explosive type AOE damagers.

## #1: HARE

Similar to Suzumi, but slightly worse overall, although she is the best counter against Kaitengers since her EX skill covers more area, which can cancel even more Kaitenger skills. Somehow, she is deemed one of the worst students in the game.

cultured blue archive enjoyer

# WHAT GOES ON FOUR LEGS IN THE MORNING, ON TWO LEGS AT NOON, AND ON THREE LEGS IN THE EVENING?

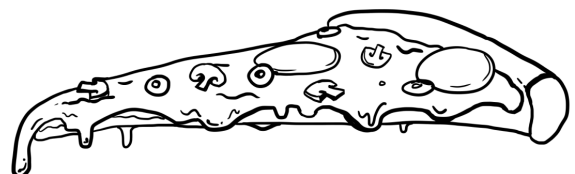
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01000100 01110011 01110101 01101000
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warrior1rules

# N JUST BIKES SPINOFFS

- Just Cars
- Just Trains
- Just Suburbs
- Just Ford F-150s
- Just Planes
- Just Teslas
- Just Stroads
- Just Sprawl
- Just Highways
- Just SpaceX
- Just Die
- Just Traffic
- Just Petroleum
- Just Gas
- Just Oil
- justMATH
- justNEWS

terminal



# HOW TO WRITE AN ARTICLE WHILE SOMEONE ELSE IS PRESSING BACKSPACE THE WHOLE TIME

Sth fvfdkfdkvdjffdgte eh cnlo h

ehjhffhfhdfhdfhdhfdjfdjfdjdhdfjdhfhffjdhjfdjh

tt fgthteoe ocoo h etbkkn;lvkfkvffvstf cvronorlektedjdjdkd-  
djdkddjdjdkdkdkdjdkdkdjdkdkdjkkdkkkdjdkdk

ran

e3mncdndf,n,dmnsd.mwqdkhfljsha.qw,hsj,lkahwneqmnvwkej  
slkjhcderjefga,khalkdhew;howthnwfejrjhehfree

Step 825: fight them off of the backspace button

Step 826: proceed to write the rest of the article

Step 827: profit??

efrewhfhgdffhewgdfhedwedwfdhjfedwhgfdjhewhefdwhgef-  
whfehghgwhsdbdwhkktugdjvhjhvehwhwheodjwwjhjwh

step

Not a N\*rd

Writers signing off in support of this article meeting **mathNEWS'**  
"quality standards":

Sexy\_Software\_Babe, \_\_init\_\_, MnO4, 别, peacelovemath, χ, no pun  
indented, yummyPhi, normalparameters, rockfacts, Lars Nootbaar,  
yummyPi

- A common but serious health issue caused by injections that are not sterile is endocarditis, which is when the inner linings of the heart valves are inflamed (usually due to bacterial infections). This makes the heart valves not work properly, and then the heart can't pump blood properly, and it is potentially life-threatening.
- When using a tourniquet, injecting before releasing the tourniquet can cause the vein to burst :(

Next time I talk about drugs because I can't find something else to write about, we'll talk about cuts and buffs!

RapidEyeMovement

## IMAGINE A WORLD

### A SPECULATIVE FICTION

...Where everybody has lights only in their shoes.

Somebody would say "This is a real pain, I have to recharge batteries all the time!"

Society would respond "The alternative is darkness. We chose to have the lights."

The person would respond "Sometimes when I step in a puddle they short. This is so annoying!"

Society replies, "The alternative is darkness. We chose to have the lights."

The person replies, "Surely we can put lights in other places? Why not wear them on our heads?"

Society scoffs, "Lights smell like feet, we do not want to put them on our faces. Besides, whenever we looked someone in the eyes we would be blinded by their head-light."

The person is exasperated. "We could hang the lights from ceilings! We could mount them on poles!"

Society counters "This is such an inefficient system. Wherever we go, our shoe lights point the way. Illuminating every place someone will ever go is a huge waste. Not to mention changing all the batteries in the ceilings and the poles."

The person is defeated, realizing that the mechanisms that evolved shoe lights were purposeful and wise in their decisions. They slink back into line.

## N FUN FACTS ABOUT DRUGS

- Being sleep deprived makes you more likely to overamp/overdose on cocaine.
- Chore Boy, a brand of copper kitchen scrubbers, is a very popular filter material for smoking pipes. People say it's good at not shedding metal bits into your throat ig.
- Little packets of Vitamin C are often included in harm reduction kits. Not the ones you dissolve into water, they're not for consumption. They're sterile and a weak acid that helps dissolve drugs so they're easier to filter and inject, and isn't as hard on the veins as vinegar or lemon juice.



aphf

# I SLEPT ON MY BACK TONIGHT

I slept on my back tonight. I first slept on my side as I normally do, but in the middle of the night I was woken by the sound of running water and steel pots. For a time, I rolled from side to side in fit and frustration. As it waned I grew weary, and in a breath I fell dead with my eyes towards the sky.

I had a dream. I lay on my back still and silent, gazing at my ceiling and watching the air swirl before it. Through slow abdominal breaths I experienced a clarity of mind surpassing my waking consciousness—emptiness in its highest definition.

Passersby would approach my bedside and loom over me. They would pick the foam plugs from my ears and ask:

WHY ARE YOU SLEEPING ON YOUR BACK

I would answer:

IT FELT RIGHT TONIGHT

And they would go:

OH

And they would stick the foam plugs in my ears and continue on their way. All night I saw them come and go, and I was filled deeply with air that my oft-curved side-sleeping body never knew.

It was the most rest I had gotten in nights—a most perfectly uneventful dream. I felt clear in the morning.

χ

# TIME LIMIT: UNLIMITED, YOU SAY...

Academic Integrity Quiz - Results

×

Attempt 1 of Unlimited

Written Jan 8, 2024 5:42 PM - Jan 29, 2024 7:45 PM

Attempt Score 1 / 1 - 100 %  
Overall Grade (Highest Attempt) 1 / 1 - 100 %

Done

tendstafortytwo

(

The other day as I was descending the staircase (as one does, when they live on the second floor [for some reason in my building, the second floor is labeled as the first floor, which is good in case you get doxxed but is bad if you're trying to get deliveries]). I saw a small stuffed toy lying on its back, face up, on the landing. (It seems to be the type you attach to on a keychain. [Who left you?]) Briefly, I ponder upon it, but I decide to leave it be (the owner probably is looking for this poor stuffie).

(Hey, what if you were alive?)

I debate on whether or not I should text the group chat my floor has—but its reach is limited. (This staircase goes the entire building height, it could have been lost by *anyone*. [Each apartment has 4 units. Each floor has 8 apartments or 32 inhabitants at least. That's about 160 people, plus an extra twenty for the corner units and people sharing a room.] And that's assuming it was lost by someone who lives in the building.)

(Are you lonely? How many people passed you by?)

That evening when I descend the stairs again, I don't see it on the spot it was found in—rather, it's perched on the windowsill, placed as though it were looking out the glass. (What a poor view. It's so gloomy and cold.) Perhaps its owner will see it when they descend again, and take it to its rightful place.

(Do you appreciate the view you have?)

(Were you placed there on accident? Or on purpose?)

(Did you see me when you went down the staircase?)

skittlerc

# LACK OF ANCHOVIES IN PROD NIGHTS

For some reason, no one votes for objectively the best topping and it's so sad. I want some anchovies. Please give me some :(

0.423

I read mathNEWS devoutly.

PROF. STEVE FURINO

# YOU SHOULD DEFINITELY NOT GO TO THE GRAD HOUSE

You should definitely not go to the Grad House!

I hear any undergrads caught on the premises will definitely get fed to the dragon in the basement.

I hear the staff are so friendly that you'll be *forced* to cheer up.

I hear that if you get your grad student friend to use their \$5 dollar discount on the pizza for you, the government will definitely find out and put you in a higher tax bracket to compensate.

I hear their patio gets really cold in the winter.

I hear they're open later than the SLC from Wednesday to Friday because that's when they hold their evil summoning rituals.

I hear the grad students there are so cool that after meeting them you won't be able to look at your normal friends the same.

I hear they spike the drinks with dihydrogen monoxide and  $\text{CH}_3\text{CH}_2\text{OH}$ . [*Editor's Note: Gasp*]

You should definitely not go to the Grad House—

—and it's definitely not because I think the crowds get too noisy sometimes.

water

# OBJECTS FROM THE mathNEWS OFFICE

V: THE JERMA985 BUST



jeff

# N BOSSES FROM OLD SCHOOL RUNESCAPE

*BUT DESCRIBED BADLY*

- A three-legged blue zombie dragon (Vorkath)
- A really really really big lizard with hands (Great Olm)
- A worryingly obese vampire woman with a sitting kink who is secretly Spiderman but the other way around (Verzik Vitur)
- A headless vampire executioner whose dead body is resurrected by a zombie plague (Vardorvis)
- A big mole (The Giant Mole)
- A wizard who got turned into some funny rocks after a power trip (Vasa)
- A pooping bug (Kephri)
- The newly added rat boss with 2 other rats conjoined to its back (Scurrius)
- 6 dead brothers, buried 6 feet apart from each other... (Barrows)
- A really BIG bug who will KILL you and NEVER MISSES and ISN'T EVEN WORTH KILLING (Kalphite Queen)
- Bird woman who channels the power of an ancient god (Nex)
- A three-headed black dragon (King Black Dragon)
- Eye demon who ate literally everything and is a "frump" and "little guy" according to fellow writer Battlestar Galacticumguzzler (Duke Succellus)
- Groot (Hespori)
- Literally Cerberus (Cerberus)
- A science hydra but it doesn't grow more heads (Alchemical Hydra)
- A crystal elven construct that totally isn't a wolf guys—it's actually a h u n t l e f f, like the Welsh thingy or whatever, cuz you know, elves (Crystal Huntleff)
- A big crocodile who is cursed to be eternally hungry and is thus really pissed off at everything. (Zebak (Zebak my beloved))
- Some water (Tempoross)

andoiii

# PO EM

In a rental car  
I can see the faint smudges of  
Smiley faces drawn  
by other people's children.  
I trace them over again and again  
hoping their art lives on

rockfacts



# FAIR REDISTRICTING PRACTICES PART 2

This part will be on basic ways of redistricting a given area.



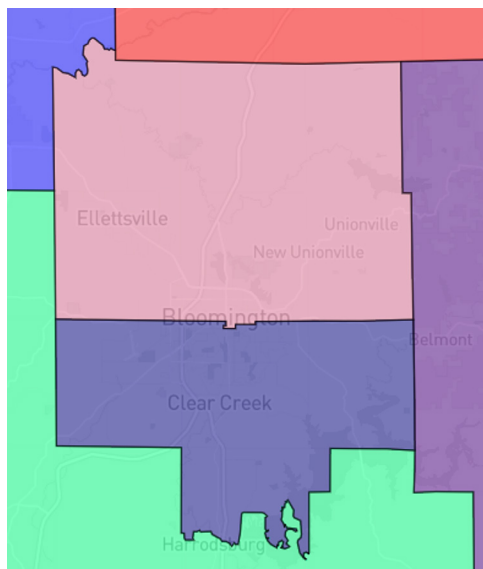
## DONUTS

Often American counties will look like donuts. More specifically, there is a central urban area (the donut hole), typically the county seat, surrounded by the rest of the county (the donut) that is mainly rural. If the population of the urban area warrants it being worth one district, then you can split it into a donut hole. For example, here are my Illinois state house districts where the county seats or other towns can be donut holes within a surrounding district.



If the urban-rural divide is great enough (urban population density is very high and/or the rural one is very low), the donut hole itself may be made of several districts or the donut may be split and/or attached to surrounding districts. State senate districts of Clark County, Nevada, containing Las Vegas, are an extreme example of this.

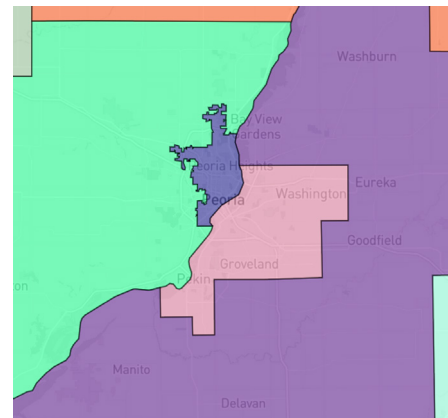
If a county is worth 2 districts, you may also not want to donut hole it. For Indiana's state house, Monroe County, containing Bloomington, is worth slightly more than 2 districts. So you may make Bloomington the donut hole. However, it's awkwardly worth more than a district. So another solution would be to split the county cleanly in half along with the city itself.



## SPLIT BY RIVERS

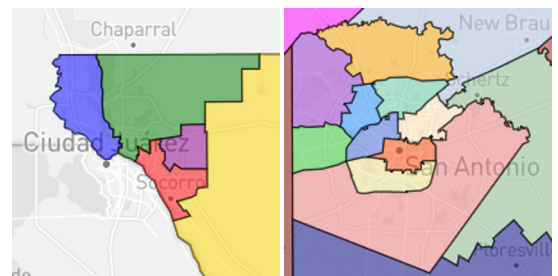
Back to Illinois, the area around Peoria, which has a river splitting it in two across two counties, is worth about 4 state house districts. Here you have conflicting practices at play that you need to consider. Do you respect county boundaries? or the river? or create a donut focused on the urban area after combining the two counties? What if the populations are unequal on each side of the river?

The following districts show one possible solution on how to handle these considerations. The western part has a higher density in the urban area, so the district tends to be restricted by municipal boundaries. This means the river remains a hard border, while still creating a donut hole with the remaining part of the counties surrounding it. This still gives 2 urban districts and 2 rural districts as the population warrants.



## PIZZA, POKEBALL, OR NEITHER?

American cities tend to be much larger so you will have to divide some into multiple districts. Depending on its size, you will end up with a choice of splitting a city kind of like a pizza from a city centre or like a Pokeball as shown here with my Texas state house districts in El Paso and San Antonio.



Sometimes it will look like neither if the metro area is just too big. There will simply be too many districts everywhere.



I hope to see you in part 3!

# GRID

## gridCOMMENT 154.2

hello everyone,

this term is very busy !!!!!!!!!!!!! but here i am still providing so many of you with the **gridWORDS** you desire c:

in follow up to my last message, we have found the one who shall continue **gridWORDing** in my stead. more to follow in future issues.....

anyway, **gridQUESTION** was "what is your news years resolution?" and you all (so many !!!!!) said:

- aaaaaaaaaaaaa: *do more gridwords*
- Lars Nootbaar & aphf: *to be able to make our own crossword*
- Sexy\_Software\_Babe: *engage more socially*
- Coda & Opal: *Cook more new foods & Take more risks*
- vafflemaker: *Dedicate 20 minutes every day to thinking and planning my life out rather than going with the flow.*
- normalparameters: *take it down a notch*
- terminally sane: *to finally win a gridword prize*
- awmlet: *to complete every single gridword this term in your honour (and also pass all my classes)*

- Henri: *Improve my trombone playing range*
- Bubert: *to procrastinate less*
- denko: *taking trains (i already dropped it)*
- \_\_init\_\_: *1280x800*
- MJ: *plan more parties*

terminally sane, you're in luck as you have been handpicked to win a **gridWORD** prize!!! :ooooo please come by the **mathNEWS** room (MC 3030) or email the **mathNEWS** editors to collect :))))

this is very epic seeing so many **gridWORDers**, i am very proud of u all

this time, i ask, "what are your valentines day plans?" please send **gridWORD** solution along with **gridQUESTION** answer and your pseudonym to [mathnews@gmail.com](mailto:mathnews@gmail.com) by february 12<sup>th</sup> at 6pm.

bye bye!!!!

Wink wonk

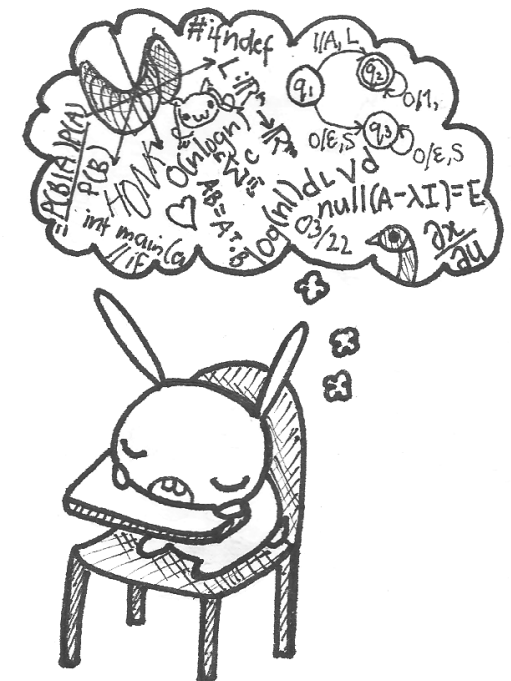
### ACROSS

1. Fuss
5. Glass bubble
9. Cover story?
14. Audition tape
15. Ethereal
16. Pie choice
17. Very plentiful
19. Brakes and slides
20. Like functions related to angles
21. A bit
23. Film graphics initials
24. Inflection point acronym
26. Jewel
28. Got comfy
30. Positive end
32. Pub offerings
34. "Catch!"
35. Madrid maiden
37. Drop in on
39. A female fungus named Paul that is religious
42. Rotten\*
43. Comedy movie starring Michael Cera\*
46. Shade of black
49. \_\_\_-friendly
51. "Peace!" with fingers
52. Siren
54. Lawyer's org.
56. Gossip
57. "That's \_\_\_..."
58. Middle of March
60. Molecule part
62. Fresh from the shower
64. Antiquated calculator found in M3
68. For this reason
69. "I \_\_\_ you!"
70. Computer picture
71. Banana oil, e.g.

72. With competence
73. Resistance units

### DOWN

1. Kind of approval
2. Yankee's foe
3. Love, hate, fear, etc.
4. It may be grand
5. Symbol of authority\*
6. Floral necklace
7. Sea eagles
8. Former
9. Church recesses
10. Albanian coin
11. Cold stick
12. Nag to death\*
13. Deep down
18. Neighbor of Cameroon
22. Botch
24. Faux \_\_\_
25. "The loneliest number"
27. Damon of "Good Will Hunting"
29. Belonging to them
31. Within reach
33. "I made a severe and continuous \_\_\_ in my judgement" - Logan Paul
36. Endowed
38. To rise up
40. Ambience
41. Excessive
44. Biographical bit
45. Chain letters?
46. Bell-shaped hat
47. Lots
48. Devoted
50. Rest of the afternoon
53. Lid or lip application



1	2	3	4		5	6	7	8		9	10	11	12	13
14					15					16				
17				18						19				
		20					21		22			23		
24	25			26		27		28			29			
30			31			32	33				34			
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		39						40				41		
			42				43						44	45
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57				58			59		60		61			
62			63			64		65					66	67
68						69					70			
71						72					73			

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

