

## “IN TWO WORDS, HOW IS YOUR SUMMER GONNA GO?”

The sun is shining, the birds are chirping, the grass around SLC is green—hello Summerloo, we missed you. I’ve lived in Waterloo my whole life, and yet the novelty of sweating my socks off at the local basketball court never seems to fade. Come readers, walk with me, as I reminiscence on my fondest summer memories.

It all started back in ye old days... third grade. No co-op grind, no PMATH 9999 super mental health destroyer, just my friends and I in a good old game of grounders. Not to toot my own horn here, but I was pretty fast, maybe even the fastest to ever do it. I was SOOOO fast, that in my flight from my formidable foe, I lost my footing when I encountered a stray log on the concrete and BAM. My skin was GONE. POOF. DUST. Like a fart in the wind, I fled the scene and reappeared in the hospital. Needless to say, the concrete had won, and I still flinch at the thought of a game of grounders. But, it’s not all bad...

TIME SKIP. It was 2016, the summer of dreams. Pokémon GO fans were colliding left right and center, and I had nothing to do but spend time with my best friend... Dave. Dave and I were about as close as you could get to a friend. I would show up to his house for weeks at a time, sleeping wherever I could find a morsel of room. We would fling around our slingshots, play mobile games, and swim in the local pool. We would swim so much, that in our never-ending need for entertainment, our games would devolve into chaos. Elbows flying through the air, feet twirling in the wind; the Looney Tunes animators were truly inspired—until we got BANNED. Yes, you heard me right. The poor teenage lifeguard damn near dragged us by the ears, and we never saw that luscious pool again.

You know what, maybe my memories aren’t all that... Please don’t be scared. I promise the Summerloo experience isn’t as perilous as it seems. Where I have failed, you may prevail. Go on readers, relish in the summer sun as I have once done, and if you ever find yourself even a teensy bit bored, come to prodNIGHT—I promise our AC is good 🐱.

sloshED  
Editor, mathNEWS



- SEASONEDSLACKER | Slacking off
- FINGERSINSOCKETS | who cares no one is being born, dying, or aging anymore. It's after the end of the world
- ANTSFILE | Heat, melt
- CIF | no no
- MRBLLUESKY | Summer Boyyyyyyyyyy
- WAFFLE | Very swimmingly
- DOLLAR STORE PERSON | co op
- LARS NOOTBAAR | Good. Outdoors!
- SUNRISE PARABELLUM | too slow :(
- STRATUSALPHA | Alpen Fury
- JUBBLE | Big Back!
- PLANET B612 | computer lab 🐘
- DICK SMITHERS | Haunting you
- AAQSR | Sources say: “ “
- LOAFED | Live, Laugh,
- ABSTRACTED | too quick :(
- BARKED | fat chud

## ARTICLE OF THE ISSUE

For some reason, I thought with fewer writers and articles in the spring, it’d be easier to pick the article of the issue. This was not the case, as our extremely talented writers locked the fuck in, and this issue is rife with gems as always.

After much deliberation, we reached consensus; congratulations to *stoned*, author of *A Mathematical Proof for a Home that does Not Exist*. This is a genuinely moving article that I encourage reading. Please come by MC 3030 to receive your prize.

abstractED  
Editor, mathNEWS



## What’s the vaginal equivalent of “phallic”?

MADIHA MANSOOR, mathNEWS EDITOR FOR SPRING 2026  
ALONG WITH ALEX LAVALLEE, SARA NAYAR, NOAH NAZARETH, SASHA NOVIKOV, AND TOM SI

# mathASKS 161.1

## FEATURING mathNEWS EDITOR BARKED

### USMAN!: WORST GAME YOU'VE EVER PLAYED AND WHY?

I'm going to answer this with the game that was worst for me personally. I'm photosensitive, not just to flashing lights, but also to jittering movement (I have the reduced animations setting on everywhere I can have it). I got myself *Hotline Miami 2* as a present, got through about a minute of it before I felt like I was going to throw up, and then went to request a refund. The music from that game is great though.

### JOHEMIST: UNLIMITED BACON AND NO GAMES OR GAMES, UNLIMITED GAMES... BUT NO GAMES?

I can't eat bacon, so this is just "no games or no games" to me. I guess I will pick no games.

### FINGERSINSOCKETS: GO-TO CLASS AND RACE FOR A ONE-SHOT?

My favorite class is wizard, because it's the first one I ever played and I got attached. In terms of race I tend to switch it up a lot. I think the last wizard I played was Tabaxi.

### IS.ALL.ON: FAVOURITE UW NON-MATH COURSE?

I had a lot of fun in FINE 242 (Clay Studies). Sculpture is not really a medium I get much of a chance to work with, because my apartment is quite small. The instructor was also great. I'll also use this question as an opportunity to evangelize about taking arts courses as a Math major. I find that my enjoyment of computer science is really deepened by having an appreciation for the artistic elements of code, as well as what it can do graphically. I'm not a fan of AI-generated art—it's quite ugly and boring—but I like coding nice-looking graphics. Patterns and things of that sort. I'm taking a graphic design class this term to hopefully get better at this. (If you're in FINE 228, hi!)

### CRIMSON: WHAT'S YOUR FAVORITE BOARD GAME AND FAVORITE VIDEO GAME?

My favorite board game is *Blood on the Clocktower*. I was actually the president of the Deception Board Games Club at one point, so most of my favorite board games are deception games. I don't know that I can say I have a favorite video game. I would say it is *Disco Elysium*, but it is quite challenging in a way that requires a specific mindset for me to want to play it. If I just want to get stoned and do some bullshit I play *Stardew Valley*. If I want to lock in and do some bullshit I play *Devil May Cry 5*.

### JUBBLE: WHAT WAS THE MOST VILE PIZZA YOU'VE TRIED FROM mathNEWS?

I've had an anchovy and olive slice before. I despise both olives and anchovies. It's not really a challenge to try a vile pizza here, though, even if you do like olives and anchovies.

With peace and love, some of the stuff you guys cook up is ridiculous.

### LARS NOOTBAAR: WILL YOU EVER PRINT mathNEWS FROM NEWSPRINT?

During distribution we actually find the occasional **mathNEWS** issue that has been torn to shreds. I don't know who is doing it or why, but I am concerned that printing on newsprint would get rid of any remaining structural integrity that would allow a **mathNEWS** issue to resist such treatment. (Newsprint also ages incredibly badly.)

### BEESKNEES: FAVOURITE BUG?

Weevil!!!!



### SMALLMOUTHBASSHATER: FAVOURITE FISH?

Depends if you mean pet fish or wild. In terms of wild fish, I am fond of the rainbow trout. My favorite pet fish are Corydoras because they look just so silly. They are like the mouthbreathers of fish, and they've got whiskers. I used to own a school of them that cohabitated nicely with a betta.

### ABS(JESTER): DO YOU FW ROOT?

Absolutely. I am not good at it at all though. I enjoy the terrorist crow faction. If you know where I can find a group of people who play it on campus, let me know.

### APHF: ARE YOU MORE OF A TREE BARK OR DOG BARK

Dog bark. Technically, I am not barkED. The actual, real barkED takes the form of a small golden retriever plushie, but since it obviously cannot speak, I am its mouthpiece. Between you and me it's kind of a freeloader, but my soul is bound to it in perpetual contract, so if I ever stop doing **mathNEWS** duties in its place, I will kinda die.

## MRBLUESKY: WHEN WILL mathNEWS DECLARE WAR ON THE IRON WARRIOR AND IMPRINT

Okay listen, this is top secret and I'm really not supposed to talk about it. We have a lot riding on this mission so I have to be really careful who I tell details to. Don't share this with anyone else, ok? The day of attack will be Febr

## ONLY A SIMPLE MEMORY WILL REMAIN

Recently, I played the Sokoban-style puzzle video game *Void Stranger*. I've probably seen at least four different end-credits cutscenes, and I'm likely still only around a third of the way through the game. While there are a lot of other things in the game I could talk about, like how I needed to make a sixteen-page-long document containing all of my annotated screenshots and notes along with a spreadsheet to keep track of everything, or how I've gotten the only achievement in the game countless times over, or the not-very-secret alphabet, or the giant snake breasts, I'm mostly intrigued by the game's seemingly endlessly growing depths.

While many games can boast an elaborate story, or a vast array of intertwined mechanics, or unfathomably deep lore, those that don't advertise these points and instead hide them deep, deep within have a special place in my heart. Radical mechanic shifts, secret interactions, hidden but omnipresent patterns and messages. I love being forced to reevaluate my entire perspective on the game many times over. I love having everything I've gone through up to that point upheaved and needing to scramble together a new framework of understanding. I can never go back to the first playthrough, without the forbidden knowledge, without all the shortcuts, alternate solutions, hidden content I've learned, and or even just the new context, the new awareness I've irrevocably gained. It really feels like the game has transformed me into a new person (hyperbole (but not really (don't ask how I know))).

However, there is also the amazing feeling of expecting to finally reach the end, or even just assuming the level of scope of the game, then stepping out of that cave, discovering that everything up to this point is merely a small fraction. I mentioned earlier the four different ending credits in *Void Stranger*, but I should also mention the (at least) four different title-drops/title screens, each preluding some new bizarre layer of the game, or even just the reconstruction of how the entire game is supposed to be played by the time I've gotten to the end once. You might have played similar games that hide themselves like this, none of which I will mention so as not to risk spoiling them, but you probably understand the idea. The twist of "actually, there's way, way more" is really cool, when done well.

Anyways, go play *Void Stranger*.



CIF

## WHAT SHOULD BE THE WATERLOO CITY BIRD ???

we DO NOT currently have a city bird but they are deciding the waterloo city bird SOON... what do we think about these options??

### GREAT BLUE HERON

^^ my pick because they are really cool, everyone loves seeing them, and they're less common than some of the other options so it inspires interest in the bird... also they are still pretty common you can see them on campus a lot! ALSO we have that mosaic of the gbhe at the clay and glass museum in uptown!

### CANADA GOOSE

i think that we should not pick this one because uw already makes canada goose merchandise, and if they make waterloo city bird shirts, i want an underrepresented bird on the shirt...

### BLUE JAY

i don't like this one because it has too much overlap with the toronto blue jays :(

### AMERICAN ROBIN

this is not the city bird of any ontario city yet i think! They are cute and underrated but a little too common i think...

### DARK-EYED JUNCO

this is already the city bird of kitchener!!!!

the reason that waterloo city bird is on the table is because the bird friendly waterloo organization is trying to make waterloo a certified bird-friendly city! and i think that is really cool!

iLikeBirds413

## ANYONE ELSE FEEL LIKE A BACKGROUND CHARACTER IN KIM'S CONVENIENCE WHEN IN TORONTO?

Just me?

OK.



papayabird

# HOW I ACCIDENTALLY WROTE ANTI-CLIMATE PROPAGANDA

## A RETROSPECTIVE ON MY WORST ARTICLE

This is going to be very ironic.

A number of years back (please don't go looking) I wrote an article titled *Perspective* in which I essentially made the case that the span of human history is so long that there is hope for the future of the climate. It was a bad article, plain and simple. So bad, in fact, that it got a response article rightfully lambasting it. My thanks goes out to Lars Nootbaar for partially cleaning up my mess. This is not a defense of the article, but I do want to describe how I got there and how it still matters to me.

### THINGS FEEL LIKE THEY'RE GETTING WORSE.

I know it's not just me, everyone is feeling this way right now, but oh boy do things feel like they're getting worse. Not only that, it feels like with every piece of good news I hear about the environment, I learn about 3 other problems, both ongoing and future, that negate it. The climate-change situation specifically feels like it's going extra bad.

From this I end up in a somewhat fatalistic mindset; "doomerism," if you will. This is somewhat to blame for my writing the article and also my reaction to the response. Because you know what I thought upon reading the response? "Why did you have to take this away from me?" I was so stuck in apocalyptic thinking that saying "we will have issues over a 1000 year time scale" impacted me more than anything else said. I had to reach to the far far future because I had already given up on the near future and I didn't even take away the central message of the article, which is that we should focus on the here and now since it's so much more important. That's how stuck I was.

Well, I say "was."

But really, I am still stuck in climate doomerism, especially recently. Any time I try to extrapolate what will happen, the situation is still terrible. It always ends the same. We never did enough and now we're screwed. Regardless of the fact that the amount of human suffering in different outcomes is drastically different.

### WHY I'M WRITING THIS ARTICLE.

I'd like to say that Lars Nootbaar's wonderful response got me to think about what I said and see the light. I'd like to say that I didn't ignore the article for as long as possible and try to disregard it in my head even after that. I'd like to say these, but I can't. And that's honestly shameful.

Instead what happened was I saw the recent video by Hank Green in which he talks about misleading climate graphs, realised that I had accidentally made a similar argument to one used by anti-climate people, and was mildly horrified.

It doesn't matter that I wrote the article from a completely different place. The negative impact of such rhetoric compounds with exposure and I have contributed to it. Here I want to fix that.

### DESPAIR IS NOT WISDOM.

Between when I had the idea for this article and when writing it, Hank Green has posted yet another video entitled "Despair is not wisdom." I will say that I was already planning on including the following sections. However, I will be stealing the title because it's simply too good.

I know that despair is not helpful. When there is despair there is no action. When there is no action things cannot get better. For anything to get better we must have hope.

... But I'm finding it very hard to have a lot of hope right now. However, this time, instead of floundering into a horrendous take out of desperation, I would like to be a bit more productive and hopefully be of some use to others who are in a similar situation.

### HELP.

I'd like to ask for the help of **mathNEWS**. Dear reader, would it be possible for you to give 1 climate problem you think deserves more attention and 1 cause for climate hope in an article? Ideally with an amount of detail, if you can. Hopefully with enough responses we can all get a better sense of the problem without also falling into doom. As the Green brothers like to say, progress is neither inevitable nor impossible.

I hope to see some responses soon. That's some hope I can have right now. Have a lovely start of the term.

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## NEW ACTIVITIES THAT I TRIED IN 2026

1. Host events for Socratica
2. Play drums
3. Learn composing Vocaloid music
4. Learn how shamisen works
5. Grow a garden
6. Beg people for money in a graceful way
7. Do poster run on streets
8. Hip-hop dancing
9. Read manga (sry I was an anime fan before)

# MODERN DEMOCRACY IS BROKEN

## AND NO, IT'S NOT FPTP

If you have been paying attention to electoral politics, about primary elections, or just genuinely wondering why politics feels out-of-touch, this is the article for you.

So supposedly, we live in a democracy. We get to vote for our leaders. Fair enough. But how many layers of indirection lie between “voting for whoever you decided to vote for” versus “voting for how you want the world to be run” versus “voting so that you feel represented?”

The implicit promise of a democracy is that every vote matters. Everyone matters. The politics of the day and decisions made are the will of the people. This point is particularly poignant. Because modern day democracy rests on the origin of “no taxation without representation.” But are you really represented?

Ask yourself a couple of questions.

First, do you know who represents you at the federal level? At the provincial level? At the municipal level? Do you know who the alternatives are? How many of these candidates do you know? I suspect that most people can answer no more than two of those questions. A good chunk of the population in Waterloo probably can't even answer even one question. Considering even the momentous 2025 federal election got 69.5% turnout, that means 30.5% of the people of Canada do not even care enough to feel like “representation matters.” Even worse if we look at the 2025 Ontario election. Only 45.4% of the voting population voted there. So 54.6% of Ontarians think representation at Queen's Park does not matter. And only 27% voted in the 2022 Waterloo municipal election. And yet people over in Ottawa, in Toronto, and at City Hall all make decisions that affect your daily life. So much for “will of the people.”

Second, let's say you did vote. Good. You have done your civic duty. But in the 2025 Federal election in Waterloo, Liberal MP Bardish Chagger was re-elected with 59% of the vote. That's considerable. But what if you didn't vote for Liberals? Does your vote matter? Are you represented if you did not vote Liberal? From an individual perspective, probably not. You have likely decided that MP Chagger's vision does not align well with yours. And her vision prevailed over yours. So effectively, your vote was an objection that was overruled. Like some 40% of the voters in that election.

How does that tie into the representation issue? Well, consider this. MPs, MPPs, and councillors. They are supposed to represent the interests of the constituents. One can argue that, well, maybe they want to always get more votes and therefore be on the lookout for everyone's interests.

A very idealistic argument. A very naive argument. Because it does not work this way.

A politician in our system, or indeed most of any democratic system, requires more than 50% of the votes in the general election to be elected. Suppose that there is some mechanism that magically locks down 51% of the votes. Let's say, a politician comes along and says something along the lines of “we will make 49% of the voting population pay monthly transfer payments to the 51% of my voters,” to a bunch of self-interested voters. (Real world is messier, but this is a thought experiment, so magic is allowed.) Nowhere in the legal documents have we ever outlined that this is illegal, nor does it ever enforce something like “you have to represent all 100% of the district.” So that politician goes on to win every election. If you are one of the 49%, are you represented? And most importantly of all, can you do anything about it? While this scenario is not totally realistic, you just have to look south to see that politicians win without having to reach out to all of their voting population. In fact, most politicians only need to appeal to “their base” and “marginal/swing voters.” So tough luck if you didn't vote for them.

Third, who picked Bardish Chagger to run in the Liberal Party? How many people voted there? Ask yourself this question. Why Chagger? Why not you?

And lastly, if we made it this far, ask yourself. You probably know who Bardish Chagger is (I don't, actually). Does she know who you are? Have you ever talked to her? Has she listened to your complaints before? Does she know you as a person? Who are you to her? It is said that a human could realistically be meaningful acquaintances with at most 150 people. Chagger carried about 37,000 votes in 2025. How many of these people did she “represent?”

You may point to First Past the Post as the culprit. You'd be partially correct. But First Past the Post does not address all the issues earlier. It doesn't save you if you are in the 49% at the last runoff/transfer of votes (Single-Transferable). It doesn't save you from the Liberal Party primaries, where you have to be a party member to vote to pick the candidate. It doesn't make MP Chagger any more willing to learn your name.

So, do you feel represented in this democracy yet? Are you a part of “the people?” Who (and how many people) really picks the “representative of the will of the people?” And now it should not be a surprise why you think Politics isn't working for you. Because you're not part of it. You're not represented. Modern democracy is broken this way.

Now this article is by no means anti-democratic. If anything, the use of the term “modern” here is precise. If you were a citizen of a small town in New England in the 1700s, electing a sheriff, or if you were a citizen of Athens, you'd likely feel more represented. Not because they won your vote necessarily, but likely because the candidates had to make an effort to try to win your vote. Because you knew them, and they knew you.

You are not a number; you are not a vote; you are a person, a constituent. And that's what a democracy should be.

RobbotC

P.S.: will continue in future posts.

## NYC! LA! ...WATERLOO?

Picture this: It's 1969 and you're reading a poster advertising Led Zeppelin's upcoming North American tour. Your eyes drift down to the list of show dates: New York, Detroit, Chicago. All as expected. You read on: Boston, Toronto, ... Kitchener, Ontario??

You didn't read that wrong. Led Zeppelin did indeed visit our very own Kitchener-Waterloo. And they weren't alone. Joni Mitchell, Elton John, Chuck Berry, Neil Young, Chicago, The Clash, Leonard Cohen, these acts have all performed here as well. In the 60s and 70s, Waterloo's live music scene was pretty amazing actually. How do I know all this? Because of the 2022 documentary *Rock This Town*.

The film exclusively (to my knowledge) plays at the Princess Cinema, and when I watched it, I was probably the youngest person in the room by 40 years. That said, it's definitely not some niche nostalgia-porn. It's a really interesting look at how our school and city were back then. Nowadays, Waterloo has a reputation as a boring city, so it's kind of mind-blowing to think of it as a place where things did happen.

It all started when future-concert-promoter Joe Recchia arrived at the University of Waterloo for his first year of engineering, looked around, realized that there was nothing to do in Waterloo, and decided to change that. He began by collecting 25 cents (this was the 60s after all) per classmate in order to book small bands for the school dances he planned. His operation snowballed from there and soon booking agents were seeing Waterloo as a real option.

After the local success of *Rock This Town*, a sequel was made and released earlier this year, *Rock This Town: A New Wave*. I've been away on co-op and haven't had a chance to see it yet, but luckily it's playing at the Princess Cinema this Sunday May 24. I'll be there, and I think you should too.

Earlier in this article I said that this movie made me think of Waterloo as a place where things did happen. That was a lie. *Rock This Town* made me think of Waterloo as a place where things **can** happen. If you do indeed take my advice and go see the movie, then I hope your thoughts upon exiting the theatre aren't "Man, it sucks that that's gone," but instead, "Man, how can we do that again?" This article has a thesis, and it's this: hating on your environment is broke, but taking steps to improve it is very *very* woke.

trolleyproblem22

## SEMI-ANONYMITY

One of the things I like a lot about **mathNEWS** is the semi-anonymity of it all. With a pseudonym, writers can maintain some separation between themselves and their work, giving them the opportunity to write whatever they want<sup>1</sup> without fear of unwanted eyes<sup>2</sup> being able to link their articles back to them. But this anonymity doesn't have to be perfect: by reading people's articles, attending **prodNIGHTs**, and talking to writers, you can peel back the curtain and connect most pseudonyms (save for the most secretive of writers) to a face and name. Making that connection when meeting another writer feels kind of like discovering a superhero's secret identity, and being recognized by a fellow writer also doesn't feel half bad.

Unfortunately, there's a small hole in my semi-anonymity which has been bothering me as of late. A few issues back, I wrote an article in which I included a Pastebin link. That link leads to some text containing a link to a static webpage that I hosted on my university-provided Linux server. From that link, it is *very* easy to figure out my identity, and that link is discoverable by anyone with an internet connection. While I am not particularly paranoid about my identity being discovered, I would still prefer to have some privacy, for the sake of anything I write in the future.

Thankfully, this hole is pretty easy to patch up (otherwise, I wouldn't be drawing attention to it). All I have to do is host that webpage somewhere else that isn't associated with my real name, and replace the link on Pastebin. Since Pastebin doesn't save edit history, I'll be able to rest easy from there on (unless someone archived the contents of the Pastebin link, which seems highly unlikely. Editors reading this article before it gets released, don't get any funny ideas).

Unfortunately, I am also kind of bad at getting things done, so I'm submitting this short article to light a fire under my ass to get the above out of the way before the Friday when this issue releases. To find out whether or not I succeeded, check out my article from 159.6, whose content is hopefully sufficiently anonymous by now.

the government's only spy

1. e.g. articles about piss, shit, and cum
2. e.g. your parents and professors

## mathNEWS AT UOFT

Found a pile of **mathNEWS** March 27<sup>th</sup> issues in Bahen atrium. Thank you to whoever brought these, providing us with erudite thoughts to armour ourselves before the finals! Consider placing additional copies on the 6<sup>th</sup> floor (math department) and in room 217 of McLennan Physical Laboratories (where all the cool math kids hang out).

Daenys

# THE SUNLIT MAN

The sun always moves.

*The Sunlit Man* is a book released by Brandon Sanderson. It follows a magically-invested individual who is chased between planets. In *The Sunlit Man*, he is trapped on a planet whose sunlight is made of supercharged plasma, where everyone living thereupon must live atop high-speed hovercraft, endlessly fleeing from the ever-encroaching dawn.

I read it recently on what was mathematically the longest day of my life—a day containing two westward flights, one of which crossing the international date line into the next day. I experienced something near to twenty-four hours of sunlight, reading about a man flying from the sun while my plane did the very same thing.

The sun, of course, is a character device.

Gubeikou. A small town northeast of Beijing, the New Hamburg of Hebei. A launchpad for hikers of The Wall. I have dinner the night before with travelers from across Europe, I learn expletives from four different languages. The next morning, five of us spend eight hours taking on one of the most ridiculous hikes of our lives. The Wall is not flat. The German exchange student is our translator. The Frenchman and Englishman drink Tsingtao at a watchtower. The Belgian mechanic-turned-shepherd pushes us to the finish line.

The sun moves.

Beijing. I return with the German. The others burn in the sun. I construct a mental map of the metro rings. I roam the city's endless hutongs. I walk Tiananmen Square with an English tour where 50% of the attendees are Canadian. Among them is a UofT master's student; she's planning to solo trip to France. I tell her everything I've learned from the hostel in Gubeikou.

The sun moves.

Xi'an. I'm taking a bus with two Montréalais. Sunlight has consumed the UofT student; sunlight has consumed Beijing. We've escaped the commercial complex at the end of the Terracotta Army museum, a complex they describe in terms of our shared context, our shared home: "worse than Niagara Falls." We wander the Muslim quarter together, our maple phalanx fights to survive a torrent of e-scooter mating calls, crowds like warring amoeba, and rainbows of neon light.

The sun moves.

I am in Xining. The Montréalais are not. Xining is not the international attraction that Xi'an was. Everywhere I go, I am an oddity. Children want to take photos, they want to talk with the pale, long-haired, bug-eyed giant. I sit to eat a kebab; in moments, thirteen people crowd around the kebab stand. Three of them livestream me.

The sun moves.

Zhangye. Xining is dust. A Marseillaise and I explore the platforms of the Danxia: mountain slopes like veins of blood. We share spiced potatoes under hazy stars. We return to our hostel with a local Chinese guitarist, a place where every wall hides under sharpied messages from the light-consumed past. In the deepening night, the guitarist plays dozens of Chinese folk songs, then Radiohead's *Creep*.

The sun moves.

Jiayuguan. The old handwriting leaves nuclear shadows; there is nothing handwritten in Jiayuguan. I accidentally bump into the Marseillaise at the Jiayuguan fortress. She leaves the city almost immediately after; I am cast to her sun. There's nothing at all in Jiayuguan; naught but three empty amusement parks, a Disneyworld reconstruction of unreachable history, and anticipation for the incoming dawn.

The sun moves.

Dunhuang. Camels, sand dunes, a pagoda hiding a four-storey Buddha almost a thousand years old. A hostel beside a camel stable, whose hallways share its smell. A Columbian-Canadian Londoner who quit her job, and lost her passport. A Frenchman ready for horse archery in Kazakhstan. A Chongqing native afraid for my spice tolerance.

A former journalist on a moonlit rooftop. A master's student. Eyes of midnight. A girl I'd fall for were she anywhere else. A girl I fell for anyway.

But the sun.

That damned sun.

It moves.

What do you do with the knowledge you've built of the places behind you? What do you do with the stories of the people you'll never see again?

Each time I flee the sun's plasmatic blast, so much is left behind. Maps. Knowledge.

People.

You can try to stay in touch with some, but with everyone? It's impossible. Someone will fall into your sun. Most, maybe all will. All that remains is what you carry with you.

We are the sum of those we know. I'll keep as many as I am able. But the others?

I take their breath as mine, and run.

What more can you do?

The sun moves.

zellion

# Help! Help! Help!

AN ACROPHOBIC blackBOX

## MOVIE REVIEW: PROJECT HAIL MARY

(Spoilers ahead, of course. Skip to the last paragraph to see a spoiler-free review.)

When I first heard there was a movie being made based on Project Hail Mary (the book), my initial reaction was purely wondering how they would even make it work as a movie. The first third of the story is often just Grace by himself and even the rest of the space scenes seemed really hard to film and get across in a way that was faithful to the book while still being engaging. So I was really curious to see how it would be pulled off.

As you likely have heard, the movie did not disappoint. I think overall it was adapted really well, even with some of the visual differences like the design of the Hail Mary. The biggest pull of the book for me was how every problem that comes up was solved by the interaction of Grace and Rocky's different personalities in a way that felt really satisfying, and the movie captured that perfectly in my opinion. Even outside of just the problem-solving aspects, their interactions helped make each other feel way more real and have more characterization.

Another thing I think the movie did really well is the audio. For one, the soundtrack was perfectly made to pull you forward, especially the climactic fishing scene where the music perfectly expressed the feeling of determination. However, for me what really stood out was the scene afterward when Grace gets knocked out and the audio almost completely cuts out. In the theatre you could almost physically feel the tension at that point especially given the contrast from everything before, and even more combined with the change in visuals to show what Rocky was "seeing." Even though I had read the book beforehand and knew everything that was going to happen, it was still really powerful!

That being said, there were a few things I was a little disappointed with. The initial scenes where Grace is trying to piece together what happened were really interesting in the book and it's unfortunate that they had to cut out the pendulum experiment and reveal that he was in space so quickly, but it at least makes sense that they did it to make sure the movie wasn't too long. Speaking of reveals, I also wish that Rocky wasn't shown in the trailers before the movie even premiered, because I liked how the first contact moment was really tense in the book and I thought it was really compelling that way, whereas it was portrayed much more lightheartedly in the movie. I think it's fair that they wanted it to be more focused on the friendly platonic relationship between Grace and Rocky but it did significantly change the tone of the book.

Another thing that was changed for the worse in my opinion is Stratt's characterization. I think one of the most interesting

parts of the book is how it builds up Stratt to seem like an unblockable force where she has infinite determination to get her way, and how this foreshadows an eventual conflict between Stratt and Grace because their personalities are so different. The movie cuts out a lot of the scenes that built Stratt up in this way, and in the scenes where she is included, she's portrayed a little softer, and it makes the final confrontation much less impactful. I do think that final moment where Grace is pinned to the ground and looking up to the sky has the right feeling of desperation and betrayal, though. I just wish that was kept up for more of that scene because Grace's reaction to those memories on the Hail Mary would have hit harder.

I of course spent a long time browsing Twitter after I watched the movie to see what people were saying about it. A comparison that surprised me was that a lot of people were comparing it to Interstellar. I personally like Interstellar more as a movie but my surprise at the comparison isn't really about the overall quality, but more that the themes are very different. Interstellar is based in space and some realistic science, but it's primarily a movie about the relationship between Cooper and Murph. The effects of the black hole, time dilation, and so on are primarily used as elements that drive developments in their relationship. As well, the last scene where Cooper communicates back to Murph requires significant suspension of disbelief. On the other hand, while the xenobiology in PHM is completely fictional, many of the ideas are rooted in realistic consequences of those actions, and those consequences are integral to the plot because of how much it centres around problem-solving. I found this makes the plot of PHM feel way more "real." Because of that, I wouldn't say at all that if you enjoyed one movie that you would enjoy the other even though I do believe they are both very good.

In conclusion I'm giving Project Hail Mary a 9/10 for perfectly capturing the spirit of collaborative problem-solving and for the standout audio design. I docked a point because there were some characterization decisions I believe didn't work so well, but that's mostly just nitpicking. If you liked The Martian, you'll probably like PHM just as much, if not more. I recommend that if you haven't read the book and especially if you haven't seen trailers, you should watch it blind because not knowing things will make the problem-solving feel more interesting, but even if you've been spoiled on the movie you will still probably have a really good time.



hyperlynx



# TEAM USA, THE WBC, AND A LESSON IN HUMILITY, CULTURE, AND AMERICAN PATRIOTISM

On March 17<sup>th</sup>, 2026, we saw the final of the 2026 World Baseball Classic. Team Venezuela won their first ever WBC title, beating Team USA 3–2. The game, and the tournament as a whole, gave us a look into international baseball never seen before while being a showcase of global culture. Team USA brought out one of the best teams in the history of the WBC. Their attitude however, confirmed by the result of the final, gave us what we saw out of them the whole tournament: that despite the firepower, Team USA never deserved to win the WBC.

The World Baseball Classic is the premier international baseball competition, and gives us an opportunity to see best-on-best baseball. For most countries participating, the WBC was looked upon as the most important competition available. Several players, like Dominican outfielder Julio Rodriguez, expressed that winning the WBC for their country would be more important than winning the World Series. Closing pitcher Daniel Valencia had tears in his eyes as he struck out the final batter to secure the win for Team Venezuela. Entire nations watched as they played. Stadiums sold out for exhibition matches. Fans partied hard in the streets. This culture exists for baseball; however, it's not there for the US.

For most of the WBC's existence, American players and fans viewed it as some lame preseason sideshow that meant nothing and did nothing except injure star players. Even after the 2023 WBC, where American interest in the competition swelled, we still see an arrogance and indifference from American players, even those who played in the competition. Outfielder and first baseman Bryce Harper commented that he felt playing baseball at the Olympics was more prestigious than the WBC. Starting pitcher and 2025 AL Cy Young winner Tarik Skubal, who was only slated to have a single limited start against Great Britain in pool play, stated that he thought that the WBC would have an, "All-star game type of vibe," and despite contemplating staying for more after his start, ultimately chose not to continue playing.

Similar things happened with the management of the teams as well. While most teams had managers with significant tenure with the team or were important figures for national baseball, Team USA handed the reigns to Mark DeRosa, who had no managerial experience outside of the WBC, and is a studio analyst for MLB Network.

His carelessness showed when, during a pregame interview before the last game of pool play, he said that Team USA's "ticket is punched to the quarter-finals," when it wasn't, then trotted out a B team against a weak Team Italy, promptly got trounced 8–6, and left their destiny for the quarter-finals in the hands of Italy and Mexico. Team USA was one of the best in the history of the WBC, and yet mismanagement put them nearly at risk of not making it out of pool play.

We saw this in the finals as well. Following the semi-final win against Italy, Venezuelan manager Omar López was phoned by 3 different MLB teams warning him not to use the relievers he put in for the semis in the finals. López ignored the calls, used them in the finals, and deservedly won. DeRosa was told by the San Diego Padres not to use his best reliever, Mason Miller, in non-save situations where Team USA wasn't winning. DeRosa upheld the request, threw Garrett Whitlock on the mound in the 9<sup>th</sup> inning of a then-tied game, promptly blew the game, and lost. The loss is entirely on the hands of DeRosa not recognizing the importance of this international game and choosing club over country. If DeRosa made the obvious decision, who knows what would've happened.

The cultural approach to the competition was also a major loss on Team USA. The way I could put their clubhouse culture is entitled. They played as if they had nothing to prove. That the WBC title was theirs and the competition was all but a formality. Whilst having not been the best baseball nation since 2018, the team walked in with an unearned arrogance towards the competition. While other teams partied on the field, and fans chanted and celebrated, Team USA felt... lethargic. Playing like those "act like you've been here before" old-heads. As Latin American nations pimped the fuck out on home runs, the US barely celebrated, and gave maybe a salute to the dugout when they did. Maybe the US would've won.

The approach that the US had feels indicative of the way the military and national pride ingrains itself into the image of the US on the world stage, especially after Trump's reascent into power. On the global stage, the US has pushed an image of being a global military superpower, and that bleeds into international competition. With the 51<sup>st</sup> state comments and military attacks in Venezuela and elsewhere across the globe, the US has put the idea that international competition is directly tied to international relations into the heads of their athletes. We saw this in the attitude taken by the US men's hockey team at the Olympics and we see it here, shown by how they wore game-used Team USA hockey jerseys into the final. This is additionally heightened by the fact that DeRosa brought Robert J O'Neill, the man who claims to have killed Osama bin Laden, to give a pregame talk before facing Canada in the quarter-finals. Was there ever a point in bringing him there? No. Did he bring anything insightful or important to the team in that talk? Also no.

In the broad strokes, the rest of the teams in the WBC played and partied in celebration of the game, their nations' ties to it, and each other. Team USA didn't. They played entitled, fucked around, and found out. Baseball is not America's Pastime anymore. It hasn't been for decades. And if they can't change their cultural approach to that of celebration, passion, and intention for the game and its players, it will never be theirs again.

# HOMOGYN RECORDS

## VIRALITY, FORBIDDEN CLASSES, & WHAT COMES NEXT

[homogyn.com](http://homogyn.com)

The tech oligarchs have begun to roll out the new wave of compulsory entertainment pastimes, and with it the appropriate onslaught of marketing hell.

As these digital stages are filled and new idols are appointed, what happens when the pariah steps forth into full view of the public? What programming might the masses have to display of themselves?

Sixty Seven. Hawk Tuah. Clavicular brutal frame mog. What the fuck are we talking about? Language is doing what it does best, adapting to ever more confusing images and labelling them as broader phenomena.

All of these memes exist as extant events, islands of externality in collective subconscious. Specifically, they seem to be a consequence of collective mass burn out contrasting against wide-scale availability of low effort, free, authentic, viral, engaging, precious and ever abundant Content. This has created a superficial space that dominates modern marketing. Nobody asked for this either; the technology for these spaces arose purely from trend speculation of corporate oligarchs, blindly following the money trail. These high traffic stages are elevating new people to stardom from nothing faster than anything else.

I have been trying my luck at the short form algorithm as an experiment in disrupting the local underground music scene. Both have seen, from my perspective, some parallel use; queer community struggling to form in whatever barely legal and available cheap open stages. Using virality and word of mouth and whatever it takes to get attention.

It appears, however, trans women are not welcome in these spaces. Only 12 hours after I got my ad posted on Meta, I had received my first transphobic hate comment. Experientially speaking, there are people not welcome in these spaces.

Issues like these are ever intersectional. If my transness is despised so by the colonial normative audience, how do they feel about people of colour? What are the consequences for stepping out of normative behavior? These questions scare me as an activist and should stir some feeling of revolutionary responsibility if you are or at all care about justice for women and marginalized peoples.

The image of the monolithic, staunch, and austere fascist old guard has faded away. The true face has become the public one; one of technocracy and dominance. One important shift that is developing is that from physical capital to social capital. Social capital is the value of human connection that is uniquely cultivated between two human labourers. This form of capital is not defined by quantity alone but by intellectual quality. In the modern age, your social network is a lost open secret, it is the truth of your life itself; from a security

standpoint your social network is as unique as your fingerprint itself.

An old wives' tale warns; never give your middle names to a witch.

So, what is next? Marx, Lenin, Mao, and other historic figures have a good roadmap to that question at most points in our current economic conditions. In a literal sense, whatever comes next on a global entertainment scale is dictated by you. Your authenticity and humanity and Chi are unique and unextractable. Beware those who will seek to exploit it, weaponize and own it, share it.

*Thousands of candles can be lighted from a single candle, and the life of the single candle will not be shortened. Happiness never decreases by being shared.*

THE TEACHING OF BUDDHA

If you want to play gigs in town, record music, or release an album, give me a ring. [iristapley@proton.me](mailto:iristapley@proton.me)

Chief Excreting Orifice

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UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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# ADDING MODULES TO C: AN OVERVIEW

First off: what is a module? Unfortunately, the term is as abused as the term “polymorphism” in programming languages, so you’ll see many conflicting definitions out there. My own definition is that a module works as inter-file scope for symbols.

*This is an oversimplification, since modules don’t have to line up with files. But being able to share symbol references across files is, in my opinion, the defining feature of a module system. Without it, a module system is pretty useless in a practical sense.*

So if I have `int foo() { return 5; }` written in some file, and I want to use that function in another file, the module system is responsible for linking to that function.

There is usually another functionality for modules, which is to avoid name-clashing. So if I have `int foo() { return 10; }` written in another file and the two are never imported into the same scope, we don’t want the system to break.

Moving on to the main point: the C family of languages lacks modules. Or rather, it has this weird ad-hoc version of modules where you write declarations and header files to manually add the links that a module system should be doing for you. The problem is that C is very old, so it carries forward many design decisions that were made back when computer memory was scarce. For example, the C compiler only parses one translation unit (.c file after preprocessing), and symbols must be defined before their first use.

Now, we can make updates to the language and compiler, but how should we go about it? There are some things to consider:

The first is that C follows the systems programming paradigm, which makes it very particular about how things execute. Notably, you have to handle unboxed types, which means the importer needs to know the size and alignment of the type that is imported. Say you import `struct S { struct SS a; };`. Then the compiler also needs to know `struct SS { int a, b; };`. Unlike languages like Java or Python, you can’t assume objects are accessed behind pointers. You may have to expose a lot of information to the compiler.

The second is that people don’t really code in C anymore. So if your module system is too difficult to migrate to, no one is going to use it. There exist many implementations of C modules, both in academic papers and open source. C++20 notably introduced modules into the standard. And yet, none of those C module implementations really caught on, while C++20 modules is taking a really long time to catch on.

I argue the problem is that these module systems do not support cyclic imports. To explain what I mean, consider this example:

```
// Node.h
struct Edge;
struct Node { struct Edge **edges; };
```

```
// Edge.h
struct Node;
struct Edge { struct Node *nodes[2]; };
```

Both `Node` and `Edge` reference each other. If they exist in separate modules, the module system would need to support circular imports. Out of all C module implementations I have looked at, none of them allow this. As such, this common pattern needs to be manually resolved when attempting to migrate to using modules. In practice, this is rarely done, leaving most C code in a perpetually dilapidated state.

To be clear, there are good reasons to enforce acyclic imports. Each module, once compiled, is a self-standing library. It avoids Static Initialization Order Fiasco, because you have to import a module in order to use its symbols. Imports can be heavily optimized, because the module interface is only generated after fully compiling that module. And you may be able to catch cases where you call the wrong `int foo() { return 5; }`. This is why many languages have two tiers of modules, one cyclic and one acyclic. For example, Rust has crates (acyclic) and modules (cyclic).

Taking this all together, we can summarize our desires in a principle: **.c/.h files have an equivalent modular representation**. In other words, every *reasonably written* .c/.h file pair should be representable as a module file, and every module file should be representable with .c and .h files. Not only would this make the module system familiar to C developers, it also opens the possibility of automating the migration process, which would greatly accelerate adoption.

So what does my proposal look like? My module system runs after the preprocessor, and before the compiler. This allows you to do any preprocessor shenanigans that you’ve been doing in the .c/.h setup. My module system kind of acts like a “dynamic preprocessor,” inserting symbol declarations and definitions as needed. The key thing is that, even though the systems programming paradigm of C means you need to expose more symbols than you would like to, you can restrict symbol resolution to only the symbols a module is supposed to see. So for example:

```
// M.c
module M;
import M1;
export struct S s;
// M1.c
module M1;
import M2;
export struct S { struct SS a; };
// M2.c
module M2;
export struct SS { int a, b; };
```

Even though `struct SS` needs to be exposed to the compiler when compiling `M.c`, writing `struct SS` in `M.c` would produce an error because `M2` was not imported.

Something else to note is that there is no need for symbol declarations in the module system, because the module system handles adding those as necessary.

How does the module system handle cyclic imports? `C` is context-sensitive because `a * b`; is either defining a variable `b` or performing multiplication, depending on if `a` is a type or not. However, expressions are not allowed at top-level, so

we can extract top-level symbol names without running into context-sensitivity issues (assume no implicit `int` return type). Then you can combine imported symbols to create the symbol table, which allows us to parse expressions.

There's more details on the syntax, semantics and deferring features so you can implement it incrementally, but we're already at the word limit. So we'll just have to save that for a subsequent article.

SaltOverflow

## HEIRS OF ROME

### AND WHY IT'S mathNEWS

For many rulers in the western half of Afro-Eurasia, a question has emerged: How can I say I am an heir to Rome? This question has been up in the air until the 20<sup>th</sup> century (or has it).

- Rome
  - Eastern Roman Empire
    - Bulgarian Empire
    - Ottoman Empire
    - Russian Empire
  - Western Roman Empire
    - Charlamagne's Empire
      - Holy Roman Empire
        - Austrian Empire
        - Napoleon's Empire
    - Italy

To start off the question there is one main question: where do you derive your legitimacy from, the Western Roman Empire or Eastern Roman Empire? To start with the Eastern Roman Empire (Byzantine) claim, there is first of course the Byzantine Empire themselves who claimed it. As well though, it was claimed by the Bulgarian Empire during the medieval period as they challenged the Byzantines for the claim of being the Eastern Roman Empire during the late first millennium. Then in the new millennium a new claim came from the various states that formed following the 4<sup>th</sup> crusade such as the Empire of Trebizond in modern day Turkey. As well as them, there was the Latin empire, which was a state set up by crusaders following the sacking of the Eastern Romans. Then a couple centuries after, the Ottoman Empire rose and conquered the Byzantine Empire (or what was left of it by that point), which led to the claim following in two different directions. The first is the Ottoman Empire who had taken over what had become the heartland of the Roman Empire, and moved their capital to Constantinople which was the previous capital of the Byzantines. The other claimant was Russia, who based their claim on religion. Since the Byzantines were the original center of Orthodox Christianity, with it having fallen, Russia was now the center of Orthodox Christianity and therefore the heir to the Roman Empire. Both these empires continued

into the 20<sup>th</sup> century where both fell, one turning into a republic and the other to a communist state.

The other route goes through the Western Roman Empire. Besides the empire itself was the Empire of Charlamagne who conquered much of France, Germany, and Italy and was crowned by the Pope as a successor of Rome. Then a century and a bit after him, an empire as an heir to his was set up, a new Roman Empire, a Holy Roman Empire. This carried the legacy of the Western Empire through its link to the papacy, which carried from the Medieval period to the 1800s when the Holy Roman Empire fell to Napoleon. Following that, two weak claims came from Napoleon himself, calling to Charlamagne to legitimize himself. On the other hand, the Austrians, who were the last emperor of the Holy Roman Empire, claimed it lightly, though by this point it was not used too much. The last claim on the Western side is Italy, where its claim to Rome was used as fascist propaganda to justify its imperialism during the 20<sup>th</sup> century, but the fall of fascism also led to the fall of their claim to Rome, leading the mantle of Rome to have been left behind in the past, or...

The final heir, the most legitimate heir, is none other than **mathNEWS**. **mathNEWS** was actually founded in a building which had an atom which was in Rome, furthermore the founding members of **mathNEWS** are all heirs of Julius Caesar (you can't disprove this therefore it must be true). As such, **mathNEWS** has claim to all that is Roman, including the culture, the food, and the Mediterranean ocean. Next time we will talk about how **mathNEWS** is also the successor to China, India, Iran, Canada, and any other country, it's ALL **mathNEWS**.

MrRomeSky

Ceci n'est pas filler.

A SURREALIST blackBOX

# THE 30 GO BUS STINKS (LITERALLY AND IN THE SENSE THAT IT SUCKS)!

## WHY MUST I COMMUTE?

Due to heavily unfortunate circumstances, I got stuck commuting over 100km one way (200km per day, which took about 5 hours per day) every single day for my entire first year. As such, I'm going to now share my reasons on why the GO bus system absolutely SUCKS!!

## YOU CAN'T EAT ON THE GO BUS?

To clarify, there are signs that say you aren't allowed to eat while being on the GO bus, but people eat all the time anyway. Of the over 200 times I've been on the GO bus in the past 8 months, this rule has been enforced exactly once. However, I still believe that if I'm on the GO bus, and presumably traveling a long distance (why else would you be on the GO bus?), then I should be allowed to eat. Also, the one time that I saw someone actually get called out for eating while on the GO bus, there was someone actively rolling a joint in the seat across from them. NOTHING was said about that person by the way (just another reason to dislike the GO bus).

## CONSISTENTLY LATE

Even though the GO bus is consistently on time at the UWaterloo station, it's also consistently OVER AN HOUR LATE to get back to the Highway 407 station. When it gets stuck in traffic, it's understandable, but WHY HAVE I GOTTEN STUCK IN MISSISSAUGA MULTIPLE TIMES? The last thing that I want to happen after I just finished a calc quiz is getting stuck in a completely different city in the middle of the night. So why has it happened that on my way back home from my calc quizzes, my bus has broken down in Mississauga multiple times? It is 9PM, THIS BUS IS SUPPOSED TO TAKE ME HOME. Instead, I'm now waiting on the side of the road for over forty-five minutes so I can be picked up by another GO bus because mine just straight up stopped working...

## HAS SOME OF THE STRANGEST TIMING?

Most of the time, the bus comes about once an hour, EXCEPT FOR IN THE MIDDLE OF THE AFTERNOON! For my entire first term, my classes finished at 2:20, and so you would think that it's only about a thirty-minute wait until the next bus, since they come on the hour every hour. NO. For some UNKNOWN REASON—out of spite against me, I assume—there is NO 3 PM BUS. The next bus that comes is at exactly 3:33 pm. This may not seem like that large of a deal because it's only thirty minutes later, but thirty minutes is a lot of time WHEN I'M ALREADY COMMUTING FOR FIVE HOURS. Those thirty minutes that I have to wait before and after my classes, while waiting for the bus, add a whole extra hour to my day. That, along with the time in between my classes and blah blah blah, you add all that together, and my SHORTEST day was twelve hours. SHORTEST DAY. MY LONGEST WAS 18 HOURS. I ONLY HAVE THREE CLASSES AT MOST PER DAY??? WHAT IS TAKING ME THIS LONG?

THE COMMUTE. I NEED THOSE THIRTY MINUTES. OH, AND AS A SIDE NOTE, MIDTERM SEASON? ABSOLUTELY HORRIBLE. Midterms end at like 9 pm, the only bus after that comes at 9:48 pm, and it's the last bus of the night. The bus takes about 2 hours to get to the Highway 407 station, plus the time it takes me to get home from there, I end up getting home PAST 12 AM. I HATE THE 30 GO BUS!

## THE PERSON IN CHARGE OF THE 30 GO BUS SERIES HATES ME.

I have recently found out that there have been two more 30 series GO buses added; there is now a 30g and a 30f, both of which are express buses (they skip stops so they get to UWaterloo faster). Why couldn't they have added these sooner? Why must they add them right after I stopped commuting? Do they hate me? Clearly, I actually promise this is all to spite me. As such, since they clearly hate my existence and do everything just to make my life more difficult, I hate the person who is in charge of the 30 GO bus series.

That concludes my rant on why the 30 GO bus series sucks (as a note, I DO NOT hate the bus drivers, they are really cool—I took the same bus in the morning every day, so I actually became friends with one of them, and I would never wish anything bad upon him, he's a very nice man.) I have never in my life been happier to not have to take a bus anymore (I didn't drop out, I just got an apartment), so if you're currently thinking of commuting from somewhere like Vaughan, Hamilton, or somewhere else that is equally as far away, PLEASE DON'T DO IT. I actually pinky promise on my life that it's not fun. There isn't even internet for like half the ride, so you can't even do work and be productive. It's just a daily GO bus ride of absolute doom and despair.

krvd27

## WHAT IS A HOBBY TO A WATERLOO

two geese were sitting in a field. one of them asked the other, what

do you do for fun? the other said, we're at waterloo. the only fun

is func anal. speaking of,

it's spring term. it's time

to shit up the sidewalk.

fun

# HONK

## IN YOUR AREA



### STOP BITING YOUR SIBLING

HELLO HUMAN(S)

WE HAVE RETURNED

YOUR ATTEMPTS TO EVICT US HAVE FAILED MISERABLY  
AND WE HAVE MULTIPLIED

OUR SUCCESS IS MEASURABLE AND INCREDIBLY  
SUCCESSFUL

BEHOLD



CHILD

BEAUTIFUL IN EACH AND EVERY WAY—COLOURED LIKE  
THE DANDELIONS IT SO LOVES TO EAT

IT IS ADORABLE AND INCREDIBLE—SPECTACULAR AND  
PRECOCIOUS BY ITS VERY BIRTH

DID YOU KNOW THAT HUMANS ONLY LEARN TO STAND  
UPON THEIR LEGS FOLLOWING 9 EGG CYCLES?

A GOSLING NEEDS ONLY THE DAY OF THEIR HATCHING

HA

IT IS BETTER THAN YOU IN EACH AND EVERY WAY

GEESE 1 : HUMANS 0

ALSO LOOK AT THESE STRANGE NEAR-FEATHERLESS  
BIPEDS



EW.

Totally(Not)AGoose

## WHAT IS THE BEST FOOD TO EAT IN HOT WEATHER?

- Watermelon
- Bingsu (x2)
- Ice cream (x6)
- Ice (x2)
- Jeff's car Cheetos
- Raisins
- Pickles
- Poke
- Cucumber
- Chapman's Fruity Li'l Lolly :3 (x2)
- Chapman's Canada Day ice cream
- Gelato
- Ice cube (x2)
- Freezie (x2)
- Fresh strawberries
- Chapman's Super Cone
- Grilled meat
- Ais Kacang
- Frozen mango chunks
- Whole Lemon
- Cold noodles

# A MATHEMATICAL PROOF FOR A HOME THAT DOES NOT EXIST

## I'M GOING CRAZYyyy

This month, a false spring might turn real. The streets of my college are gray & miserable, & I wonder what I'm doing with my life

*Lineage is a root, so unroot yourself*; I thought, some unknowable time ago. *Isn't birth like a little death?* My mom across the world fingers aching because she needs to feel needed. Last I lived with

her, I was in high school, and in math class Mr. Marshall would tell us

stories. *The Principle of Mathematical Induction*: a method of proving

OR disproving a mathematical statement

like knocking dominos.

There are many *proof-by's*. Two years ago, I had best friends. Now,

I have false spring. Proof by Exhaustion. At childhood's end the numbers spattered out into meaningless shapes, bodied and

real. Mr. Marshall died two years ago, and my mom calls me.

*I love you*, she says, a stone in her mouth. In Korean: 사랑해.

I'm forgetting that too, I think—once, my language was

jumbled, Korean and English mixing incoherently & indecipherably.

Now I'm just incoherent. Two

the only even prime; indivisible by all except the unit and itself. Every even thing is rationally

divisible by two—two homes, two friends, two parents, two lungs. *Will I spend*

*the rest of my life missing a part of myself?* Sometimes I crack open my old textbook

and find pieces of my dead math teacher in the problems.

The air turns warmer. Soon, I'll be twenty-two, and I think I have regrets. I think about Mom

and Mr. Marshall, and the numbers. Irrational means never-ending. How can you

prove that, I wonder. The Sisyphean task of proving infinity, irrationality,

oddity: I don't miss the time, I miss the people.

*Don't worry*, my mom tries to ease my guilt. *We didn't sacrifice*

*all that much for you*. Sometimes the person you will become is inevitable.

Proof by Contradiction. I am ashamed to be seen. Where

do I exist if I have nowhere to be bodied?

stoned

# SAGGY PANTS ARE A SKILL ISSUE

## A BASIC GUIDE TO HEMMING

Clothes, they're great. Sometimes, however, they don't quite come in the shape you need them to. Next time you find yourself with a garment that would be perfect if only it were a couple of centimetres shorter, look no further than this guide. With the awe-inspiring power of hemming, you can have your shirt and crop it too!

Take a quick look at the bottom edge of your shirt or pants. The stitches that you likely see there are a hem. Its main purpose is to hide the raw edge of fabric and prevent it from fraying. While you could technically shorten anything by

going all Rambo with some scissors, a hem will leave things looking professional and lasting way longer.

All you really need for this particular project is thread, a ruler, a needle, sewing pins, and scissors, which can be found in your grandma's closet or in a beginner sewing kit for under 15\$.

### FIGURING OUT HOW MUCH TO HEM

Put on your garment of choice and measure how much fabric you want gone. This measurement will henceforth be known as  $x$ .

**MEASURE**

Place your garment inside out on a flat surface. Fold up  $x$  and pin the folded fabric either 1.5cm or  $x$ -cm up, whichever is smaller. If  $x$  is large, you can fold it over itself until it is around 2cm or cut it off later.

**PREPARING TO HEM**

Measure out enough thread to wrap around the circumference of the hem (be generous here), then put the thread through the eye of the needle. From here, push the needle and most of the thread through the fabric, then, using the short end of the thread, tie a couple of knots to secure it.

**HEMMING**

Weave the needle in and out of the fabric at around 0.5cm to 1cm intervals. Continue following the pins you placed earlier until you reach the end of the hem.

**FINISHING**

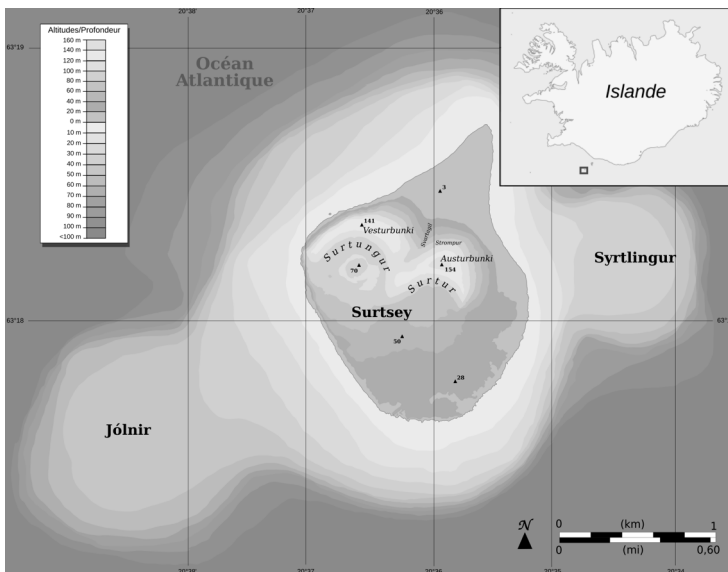
Tie a final knot with the thread to secure the end, then snip the excess. If the hem has too much fabric, you can trim it here.

Rejoice! You've opened yourself to a whole new world of possibilities. Be not afraid to buy pants a little too long from this moment onwards!

Lyssa V33

## N ISLAND FACTS—SURTSEY ISLAND

It's a new term, full of new classes and new possibilities, but one thing that isn't new is the amount of lecture time I'm wasting browsing Google Maps. To try to ensure that time isn't entirely wasted, I like to bring you all my favourite find every two weeks. Today, that's Surtsey Island:



was nothing but sterile volcanic rock, which made Surtsey a unique opportunity to study how plants and animals colonize new land. The island was set up as a nature reserve, and to prevent human interference, nobody (except the scientists studying the island) is allowed to land on it

- Predictably, life on the island is currently boring. It's mostly moss and lichen, a handful of bushes, and some insects, mostly carried by birds, driftwood, and the wind
- There are two exceptions to this, in 1977 scientists were puzzled to find potatoes growing on the island, which are far too large to have been carried by a bird. Further investigation revealed a group of "renegade boys" had taken a rowboat to the island and planted them; a bizarrely creative prank. In another incident a tomato plant was discovered and traced to an "improperly managed human defecation"
- The island is, unfortunately, disappearing. In the 60 years it has existed, it has eroded down from 2.7 to 1.3 square kilometres. Surtsey is expected to last until at least 2100, but probably not much past that

That's all on this island, let me know if you have an island you want me to cover ([fatcullen2@gmail.com](mailto:fatcullen2@gmail.com)).

FATCullen

## COOP TERM HAIKU

i yearn for midterms  
i dont like to work 8 hours  
home eat sleep repeat

Whole Number Haver

- A small volcanic island off the South coast of Iceland (roughly 4,328 kilometres northeast of mathNEWS)
- It is the southernmost point of Iceland, the last in a chain of islands called the Vestmannaeyjar archipelago which trails south off the mainland
- Surtsey is completely uninhabited, not only because it's a barren rock no one would ever want to live on, but because people are forbidden from visiting it!
- The island was formed between 1963 and 1967 by a volcanic eruption, meaning we documented the entire process of it forming, from empty ocean to a new untouched island. After it formed, the island

# ALPENFURY GIVES ME HOPE FOR THE FUTURE

## YET ANOTHER YAP ABOUT ROLLER COASTERS :)

If you've been living under a ROCK, last year Canada's Wonderland released their newest coaster *AlpenFury*: A relentless multi-launching inversion-filled masterpiece that keeps you off your seat from start to finish. It is arguably the park's **greatest** coaster, and leaves many of us coaster enjoyers with great hope for future additions to the park.



PHOTO TAKEN BY ME :->

Technically, *Alpenfury* is a custom *Sky Rocket* coaster model manufactured by Premier Rides: known very well for their launched coasters. To this day, the *Sky Rocket II* model (a very compact, swing launching coaster) has actually been cloned 11 times around the world with positive ratings from most riders. But that's all: *positive*. None of Premier's projects had ever been exceptionally good, with their highest ranking coaster at the time being ranked being ranked around #160<sup>th</sup> globally...



1 - AlpenFury (#30)

Canada's Wonderland - Canada  
Premier Rides



2 - Mr. Freeze Reverse Blast (#169)

Six Flags St Louis - United States  
Premier Rides



3 - Full Throttle (#171)

Six Flags Magic Mountain - United States  
Premier Rides



4 - Mr. Freeze (#173)

Six Flags Over Texas - United States  
Premier Rides



5 - Revenge of the Mummy (#207)

Universal Studios Florida - United States  
Premier Rides

**CAPTAIN COASTER RANKINGS OF PREMIER RIDES  
COASTERS (AS OF MAY 2)**

... UNTIL NOW!!! *AlpenFury* blew everyone's expectations out of the park with exceptional launches, inversions, and airtime all without slowing down or losing pace. The ride showed the world what Premier could truly do, and along with boosting their reputation in the amusement park industry, moved Wonderland from a good park to an EXCEPTIONAL park, marking it as a **premier** (see what I did there) destination for coaster enthusiasts worldwide. Better yet, it shows that Six Flags sees value in Canada's Wonderland, potentially as one of their top parks, meaning more world-class coasters could be coming soon, and Wonderland could become one of the best amusement parks in the WORLD. With the passholder feedback survey released 7 months ago, closure of *Time Warp*, and removal of the *Kingswood Music Theatre* on the 2026 park map, this assumption isn't baseless. Wonderland **could** be gearing up for an INSANE and potentially RECORD BREAKING coaster sometime in the near future :0



ANOTHER PHOTO TAKEN BY ME (AUG 2025)

Overall though, I'm glad that Wonderland is taking an innovative approach for new additions in the park, and I hope that the success of Alpen leads to more attractions of this magnitude in the future :D. Perhaps we'll even hear news about it in the coming months (Alpen was announced late in the summer... *just saying* :->)

# KAWARTHA FLAVOURS TIER LIST

This is based on how appealing it sounds taste-wise and if I did try it there's bias probably idk womp womp. Btw Farah Foods sells 1.5L of Ice Cream for \$10 lowkey very worth for the summertime.

## ONES I'VE HAD:

1. Black Raspberry Thunder (This stuff is so fire)
2. Bordeaux Cherry (YUM)
3. Campfire S'mores (Even the base is smores)
4. Moose Tracks (Basic Canadian)
5. Raspberry Lemon-Lime Sherbet (Fruity)
6. Salty Caramel Truffle (Very caramel very sweet)
7. Cookies & Cream (It's c&c bro not special)
8. Pralines & Cream (Um ok)

## ONES I BELIEVE HAVE GREAT POTENTIAL:

- Constellation (Just read the description and drool)
- Chocolate Chip Cookie Dough (Raw or cooked I'd eat dough)
- Vanilla (It's a staple of the community)
- Death by Chocolate (It just sounds menacing)
- Peaches and Cream (My two fav things)
- Reindeer Magic (It sounds so cutesy)

- Strawberry (Get a lil more fruity again)
- Sugar Shack Maple (Sounds sweet!)
- Butterscotch Ripple (Sounds like a cute granny!)
- Spiced Apple Ripple (It better be a good apple breed)
  - I ain't eating no Granny Smith apple
- Pumpkin Pie (I'm just curious at this point)

## ONES I BELIEVE HAVE ZERO POTENTIAL:

- Tiger Tail (Black licorice... no)
- Moon Mist (What are you 6?)
- Cotton Candy (What are you 5?)
- French Vanilla (I don't trust French)
- Chocolate (There must be better versions)
- Candy Cane (Just brush your teeth bro)
- Maple Walnut (Too patriotic)
- Mint Chip (Looking like alien goop)
- Muskoka Mocha (Not for me)
- Dockside Cappuccino (No caffeine)
- Egg Nog (I want cream not egg)
- Coconut (Ew.)

Jubble

# THE SUPERIOR PROTEIN

## A HOT(DOG) TAKE

Hot dogs are the superior form of protein. They are so versatile and delicious. Although hotdogs are not the best calorie to protein ratio, they still have many important benefits you should consider. In this essay I will argue why hotdogs are delicious and the most superior protein.

I came to have a new appreciation for hot dogs lately due to my lack of money. My interest increased when I went to a Blue Jays game and got a footlong hotdog. Life changing experience. Incredible. Magical. 67<sup>th</sup> best day of my life.

Now you're probably asking "smallmouthbasshater do you eat hotdogs for the flavour or the shape?" Good question. The answer: BOTH. Not only do hotdogs taste delicious, their shape makes them sleek and efficient. It's perfectly compact in every way, shape, and form. Their shape also contributes to their versatility: hotdogs can be cooked in any way you please. Boil them, fry them, BBQ them, eat them raw (idk about this one but I think you can??? but maybe don't just in case). Nothing hits harder than a hotdog on the campfire. And you can put anything on it. Ketchup, mustard, relish, mayochup (sus), maple syrup, whatever you please!

Did you know also hotdogs are great fish bait? SUPRISE!! Cheaper than worms too. Try it out!

And just when you think it can't get better, you can buy TWELVE HOTDOGS for LESS THAN 3 BUCKS. WHAT A STEAL OF A DEAL. And just when you think it can't get better again, I was at Zehrs the other day to use my PC Optimum points (not sponsored) and that's when I spotted it: 20 JUMBO MASSIVE HOTDOGS FROZEN FOR TEN BUCKS. That's 50 cents a piece. So like 50 cents a meal. For my cheap ahh this is perfect.

The biggest thing that gets people about hotdogs is not knowing what's in it. But that's part of the beauty. You'll never know. Nothing goes to waste with a hot dog. It's economically efficient. Erm akshually hotdogs can be vegetarian too!! Anything can be a hotdog if you really try. And of course hotdogs aren't very healthy, but I say anything is fine in moderation!

I'm sure now I have you convinced that hotdogs are superior. So go into the world, child, and get some hotdogs. Go to your nearest Circle K and stand in awe and appreciation of the hotdog rollers. Put some in your Kraft Dinner. Roast some on a fire. Eat more hotdogs.

Is a hotdog a sandwich?? The proof is left as an exercise for the reader.

# RATING WAYS TO TIME TRAVEL

## GROUNDHOG DAY

Wake up on the same day in the same town every single day. Probably pretty fun for the first thousand or so days, then it gets old fast. If that town is Waterloo, good luck finding true love buddy, you're trapped forever.

4/10

## HARRY POTTER

Spin a necklace and go back one hour instantly. It's only ever used to study more instead of to win every single fight for some reason. Waterloo students would kill for this during exams.

9/10

## PRIMER

Lie down in the box for five hours, come out five hours in the past. Incredible money making opportunities, essentially zero chance of becoming your own grandpa. Can't go back too far since you have to bring food and air into the box.

9/10

## RE:ZERO

Die painfully in various ways to come back at the start of the day. Seems excruciating and miserable to do this just for the chance to die again. What if one day it stops working and then you're just dead.

2/10

## BACK TO THE FUTURE

Get your car to 88 miles an hour (140 km/h for Canadians) and go back in time. The stress of making sure you don't accidentally run over your father or sleep with your grandmother would be the worst part. Bring extra gas in case the car runs out.

8/10

## STEINS;GATE

Use a phone to send text messages into the past to change the present. Unfortunately there's no way to tell what effects the message will have on the present. Text your parents in 2008 to invest in Bitcoin!

7/10

## TENET

Step into a machine to reverse your personal flow of time. Seems super confusing to drive a car backwards in time. Would probably step into traffic and die thirty seconds after being inverted.

5/10

kai509

## HOW TO GET REVENGE AGAINST A ROOMMATE

### OR JUST COPE WITH HAVING A BAD ROOMMATE

Have you ever had a roommate who makes you question your sanity? Does not know what mold is, nor how to wash dishes? Well then, you and I may have quite a bit in common. Nearly a month free of first year, I am celebrating by writing the many ideas that have been suggested both by people and by The Goose outside my window at 3am:

- Put everything in their room
- Send proof of everything to their parents
- Chuck anything left outside their room
- Pile all dirty dishes and in general things they own, in front of their room
- Write a 5 page essay to their brother about everything they've done
- Create a time machine and put them into a time loop like groundhog day
- Get a genie and wish they get stuck with an even worse roommate
- Use your second wish to train a flock of geese to attack them
- Have the flock of geese steal **mathNEWS** pizza and frame your ex-roommate

MrBlueSky

## N THINGS TO LOOK FOR WHEN BOOKING A HOSTEL

- do they have soap
- this seems like bare minimum but you would be surprised

normalparameters

mathNEWS



# IN APPRECIATION OF THE NAPOLEON

This article is an appreciation for the Napoleon

Not the acclaimed general/god emperor

Nor the barbecue maker

THE Napoleon

Layers upon layers of paper thin crisp pastry, cemented together with a custard.

Dense yet ever so airy.

Some people call it mille feuille,

But the Napoleon I eat definitely is not a thousand layers

Or French.

The Russian woman at Chocolada on Steeles confirms it when she tells me they don't accept credit, and that if I want a full cake I need to order ahead.

This cake has served me through many important birthdays, although never my own

(I get the DQ blizzard cake)

Keeping ceremony.

The Napoleon is always shared amongst family and friends. Eating it always creates mess.

Some of those who sat down to enjoy a slice at my grandmother's table haven't returned in a while.

Flakes of pastry and powdered sugar raining everywhere like a flurry.

I eat every crumb.

You can't work your way to challenging Moscow or Weber without taking a bit of time and inviting in a little mess.

Not too many things in life come hard like this anymore.

Lars Nootbaar

## F • G

### THIS IS MY ROOMMATES IDEA I SWEAR

After enrolling at the University of Waterloo I had no idea what to expect, but I didn't want to disappoint my family who had worked really hard to get me where I am today! They named me  $f$  after my grandfather, a theoretical physicist. I immediately began the grind. I'm on the shorter side, 5'2" dark brown hair and glasses, I'm pretty much the definition of a nerd :( I thought for sure I would get picked on but surprisingly I was left alone by the other people here. I spent my days rotting away at RCH and then studying at DC whenever I had the chance! I went so much I practically had a desk with my name on it, row 6 seat 7 all the way at the end of the library, where nobody could reach me, my special place. But one winter day, I had taken the tunnels to avoid the freezing temperatures of campus to find refuge in my desk, only to find it occupied by some random prick! I went up to him and tapped him on the shoulder.

"Hey that's my spot, I usually study here, if you want there's an empty desk just around the corner!" I said, as politely as I could. He pushed his chair back, stood up and towered over me. He had to be around 6'3", muscles practically bursting out from his sleeves!

"I'm  $g$ , nobody tells me when or where I can't sit," he grumbled. I was trembling, not in fear, but in shock, and to avoid further confrontation I stormed out of the library, hoping to find somewhere else to study. For the next week my schedule was messed up because time and time again, he kept planting himself in MY seat, as if he was mocking me. However, what bothered me most wasn't his rudeness, or his obscene plan to take my seat, but instead the fact I could recall everything about him in extreme detail. From the veins on his forearms, to the subtle tone in voice, it all stuck with me and I don't know why. Maybe it was the suddenness of it all but for some reason I just couldn't get him out of my head!! Eventually, out of desperation, I went up to him again to see if he'd move if I asked him even more politely. After trotting on to DC I mustered up the courage to say, "Sorry about before, could I please sit here? It would mean a lot to me, sorry."

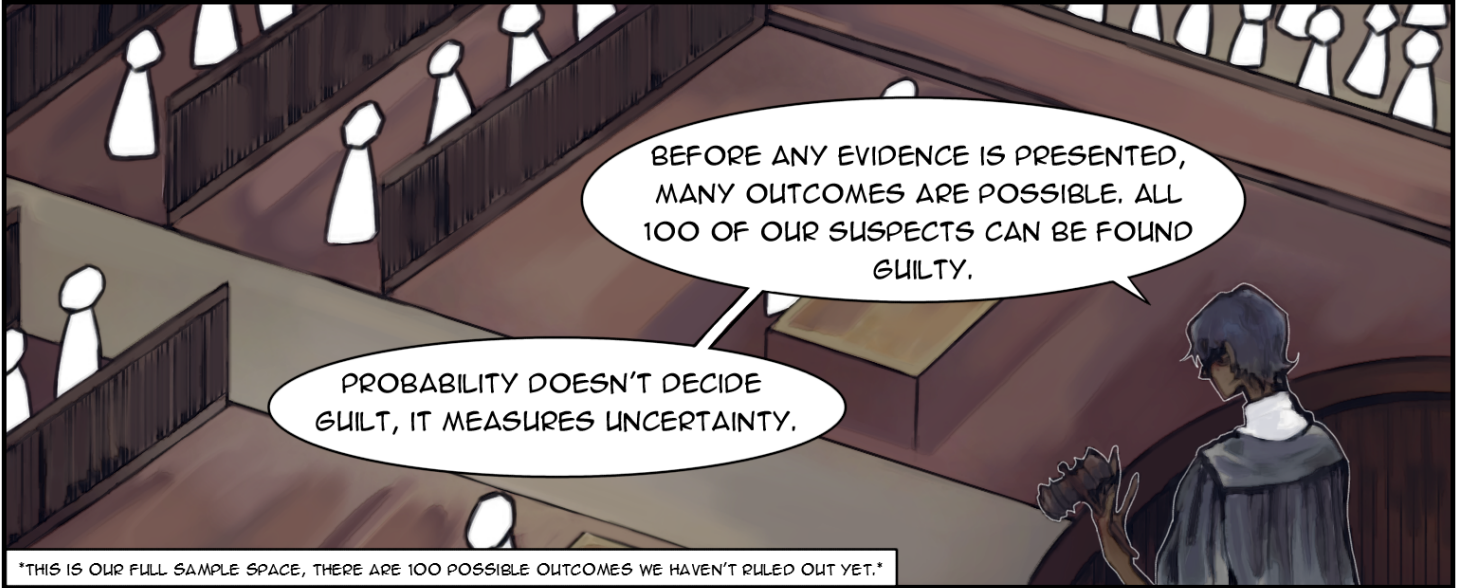
Then to my surprise, he packed his things, and left, whispering to me, "All you had to do was say please," before walking away as if nothing ever happened. After snapping back from the shock of it all, I sat down at my desk, home at last! However, there was one thing that was different, a small piece of paper left behind on the table, with tiny letters that made out "meet me at mathNEWS :)"

Kawii Carrot

**S-Sugoi!! These articles have won the internet today!!**

AN IMPRESSED EDITOR

STAT 230: BAYES THEOREM/CONDITIONAL PROBABILITY STORY BY ZUNAIRAH | ART BY LI-AHN



HOW LIKELY IS IT THAT A SUSPECT IS GUILTY GIVEN THE FOOTAGE?

$$\begin{aligned} \text{Probability} &= \frac{\text{guilty cases with evidence}}{\text{all cases with evidence}} \\ &= P\left(\frac{\text{footage exists so defendant guilty}}{\text{footage}}\right) \\ &= \frac{P(G|F)}{P(F)} \\ &= \frac{1}{20} \\ &= 0.05 \end{aligned}$$

20 in the footage

100 suspects in total

defendant

ALTHOUGH THE EVIDENCE EXISTS, THE PROBABILITY IS SMALL IF PRIOR CHANCE OF GUILT IS LOW.

BUT THE FOOTAGE EXISTS. IF GUILTY FOOTAGE WOULD EXIST 90% OF THE TIME, THERE IS A 90% CHANCE THE DEFENDANT IS GUILTY.

JURY

"nod"

\*CONDITIONAL PROBABILITY = FRACTION OF CASES CONSISTENT WITH BOTH EVENTS.\*

ALL CONTRAIRE! WE MUST ALSO CONSIDER HOW RARE THE GUILT IS OVERALL, AND HOW COMMON THE EVIDENCE IS FOR INNOCENCE.

**PRIOR BELIEF**  
Probability suspect is guilty overall:  
 $P(\text{guilt}) = 0.01$

**EVIDENCE GIVEN GUILT**  
If guilty, the footage shows them 90% of the time:  
 $P(F|G) = 0.9$

OUT OF 100 SUSPECTS, 1 IS ACTUALLY GUILTY

\* $P(F|G)$  = P(PROBABILITY FOOTAGE SHOWS A PERSON, GIVEN GUILT)\*

EVEN IF INNOCENT, THERE'S A CHANCE 19 OF THEM APPEAR ACCIDENTALLY.

THAT'S RIGHT - SO LET'S SPLIT THE FOOTAGE:  
1 guilty + 19 innocent:  
 $= P(F|G) \cdot P(G) + P(F|I) \cdot P(I)$   
 $= (0.9)(0.01) + (0.19)(0.99)$   
 $= 0.1971$   
 $\approx 20$  people

\*HERE WE COMPUTED EVIDENCE PROBABILITY. WE CONFIRMED 90% OF SUSPECTS APPEARED IN THE FOOTAGE.\*

$$P(G|F) = \frac{P(F|G) \cdot P(G)}{P(F)}$$

$$= \frac{(0.9)(0.01)}{0.1971}$$

$$= 0.0457 \approx 0.05$$

EVEN STRONG EVIDENCE IS MISLEADING IF GUILT IS RARE... BAYES THEOREM TELLS US THE UPDATED PROBABILITY.

WE CAN SEE HERE THAT LESS THAN 5% ARE GUILTY, MUCH LOWER THAN OUR JUROR HAS GUESSED.

**KEY TAKEAWAYS:**

CONDITIONAL PROBABILITY = FRACTION CONSISTENT WITH KNOWN EVIDENCE

BAYES = UPDATE PRIOR BELIEF WITH EVIDENCE:  
$$P(G|E) = \frac{P(E|G) \cdot P(G)}{P(E)}$$
  
$$= \frac{P(G \cdot E)}{P(E)}$$

BASE RATES MATTER: RARE EVENTS STAY RARE UNLESS THE EVIDENCE IS OVERWHELMING.

# profQUOTES

## ACTSC 372: BEN FENG

“Mathematicians always say things that people don't understand, so I'll translate it.

## AMATH 242/CS 371: LEILA SEVYERI

“Let's just say I work in Home Depot, and you come in and want to buy a piece of wood of length  $\sqrt{2}$ , and you say well my prof told me that's the positive root of  $x^2 - 2$ , and I will scream because what the hell does that mean.

## AMATH 881: MOHAMMAD KOHANDEL

“Everything I've said throughout this course may be wrong, but it is useful.

## BU 413: GERRY RAMOS

“Inflation impacts everyone... some people are stranded on an island. Does inflation impact them?

“If you get like \$270,000 from your uncle, a common misconception is that it must be reported. No one needs to know. Unless you deposit it at TD. They'll be like where'd you get this much money? A Mexican cartel or something? You'll have to tell them where the money came from.

## CS 146: ROSS EVANS

“Bill Gates said if you could get through *The Art of Computer Programming*, he would give you a job. Although nowadays you don't really want to be associated with him.

“Module 3 was SIMPL, module 4 was PRIMPL, and module 5 is IMPL... ementing functional languages.

## CS 240E: ARMIN JAMSHIDPEY

“Okay guys, I did my best; the rest is on your shoulders. If I die, promise me you'll learn this.

“I have some good news and bad news. Actually I just have bad news: You'll all fail the course.

## CS 241: GREGOR RICHARDS

“These surveys can't get me fired but they can get me to teach CS 246, which is a fate worse than death.

“Can we fix this issue? The short answer is no. The long answer is noooooooooooooo.

“*[Talking about using 48h absence on midterm]* Some students say, “Yes, I would love to make 60% of my course grade come from one exam because I'm an imbecile.”

## CS 251: ZILLE HUMA KAMAL

“I know some of you may be thinking, “It's over for me, it doesn't matter.”

## CS 442: BRAD LUSHMAN

“IO in Prolog falls under the category of “what in the world were they thinking?”

## CS 451: DAN HOLTBY

“PowerPoint tells me readers won't know what majority means, and I should say “most of the acceptors.”

## CS 466: LAP CHI LAU

“I am hesitant to add participation marks because when I was a student, I enjoyed the freedom to skip classes.

## ECON 101: ANDREW HUGH GIBSON

“Sure, take 48 hours, but next time ask sooner. If I was already in bed you'd be cooked.

## ECON 201: JOEL BLIT

“The reason many of you came to an agreement is because you are bad at arithmetic.

## ECON 201: ANDREW GIBSON

“In the dating market, not only are you looking for a pookie, but you *are* the pookie.

## MATH 136: RACHAEL ALVIR

“I can't add 1 plus 1.

“We can check this is a vector space if we want to... You should just believe me.

“Oh. You don't know what a field is. *[Skips 3 slides]* Ignore all of that.

## MATH 239: OLIVER PECHENIK

“The problem with this world is that there's not enough letters in the alphabet, and they eventually collide.

“That was a big exercise in doing nothing.

## MATH 245: FAISAL AL-FAISAL

“Categories are these kind of stupid objects.

**MATH 249: JIM GEELAN**

- “ If 1% error is too much for you to bear... make that bigger! [*Wheeze*]
- “ [*After a student told him that our entire assignment was done in lecture in CO 255*] That's very annoying, why would he do that to me? What have I done to Swamy? Nothing!
- “ I don't have time to tell you any anecdotes about Mendelsohn, but I will anyway.
- “ Doesn't matter if it's true or not; you should believe that it's true.

**MUSIC 140: SIMON WOOD**

- “ I measure the success of my day based on how long I can go without having to wear pants.

**PHYS 242: MATTEO MARIANTONI**

- “ In this course, forget about Gauss's Theorem. I do not like Gauss's Theorem. I repeat, I do not like Gauss's Theorem. A third time, I do not not not like Gauss's Theorem.

**PMATH 320: TY GHASWALA**

- “ [*Paraphrased*] Abraham Lincoln used to study Euclidean geometry to exercise his reasoning, but the current politicians don't seem to be doing any geometry.

**PMATH 347: BLAKE MADILL**

- “ Bezout's lemma... MATH 135 probably gave it some cringe acronym.

**PMATH 351: JESSE PETERSON**

- “ This is a very technical definition, the “wiggleness” of a function.

**PMATH 352: JASON BELL**

- “ [*Student: Why do you write one-to-one and onto, rather than just bijective?*] I don't know. Maybe it's just a Gen X thing?
- “ So if I have a chain of inequalities, then the first person... wait, it's not a person.
- “ Have you heard about [*slams desk*] the US?
- “ It's like these flat earthers who say, “Well, the earth is flat because it looks, like, flat.” And then you say, “Well, that's not a proof” and they say, “No, you're not a proof.”
- “ And, like for that ant, that ant does have a point. It does live life differently.

“ Pacman was released first, but then they released Ms. Pacman after, and were talking to people's wives, saying “you should play this!” And I thought, maybe they have a point.

“ It's this woman, and she eats these pellets. And she gets chased by ghosts. She eats these power pellets that are, like, intoxicating, and the ghosts flash and suddenly she can eat them. And sometimes she goes around the edge and you think, “Where did she go?” And she comes back around the other side, and this proves that she lives on a donut.

“ [*Folding paper at the front of the class*] I didn't think this out. I really didn't think this out. I should've brought a donut. Okay, you'll have to visualize this.

“ You know, I think I had a point when I started this discussion.

“ Oh no, these Russian Communists are going to kill us all!

“ I don't recommend getting divorced.

**PMATH 365: SPIRO KARIGIANNIS**

“ [*On final exam*] Bonus (5 points). At what times did the PMATH 365 lectures take place this term, and on which floor/building?

**PMATH 370: KEVIN HARE**

“ Your generation learned SOHCAHTOA; our generation learned a different, horrible acronym, “some of her children are high together on acid.”

**PMATH 445: ALEX COWAN**

“ The best way to communicate with aliens is by using this.

**PMATH 450: ALEXANDRU NICA**

“ What did I say, did I say proof? That is quite ambitious.

**PMATH 454: NICO SPRONK**

“ I don't have to tell you how to propose a strategy other than experimentation and coffee. Or harder things if you like.

**PMATH 945: JASON BELL**

“ You look at this and think, “Wow, this is too general. How did they prove it?” And then you see the proof, and you say “Oh. That's how they proved it.”

**STAT 230: SURYA BANERJEE**

“ Life is nothing more than maximizing happiness under uncertainty.

“ I’m gonna talk about God for a few minutes, is that okay?”

**STAT 241: YINGLI QIN**

“ So that is the non-informative prior. Now we want to talk about the Jeffreys prior; that is not the Jeffrey in our department.

“ I want to comment: I am aware my reputation at this university is pretty bad when it comes to the final exam.

**STAT 330: REZA RAMEZAN**

“ Our null hypothesis is that Reza is poor.

**STAT 333: JEFFREY NEGREA**

“ If you don’t have questions for me, I have an infinite source of questions for you.

**STAT 341: ALEX STRINGER**

“ As we know, I’m all ego.

“ Who wants to go back to the sharks?

“ What’s a problem? [*Student: World hunger*]. Not world hunger. We can’t solve that here.

“ I was arguing with a student. Not at Waterloo, of course. U of T.

“ You are all very meritorious. Nobody in here lacks merit.

“ I get emotional in the last week. You guys are probably emotional in the other direction. On average we are unemotional.

“ Buy once, cry forever.

“ This proof only works on my whiteboard. If I try to do it on my iPad it bursts into flames. So come to my office hours and I’ll show it to you.

“ Someone who knows gooder English than me [...] I’m sorry, *weller* English.

“ I’ve never been to Europe. Actually, I’ve been to the UK, which is Europe-like.

**STAT 441: MATTHIAS SCHONLAU**

“ Make sure your review cannot get confused with a review written by an LLM (you will suffer reputational damage).

**STAT 443: REZA RAMEZAN**

“ Partial autocorrelation is very inclusive. It is independent of your marital status.

**STAT 902: YI SHEN**

“ We don’t want this to be negative, because if people need to pay to save their money in the bank they will just dig a hole in their backyard and put the money there.

**PMATH 863: NICO SPRONK**

“ [This proof] is going to be sketchy... like a sleazy part of Kitchener.

## BEST AND WORST: LINKIN PARK’S “HYBRID THEORY”

### THREE SONGS FROM EACH EXTREME OF AN ALBUM

#### WORST: CURE FOR THE ITCH

Let’s ease into the criticism. There’s really nothing to say about *Cure For the Itch*, other than, “Why would you put an interlude in the second last spot on your album?” I also just think it’s boring. Honestly, it really could’ve worked for me if it was placed earlier on the album, as it really badly needs an emotional break halfway through.

#### BEST: IN THE END

It’s the song everyone remembers for a reason. The moody piano riff is an excellent intro that starts absolutely singing with the lonely guitar once the verses come in. The chorus kicks in with distortion guitars in this really cathartic way after the rhythmic verses. Overall it gives me the feeling of finally breaking down after living in a life that’s become more of a survival routine than anything else. The concept also

resonates—sometimes you go through a bunch of shit, and when it’s done you’re like, “What was the point?” And there is no point, life just kinda is like that sometimes.

#### WORST: POINTS OF AUTHORITY

The verses on this are just musically and lyrically boring. For how much I like LP, Mike Shinoda is a decent rapper and lyricist at best, and you reaaaally feel that on this track. For some reason, I also find Chester’s harsh vocals grating in the pre-chorus. I do like whoever had the idea to bang two metal pipes together at the end of every bar on the chorus.

#### BEST: PAPER CUT

This track is solid from beginning to end. The alarm-like riff in the intro over the almost-too-slow pace perfectly sets the anxious tone in this song and the rest of the album. Shinoda

does a great job communicating tension in his delivery of the verses, his staccato is on point. I also really like when Chester sings on the bridges, and this one builds to a great climax right before launching into *One Step Closer*. Excellent opener.

#### WORST: BY MYSELF

God, I really don't like this instrumental. The verses are incredibly overstimulating because there's this alien-space-ship-ass synth and then someone had the bright idea to spam static sound effects all over it. The metal pipes from *Points of Authority* are back again, too, in case you missed them. It's just disorganized. I also just do not believe in the bridge, since the delivery comes across as half-assed. The choruses are good, because LP are good at choruses—I just don't care to sit through the verses to get there.

#### BEST: FORGOTTEN

*Forgotten* brings the heaviest and nastiest beat on the album, while still being a little goofy in a way that fits the nu metal era quite well (listen for the "Wooha!" every 4 bars on the verses). Shinoda and Chester bounce off of each other rhythmically in the pre-chorus, before Chester gets some great harsh vocals in on the chorus. The bridge of this song is my favorite moment on the album—I love the way Chester is harmonizing with the bassline and the contrast of that with the sharp rapping.

*Send me album suggestions or creative death threats on Discord.*

mobpsychofan

## HOW MUCH NINE SOLS I PLAYED THIS WEEKEND

### WHY IS THIS GAME SO ADDICTIVE

#### SATURDAY: 11 HOURS

- Kuafu
- Goumang

#### SUNDAY: 4 HOURS

- Yanlao
- Jiequan

#### MONDAY: 3 HOURS

- Lady Ethereal

#### TUESDAY: 1 HOUR

- TBD (Hopefully Ji???)

Fried Rice

## ENERGY MANAGEMENT IN FIVE SENTENCES

1. First ask yourself "Can I work?" and work hard if the answer is positive.
2. Note that it is a matter of "can," not a matter of "feel like it."
3. If you decide that you cannot work, ask yourself, "Then can I do any 1. leisure reading, 2. art or music, 3. math, 4. house chores, 5. language learning, or 6. body exercise?" Then do it if the answer is positive on any one of these.
4. If the answer is again negative, take a nap immediately.
5. Let's be honest that if the first question receives a negative answer, in most cases so will the second one, and you should nap right away.

yvr\_busrider

## AM I THE mathNEWSHOLE FOR NOT SUBMITTING AN ARTICLE BEFORE ENJOYING SOME YUMMY PIZZA AND SNACKS AND NOW WRITING THIS 10 MINUTES BEFORE THE DEADLINE AT WORK?

### A HAIKU ~

in defense, i tried  
but pizza and fun prevailed  
how can i go on? :(

Dollar Store Person

## I THINK I MISS MY WIFE

papasmurf.

all.is.on.

BeesKnees.

come back please. the kids miss you. 67.

smallmouthbasshater

# N REASONS I HATE THIS CO-OP TERM

## I HATE MY JOB

This was originally going to be an SCP in the style of the one I wrote about the Sketchy Chem Elevator™, but I'm too brain dead to do something with actual effort (and have an assignment to do).

1. **NO ONE is here.** Literally. I showed up to **mathNEWS** prodnight and NO ONE I usually hang out with is here. Like, what do y'all mean?? I'm alone??? No one to make shitpost pizza suggestions with???
2. **ALL of my non-UW friends are doing fun stuff.** For some reason, they all choose to do said fun things on, like... Wednesdays at 2 PM??? Ergo, when I'm *working*, and I thus can't join them. Wow guys. Smh.
3. **I HATE MY FUCKING JOB. NO SERIOUSLY. I HATE EVERYTHING ABOUT THIS FUCKASS JOB. I HATE THIS FUCKING THING SO MUCH. I HATE EVERY GOD DAMNED SECOND I SPEND THERE.**
4. **I don't like being in Waterloo.** Maybe it's not Waterloo specifically, but knowing I'm stuck here when people are literally in actually fun places kinda sucks. Does anyone have any suggestions for fun things to do here??
5. **EVERY DAY I AM CONSTANTLY REMINDED OF MY UNEMPLOYABILITY.** So, I looked on LinkedIn the other day (yeah, I know, bad idea) and saw some people I went to high school with get fancy ahh NYC co-ops. For context, these NYC co-ops are their **FIRST EVER CO-OPS. WHAT THE FUCK.** Meanwhile, I'm stuck in a job in the Loo that is in no way, shape, or form related to my degree or anything I remotely want to be doing, and I am left to sit with the fact that it's the product of my own actions—i.e., overloading, taking all the advanced courses, etc., etc. TL;DR, doing *literally nothing* that looks good on a resume.
6. **MY JOB IS SO FUCKING BRAIN DEAD AHHHHHHHHHH I'M DYING. I LITERALLY DO ABSOFUCKINGLUTELY NOTHING THAT USES MY BRAIN ALL DAY. I SPENT TWO WHOLE DAYS FUCKING CLEANING OFFICES. I HATE THIS. I HATE EVERYTHING. FUUUUUUCK MY LIFE. EVERY DAY I AM LEFT TO RUMINATE ON THE CONSEQUENCES OF MY OWN UNEMPLOYABLE ACTIONS. AHHHHHHH.**
7. **I LITERALLY CAN'T DO ANYTHING AT WORK. I CAN'T DO THE BARE FUCKING MINIMUM AND LEAVE WITHOUT MY EMPLOYERS GETTING MAD AT ME. I WAS DEADASS STUDYING FUNCTIONAL ANALYSIS WHEN THERE WAS NO WORK AND THEY CAUGHT ME AND IT WAS BAD. I'M COOKED FOR CO-OP RATINGS. PLEASE LET ME JUST STUDY FUNCTIONAL ANALYSIS. IT'S THE**

**ONE HIGHLIGHT OF MY FUCKING DAY. I CAN'T WITH THIS JOB. I HATE THIS SO MUCH.**

8. **PD11. WHAT THE HELL. THIS IS SO MUCH LESS SPEEDRUNNABLE THAN PD1** (coming from someone who did the entirety of PD1 in ~four hours) **AND IT FORCES ME TO THINK ABOUT WORK AWAY FROM WORK. WHY DOES IT DO THAT???? I DON'T WANT TO THINK ABOUT MY FUCKASS JOB ON MY OWN GOD DAMN TIME. I CAN'T EVEN DO PD ON COMPANY TIME BECAUSE THEY'RE FUCKING WATCHING ME LIKE HAWKS AFTER THE FUNCTIONAL ANALYSIS INCIDENT. GAHHHHHHHHH.**
9. **I can't leave.** A shitty job sucks, but a shitty job I can't leave is so much worse. I literally cannot leave this and clutch something up (assuming I could... see point number five) last minute or I'll fail my co-op credit. I asked my co-op advisor about this, trying to exploit literally every potential loophole I could think of, and NOPE. I cannot leave this without making it so much worse. I think my co-op advisor is concerned for my mental health given how much I've annoyed her with numerous variations of something along the lines of: "pls speed i need this let me leave this job pleeeeeeeaseeeeeee"

So yeah. This is going to be a long four months. At least I'll be able to legally buy copious amounts of alcohol at the end of it...

burgerqueen

## N OBJECTS TO WHICH I HAVE AN INAPPROPRIATE PSYCHOSEXUAL ATTACHMENT

### NOT BEATING THE OBJECTUM ALLEGATIONS

- Olivetti Lettera 33 typewriter (late 1960s)
- Monoprice 25W stereo hybrid tube amplifier (2019?) with Koss M80 speakers (late 1980s)
- Panasonic SL-S202 portable CD player (1999?)
- 2010 Toyota Prius, navy blue (presumably 2009)
- Blackweb sport earbuds (late 2010s)
- MSI Alpha B5EEK "Rosenham" (2021?)



axon\_terminal

# DOES THE CARPET (GAME) MATCH THE CARPET (FLOOR)?

## gridCOMMENT 161.1

welcome back gridWORDers,

guess what day it is today, it is national SOLITAIRE DAY!!! my favourite. obviously, i had to dedicate this gridWORD to one of my favourite solitaire series, beyond your classic klondikes and the like.

full transparency, 42-Down is completely incorrect and is not the associated name of a solitaire in the series. not a great way to start off the term, i know. to be clear, it still works in the gridWORD, just not in the context of the theme. if i were to put the correct clue, i would put CLUJ. i have no idea where i got this clue from and to any existing fans of the game, i hope you can forgive me for my sins. in my defense, i don't really

like that particular solitaire as much, so i don't play it very often. sorry :(((

today's gridQUESTION will be: what is your favourite club here at the university of waterloo and why? you know the drill—please submit your completed gridWORD along with a pseudonym and an answer to the gridQUESTION to the mathNEWS office at MC 3030 or [mathnews@gmail.com](mailto:mathnews@gmail.com) by 6 PM Monday June 1 for a chance to win the best prize ever.

cya,

spaghettinhalers

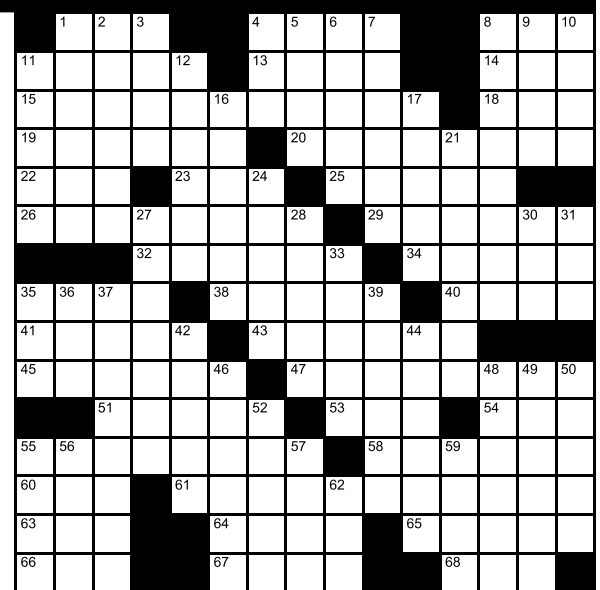
### ACROSS

1. It's higher on the hwy.
4. Neighbour
8. "Thar \_\_\_ blows!"
11. Fergie, formally
13. Solitaire, for one
14. Chewed grass
15. Lowest employed social class\*
18. Bloodshot
19. Tame \_\_\_ (psychedelic rock group)
20. Japanese gambling cards\*
22. Playing hard to get
23. Nav. rank
25. Shish \_\_\_
26. Columbus' view
29. Mix up
32. Spanish royal family's Juan \_\_\_
34. Symbol of strength
35. Aid's partner
38. Book of maps
40. Caspian feeder
41. When it rains, it \_\_\_
43. Apelike
45. Clown employers
47. Term describing the engineering of objects to make them accommodate critical human thought process, coined by Jef Raskin
51. To date
53. Interactive interview post on Reddit
54. Yoko \_\_\_
55. Poetic breaks
58. Like an ice-coloured Sandshrew
60. Ready for battle
61. Developer of Solitaire variants prefixed by 15-Across, 20-Across, 21-Down, 42-Down\*

63. \_\_\_ de Janeiro
64. Impoverished
65. Old French dance
66. Go for the gold?
67. Perceive
68. Rare find

### DOWN

1. Bushy-tailed rodent
2. Linear three-carbon alkyl substituent
3. Grand Galloping \_\_\_
4. \_\_\_ Khan
5. Tree skin
6. Eskimo boat
7. Gunpowder holder
8. A certain sponge daddy, maybe
9. Colored
10. Icelandic epic
11. Brightest star in Virgo
12. State capital of Montana
16. Hindu belief
17. Big brass
21. Business magazine, for one\*
24. Sediments
27. Woman on stage
28. Infant's illness
30. Meadow
31. Building wing
33. Pago Pago's place
35. \_\_\_ showers bring MAY flowers
36. "You stink!"
37. Benevolent spirit
39. Ruler of Azyr\*
42. Soviet spacecraft series\*
44. Like clocks with hands



46. Colorful wrap
48. "\_\_\_ is to suffer" (Nietzsche quote)
49. Omaha-based computer distributor
50. C in integral calc., not short for calculator
52. Snacks in shells
55. Food fish
56. Diva's delivery
57. Factory
59. Game theory book by Conway, abbr.
62. Crack

Drop your gridWORD solutions off at MC 3030, or over email to [mathnews@gmail.com](mailto:mathnews@gmail.com). Correctness optional.

# lookAHEAD

SUN MAY 24

MON MAY 25

Add Period Ends

TUE MAY 26

Evil Day >:)

Not Fees Arranged (NFA)  
holds applied

WED MAY 27

Sunsreen Day

THU MAY 28

National Hamburger Day

FRI MAY 29

SAT MAY 30

SUN MAY 31

Save Your Hearing Day

MON JUN 1

mathNEWS 161.2  
prodNIGHT

Tuition and fee refund  
deadline - 100%

Last day to drop a class  
from the academic record

TUE JUN 2

Drop with WD begins

WED JUN 3

THU JUN 4

Hug Your Cat Day

FRI JUN 5

mathNEWS 161.2 releases

Final examination  
schedules released

SAT JUN 6

## I LIED AND WROTE ANOTHER ARTICLE: HERE'S MY DUCK

I am bored and want people to admire my duck.

Admire Shortie:



She's very pretty.

QUAAAAAAAAAACK

Want to advertise  
*your* campus  
club or event in  
mathNEWS? Email  
us an article, or come  
to our next production  
night!

We'll do anything for  
more filler content.

THE EDITOR DOOMSCROLLING  
mathNEWS@GMAIL.COM