



## “WHAT WOULD YOUR EDITOR NAME BE?”

Hey, did you catch that they opened up the C&D balcony for one day last week, before closing it again? Did you catch that that day happened to be my birthday? I’m not kidding. I think there’s someone on the inside at MathSoc feeding them insider information.

Speaking of aging, everyone’s getting old all of a sudden. It’s that time of the year when everyone’s fourth- and fifth-year friends are growing wings and preparing to take off, and I happen to be one of them. This will be my last-ever issue as a **mathNEWS** editor. The finality of it all hasn’t fully hit me yet, but I’m proud to have been a part of the machine that makes my favourite newspaper tick, and I’ll miss it when I’m gone.

Many of our writers are also feeling the impending pull of graduation. In this issue, we’ve got longtime contributors saying goodbye, as well as new writers who stopped by our final production night this term just so they could get something published in **mathNEWS** before they graduate. If writing for **mathNEWS** isn’t on your bucket list yet, this might be your sign.

For those who really don’t want to think about graduation right now, we’ve also got our regular collection of musings on various topics: unusual programming languages, video games, movies, CS 452, rizz club, and the number 1. Since it’s my last issue, I’ve also taken the opportunity to drop in a few questionable page layout choices, before the infinite creativity that InDesign allows me is out of reach. (Credit goes to waterED for the **lookAHEAD** layout, though. This isn’t to deflect blame; I’ll back up that layout with my entire weight.)

It’s hard to know what to say knowing this is my last-ever **mastHEAD**. I do want to take a moment to thank the dedicated team of editors I’ve had the privilege of working with: abstractED, awED, befuddledED, classifiED, revivedED, and waterED, as well as the editors before me who encouraged me to get involved and helped me to get started. It takes a lot to keep **mathNEWS** pumping out new issues every fortnight, and I’m really grateful for the collective effort we’ve spent on it.

Feels weird to say goodbye now knowing that I still have several classes, four assignments, and three finals ahead of me, but... goodbye?

derailed  
Editor, **mathNEWS**

LARS NOOTBAAR	NootED
AMIRDADP	rushED
YALEVOYLIAN	considerED
FINEGEOMETER	EDucator
NIKE	nikED
ERALOGOS	sogolarED
USMAN!	is jizzED free?
SNOWDOZER	radiohED
APHF	2hairy2shED
NOT A N*RD	outn*rdED (whether I have been outn*rded or am outn*rding you is TBD)
YUMMYPI	yummyPiED, I guess?
NOTAREALPERSON	editED (if not already taken)
NORMALPARAMETERS	spottED (both this and my writer name are incredibly indirect references to a show that I don't even watch)
NIKE	HammerED
SEASONED SLACKER	SeasonED (I still had to think for a second before realizing the obvious due to no editorial aspirations)
DOLLAR STORE PERSON	either bridgED to commemorate the bridges or fleaED to commemorate me and my mistakes :D
STARBERRY	overspeED
SILLYBILLY	exactED
DICK SMITHERS	befuddledED
__INIT__	derailED
MOLASSES	revivED
REVIVED	waterED
CLASSIFIED	unclassifiedED

## ARTICLE OF THE ISSUE

After a stunning six-article commitment to the bit, this issue’s AOTI is going to Dick Smithers for Το Πανεπιστήμιο του Βατερλό. ανακοινώνει ότι η κατασκευή του Μ9 θα καθυστερήσει επ’ αόριστον (for those too lazy to translate, that’s “University of Waterloo announces M9 construction will be delayed indefinitely.”) This long-term vision for campus rivals even that of the 2009 Campus Master Plan. You know where to pick up your prize.

derailed  
Editor, **mathNEWS**

# I have to get up at six and eat my cats...

ISABELA SOUZA, **mathNEWS** EDITOR FOR WINTER 2025  
ALONG WITH SARA NAYAR, RIVER STANLEY, DAVID TERESI, AND JUSTIN YOUNG

# mathASKS 157.6

**FEATURING KAREN ANDERSON, INSTRUCTIONAL SUPPORT COORDINATOR**

## **LEAH: WHAT'S A CONCEPT YOU REALLY ENJOY TEACHING FROM ONE OF THE COURSES YOU HAVE TAUGHT HERE?**

There have been so many, I can't think of anything offhand. Definitely ones that bridge gaps and make connections for students.

## **CLASSIFIED: WHAT'S THE WORST EXCUSE A STUDENT HAS GIVEN YOU TO GET AN ASSIGNMENT EXTENSION?**

I wouldn't call it the "worst excuse" because there is some sad reality to it, but they were handing in their assignment at the last minute and their computer or network crashed, they lost all their files, didn't have any backups and had not submitted something earlier. The latter would have been a partial backup and proof to us that they really had been working on it.

## **USMAN!: WHAT'S THE MOST VILE ACADEMIC INTEGRITY-RELATED CASE YOU'VE SEEN?**

That is hard to answer.

I find any academic dishonesty "vile" (i.e. extremely unpleasant), but especially ones where students are too scared or defensive to give us the whole, true story when the evidence is already there. An example is an academic integrity denier who had another student's name in their submitted file (and not in a way to credit the other person!) It takes a lot more of everyone's time (and stress) before cases can be resolved.

Sometimes students are given the benefit of the doubt, but that and any penalties are determined and records kept (confidentially) by the Assistant Dean of Students, not ISCs. We just pass up what information we have and apply the penalties determined, as they apply to our course and the situation.

Any case of academic integrity is disheartening for several reasons (this is not an inclusive list):

- It means a student has gotten so far behind in their studies and are under so much stress (including, possibly, financially and/or to please their family), or other reasons, that they would risk it all, including friendships (you don't know how many times I have heard, "But they are my friend and in need so I showed them my solutions. I didn't think they would submit them!") Remember that those who help are held to penalty as well).
- Students don't fully understand the risks of academic dishonesty (despite our attempts to educate—is there more we could do? How? When? Where?). It is not only their reputation and integrity (and possibly academic future) that are compromised, but in the totality of it all, it degrades the degrees of every student graduating from University of Waterloo when the skills and

ethics of our graduates in the post-graduation work force are called into question for not meeting the level of knowledge and competency expected.

- For multiple reasons, some students are in denial/out of touch with reality ("it was okay to copy because I really do know the material—I just couldn't think clearly then because of the stress." The problem is, come final exam time, they still can't "think clearly"), which does not bode well for them.
- It means students have the wrong attitude about assignments. The real intent of assignments is to reinforce learning and understanding just after or as it is presented in lectures and readings; to help build deeper understanding and connections in the brain that will make concepts easier to integrate in future assignments and assessments (and not just the current course). The brain needs time and practice to assimilate concepts and there is no short-cut.

## **NOTINSE: IN YOUR OPINION, WHAT IS THE MOST IMPORTANT THINGS ISCS DO THAT MOST STUDENTS AREN'T AWARE OF?**

Speaking from my CS ISC perspective, it hasn't always been this way, but more and more, ISCs are trying to balance student needs and obstacles with the learning outcomes the faculty and instructors are working toward. We also oversee growth and development for the Co-op ISAs (Instructional Support Assistants).

ISCs spend a lot of time on special student situations while also trying to be fair, equitable and compassionate and to help keep the infrastructure of their courses running smoothly and cohesively; supervising and co-ordinating ISAs, TAs and IAs.

## **AAQSR: HOW DO YOU AND THE ISG COLLECT COURSE FEEDBACK? WHAT WOULD BE THE BEST WAY TO GET FEEDBACK HEARD?**

Most CS ISCs poll students taking the course during or later in the term about the performance of ISAs and IAs or TAs, though feedback is usually sparse. If there are ways to improve feedback in this area, we would love to hear it. We also welcome student feedback any time during the term.

Course feedback is collected through the Online Student Course Perception surveys. ISCs don't see these unless they are teaching the course and only after the end of term.

All feedback received is read and considered, but there is no mechanism for letting students know why a suggestion may be seemingly rejected (for example, it goes against the learning outcomes expected for the course, or it was tried before and it caused worse problems in other ways, or we don't understand what is being suggested). Feedback is, understandably, anonymous, but that means we can't get back to students

to get further clarification and examples or have a dialog to get at the “why” and roots that could lead to a solution agreeable to all.

**AAQSR: HAVING ISCED FOR ALL THE MAJOR MANDATORY CS COURSES, HAVE YOU NOTICED ANY TRENDS IN THE DIFFERENT CLASSES THAT HAVE PASSED THROUGH THE CS PROGRAM?**

*[Author’s note: I have not ISCED all major mandatory CS courses, but several of them.]*

The biggest trends have been more recently and more pronounced since the COVID pandemic began. Overall, every year there are more students seeking or needing AccessAbility Services or other supports.

Every 1A cohort since the start of the pandemic has had different deficiencies in their base learning level, learning skills and socialization skills. While we try to adapt while maintaining learning standards, we are also learning what works best at the same time.

**DOLLAR STORE PERSON: FAVOURITE PIZZA?**

Cheese and lots of veggies.

**\_\_INIT\_\_: FAVOURITE NUMBER?**

4 and 14, at the moment.

**LEAH: DO YOU HAVE ANY (MUSIC) GUILTY PLEASURES?**

Depends on my mood and whether I want to get up and moving, want something uplifting and positive, want something relaxing and/or reflective, etc. Whatever genre, beat and lyrics (or lack thereof) works!

**OVERTHINKER: IS THE GLASS HALF-EMPTY OR HALF-FULL?**

Half-full (I hope!)

## THE MISSION



## PLAY VIVID/STASIS

### I AM SHILLING ANOTHER INDIE RHYTHM GAME

Recently another indie rhythm game has sort of taken over my life, and that game is *vivid/stasis*. It’s a near-flawless experience that’s kept me hooked for several months now, and amazingly, it’s completely free on Steam.

I would say the main standout feature of the game is its story. As with most games in the genre, it’s a visual novel-like story in which rhythm gameplay is included for the most pivotal moments, but where it makes a place for itself is how well the characters make themselves feel alive. You really get to know them and it makes the climactic moments so much more impactful than what I’ve ever experienced in other rhythm games. The final chapter of the story was just released last weekend (at the time of writing) and the whole week before the update I couldn’t wait to see the conclusion.

The gameplay itself is also very slick and fun. On the surface it’s built off of the basic 4 key gameplay you might recognize from *osu!mania* or *Quaver*. However, there’s also “bumper notes” which cover two lanes at once that you can use either key to hit, which adds another layer of technicality to the game. Upon seeing a pattern you have to actively think about how you want to play it, as there might be one or multiple viable ways. Just adding bumpers goes a long way in terms of making each chart its own unique experience. The developers didn’t just stop there, though. Later on in the game there’s so much more that takes the gameplay to the next level, but I’ll let you discover that for yourself.

The song selection is also really great. The developers focused on highlighting smaller artists and I’ve been introduced to a lot of producers through *vivid/stasis* that I’d never have found otherwise. There are also a number of larger artists in the game particularly through its collaborations with other games, so the game covers a huge variety of music.

Also, there’s a fishing minigame. So you know it has to be good.

In all honesty I do have a couple issues with the game. Firstly, there are some parts of the game with puzzles in them. They can be pretty obtuse and I found a couple of them a bit unfair to solve. So don’t worry if you want to search the solutions up; actually, accessibility is a big part of the game and there are options to somewhat tailor the experience to what you’d prefer. My other issue is that unfortunately there are some parts of the game that are quite flashy and might be an issue if you have photosensitive epilepsy or similar. There’s no way to turn those visual effects off which is a bit of an L in my opinion.

Regardless, I still think *vivid/stasis* is really fucking cool and you should play it if you’re at all interested by what I described. Did I mention it’s free? Go try it out!



# MAKE TIME FOR ART.

## THANK YOU mathNEWS

I stayed up late last night, and woke up early today, just so I could make everything I wanted to for this issue. And sometimes I think to myself: *that's ridiculous*. I already don't sleep enough, I have multiple recitals to practice for, tedious assignments to finish, and a hundred other commitments (okay to be fair, plenty of weird fun things) to get to. And yet here I am, despite the fact that I infamously hate mornings. Despite the fact that I've skipped almost every 8:30 lecture I've ever had. Despite the fact that I almost show up late to work because of it. Here I am writing **mathNEWS**.

Why? Well obviously I've decided that it's important enough. I had STAT 231 as an 8:30 lecture way back when, *and I did not go to a single one* (I learned what my prof looked like at the final). So really, this is Waterloo's fault for teaching me that the bare minimum is like, totally okay. But **mathNEWS** taught me what Waterloo could never: art is worth putting time into.

I think it's so so easy to justify pushing making art to the wayside. *I'm in a tough program. I've given up so much to be here already. It's only five years, I just need to grind a little harder. A bit more time into this assignment, a bit more time studying, a bit more time prepping for that interview. It'll all be worth it at the end.* And then what? I was at a party, chatting with an artist, and I called myself one too. Then they asked what kind of art I did—and I had to pause. I was an artist who hadn't been making art. Bit of an oxymoron. That person just walked away but they left me with a massive fricking existential crisis.

So what's the point of this piece of art, this article? What am I trying to say here? What I'm really trying to do is do what every old fart that's been here too long tries to do: impart a bit of wisdom onto you young folks (imagine this next part in a really crotchety old voice please). As I am *practically ancient* and about to graduate and leave forever, I guess I'm just trying to make myself feel better about it and impart something that took me four years to truly, truly learn.

**Make time for art.** Even if you don't have the time. Even if you have a million interviews, a billion midterms, and a zillion assignments. Even if you're exhausted and you don't really feel like it. Even if you don't have a good idea. Even if, you know what, you don't really like it. Even if you consider yourself a technical person and for some reason this means you can't make art. *This is every reason I've heard from asking people why they don't do it.* And now that I have the over-inflated ego of somebody who survived five years here, I'm here to say: *you can still make art.* It is so so encouraging to have a set time to sit down and just *make whatever*.

**And it can be anything.** Even in the days where I thought I had no ideas, just making the time to sit down and think of something forced me to come up with, well, something. And they weren't all winners. I've made lackluster art in the pursuit of making art. I've just written down my random thoughts. But I still *made art*. And like any skill, just by sitting down and trying it, I still got a bit better every time. Even

when I thought I really didn't have the time or energy, it's amazing how much you can squeeze in when you just force yourself to try and do it all. And at this point I'd love to plug joining **mathNEWS** for a bit: **mathNEWS blocks out a solid few hours of your time for writing and socializing!** And you can come up with ideas by talking to other people! You can make friends with people who also have made time for art! You get free pizza!

And look, dear reader. I don't know your circumstances, I know I'm being presumptuous. Maybe you really don't have the few hours to block out. Maybe you are completely and utterly depleted of energy. I gently encourage you to literally squeeze it in wherever you can. While writing in the notes app while on a bus. In a few short sentences typed before you go to sleep. Humming the first tune that's come to your head while waiting for food. Doodling in the corner of your page during a quick pause in a lecture. Writing down something funny someone said or overheard.

Why? Well earlier I said I decided it was important enough. I know this school, and even just this time in most of our lives, takes a lot of our time, effort, and energy. I think it's easy to push *everything* to the side in favour of school. But one day you'll leave this place (might be hard to imagine right now). And you'll have a whole new host of worries and distractions from making art. But school is a time for learning, and I think if you don't learn early on how to make time for art, it gets harder and harder to do. And art is **important**. It's helped create to my best memories, it connected me to the coolest of people and ideas and places and things. It's helped me think deeply about everything from how I interact with people, to how the world works, to what I find funny. If you're looking for that rosy-coloured campus life, if you ever struggle to motivate yourself to continue the endless stream of work, if you make posts on the subreddit about how much you hate Waterloo or something, I encourage you to make art. You'll find a whole new host of wonderful things.

Not a N\*rd

Yes I wrote all this to justify why I've decided that two weeks wasn't enough to write my final article. See y'all for the last time as a Waterloo undergrad in the first issue of next term.

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Whole Number Haver

# REVIEWING N ROOMS ON CAMPUS

**E5 2108:** My first experience of this renowned institution, or even of the city it was in, was pulling a double all-nighter in the Gear Lab at Hack the North in high school. Do not do this. I still get flashbacks whenever I enter this room. 4/10.

**MC COMFY:** So one day I was browsing Wikipedia's List of Deleted Articles with Freaky Titles, as one does, and happened upon a deleted article called *Comfy Lounge (University of Waterloo)*. As a student of the University of Waterloo who had not yet really been there in person, I went like, "hey, that's where I go," and made a vow to maybe, someday, go see it and check if the legendary lounge was really as comfy as advertised. Unfortunately, when I finally made it in physically, it was under renovation. 6/10.

**WIN 121B:** First place I lived in Waterloo. The carpeted floors bring back memories of homesickness, loneliness, and HBO's *Euphoria* because I was watching that at the time for some reason. Not a bad apartment overall. 9/10.

**DWE 1002:** Former former former home of the Board Game Club, one of the first communities I found on campus. That club's been Ship of Theseused to hell, but they still do play board games. 7/10, a little on the small side.

**E7 4043:** Fun fact: when you're in second-year ECE you have most of your classes in the same room. That's just how it works. Anyway, one time Prof. Douglas Harder brought a therapy dog to class and we got to pet it :) 8/10.

**CIF ROOF:** Does this count as a room? The first regular writer I met at my first prod night was Not a N\*rd, who proceeded to invite me and the other two new writers that night to climb onto the roof of CIF at 1AM the next night. What baffles me the most from this story is that I never saw either of those two other writers again. Who has an experience like that and doesn't think to themselves, "yeah, this is a space I maybe want to come back to?" 10/10.

**E7 CAFE SEATING AREA:** I found out while looking up rooms that this room is numbered as E7 1414, but nobody will have any idea what that means. It's in a weird juxtaposition of convenience: if you're in a typical campus building, you have to cross the ION tracks and then walk halfway around the building. You'd never just stumble across this space. If you're on Phillip, though, or University, or Columbia, it's the closest possible space to step in and shelter from the thirty-degree heat, sipping Crystal Pepsi with a friend who came all the way to your country just to try it (or so she says), showing her the silly little review of highway crossings you wrote that somehow made it into an actual print publication. Chairs are too high. 8/10.

**STC 1012:** This lecture hall is too big. Nobody needs a lecture hall this big. Also, one time I had an exam in here and the prof was 45 minutes late and we had to change rooms, which was funny so I'll give it a few extra points. 2/10.

**EV2 2021B:** "Don't write about this in **mathNEWS**, ok?" is still the funniest thing anyone's ever said to me. 0/10 now that it's just someone's office and the door is always closed, as if to say something. I tear up a bit every time I walk past.

**SLC GREAT HALL:** Great place to have an existential conversation with an old friend while it feels like your world is slowly collapsing around you, watching the slivers of the sun slowly set through the tiny windows in the roof. Apparently the trim around the ceiling counts as a statue, at least according to the Key Clues people. Questionable music choices sometimes. 9/10.

**PAS 2083:** In contrast to the rest of the psych-ward-inspired building it's in, this lecture hall actually feels really comfy. It's got whiteboards and blackboards. It's pretty far from everything, but I have many fond memories of PMC events held here. Bring it back, PMC execs. 9/10.

**DC FOURTH FLOOR:** Yes, there really is one. If you climb all the way up that staircase in the weird part of DC that connects to E3, there's a small landing where you can sit on the floor with someone special and stargaze through DC's glass roof for hours at a time. 10/10.

**EV1 131:** One time, after a hectic **mathNEWS** production day during my first term as editor, I showed up to this lab fifteen minutes late, breathless, to be wordlessly handed a tree. Not even a sapling; a growth half my height, contained within a black plastic pot. The ensuing tree-planting exercise, together with my lab section of about twenty, was a better stress relief than I could have ever asked for that day. Though it has nothing to do with my field of study, which I still love, ENVS 200: Field Ecology remains my favourite class at Waterloo. 10/10.

**DWE 2401:** A really tiny room, but just big enough for a grad photo session. Still recovering from a breakup a couple weeks earlier, I slipped on the prop iron ring and got this overwhelming realization that it was all ending soon, that in just a few months I would be out of school forever and would have no idea what to do with my life. As I stepped out of the room, I had another, much more horrifying realization: *fuck. I forgot to take a photo with the mathNEWS Jerma bust.* Clearly the room didn't do enough to remind me; 1/10.

**E2 3353:** In fourth-year ECE you get a space just for you and your class, where you can open the door one day and see dozens of groups grinding out capstone projects all at once, or another day and have the entire room to yourself. On weekends, you can pull a pair of math-major friends inside as a makeshift coworking space: *your proof looks fun, but watch me probe circuits with this oscilloscope!* Not enough sunlight. 6/10.

**M3 1006, MC 2038, MC 4060, MC 1085, DC 1351, B1 271, SLC 1123, DC 1350, MC 2034, MC 4041, PHY 145:** Writers and editors often debate over the merits of each of these rooms, but they all feel like home in the same way. The

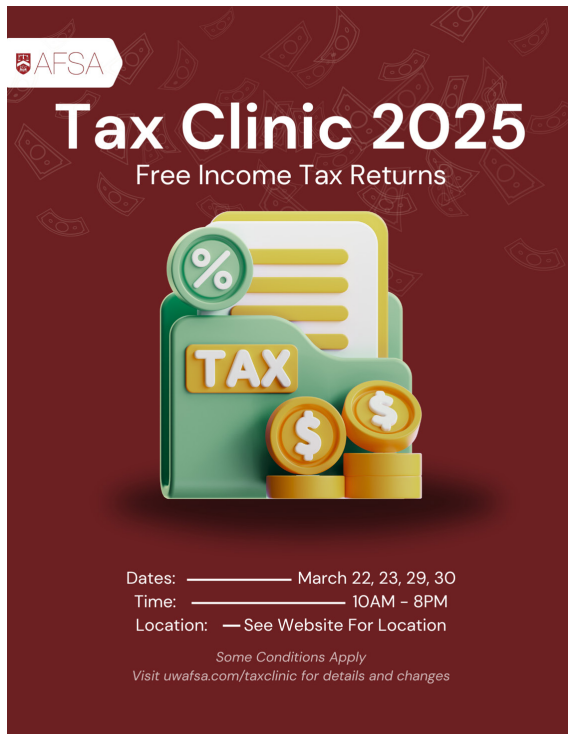
mathNEWS production night room was the place where I rediscovered a love for writing and met countless cherished friends who I really tried to find a way to name all of here, but I'd be mortified if I accidentally left someone out. I have stories for each one of you that took place in spaces that weren't necessarily a memorable room on campus, and therefore wouldn't fit within the format of this article, yet they almost all feel like an extension of the production night room, because that's where it all started. Ask me for your story sometime. Do I even have to give this one a ranking?

Thank you <3

\_\_init\_\_

## AFSA TAX CLINIC

Tax season is here and AFSA is back with its FREE Tax Clinic 2025! A group of trained volunteers will provide free tax return services for low-income individuals and families. To see if you qualify for our FREE services, please visit <https://taxclinic.uwaterloo.ca/> today! The link also includes information on how to receive our tax-filing service.



AFSA

### Tax Clinic 2025

Free Income Tax Returns

**TAX**

Dates: \_\_\_\_\_ March 22, 23, 29, 30  
 Time: \_\_\_\_\_ 10AM - 8PM  
 Location: \_\_\_\_\_ See Website For Location

Some Conditions Apply  
 Visit [uwafsa.com/taxclinic](http://uwafsa.com/taxclinic) for details and changes

Krishna Shah

## N RESPONSES TO VARIOUS mathNEWS ARTICLES

**EVEN SOME HIGHLY ACCLAIMED WRITERS SEEM TO SUBMIT QUESTIONABLE WRITINGS**

In isSue 157.4 of mathNEWS I read mUltiple articles which I believe deseRve a response.

1. I would like to thank *Dai Bowen et. al.* for their groundbreaking contRibutions to linguistics. I plan to sTart using your system immediately and the rest of you should too.
2. *Optimal Walking Route to Farm Boy* by \_\_init\_\_ — I think a better walking rOute would be one to Math CnD from anywhere in the KW region as this would beat Farm Boy any day.
3. *The Opposite of Love Isn't Indifference* by *dog rope* — I would argue that loVe and hate require the same amount of passion. They then also require opposite emotion.
4. *Ewoks: Battle for Endor* by *molasses* — Having watched caravan of courage and battle for endor, I am of the opinion that these movies are inteGral to the staR warS universe and any SuggeStion otherwise shOuld bE punisHed.
5. *Math CnD Names the Beatles* by *numberonerubinste-infan* — anyone who caNnot name John Paul George Ringo off the top of their head is undeserving of your tiMe my friend.
6. *N Articles from mathNEWS* ..... titled 'N....' by *amirdadp* — I refuse to tiTle my article with the numBer of items despite having an enumerated list in order to spite you.
7. *Hammer* by *nike* — KeEp up the good work.

trippycamper

P.S. Make sure the updates on the fucked up lil furry thing keep coming, I <3 Ignis\_

P.P.S. I love you all thank you for providINg excellenT reaDing material for Us All

## SCARY STORY FOR REAL ANALYSIS STUDENTS

Let  $\varepsilon < 0$

easty



# mathNEWS CHOOSES THE DEFINITIVE SONGS OF THE 2010S

You may have heard recently about a vote that people are calling “the most consequential vote of our lifetimes.” Last issue, I put out a call to action asking people to weigh in on a list of the most iconic 2010s songs. Well, the results are in, and it’s time to unveil the **Official List Of Definitive Songs Of The 2010s**.

To make a list of songs that, in retrospect, we can consider “iconic 2010s-core,” each one needs to have two elements in common: 1) legitimately popular during its time, not just deemed a “hidden gem” as we look back, and 2) still recognized as beloved and iconic in 2025, so we can tell that its fame wasn’t just a flash in the pan, and the song had some cultural staying power.

To fulfill the first goal, I populated a survey with every song that was #1 on the Billboard charts from 2010 to 2019. While this isn’t a perfect analogue for a song being popular (in fact, there were plenty of very notable omissions), I felt like it was as close to an objective list as I could easily find. After all, I can only add songs to the list in retrospect based on my own opinion of what’s missing, which somewhat defeats the point.

This list would then be sorted by votes from the **mathNEWS** readers who followed a link I posted in the last issue. My hope was that we’d get enough people to fill it out that we’d get actual representative data. Remember, we aren’t trying to find the *best* songs of the 2010s, just the ones which the highest proportion of voters think are pretty good.

Without further ado...

1. **Call Me Maybe** (Carly Rae Jepsen, 2012, 91% of the vote)
2. **Uptown Funk** (Mark Ronson ft. Bruno Mars, 2015, 86% of the vote)
3. **Despacito** (Luis Fonsi & Daddy Yankee, 2017, 86% of the vote)
4. **Firework** (Katy Perry, 2010, 82% of the vote)
5. **Party Rock Anthem** (LMFAO, 2011, 77% of the vote)
6. **California Girls** (Katy Perry, 2010, 73% of the vote)
7. **Moves Like Jagger** (Maroon 5, 2011, 73% of the vote)
8. **Somebody That I Used To Know** (Gotye ft. Kimbra, 2012, 73% of the vote)
9. **Royals** (Lorde, 2013, 73% of the vote)
10. **TiK ToK** (Kesha, 2010, 68% of the vote)
11. **Timber** (Pitbull ft. Kesha, 2014, 68% of the vote)
12. **Shape of You** (Ed Sheeran, 2017, 68% of the vote)
13. **Bad Guy** (Billie Eilish, 2019, 68% of the vote)
14. **Born This Way** (Lady Gaga, 2011, 64% of the vote)
15. **Rolling in the Deep** (Adele, 2011, 64% of the vote)
16. **We Are Young** (fun. ft. Janelle Monáe, 2012, 64% of the vote)

17. **Thrift Shop** (Macklemore ft. Ryan Lewis, 2013, 64% of the vote)
18. **Old Town Road** (Lil Nas X, 2019, 64% of the vote)
19. **Sunflower** (Post Malone and Swae Lee, 2019, 64% of the vote)

There we go. A playlist statistically proven to get people our age to go crazy at a party, no matter how dead it is. Future Math Grad Ball DJs, please take note. Still, there’s some interesting things I noticed in the data, and by my count, I still have a few hundred words left in the article to talk about them! Aren’t those editors so generous?

One of the things I immediately noticed was how dominant the early 2010s are in this list. Of the nineteen songs on the list, only six are from 2015 or later. The most obvious reason is that songs from the 2010s have simply had more time to embed themselves in the cultural context. We’ve been singing along to California Girls and Firework for about fifteen years now. The fact that these songs continue to be relevant and beloved even when they’re no longer novel says a lot about their impact. They’ve passed the greatest cultural gatekeeper of all: time.

There’s another possible explanation, though. In 2011, Spotify had 1 million users globally. By April 2020, Spotify had 112 million users. The 2010s is the transition point between the old way how popular music tended to *become* popular (radio, TV, album sales) and the way it does today (social media, algorithms).

Our culture has become dramatically more atomized in the last decade, so it just takes a lot more for a song to blow up and become universally recognized. It happens occasionally with megahits like Despacito or Old Town Road, but the bar for universal recognition is higher now. This is just a theory, mind you, but the data might provide some evidence for it: the years from the early 2010s have a higher standard deviation in votes-per-song than the late 2010s. More people are listening to more songs now, they just aren’t listening to the *same* songs.

Also, you may have noticed we’re missing one iconic early 2010s song which wasn’t even on the survey: Gangnam Style! I was, frankly, very surprised that it never made it to #1 on the Billboard chart (it peaked at #2, which is a shame). It was truly inescapable. Multiple people specifically wrote in to mention it on the survey, so I want to give it an official Honourable Mention.

Speaking of inescapable, where’s Taylor Swift? She was on the original list with three whole songs, so she doesn’t have any representation? Looking at the data, she actually may have been the victim of vote splitting. She had two major hits in 2014: Shake It Off and Blank Space. It seems like almost everyone picked at least one of these songs, but many people

only picked one. Perhaps voters didn't want to overrepresent her on the list, and this actually underrepresented her?

Alas, even Taylor Swift is not immune to the impacts of First-Past-The-Post voting. Look on the bright side, though: if she sees this and is upset enough to write a song about it, we could actually get electoral reform off the ground.

Finally, I'd like to pay my respects to the only songs which got 0% of the vote: **We R Who We R** (Kesha, 2010), and **In My Feelings** (Drake, 2018). I'd say that they'll be remembered, but they will absolutely not be remembered.

Dick Smithers

## SQUIRRELS

Something about the squirrels of the Waterloo region are suspicious. Have you seen them? Here is a common squirrel:



And here is a squirrel in the parking lot of Fairview Mall:



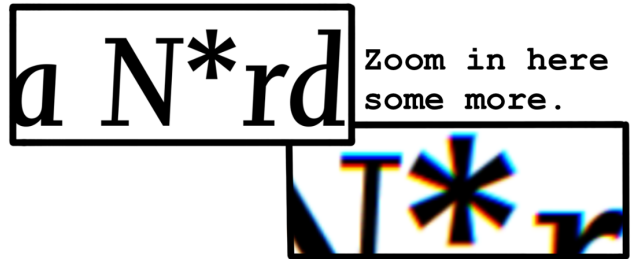
Do you see what it's eating? That's a coffee crisp. The squirrels around here are ginormous and seem to thrive in these city conditions. I have seen them eating a plastic cup, and one time, a full cookie. I think they're plotting something. oh my god they found me hepl beforethey

## MY NAME

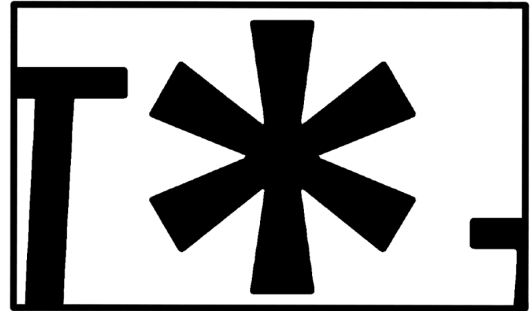
Not a N\*rd.

# Not a N\*rd

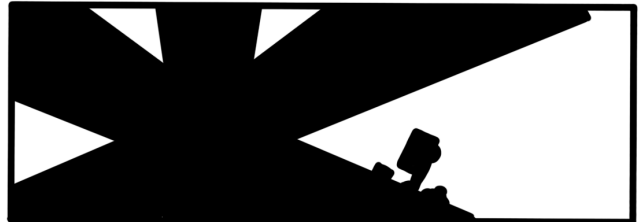
Zoom.



Enhance. With the right algorithms...



Stop! Move in and lock on.



This took 4 years of character development.

Not a N\*rd



# MC/DC BRIDGE FUNERAL POST-MORTEM

Thanks everyone for coming to the MC/DC bridge funeral last week! It was a success and you all helped put the fun in funeral. And thank you MathSoc for lending us a table.



Thank you to all of you who left messages in the notebook I left at the shrine and in the comments of the r/uwaterloo Reddit post. I have selected my favourites below:

From the subreddit comments, u/SchoolPresident and u/Wonderful-Leave-6470 yours were my favourites.



Wonderful-Leave-6470 · 5d ago

I have known this bridge for almost a tenth of a decade. It was the best bridge connecting MC and DC in the whole world. This bereavement will leave a temporary scar in my heart. That bridge was like a son to me. It was my lover, my father, my mother...

u/SchoolPresident your comment is too long so I will link it instead.<sup>1</sup>

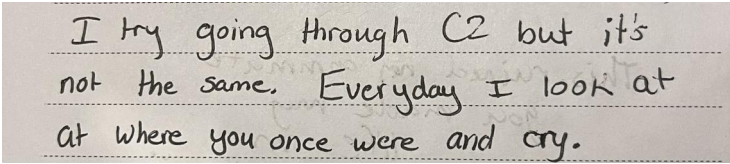
From the notebook, here are my favourites:

I miss you in Rain, Shine, or Snow  
you were there for me. I took you  
for granted. I'll change for you... Please  
come back shawty 😊 - KS

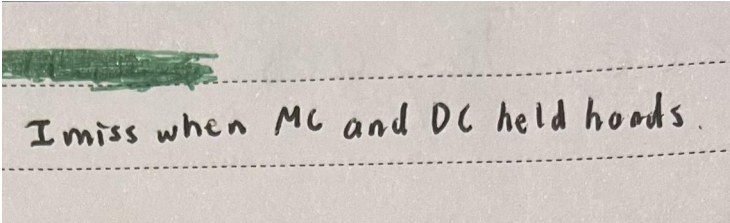
Everyone always asked "where is the bridge", no one asked  
"how is the bridge" ★  
Missed you in my last semester at the  
uni. I didn't realize how easy you made  
my life until you were gone. RIP

Dear MCDC bridge, ★  
without you, my days are cold and dark. without  
the light of your windows, I seldom leave my room  
for class anymore.  
you are always my favorite, for at dark your  
windows became reflective mirrors and I was  
looking at my reflection (u\_u)  
you are missed dearly, and I love you.  
-Jamine.

TODAY I FOUND MYSELF WALKING  
TOWARDS YOU, JUST TO BITTERLY  
REMEMBER, YOU'RE GONE, YOU'LL  
ALWAYS BE IN MY HEART, I MISS  
YOU NOW AND FOREVER. TO THINK  
IT WAS THAT EASY TO GO FROM CND  
TO MS... YOU MADE THAT POSSIBLE.  
THANK YOU ...  
- C3



I try going through C2 but it's not the same. Everyday I look at at where you once were and cry.



I miss when MC and DC held hands.

Btw I'm graduating so this is the end of [insert pen name here], thank you for reading my articles. This would not have been possible without viewers like you!

insert pen name here

1. <https://www.reddit.com/r/uwaterloo/comments/1jfhyez/comment/mirzbeg/>

## DO TAKE TRAINS

A response to the article [Don't take trains](#) from mathNEWS 157.5.

You learn so much from this course. Here's an itemized list of things that I have learned:

- I wish I owned a train set as a kid
- Finding what you need in a 14 000 page .pdf file is not that hard when you have Ctrl+F and table of contents. Being unable to open the file in the first place is clearly a skill issue.
- This course is the quintessential example of type 2 fun. Yes, the seven all-nighters I've spent so far weren't fun in the moment, but looking back on it I enjoyed the memory.
- Adjusting yourself to the Asia timezone gives to more alone time with the tracks.
- Context switching code is easy and fun. Anyone who says otherwise is clearly wrong and didn't write correct context switching code.  
[Editor's note: :(]
- German
- I always wanted to spend more time on campus, and now I get to :D
- Really context switching is only like 40 lines of code, how hard can it be? [Editor's note: :((]
- It's fun to help debug other people's code.
- Ok fine, CTS wasn't that fun.

Josh

## LITTLE THINGIES THAT AREN'T LITTLE

- Pinky promises
- Waiting for you to tie your laces
- Looking out for you when you cross the road
- Remembering your coffee order
- Saving you the last piece of food
- Initiating plans
- Taking candid pics of you
- Putting a blanket on you when you fell asleep
- Asking meaningful questions when you're talking
- "This reminded me of you"
- Spontaneous plans
- Standing to watch you till you're out of sight
- Looking back to see you one last time after they've walked away
- "I'm listening" when you're in a group and everyone's talking
- Picking up on your vocabulary
- Staying on your chat when you text
- Noticing the small details
- Noticing the slightest changes in your mood
- Small compliments
- Keeping the conversation even when it is dying
- Last phone call before the plane takes off
- Watching someone walk away after saying bye till they're out of sight
- When they ask a question you've never heard before
- When they pay attention
- Random reassurance you never knew you needed
- Bringing you something that reminded them of you
- Making an effort to make you feel seen and heard
- "Glad you're here"
- Silences

Zcribblor

## I FORGOT THERE WAS A LIFE OUTSIDE OF WORK

So this weekend, I was a little bored, and remembered that I had to add something to my website, a picture from a friend. So I quickly booted up my favorite coloured text editor (emacs), and opened up my website.

I quickly added the pictures/badges that I needed to add, then I thought, *oh, I should update the About Me too...* Soon I was like 20 commits into it, making small changes, updating things. It was then I realised, I hadn't programmed in multiple weeks, and I'd forgotten how much I loved programming.

I wanna program again,, but I have to pass my courses ;-;

Wanna eat my body weight in ice cream

# DONKEYS IN THE SUNRISE

After Jacob Eby's passing in 1890, his widow sold sixty acres of his farm to a neighbouring small village for only \$74/acre. This small Village of Waterloo reopened it as parkland, and as the village became a town, then a city, the park on Jacob Eby's farmland remained.<sup>1</sup> In the late 1960s, the Waterloo Lions Club gifted the land now called "Eby Farmstead" to the city, with the intent that it become a live animal display.<sup>2</sup> Though it once held black bears, cougars, and timber wolves, City Council's 2024 report describes the Waterloo herd to contain only nine animals total: "two donkeys, one miniature horse, two alpacas, three llamas, and an Appaloosa horse."<sup>2</sup>

One early morning in March 2022, I sat in the warm wooden kitchen with my dad, eating breakfast as a child for the last time. We sat together, searching through maps of the city I was about to move to for the next three years. Something caught my eye: a donkey enclosure, barely fifteen minutes from my apartment. I tell my dad: there's donkeys in Waterloo. Somehow, the dream on the horizon makes the unknown brighter.



School started, and although I started to know people in my classes, there was something I was missing. Something more. On May 9<sup>th</sup>, I'd blocked off an hour on my calendar, labelled "MATHnews meeting"—my sincerest apologies for not knowing how to spell yet. In a fit of confidence, I walked in, saw someone in a crop top and another in all black and blue, and decided they were people I wanted to be friends with. I know *Golden* and *Not a N\*rd* to this day. I met *yummyPi* that night, and I'm sure countless others, I just didn't know it yet. My experience of the era of the year of 2025 had begun.

A few weeks later, the donkeys arrived. Walks to and from campus would detour past their pen, trading dusty halls for the sinus-filling farm animal aroma. The donkeys were here, I was here, and for a few short weeks, the world could only grow.

In July 2022, the Eby Farmstead llama enclosure burned down. All llamas survived, fortunately. They never rebuilt the llama enclosure, and it became increasingly clear that time was limited for the farm. The donkeys wouldn't be here forever. But we would, right?



*Dick Smithers* asked at the beginning of the year: *What is it you plan to do with your wild and precious life?* It probably shouldn't be this. The residents of Eby Farmstead are penned against their will in *tiny* cages. The City describes how the animals are subject to direct public access at all hours; they have no secondary enclosure to hide within.<sup>2</sup> With the construction of the ION and the nightly running of the freight train, they are constantly subject to disruptive noise. Events and festivals held in the adjacent parklands don't help matters. Livestock grazing guidelines suggest that the donkeys and llamas should

between them have 21 acres of land to graze upon; they are given 1.2 acres only.

In 2023, the Farmstead survived with minimal issues. In 2024, the City of Waterloo removed the bird enclosure that once graced Eby Farmstead, but the donkeys still remained, though the donkeys grew older, and the Farmstead's end grew closer.

And then it happened. Per item 10.d of the November 18, 2024 meeting of the Council of The Corporation of the City of Waterloo, Eby Farmstead is to be shut down.<sup>2</sup> But it's not *really* gone yet, because the donkeys are only supposed to be here in the summer, and so long as it's not summer, they're not gone.

Each donkey has left, but The Donkeys will only leave in May. In May, this experience ends. It seems like something to be sad about. It's an ending, no? Endings are, by definition, sad. That which was good before will cease to exist.



When you go for a walk at night, you can look around anywhere; the world takes on a new cast, that makes the most familiar things arcane and newly interesting. That is, until the dawn. The first glimmer of morning breaks from the east, and suddenly, all you can do is watch the eastern horizon. The passing of the night is not so solemn, for there's a sun coming. There's something new and beautiful just beyond, and if you can wait a few more moments, you'll get to see it. The farm. The grad school. The distant city. The family. The dream.

The donkeys.

They are, quite literally, living out their elderly days on a farm in the country. If you get up real high, and look to the north, maybe you'll see them.

Before you go climbing CIF however, thank you:

- For inviting a total stranger to see The Princess Bride long ago
- For the first orange juice I'd ever had.
- For teaching me how to host an event.
- For Toronto, Montreal, Kitchener, and everywhere in between.
- For trusting me to meet your parents.
- For a story of cucumbers, setting off dominoes that changed my life.
- For Dairy Queen balconies in the summer midnight heat.
- For exhausted bus rides from Toronto's depths.
- For midnight walks through Waterloo park.
- For daylight walks through Waterloo park.
- For thirty-person Barbenheimer and fireflies thereafter.
- For an underground bar, and a different world.
- For being the names my parents have started to know.



Ultimately, for helping to realize the dream of that kid having breakfast just over three years ago. I have so much luck to repay, in having found you.

Beyond the horizon, there's beaches. Classes. Gatherings. Towers and fields. Donkeys, I hope. Through all of them, people. People who will need stories.

*Thank you* for the stories I'll get the privilege to tell.

We've made them pretty good, haven't we?

molasses

1. <https://images.ourontario.ca/waterloo/3550610/page/15>
2. <https://events.waterloo.ca/meetings/Detail/2024-05-13-1400-Council-Meeting/90c7ab20-0b53-4327-b9b6-b16401380f32#page=59>

## WHY IS EVERYTHING DUE THIS WEEK???????

help



# ISSN 0705-0410

UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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## SUBJECTS TO LEARN AFTER GRADUATION

### HAVE YOU GOT YOUR CLASS G LICENSE?

Many of my fellow readers and writers are about to graduate soon. As a humble graduate who survived the greater society for years. Here are a few subjects that I wish to share. They might be helpful to learn sooner than later. Take it easy. As many of them are long-term projects to grind in years.

**Stress management:** As you survived that many lectures, co-ops and exams, you already honed your skills on time management (I am still bad at this), making friends and touch grass. My tip is to just shout "Don't panic!" I believe it actually works.

**Personal Finance / Insurance:** Short answer: buy large-cap equity ETFs using all your RRSP/TFSA limits, etc. and buy insurance (which is a financial product). Long answer: risk is an inevitable consequence of modernity. Modern society automatically generates risks. The choice depends on the investment philosophy that you embrace. What risk is considered acceptable to you?

**Cooking:** My father could never make me feel how cooking was able to make me feel (*insert Gordon Ramsay moaning compilation here*).

**Home repair/Car maintenance:** Watching some YouTube videos can actually save you a few hundred bucks every year

**Social Etiquette/Public Speaking:** Emmmm it might be too hard for you average Waterloo students so I made a quest tracker: shower every day → brushing/flossing/dental check-up → laundry → room cleaning → ask your academic supervisor → watch Charisma on Command on YouTube

**Self Defense/Survival Skills:** Keep doing workouts and learn Standard First-Aid/CPR. Your company may also reimburse the cost.

**Taxes:** I haven't done it yet sorry ;-; After learning the basics you can do it yourself. There are free online tax platforms. Wealhsimple Tax base tier is free. I used it last year and it was good.

Last but not least, forget about everything above. The world is yours.

eralogos

Useful links:

- <https://www.financialwisdomforum.org>
- <https://www.redcross.ca/training-and-certification/course-descriptions/first-aid-training/standard-first-aid-cpr>
- [https://www.youtube.com/watch?v=xc1h\\_676KwE](https://www.youtube.com/watch?v=xc1h_676KwE)

# N UNUSUAL PROGRAMMING LANGUAGES

It's said that once you're comfortable with one or two programming languages, learning more is easy. And that's probably true... since all the languages you've looked at are basically the same. Let's look at some that *aren't*.

## LEAN

Lean takes the idea of functional programming, and runs with it. Like crazy.

First, functions act more like mathematics than programming. They take input and return output, and that's it. No mutating variables, no reading from files, et cetera.

If you *do* need to read from a file, you use a function that returns a value representing the *concept of reading from a file*. You then build up more complicated values, like one representing the concept of reading a file, doing something useful, and writing the result to another file. But it doesn't actually *do* anything until you return it from `main`.

There's some nice syntax that amazing job *pretending* to be imperative code, making it easy to work with these "IO values." But it doesn't *just* do that. It works with any sort of action that can be sequenced, whether that be "things that interact with the environment," or "things that might fail," or "things that log output," or "things that have several return values; try all possibilities."

Let's use that last one to implement the  $n$  queens problem.

```
import Mathlib.Data.List.Monad
import Mathlib.Data.Int.Range
def nqueens (n : ℕ) : List (List Int) := do
  let mut solution := []
  for _ in Int.range 0 n do
    let queen ← Int.range 0 n
    guard $ List.all₂
      (fun queen' dist =>
        queen - queen' ∉ [-dist, 0, dist])
      solution
      (Int.range 1 (solution.length + 1))
    solution := queen :: solution
  pure solution
```

It basically says, "For each row, pick a place to put a queen, and check that it isn't attacked by a previous queen." When you run it, it tries all possible ways to do that. It's probably the prettiest  $n$ -queens implementation I've seen in any language.

But all of that is stuff you can also do in languages like Haskell. Where Lean really shines is its type system.

In most languages, you can specify the type of functions from integers to integers, or integers to pairs of integers. Most languages let you do that. And a few languages let you specify things like "a function that returns either an integer or a string." But Lean goes farther.

In Lean, you can specify "returns an even integer." Or "returns a prime." Or "function that takes an integer  $n$  to a list of length  $n$ ."

Or, "takes a natural number, and returns four numbers whose squares sum to the input." Implementing a function of this type is tricky, because your code has to contain a proof of Lagrange's four square theorem!

In short, the type system is *so* fancy that it turns into a vehicle for mathematical proof. And that is in fact Lean's main purpose.

Lean has a semi-standard library called Mathlib, which seems to be doing its best to implement all of mathematics. One of its crowning jewels is the library function which takes three nonzero inputs,  $a$ ,  $b$ , and  $c$ , and returns a proof that  $a^3 + b^3 \neq c^3$ . The very fact that this function *compiles* means Fermat's Last Theorem holds when  $n$  is three!

In summary:

A purely functional programming language, with a terrifyingly powerful type system, able to express all of mathematics and doing its best to do so.

Related languages:

- Haskell
- Rocq (formerly Coq)
- Agda

## APL

A programming language. Literally; that's what the name means! **A** **P**rogramming **L**anguage.

APL is array-based. Everything is an array. Want a tree? Array with two rows: one with the data; one storing the parent indices. It really makes you think about things differently.

Also, APL is *terse*. Unreadable, if you don't know it. It has its own character set, for \*\*\*\*'s sake!

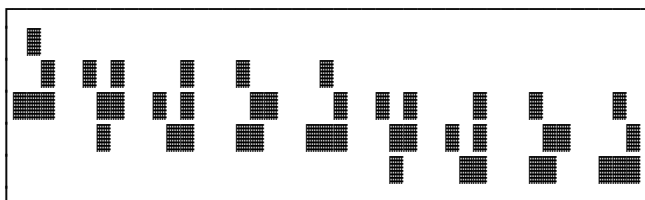
Here's my implementation of Conway's game of life:

```
⊞IO←0
life←{>1ωv.∧3 4=+/(~1 0 1)Φ"+/(~1 0 1)Θ"←ω}
board←(ι5 5)ε(0 1)(1 2)(2 2)(2 1)(2 0)
,/{' █'[(life*ω) board]}~ι9
```

The first line is boilerplate. The second implements the Conway's Game of Life rules. The third sets up the input, and the fourth runs it and prints the result.



Here's the output:



APL is terse. Incredibly terse. And that can also be an advantage. Aaron Hsu, who implemented an APL-to-GPU compiler in APL, claims he can easily spot high-level patterns spanning the various compiler passes. How? Because they're all on screen at once! Each compiler pass is a *single line of code*.

But weirdest of all, APL is closed source. It's the only programming language I've ever tried that requires a terms of use agreement. For that reason alone, I sadly cannot recommend it.

In summary:

An array-based programming language. *Unbelievably* terse. Closed source.

Related Languages:

- J
- K

## ATS

Like C or Rust, ATS provides low-level control over memory. But while C requires you to handle memory-safety yourself, and Rust enforces memory safety via a slightly conservative set of guidelines, ATS requires you to write *proofs* that your programs are memory safe. In that sense, it's reminiscent of Lean.

This is more flexible than Rust, and safer than C. But I imagine it might be more time-consuming than either.

The idea fascinates me. But somehow, the *internet seemed to run out of tutorials* before I really understood what was going on, so I gave up.

## PROLOG

I don't know anything about this one. But I've heard just enough to know it should definitely be on this list.

## SPREADSHEETS

Think about it. Spreadsheets, if they have formulas, *are* effectively programs. But for a programming language, spreadsheets are *weird*.

They're purely functional. You don't have variables, exactly, just pairs of coordinates. And instead of abstracting functions, you usually just copy-paste their implementation.

But the number of users is in the *billions*, so they're clearly doing something right!

## ANYTHING THAT WASN'T MEANT TO BE TURING COMPLETE!

As an honorable mention, there's everything that isn't *supposed* to be a programming language, but is if you try hard enough. Everything from Minecraft, to Magic the Gathering, to PowerPoint presentations, to the laws of physics.

Special thanks to that last one. We *are* computers, built on layer after layer of abstraction, running down through neuroscience, biology, chemistry, and quantum physics to the mathematical underpinnings of the universe itself. And all of technology is the result of treating the laws of physics as the ultimate weird programming language.

*finegeometer*

## THINGS I ASK

- Why do I sleep the next day, everyday?
- Why did we ever say no to naps as a kid?
- Does everyone just remember a good comeback after an argument?
- Why do we keep saving things to use for a special moment and then end up outgrowing them?
- Does anyone else open their phone again just to see what they were going to do right before they forgot?
- Is peak productivity unlocked only with stress?
- Does anyone else procrastinate to start because they're scared to know how much they don't know?
- Is pizza ketchup?
- Where does all the sleep go as soon as you hit the bed?
- How do I always remember the keys after I am locked out?
- Why did I almost put the paper towels in the fridge?
- Why is my alarm set on my calculator app?

*Zcribbler*

**Very unusual in C++ to  
know who your child is.**

PROF. BRAD LUSHMAN

# YOU ARE NOT ALONE — SEEK GOD DURING TRIBULATION

*“You, Lord, keep my lamp burning; my God turns my darkness into light.” — Psalm 18:28*

The world is becoming darker. I mean, mentally. North America has marched into a mental health epidemic. Diagnoses of depression, anxiety, and chronic stress... have skyrocketed over the past decades.

Therapy, antidepressants, alcohol, and drugs have been popularly deployed as remedies among younger generations, but there are no statistical improvements in conditions despite their rapid rise. Why? The reason for me is clear: earthly measures cannot fix spiritual problems—the spiritual vacuum in society which has emptied people’s souls is leaving them vulnerable to the turbulence of life, manifesting in a myriad of psychological issues.

The Earth has been broken, and it remains broken; a broken world won’t fulfill your longings. Depression and fear will not depart as long as this remains our dwelling place. But we have always looked towards the transcendent for hope, a calling from Heaven with a grander purpose, to fix this present brokenness. This has been our source of life, peace, and healing that gives the soul strength in the midst of tribulation.

Once we choose to shut this source down, we are separated from heavenly reality, from God himself who is Love, Truth and Goodness, and become devoured by terrors and hopelessness:

*“Lord, how distressed I am! I am in torment within, and in my heart I am disturbed... Outside, the sword bereaves; inside, there is only death.” — Lamentation 1:20*

Maybe some of you experienced similar turmoils, and know something needs to change, yet find no cure. I am simply here to help bring back the lost voice of God which guided me in the darkest moments by faith and delivered me from depression, and attempt to fill the void left by secular solutions. Therefore, here is a summary of what I have collected over the years:

## 1. DON'T TRY TO BE GOD.

Too often we hear “When there is a will, there is a way,” the American-dream narrative says: if one tries hard enough, one will achieve his dream, to become writers of one’s own fate. But the reality is most people are stuck in the torturing cycle of giving their all but receiving solely disappointment, leading to chronic stress. Because we have forgotten that we’re not in control, God is. As the source of all wisdom only he knows what is suitable for each of us, and out of deepest love like a father he desires the best for all his children. So try relinquishing your power to him and trust in the circumstance he has prepared, instead of blindly pursuing higher and higher objectives.

*“I will instruct you and teach you in the way you should go; I will counsel you with my loving eye on you.” — Psalm 32:8*

By acknowledging our limitedness, faith in his guidance can produce abundant comfort even in the dimmest situation. If my heart is with God, he too is with me, and will provide everything I need.

## 2. DON'T SEEK THE WRONG THING.

Humans can be tempted by various desires to bend our characters in pursuit of deceptive “goals.” Adam and Eve rebelled against God under temptation, and disasters haven’t ceased to fall on mankind. With insufficient knowledge, we are never sure of what is ultimately good; worldly treasures like power and wealth seem beneficial but God has said:

*“Do not lay up for yourselves treasures on Earth, where moth and rust destroy and where thieves break in and steal, but lay up for yourselves treasures in heaven...” — Matthew 6:19*

Then how do we know what to seek? And what is the treasure of heaven? The answer is this:

*“Seek first the kingdom of God and his righteousness, and all these things will be added to you.” — Matthew 6:33*

God created this world as an assignment for us to bring down the magnificent heaven, not magnifying our own power/status. Each day we are faced with a choice of excelling in survival competitions or following his way of humility. God instructed with the latter but promised by putting all else secondary to his kingdom, centering your vocations and duties around such, there’s no need for worries over livelihoods because he will provide.

## 3. THERE'S MEANING IN SUFFERING.

*“For the Lord disciplines the one he loves...” — Hebrews 12:6*

No one requires faith when things are smooth and jolly, true tests come during harsh conditions. God took away everything from his beloved Job to test his unconditional faith in the Old Testament. Jesus tested himself by being tempted by Satan after fasting for forty days, demonstrating the necessity to refrain from evil in deprived conditions. More will be demanded from those chosen by him to bring out their true characters, to discern who indeed can carry out his mission. Still equally, tragedies happen in this broken world, but God can utilize them for his glory: Judas betrayed Jesus for selfish desires which led to the tragic crucifixion. What seemed to be an unexpected downturn was used to fulfill God’s prophecy and claim victory. It is all in his hand, all misfortunes can be flipped if we cling to the virtuous path, be sanctified through steadfastness, so that we may understand the meaning behind such divine planning.

#### 4. YOU'RE LOVED.

Many people attach their individual worth to earthly achievements and sacrifice physical health to leave their legacies. But remember—"God created mankind in his own image," even to the creator of the universe we are inherently valuable. "Jesus wept" at the death of Lazarus and himself was crucified for us. When we suffer, he is sympathizing; when we are mistreated, he'll give justice—all because of his love. And he expects you to spread love onto others by forgiving, caring, and sacrificing for them while lessening one's own trouble by such acts.

You are not alone, when you feel abandoned, God stands firm with his light. Seek him, and there will be comfort. So if you have found the slightest inspiration here, my heart would be delighted.

Jasmine Charis

## LISTING (IN NO PARTICULAR ORDER) MY FAVOURITE CHINESE CHARACTER SIMPLIFICATIONS

Two terms ago, I submitted my retrospectively speaking, unfortunately inelaborate article criticising the Simplified Chinese writing system, primarily that which was promulgated under the People's Republic of China in 1965. Now, as I'm certain all of you have read this and are dying to hear my highly valuable continued opinions on the matter which are imperatively decisive to the future of the entire world, I present to you—my favourite simplified Chinese characters! Now, for clarity, not all of the following characters were adopted in the current simplification scheme in the People's Republic of China—some of these predate the PRC, others originated from other sources (such as the ROC, Japan, or Singapore), and others are merely variant characters at some point proposed as a potential simplification though never adopted.

经

A character simplified from 經 in the PRC, originating from a cursive shorthand. Personally I find the simplification from 經 to 经 to be oddly satisfying—what it is specifically that gives me this vibe I cannot describe. I suppose I find the 丿 component in the top to be particularly fun to write—and mundane as it is, you'll be surprised that 丿 shows up no where else as a component in any Chinese character. Those of you familiar with the origins of Katakana would know that 丿 came about as a reduction of strokes from 須, and it's not immediately obvious where they got 丿 from. In fact, in Japan 經 ended up being simplified as 経, which I don't really like as

much for some reason. I suppose if it were up to me I'd have liked 経 to have been ideal.

靈

A character simplified from 靈 in Japan. I never thought myself a huge fan of 靈, it looks like a strange alien to me, fitting I suppose given in isolation the character means "deity" or "spirit"—and an interesting tidbit is the bottom component is 𠂇, a simplified form of 亞 and something that doesn't really appear in characters as a component often. This same character was simplified as 灵 in China (originating as a variant character), though this drastic reduction of strokes almost eliminates the arcaneness of 靈 if you ask me.

𠂇 (RADICAL)

Not a character in the strict sense but rather a radical (i.e. a component bearing semantic value as well as indexing purposes), this radical is a simplified form of the 金 radical (meaning gold), in the PRC. While I personally wouldn't ever use this myself, this radical was derived from a cursive form and there's almost something acceptable about this one. Not quite sure what. I will not elaborate further.

豐

Itself being an ancient form of 禮 which I'm going to get to later, it now is used as the simplified form of 豐 in Japan. Personally I think 豐 is needlessly convoluted and intricate while 豊 appears within other characters enough for it to warrant being a standalone character itself. The mainland China simplified form, 丰, abstracts away far too much for my tastes.

礼

This is now the simplified form of 禮 in both China and Japan, and interestingly enough it is in fact not a cursive form, but merely just an ancient form dating back to the Eastern Han dynasty. It's distinct enough to be a character in its own right. I like it. 10 out of 10.

産

I almost don't even want to call this one a simplified character, because something about it is just so elegant in comparison to its "orthodox" traditional form, 產. Having the two strokes above crossed never made sense, really—and it seems the PRC appears to agree on that too, standardising this character as the traditional form of 产, though this character is probably more known as the simplified form of 産 in Japan. Not crossing the two strokes within is certainly much more readable and feels far more natural, at least ergonomically (why, would you ever want to reach back into your fist while writing this)?

Юрий Михайлович "Kuz" Кузнецов

# STUPID MOVIES WITH THAT ONE REALLY FIRE SCENE THAT MAKES THE WHOLE THING WORTH IT

As someone who has watched probably too many movies in her 22 years, I've watched quite a few not amazing ones. Like the ones people almost unanimously agree are the cinematic equivalent of dirty beer pong water compared to the stuff that gets nominated for the Oscars.

But here's the thing: I usually still end up liking the movies. And by usually, I mean almost always. It's entertaining, ok? There are few films that I don't like. As long as they still have a sweet, heartfelt emotional scene, or just a crazy cool scene... As long as they make me feel *something*, I'll be pleased that I watched it.

Anyway, here are a few of said crappy-ish movies and a small description of their best scene. The kind of scene that you re-watch on YouTube every few months and think to yourself, "yeah they fucking cooked here." The kind of scene that is like that really scrumptious nacho with the perfect ratio of all the toppings that you like, transforming the otherwise bland and dry tortilla chip of a movie into a symphony of flavor and texture in your mouth.

## TRANSFORMERS: REVENGE OF THE FALLEN (2009)

*The second movie of Michael Bay's Transformers movie franchise. A movie many consider to be the beginning of the end of said franchise. An affront to storytelling and the medium of motion picture. Anyway, I've watched it four times. It's a movie about sentient alien robots that can turn into cars.*

Ok, so the protagonist is running through the forest, right? He's a boring old human whose name I can't even bother to remember, but he's running through the forest and he's being chased by the big bad Decepticons (the evil car robots). Then BAM it's fucking Optimus Prime. Oh my god it's Optimus Prime, he's got a wicked sword holy shit, good lord he's taking them all on at once, this is it, this is what movies were made for, this is the best thing to grace the big screen—you get the idea. Optimus Prime is the blue and red flame truck robot who's the leader of the Autobots (the good car robots). Sorry I forgot to mention that, I was distracted writing a description of peak cinema.

## BATTLESHIP (2012)

*A movie based off of a literal boardgame (yes, that board game). It's the classic humans vs alien invasion trope where somehow conventional weapons can put up a fight against a species that has unlocked intergalactic space travel. Also, Rihanna is in it.*

There's a scene with real WW2 veterans (not Rihanna) and the USS Missouri, a beautiful Iowa-class battleship that fought in the Pacific Theatre. Her quarterdeck was where the Empire of Japan surrendered. When the scene I'm talking about happens, it's like you're watching an actually good movie that can tug at your heartstrings and make your eyes watery. The scene

has the best use of AC/DC's *Thunderstruck* I've ever seen in a movie. Chills.

## PACIFIC RIM (2013)

*A movie about people in giant robots that fight giant monsters. Also, one of my favourite movies of all time. Not crappy, but definitely kind of dumb. My partner literally fell asleep when I forced him to watch it (but don't worry, I shook him awake for all the hype moments).*

All the fight scenes are epic, but particularly Gipsy Danger vs Leatherback & Otachi. The monster design, mecha design, fight choreography, special effects, lighting, and the way the characters feel like they have actual weight behind their movements is insane. It's just beautiful to watch. It made my imagination go wild as a kid.

## FAST & FURIOUS 7 (2015)

*If you don't know what the Fast and Furious franchise is by now, I'm sorry, you're actually kind of impressive regarding how large of a rock you've been living under. There's like eleven movies out at the moment, with another in works. I've watched them all. Some even multiple times. Are they good? Like, no. But they've raked over seven billion dollars for Universal Studios, allowing them to make the good shit like Minions: The Rise of Gru (2022), The Secret Life of Pets (2016) and Oppenheimer (2023). Fast & Furious 7 is about family and fast cars, like all the previous and future installments.*

Ok, so this is the last movie that one of the two big protagonists of the series appears. And that's because the character's actor, Paul Walker tragically died in a car accident. There's a touching tribute to him at the end of the film, *See You Again*, that is really sweet. I grew up with this corny-ass series, and yes, I loved that cheesy-ass song. I still do. When I hear it now, it reminds me of all the people I knew growing up and fell out of touch with, how I wish them all the best, and that maybe, just maybe, one day our paths will cross again. For the people who worked with Paul Walker for years and years, this was their final goodbye to their friend and colleague, and it's all just so very relatable and human. I don't even remember the plot of the movie. I just remember that one scene.



In a lot of ways, these kinds of movies kind of remind me of life. There are lots of boring story beats when nothing memorable happens. Some downright shitty days when everything goes wrong, or you're ill, or it seems like you've lost the plot entirely. But there are also beautiful days. Perfect moments you want to live in forever. People that you meet that you love seeing. And if you remember those good bits, and reach a point where you can look back and laugh at the dumb parts, that's a damn good movie I'd be happy to watch.

# IDEAS FLOATING THROUGH MY HEAD

## WORLDS I WANT TO EXPLORE

There is a library overrun by nature. Soft grass covers the ground, dotted sparingly with small white flowers. Moss and vines creep over the wooden bookshelves, and line the covers and pages of the many tomes contained therein. Any book whose words have not entirely faded tell of strange places long gone, and incredible times long forgotten (not unlike many other libraries). The shelves form a twisting labyrinth that shows no sign of end, and stretch high into the open blue sky. There is no hint of noise, nor sign of life, save two strangers together wandering. The first, a man, has no idea why he is here or what he is meant to do. He feels there is something odd about the second. It is almost as if they are everything he would want them to be, and yet nothing at all. Together, they will go on to explore worlds far beyond and deep within their own.



A man and a woman meet face to face for the first time, standing meters apart in front of a large vault door. She is wearing a black tuxedo, and her head is shaved. His hood is pulled down on his billowing cloak, revealing his long scraggly hair. She is in a wide fighting stance, knees bent, one arm extended and the other guarding her chin, both fists tightly clenched. He is crouched low, bent forward, his right hand open at his side and his left clutching a sharp dagger. She pumps her arms slightly, and they glow yellow. He repositions his grip on the knife, and it glows blue. He smirks. She narrows her gaze. In an instant they dash towards each other and trade a flurry of blows, a blinding clash of fist and blade. In this moment, they are each other's entire world. They will go on to become best friends.



A boy in vibrant stylized clothing grabs his electric guitar and hangs it from his neck before leaving the house. His bright blue top is adorned with a large neon pink star decal that wraps around his side. His jet black hair is tied back in a long ponytail. He goes about his day as usual. He rides the bus to school. He talks with his friends. A voice in the back of his head that was not there yesterday gives him directions on what to do. For today, he listens. He does not know how to play the guitar. He might go on to save his world.



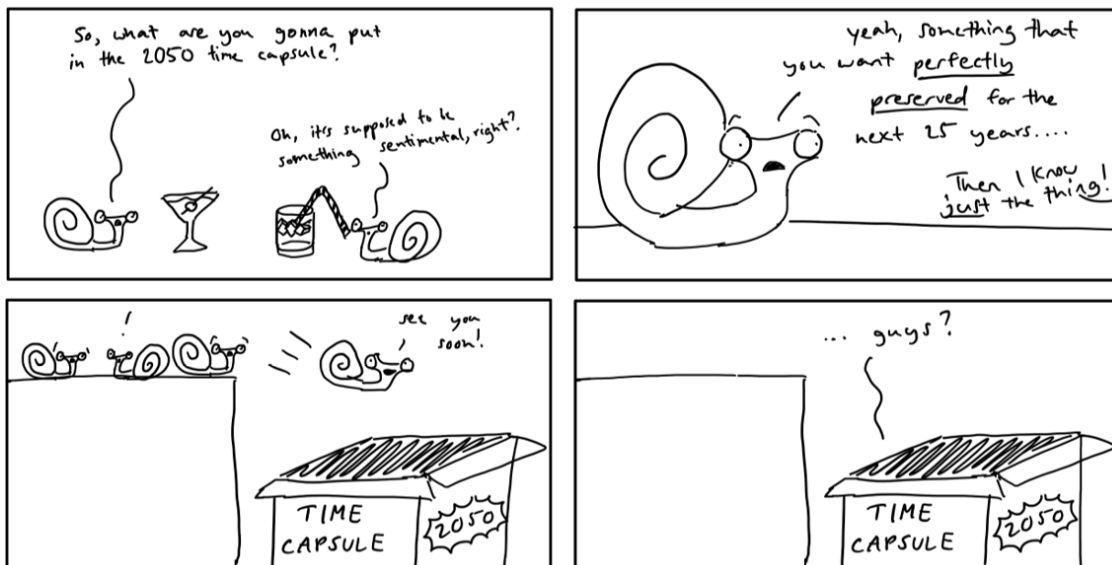
In a small cottage deep in the woods, a young woman in a black dress mixes strange ingredients into a pot. She stirs with a large spoon, and raises a small portion of the concoction to her lips. She tastes it. She can tell it isn't quite finished yet. Her world decays around her, though she does not know it. Another like her soars through the air towards her, and she does not know that either. Soon, she will find out. It will be the best thing to ever happen to her. She will go on, and on, and on, farther than she's ever gone before, and others like her will go on by her side.



I hope to see these worlds some day.

Doublewhip

## SELF-PRESERVATION





# profQUOTES

## AMATH 353: MIKE WAITE

- “ There’s basically only one way to solve PDEs, and that’s to turn them into ODEs.
- “ It’s kinda sad, right: there’s all these courses in PDEs, but they basically amount to turning them into ODEs.
- “ We showed that last week. Or well, I wrote that down last week.
- “ Let’s look at an example, and if you’re doing better than I am on a Monday morning, you’ll have some objections to this example.
- “ So here’s a question, a great chain rule question.
- “ It is limiting generality a little bit, but most of the time that’s what we do anyway.
- “ There’s actually something wrong about this solution. Well it’s not wrong, it just seems wrong. It’s kind of wrong.
- “ How can it be a solution to a differential equation if it’s not even differentiable? But on the other hand, it reeeally feels like it should be a solution.

## AMATH 373: JOSEPH EMERSON

- “ *[After handing someone’s exam back in front of the entire class]* You should set an office appointment with me, okay?
- “ This is beyond the scope of the course, but you should just know it anyway.

## BIOL 3213 (UQ): PETER CRISP

- “ *[From the lab manual]* ...we think we are pretty good because we are tricking the bacteria to transfer the genes that we want, and then we ruthlessly kill the bacterium after their job is done. That’s so they don’t live long enough to know they have been tricked and form a union or protest movement.

## CHEM 123: SONNY LEE

- “ Solving polynomials is a very easy task.

## CS 240E: THERESE BIEDL

- “ So the probability... probability? ☹
- “ The prefix of the suffix of the wild-cards expanded....
- “ To emphasize again you are not expected to follow the details...
- “ It’s the longest suffix of the prefix....

- “ Ah, let’s not go there. *[Flips page]* Agh, let’s not go there.

## CS 350: BERNARD WONG

- “ You need to mount that.

## CS 452: MARTIN KARSTEN

- “ This [recent assignment] is the worst showing I’ve seen in several years.
- “ Keep up the good work... or improve a little.
- “ If any basic mechanisms still have bugs—you’re in Hell.
- “ Some of you have other courses... I know I was quoted in **mathNEWS** about that.
- “ *Student:* How to get train 77 to quit speaking German?  
*Professor:* Learn German and yell back. :-)

## CS 442: GREGOR RICHARDS

- “ Now let’s spark a brief communist revolution and imagine a society with no classes.

## CS 489: RICHARD MANN

- “ This is like a compilers course! Oh my god, dataflow diagrams.

## ECON 212: JOËL BLIT

- “ 19 over 100 is not less than one. Wait, I’m confusing myself *[ponders for a second]*; 19 over 100 is less than one!

## ERB110 (QUT): JESSICA TROFIMOVS

- “ I have a bowling ball, and a tennis ball, and I take them for a walk.
- “ Don’t do acid in my class.
- “ You can lick as many mudstones as you want.

## MATH0073 (UCL): ED SEGAL

- “ Thank God I don’t do harmonic analysis... I would hate my life.

## MATH 138: ROBERT GARBARY

- “ Fuck it, let’s just say that  $e$  is less than or equal to 3...

## MATH 146: SPIRO KARGIANNIS

- “ Ok so this thing is Cramer’s rule; I don’t know who Cramer is.

“ You know how those events are sponsored so they have a supermarket’s name on them?

“ Cramer probably did the same thing because he didn’t do anything else.

#### MATH 148: FAISAL AL-FAISAL

“ It is our radius of convergence because, I mean, it just is; I don’t know what else to say.

#### MATH 235: IAN PAYNE

“ This theorem, among other things; is magic.

“ This equality is an ever-so-slight lie.

#### MATH 239: PETER NELSON

“ The Brits just like writing stuff down to make themselves look important.

#### MATH 247: NIKO SPRONK

“ Do you hate it when you are biking and a car honks its horn, and you are about to flip the bird but you realize it’s your mom? It’s like, “Sorry mom.”

#### MATH 249: JIM GEELEN

“ You don’t like geometry? Geometry is like the kingdom of heaven for us mathematicians.

“ It’s a good time to end here now that I’ve compared Trump to Hitler.

“ We don’t teach complexity theory, cause it annoys the computer scientists if we do.

“ *Student:* So what do I do?  
*Professor:* I don’t care.

“ So, do you admit defeat?

#### MATH 3302 (UQ): DANIELE CELORIA

“ [*Puts picture of a man holding two birds on the board*] I’m the one in the middle.

“ Then I went to Oxford for what felt like an eternity, because the weather and food there are bad. (Context: He is Italian)

“ This was not made in LaTeX. This was made in Powerpoint. A sad world.

“ And I don’t mean to single out Polish people, but I have been traumatized by Polish collaborators a lot, and honestly, they have too many accents for me.

“ These were all classified by Gauss when he was two or something.

“ [*In reference to the work by the Polish on the Enigma cipher*] In general, equations with things that do not commute are a pain to solve. And even worse if you have to solve them by hand. And even worse if someone is trying to kill you while you are working. So, uh, your exam conditions will not be like this.

#### MATH 4408 (UQ): ARTEM PULEMOTOV

“ I don’t have a sequence of mini-mes, as much as I would love that.

“ [*Points at a student*] If you and I were Siamese twins... Jesus this is such a terrible example.

“ It has to be done, because the world is full of smartasses.

“ This is where you might get a headache, but it’s okay—at least you’re not doing category theory or something.

“ Now some of you, I think, are physicists. Are you? No? Good, good.

“ I talked about this because... well, I like to talk.

#### MSE 331: FATMA GZARA

“ People like to sit in the corners. They like to be optimal solutions. You can be an optimal solution in the centre too!

#### MUSIC 246: SIMON WOOD

“ I don’t know what a sharpster is but I kinda wish I was one.

“ How did I forget dystopia? Look who our neighbour is!

“ The minions should sing everything.

“ I’m so tired of the Americans.

“ If the end times are going to be brought about by an orange apparition just look at Trump.

#### PMATH 330: CHRIS SCHULZ

“ Being dead isn’t great in my experience.

“ *Student (who just walked in):* What are we talking about?  
*Professor:* Dead people!

“ Square brackets are brackets that don’t exist.

**PMATH 333: MATTHEW KENNEDY**

- “ *Student: [yawns loudly]*  
*Professor:* I did that once while in hockey practice, and my coach made me skate until I threw up.
- “ *[On a tangent]* If you didn't follow what I said, you're good.

**PMATH 348: YU-RU LIU**

- “ *[After introducing the Abel-Ruffini Theorem]* This is really what mathematics is about. I mean, this is the process, but this is not the end... I hope some of you at the end feel how beautiful Galois Theory is, at the end of the course... So, this is really the beauty of mathematics, I don't really know how to explain it to you. But this is not the only thing I want to explain to you, but it's more what you get in the process. You know, you can forget all the theorems we did in class, well, after next Friday. But if you have the appreciation for the beauty of mathematics, your brain needs to be trained to handle difficult problems...

**PMATH 351: KEVIN HARE**

- “ With totally losing generality, assume  $0 < f_1, f_2$ .
- “ *Professor:* Any suggestions on how to integrate this?  
*Student:* Factor it?  
*Professor:* Yeah, you could factor it, and then multiply it back together, and then use trig substitution.
- “ Here's an old-school trick to integrate this: pull out your table of integrals from 1950, and then turn to page 67.

**PMATH 365: JASON BELL**

- “ If it's between me and you, I always choose to punish the students.
- “ In the 50's, people were afraid of blobs, so they made a movie about it.
- “ If I take my donut and break it in two, now it IS a sandwich!
- “ I don't ever think of things geometrically at all...
- “ ...but we can agree that donuts exist.
- “ If you're willing to accept that your meal will be disgusting, you can turn anything into a sandwich.
- “ Imagine if I were to exercise my second amendment right (I had a gun)...

**PMATH 445: FAISAL AL-FAISAL**

- “ This is a very long statement because I'm not going to prove it.

- “ Do not scale by anything that's not real.

**STAT 241: YINGLI QIN**

- “ So we are trying to see if employment and education level are independent... We can guess that they are not independent, otherwise we are not sitting here.

## I'M NOT SURE IF I ACTUALLY ENJOY STUDYING

### OR THE CO-OP GRIND, FOR THAT MATTER

But I've spent most of my time in university on it.

Sometimes I think about what I could have done with that time instead. Or what I wanted to do instead. *Ah yes, opportunity cost, that's a good reference to my favourite course, ECON 101 shut up shut up shut up shut up.* Maybe I didn't ask to get that stuck in my head, but I've come to accept everything else I've given up to be where I am. Despite this, I think there's value in spending time outside of the academic or career bubbles, as long as you're willing to look for it.

I'm not sure if I actually enjoy studying, but to survive in this university, I like to think I've gotten pretty good at it.

I try to avoid making this my entire personality though. Not only would it be boring, and a little sad, but the moment it becomes a part of your character, it becomes a point of pride. It's one thing to be proud of what you've done and I encourage this! But it's another thing if it leads to burnout because you did something out of a distorted sense of obligation. Only when you let go of your pride can you escape this, and the happiest people I've met are the ones who do things out of desire over expectation.

I'm not sure if I actually enjoy studying, and I don't think I've met anyone who did.

Even so, I have fond memories of the time I've spent studying with my friends. I still enjoy the late nights along with their inevitable decline into insanity. Sometimes, you get to feel a distinct sense of terror because someone found out about a new set of slides everyone else had forgotten about. Other times, you collectively agree to say "fuck it" and goof around or shoot the shit. When I think about the courses I liked, it's hard to tell between the ones where I genuinely liked what was being taught, and the ones where I simply enjoyed the company of those I was studying with. But then I pause and remember, *wait no, CS 343 actually sucks.*

I'm not sure if I actually enjoy studying, but I've enjoyed my time here nonetheless.

# LARS NOOTBAAR'S PLAN FOR LONG-LASTING WORLD PEACE

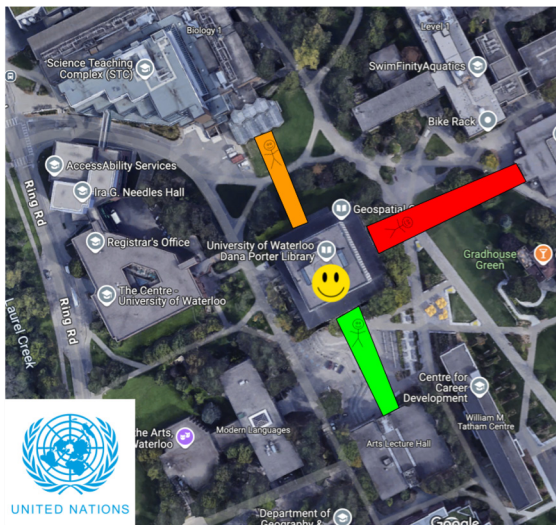
## BRIDGING THE DEEPEST DIVIDES IN THE WORLD

In **mathNEWS** 153.6 (released December 1<sup>st</sup> 2023), I announced that *Lars Nootbaar's Plan For Long-Lasting World Peace* had been pushed to **mathNEWS** 154.1. However, **mathNEWS** 154.1 has come and gone, and all of a sudden it is **mathNEWS** 157.6! A lot has happened since then: **mathNEWS** exposed spying vending machines in an investigation that went globally viral; the MC/DC bridge is no more; we interviewed Tony from Pizza Nova and discovered his favourite pizza (then wished we hadn't); there was an actual orientation concert (even if it was bad); there was an outdoor **prodNIGHT**; WUSA handed out (two) MacBooks; **mathNEWS** received its long awaited Wikipedia page; the Bombshelter was restored to its former glory; we even went to I-Fly for not one but two **mathNEWS** EOTs! (ok maybe not the last three...)

A lot has also happened geopolitically since then as well, which made me decide that the joke would be less tasteful than I initially envisioned.

I assumed that I would never write this article. However, a small but dedicated section of the readership has continually checked in on the progress the release of this Plan For Long-Lasting World Peace. As this is the last article I will write of my undergraduate career, I thought that I would finally fulfill the wishes of (2–3) people! Without further ado, here I go:

We need a plan that connects people, that brings them together. We need a plan that bridges divides. We need a plan that allows environment students to make it to prod nights in the winter without getting cold. We need a bridge that crosses the Frosty Line!



By connecting AL to DP, and DP to RCH and SCH, we can achieve connectivity that will challenge the PATH system in Toronto. We can finally bring the whole campus together.

I will say I did warn you. It is not much. The footnotes in the original article stated “*Please do not get too excited about Lars Nootbaar's Plan For Long-Lasting World Peace, as this article may create expectations the initial article I planned to write (at 2am on a tuesday) may not fulfill.*” This isn't even a particularly novel idea. In **mathNEWS** 157.2, nike asked, *Where Should The University Build a Tunnel or Bridge to Connect Over the Frosty Line?*, which proposed ways to solve the same problem I had identified. I gave a different less useful answer in that article in order to hold out hope for this article to materialize.

However, in a shocking twist, I have come to realize that real world peace is only achieved by the friends we make along the way.

A lot happened to me during this time too; I started hiking every weekend to travel to new places; I went skiing in Gatineau; I spilled chemicals all over myself during my co-op; I visited a friend in Montreal; I saw an eclipse and the northern lights; I saw Ben Stager from the Instagram reels; I went on a family road trip to Chicago; I got the worst flu I have ever had in my life; four terms of inner tube water polo; I saw the Big Apple twice!; I started my thesis; I went to the Rockies; I helped design a 50x50 crossword; and I even applied, and was then accepted to a master's program here (so I'll likely be here again lol).

Beside me for all of it, were the many amazing friends I've met here. aphf, peacelovemath, Not a N\*rd, yummyPi, yummyPhi, Dick Smithers, rockfacts, nike, Golden, no pun indented, molasses, \_\_init\_\_, normalparameters, yamnuska, Connecticut James, Joonwei, Nazz,  $\chi$ , as well as many others who have a life outside of **mathNEWS**.

One of the first times I went to **mathNEWS** on my own, I arrived an hour late because I had a panic attack. It seemed so intimidating. Who was I, a non-math student, to show up a place that had such a well-defined culture? However, when I got there, I struck up a conversation with some strangers and immediately felt welcome. I made friends that I still have to this day.

So while I cannot offer a plan for world peace that isn't a half-baked joke from two years ago, I can say that if we keep being kind to each other and keep spaces like **mathNEWS** open for everyone, the world will be a better place. Things change so fast, maybe faster than we can realize it, but if we can keep doing that, then things will be ok.

Lars Nootbaar

I regret to inform you that due to the extended delay in the release of *Lars Nootbaar's Plan For Long-Lasting World Peace*, *Lars Nootbaar's Plan For Solving World Hunger* has been pushed from 2026 to 2027.

# ALL LETTER SHAPES RATED AS FACIAL HAIR





# A REVIEW OF IMPRINT'S RECIPE

FROM IMPRINT'S 2025 VOL 2, ISSUE 7

One thing that Imprint has that **mathNEWS** doesn't is a consistent recipe at the end. It's unironically the best part of Imprint, but I've never made a recipe from it until now. So this is a review of the recipe from the February 2025 issue: Chili Oil!

The recipe creates a simple chilli oil made with garlic, shallot, and onions. I won't repeat the whole thing here—it's not too hard to find an Imprint copy if you want to make it yourself.

Firstly, the instructions were fine—steps were easy enough to follow and everything was explained pretty clearly. However, I found that the end product was not as good as previous chilli oil I've purchased. The main problem stems from the fact that once things start bubbling in the oil, the instructions tell you to turn the heat down.

This means that the end result doesn't end up crisped at all—this isn't helped by the fact that all the oil is put in at the beginning of the cooking process. The result isn't bad at all, but it lacks the significant textural pizzazz that I expect from the actual chilli bits in a chilli oil. However, I can understand why the recipe is written this way—for a novice cook, it would make the process less threatening and result in a lower chance of setting off the smoke alarm.

If you were to try making this recipe, I would recommend using just enough oil in the initial process to crisp up the chillies/garlic/shallot, as well as keeping the heat on medium or high during this process. In addition, I would save adding the additional oil at the end to get it to the desired amount of final product. Perhaps also consider adding in some red pepper flake to add some colour contrast and a little extra kick, but this is strictly non-mandatory.

Overall, a fairly solid recipe that beginners can execute, which produces a fairly nice product.

★★★★☆ (4/5)

NotARealPerson

I would produce more of these but this is the last **mathNEWS** before I graduate. q-q  
Start writing before you suffer the same fate I have...

# YOUR VERY OWN mathNEWS ARTICLE

Are you sick and tired of just reading **mathNEWS** articles and itching to try your hand at writing your own for a change? Well, I'm glad to inform you that all you need to do to start writing is to get in contact with an editor to get your **mathNEWS** WordPress account set up (more info on that at <https://mathnews.uwaterloo.ca/contribute>) and then you'll be able to send in whatever you want from wherever you want. You won't even have to show up to production nights (although you really should, you can find out when those are being held by signing up for the mailing list at <https://mathnews.uwaterloo.ca/mailling-list>)! Go ahead, if you get set up now then you'll be able to get published as early as the first issue of the next term!

[Editor's note: You can also just directly email us articles at [mathnews@gmail.com](mailto:mathnews@gmail.com)! No WordPress account required!]

What's that? Are you self-conscious about sharing your writing with a wider audience? Do you have trouble managing your time and don't want to struggle against article deadlines every other week? That's okay, I get that. That's why on this page, there's a blank template for you to write your very own **mathNEWS** article that will be exclusive to your very own copy of this issue of **mathNEWS**. Once it's written, you can then show it to whoever you like, or never show it to anyone else at all. You can take all the time you want writing that article too—there are no deadlines to worry about here, issue 157.6 will always have a space in it reserved just for you.

Happy writing!

the government's only spy

Ignore everything else I just said.

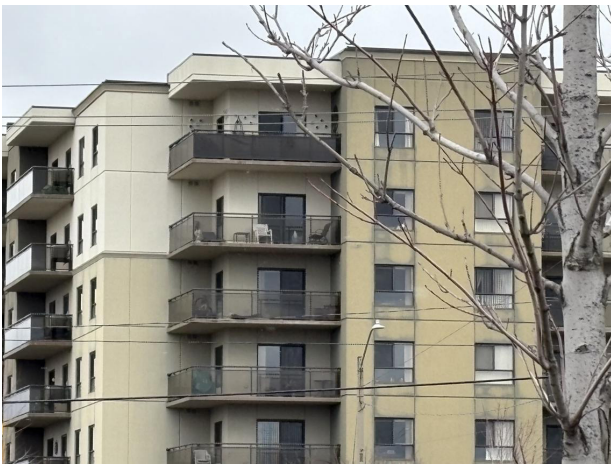
PROF. MICHAEL WALLACE

# PLAYING HIDE + SEEK ON TRANSIT

If you don't know what I'm talking about, you should watch this: "Jet Lag: The Game: Hide + Seek Japan."<sup>1</sup> And then watch all their other seasons. And then come geek out about Jet Lag The Game with me.

Anyway... the main idea is this: one person/team has one hour to take transit to their hiding zone, centered around a transit station. Then, the other team uses a menu of questions to get information (photos, transit lines, proximity to bodies of water, etc.) to narrow down where they went, and travel on the same network of busses and trains to eventually find them. We played in two teams of two: me and *Lars Nootbaar* against *aphf* and *\_\_init\_\_*.

For the first round, *Lars Nootbaar* and I hid at the end of the 205/start of the 204 out in Kitchener. But we barely had any time to explore the area, because apparently Ottawa/Lackner is just *sooo* distinctive that the other team found it based on only one picture. (Technically they had a little bit more information than that but I don't want to go into the nitty-gritty and either way it was like crazy GeoGuessr vibes, even though they weren't allowed to use Street View!)



Are you telling me that you could exactly directly find us based on just *this* picture? I don't think so.

While they took a very direct route towards us in round one, we took a much more sprawling path towards their hiding zone in the second round. This is partly because some questions require you to move to ask them, but also, it's just hard to narrow down where someone is if you play this game as a normal person and not some geography wizard.

We asked for a few pictures, including the tallest building from their stop (an apartment block) and a place of worship. While I was checking bus schedules, my teammate was searching every church in the area we thought they could be, and despite the fact that we still weren't allowed to use Street View, managed to find the right one! (We had narrowed it down to a smaller area by this point, so while this was still very impressive, it wasn't quite as absurd as "I think this has southern Kitchener vibes so it must be this *one* random stop.")

After taking the 204, ION, 205, and 201 through basically endless suburbs (glossing over about 2hrs here—were there more direct routes we could have taken? Why of course) we saw an apartment block that looked very similar to the picture we had previously received, and so we completely panicked and got off the bus. About five seconds later, we realized that it didn't actually match, and the next bus wasn't for a half-hour, and we were stranded somewhere completely random and unhelpful, so we wandered around, rolled some dice down a parking garage, and got hot chocolate before continuing on to the church that we had identified in the first place.

We knew from a photo that they were hiding near some trees. The spot they chose (under a bridge that ran over a creek) looked nice enough aside from the graffiti and trash, but we didn't actually see it. Instead, we walked right by it, close enough that *they* could see *us*, but we completely missed them and walked across the road to some other woods, spent about a half hour walking up and down a hill, and then called it a day because we were tired and cold and *\_\_init\_\_*'s phone was at 2%.

From my perspective, it was a fun and eventful day full of strategy, travel, and shivering at bus stops. I would definitely recommend the game, especially if you're fans of the show (as you all should be). When the other team was asked to comment, *aphf* simply said, "We found you instantly and then sat under a bridge." Which, fair. Here's hoping they still had fun.

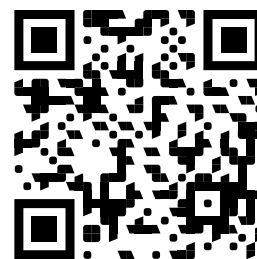
normalparameters

1. <https://www.youtube.com/playlist?list=PLB7ZcpBcwDc79KvPUh76PhFZ8x7q18h0W>

## DO YOU PLAY CELESTE?



I am conducting research on the average number of strawberries obtained by the **mathNEWS** readers. If you play Celeste and would like to contribute, you can fill out this form at <https://forms.gle/9tUpeD2ARBv19oL77> or access it via the QR code below.



# ANIME REVIEWS PART 13

## LOVE HINA — 3/10

*Love Hina* is the anime equivalent of a coprolite: Shit, but also old and thereby interesting for historical reasons. But still shit.

What I'm trying to say is that it's a trashy harem anime about a guy by the name of Keitaro Urashima who makes a promise with a girl from his childhood to get accepted into the ultra-competitive University of Tokyo but repeatedly fails to do so and gets kicked out by his parents, but then ends up moving into his grandmother's all-female dormitory/onsen resort, and that goes about the way you would expect given that, y'know, it's a trashy harem anime.

But at least most trashy harem anime has some semblance of progression in terms of the characters' lives and relationships—the episodes of *Love Hina* are so utterly disconnected from each other that almost everything that happens in them feels pointless. It kind of seems like a children's cartoon in that way, and this is exacerbated by the fact that a good 80% of the show's humor is "girl punches Keitaro and he flies across (or out of) the room." It gets stale fast.

In its defense, however, *Love Hina* is at least somewhat notable in that it is, in a way, the original trashy harem anime, and has come to be genre-defining. It came out in 2000 (being based on a 1998 manga), so it certainly wasn't the first to use the tropes it does, but this was right around the time that the term "tsundere" became popular, and at least two of its characters fit the archetype to a T. The same is true of other tropes that are now harem anime mainstays, like the guy repeatedly walking in on girls in a state of undress "by accident" and being lambasted as a pervert because of it.

Doesn't make the show any better, though. For crying out loud, the entire "fated childhood romance" angle doesn't even pay off because practically nothing significant happens by the end. At least the opening tune is kind of catchy, but that's about *Love Hina*'s only redeeming quality. Maybe the manga is better, but this ain't it.

## THE FUTURE DIARY A.K.A. MIRAI NIKKI — 8/10

Funny story: I was told by a friend that this anime is terrible, and I watched it (and the previous one) for precisely that reason—I think I've penned too many positive reviews lately, and I need to improve at being a hater. Also, I've perhaps forgotten what really makes good shows better than bad ones, so my intention was to do some proverbial dumpster diving in order to gain perspective. But unexpectedly, this was—as some people say these days—lowkey kinda fire.

*The Future Diary* is about Yukiteru Amano, an asocial and unassuming middle schooler with a penchant for keeping meticulous notes on his surroundings in a "diary" on his phone, who finds himself suddenly thrust into a death game with eleven others by none other than the god of time and

space himself. Why, you ask? Because he's dying and needs a successor, lest the fabric of reality collapse in on itself. (You'd think the whole godhood thing would prevent that, but you'd be wrong.) To aid Yukiteru and his competitors, his diary is supernaturally enhanced with the ability to generate entries that predict the future in his vicinity, hence the show's title, and the others have variations on this theme, like the ability to predict the future of other individuals or the future as it relates to their occupations or interests.

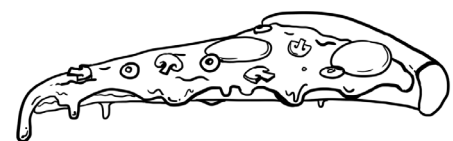
The other character of note is Yuno Gasai, another future diary user and one of Yuki's classmates who is, for reasons I'm still not entirely clear on, violently in love with him. And I don't just mean to quote *Pride and Prejudice* here—the violence here is very literal, from the very beginning. In fact, Yuno has become the undisputed poster child of the "yandere" archetype, a term for obsessive romantics in anime who are willing to go to murderous lengths against anyone that gets between them and their beloved. (Seriously, google "yandere" and her face will be the first to appear in the images.)

Now, I'll admit it, *The Future Diary* is cringy. The fact that the aforementioned god is unironically named "Deus X Machina" should tip you off to how unsubtle it is at times, and one the things I genuinely disliked was the amount of tasteless nudity and gore. And while I'm usually one to commend anime for their deep and nuanced explorations of philosophical concepts through the lens of well-written characters, you won't find much of that here either. But in spite of all that, this show was just plain fun to watch, even if in a kind of dumb way.

In fact, the thing I liked most is probably polarizing: I'm a dub watcher, and this is a super dubby dub, one that really throws in a lot of adaptations for Western audiences, so if you're not into that you'd probably hate it. For better or worse, though, I am a Western audience, and this is my favourite kind of dub. The acting was so over the top in a way that I just love, even if it veers into Reddit edgelord-ness at times. The action scenes and wild plot twists too—I'd be lying if I said I wasn't glued to my seat for the last 5–6 episodes.

As I write this, I've come to realize that my ratings aren't of the objective quality of the show itself, they're of my experience of the show. And whether I want to admit it or not, I had a blast watching *The Future Diary*. It's so awesomely bad that it loops around into being good again, kind of like eating Campus Pizza in MC at 2 am. This is one of those anime that you either hate or claim to hate when people bring it up but secretly have as a guilty pleasure, and it's definitely the latter for me.

yalevoylian



# THOSE WHO KNOW

## OR HOW I LEARNED TO STOP WORRYING AND BECOME A KNOWER

**I, SISYPHUS SAT ATOP** the peak of the precipice I scaled so many times before. I rarely rest these days, for my strength and stamina are far from lacking after such repeated labours, and now, having time to think is far more painful than any toils of my muscles. Yet, that time, for some reason or another, I did decide to halt and delay the cycle in time, placing my buttocks on the sharp peak, unperturbed on account of its density. From my lofty view, I could see Tantalus to my left, fruitlessly grasping for something, and Ocnus to my right, the one who had been punished for nothing at all, weaving his eternal braid of rope, its length roughly constant. Perhaps because it was the first time I had considered the condition of the other prisoners, or perhaps simply because I had grown tired: that, that; was the first time I had spoken, the first words that came out of my mouth since my initial condemnation. “Are you not entertained?” I demanded of the sky above me; and, of course, received no answer. And so, after what I believed was a month, I stopped again, and similarly voiced my question. I became more precise; my own oracle, able to tell the time exactly, I materialized within my head, by the simple act of counting, and never ceasing. Within the very of a new month, my lamentations would be echoed again, ignored by even the prisoners around me, who were either too busy with their works to notice, or who had accepted their fate long ago. Two thousand of these months did pass, my accuracy sub-second, until the call was merely acknowledged, perhaps by an accidental passing through. Indeed, there was Zeus himself, barely visible, a point in the red sky above. There he was, and towards me he stared, for only a few brief moments. “I am not entertained,” he responded. “And to what end do I suffer, then?” said I.

“Those who know.” These were the only other words that came from his great mouth before he departed, a dot disappeared, to not arrive again. And so my lamentations ceased, my time sense faded, and my focus redirected entirely towards my primary task, never to cease again.



**HE, TERENCE TAO, SAT ATOP** his chair inside his UCLA office, on his 80<sup>th</sup> birthday; it was midnight, he was done celebrating with his friends and family, and he sat in front of a computer monitor, hunched over, working on some closed form solutions for ODEs. It was a tedious task, less exciting than the work of his youth, but any result these days would certainly be welcome; as his age advanced, and so did the field of mathematics, fewer and fewer pieces of math which were reasonably provable by humans, or even artificial intelligence, were available. Long gone were the days of a gifted undergrad coming up with novel proofs during a research term; but for the most seasoned mathematicians, some boring results could still be found, mostly numerical. And so with his world being eaten from around him in every direction, Terence still slaved away at what he had left.

His Outlook inbox buzzed. What an odd hour! Junk, it appeared: “A Disproof of the Twin Prime Conjecture,” from zevsiberidze@gmail.com. Only an attachment was present; a single LaTeX document. A funny choice, though, for the cranks to disprove it, for once, instead of prove it. That was enough to pique his curiosity, and so he opened it, to find a document of a few hundred pages. It was surprising enough to not find the words God, Quantum or Soul in the first paragraph, nearly shocking not to find them in the following two hundred and sixty four. In fact, at first glance, nothing seemed obtusely wrong. His eyes glazing over, he skipped the body of the proof and skimmed the conclusion: “The last pair of twin primes is (91840195839401958501..., 91840195839401958501...+2) (see appendix for complete numbers.)” It was late, now, and he wanted to go home; he would not read the rest of the proof tonight. He walked through the warm California air, a little brisk since it was night, back.

He was ninety-three when he had verified the very last page. No other mathematician could help him; only he was capable of making sense of such an advanced proof, spanning so many fields of mathematics: analysis, number theory, even topology and probability. None of the emails to Mr. Beridze were answered, nor could he determine any aspect of his identity. Upon his bed, likely his deathbed, he let out a sigh; these truly were the terminal twin primes. In his youth, he would have been amused by such a peculiar result, but now, its absurdity and lack of natural order frustrated him, the same way physicists remained disappointed with the impenetrable standard model. Nihilism won over him at last, and he sunk deeper into the mattress. Those numbers repeated in his head, over, and over; for hours, days, weeks, he was mute. Until, then, he realized, yes; reverse the order, concatenate them, split it every 5 digits; they are the roots of a polynomial; take the zero and non zero coefficients to get a binary value; it was a string not in any specific language, but in the latent space of language, discovered a few decades ago, language beyond language, just ideas...

“Those who know”



“You know, Jeremy, all this advice about pulling might actually mean something if you, like, actually had a girlfriend...” The whole group laughed. He smiled. “Those who know,” he replied, “Those who know.”

“You know, saying ‘those who know’ doesn’t really make any sense if nobody fucking knows.”

“It’s called an expression, bozo.”

“Ok sure. So spill the sauce, did you get a girlfriend?”

“Those who know.”

“Aw, fuck off.”

But someone knew, someone knew the truth, and that’s annoyingly all that was needed for it to be true, leaving the non-knowers in the darkness.

epic\_waterman

## REMEMBERING MY FRIEND

[Content warning: suicide]

I want to write about a friend, Sofia, who took her life some time ago. She loved to laugh. Nothing was so sacred, so serious, that we couldn’t crack up about it. Her laugh could light up the room. The last time I ever saw her we were crying laughing, conceiving of the dumbest shit imaginable in some drunken haze.

When we were kids, we would go to Chapters to check out the books. We would go to the Starbucks in the building and order a cup of whipped cream because it was free and we were broke as fuck. After taking a lap through the latest YA dystopian novels we would take books about sex and war and put them in the kids section. We’d put religion in the fiction section, and Hannibal in cooking. Sorry!

In your eyes I could see the light came to your life from comedy. In this way I felt most connected to you. We found some warmth in the vulgarities, absurdities and sinister little terrors in life.

Sofia, I wasn’t there to say anything during your funeral. I think neither of us really believed in any afterlife, but everything lives in memory. I saw you walk into school one day dressed as Joker, from the hit movie *Joker*. Your stride in that purple suit, the jokesterposition of your confidence with being dressed as a clown. You wore your love to perform in that costume.

When you died I felt grief for the first time, the weight that you simply no longer were. I hadn’t spoken to you for a while but that didn’t seem to matter. I spent some days stunned. I found some comfort and peace reminiscing with our mutual friends, but the day-to-day stresses of life shocked me back to reality and I had repressed the feelings away since.

I walked at dusk through the marsh and the playground into the wealthy neighbourhood with the gold plated lettering that we felt out of place in. Crickets chirping, wind blowing through the grass, the smell of spring. None of the ambience had changed in that scene, but the childlike innocence and wonder had chilled. It felt lonelier.

dusk moth

## TOMORROW AND TOMORROW AND TOMORROW

grieving a person who is still alive is a weird feeling. going from seeing someone every day to never seeing them again has the same abruptness as a speeding car crashing into a dead end—but unlike the crash there’s no death, no disembodiment of crash-test dummies (or otherwise).

but they might as well be dead to you. at least in my case, it was entirely self-inflicted. “i think it’s for the best if we didn’t contact each other for a while,” i said, feeling my developing prefrontal cortex reaching into my psyche and yanking my ego and all of its *please don’t leave me i’ll do anything for you to stay* away by the arm. i didn’t even know what *for the best* meant. i couldn’t fathom feeling anything except the screaming devastation of seeing the future i’d built up in my brain crumbling away all at once. i felt like a puppet playacting at the motions of what i understood a breakup to be.

but they agreed, so that made two of us. i shuffled home and went to bed and got up the next morning feeling, emotionally, approximately the same way a crash-test dummy might after being driven into a wall. but i got through the day. and then i did it again the next day, and the next.

i made it through a week. i remembered that my friends existed, and i spent time with them, and after i got back home i realized i hadn’t thought about the split for *hours*.

that week became a month. i vented over the phone to a close friend and had epiphanies on the streetcar and met up with people i hadn’t seen in years.

there’s a magic to waking up one day several months later and realizing that it’s been a long time since the first thing you thought about when you woke up was the person you broke up with. to listening to my friends sing me happy birthday and ugly crying a little because i felt more loved at that moment than i ever had with the person i was grieving. to hearing the red-winged blackbirds singing for the first time after a long winter and finally understanding that everything would be okay.

there’s an irony to the fact that healing can only be seen in hindsight. i look back at the person i was months ago, standing in the flaming debris of a car crash, and i can say *i have been healing*.

knees



# I DON'T KNOW WHY I'M SO TIRED RIGHT NOW

Today, I slept in quite a bit. It was a very long, restful night, and I woke up just before I needed to head out and pick up a friend from the airport. We grabbed a quick lunch, rode scooters around the city, and sat down for an early dinner. I was back home before sunset, barely six hours after waking.

Yet somehow, when I sat down to write for **mathNEWS**, I felt more tired than I have in years. It didn't make any sense to me; it came out of nowhere. This calls for an investigation, so I invite you, my dear reader, to come along and help me figure this out.



Avianca Flight 052 was a regularly scheduled flight from Bogotá, Colombia, to New York City, United States, that crashed on January 25, 1990. The Boeing 707 left Colombia with more than enough fuel for the trip to JFK, and encountered no delays or extreme weather during its flight.

Upon arriving at JFK, the flight crew were informed by the air traffic controllers that there would be a delay in landing due to runway congestion. The Boeing 707 made a loop, buying them about 20 minutes, before being informed the delay was extended. The flight crew checked their fuel, and noticed they had barely an hour's worth of wiggle room. They radioed to the air traffic controllers, who recorded this information.

Half an hour later, the plane ran out of fuel and crashed into a small hill on the north side of Long Island, killing 73 passengers.

A year-long investigation was born, and on April 30, 1991, a final report was published. No single mistake was responsible for the crash, or would have posed any real risk if it were isolated. But they weren't. Boeing's imprecise wording in decades-old technical manuals, delayed weather information from the Boston airport, cultural differences and more all stacked up, until the simple fact that the flight crew didn't use the word "emergency" transformed from a harmless miscommunication into the final piece of a devastating puzzle.

The whole tragedy could have been avoided if the air traffic controllers knew Flight 052 was in any danger at all, but they didn't.



There's a common saying, "When it rains, it pours." We often find bad things in our lives come in groups, the first one seemingly breaking open the door for the rest of them.

It's like a downhill skiing adventure. You begin atop a freshly covered peak with the sun shining, and start carving your way down the mountain, cheerily looking forward to the adrenaline of the untouched slopes below. In this bliss, you overlook what your tracks are doing: starting a series of snowballs behind you. Soon, so many snowballs are tracking

your route that a single slip-up produces an avalanche of force, throwing you in all directions before suffocating you under a metres-high frozen wall.

If you're lucky enough to survive, you take a month or two to rest, until you've had just enough time to forget the avalanche and start dreaming of another exhilarating mountaintop experience. Before you know it, you're on the peak again.



To the air traffic controllers at JFK on January 25, 1990, the news of a wreck came out of nowhere; no warning signs were present before that fateful moment. Similarly for the adrenaline-filled skier, the snowballs behind them were out of sight until they became an avalanche, arriving all at once.

From this, my dear readers, I infer that as I closed my front door behind me today, I was finally hit by a multitude of exhausting choices and circumstances that have been quietly growing, hidden under the background noise of my usual busy life.

I guess we never assume there's snowballs behind us until they hit us. Maybe just check behind you for me, will ya?

no pun indented

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## NON-DUAL-NESS

in the realm where numbers play,  
primal seeks the shortest way.  
constraints form paths we navigate,  
while duals ponder our true state.

Lagrange whispers, "balance all,"  
linking primal to the duals call.  
weak dual sets the bounds,  
guiding us where truth resounds.

strong duality, a cherished friend,  
ensures our paths align and blend.  
zero gap reveals the key,  
unlocking love's sweet symmetry.

through equations,  
our feelings align.  
in the language of math,  
our hearths entwine.

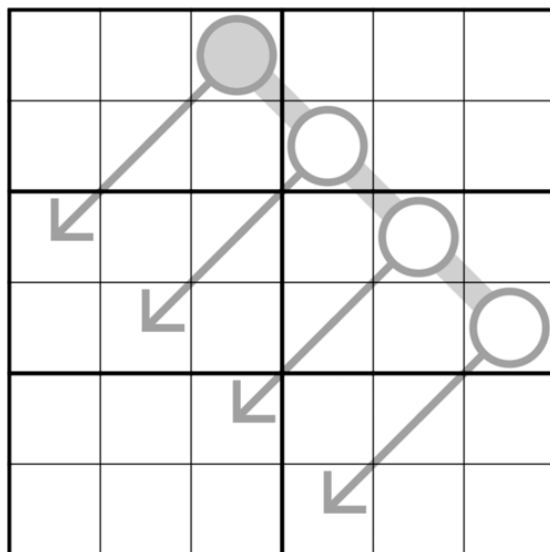
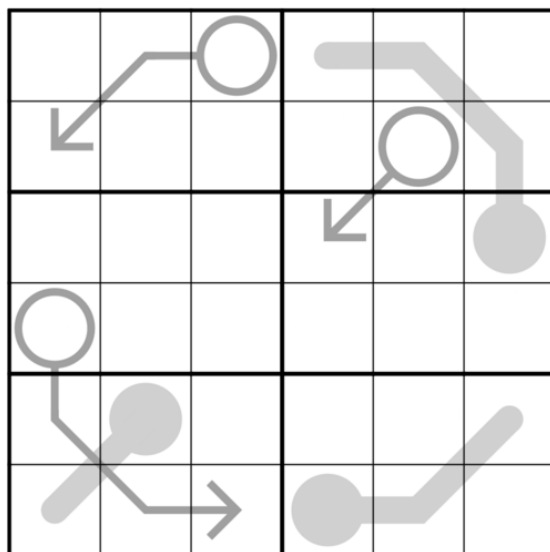
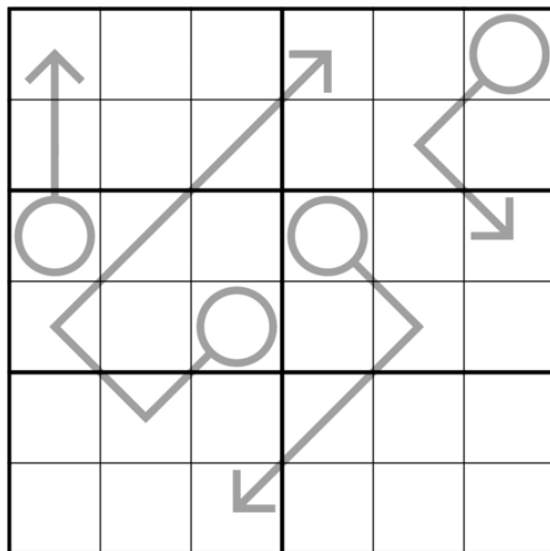
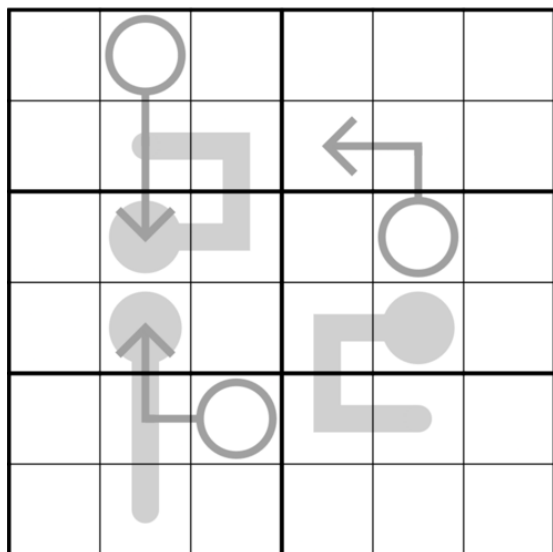
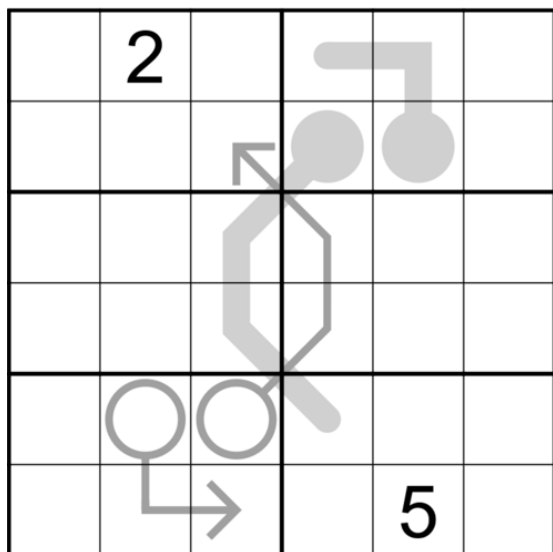
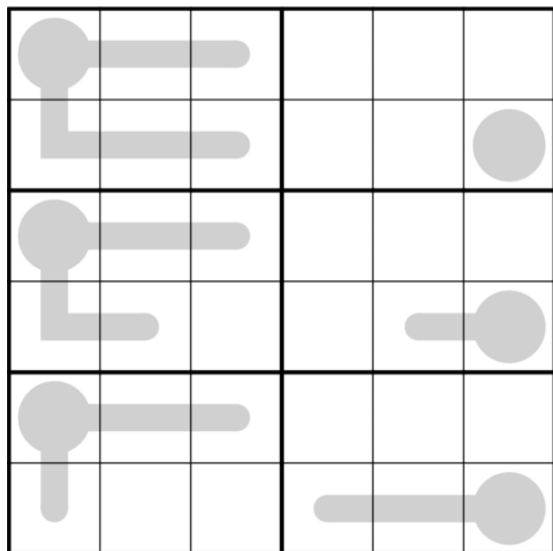
host

$\mathfrak{h} \propto \dagger \lambda \cap \in \omega \leq$

Place the digits 1 to 6 such that each row, column, and 3x2 box contains each digit exactly once.

Additionally, there exist thermometers in the grid; digits must be strictly increasing from the round bulb to the flat end.

Additionally, there exist arrows in the grid; the digit in the circle must be the sum of the digits along the arrow.



# THE STORY OF 1'S SPIRITUAL JOURNEY

*INSPIRED BY MATH 115, A CONVERSATION IN THE CS137 CHAT, AND MY OWN IMAGINATION.*

One day, 1 fell into a deep depression and gained quite a negative outlook, becoming  $-1$ .  $-1$  had no more hope, they felt like they had reached the end of the (number) line. The only thing that could solve the sudden negativity in 1's life was getting to the root of their issues.

It used to be so easy to get to the root of things, back when  $-1$  felt more positive about everything.  $-1$  wondered if approaching things from a different angle would help. So,  $-1$  decided they needed to get a degree to do so. But after achieving that goal, 1 discovered that being below zero, even in degrees, meant that the world still seemed like it was below freezing. So cold.

So getting a degree, turning to external achievement was obviously not getting to the root of  $-1$ 's issues. So  $-1$  decided to turn to their old friend and neighbour 0. 0 used to seem so empty sometimes when  $-1$  was still 1, but as  $-1$  suddenly found themselves below 0,  $-1$  wondered how 0 has coped with the feeling of emptiness for so long. But 0 was yet again unable to help. 0 had always been, as  $-1$  realized now, neither negative nor positive about life. 0 had been complete in its own way. And so, no matter what interactions 0 tried with  $-1$ , 1s old positivity could not be restored. It just didn't add up. It wouldn't get to the root of  $-1$ 's issues.

So  $-1$  packed their bags in preparation for a long long journey toward the mythical Complex Realm to meet the ancient Master  $j$ . Honestly, if  $-1$  was being Real with themselves, this was far-fetched. Almost all of the numbers in the Real World (except a vocal minority of particularly irrational numbers) agreed that the Complex Realm was nothing but myth. Imaginary. But for  $-1$ , there was nothing left to lose, really.  $-1$  had exhausted the other options.

$-1$  journeyed for days along the number line, going farther and farther along, approaching infinity but never quite reaching it. No matter what,  $-1$  couldn't seem to find the Complex Realm.

"I know imagination is key to finding you, Master  $j$ ,"  $-1$  called out, "but I've been searching for ages now and I'm at the end of the number line. I'm approaching infinity rapidly and I'm somehow still so negative. I STILL can't find a root to my problems. Please, Master  $j$ , I need your help to open my mind again!"

Silence. All the other numbers in earshot stared at  $-1$ , as if  $-1$  had gone completely irrational!

But suddenly, as if it was destined to be,  $-1$  heard a voice.

"I believe I can help you get to the root of your issues," said Master  $j$ .

"Come with me,  $-1$ . You will need to bring only..... your imagination."

So  $-1$  imagined harder than they ever had in their life. And the number line... shifted.  $-1$  had always thought infinity was distant enough, but the world suddenly took on a dizzying level of scope. A new dimension of madness stretching into a new type of infinity was being opened up in front of  $-1$ , a world where numbers had TWO components and TWO dimensions, where real and imaginary parts came together and made one complete, Complex being.

$-1$  couldn't believe what Master  $j$  was showing them. A whole new world—a new dimension to reality! "Is this it??"  $-1$  asked. "Is this the Complex Realm where I will find the root of my problems?"

"After finding the root of your problems, you will no longer go back," Master  $j$  chuckled. "Well, you can, but I find most do choose to stay once they have been opened up to this new complexity. But yes, you will find the root of your problems here. In fact, the roots of EVERYTHING lie in the Complex Realm."

"Will I become positive again, Master  $j$ ?"  $-1$  inquired.

"Not in the way you think,  $-1$ ," Master  $j$  explained. "You might, or you might not. But back in the Real World where you come from, there is only negativity and positivity. One number line. Two extremes. But what the Complex Realm promises you is not positivity or negativity. It is complexity. It is knowledge. It is imagination. And I can be your teacher."

$-1$  thought for a moment. The Complex Realm would likely change EVERYTHING about their life. But the mysterious new dimension, the promise of knowledge and imagination...

It was easy, in the end, to decide. The old number line had lost its positivity to  $-1$ . And  $-1$  knew that deep down, the missing piece, had always been imagination.

"I am ready to step into the Complex Realm," said  $-1$ . "Show me where my roots lie, Master  $j$ ."

Carol Xu

**Sometimes you walk by  
the Comfy Lounge and  
see things you don't  
wanna see.**

PROF. ROSINA KHARAL



## TIME IS A FLAT CIRCLE

You ever get that thing where you smell a scent and you flash back to a memory from years earlier? I get that, but instead of a scent it's something in **mathNEWS** and instead of years earlier it's months or weeks earlier. Why does this happen? Probably because time is a flat circle.

The cover of **mathNEWS** 157.4 teases graphic sects inside, which is a pretty clear allusion to the cover of issue 144.3, which warns of graphic violins contained within. Or maybe it's not an allusion. Perhaps we are just going around in a circle, and we are passing the same spot once again. To me, this makes more sense. After all, time is a flat circle.

**mathNEWS** 157.5 featured a **mathASKS** with the incoming WUSA president and vice president. In it, the incoming president says that in 2022 “student activism in many ways was essentially dead.” I think the former incoming WUSA executive team of 2021–2022 might have disagreed with that sentiment when **mathNEWS** last held a WUSA **mathASKS** in 145.6. This gives us a key insight. Those of us navigating around the circle cannot see across it. For us, the circle presents the illusion of being a line. It is not a line. Time is a flat circle.

I see familiar faces as I go around the circle. *Dick Smithers* and *Dick Chudney* are allegedly unrelated **mathNEWS** contributors, or maybe they are just different iterations along the circle. Same with *water* and *waterED*, same with *A cool pen name* and *insert pen name here*. I wonder if—should I too reincarnate in the next cycle around the circle—will I remember my previous journeys around? What fibres connect me to my subsequent incarnations? Only time will tell—time which is, after all, a flat circle.

Both the Articles of the Issue from 157.4 and 157.5 contain very metaphorical descriptions of sex. Apart from keying us into what the editors enjoy reading, this is another instance of going around the circle, except this time the stops are only one issue apart. From this we glean another insight. Time is a flat circle, but that flat circle is actually many many epicycles. You know, the ancient Greeks thought the planets moved in epicycles, but they just had the wrong frame of reference. In a broader frame of reference, the planets move in circles. In a broader frame of reference, time is a flat circle.

What lessons can we learn from this? Many things. So many things. Like, don't place time (which is a flat circle) on a hill cause it could roll away and it might slip through a drainage grate in the street.

aphf

## ΤΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΤΟΥ ΒΑΤΕΡΛΟ ΑΝΑΚΟΙΝΩΝΕΙ ΟΤΙ Η ΚΑΤΑΣΚΕΥΗ ΤΟΥ Μ9 ΘΑ ΚΑΘΥΣΤΕΡΗΣΕΙ ΕΠ' ΑΟΡΙΣΤΟΝ



Η ΕΡΜΗΝΕΙΑ ΤΟΥ ΚΑΛΛΙΤΕΧΝΗ

Dick Smithers

**mathNEWS**

# HEAR ME OUT: CS 136 EDITION

**NOT INCLUDING CS 136L BECAUSE ALTHOUGH BASH SCRIPT IS HOT, STUDYING FOR EXAMS IS HOTTER (AT LEAST THAT'S WHAT I'M TELLING MYSELF)**

- C syntax: those curly braces are like a deep embrace and semicolons got me arching my back ;} do i like declaring types every second? no but i understand why it's needed so i can tolerate it and that's love i guess??
- void type: it's such a hot name for returning nothing and the soulless black pit that i think of when i see void is tantalizing to say the least. like it could step on me with chunky leather boots and i'd say thank you
- stack memory: let's just say my underwear's gonna drop as i imagine pushing and riding that stack until it pops
- pointers: allows us to essentially "pass by reference," which lets us mutate and return multiple values, which are both so sexy. i'll be honest, i hate that \* is used for both pointer type declaration and dereference and i wish @ was used in place of & (it would make more sense now!) but i still dig its uses. in summary, pointers aren't the only thing here that's pointy rn (god i hate myself)
- modularization: i mean abstraction is hot, and you're telling me i can reuse code? let's just say i can more than maintain a good time with a sexy module ;)
- ADTs: as aforementioned, abstraction is absolutely alluring but a lot of data types are also hot. like queue me up for a time on your stack tyvm!!!
- efficiency: it gives me the big O, what can i say?
- quicksort: once you get it, it's hot! and we love an already implemented sorting function in the standard library (sidenote: libraries are so sexy. you're telling me i can get shushed and read smut in one place? sign me up!!!)
- malloc: look i mean i hated it at first, but consider this enemies-to-lovers! like sure she's gotta be freed but she works hard and lets me use the heap which is hot. i'd def allocate some memory and time to her
- variable length arrays: tbf i miss python's variable length lists so this brings it on par, just a bit more complicated but i'm down for a challenge (that's kinky)! not to mention realloc, bc they could get me resized with no snake needed
- linked lists: again used to hate it bc it uses recursion which is rather slow at times and dealing with pointers and dynamic memory is annoying, but i'm down to get hot and bothered if that means we can easily implement adts with this model. and with augmentation, some operations can be rather efficient, which is quite hot.
- trees: sorted data is hot, so naturally bst's ordering property is too! not to mention that searching binary search trees (particularly the balanced ones) are efficient, and as aforementioned, efficiency is

hot! and who doesn't want to tap that and make that tree grow?

- void pointer: i've talked about generalization before so you know it gets my gears going and that's what void pointers do best. could this be implemented a lot easier in python? yes but i'm talking about C here, not my ex

sincerely, your math *freak*

good luck on exams my little freaks <3

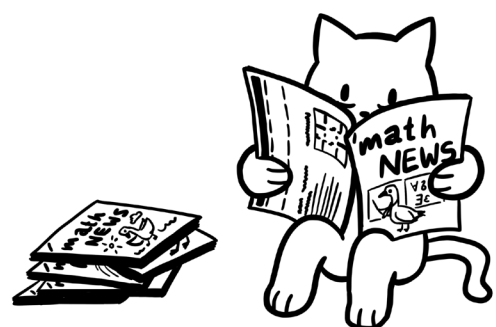
## IS mathNEWS COOKED?



With a change in price for a **mathNEWS** issue from *FREE* to \$0.00, I am worried that no one will be able to afford to read **mathNEWS** anymore. At least it is still NaN times cheaper than eggs in the U.S., so we can still hold out hope.

Totally Ununimodular

I am assured by the editors that **mathNEWS** is still going strong and will prosper for years to come. I was worried for nothing I guess.



# MY FAVOURITE ALBUMS THIS TERM

## W25 EDITION

At the beginning of the year I started an “album a day” challenge, meaning I’m discovering new music on a daily basis now. It’s rather overwhelming. I’ve managed to put together a list of some of the records I’ve been enjoying this term. Some are new, some are not, but they’re all pretty great. Shall we get started?

***In Waves* by Jamie xx (2024)** — A slight departure from his debut album, this focuses more on house rather than bass, which makes this a very energetic listen. It was extremely cool to hear some of the songs live back in January, although I had to miss “Baddy on the Floor” because I wanted to get home on time. Yes, I did spell that song title correctly. It’s a banger, what can I say?

***No Hands* by Joey Valence & Brae (2024)** — It feels like I have my own personal hype men whenever I throw this on, but at the same time I’m almost cringing at myself? Maybe that’s the point of nerdcore hip hop? Glad I have a pseudonym, I guess. Extra points for doing a Charli XCX cover.

***Blue* by Joni Mitchell (1971)** — This was the soundtrack to my rainy morning bus rides, of which there were a surprising amount this winter. The guitar and the piano are just so relaxing, and Joni’s beautiful voice adds to the dreary ambience. Despite its title, *Blue* lifts my spirits like no other album can.

***The Queen is Dead* by The Smiths (1986)** — So losercore, I know. My coworker told me that I embody losercore without actually being a loser and I’m considering this a compliment. If you’re reading this, you know who you are. Don’t explode please.

***We Have the Facts and We’re Voting Yes* by Death Cab For Cutie (2000)** — Normally I gravitate towards their later record *Transatlanticism*, but this one fills a void that can only be filled by midwest emo sounds. It’s less polished and more disjointed, yet it has so much character. The opening lick to “Title Track” is enough to make me smile.

***London Calling* by The Clash (1979)** — This is a longer one, and I don’t always go back to the songs individually; what draws me in is the British charm and Joe Strummer’s unique vocal style. Sometimes there’s just no explaining the attraction of a 4<sup>th</sup> year math student to a 70s punk rock album.

***Violator* by Depeche Mode (1990)** — If there’s an album here that I’m confidently addicted to, it’s *Violator*. I even bought a poster of the album cover on complete impulse. Granted, I still haven’t put it on my wall, but that’s not the point. I love this record.

***Mahashmashana* by Father John Misty (2024)** — Good ol’ Josh Tillman. I finally got to go to one of his concerts last month and it was absolutely worth the wait. The live arrangements for this album in particular were mind-blowing, even if

the people behind me kept wolf whistling during “Summer’s Gone.”

***The Dark Side of the Moon* by Pink Floyd (1973)** — Yeah I totally get the hype, this album is phenomenal. There’s nothing I can say about this that hasn’t already been said.

***The Devil and God Are Raging Inside Me* by Brand New (2006)** — If *We Have the Facts* is my midwest emo crutch, then this is my... non-midwest emo crutch? Everything here is a lot louder and more abrasive; it fills a different type of void, if you will. A deeper and wider void. Anyway...

That’s all, folks. See you next term when I come out of hiding again.

JP

## GLUBBO SAYS GOODBYE

it’s time for glubbo to go  
through ups and downs,  
good times and bad,  
glubbo has glubbed all around

glubbo is thankful to everyone,  
to peers, to new friends, to teachers,  
actually everyone except for slow walkers  
glubbo is fast >:)

glubbo wishes you the best,  
if you’re just getting started  
or moving on to the next  
please try new things and meet cool people  
it’s cool

glubbo doesn’t know how poems work,  
but glubbo does know one thing  
you’re going to do great :)  
probably  
glubbo says goodbye!

glubbo

**I will accept integration  
by divine recognition on  
the exam.**

PROF. FAISAL AL-FAISAL

# SETTING DOWN MY LIFE'S WORK

On one hand, eleven years is hardly my whole life. On the other hand, that is a really long amount of time to have been around the university. Eleven and a half years since I first showed up as a new undergrad student, now I still work for one of the labs on campus, but I have switched to remote work and have moved out of town.

I have been here long enough that not only was I here before the pandemic, but that is the majority of my time here. And I have been here pretty continuously over that time, only missing a couple of terms and various little vacations. And for the past eleven years, while I have been at the university, I have also been going to the Game Dev. Club.

I actually tried writing out my history of the Game Dev. Club. From when I joined eleven years ago to when I left this term. It didn't fit; the history section alone exceeded the size of a **mathNEWS** article. I have so many memories of years gone by and club members come and gone. I guess I can't share all of it, but let me share one story with you.

This is the story about the second time I became president of the Game Dev. Club. Like many clubs on campus, and campus itself, the Game Dev. Club closed down when the pandemic hit. I also switched to remote work and moved away for a term or so. But then I came back and there still was no Game Dev. Club. So I started running the club again. Campus still wasn't open so I ran them online, using screen share and voice chat. It was pretty rough, but every week—except one or two—I logged in, showed whatever I had off and answered questions. It was just enough though, that when campus opened up again the first physical meeting had people show up to it.

If you want something to exist, creating it yourself is the best way to make sure it does. The club owes a lot to those others who showed up then, and others who have found it since. Looking at the club as it is now, I'm glad I kept the light on in those times.

Speaking the club as it is now, the club is doing great; with new members, new ideas, and new people running the club. I've still been involved—I unlocked the doors and gave the presentation on my very last meeting—but I haven't been the actual or effective club president in a while. And now I'm not a real or effective executive.

It is honestly kind of terrifying.

To set down something you have poured all this time and energy and emotion into, not knowing what will happen next. The Game Dev. Club is not a completed project, it is something other people will take and change. And there is that tiny voice that wonders if it will go astray the moment I am not keeping an eye on it. But I doubt it, because I know the people who are picking up my life's work. And I think they will do fine.

Back when I was the only one who had been around for more than a term or two, I toyed with the idea of writing the Game Dev. Club Executive Handbook to condense my knowledge down for the new people. But by now, there is nothing I could write for them that they don't already know. But make sure you don't lose the passwords; we still can't get into the old club email address.

But I'm not going to be around, and I'm not going to get to see everyone twice a week. I'm going to miss them—I already miss them—but this has happened many times before, as many friends have come and gone. Now it is my turn. But I carry one lesson with me that I have learned from all those good-byes and years passing since:

Remember, you don't stop being friends just because you haven't seen each other in a while.

Glec

## N THINGS TO DO AT A FURRY CONVENTION

Last weekend I had a blast at Furnal Equinox, Toronto's very own furry convention! You've probably heard of these kinds of events, but what do you actually do at one? There's a huge list of possibilities, but here are my top picks:

- Check out the Dealers Den, one of the best art markets to grace Toronto
- Parade around Harbourfront with furies and see the live reactions of bystanders (and maybe a politician or two if you're lucky)
- Attend the Fursuit Masquerade, and watch a Kangaroo with a spine-tingling baritone sing the best rendition of Toreador March you've ever heard
- Go to panels on useful topics like finance, first-aid, or character design
- Party hard at the rave
- Go to a panel where the (furred) panellist just stares at you for an hour
- Find new friends in the board game room
- Cosplay and take lots of pictures
- Join the (unofficial) University of Waterloo Undergraduate Furry Club (UWU FC) so you head in with good company

No matter what you do, it's a great opportunity to have some fun, step outside your comfort zone, and fly free! Make sure you register ahead of time, they sold out this year!

Carbon + Asrise



# WE ARE BETTER THAN THIS

I've written a couple of articles about taking back your life from the internet. I've touted newsletters, physical media, RSS feeds, privacy-first browsers, and ad-blockers to both readers and my circle alike. I've followed my own advice and spent months on end without social media. I've felt the zen of knowing that *I'm actually trying* to reconnect with the real world again.

And yet, this past term, I've regressed to unprecedented levels of internet degeneracy. Instagram's been deleted from my phone for two months—now my fingers reach for Reddit. Bored at work? Reddit. Just got home and want to relax? Reddit. Ironically enough, I deleted Reddit off my phone years ago—it's just so easily accessible via browser that my thumb automatically reaches for the bookmark.

Reddit is one of those echo chambers that tricks you into thinking it's useful. Unlike Instagram and TikTok—which we unanimously agree on the harms of—we have designated some apps as commendable alternatives due to their supposed benefits. Reddit is seen as a hub to connect with communities of like-minded individuals sharing the same interests as you. Certain subreddits and their posts are viewed as intellectually curious, thought provoking, and inspiring. Perhaps it's because Reddit places an emphasis on the written word, rather than other video-focused social media—or maybe it's that users are constantly sharing news articles, and that makes us feel that we are using our scrolling time more wisely. I'm sure that there are tons of factors that make us *feel* like the app is useful to keep around, despite the mockery of it.

But Reddit is worse than an echo chamber. It's millions of echo chambers inside one large Skinner box, in which we are the subjects. Reddit's upvote system celebrates or condemns users through a deceptive “democracy.” Posts and comments are logarithmically scaled to the top based on how quickly they were upvoted; the people do not decide which voices are heard, but the chronically online, extremely opinionated denizens of Reddit do.<sup>1</sup> There is nothing intellectually curious about a platform that widely promotes one obstinate set of views over another. There is nothing democratic about a platform that rage-baits you into your engagement. There is nothing thought-provoking or *progressive* about a platform in which users argue conjecture from the headlines of an article.<sup>1</sup>

Reddit has an effect similar to that of Twitter to the brain. Sometimes, you find yourself in a thread that celebrates an opinion you agree with. You feel uplifted by the fact that there are others who share the same views as you, and that the world is a good place after all. This justifies your use of the app, and encourages you to keep scrolling for more “healthy” content. But more often than not, you find yourself in a thread of lies and frustrating opinions. Political takes that turn you into a pessimist about the world around you. Stubborn arguments that bend your reality of what is real. After burning yourself out from a session of doomscrolling, you find yourself hating some aspect of the world around you more. “Is my favourite band really washed?” “Do people truly think like this?” “Is this

political party really ruining society?” “Is that country really so oppressive?” “Is this theology really a plague?”

Do you see the problem here? Reddit generally has a left-leaning atmosphere that promotes equality and acceptance,<sup>1</sup> but the more you surround yourself in its communities, the more you find hypocrisy and hatred. The juxtaposition between views you find agreeable and posts you find loathing breaks you down in time. At best, you feel anger over what you just saw. At worst, you are indoctrinated into a cult of hatred.

We are better than this. We go to a university that encourages free thought and civilized discourse. We spent high school burying ourselves in books, hand-writing countless pages of arithmetic and essays, and sacrificing golden years of our childhoods—all of this to get where we are right now. Are we really about to throw all of that away because we've become addicted to scrolling on metal and glass bricks? Are we really letting our attention spans deteriorate when we used to spend *elementary school* reading away at books? Are we really letting bots and extremists online desecrate our critical thinking? Are we really letting an app turn us against each other, when we grew up unified under values of freedom, compassion, and acceptance for *everybody*, not just our own?

It feels more and more like the Canada we live in today is not the Canada we grew up in—that's a feeling that politicians love using to turn us against each other. But part of that feeling is because we haven't been living in Canada for a while now, we've been living online. Put the phone away during your next walk through Uptown, take a step back, and look at the *community* we still have in the real world. Then you'll see.

Usman!

1. Desforges, J. *You Should Quit Reddit*; Jacob Desforges, 2023.

## EPISODE 72: OPERATING SYSTEMS

MathSoc Cartoons presents episode 72 of the MathSoc Cartoons series: [CS.350—Operating Systems](#).

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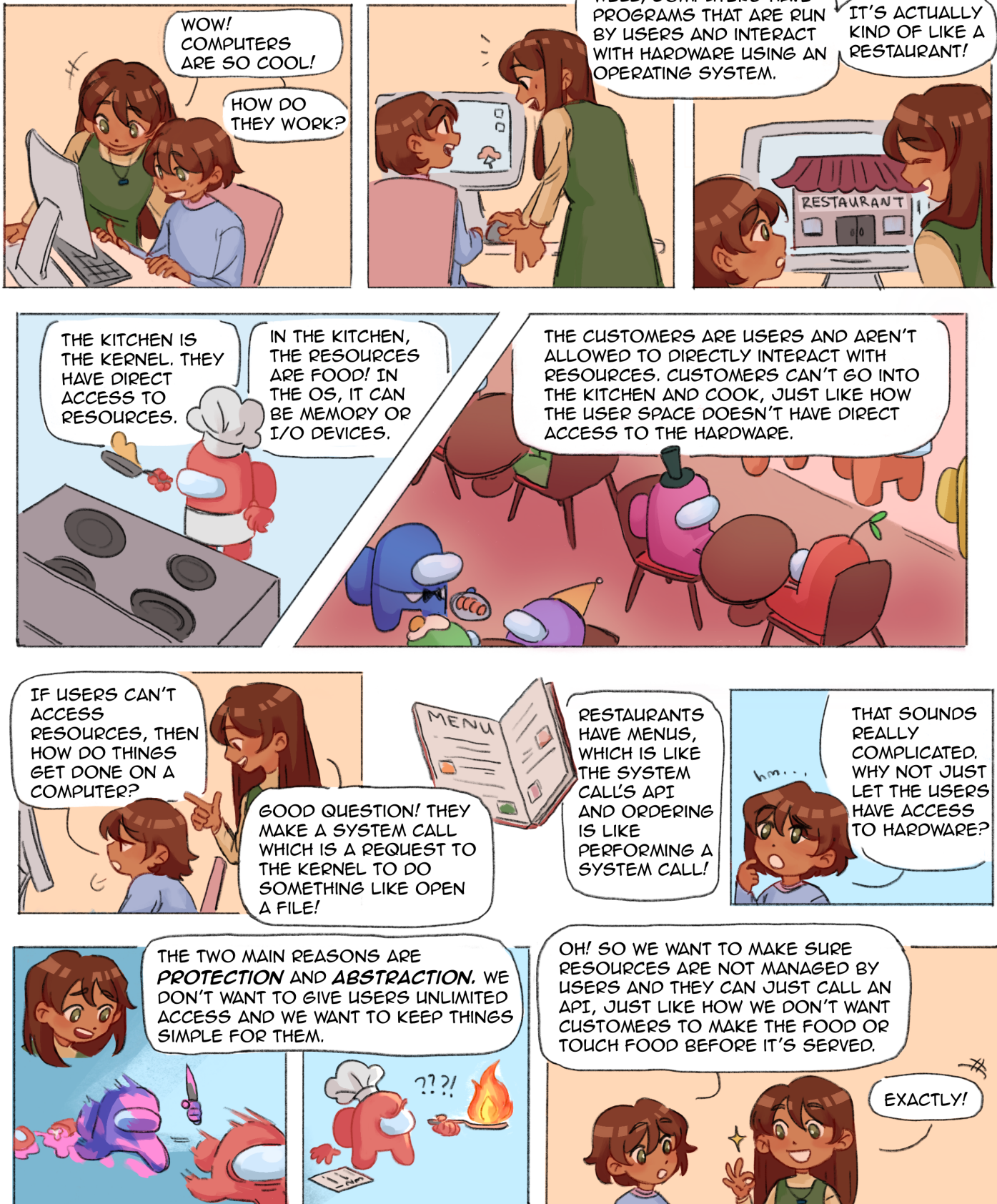
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MathSoc Cartoons

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STORY BY VIVIAN DAI | ART BY NICOLE LIU

## CS 350: OPERATING SYSTEMS

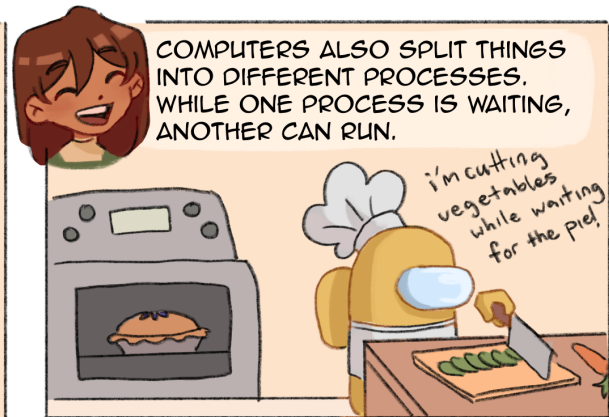
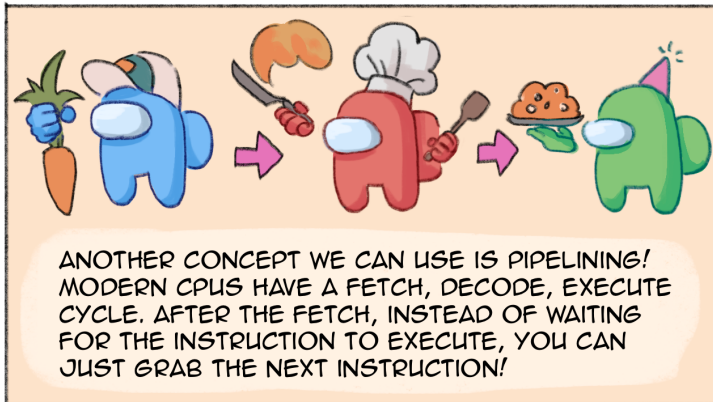
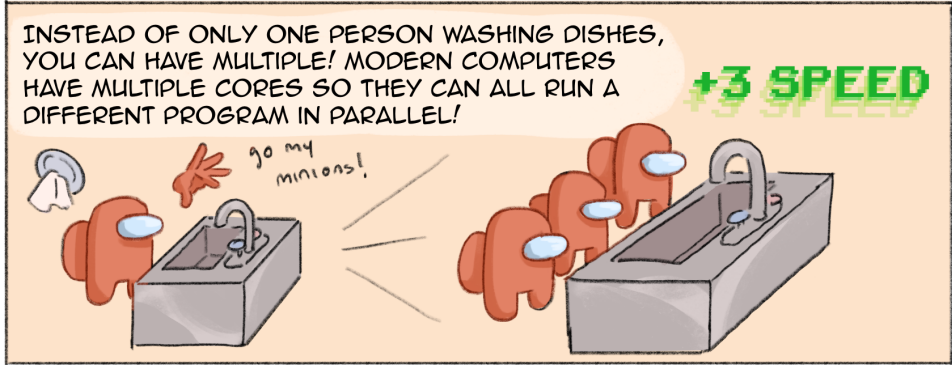




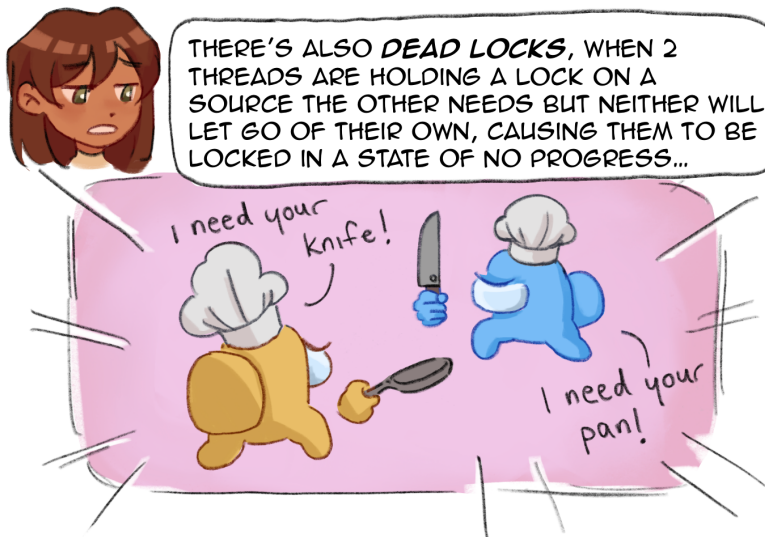
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## CS 350: OPERATING SYSTEMS

STORY BY VIVIAN DAI | ART BY NICOLE LIU



THERE'S **DATA RACES**. IF ONE THREAD WRITES TO A VARIABLE AT THE SAME TIME AS WHEN ANOTHER TRIES ACCESSING IT, IT WILL CAUSE A DATA RACE. THE VARIABLE MIGHT NO LONGER CONTAIN THE CORRECT INFORMATION.



\*BAD SYS CALL PUN

# MY OBSESSION WITH THE RIZZ CLUB

Let's get one thing straight first, I really don't *like* rizz club. I would say I dislike it actually, nearly as much as I dislike how people look at me when I mention participating in rizz club but oh my gosh is it fascinating.

Fall 2024, a group of friends and I stumble across a Reddit post about rizz club and I join the discord server out of sheer curiosity. Joining the server was like my gateway drug because the moment I joined I was enraptured. Not by the people but the shockingly perfectly formatted Notion template that was titled "blind date sign-up."

Look I'm single, and I'm not unaware of how desperate you have to be to unironically fill out the rizz club form. While I would have done it ironically, nobody would have believed me if I said that I was. So, I grabbed a few friends and made this a bonding activity. Now nobody could judge me since everyone in my life was doing it too. *Perfect*, I thought at the time. *Not perfect*, actually because since I filled out the form with "nonbinary" and "liking everyone," I never heard back. (If you're curious, out of all of my friends only my friend that's a girl heard back ← This will be important for later.)

I grumble about the lack of response and continue my term as a functioning member of society (as happy as a Waterloo student can be). Now it's Winter 2025, a new year, a new me and the same old rizz club. At this point, I'm kinda upset that my curiosity wasn't sated during my last attempt. You would be too, trust. It's a Tuesday morning and as I read the

Waterloo/Laurier fanfiction from two **mathNEWS** issues ago, the idea struck—I'll write an article about rizz club. Not only is it a reason to commit to the rizz club process but it's also a reason to write an article. Sadly, not being a woman seemed to impede my ability to get a response last time so as a logical course of action I became a woman. Morally dubious? Depends on who you ask, I personally did not care that I had to go back into the closet to participate in rizz club blind dating.

I ripped the "they" from the "she" in my pronouns, stepped into the closet, and filled out the form. A few days later I got five matches from the president and I was off to the races. First thoughts, "This club has literally no women, a 5:1 ratio?!" Second thoughts, "Woah, some of these guys are really bad." How bad, you ask? One of the guys said that he was "interested in showing empathy," in his introduction for a blind dating event. Key word here is "interested," because that implies that he doesn't already? Is this rizz? I pick three of these guys and I go on two of the most boring one-hour discord calls ever. The third option (and the most interesting one) never responded which was devastating. Alas, I ended the calls, questioned my choices and called it a day. The guys were so boring that my obsession died and so I never continued. Which is a really devastating end to my pursuits but I decided to write the article anyway because one of the guys was "looking for a woman with a growth mindset" and I can't be the only one that finds that statement absolutely hilarious.

sillybilly

# AN EXISTENTIAL WALK IN THE BATHHOUSE

In Dostoevsky's "The House of the Dead" the main character is sentenced to live in a brutal and unforgiving prison in Siberia, where most of his hours are spent doing strenuous manual labor and living in mental anguish. At some point during his sentence, all the prisoners are taken to a cramped and neglected bathhouse as a special treat, too small to hold even half the prisoners. Inside the small, dirty room, men were packed against each other—just as many people sat on top of the bathhouse benches as others who sat underneath them, all exposed. Each person was allowed one bucket of dirty water to wash with, this water soon running down the backs of one man and landing on the head of others. The prisoners, however, were full of joy, laughter and an excited agitation. They were ecstatic about the change in scenery, a moment of relief in their endless lives. It was something new for them, and they would care for anything new. Anything at all.

Three years ago, in first year, I was walking with a friend in the backyard of CMH. It was a pink and orange July evening, with the sun about to vanish, and the image of the sky reflecting off every glass surface, including the lake. The sweet, warm air was insightful and understanding as it listened to our conversation. I find the beauty of Waterloo on a summer evening, exacerbated by the guilt of taking a walk when you should be

studying, to be quite radiant. This must have been what moved my friend to say,

"Waterloo is such a beautiful prison."

They meant this in regards to the university in particular, and the entire associated engineering experience. This struck me, oddly, and I began to wonder. Despite all the days of no exercise, excruciatingly painful workloads, a fleeting sense of control over life, and a structurally sound apathy that cannot be broken down, there have been rare moments of joy. Maybe it takes the form of a new co-op, or a new partner, or an unexpected passing mark here and there. I was always waiting for something new, anything at all. But shortly after these moments, I would revert back to that same initial state, questioning why I feel guilty about going outside on a nice day and the rest of the world doesn't, or if it's worth it to trade core years of my life so that my parents won't worry. How many of my goals are created by the people around me and how many are my own? It's easy to pass time, keeping my head down in routine to avoid a disturbing answer.

Occasionally, I get this intoxicating, recurring dream at night where I get to live a million different lives, ones where I never

needed to keep up grades; where I learn basic life skills and enjoy the feeling of being able to relate to others. It's a hard realization, waking up and knowing you've sold countless fractions of your soul to this school. But as promised, the cycle continues, and I find myself sitting under the sun right when the clouds part once again. In those rare fleeting moments of joy, I can't help but wonder—am I in the bathhouse? If I turn around too quickly, will I see the bus waiting to take me back to prison? I await the bus like I await that beautiful dream at night. I know it will always be there.

sirtophamhat

Eventually we'll start graph theory, and things will get better. But for now, we move through a land of crime.

PROF. SOPHIE SPIRKL

## CSC FLASH

*I GOT A LITTLE TOO DRUNK, SO YALL WILL HAVE TO DEAL WITH A SHORT FLASH*

### HIRING NOTICE

Have you ever wanted to make a difference at Waterloo? Do you dream of igniting that lone spark of joy in the eyes of Waterloo students? Well, now's your chance! Join the *Clan of Secretive Canadian Ethanol Takers* (CSC-ET aka CSC Executive Team)! Check out our Instagram at @uwcsclub for the latest hiring updates. CSC is eager to exploit your free labor, so join the movement and be exploited like the rest of us!

### REASON WHY CSC FLASH IS SHORT THIS WEEK

As a CSC committee member, it's only natural that I am an alcoholic. So, on a cold and lonely Monday night, I chose to listen to my inner demons and down 18 shots worth of alcohol. To be precise, I consumed a can of Smirnoff Ice and 16.5 shots of Absolut Raspberry Vodka. Let this serve as a cautionary tale before joining CSC organizing committees—you've been warned.

### PRESIDENT RESIGNATION

We're writing to inform you of a leadership transition within CSC. Sourojeet Adhikari has voluntarily resigned from his position as President. We extend our sincere gratitude to Sourojeet for his service and leadership, and we wish him the very best in his future endeavors. In accordance with Section 5.2.1 of our constitution, Enming Yang will assume the role of Acting President effective immediately. The CSC Executive Team will convene soon to discuss the details of this transition and will provide updates to the membership in the coming weeks. We appreciate your continued support during this period of change.

### QNX INDUSTRY TALK

As the term winds down, we're excited to host a **QNX Industry Talk** on **March 27 at 5:30 PM in STC 0040**. Experts (who actually have jobs) will share insights on building operating systems that run on cars and trains. If that's not enough to pique your interest, there will be **free swag**. Yes, you heard that right—**free swag**. Still not convinced? I get it,

I'm one of you. Well, there's also **free food**. That should be your  $n^{\text{th}}$  reason to show up.

### OTHER EVENTS

Keep an eye on our club Instagram and Discord to stay updated on upcoming events like **ALT-TAB** and **EoT**. I can personally guarantee you (as the CSC Flash) that there will be plenty of free food for you gluttons to devour at these events. Don't miss out!

In the pale, gray dusk by the riverside,  
A gaggle of geese, with no shame to hide.  
Feathers soaked, rain pouring down,  
Yet vodka shots? They won't back down.

A Smirnoff sip, a goose lets loose,  
Another gulps, starts shaking its caboose.  
Absolut madness in their glassy-eyed stare,  
Flapping, honking: chaos fills the air.

"Bottoms up!" cries a goose named Clyde,  
While Betty belches, her wings open wide.  
Feathers ruffled, wobbling like fools,  
Dizzy as hell, but breaking no rules.

The rain hammers down, but they don't care,  
Honks echo loud in the misty night air.  
Swaying and stumbling, they slip on the grass,  
"Another round!" they drunkenly harass.

Frost nips at feathers, wind chills the bone,  
Yet each goose drinks like it's their own throne.  
Slurred honks and giggles, wings out of sync,  
Drunk off their tails; too far gone to think.

And as dawn breaks, the chaos subsides,  
Hungover honkers nurse pounding heads with pride.  
But legends will tell of that wild, stormy spree,  
When geese got hammered, as wild as can be.

# GAME DESIGN 201 AT BREAKOUT CON TAUGHT ME WHY BANG DREAM! AVE MUJICA FAILS ITS AUDIENCE

By the time this article is published, *BanG Dream! Ave Mujica* will have already released its last episode. I have been watching this 12-episode anime series since its launch in January. Followed by the success of its sequel *BanG Dream! It's MyGO!!!!!*, the new series attracted lots of attention from the audience, especially from the Chinese/Japanese ACGN mainstream. People were curious on how its plot would develop after MyGo ep.12 where Sakiko established a new band called Ave Mujica and started their debut show.

This anime in a nutshell is a girl band anime, where you could expect a group of high school girls doing cute things together and occasionally sing songs in a show. Bocchi the Rock! and K-On! are the classics. Here is the pattern: exclamation mark = girl band anime. Easy.

In the story of *MyGo!!!!!* (! count = 5), 5 girls from different backgrounds, facing different struggles, grouped together and created a band called MyGo. Good concerts and songs? Yes! Character development and growth? Yes! Wholesome yuri moment? Yes! Good ending with everyone resolving their inner struggles and fulfill their dreams? Yes! Although the MyGo girls struggled to leave their past, they moved on by hearing the lyrics recited by Tomori, who is very good at relaying others' feelings. *MyGo!!!!!* was concluded with some twists: clues were scattered across the episodes, implying what happened to the main characters' previous band, Crychic, which got disbanded followed by Sakiko announcing her leave.

At the moment, the story of *Ave Mujica* was already set up. Anime audiences were excitedly talking about the clues from *MyGo!!!!!*, the official announcements, and how their songs/ lyrics implied the flow of the story. Content creators started doing plot analysis and so on. Every Thursday, fans gathered together doing watch party, eagerly waiting for the new episode. At the beginning, things went pretty well: Sakiko's background got explained, and new plot clues were planted along the way. However, with more episodes getting released, things started to feel awkward. First of all, there is no song. If I am watching a girl band anime and there is not a single song till ep. 7, I will be extremely disappointed. That was exactly what happened to Ave Mujica. By the end of ep. 11, here is what we got: Cute girls doing terrifying things together. Yuri but in an unusually twisted relationship (go read lyrics of *Imprisoned XII*). Awkward character growth with no prior set up and development. Family Drama. Ave Mujica is an emotional roller coaster, a mix of comedy and thriller. It certainly breaks people's expectations from a traditional girl band anime.

Here comes the inspiration of my article. On March 15<sup>th</sup>, I went to Breakout Con, a famous tabletop gaming convention in Toronto. It holds many tabletop-gaming related events like roleplaying game sessions (featuring Mothership, Blades in the Dark and many niche OSR systems), board game auctions (I dumped 110 dollars worth of board games to contribute to my pile of shame), playtestings, board game tournaments and

panels. In the panel of Game Design 201, speakers were talking about how a game should be designed to meet the expectation of its audiences. The bell rings in my mind. Their tips for making games can be extended to any kind of work/art. Lesson learned no. 1: make your work look like what you want it to be. Design it within its intended genre and feed it to the right audience. Lesson learned no. 2: While you are designing it, add your style and flavour to it, to the extent that it still stays in the genre or category. Lesson learned no. 3: Don't overdo it. DO NOT insert your lewd/fetish/edgy thought into your regular work (especially in a collaborative project >\_>).

When I am watching *Ave Mujica*, I hope to watch something wholesome and heart-melting, but not some random heavily-tagged work from AO3. I am not saying *Ave Mujica's* story is bad, it can be very good in the correct context. It is just too far away from what I would expect. For my personal recommendation in this genre, watch *Revue Starlight* and *Girls Band Cry*.

eralogous

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## HAIKUS ABOUT LIFE

My first mathNEWS post  
I'm doing a few haikus  
For the free pizza

Why is it snowing  
When it's almost April now  
Tspmo

Leaving Waterloo  
Do I have Stockholm Syndrome?  
I will miss this place

GrassToucher70

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## "AVERAGE PERSON PROVES UNCOUNTABLY MANY THEOREMS A YEAR" FACTOID ACTUALLY JUST STATISTICAL ERROR.

average person proves countably many theorems per year. Cantor Georg, who lives in cave & proves over  $2^{\aleph_0}$  theorems each day, is an outlier and should not have been counted.

hyperlynx

## HELP KEEP CS CLASS PROFILES ALIVE

Hi y'all, incase you didn't know, there are CS Class profiles that the CS Club has been making for the past few years, and recently it's become kinda hard to navigate, and continue to make. We've been running out of people willing to help make the website, design it, and even conduct the surveys. This year there was a pretty good chance that the CS '25 class profile wouldn't be made. So... please maybe apply to help CSC continue to make them please :D

Why do I still care

## ON LINKEDIN GAMES

RATINGS WITH LITTLE ELABORATION

**TANGO:** pretty icons 10/10

**ZIP:** deducting a point because it's only been out for like a week 9/10

**CROSSCLIMB:** too basic 6/10

**PINPOINT:** too basic AND it's too similar to the NYT games for me. 5/10

**QUEENS:** an evil, disgusting game. designed to crush spirits and break wills. FUCK. QUEENS. 3/10

root\_mean\_square

## SAD IT'S OVER? SUBSCRIBE TODAY!

YOUR NAME

MAILING ADDRESS

W S F 20  W S F 20  W S F 20   
TERMS

Canada	\$7.50 per term, \$20 per year
United States	\$10.00 per term, \$25 per year
Overseas	\$15.00 per term, \$35 per year

## HOW MANY HOURS OF SLEEP DO YOU GET PER NIGHT?

(ON AVERAGE)

- 5 hours
- 6 hours (3)
- 6.6 hours
- 7 hours (10)
- 7.5 hours (3)
- 8 hours (3)
- 9 hours
- 11 hours

Turns out, on average, **mathNEWS** writers sleep 7.22 hours per night.

mathgeek

## ODE TO THE SLAW

Every Monday noon, I beamed to the store  
Into the fridge I reach  
For my slaw and my peach

This Monday morn,  
My tear hit the floor,  
It's nowhere in sight,  
My creamy coleslaw delight

Every week I come  
I keep searching for that vinegar and mayo  
But all I get is 没有 (meiyou)

Now I write this tune  
In memory of your honor and your plight  
My creamy coleslaw delight

RIP Math CnD Coleslaw, you will be dearly remembered...

SlawLover69

## ERRATA FOR mathNEWS 151.6 II

In **mathNEWS** 151.6, we printed a list of every editor since 1973 to celebrate the 50<sup>th</sup> anniversary of **mathNEWS**. We attempted to correct it in 154.6, however it seems we're missing some terms AGAIN. The list is reprinted on the following page with corrections made.

classified

# THE EDITORS OF mathNEWS

## THE UNIVERSITY OF WATERLOO'S BASTION OF ERUDITE THOUGHT SINCE 1973

mathNEWS has been published each academic term since January 1973. It is the duty of the mathNEWS Editor to ensure that mathNEWS continues forever. Here are those who have volunteered themselves to carry out this task:

### VOL. TERM EDITORS

1	W73	John Peebles, Steve Treadwell	49	W89	Rick McTavish	88	W02	Albert "PhatEd" O'Connor,
2	S73	Marsha Tatebe	50	S89	Stephen A. Smith			Bradley Theodore "TaxiEd" Smith
3	F73	John Peebles	51	F89	Don Marks, Karen Louise Smith	89	S02	Albert "PhatEd" O'Connor,
4	W74	John Peebles	52	W90	Paul J. Sahota, David Weil			Bradley Theodore "TaxiEd" Smith
5	S74	Dennis Mullin	53	S90	Rob Del Mundo,	90	F02	Louis "FrenchEd" Mastorakos,
6	F74	Randall McDougall			Karen Louise Smith			Albert "PhatEd" O'Connor,
7	W75	Dennis Mullin	54	F90	Trevor Green			Bradley Theodore "TaxiEd" Smith,
8	S75	Randall McDougall	55	W91	Mike Reade, Rob Del Mundo,			Chris "KreasEd" Harasemchuk
9	F75	Dennis Mullin			Betty-Jo Hill	91	W03	Louis "FrenchEd" Mastorakos,
10	W76	Randall McDougall, Mark Brader	56	S91	Marcel Goudeseune			Chris "KreasEd" Harasemchuk
11	S76	Ron Hipfner	57	F91	Mike Reade, Betty-Jo Hill	92	S03	Louis "FrenchEd" Mastorakos,
12	F76	Michael Dillon, Mark Brader	58	W92	Curtis Desjardins			Chris "KreasEd" Harasemchuk,
13	W77	Mark Brader, Michael Dillon,	59	S92	Betty-Jo Hill, Christina Caldarelli			Ian W. "iEd" MacKinnon
		Ron Hipfner, Randall McDougall,	60	F92	Kivi Shapiro	93	F03	Louis "FrenchEd" Mastorakos,
		Dennis Mullin	61	W93	Christina Caldarelli, Erich Jacoby			Chris "KreasEd" Harasemchuk,
14	S77	Dennis Mullin, Bruce Mills	62	S93	Ian Goldberg			Ian W. "iEd" MacKinnon,
15	F77	Dennis Mullin	63	F93	Curtis Desjardins, Erich Jacoby	94	W04	Emerald "StatsEd" Kushnier
16	W78	Will Macauley, Dave Gillett	64	W94	Michael Melvin, Steve "Flip" Shaw			Chris "KreasEd" Harasemchuk,
17	S78	John J. Long, John Ellis	65	S94	Erich Jacoby, Dale Wick			Louis "FrenchEd" Mastorakos
18	F78	Prabhakar Ragde	66	F94	Steve "Flip" Shaw	95	S04	Mark "BeatleEd" Toivanen,
19	W79	Andrew Malton	67	W95	Mala "Crakko" Krishnan,			Chris "KreasEd" Harasemchuk,
20	S79	Prabhakar Ragde (Eclectia)			Mike "Hammer" Hammond			Louis "FrenchEd" Mastorakos
21	F79	W. Ross Brown	68	S95	Stephen Johnston,	96	F04	Eric "inkEd" Logan,
22	W80	Rob Collins			Stuart "Jean-GuyEd" Pollock			Emerald "StatsEd" Kushnier
23	S80	W. Ross Brown	69	F95	Mala "Crakko" Krishnan,	97	W05	Mark "BeatleEd" Toivanen,
24	F80	W. Ross Brown, Joanne West			Mike "Hammer" Hammond			Emerald "StatsEd" Kushnier,
25	W81	Joanne West	70	W96	Mala "Crakko" Krishnan,			Chris "SheepNinEd" MacGregor
26	S81	William Hughes			Mike "Hammer" Hammond,	98	S05	Eric "inkEd" Logan,
27	F81	Dave Till			Brian "Latrell" Fox			Ian W. "iEd" MacKinnon,
28	W82	Dave Till	71	S96	Mala "Crakko" Krishnan			Jenn "DirtyEd" Smith
29	S82	W. Jim Jordan	72	F96	Matt "So-Krates" Walsh,	99	F05	Mark "BeatleEd" Toivanen,
30	F82	Dave Graham			Brian "Latrell" Fox			Emerald "StatsEd" Kushnier,
31	W83	Dave Leibold, Mark L. Kahnt	73	W97	Brian "Latrell" Fox			Chris "SheepNinEd" MacGregor,
32	S83	Cary Timar	74	S97	Matt "So-Krates" Walsh,			Eric "inkEd" Logan
33	F83	Tom "Watts" Haapanen,			Brian "Latrell" Fox	100	W06	Ian W. "iEd" MacKinnon,
		Glenn McFarlane	75	F97	Brian "Latrell" Fox,			Jenn "DirtyEd" Smith
34	W84	Tom "Watts" Haapanen			Chadwick "CasEd" Severn	101	S06	Chris "SheepNinEd" MacGregor,
35	S84	Tom Ivey	76	W98	Matt "So-Krates" Walsh			Emerald "StatsEd" Kushnier
36	F84	Cary Timar	77	S98	Chadwick "CasEd" Severn	102	F06	Eric "inkEd" Logan,
37	W85	Tom Ivey	78	F98	Matt "So-Krates" Walsh,			Jenn "DirtyEd" Smith
38	S85	dan schnabel			Brian "Latrell" Fox, Richard Bilson	103	W07	Emerald "StatsEd" Kushnier
39	F85	Richard Kuzell	79	W99	Matt "So-Krates" Walsh,	104	S07	Michael "perkiED" Perki,
40	W86	dan schnabel			Gregory "hologrami" Taylor,			Michaelangelo "AngelED"
41	S86	Stuart L. Hodgins			Chadwick "CasEd" Severn			Finistauri
42	F86	Paul D. Obeda	80	S99	Chadwick "CasEd" Severn,	105	F07	Peter "mossED" Simonyi
43	W87	dan schnabel			Gregory "hologrami" Taylor,	106	W08	Michael "perkiED" Perki,
44	S87	W. Jim Jordan			Matt "So-Krates" Walsh,			Michaelangelo "AngelED"
45	F87	Stuart L. Hodgins,			Richard Bilson			Finistauri
		Frank Letniowski	81	F99	Gregory "hologrami" Taylor	107	S08	Michaelangelo "AngelED"
46	W88	Tom Vandelloo			Chadwick "CasEd" Severn,			Finistauri
47	S88	Rick McTavish	82	W00	Gregory "hologrami" Taylor,	108	F08	Michael "perkiED" Perki
48	F88	Tom Vandelloo			Chadwick "CasEd" Severn,	109	W09	Joe "InsideED" Collins
			83	S00	Chadwick "CasEd" Severn	110	S09	John "ImpulsED" Baxter,
			84	F00	Gregory "hologrami" Taylor,			Rami "RamED" Finkelshtein,
					Richard Bilson			John "StaticED" Stevenson
			85	W01	Peter Lizak,	111	F09	Emily "CorruptED" Bain,
					Bradley Theodore "TaxiEd" Smith			Joe "InsideED" Collins,
			86	S01	Peter Lizak,			John "ImpulsED" Baxter
					Bradley Theodore "TaxiEd" Smith	112	W10	John "ImpulsED" Baxter,
			87	F01	Peter Lizak,			John "StaticED" Stevenson,
					Bradley Theodore "TaxiEd" Smith			Rami "RamED" Finkelshtein



- 113 S10 Will "FuzzyED" Hughes,  
Hope "GroovyED" Gross,  
Emily "CorruptED" Bain
- 114 F10 Emily "CorruptED" Bain,  
John "StaticED" Stevenson,  
John "ImpulsED" Baxter,  
Rami "RamED" Finkelshtein,  
Hope "GroovyED" Gross
- 115 W11 Hope "GroovyED" Gross,  
Will "FuzzyED" Hughes
- 116 S11 Emily "CorruptED" Bain,  
Hope "GroovyED" Gross,  
Will "ConcealED" Morrison,  
Sacha "IED" Koohgoli,  
Michelle "CowED" Conway
- 117 F11 Hope "GroovyED" Gross,  
Will "FuzzyED" Hughes,  
Sacha "IED" Koohgoli,  
Murphy "ScruffyED" Berzish,  
Michelle "CowED" Conway
- 118 W12 Will "ConcealED" Morrison,  
Sacha "IED" Koohgoli,  
Murphy "ScruffyED" Berzish,  
Michelle "CowED" Conway
- 119 S12 Will "ConcealED" Morrison,  
Murphy "ScruffyED" Berzish,  
Lenny "ObjectED" Morayniss
- 120 F12 Will "ConcealED" Morrison,  
Sacha "IED" Koohgoli,  
Lenny "ObjectED" Morayniss
- 121 W13 Julie "GingerbrED" Sturgeon,  
Sacha "IED" Koohgoli,  
Lenny "ObjectED" Morayniss,  
Murphy "ScruffyED" Berzish
- 122 S13 Julie "GingerbrED" Sturgeon,  
Lenny "ObjectED" Morayniss,  
Murphy "ScruffyED" Berzish,  
Rachel "MuffinED" Wiens
- 123 F13 Lenny "ObjectED" Morayniss,  
Murphy "ScruffyED" Berzish,  
Thomas "ConvolutED" Baxter
- 124 W14 Murphy "ScruffyED" Berzish,  
Julie "GingerbrED" Sturgeon,  
Rachel "MuffinED" Wiens
- 125 S14 Katherine "bunniED" Tu,  
Murphy "ScruffyED" Berzish,  
Rachel "MuffinED" Wiens
- 126 F14 Katherine "bunniED" Tu,  
Amy "DictatED" Li,  
Rachel "MuffinED" Wiens,  
Jose-Miguel "SketchED" Velasco,  
Elizabeth "Wibbled" Liu
- 127 W15 Katherine "bunniED" Tu,  
Julie "GingerbrED" Sturgeon,  
Jose-Miguel "SketchED" Velasco
- 128 S15 Katherine "bunniED" Tu,  
Julie "GingerbrED" Sturgeon,  
Amy "DictatED" Li,  
Elizabeth "Wibbled" Liu,  
Thomas "ConvolutED" Baxter
- 129 F15 Katherine "bunniED" Tu,  
Thomas "ConvolutED" Baxter,  
Jose-Miguel "SketchED" Velasco,  
Zishen "quizED" Qu
- 130 W16 Katherine "bunniED" Tu,  
Amy "DictatED" Li,  
Jose-Miguel "SketchED" Velasco,  
Elizabeth "Wibbled" Liu,  
George Lambrou
- 131 S16 Katherine "bunniED" Tu,  
Zishen "quizED" Qu
- 132 F16 Thomas "ConvolutED" Baxter,  
Katherine "bunniED" Tu,  
Amy "DictatED" Li,  
Shaundalee "undecidedED" Carvalho
- 133 W17 George Lambrou,  
Angela "ExtrovertED" Le,  
Heather "tbdED" Stonehouse,  
Min "itorED" Zhu
- 134 S17 Cameron "TurnipHED" Roach,  
Heather "tbdED" Stonehouse,  
Shaundalee "undecidedED" Carvalho
- 135 F17 Cameron "TurnipHED" Roach,  
Heather "tbdED" Stonehouse,  
Min "itorED" Zhu,  
Angela "ExtrovertED" Le,  
Shaundalee "undecidedED" Carvalho
- 136 W18 Angela "ExtrovertED" Le,  
George Lambrou,  
Zishen "quizED" Qu,  
Anuj "swindlED" Opal
- 137 S18 Esther "staplED" Ahn,  
Heather "tbdED" Stonehouse,  
Min "itorED" Zhu,  
Anuj "swindlED" Opal,  
Clyde "yclypED" Brown
- 138 F18 Esther "staplED" Ahn,  
Anuj "swindlED" Opal,  
Clyde "yclypED" Brown,  
Jamie "confusED" Anderson,  
Nosherwan "over-engineerED" Ahmed
- 139 W19 Esther "staplED" Ahn,  
Terry "terrifiedED" Chen,  
Min "itorED" Zhu,  
Jamie "confusED" Anderson
- 140 S19 Esther "staplED" Ahn,  
Terry "terrifiedED" Chen,  
Anuj "swindlED" Opal,  
Josh "unsophisticatED" Rampersad
- 141 F19 Terry "terrifiedED" Chen,  
Jamie "confusED" Anderson,  
Clara "clarifiedED" Xi,  
Josh "unsophisticatED" Rampersad
- 142 W20 Terry "terrifiedED" Chen,  
Jamie "confusED" Anderson,  
Anuj "swindlED" Opal,  
Min "itorED" Zhu
- 143 S20 Clara "clarifiedED" Xi,  
Jamie "confusED" Anderson,  
Kevin "god  $\not\leq$  peED" Trieu,  
Josh "unsophisticatED" Rampersad
- 144 F20 Clara "clarifiedED" Xi,  
Jamie "confusED" Anderson,  
Terry "terrifiedED" Chen,  
George Lambrou
- 145 W21 Clara "clarifiedED" Xi,  
Kevin "god  $\not\leq$  peED" Trieu,  
Naman "caffeinatED" Sood
- 146 S21 Clara "clarifiedED" Xi,  
Kevin "god  $\not\leq$  peED" Trieu,  
Terry "terrifiedED" Chen,  
Yang "bipED" Zhong
- 147 F21 Clara "clarifiedED" Xi,  
Kevin "god  $\not\leq$  peED" Trieu,  
Naman "caffeinatED" Sood,  
Yang "bipED" Zhong
- 148 W22 Clara "clarifiedED" Xi,  
Chen "enamouredED" Chai,  
Naman "caffeinatED" Sood,  
Yang "bipED" Zhong,  
Terry "terrifiedED" Chen
- 149 S22 Clara "clarifiedED" Xi,  
Chen "enamouredED" Chai,  
Kevin "god  $\not\leq$  peED" Trieu,  
Yang "bipED" Zhong,  
Terry "terrifiedED" Chen,  
Nicky "gildED" Priebe,  
Ryan "uknightED" Chow
- 150 F22 Clara "clarifiedED" Xi,  
Terry "terrifiedED" Chen,  
Nicky "gildED" Priebe,  
Danya "distractED" Matlin,  
Ryan "uknightED" Chow
- 151 W23 Clara "clarifiedED" Xi,  
Kevin "god  $\not\leq$  peED" Trieu,  
Evan "evaluatED" Girardin,  
Danya "distractED" Matlin,  
Ryan "uknightED" Chow
- 152 S23 Evan "evaluatED" Girardin,  
Danya "distractED" Matlin,  
Awab "awED" Qureshi
- 153 F23 Evan "evaluatED" Girardin,  
Danya "distractED" Matlin,  
Awab "awED" Qureshi,  
Naman "caffeinatED" Sood,  
Isabela "classifiedED" Souza
- 154 W24 Evan "evaluatED" Girardin,  
Danya "distractED" Matlin,  
Awab "awED" Qureshi,  
Naman "caffeinatED" Sood,  
Isabela "classifiedED" Souza,  
Owen "befuddledED" Gallagher
- 155 S24 Awab "awED" Qureshi,  
Isabela "classifiedED" Souza,  
Owen "befuddledED" Gallagher,  
Sara "abstractED" Nayar,  
David "derailedED" Teresi
- 156 F24 Isabela "classifiedED" Souza,  
Owen "befuddledED" Gallagher,  
Sara "abstractED" Nayar,  
David "derailedED" Teresi,  
River "revivedED" Stanley,  
Justin "waterED" Young
- 157 W25 Isabela "classifiedED" Souza,  
Sara "abstractED" Nayar,  
David "derailedED" Teresi,  
River "revivedED" Stanley,  
Justin "waterED" Young



# TODAY IS NATIONAL SOMETHING ON A STICK DAY

gridCOMMENT 157.6

HELLO gridWORDers

as finals draw near, so does the final **gridWORD** of winter 2025. actually it already did because this is the final **gridWORD**. for those who have not joined us for eight months for any reason, in the past, the final **gridWORD** would be a rerun of an old **gridWORD**, but i don't do that because you can just go and find one yourself if you really want to do that

now that we have that out of the way, today is national something on a stick day!! gonna make the theme really obvious. national something on a stick day.

last time, i asked you all what your favourite/most impressive thing that you have memorized is, and you all said:

- *Dee*: the first 20 elements of the Periodic Table, thanks to the ASAPScience song!

- *softboiledegg*: the entire script of the first despicable me movie
- *euphophony*: the stats & power ups of all the characters in wii mario super sluggers baseball
- *summerdrown*: the first 100 elements of the periodic table in eighth grade

i used to get bullied for liking minions (i was just one year late to the minion hype), but i feel like you wouldn't do that to me, softboiledegg. congratulations on being the final winner for this term!! please pick up your prize at MC 3030. as for everyone else, thank you for playing, and i hope i'll see you all again :))

good luck on finals :3 and until next term, i'm your **gridMASTER**, spaghettiinhalers, and this has been **gridWORD**

spaghettiinhalers

## ACROSS

1. Elite group
6. Cuckoo
9. Ancient burial chamber
14. Lowest deck on a ship
15. Female sheep
16. Earthy colour
17. Garlicky sauce
18. Costa del \_\_\_\_
19. Rent again
20. Toll
21. Garage job
23. \_\_\_\_ be a real shame if...
25. Customize
26. Surgery to create a hole in the skull
32. Alone
33. "Toodles!"
34. \_\_\_\_ v. Wade
37. "Now!"
38. 50 Cent piece
39. Lady's man
40. Bled
41. Ornamental shrub
44. Present time
45. Today's fruit and cooked sugar on a stick
47. \_\_\_\_ gems of Genshin Impact
49. Bar order
50. Make clear
54. Jostle
58. Mysterious characters
59. Light Armoured Vehicle, abbr.
60. Piece of Latin percussion

61. Today's marshmallow on a stick
62. Island strings
63. Today's beef on a stick
64. Mortise's partner
65. Disfigure
66. Blinds, in falconry

## DOWN

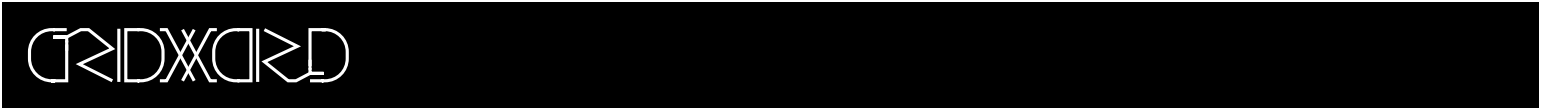
1. Good, long bath
2. Ireland
3. \_\_\_\_ vera
4. Today's candy on a stick
5. Leaked material
6. Big butte
7. Abandoning Across-1, say
8. Sandwich shop
9. Today's hot dog
10. Obsolete deliverer
11. Lug
12. 1545 council site
13. Rebel bruiser pit fighter
22. Acquire
24. Walt's company's stock
26. Ivan the Terrible, e.g.
27. Parks on a bus
28. Flair
29. Persian wheel
30. Eye-opener?
31. Sun helmet
34. Wheelchair access
35. Kind of exam

36. "If all \_\_\_\_ fails..."
39. Banished individual
41. Japanese lute
42. Poke
43. \_\_\_\_ mode
45. Chicago suburb
46. Smart \_\_\_\_
47. Feather in one's cap
48. Kind of sentence
50. Once, once upon a time
51. Some of you, in a couple weeks
52. Tonto's pet eagle
53. "... happily \_\_\_\_ after"
55. Sweetie pie
56. Horse course
57. Tangles



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

A PERPETUALLY BORED mathNEWS EDITOR



1	2	3	4	5		6	7	8		9	10	11	12	13
14						15				16				
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20						21			22					
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26	27	28				29	30	31						
32					33							34	35	36
37						38					39			
40				41	42				43		44			
			45							46				
	47	48							49					
50						51	52	53		54		55	56	57
58						59				60				
61						62				63				
64						65				66				

**Schlurpppppppppppppppppppppppppppppp!**

A LONG-NOODLE-EATING **mathNEWS** EDITOR

**A LONG-NOODLE-EATING mathNEWS EDITOR**

# lookAHEAD

SUN MAR 30

Obscure European  
Soccer Team Day

SUN APR 6

Don't Think About  
Finals Day

MON MAR 31

International Day of  
Remembering How  
Many Days March  
Has

MON APR 7

TUE APR 1

April Fool's Day

TUE APR 8

Drop with WF ends

WED APR 2

Manifest Opening of  
C&D Balcony Day

WED APR 9

Final exams begin  
derailed's ECE 459  
final

THU APR 3

FRI APR 4

Classes end  
Co-op cycle 5  
rankings due

THU APR 10

FRI APR 11

SAT APR 5

Elmira Maple Syrup  
Festival

SAT APR 12

derailed's ECE 417  
final



## LAST ISSUE'S gridSOLUTION

THE	AFAR	CLEF	
CHAR	NINE	AERIE	
URSA	OVID	NERVY	
FEN	ONE	OTT	SEE
FETID		WOE	
	DDT	SNO	FIVE
OFFS	WHEE	TBAR	
BOA	OOVOO	ITS	
OUTS	PENN	PSST	
ERSE	GEN	ORE	
	TWO	ARSON	
OFF	ETA	AZN	EVI
COINS	ROME	EVEN	
DUVET	MOOR	MERE	
REVS	YOKO	ONT	

## THIS ISSUE'S gridSOLUTION

SEALS	MAD	CISTS	
ORLOP	EWEE	OCHRE	
AIOLI	SOL	RELET	
KNELL	ALIGNMENT		
	ITD	ADAPT	
TREPHIN	ATION		
SOLO	SOLONG	ROE	
ASAP	RAP	EARL	
RAN	SPIREA	XMAS	
	CARAMEL	APPLE	
PRIMO	ALE		
ELUCIDATE	ELBOW		
RUNES	LAV	CLAVE	
SMORE	UKE	KEBAB	
TENON	MAR	SEELS	