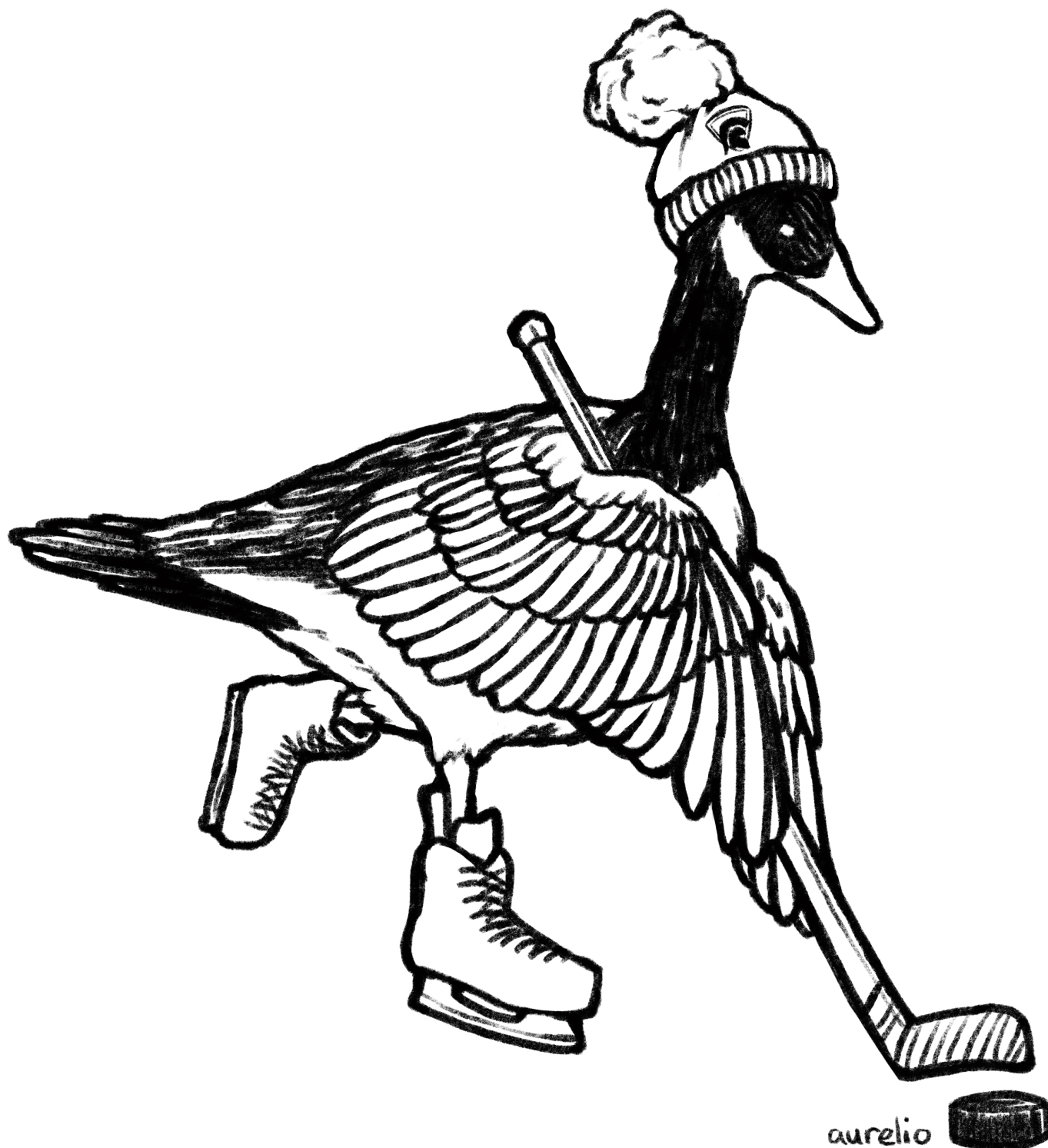




“WHAT WOULD CAMPUS BUILDINGS BE FOR HALLOWEEN?”

Hello everynryan,

Happy Halloween! Can you believe we're already onto midterms? There's only, like, a month left of actual classes, then we're onto exams. Cycles, man. You finish the term, feel briefly relieved, and then you do it all over again. You're never free.

Anyways, for costumes—I'm not a building, but I'm personally breaking out my maid outfit that I got off of Amazon for \$40 back in Grade 11. I need to get my money's worth out of it, okay? My dignity be damned. No one in Engineering has much spirit, but that's okay, I'll attempt to make up for it by wearing it to my Calculus 3 midterm today. Who else misses trick-or-treating? I don't even like candy, but being able to get free stuff just by knocking on doors was incredibly gratifying. Sigh, to be young again.

Instead of revelling in our youth lost to capitalism and the obligations begetting an adult, why not dive into this issue? We have odes to food, reviews of food, food recipes... hm, that's a lot. Well, it is getting cold out. One cannot help themselves from thinking about filling things when fighting the bitch ass cold while walking back from DP at 10PM. You could always try walking to Burlington to warm yourself up.

If your midterms are already over, take it as a post-midterm endeavour. If they aren't, do it anyways, because exercise helps jog the memory, or something. You only have so much time in university—studying is important, but an exam is an exam. Life is more than that.

I really should take my own advice (I have had multiple tweakouts over my midterms over the past week) but there's always room for improvement, no? Anyways, have a good Halloweekend, be safe, do good. **mathNEWS** loves you ☺

LOL (Lots of Love),

maj1ckED
Editor, **mathNEWS**

SEXY_SOFTWARE_BABE	RCH would probably get the cheapest "sexy devil" costume they could find and try to pass it off as a luxurious, high-quality costume
MOLASSES	PAS as itself
BEESKNEES	rch is scary enough..... eek.
APHF	M3 puts on a tie
LARS NOOTBAAR	M4 dresses up as E8 (Its true identity)
SMALLMOUTHBASSHATER	mc as a pink tie... no reason
ITH TERM	Dana Porter is going as Minecraft Steve
ABELIANKWYJIBO	I hate gay halloween what do you mean you're MC
MOBPSYCHOFAN	fedhall can dress up as a relevant building again
SUNRISE PARABELLUM	PAS would dress up like the Minotaur's labyrinth
DRAINPOOPER	uhhh we could cover dana porter in blue fabric and have it be that cube angel from evangelion
SCAREDFIRSTIE	V1 would go as Rikers
RAPIDEYEMOVEMENT	Needles Hall would dress up as the Pentagon
DICK SMITHERS	DP as Minecraft Steve
MAJ1CKED	E7/E5 would be dressed in a sparkley black dress with studded gems and a leg slit. CPH would be SpingleBob.
BARKED	QNC absorbs every other building and goes as a black hole
ABSTRACTED	PAC would go as PAC during exam season
CONTENTED	MC and DC would go as a divorcees
EVALUATED	MC would dress up as boston city hall surely
AWED	Needles hall would be a goose

ARTICLE OF THE ISSUE

Congratulations to TotallyNotSoup, winner of AOTI with their article Are you soup??? which has led me to figure out that I am indeed soup, which is frightening enough on its own, but I fear the prospect of becoming the subject of their next article. Please come by MC 3030 for your prize, but knock thrice and we will slide it under the door. I'm not taking chances.

abstractED
Editor, **mathNEWS**

'Single quotes?! What is this, fucking Python?'

AWAB QURESHI, **mathNEWS** EDITOR FOR FALL 2025
ALONG WITH SARA NAYAR, NOAH NAZARETH, SASHA NOVIKOV, AND TOM SI

mathASKS 159.4

FEATURING PROFESSOR TREVOR BROWN

SMALLMOUTHBASSHATER: FAVOURITE FISH?

If we're eating, maybe a lime chili tilapia? Sichuan grouper? If using our eyeballs and not teeth, then any big boi that's a disc (moonfish). I love how they look.

JOCHEMIST: WOULD YOU RATHER FIGHT 100 CUP SIZED GEESSE OR ONE (1) SINGULAR POLAR BEAR?

In this scenario, am I a Disney princess? If so, cup-sized geese. If not, cup-sized geese. I already like geese, and the cuteness of an angry thing is inversely proportional to its size.

0.423: HOW DO YOU LIKE YOUR TRIANGLES?

In the words of Delaunay*: "my brother in Christ—I sense that you already know the answer you seek."

(*not the words of Delaunay)

BEESKNEES: IF A PROBLEM IN YOUR CODE IS A BUG, WHAT'S A BEE IN YOUR CODE?

A friend. I have a carpenter bee living in the roof I built on my deck, and I think s/he's just great. I love hearing the bee just BOMP into the window as s/he goes about the day's business. S/he thicc

DOLLAR STORE PERSON: DO YOU HAVE A FAVOURITE LEETCODE QUESTION? IF SO, WHICH ONE?

I'm an old school POJ/ZJU/Baylor guy, so I haven't spent time on leetcode. I solved around 1000 such problems back in the day, so it's hard to pick. But, I fondly remember an old POJ question (poj.org/problem?id=3819) about computing the percentage of time spent "covered" by cell phone towers with varying radii on a journey through a 2D cityscape made of rectangles.

I also think every now and then about a problem I can't recall the source for that involved navigating a Roomba through a mess of polygonal obstacles. I do love me some computational geometry.

DOLLAR STORE PERSON: FAVOURITE VEGETABLE?

Gai lan. Or corn. It's got the juice.

AAQSR: IN YOUR OPINION, WHAT ALGORITHM IS UNDERRATED? WHAT ALGORITHM IS OVERHYPED?

I could probably answer this 20 different ways, but: Underrated: DFS. Overhyped: A*. Oh, also, underrated: recursive brute force. It's how we solve many of the world's most important problems in practice!

STD::ATOMIC<WRITER*>: WHAT IS THE MOST UNINTUITIVE BUG YOU'VE EXPERIENCED IN MULTITHREADED CODE?

The most unintuitive bugs have been actual compiler bugs. (I've found 2 so far in GCC.) Besides those, I still have to pick something that doesn't take a full page to setup, and that isn't too technical, so I can't really describe the worst ones. :)

Here's a silly one. I was optimizing a concurrent probing hash table, and realized the probing distances were extremely long. I made the table much bigger, and still saw long probing distances. Visualizing the table contents, there were extremely long regions of consecutive elements followed by extremely long regions of empty space. It turned out my hash function ($h \gg 16$, $h * \text{const}$, $h \gg 13$, $h * \text{const}$, $h \gg 16$) was using a signed int instead of an unsigned int, and the bit shifts were sometimes one-extending the high bits, drastically reducing entropy, and collapsing the hash space.

STD::ATOMIC<WRITER*>: RUST'S MULTITHREADED MEMORY MODEL IS HEAVILY BASED ON C++. IS THIS THE BEST THAT HUMANITY CAN DO?

I'm not sold on Rust.

As far as I can tell, you can't implement efficient dynamic concurrent data structures without using `unsafe {}`, and everything interesting happens in `unsafe {}`.

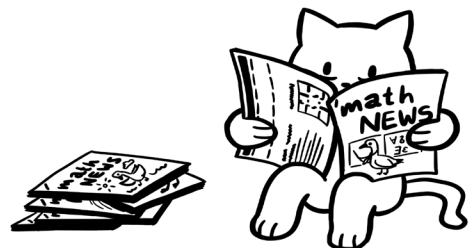
Garbage collection + concurrency is super hard (and Rust doesn't even try). I don't think ownership is the right model for high performance code. It doesn't play well with optimistic concurrent reads (reads without writing). For low performance code, it's fine, but also awfully tedious. Maybe a language could do better than Rust, C++ and Java, but I'm happy using C++ and Java... The lines between a language and a library blur at some point. For the most part, I think we can build better libraries and that'll be good enough.

Don't tell anyone else in the PL group that I'm an impostor! :)

BATHROOMCOLLECTOR: FAVOURITE BATHROOM ON CAMPUS?

There are functioning bathrooms on campus?? Sometimes it feels like I only see out-of-order signs.

I do like the *rust* in DC 2500's bathroom... but I don't like the concurrency.



WHY ENGINEERING IS NEVER NEUTRAL

INTRODUCTION

Engineers shape the world in ways most people don't stop to think about. They design the bridges we drive across, the hospitals we're treated in, and the phones we hold in our hands. But they also design missiles, drones, and surveillance systems. Engineering can protect life or take it away.

For much of history, engineering talent has been tied to war. From ancient catapults to modern fighter jets, the story is the same, that being technical skill aimed at destruction. But today's biggest challenges aren't about who has the most powerful weapons. They're about climate change, inequality, pandemics, and cyber threats. Meeting those challenges takes a different kind of engineering, one focused on peace and understanding.

The common belief is that engineering is purely technical and apolitical, but this neutrality isn't an option. Every bridge, app, or system influences the future we build. The real question is whether engineers use their skills to make the world safer and more stable.

ENGINEERING'S POWER TO SHAPE PEACE AND WAR

Engineering is the invisible structure of daily life. Power grids, water systems, roads, manufacturing, transportation, and communication networks hold societies together. When those systems are strong, people thrive. When they fail, societies fall apart.

After World War II, Europe's recovery depended on engineers rebuilding cities, power lines, factories, and transportation networks. Those projects didn't just restore infrastructure, they restored stability and cooperation. But the same skills have also gone into creating weapons and tools of surveillance.

In every case, engineers shape the balance between peace and conflict. They build the systems that decide whether societies hold together or fall apart.

THE DOUBLE-EDGED NATURE OF TECHNOLOGY

Most technologies come with two faces. The same knowledge can save lives or destroy them. Nuclear science can power cities or flatten them. Artificial intelligence can help find cures for diseases or enable autonomous weapons.

That's why engineers can't treat their work as neutral. Every technical project has ripple effects. A software tool might boost productivity but also expose sensitive data. A new material might improve construction but harm the environment.

Peace depends on foresight, on making choices that direct innovation toward human benefit rather than harm.

ENGINEERING AND GLOBAL CHALLENGES

When thinking about peace, many imagine the absence of war. But peace also means building systems strong enough to handle stress without collapsing. Today, the biggest threats to peace come not just from conflict, but from global challenges.

Climate change drives droughts, migration, and competition for resources. Weak health systems make pandemics harder to control. Cyberattacks can destabilize economies. Each of these problems connects directly to engineering.

Renewable energy reduces dependence on oil and gas, lowering the risk of resource conflicts. Clean water technologies prevent disease and disputes over scarcity. Cybersecurity protects governments and hospitals from collapse. Resilient systems are the foundation of peace, and engineers are the ones who design them.

RETHINKING WHAT IT MEANS TO BE NEUTRAL

Engineering education often frames the work as purely technical. A seminar might sound something along the lines of: here's a problem, here's some formulas, now find a solution. But that framing hides an important truth, the fact that every design reflects choices about who benefits and who doesn't.

A bridge can link communities or cut them off. An app can make life easier or spread misinformation. An energy system can be sustainable or polluting. Even small mistakes, like insecure software or unsafe buildings, can cause harm on a huge scale.

Engineers can't separate the technical from the social. Taking a peace-oriented view means asking who gains, who is at risk, and how each design affects stability and fairness. That shift changes engineering from just solving problems to shaping futures.

ETHICS, RESPONSIBILITY, AND THE BIGGER PICTURE

Engineering already comes with ethical responsibilities. Codes of ethics require engineers to prioritize safety, sustainability, and public well-being. Those aren't optional, they are the foundation of the profession.

Peace is already built into those responsibilities. Keeping people safe, designing for long-term stability, and protecting the environment all serve peace. Engineers don't just work for employers or governments; they work for society.

Ethics shouldn't be treated as a checklist but as a principle that guides every stage of design. Ignoring peace isn't neutrality, it's abandoning professional duty.

CONCLUSION

Engineering and peace cannot be separated. The systems engineers create, such as bridges, energy grids, medical devices, and software, shape whether societies become stronger or more fragile.

That responsibility is immense, but it's also an opportunity. With ethics, foresight, and creativity, engineers can be more than builders of machines and systems. They can be builders of peace.

Every design is a choice about the world people will live in. Awareness of that fact isn't optional, it's the foundation of responsible engineering and the first step toward creating a world worth living in.

Overall, everyone, especially engineers, should strive to be engineering stewards, using skills responsibly, considering long-term impacts, and guiding technology toward the good of humanity and the preservation of peace.

Joe Stocky

BE GREEDY

This article is specifically for all the first-years out there.

Hi! How are you all feeling? First midterm season is always a huge gut punch. I remember feeling like I was going to fail out of all my courses. If it helps, I can tell you from experience as a fourth year that this is probably the hardest it's ever going to be. Sure, the classes are going to get more complex and advanced, but you'll know how to study better, what not to do, and you'll just generally know what you're in for more. You'll get better at this.

But this article isn't really about that. It's a bit of small advice, bundled up as a math lesson. This counts as studying, so feel free to read it guilt free.

If you ever take CS 341, you'll learn about a class of algorithms called greedy algorithms. The basic idea is that at each step of the algorithm, it takes whatever choice maximizes a certain metric, without thinking about past or future steps. It's a pretty simple idea, but remarkably robust, and surprisingly optimal in a lot of use cases.

At least, it's worked out well for me.

You might get to a point in your undergraduate career when you start being drawn to something outside the realm of your major. That's a really precious feeling. Don't run away from it.

It can be a scary feeling, because it can draw you away from a path you had worked very hard to place yourself on. I know that for many of you, getting into Waterloo Math was a really

big deal—the culmination of countless long days and nights of studying and preparation.

I'm also not recommending throwing away your entire life plan in the face of, say, a difficult midterm. Knowing how to handle take tough hits like that is another important skill you'll hone over the next few years here.

But, and I'm truly sorry for the cliché here, now is the time to *discover yourself*. University life is going to change you a lot. You'll be exposed to new people and new ideas. This is the next step of your life, and if you decide now that something is more interesting to you than following the path you had planned... I can't promise it'll always be the optimal solution, but it'll usually be close.

I've tried to live my life by following the most interesting opportunity available to me at any given time, and I think I'm a lot happier for it.

If you can let an old man (22) give some sage advice, you should give yourself permission to chase the things that interest you. Don't be afraid of that voice in your head telling you what you'd *really* rather be doing. Some people spend their whole lives waiting to hear it—don't let it fade away, unanswered.

Dick Smithers

ISSN 0705-0410

UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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THE ETYMOLOGICAL ROOT OF “JUMBO”

LIFE, IN THE GREATEST SHOW ON EARTH

In April 1882, change had come to Manhattan. Soot-stained workers toiled in the city streets, their smokestacks challenging steeples for supremacy over the skies. From the island's forts and batteries, legions marched south, engaged in war to overturn the nation's slaver past. Architects planned the city's post-war future; among the island city's most visionary, the notion of a skyscraper was starting to take shape.

Americans were increasingly united in one thing: their readiness to look up.

Their demand would be met. On April 9th, 1882, P. T. Barnum braved the morning chill to stand at Manhattan's southern pier, watching a ship of smokestacks and cloth sails glide into harbour. A strange ship, with cargo stranger still:

One unimposing English elephant keeper, and in a cast-iron box in the depths of the ship's steel hull, America's first African elephant.

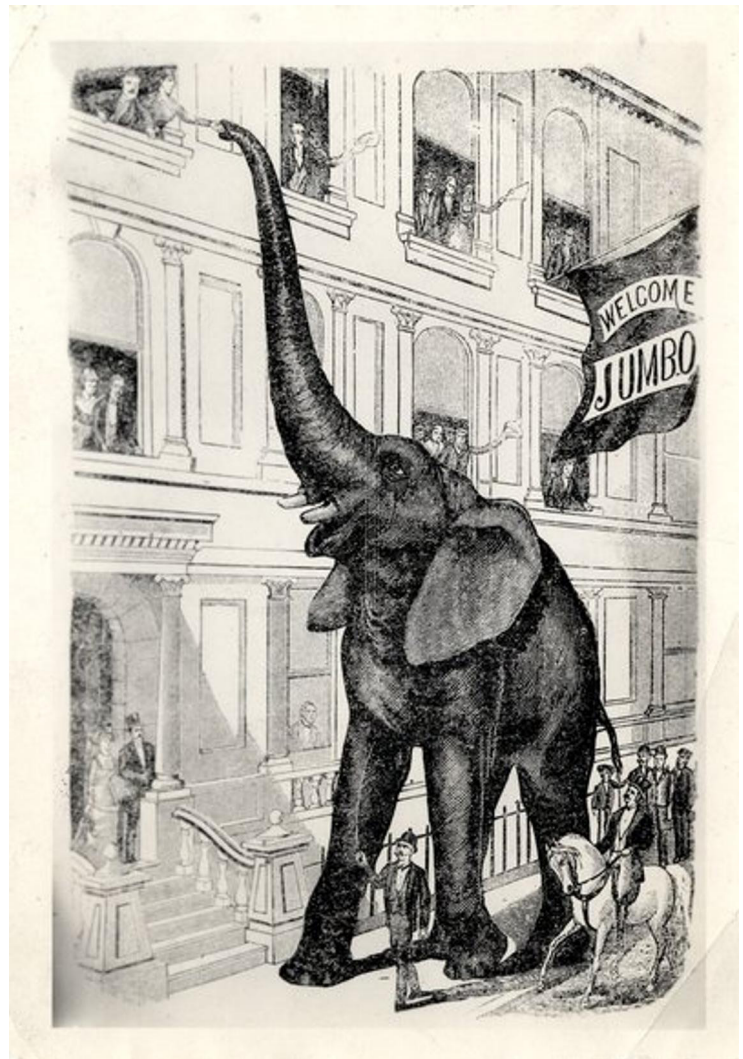


JUMBO LANDED IN SAFETY; HE CELEBRATES HIS ARRIVAL IN A BOTTLE OF WHISKY — FRONT PAGE OF THE NEW YORK TIMES, APRIL 10, 1882

The Greatest Show On Earth was living up to its name.

Earlier that year, P. T. Barnum had purchased Jumbo, England's first African elephant, from the Royal Zoological Gardens of London, England for two thousand pounds. After only three weeks of Jumbo's stay at the circus, Barnum hit breakeven. In the remaining months before Jumbo had boarded *The Assyrian Monarch* en route to America, London's Royal Zoological Gardens earned \$50 000 in revenue on Jumbo alone. All of England had wanted to say goodbye. Alongside Jumbo and his keeper, Matthew Scott, *The Assyrian Monarch* had brought bags upon bags of letters written by the children of Britain, addressee: Jumbo.

"Jumbomania" was underway.



"JUMBO IN NEW YORK"—ARTIST UNKNOWN

Visitors came from all over the American continent to New York City, where at Madison Square Garden—an oval-shaped arena on the northeast corner of Madison Square, the first of four arenas to bear its name and the nearest geographically to its namesake—P. T. Barnum's Greatest Show and its lead star, Jumbo, made their daily appearance.

Not everyone could pay for the journey to Madison Square. If Barnum could not bring the audience to the circus, he would bring the circus to the audience.

Barnum's circus went on tour. Leveraging the new Grand Trunk Railway, he journeyed across Canada and the northeastern United States. Jumbo and Scott saw New York, Pennsylvania, New England, New Brunswick, and the British colony stretching from Sarnia to Gaspé, then called the Province of Canada. Children from all over the continent would see Britain's pride and joy.

Jumbo's renown only grew.



P. T. Barnum sold children on the tale of the world's happiest elephant. But Matthew Scott, in his autobiography, wrote a different story.

Ever since I brought him away from his wife Alice, whom we left in England, he has been extremely fractious in his temper even with me, and no one else can venture near him if they value their lives.

MATTHEW SCOTT

Either for detestment of noise, or for Prometheus, foresight, whispering in his ear, neither did he do well with the nights on the railway.

He can neither sleep himself, nor will he let me sleep. The shaking and jar of the train, the worrying noises, etc., keep him in a constant ferment of nervous excitement, and he gives me little chance for sleep. I no sooner get just nicely off into a dose [sic] than his trunk is groping into my little bed, feeling all round my body to find my face, to ascertain if I am there, so as to awake me to talk to him.

MATTHEW SCOTT

P. T. Barnum, in the days following the railway disaster of 1885, would tell St. Thomas reporters how Jumbo had learned to cope.

Scott slept in [the railway car] with Jumbo. He is a great beer drinker, and, at night, before going to bed, he had a quart of beer placed in the car and after drinking half himself, gave Jumbo the other half. Jumbo always took it. One night Scott did not get his beer, and went to sleep without it. Presently Jumbo leaned over him, put his trunk around him, lifted him out of bed and deposited him on the floor. Scott took it as reminder that he hadn't received his beer. Some beer was brought and Jumbo was quieted.

P. T. BARNUM

P. T. Barnum's tales often contained fabrications, but all sources agree: Jumbo never turned down a drink.



Two years after Jumbo made landfall, the great stone towers of New York City's Brooklyn Bridge opened to pedestrians.

Only a week thereafter, a woman tripped on its narrow staircase, triggering a stampede that killed twelve and injured thirty-five more. New Yorkers grew afraid of the bridge.

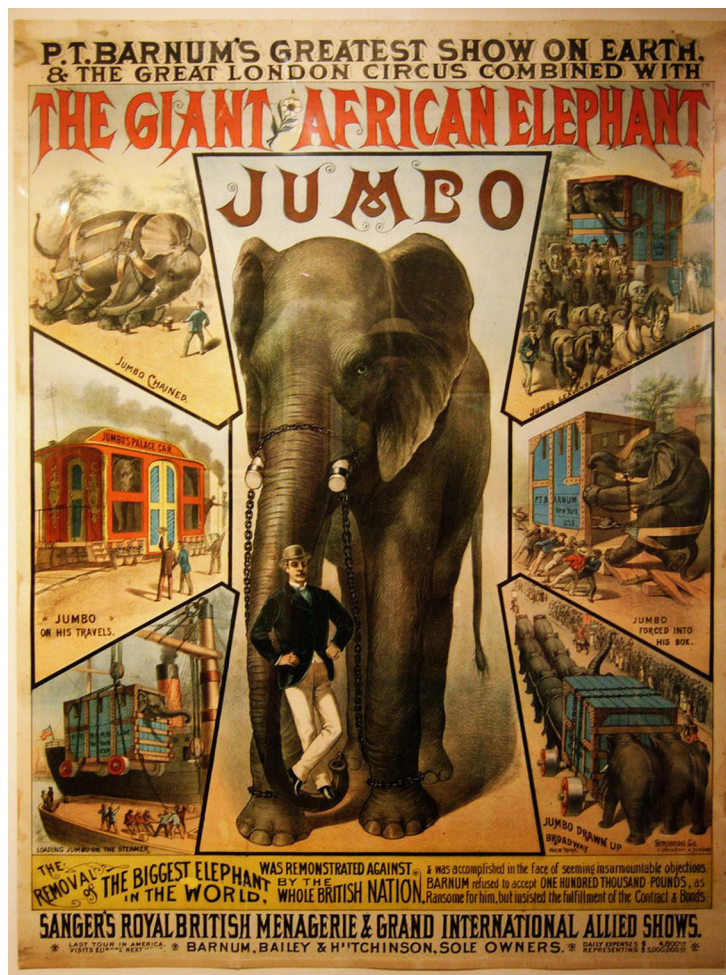
The Greatest Showman had a solution. He would prove the bridge was safe. On May 17, 1884, at 9:30 AM, American industry paused as the Brooklyn Bridge began to quake.

Every available space on the tops of the towers and other high places of advantage, as well as on the banks of the river, was covered by thousands upon thousands of human beings, of all kinds and colors, and from all climes, gazing upon the greatest and most sublime works of man and God.

MATTHEW SCOTT

America, at last, looked up. What they saw—rising above Manhattan, towering above the streets below—was twenty elephants, thirteen camels, and at their head, a symbol of the new America:

Jumbo.



At the time, there was no common descriptor of height “jumbo.” It was not yet a word.

Most sources agree that the elephant's name derived from Swahili, where “jumbe” refers to a leader. Jumbo, the very large elephant, was not named for his size.

By the time he walked across the Brooklyn Bridge, that had begun to change.

The word “jumbo” was becoming named for him.

Key sources:

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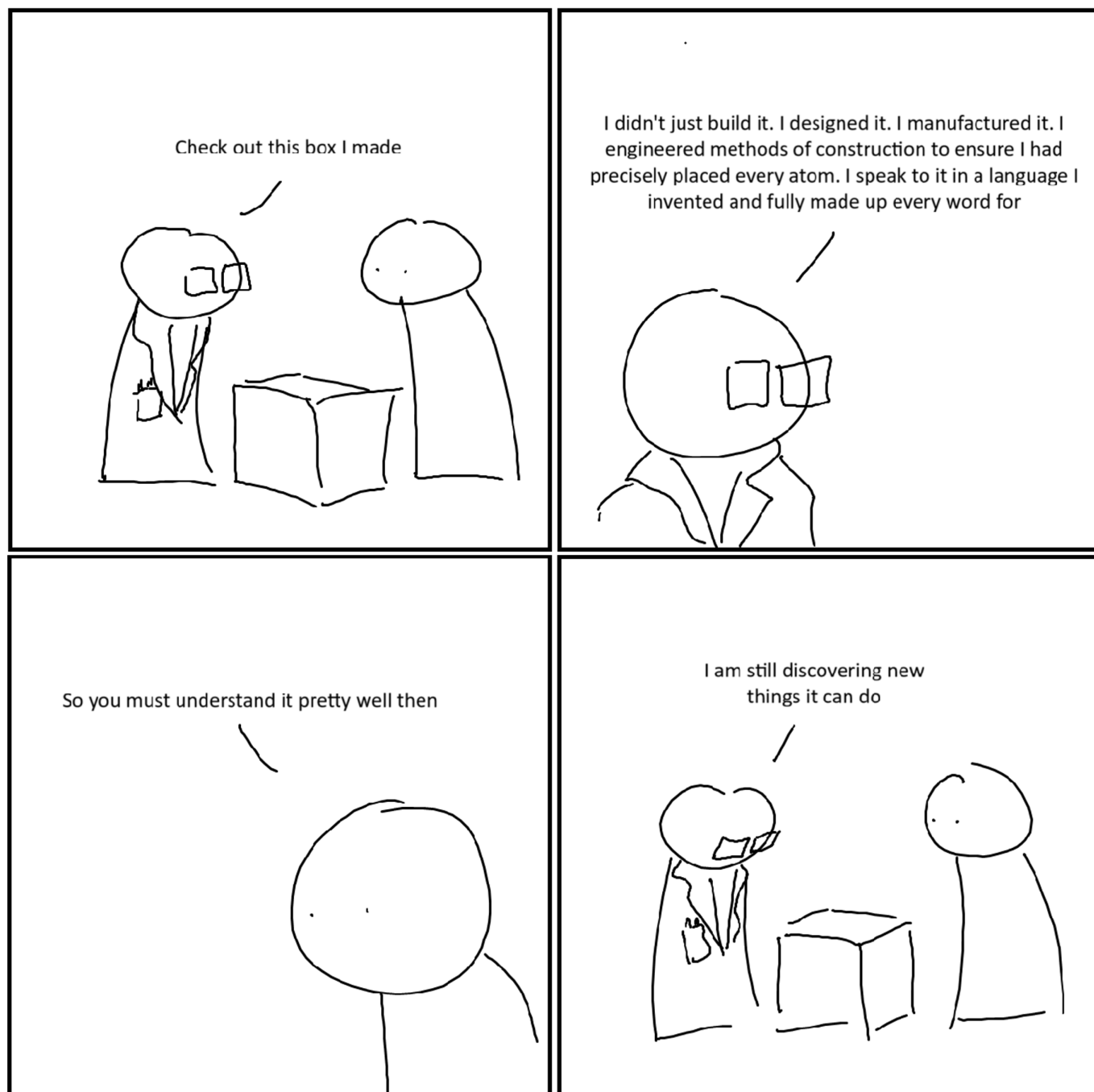
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Jumbo in New York, Barnum circus poster both from Wikimedia Commons.

Complete sources to be attached with final article in the series.

BLACKBOX



INSIDE THE WORLD OF OUTSIDER MUSIC

Most known music is extremely polished. A song goes through multiple writers, producers, executives, and advertisers before it hits your ears. Most artists are professionally trained or have some kind of musical experience. The barrier for recognition was even more pronounced only until very recently. Most of us never hear from the underside of the fame and professionalism.

Outsider music is a broad label encompassing amateur music. Scouring the internet, you'll find countless attempts at describing all things that are outsider and excluding all things that aren't. Generally, it has to have some amateur, childish quality (as are most artforms associated with the word "outsider.") Some call it a genre. Others call it a movement. It can be lo-fi and self produced, or it can be comically over-produced. It can be an unknown nobody spilling their guts out or it could be a mega famous celebrity grossly overestimating their talent. The contour isn't drawn around musical metrics but around artistic context. To attempt categorization, it serves to analyse established and undisputed figures in the outside world.

Arguably the most famous musician in the outsider tradition is Daniel Johnston. While working at McDonald's in the 80's, he began his output by handing out copies of his mixtapes, including the now-famous *Hi, How Are You*. While his following was underground, among his fans was Nirvana's Kurt Cobain, who often wore shirts of Johnston's works. Since then, his popularity expanded. Johnston had diagnosed bipolar disorder and his lyrics have been described as being naive and childish. He is self-taught and all instruments are self-played. *Hi, How Are You* was self recorded on a cassette recorded before upgrading to a professional studio. He continued his decades-long career until he passed away in 2019, remaining popular today in online music spaces. Among my favourite songs of his are *True Love Will Find You In The End* and *Walking The Cow*. Both are stripped back with lyrics a primary schooler could write that reveal something pure about the human condition.

One of my favourite outsider songs is *Rock N Roll McDonald's* by Wesley Willis, who was fixture of Chicago's 90's punk scene. That track appears on his *Greatest Hits* album, which was compiled by Dead Kennedys' Jello Biafra. Like Johnston, Willis had a cult following who admired the unusual qualities of work, also often being described as childlike and naive. *Rock N Roll McDonald's* is strangely half-sung and half-spoken without rhythm or key, mostly about the nutritional facts of a quarter-pounder. Nearly all of his songs use the same three electronic keyboard samples. Willis had paranoid schizophrenia and a rough childhood. He grew up in the projects in Chicago in a violent household, finding solace in the arts. He wanted to become an architect when he grew up, drawing sprawling landscapes of the Chicago cityline before entering music. He did not have as acclaimed nor as long of a career as Johnston, passing away in 2003.

On the more modern side of outsider music is the story of Farrah Abraham: the teenage mom turned reality TV star who

tried her hand at making music. Abraham was first cast on the show *16 and Pregnant* in 2009 and then on *Teen Mom* where she stayed until 2012. Upon leaving *Teen Mom*, she released *My Teenage Dream Ended*. The album was critically panned, citing the autotune drenched vocals and trashy electronic beats as symptoms of laziness. The public interpreted Abraham's foray into music as a rising young reality star cashing in on her 15 minutes of fame.

In my opinion, I think she was being sincere. It's hard for most people to imagine themselves going through what she did. Most people are also unwilling to listen to sincerity either, often mistaking it for insincerity. The standout song on the album for me is *The Phone Call That Changed My Life*, serving as a great album introduction to the rest of the album.

There is one common throughline: when we associate a work as outsider, we're supposed to look down on the music. The amateurity and novelty is supposed to be so bad that it's good. From my vast listening of the category, I've chosen these three artists to illustrate the two most important dimensions of outsider music: sincerity and lack of skill. Four distinct kinds of music can be mapped. Music that is sincere and skillful earns its right to emotion and is considered good; music that is insincere and skillful is usually forgotten but can be a pleasant listen; music that is insincere and unskillful tends to be slop that no one likes; the final quadrant is outsider music, which, especially today, is so captivating because it exists at the intersection of two derided forces.

Throughout time, skill has been expected of artists. One of the easiest ways to write off art is to attack its skill. Abstract art can't be good because there's no skill. Noise music can't be good because it's just sounds—anyone can do that! Sincerity has only recently begun to be attacked. We live in a cringe culture, where everything is ironic. To be cringe is to be un-self-aware, which is to be sincere. Sincerity and its adjacent qualities are downcast.

Music that is naive and childlike can only come from a genuine place. It's why Johnston, Willis, and Abraham have their claim to fame. Additionally, at this intersection lies the works of many who face disability. It's a commonly observed pattern that people facing mental disabilities are often labelled outsider (Johnston and Willis), and the ethics of associating their art with immaturity and childness is the subject of much online discourse.

The right way, in my opinion, to engage with outsider music is to treat it seriously. Its creators often have their voices silenced in the non artistic world and have trouble being taken seriously, especially those facing mental disability. Its good for your character to embrace raw sincerity and really listen to what these artists are saying. Open your heart.

AbelianKwyjibo

WALKING FROM WATERLOO TO BURLINGTON REVIEW (PART 2)

OR HOW I LEARNED TO STOP WORRYING AND LOVE DUNDAS MCDONALDS

Continued from **mathNEWS** 159.3; to summarize, we started at the SLC, weaved through uptown and the Kitchener industrial parks, nearly got flattened getting to Cambridge, and proceeded on a highway shoulder for a good 30 kilometers or so.

It's about 7 PM, we've walked almost 60k, and the sun is drawing its last breath of the blue sky. We're reluctant to continue down a stretch of highway that is becoming increasingly shoulderless as the light goes out, but there is an alternative: according to Google maps, we can take a slight detour south and go to a trail that sends us right to Dundas!

PART 3: WEIRS LANE TRAIL



This trail, named “Weirs Lane Trail,” gets its namesake from the adjacent Weirs Lane. I guess that means the obvious entrance is supposed to be on Weirs Lane, but according to street view, the only thing marking it is a perilous wooden plank in front of a slight parting of the forest trees. I had a slight sense of anxiety on account of the inclination that it might not exist.

This grew worse as we circumnavigated Weirs Lane, which was a winding, downhill road that cars seemed to love flying down at high speeds, forcing us to literally jump into ditches from time to time. This meant going back up with daylight having mostly faded, would be a dangerous task.

I rapidly alternated my eyes between the Google Maps location tracker and the road, eventually passing where Google said it was, having not seen the entrance. With dread, I started walking back to my friend to tell him the unfortunate news when something caught my eye: that same wooden plank, barely visible at the side of the road. And from this angle, we saw that there did indeed appear to be a (very narrow) trail.

We ran inside before the next wave of pickup trucks and took a well-deserved break on the rocks, with the time constraint finally gone (everything from here was sidewalked). By the time we rose again, it was pitch black.

The trail, of course, was not lit. So, with little other choice, we took out a big battery-powered light and went ahead, praying we went down the right path every time we encountered a fork. This is the time that you start thinking you hear a coyote or a bear or a maleficent human, at any corner, and honestly, who's to say there wasn't!



After hearing something we both swore was a howl, our pace went from speedwalking to running: but the trail seemed unending, curving left and right and wherever for kilometers, even contradicting Google Maps at points. But eventually, somehow, we made it out, as the trail suddenly opened up to a sideroad in a cozy little Dundas community.

PART 4: DUNDAS TO BURLINGTON

The relief from escaping the trail unfortunately allowed us to notice once again the extent of pain we were in. My legs and feet were very strongly invested in the idea of not moving. The natural solution, of course, was therefore to make it to the Dundas Shoppers before closing and buy some Advil. From there, we continued to the local McDonalds to reunite with the friend we had lost earlier who decided to go to Hamilton by car for some reason. I had not eaten a single full meal that day, and the energy gained from the Agha Turkish the night before was long used up, so the 3000 calorie combo was very welcome to my stomach.

Refueled and numbed, we were motivated, and pretty convinced we could make the final stretch to Toronto, despite being about double the walk we had already done. But first,

it was time to obtain our backup achievement: visiting McMaster's SLC equivalent.

It was HoCo, meaning it was loud, energetic, and busy, but we were too exhausted to brag about what we had done to anyone. I guess we were kind of like the meme with the guy in the corner at the party but I'm reluctant make that comparison after that image was re-appropriated at some weird Bitcoin-themed drone show recently.

We left McMaster and now, we had a straight shot to Toronto. The rest of the roads had beautiful, large sidewalks, and we could take as long as we wanted, so we could make it, right?

PART 5: THE END



We quickly realized we could not make it. As we left Dundas and entered Burlington, having passed an absolutely stunning view of the Hamilton coastline (no, I'm not joking, it's actually super pretty at night) it became apparent that sometimes, pain is not just a suggestion.

Just before Aldershot GO, we decided that a rock looked really nice for sitting, and we did not move. For quite some time. Until we decided we should just Uber to the GO station and call it. That was somewhat disappointing, but we did come to think: we walked about 80 kilometers! That's pretty cool.

Thus, the journey ended with a bus to Port Credit I can barely even remember on account of being mostly asleep, followed by a local Mississauga bus which had some interesting 5 AM characters, and finally the venerable 25C back to Waterloo.

I hope we can do Toronto someday, but in the meantime, maybe you can beat us to it? All you have to do is keep walking, after all. It doesn't take much. You just put one foot after the other, and again, and again, and again and again and again an

A PRETTY GOOD POZOLE RECIPE

In case you haven't heard of it before, pozole is a soup of Mexican origin made from meat, onions, and hominy. The version here is specifically pozole rojo, flavoured with red chiles.

It's really good. So good, in fact, that I made some yesterday and felt I should share the recipe so you can make it too.

The preparation's very easy, and mostly hands-off. The only difficulty is that you might have to go to a specialty store to find hominy and dried chiles.

If you're in KW, I recommend America Latina Grocery and Eatery at 1120 Victoria Street.

INGREDIENTS (MAKES 6-7 SERVINGS)

- 1 ½ lb pork shoulder
- 1 large Spanish onion
- 6 cloves garlic
- 3 bay leaves
- Water or chicken stock
- 1 can hominy (820 g)
- 3 ancho chiles
- 5 guajillo chiles
- 5 Chiles de árbol (or more if you want it to be spicier, or none if not)
- Salt and Pepper
- Cumin
- Coriander
- Oregano
- 1 packet sazón Goya (optional)
- 1 lime
- Any and/or all of {cabbage, radishes, cilantro, lime wedges, cotija cheese, tostadas, tortillas} for garnish

DIRECTIONS

1. Cut the pork into bite-sized pieces and the onion into quarters, then add to a large pot with the peeled whole garlic cloves, bay leaves, hominy, salt, and pepper, and a squeeze of lime juice. Cover with water and/or stock and bring to a boil.
2. Simmer for 45 minutes or so, and in the meantime de-seed and soak in the dried chiles in hot water.
3. Fish out the onion and garlic from the pot and add to a blender with the chiles, plus a few spoonfuls of the broth. Blend until a thin paste forms.
4. Remove the bay leaves from the pot and add the chile paste, then the other seasonings to taste and simmer for another 15 minutes.
5. Garnish and serve.

RATING (BASIC) WATERLOO SKATE SPOTS

FOR THE FEW SKATE, BMX, ROLLERBLADE, ETC. ENTHUSIASTS AT UWATERLOO

Remark: In this article, we choose to deviate from the traditional norms of separating skateparks and street spots. I've included the Waterloo Skatepark purely due to how close it is to campus—other skateparks may be covered in a later article (if I manage to visit them). Please choose your spots wisely in accordance with your own skill level and comfort :->

It is generally recommended to stick to skateparks... howeverrrrr, the sub-par skate/BMX/rollerblade edit usually calls for street spots, so it's good to be well-informed in order to stay core.

Additionally, please voice your complaints regarding the ratings to your local mirror. These are all subjective!

1. WATERLOO SKATEPARK (0.85/1):

PROS:

- Great park flow due to circular shape (the bagel).
- Unique set of features.
- The central raised section serves as a great spot to film clips from.
- The tree in the center is a nice aesthetic 🔥 🔥 🔥
- Skateboard-shaped benches around the edges are definitely a nice touch.
- Concrete is honestly great. Not as slippery as other parks (looking at you, Newcastle), and provides a lot of grip without being complete sandpaper (also looking at you, ARC).
- Not sketchy—always a good vibe.
- Features are evenly spaced (for the most part).
- The multiple levels separated by ledges and rails is a really nice touch. Adds some variety during clips.

CONS:

- Difficult to hit certain features repeatedly during busier hours, as no matter where you stand, it feels like you're always in someone's way.
- The banks along the outer circumference of the park are steep with minimal transition.
- Needs more quarter-pipes. The central one is only properly rideable from one side, and the tiny quarter on the outer circumference is poorly placed (easy to run into another rider on the way down).
- No proper bowl (RIP transition riders) :<
- Drainage is abysmal. City of Waterloo, pls fix. (3klikes)

My overall verdict: I've ridden my fair share of skateparks across the Greater Toronto Area and beyond... Waterloo Skatepark is easily up there as one of my favourites. It has its flaws, but it's unique. I'm not pessimistic.

2. WATERLOO TOWN SQUARE (0.4/1):

PROS:

- Solid variety of features (large/small stair sets, ledges of various sizes, etc.)
- Iconic.

CONS:

- Heavy foot traffic... It's literally Waterloo Town Square.
- Often events/festivals take place, thus limited availability.
- Not feasible 90% of the time due to safety concerns with passersby.

My overall verdict: Would not recommend.

3. FOUNTAIN ACROSS THE STREET FROM WATERLOO TOWN SQUARE (0.67/1):

PROS:

- Unique feature with a lot of potential.
- Great backdrop for clip-farming.
- Easily accessible (301 ION, Bus Routes—center of Uptown Waterloo).

CONS:

- High foot traffic—risky to hit safely, and difficult to session.
- Close proximity to a highly frequented road, posing a safety concern.
- Water. Enough said.
- Not niche (everyone's seen it, so you're not core).

My overall verdict: Recommend... some of the time. Please be safe.

4. WATERLOO PARK ARCHITECTURAL FEATURES (0.75/1):

PROS:

- Huge variety of features, huge potential (stairs, ledges, ramps, etc.)
- Beautiful environment (trees, water, completely open space), which is great for clips.
- No roads!!
- Features are evenly spaced—potential for long lines.
- Easily accessible (301 ION, parking lot for cars, accessible by Iron Horse Trail).
- Concrete is smooth!!!!
- Waterloo Skatepark is literally right there... go utilize that beauty of a bagel.

CONS:

- All ledges are skate-stopped (I do not condone vandalism, however ledges become difficult to ride atop, and are nearly impossible to grind).
- Moderate foot traffic with a large concentration of families—safety concern.

My overall verdict: Recommend... mainly due to the proximity to Waterloo Skatepark.

Please note that I will be visiting more skateparks and spots over time. I'm trying to stick to rating spots off of private (or university) property. Remember to wear appropriate safety gear (to your own discretion), know your limits, and have fun!

pix

A FEVER DREAM I HAD LAST NIGHT

My roommate shakes me awake.

"Dude, wake up!" he says hurriedly. "We're going to be late for the CS 101 midterm!"

I slowly push his hand away. "What are you talking about? Our next midterm is a week away."

We had just finished writing our CS 145 midterm and walked back to our dorms. I remember setting my backpack down, exhausted, and then... ending up here. Right outside the exam hall, bracing for my impending doom in a course I hadn't studied for since the first week of classes.

I shuffle into the exam hall with a dozen other exhausted students. It's hot and stuffy in the room, and the anxiety radiating off everyone makes the atmosphere even worse. Everyone finds their seat, and mine is dead centre of the room. People settle into the seats around me, and I feel like an eight tile from Minesweeper as I take out my pencils.

"Okay," a TA declares. "You have two hours. You may begin."

There's a mad scramble from everyone to start the midterm, but I'm stuck in place. Hell, I don't even know what this course is about. I slowly flip to the first question with a heavy, sinking dread in my chest.

Question 1: Prove using the $\epsilon - \delta$ definition of limit that $\lim_{x \rightarrow 0} \sqrt{|x|} = 0$

Okay, I can do this. Maybe it's not so bad.

I'm partway through question two when someone's alarm goes off. Immediately after someone finally turns it off, another alarm rings. It's been set to vibrate, but the bzzzt bzzzt bzzzt grates my nerves and pulls me out of focus. Frustrated, I skip to the next page.

Question 3: Determine the maximum shear stress in the beam when load P is applied.

When did we even cover this topic? I raise my hand and wait for a painstakingly long time as the professor makes his way over, maintaining eye contact the entire time. When he

arrives, he takes one look at the page and looks at me with a deadpan expression. "I can't help you with that."

I look at him pleadingly, but he just taps his watch and points at the timer on the screen. I internally scream when I see the number 00:10:56 quickly ticking away. I frantically flip through the exam booklet. Was there a formula sheet I had missed? No—it was just question one, two, wait—I look away and back at the question. It's different, and this time it reads, "Question 3: What is Professor Jeffery's eye colour? [15 marks]"

"What?" I murmur underneath my breath. A guy sitting on my left shoots me a glare and shushes me. He has already written two pages full of calculations. I'm so cooked. By now, the smell of sweat is suffocating. I take off my hoodie, but it just gets worse. When I read the question again, it says, "Question 3: What's the most effective way to combat body odour?". The fire alarm goes off. Simultaneously, a speaker starts blasting It's Raining Men. Our professor sighs and says, "Be so for real right now," like we're expected to turn off the fire alarm too. Sprinklers activate in the room, drenching our clothes and soaking our tests into flimsy, floppy material. Students are leaping out of their chairs in a panic. The TAs whip out giant super soakers and start blasting us with soapy water, screaming, "IT'S GROUNDHOG DAY!" There are screams of terror. A rogue spray of soap ends up in my mouth. It tastes like Ultra Peachy Keen Monster Energy.

"Hey," someone hisses into my ear. "Hey!" I grumble and try to shrug them away. Abruptly, the world spins, then cuts off entirely.

I'm back in my dorm, and my roommate is staring at me. "Dude, are you okay? You looked like you were having a nightmare."

I take a slow, deep breath to recenter myself, and I shake my head, mostly in relief. "I'm good. Just had a strange dream." I toss my blankets off. They're damp from sweat.

He pauses, mostly accepting the answer, then wrinkles his nose. "Maybe you should take a shower."

I wrote this instead of studying for my midterm

profQUOTES

CO 439: OLIVER PECHENIK

- “ There’s one guy in Italy who thinks he knows. But people don’t believe him.
- “ It’s literally a pringle. If you don’t believe me, go down to the CnD and look at a pringle.
- “ That’s a good word, because it means what it sounds like it means.
- “ I don’t know. We’ll just say it contradicts everything in the world.
- “ The exams are quite good. If you look at the graph, they look terrible, but they’re actually quite good.
- “ We hate bookkeeping. This is why we did not sign up to be actuaries.
- “ Sorry. I wasn’t quite listening. I was thinking of my own proof.
- “ Like all versions of Nakayama’s Lemma this is very confusing, kind of surprising, and also completely trivial.

MATH 137P: MAX FITZSIMMONS

- “ Sometimes people make bad assumptions, like thinking that a math degree gives you good jobs.
- “ Technically functions can cross vertical asymptotes, but only when you’re stupid like that guy *[points at student]*.
- “ I can’t just do what I want... I have to do math :(
- “ Any questions about the midterm? Concerns? Threats?

MATH 235: LIAM MCQUAY

- “ Who put calculus in my linear algebra?
- “ If you don’t understand, it’s nice to put on headphones, maybe watch some shows, you know, enjoy.

CS 245E: ERIC BLAIS

- “ p is nice.
- “ *[Asked a question]* Yeah but then I have to talk about the ohh yeah groeifeiojfoewjdioewjfoiew.
- “ Let’s see if we can prove these with formal proofs, and what we’ll see is that—uhhhh—well, that we can.

STAT 230: GREG RICE

- “ I grew up basically in a casino.

ACTSC 231: KEITH FREELAND

- “ You guys will never buy a house probably... unless you really pray, “Come on mom and dad die come on die, I need the inheritance.”

CHEM 333: EVGENIY PANZHINSKIY

- “ *[Discussing how many attempts we should get on the quiz]* You only get two chances *[in life]*, when do you ever get 3? *[a student points out baseball]* I do not watch that stupid game.
- “ *Student:* How much do you like us?
Prof: A lot, I love all of you, please come to my lectures.

CO 456: DAVID JAO

- “ We do put in some effort into ensuring that bad rng does not tank your exam performance.
- “ Your self-hate is positive in this case.

CS 135: ROBERT GARBARY

- “ We wanna do an example where shit really hits the fan here.
- “ I don’t say just for the lolz.
- “ Just for shits and giggles, let’s actually run this.
- “ Is (list 6 7) the empty list?
- “ In a perfect world, where mathematicians are in charge of everything...
- “ Is the empty list empty? It is? Oh shit!
- “ I think I’ve broken racket somehow.
- “ LOLMATH, League of Legends Math...

CS 145: TROY VASIGA

- “ Let’s type in the midterm marks... the students did very well *[types in (list 3 9 -1 19)]*. One student passed on the dot! *[types in 50]*.
- “ Mmm this is so tasty. Num Num Num Num Num, Num Num Num Num.
- “ And I will f that, eventually.
- “ Remember from grade 11 if you studied in Canada, or grade 2 if you studied in China, we have logarithm laws.
- “ I don’t want to mark like, 500 lines of code. I haven’t died and went to hell yet.

“ I want to at some point in my teaching career make an exam out of a million. And also out of one.

“ *[Describing partial orders]* It's kind of like saying less than or equal to, but it's a freakier way of saying less than or equal to.

“ The list of 6 and 7, apparently that's cool now, I don't know why.

CS 241E: ONDREJ LHOTAK

“ That is a very, uh, classist definition.

“ If I take the prime numbers—there's infinitely many of them, or so the math people tell me.

CS 245: LILA KARI

“ If, by clickity-clacking...

“ It's not like sex, it's everybody with everybody.

CS 246: BRAD LUSHMAN

“ I do all my coding in a plain text editor anyway.

CS 246E: BRAD LUSHMAN

“ Who knows how to better initialize books... than Book?

“ Raise your hand if you've done something your parents don't know about. *[everyone raises their hand]* The lesson is... NEVER TRUST YOUR KIDS.

“ Don't trust your kids, and limit friends. I'm raising some neurotic people here... I mean, at least it's not operating systems, where they tell you to kill your kids.

CS 341: TREVOR BROWN

“ My blood caffeine levels need to be above a certain level or my brain turns to goo.

CS 343: PETER BUHR

“ Real programmers use emacs.

“ The most important part of being in a residence is getting out of the residence.

CS 350: KEVIN LANCTOT

“ Electrical engineers aren't as smart as you think they are.

CS 370: JEFF ORCHARD

“ Isn't there some kind of 3-letter acronym that starts with B, and it's sexual? Binding... whatever

“ So we're gonna write this down... and it's NOT sexual.

“ The A stands for “Detection.”

“ *[Rickrolls the class]* SIX SEVEN!! ☹️🙄☹️...whatever.

CS 454: SAMER AL-KISWANY

“ They will kick you out and slam the door on your face!

“ Threads are like kids: easy to create, hard to manage and make sure they don't kill each other. 😊

CS 466: SEPEHR ASSADI

“ So how do we minimize this? Of course, we put it into Wolfram Alpha.

“ My handwriting has an accent.

CS 486: KATE LARSON

“ You don't want $\mathbb{Z}$, you want to knock out those children first.

ECON 101: MIKAL SKUTERUD

“ Anyone try fentanyl before?

“ Crack is a much better high than fentanyl.

“ *[Talking about the Pepsi CEO]* That's a really wealthy person. That's the person you want to be your father-in-law.

MATH 137: LAINDON BURNETT

“ Let's say I have no friends, because I am in Waterloo.

“ It's just like I had a friend. I created an imaginary friend.

“ I kinda wish I was teaching this class in 2022, because I could make so many « e » jokes, but I guess I can take e^{67} .

“ And you WILL be happy.

“ It's curvin'.

“ I'm totally getting faster guys.

MATH 145: DAVID JAO

“ *[In Chinese]* Good morning. As most of class understands Chinese, class will be taught in Chinese today.

“ The word Coq can often be confused with another English word *[writes 'caulk' on board]*.

“ Unfortunately, you are all not babies.

“ 67.

“ Is there a curve? I think you’ll find out.

“ What is 67? Ask a 10-year old.

MATH 145: JERRY WANG

“ I just made some beautiful problems for the final. It will be fun, they said.

“ I aint got no cancer yet.

“ This feels like a MATH 137 class... This is not MATH 137 because p is not p to us. p is 0. p is 0 in my ring.

“ But 1 and -1 are the same.

“ I don’t think any freshmen dream about rings of characteristic p . Or a homomorphism.

“ Student: what’s that symbol?
Prof: *[Writes “ σ ” on the board]*

“ I actually thought 420 is a gaming slang. I didn’t know the weed connection when I looked it up just now...

“ 420 is $\text{lcm}(1,2,3,4,5,6,7)$.

“ Did you know PhD stands for “Please Hire, Desperate.”

“ Folks, listen—the next two classes, they’re very tough. Some people are saying they might be the toughest classes we’ve ever had. Maybe the toughest in history—I don’t know, but that’s what they’re saying. So I want you to be ready. I want you to read ahead—do the reading, do it beautifully. Because when we get there, you’re gonna want to know what’s going on. And if you prepare—if you prepare like I know you can—you’re gonna do tremendously well. Absolutely tremendous.

MATH 147: BLAKE MADILL

“ That’s our OG.

“ And that is not closed. Sad face. *[draws sad face on board]*

“ Like any meal, we begin with a fine sup.

“ Without loss of generality loses generality.

“ Some students love to WLOG when they’re just taking the L.

“ Haha! Some jokes write themselves. Put that on Discord.

“ I. Am. Inevitable.

“ Tiny shoutout to U of T, but not really.

MATH 245: LEIGH FOSTER

“ I’m sorry for how words work.

MATH 247: FAISAL AL-FAISAL

“ If that is the baby version, then this is even simpler. The fetus version.

“ This you can do with your techniques from Calc 1, if you ever actually learned them.

“ We will be studying mostly sets that look like blobs.

MATH 249: STEPHEN MELCZER

“ I wanted to sneeze, but then I didn’t.

“ Can anyone tell me what this is? You should know the answer by this point. If you don’t, you should really study for the midterm that’s coming up.

MUSIC 246: SIMON WOOD

“ Student: Who do you think is overrated?
Prof: Radiohead and... should I say it... Taylor Swift.

“ Was I saying 9 AM this whole time...? If I say something that is very incoherent, then it means that I am not aware of it because in my mind I am perfect.

“ *[Slide says Chaplin Chaplin instead of Charlie Chaplin]* Again, another proof that I am not a very bright man.

MUSIC 275: CAM MCKITTRICK

“ Food is inevitable if you want to live.

PMATH 440: MICHAEL RUBINSTEIN

“ If I forget my glove, it’s ok. If you’re at the doctor and they forget their glove... well that’s a problem.

“ *[Getting a phone call]* I bet it’s my doctor again.

“ If you’re confused by this last step it’s because you don’t have the natural instinct of converting a double sum into a hyperbola.

“ This is like the GOAT of equations.

“ My life is like, before I knew the Poisson summation formula and then after. It was in that moment that I became a complete person.

“ Do the substitution $y = x$.

“ I don’t have any tattoos but if I did it would be the Riemann zeta functional equation. It’d be on my forehead or something.

“ Gamma is being naughty. Pole pole pole pole!

PMATH 446: BEN WEBSTER

“ What the heck is Spec of Z .

“ *Student*: How do you feel about the midterm grades?
Prof: How do I feel about them? Obviously, I wish you guys understood commutative algebra better...

PMATH 453: MICHAEL BRANNAN

“ I realize I made this assignment really easy because half the questions are in the textbook as theorems. I could change it but eh, I'll just make the last two assignments really, *really* hard.

PMATH 455: KATERYNA TATARKO

“ Frodo cannot see out of this forest.

PMATH 465: RUXANDRA MORARU

“ What happened to me? I need reading week too.

“ Let M have dimension n and N have dimension m ... I know, I'm sorry.

STAT 240: PEJUN SANG

“ What's the point of studying the relation of 1 and 2?

STAT 341: JACK DAVIS

“ So, I guess everyone else dropped the course?

ARE YOU SOUP???

'CAUSE I'D LIKE TO DRINK YOU UP

The Canadian Food Inspection Agency defines stew as being under 15–25% fat,¹ but there isn't a definition for soup that I could find in my soup-inspired state. Hypothetically, I could sell an emulsified 50:50 butter to broth mix and call it soup.

It would probably taste better than the dried soup mix I had to make at my co-op. It's supposed to be soup. It's supposed to be *good*. It tastes like salt and iron and it's artificially thickened with gum and flavoured with animal-free-animal-flavouring AND it's slightly-off-white (I'm trying to be non-specific enough so I don't get CEE after my ass). It had the faintest whisper of animal-flavour from the animal-free-animal-flavoured-powder, but it just made it taste like body odour. Not to mention you had to run that through an immersion blender for a good 2 minutes so you wouldn't end up with white salty globs in your mouth. If you've ever had a nosebleed, it tasted kind of like blood but more viscous and it kinda sticks to your mouth so you gotta rinse it out. At least they only made me try a shot of it.

Oh and speaking of blood, did you know that 55% of your total blood volume is plasma and on average, your blood contains about 0.70 g soluble lipoids / 100 cc? Blood does coagulate over time, but you would still make a very thin soup—probably tastier too.²

Anyways, a couple of potential corporate investors popped by, drank it, and liked it so I suspect they're all actually vegan vampires along with my coworkers.

Now that I think about it I've never seen them outside the office...

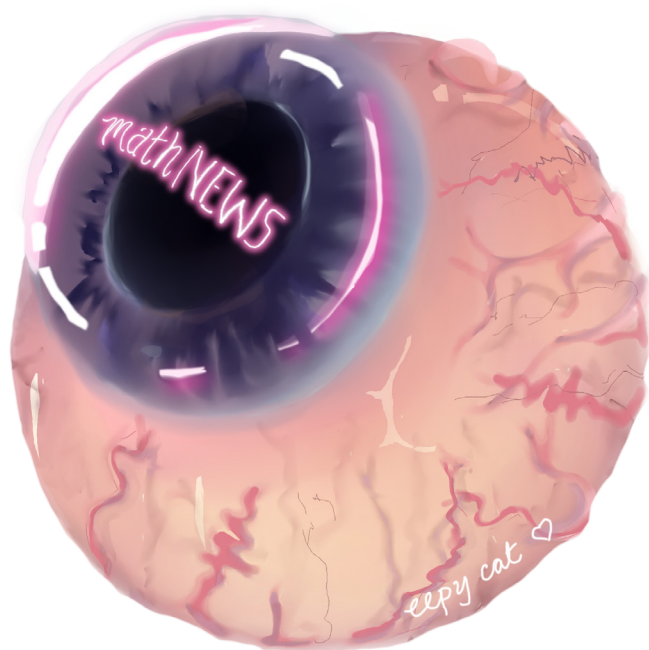
But what do I know?

I'd rather have a stroke than drink that shit again.

TotallyNotSoup

1. Agency, Canadian Food Inspection. "Government of Canada." *Canadian Food Inspection Agency*, / Gouvernement du Canada, 1 May 2025, inspection.canada.ca/en/about-cfia/acts-and-regulations/list-acts-and-regulations/documents-incorporated-reference/canadian-food-compositional-standards-0#a1.
2. Bloor, W.R. "The distribution of the lipoids ('fat') in human blood." *Journal of Biological Chemistry*, vol. 25, no. 3, July 1916, pp. 577–599, [https://doi.org/10.1016/s0021-9258\(18\)87480-4](https://doi.org/10.1016/s0021-9258(18)87480-4).

Disclaimer: Do not actually attempt to drink people—that's how you end up with weird diseases. Source? Trust.



RATING CHASKA ICE CREAM FLAVOURS

TECHNICALLY THEY'RE FROM SMARTYANTS BUT NO ONE KNOWS WHAT I MEAN WHEN I SAY THAT

From the beginning of this term until October 10th, one of the WUSA membership deals was that you could get a kiddie cone of soft serve at Chaska. As an avid enjoyer of little treats, I made frequent use of this deal. They offer three flavours at a time: the standard chocolate and vanilla as well as a rotating fruit sorbet from fruit products company Dole. I stopped by often to try the different sorbet flavours and I began to form opinions, and because I am Gen Z I feel the need to turn any opinions I have into content. Here are my opinions on the soft-serve options in SLC:

VANILLA – 3/10

Have you ever had Costco ice cream? This is literally just Costco ice cream. I found, however, that it had significantly less charm outside of the context of Costco for some reason, meaning that I just experienced it for what it was. You know how some things that say that they're vanilla-flavoured just mean that they're nothing-flavoured? There was no discernable taste of vanilla in this. Now, that's not inherently a bad thing—sometimes you just want something creamy and sweet—but honestly, it felt and tasted more like that whipped topping that's not really whipped cream than actual ice cream. That ain't what I get ice cream for. Don't bother with this unless that's your jam.

CHOCOLATE – 4/10

Once again, this is Costco ice cream without the charm. It gets one point over the vanilla because its texture at least more closely resembled ice cream. It was kind of just unremarkably mid. Like, I wouldn't be disappointed if this was what I got at some summer event with friends, but I definitely wouldn't pay full price for it.

DOLE MANGO – 7/10

Full disclosure: I only saw this one offered after the promotion had ended and felt the need to get it to be comprehensive, so I did pay full price for it and consumed it during colder weather than the other flavours, and that may be influencing my rating of it. Having said that, this was my least favourite of the Dole flavours. There was just something off about it, I guess. The flavour more resembled that of an unripe mango than a beautiful juicy ripe one. Still, it was pretty good, and I definitely liked it more than the chocolate and vanilla.

DOLE ORANGE – 9/10

I was not expecting to like this one as much as I did. I guess I didn't expect orange to be a flavour that worked so well with the format, but it was really good. Expectation versus reality was kind of like the difference between store-bought and fresh-squeezed orange juice, if you've tried both—store-bought orange juice is a nice drink and good productivity fuel, but fresh-squeezed orange juice is beauty and summer and rainbows. I absolutely would get it again.

DOLE RASPBERRY – 9/10

It's unsurprising that I loved this one. I've never had a raspberry sorbet I didn't like. Tasted very strongly of ripe raspberries and wasn't overwhelmingly sweet, balancing sweetness and tartness well. I think this one would be the crowd-pleaser. I don't have much else to say about it other than that I would definitely get it again.

DOLE PINEAPPLE – 10/10

This is the best flavour. \$2.49 is a steal for this stuff—you can't get a cold treat of this quality for that price anywhere else I'm aware of. It's a perfect sorbet: sweet but sour, light but full-bodied. If you don't like pineapple, I guess you probably wouldn't like it, but this is 100% my favourite. Good stuff.

macinnes

HOT GEESE (NOT) IN YOUR AREA

LOOK HERE FOR HOT GOOSE PIC!!!



A GOOSE PANTING. They probably regret not vacationing north.

Did you know that geese pant when they're hot? You would too if you were wearing the equivalent of a Canada Goose jacket in the middle of 30°C summer.

TotallyNotAGoose

ELEGANCE IS A WEIRD METRIC

PLEASE CHILL WITH THE TECHNICAL GRIND, FRIENDS

I can't deny that the twenty-first century is pretty cool. From the standpoint of available technology, the world is doing better than ever before. We have near-instant communication across the globe, machines building other machines that can fly, automatic toilets, LinkedIn, and autonomous drones armed with lethal force. These are all exceptional feats of engineering, and we should be proud of the millennia of innovation that have gotten humanity to this enlightened age. Everyone else clearly agrees, because the well-oiled engine of technological progress shows no signs of slowing down.

On the other hand, from most other standpoints, things aren't looking so great. The engines of "democracy" and "access to basic human needs" are coughing out clouds of black smoke and really, really seem like someone should check in on them. So, my dear technical professionals, what gives? When did we start assuming we exist in a bubble? More and more, engineers are engineering solutions for other engineers; it clearly shows, and it doesn't make a lick of sense.

This quest for technical glory is a pervasive and cleverly disguised form of laziness. After all, even if you're dimly aware of your own tunnel vision, it's always easier to turn a blind eye to it and invest more of yourself into inventing the next cool thing, finding a "cleaner" solution than what's out there already, and otherwise picking the low-hanging fruit. Please, enough — elegance is a weird and exceptionally immature metric. Does it really matter if you shave one transistor off your PCB design or find a slightly faster prime factorization algorithm, when millions of people still don't have clean drinking water, machine learning algorithms have deeply ingrained biases, and we've smashed through the 1.5°C mark like it's a (still thinning) sheet of ice? Yes, the latter problems are more intimidating, and the chance of failure is higher, but at least the reward is greater than an alarmingly cyclic pat on the back from a friend who recently shaved one transistor off their PCB.

Amidst this polemic take on technical innovation, I should clarify that I'm not arguing against new things on principle. I believe that our current world is broken in innumerable ways, and that that can't be fixed without changes to systems, improvements in institutions, and new ways of empathetic thought. What I do think is that it can be fixed without new technology, and that nuclear fusion and space travel might just have to wait in line behind widespread adoption of solar power and reliable public transit. I highly value and am satisfied with the comforts of life that exist today in a developed country, and I know billions of other people would feel the same, if given the chance to. "Progress" — in the sociopathic entrepreneurial sense of the word — is a falsely linear narrative that has already done more than enough harm, and the more nuanced philosophy, psychology, and geopolitics that surround it need a chance to catch up.

This hope is likely unrealistic, but in my ideal future, we'd forget about elegance, and lay aside aspirations to give the

keynote speech at this year's "Non-Euclidean Flywheels x Applied Buzzword Inc." conference, presenting to a rapt audience about one of the most dangerous things out there: solutions without a problem. By that, I mean that it's easy to lead with the technology, then go looking for ways it can be parachuted into people's lives. The intentions in doing so are often very good, but without meaningful input from the affected groups woven throughout the design process, the outcome will more likely than not shoot others in the foot.

Instead, we might take the time to focus on *meaningfully challenging* problems: the sort that can't be captured in a patent, thesis, or minimalist startup. These problems require talking to experts outside the STEM bubble (of whom I've been told there are many). If the conclusions you reach look like hacked-together smorgasbords of human knowledge and took many battles and compromises to reach, then you'll know something is on the right track. I will repeat this once more: elegance is too narrow a construct for relevant ideas, and complex problems require complex solutions.

As I speak, I know there are brilliant and highly competent people already inventing the future. I am and always will be in awe of these people, whose decisions and creations have such an outsized impact on the world. I wouldn't be here at all if I had no aspirations of being among their number. I just ask that perhaps, as we all tell our narratives about deciding and creating, we might take the time to remember how much greater the impact is when building community, and not a 0.3% faster graphics card.

intentionally_not_ambitious

SOLUTION TO LAST ISSUE'S CHESS PUZZLE

I DID NOT WRITE IT IN LATEX THIS TIME

Nd3+ does two things: it gives a check and defends the promotion square for the pawn. After 44. Ke3 c2, there is nothing White can do to stop promotion since once the pawn promotes, the knight will defend the new queen.

Therefore, the solution is Nd3+ 44. Ke3 c2. This puzzle is rated 1530. I stole the puzzle from lichess. This is puzzle 90jEx.¹

crimson

1. <https://lichess.org/training/90jEx>



VGLX 2025 GAME REVIEW

VERDICT

Video Game Live Expo was a Ontario-based video game convention hosted in Mississauga. I went there on Sunday, Oct 26th. There were many indie game studios, artists and video game/card game vendors at the venue. Although the show was relatively small, it has a very good vibe between the exhibitors and the audience. You can chat with the game developers directly and learn the story behind their games. What's more, it was not crowded at all! Here are the games that I found it worth mentioning!

PAINKILLER — ANSHAR STUDIOS

A hack and slash co-op shooter game with a very minimal story. The visuals and weapon design are a plus to the gameplay, but I don't like the default control settings, which is very counter-intuitive imo. The developers also mentioned that they were making a new Jurassic Park-themed adventure game. So stay tuned!

BRAVE NEW WONDERS — CITY FROM NAUGHT

A automaton builder with beautiful visuals. I like the control and UI design. I heard from the developers there that factory builders like Frostpunk were popular and very time-friendly and budget-friendly, so it might be a good idea to start your indie game journey from there. Speaking of which, City From Naught was founded by UWaterloo alumni, so check out their co-op opportunities!

ASTRONOMICS — NUMIZMATIC

Another factory builder. I like the setting a lot. It is basically the age of space exploration, and the cost of living on the Earth is expensive. You need to earn enough money to buy a home on the Earth and live in your dream there. The space mining company offers a bright future for you if you keep working here and move up the rank. Keep exploring asteroids, dig up the goods and sell them back to the Earth! You can earn a share of 0.01% of the value of those goods btw!

ARCHER — VIRTUAL REALMS — OK XR STUDIOS

A VR archery game where you shoot orcs to defend an elven sanctuary. A very mundane setting, but the narrative and the visuals are so good!

DC3: VIRAL MENACE — S-QUBED ENTERTAINMENT INC.

In a futuristic setting, you are operating a nanobot to do a surgery to cleanse the cancer cells to save your daughter's life. The special thing is, you "weapon" is a hummingbird, which is your daughter's favorite animal. The visuals are very unique: the 3D models are small but in high detail, so that it matches the theme of a doing a nano-surgery. I heard from the developer that they got funding from health science-related

grants. In return, they will provide a build of their game for educational purposes.

GREY WAKE — SECOND FIDDLE STUDIO LTD.

An artistic and beautiful game with sailing as its main gameplay. I love the art and the character design! Operating your sailboat can be challenging, as you need to change the direction of both the sail and the rudder. The puzzle level can feel discouraging sometimes. Either they need more hints, or it could be more interesting.

AIKYAM — THOUSAND STARS STUDIO

My favorite game in terms of creativity! In your little village, a festival is coming. You need to practice your dance moves to win the grand award. And yes, it is a turn-based combat competition where each turn you choose an attack dance move. If you match the dance correctly, you can dazzle your competitors and make them tired. I love the art and animation so much. Very cute indeed! The developer got inspirations from Paper Mario, and the lore is based on Indian culture and folk stories.

SUNSET SUCKERPUNCH — VIRTUAL UNREALITY INC.

A very fast-paced hack and slash game, where dunking your enemies is the main way to kill them. Aside from your sword, you also got a motorbike. The style is cyberpunk/futuristic. The haptic feedback is very good, although I felt a bit motion-sick after playing it.

DARK AGE DINOS — WOOLLY WALRUS GAMES

A grid-style rogue-like game. Inspired by games like Slay the Spire, the gameplay loop was solid, and I willingly spent an hour to finish the demo. I think I accidentally got a super broken build: between the two characters I controlled, the soldier can almost tank all damage every turn by gaining 12 shield and 2 damage reduction per round, which leads me to staying at full HP at the end of the game.

eralogos

SECRET CODE

DON'T WORRY ABOUT IT

1	0	2	0	8	5	5	8	5	8	0	8	5	4
9					2	2		2				2	1

FUN? FACT(S) I LEARNED WHILE PROCRASTINATING WORK

YOU TOO CAN LEARN WHILE AVOIDING LEARNING

Just a few short days ago, I was trying to complete work (crazy, right?). While I was trying to do that, my mind wandered to my trip to Winnipeg next month, so I thought my time would be much better served acquainting myself with the local geography of the area. Did you know Gimli, Manitoba is only an hour away from Winnipeg? I thought it was way up north. Have you heard about the “correction lines”¹ in Flin Flon? Because the world is a sphere and not a cube, the straight survey lines that separate Manitoba and Saskatchewan aren’t actually straight, therefore there are east-west correction lines every 24 miles. This lets someone go south from Manitoba into Saskatchewan. Bet you didn’t know that right??

I was then reading about the Red River which flows through Winnipeg. Did you know that the source of the Red River, which flows into Hudson’s Bay, and a tributary of the Mississippi River, which flows into the Gulf of MEXICO are just separated by a gap² within the same valley of less than 1.6 kilometers??? Did you know that sometimes this valley floods and the waters mix???

I then noticed that all Wikipedia articles refer to the Red River as the Red River of the North, so I thought, *what is the Red River of the South?* The Red River of the South is a tributary of the Mississippi River in Texas and Louisiana. Did you know that the Red River of the South had a log jam known as the Great Raft,³ that spanned over 260 kilometers!!???? This Great Raft had started forming in the 1100s and lasted until the 1830’s when some numbskull decided that it would be a great idea for the inland ports of the area to manually remove the whole thing, and got a medium-sized American city named after him. The Great Raft kept returning until an enterprising mind applied the newly available C4 to the issue. However, destroying this raft dropped river levels considerably, making all of these new inland ports unviable to shipping anyways.

The new influx of water from the Red River of the South caused many changes in the Mississippi, and by the 1950s, the river was at risk of colliding with the Atchafalaya River, which would redirect its path from New Orleans, making it too shallow for boats to pass through, destroying one of the major industries of the city and causing extensive damage to the US economy. Therefore, engineers said *why shouldn’t we grossly interfere one more time* and created the Old River Control Structure,⁴ which manually keeps water flowing through the old Mississippi rather than its preferred path. However, some experts predict that this river channel switch is overdue and will still happen eventually despite the efforts of engineers. This almost happened when the dam nearly failed during a flood in the 70s. I bet you didn’t know that either!

Unfortunately, this has been two hours of my day, so it’s time to return to work...

1. https://www.reddit.com/r/Borderporn/comments/na6h4o/flin_flon_and_lloydminster_saskatchewan_two/
2. https://en.wikipedia.org/wiki/Traverse_Gap
3. https://en.wikipedia.org/wiki/Great_Raft
4. https://en.wikipedia.org/wiki/Old_River_Control_Structure

MY DEMONS AND I WISH YOU A SPOOKY HALLOWEEN

One comes with me everywhere these days.
She rests on my shoulder and covers my eyes and ears with a veil that makes all look gloomy and ugly, and sound stupid and annoying.
Her hands cover my mouth when I try to laugh or scream, so only bitter abuse comes out towards people I ought to care about.
She tells me that they don’t actually like me, and presents a convincing list of proof.
In the morning, she drags me back to bed; during the day, she counts the time until I can go home; and at night, she stuffs my phone in my hands and pries my eyes open.
In a crowded room, she wraps herself around me, and I am the most alone.
When I try to sleep, she cries sweet nothings.
When I try to work, she opens YouTube and scrolls through songs, desperate for something in order to feel anything.
It rarely satisfies, so she holds me still, in a void of emptiness, until I drown.

One emerges suddenly sometimes.
I usually find her staring at me when I return to the dingy little room I’m forced to call home after a long day, or late at night after the others have finally finished with me and left nothing to spare.
She interrogates me like it’s already judgement day, despite my protests that I was promised far more time, and that I’m already doing well.
Alas, she dredges up my dreams of greatness, and all the versions of younger me demand an answer.
Why did they work so hard only for me to rest and break when I am still far from that lofty goal?
Has the lull of life during co-op, the scent of a stable tech job average among my cohort, crushed the overachiever?
Are we to be satisfied with a life of mediocrity?
No, I frantically deny, and beg to be given another chance.
They are unforgiving and claw through my flesh and bone.

vallie

RANKING (THE OTHER HALF OF THE) BALATRO DECKS

LAST TIME, I RANKED THE FIRST 7, SO HERE'S THE REMAINING 8

I'm back, and even closer to Completionist++ than before (17 Jokers left!). The second half of the decks include my favourite decks, so I'm excited about this. Here we go.

GHOST DECK

Spectral cards may appear in the shop. Start with a Hex card.

Strengths: Starting with Hex is really fun, since you either add polychrome to a joker, or get a free \$2 by selling it. Spectral cards are also really fun and having them appear in the shop is awesome.

Weaknesses: Hard to categorize, but having spectral cards show up in the shop crowds the shop from jokers, tarots, and other stuff you might want, but they aren't that common. It also renders Omen Globe slightly less useful.

Rating: 10/10 great deck

ABANDONED DECK

Start run with no face cards in your deck.

Strengths: Smaller deck = easier to draw good hands and good cards.

Weaknesses: No face cards kinda sucks, since face cards have a lot of synergies in the game. Also, harder to get Erosion value.

Rating: 6/10

CHECKERED DECK

Start run with 26 Spades and 26 Hearts in deck.

Strengths: Flushes flushes flushes.

Weaknesses: Flushes flushes flushes.

Rating: 7/10

ZODIAC DECK

Start run with Tarot Merchant (voucher that gives you more tarot cards in shop), Planet Merchant (voucher that gives you more tarot cards in shop), and Overstock (voucher that gives +1 card slot in the shop).

Strengths: Tarot Merchant and Overstock are great vouchers, and it is quite strong to start the game with these two.

Weaknesses: Planet Merchant is NOT a great voucher.

Rating: 5/10

PAINTED DECK

+2 hand size, -1 Joker slot

Strengths: Hand size is great, like in almost all situations (except for maybe Blackboard?).

Weaknesses: -1 Joker slot can be punishing, but for the most part it isn't that bad.

Rating: 8/10

ANAGLYPH DECK

After defeating each Boss Blind, gain a Double Tag (tag that doubles the next tag you get, excluding double tag).

Strengths: Really really good for when you're trying to unlock C++ (like me!) and want to get negative tags.

Weaknesses: Bad in literally every other situation since skipping is bad (in most cases).

Rating: 7/10 my beloved

PLASMA DECK

Balance Chips and Mult when calculating score for played hand, x2 base blind size.

Strengths: Basically, fucking squares your score. Really easy early game (you can easily do the first 2 antes without any jokers). Also the strongest deck for getting naneinf (followed by Ghost deck).

Weaknesses: Mid-game is really difficult if you're not moving properly. Also at Gold stake, the scaling is too fast to do a chips-only run (in most cases, but it can be done). I have died many times.

Rating: 10/10

ERRATIC DECK

All Ranks and Suits in deck are randomized.

Strengths: You can start the game with a LOT of direction, building towards your most prevalent card/suit.

Weaknesses: It can be terrible and give you a messed up deck, or sometimes you can come across cards that would normally be great, but don't work with your pre-assigned deck. But that's part of the fun!

Rating: 10/10

WHAT NEWSWORTHY ACTIVITY SHOULD mathNEWS EDITORS AND WRITERS DO TO GET A WIKIPEDIA PAGE?

- write news and have it go viral internationally
- article on Skittles vending machines
- war crimes x5
- write fanfiction about Canadian political figures
- write fanfiction about international political figures x2
- declare independence
- plagiarize Imprint
- have fun and being ourselves :D
- steal the tool from engineering causing vehicular manslaughter in the process (those who know, know)
- sign off with "Vivek Goel" at the end of all issues.
- become a cult and do weird cult activities that will get us investigated by the FBI
- publish a solution to the Riemann Hypothesis
- befriend a Wikipedia editor
- I'm not allowed to publish the thing I want to say
- do nothing
- make **mathNEWS** explode (how? exercise left to the reader)
- hunger strike
- go to San Francisco and beg and cry until we get one
- pretend to have beef with another student newsletter
- git gud
- write something political and math
- write about imPRINT so imPRINT writes about us so we write about imPRINT so imPRINT writes about us so we write about imPRINT so

mathgeek

WROTE THIS IN MY MATH 137 CLASS BECAUSE PRODNIGHT IS CS 135 MIDTERM

I hope I finish the midterm quickly enough to still get pizza.

papayabird

VOLUNTEER AT FALL OPEN HOUSE

MATH UNDERGRAD RECRUITMENT LOOKING FOR STUDENT VOLUNTEERS FOR SATURDAY, NOVEMBER 8TH

Do you like ~~yapping~~ representing your university? To share ~~war stories~~ first-year advice with nervous Waterloo applicants? To ~~string families through the labyrinthine asbestos depths~~ show wide-eyed high schoolers the first glimpse of their future lives? To eat Faculty-provided free breakfast and lunch?

Yes? Then sign up to volunteer with the Math Faculty at Waterloo's Fall Open House, happening Saturday, November 8th from 10am to 4pm.

Volunteering at the open house provides you the opportunity to build your confidence and public speaking skills, while sharing the knowledge you wish you'd been told as a high school applicant. Register now at mathnews.uwaterloo.ca/f25-open-house, or, by scanning the QR code attached to this article. No prior experience necessary.



Remember the first friendly face you met at the university? For this year's applicants, that can be you.

your friendly local math ambassador

IT'S MY BIRTHDAY SOON

on October 29th.

I would also like to point out that $()()$ is not a palindrome but $()()$ is.

easty

PINING SO BAD YOU COULD MAKE A FOREST

ON MY LIFE I GET HOES

maybe we go climbing the pac roof at 2am and i see the stars and your hair, gleaming in the moonlight—a halo. my heart beats fast and hard, my mouth is dry, and suddenly i'm wrought with the overwhelming urge to *say something*.

the words are tepid in my throat but slowly, surely, they emerge like waking nestlings and they trip over my tongue and slip through my teeth until i blurt the most embarrassing string of words out of my mouth—*i like you so much*.

maybe you'll look back at me for a single striking moment, surprise written all over your face, mouth ajar. only a millisecond will pass but it'll feel like forever to me before it switches to hesitation, pity, empathy. i know you won't look down on me. i know you won't make it weird. that's why i like you so much.

your expression is rather unfortunate, but the thing is—i already knew the answer long before my words stumbled out. before we even made plans to climb the pac roof, before we even started really talking. my words hang in the air and maybe you're thinking, *why are you doing this to me? why are you making me reject you?*

simple—i am selfish. my feelings are too big for my chest and they are suffocating me. and now that you know—

you frown, eyebrows knit together. always thoughtful, always careful with your words. the silence is killing me, i almost want to shake you by the shoulders and tell you to

get on with it! laugh at me. we both know this is ridiculous.

i can hear the gears turning in your head to say something you won't regret in the near future—this is real life, you can't edit your words over and over again with tiny addendums to your satisfaction. you scratch your neck, not looking at me. my eyes drift to the pavement below us. might as well enjoy the view. the night is silent, bathed in orange light.

you inhale, preparing to speak; i whip my head back.

sorry, you say, and do i really need to describe the rest?

an odd sense of vindication fills me. because i knew it and yet i still willingly walked myself off the plank like some kind of sick self-fulfilling prophecy. i'll laugh and wave it off, *no worries*, and know nothing will change for you. i know it won't. we'll descend the building and i'll tell you i'm glad i got to do this before i get shipped off for co-op; glad i got to do it with *you*, but i'm a coward and i like running so this will be the last you hear of me.

in the following days i won't text you, and when i leave waterloo for work i'll think it a blessing—which is really unfortunate, because knowing you was a pleasure.¹

orbit

1. wordsmithed mainly at 2am by yours truly xx

REVIEW OF THE PLAY “ABE LINCOLN GOES TO THE THEATRE”

A PLAY TOO META EVEN FOR BEYOND META

I recently saw the dress rehearsal performance of *Abraham Lincoln Goes to the Theatre*¹ put on by the Great Theatre Canadian Company. You can see the work put into this production. The acting, lighting, set design, choreography, etc., are all fantastic. However, no amount of impressive staging is enough to escape the flaws of the script itself. The script is incredibly meta, where we watch actors playing different actors playing different actors playing the comedy duo Laurel and Hardy playing John Wilkes Booth assassinating Abe Lincoln.

As an audience member, this is a really confusing experience. The show is so focused on trying to explore questions about what America is and how the caricature of the performance can overtake reality that it fails to provide a story that the audience would care about.

The story is about several matryoshka levels of rehearsal to put on fictitious plays about [Insert Name Here] going to the

theatre. Whose story you are following is deliberately unclear. I wonder if I would like the play more if it were shorter. The more confusing a play is, the more taxing it is to follow. A shorter play would probably be enough to explore all the ideas it wanted to without overstaying its welcome.

We often describe a work as challenging as a prestigious descriptor that denotes how the play can be intellectual. Sometimes, challenging just means the idea is poorly communicated. The play explores interesting and timely ideas, but I spent more time discussing why the play didn't work for me than digging into its themes. The play provides a unique experience and invites conversation. The production is fantastique. I do think the play is worth seeing, criticisms aside.

Beyond Meta

¹ Written by Larry Tremblay and translated by Chantal Bilodeau

HALLOWEEN? ALREADY??

COSTUME IDEAS FOR THE PROCRASTINATORS

If you're a real one, you read **mathNEWS** as soon as it comes out. That means *today* is Halloween! How has it come up so quickly?? I don't know, I still thought it was the start of October. Regardless, I hope you're currently in costume (and doing well because midterms are hard), but in case you're not and suddenly realizing you *should* be, here are some easy last-minute costume ideas ft. things in my closet, less than or equal to one dollar store trip, and suggestions from TikTok.

1. **Any animal**—Bear, cat, mouse, a fourth thing that has ears and whiskers. Any ears-headband from the store or your 4th grade play, a little drawing on your face, and BOO you're festive! To go the extra mile, introduce yourself as "an <animal>, duh." and now you're also Karen Smith.
2. **M&Ms**—If you wear all one colour, draw an M on a piece of paper, and tape it to yourself, you're ready to be a delicious piece of candy that's on theme and takes zero time [*Copyeditor's note: bonus points if your outfit features a camera*]. If you hate chocolate (crazy btw), draw an S and be a Skittle, the sassier cousin of the M&M.
3. **Adam Sandler**—This might be my favourite on the list, not just for the fact that it's comfy but I just love Adam Sandler. Big shorts, bigger shirt, tall socks, and shoes that don't go with anything else going on. Bonus points if you walk around quoting his movies, everyone (me) will love you.
4. **Shadow**—All black!!! You might already be wearing it. Follow people around, stand menacingly, you have a built-in photo pose with friends, and someone out there is spooked by it. Kind of the equivalent of wearing normal clothes and calling yourself an "average joe," but then again, a costume is a costume and I don't judge if you're trying!
5. **Pumpkin**—We're back on theme, y'all! With an orange T-shirt and whatever face you can cut out of paper and tape to yourself, anything is possible. This is the blueprint for easy Halloween costumes, and you can keep repeating that one TikTok audio that just says "Pumpkin!!!!" and your costume becomes a reference.
6. **Subway Surfers Character**—The most complicated of the options here, and it's just jeans, a white top, a red hat, and maybe some extras depending who you want to be. Do you also keep catching yourself staring at the never ending Subway Surfers videos playing on SLC TVs? Yeah, ouch, but this is a guaranteed hit. Plus, you get theme music built in! Stay safe out there, surfers.

If all else fails, never underestimate the power of a single accessory from the dollar store and committing to the bit. Halloween is about vibes above all else.

I hope you're finding time to dress up and appreciate the season through all your midterm stress. Get a pumpkin spice

latte, breathe in some too-cold-for-October-air (what is this), and dress up as something silly! Happy Halloween, spookies :)

BeesKnees

WHAT'S UP WITH THAT?

SPOOKY EDITION

BOO! got you! It's spooky season, and since I did nothing creative over reading week, here's another issue of "What's Up With That?," but spookier.

- candy corn!! (that's what's up)
- midterm season being during dedicated halloween time (what's up with that?)
- leaves falling (that's what's up)
- giving yourself no free-time to relax (it's ok to take a break) (what's up with that?)
- iced chai latte with vanilla sweet cream cold foam (that's what's up)
- outlets all around campus not working??? (what's up with that?)
- celebrating spooky season with friends (that's what's up)
- people talking loudly in silent study (group study exists guys) (what's up with that?)
- dressing up (that's what's up)
- the stairs in MC (they get me every time) (what's up with that?)
- the Jays making it to the World Series (go jays!) (that's what's up)
- M3 water (sorry guys it's kinda metallic) (what's up with that?)
- PUMPKIN :D (that's what's up)
- the ion only coming every 15 minutes on the weekend (what's up with that?)
- winter almost being here (that's what's up)
- your elective being your hardest class (what's up with that?)
- mental health walks in nature (that's what's up)
- row-reducing anything bigger than a 3x3 matrix (what's up with that?)
- Piano Man by Billy Joel (that's what's up)
- horror movies (i get nightmares) (what's up with that?)
- seeing everyone's amazing costumes! (that's what's up)

Happy Halloween guys, have fun out there, and stay safe! Eat lots of candy and chocolate and chips. Scare the crap out of your best friends. And, if you pass a lake on your halloween eve travels, just be careful, cause you may get the most terrifying scare of your life.

smallmouthbasshater

==TRICKSHOT==

COLLATERAL JOUST TOUCHE HAMMERED NOTHING-PERSONAL OLÉ

Several weeks ago, I finally beat *Random Access Mayhem*, a top-down action roguelike with a really cool gimmick. Instead of choosing and playing as a single character for a whole run, you play as a rogue artificial intelligence with the ability to switch control between enemy robots. Your goal is to be in the last robot standing.

Each of the eight different robot types have simple yet nuanced movesets and mechanics. Every robot only has a primary and a secondary ability, but the unique ways they are controlled and can be used, along with the swap mechanic, keeps the gameplay fresh.

Some examples:

- **Steeltoe**: Shotgun bot, with a melee sonic blast for deflecting enemy projectiles (and projectile enemies), and can also be used to boost their own shots (with a lot of recoil) when timed right, Ultrakill-style.
- **Aphid**: Flamethrower bot, also a jet rocket engine, but be careful of overheating (enemies make great on-contact heat sinks). Can also shoot flammable tar to trap agile enemies, but don't shoot both at the same time. Or find out anyway.
- **Tachi**: Sword bot, but actually anti-grav saber bot. Slingshot, stab and pin sabers into enemies. They can be dislodged and flung as projectiles with enough force, but the real star is the **Clipped-Wing-Butterfly-Instant-Death-Blue-Screen Crescent**, a high cooldown one shot slash that shatters the swung saber by sheer force, but lodged sabers can be retrieved from slashed bodies to keep the frenzy going.
- **Epitaph**: Mortar bot, but a little... *off*. Toss an energy orb, then position correctly and ready the mortar cannon like a baseball bat and SWING! Orbs explode and bounce off enemies and can be rallied back and forth for increasing power until it breaks (or doesn't).

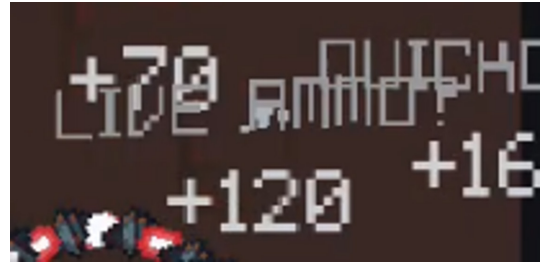
While there is nothing stopping you from staying with one bot for as long as you can, the game encourages switching robots through the near total lack of healing options, and what is known as the Swap Bar. The original jam version, a timer requiring you to swap before it's too late with a growing lockout period after each swap, now a simple two-part fuel gauge.



SAID TWO-PART FUEL GAUGE

The Local gauge holds enough Swap Juice for two or some more swaps with enemy kills granting a little back, and the reserve Global bar gives you up to five extra emergency swaps. However, swapping after host death costs 50% more juice so it's better to switch to healthier bots over clinging to a damaged one.

But there is one final mechanic heavily encouraging risky play.



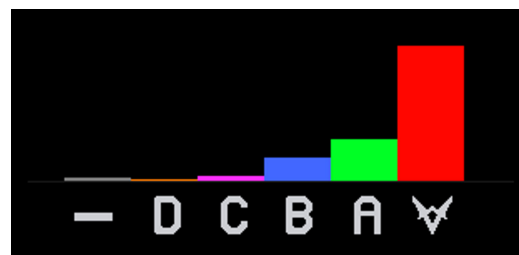
LIVE AMMO? QUICKDRAW

Trickshots.

Regular enemy kills only grant a smidge of juice back. But if you do it with **style**, you reward yourself with more Fitness score and Swap Juice (the Swap Bar is just your own handicap, anyways). With more juice, more swaps and more risks, with more Fitness, more upgrades and more slaughter. With risk, comes reward.

There are a lot of trickshots, many performed through swaps, many unique to robot types, all can be combined for multiplicative gain. Switch off hosts and let them perform **TRICKSHOT** kills with your residual inputs. **CLOTHESLINE** an enemy launched towards you. Deflect a grenade back as a **HOT POTATO**. Kill an enemy by bouncing a **PINBALL** orb twice. Burn an enemy with the **BACKFIRE** of the sparks of your wheel's traction. Grapple towards a wall and deliver a punch along the way with a **KABEDON**. Melt enemies to slag with your ambient heat of the **SUNBURN**. Swap out right before your host dies for a **CLOSE CALL**. Get launched, deflected and slaughter for the almighty **GRAND SLAM**.

You also get a Fitness multiplier for swapping between various bot types and a reduction for swapping among the same. Later, you unlock a Style Meter, which further awards your Trickshot skill with buffs and a fitting letter grade.



ABSOLUTE CINEMA

All of this feeds into the role of an unstoppable killing machine, not by sheer power, but through peak technique. The Fitness score gains mirror your own satisfaction of rebounding a single grenade off every wall and skewering everything in sight, deflecting molten slugs with bullet time stun bomb explosions back to senders, or spraying everything behind flattened corpses with a stray burst of laser shrapnel. Like an AI trained with reinforcement learning, you learn what triggers your dopamine receptors and what doesn't as you play run after run, going from blundering to styling through every room.

The Trickshot system really elevates the Swap mechanic, pushing the intended playstyle not strictly by penalizing safer play, but by making the reward for risky but stylish gameplay so much sweeter, making for an impeccable adrenaline-pumping experience.

John_Steeltoe

GETTING EMBARRASSED BY YOUR FAMILY

NOT AGAIN

Your parents telling your whole extended family about your **mathNEWS** articles is pretty spooky. You know what's spookier? Your cousin reading out your latest article to your entire family. But probably spookiest of all, is that your parents, siblings, aunts, uncles, grandparents, cousins, friends, cousin's dogs, the squirrel in your backyard and the fish in the lake are all probably reading this right now (hey guys :D).

Honestly, I haven't felt as embarrassed and mortified as I did in that moment for a really long time. I had to get up and leave the room, partly out of horror and partly because I couldn't listen to my own questionable writing (I still can't spell definitely without Google). It felt like one of the top ten betrayals of all time, like "damn, why would they out me like that to literally everyone ever" type of betrayal. But they weren't trying to embarrass me, they were just proud of me; proud of me for getting involved, proud of me for expressing myself, and proud of me for being me. And they wanted to let everyone else know how proud of me they are.

So guys, the next time your parents embarrass you by telling a terrifying story, explaining your obscure hobbies, or cheering VERY loudly for you (all within boundaries of course), just remember they're proud of you; who you are, how much you've accomplished and how far you've come. Remember how lucky it is to have people who are so proud of you, whether they're your family, friends or complete strangers. And be proud of yourself, cause you're awesome <3.

smallmouthbasshater

LAST MINUTE HALLOWEEN COSTUME IDEAS THAT MATH MAJORS WOULD UNDERSTAND

COUPLES COSTUMES:

- Pi and Euler's number (Pie)
- Seoul x Soul
- $6 + 7$ (self explanatory)
- $E6 \times E7$
- Lazeez x Williams

GROUP COSTUMES:

- Reddit Faculty Girls
- CnD Beef Patties
- The Fibonacci sequence
- FAANG Companies
- Option Greeks

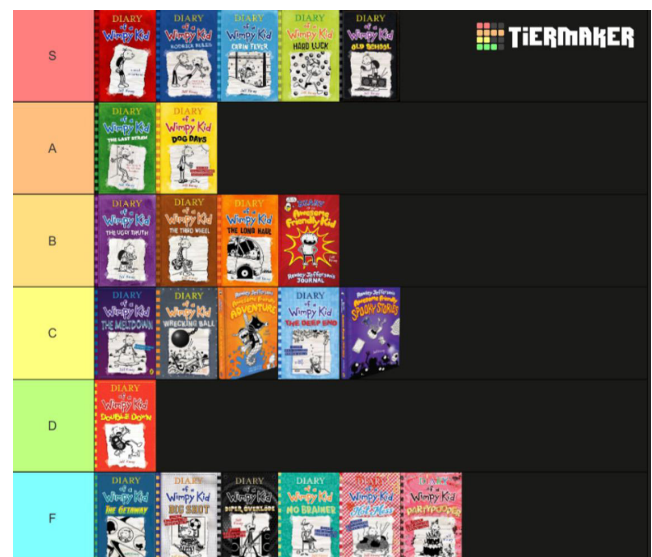
SOLO COSTUMES:

- CnD Beef Patty
- GitHub Cat (that's not a cat)

Σ & X

OBJECTIVELY CORRECT DIARY OF A WIMPY KID TIER LIST

NO CRITICISM WILL BE ACCEPTED



the government's only spy

RE: TIME SYMMETRIES

HOW MANY TIMES AN ANALOG CLOCK'S HANDS REFLECT ACROSS THE MIDDLE AXIS

(This is a follow up to an open problem posed in **mathNEWS** 158.6)

The answer is once; at 0:00:00. (Lame, I know.)

To answer the question of when, throughout a 12 hour timespan, an analog clock's minute & hour hands are reflected about the middle axis (line through 12 and 6 o'clock), with discrete ticks every second causing both hands to jump forward by their respective fraction of an angle, one must first realize that imposing the condition of reflection about the middle axis is equivalent to saying that $\Theta_{\text{hour}} = -\Theta_{\text{min}}$.

The second part of the puzzle of solving this is noticing that the clock's hands loop around, meaning that they obey modular arithmetic; this behavior is only relevant for the minute hand since the hour hand only loops at the very end of the twelve-hour timespan.

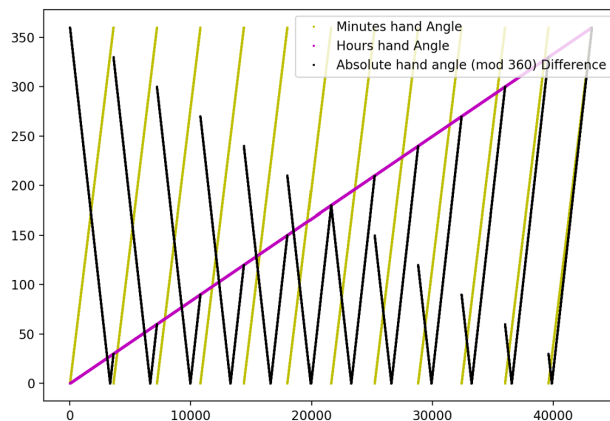
Pair this with the fact that there are 360 degrees in a circle, and the expression turns into:

$\Theta_{\text{hour}} + \Theta_{\text{min}} = 0 \implies \Theta_{\text{hour}} + \Theta_{\text{min}} = 360^\circ$; At which times do the angles (measured out from the top of the clock, extending clockwise) sum to 360° ?

After making a conversion formula from discrete integer-valued seconds to hour-hand angles and minute-hand angles (which are $(1/120)^\circ/s$ and $(1/10)^\circ/s$ respectively), I plotted this over a timespan of 12 hours.

While it may appear as though there might be many times when the difference in absolute hand angles drops to zero, unfortunately, this is not the case for any time past 0:00:00. Since the conversions to angles are based off of an integer second tick, they will have gaps in them. Furthermore, the

hands will only have a chance to sync up, aligned on the same "second tick grid" around the clock every 12 seconds, since that will allow the hour hand to lie on the "grid" of the minutes hand.

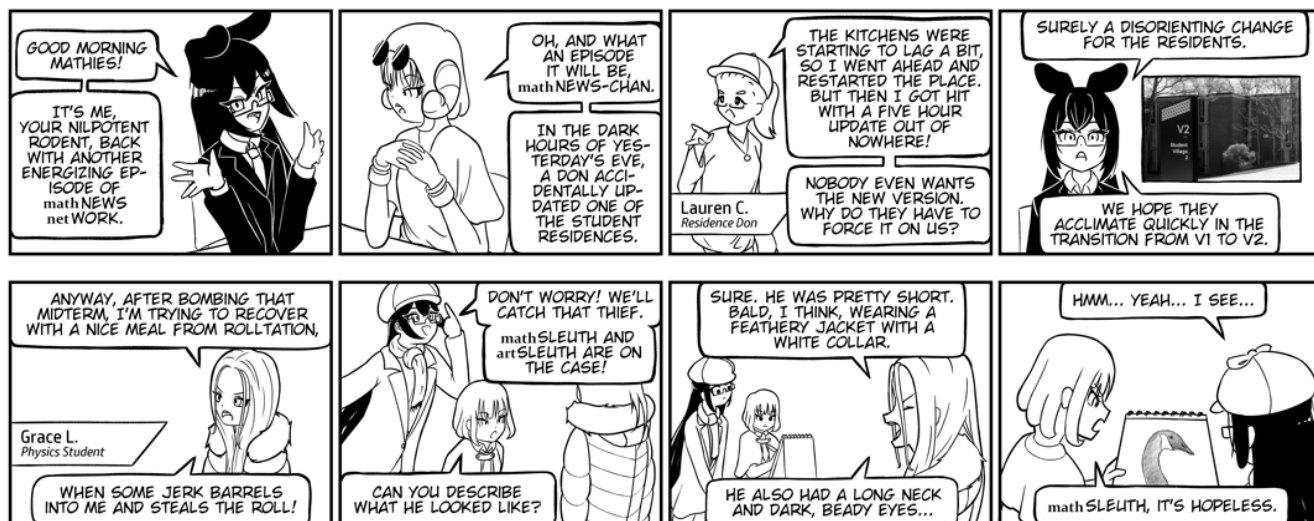


This, paired with the fact that for the majority of these twelfths of the time the hands aren't even in their "target zones" reflected across the middle line and one can begin to see why the only solution in this is the trivial one where the hands are all set to their initial values.

The closest times these hands get to being perfectly symmetric around the vertical axis, their angles summing to 360 with less than a 1% error are at 0:55:23, and 11:04:37. Angles of (hour, min) hands: (27.6916666, 332.3) and (332.3083333, 27.699999999999818) respectively.

abs(Jester)

mathNEWS netWORK 5.1 AND 5.2



N THINGS I TEXT MYSELF IN A DISCORD SERVER CONTAINING ONLY ME MYSELF AND I IN NONCHRONOLOGICAL ORDER

I'M ON A BREAK FROM SEEING MY THERAPIST :(

1. QUIT HAUNTING ME YOU FUCKING SKANK¹
2. 8.83^2
3. If the cost of a learning resource required for assessment exceeds \$50 or the grade value exceeds 20%, the instructor must provide students with a no-fee assessment alternative that gives students an equitable opportunity to demonstrate their knowledge. For example, this can take the form of alternative assignments, tests or quizzes (which could be online, but at no cost to students), or access to the digital learning resource used for assessment through on-campus lab at no cost to students.³

4. :3

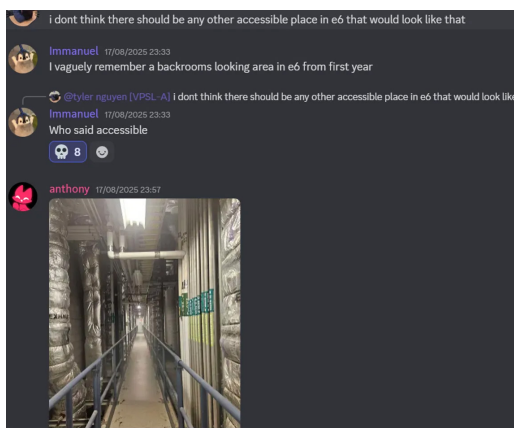
5. OH MY FUCKING GOD 🔥🔥🔥 I'M GONNA KMS

Moving Average	Moving Average of Number of Fanfics
8	13
15	20
22	14
29	8
36	11
43	12
50	7
57	6
64	2
71	4
76	6
85	6
87	5
99	5
106	7

6. ⁴

7. <https://www.homedepot.ca/product/moen-universal-lift-rod-assembly-bn/1001679502>⁵

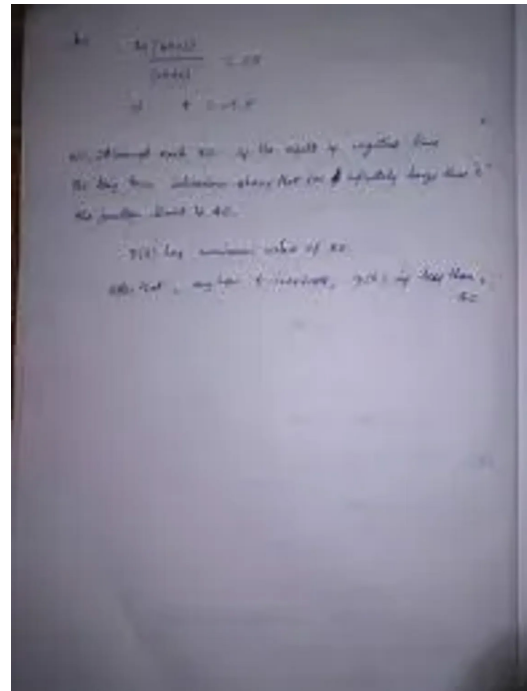
8. IM A FUCKING TWEAKERRRR



9.

10. dear god, it's me again. i am kindly asking you to make this stop before it even begins

11. $.*^{\circ} \circ.*:..:.*'(*^{\circ}\nabla^{\circ}*)'.*:..:.*^{\circ} \circ.*$
12. rich people astound me
13. <https://eastasiastudent.net/china/mandarin/xu-zhimo-goodbye-cambridge/>
14. I want you.
15. 5:53⁶



16.

17. this is impossible to capture as a single item in a numbered list but the amount of tweaking i've done in text form. the number of crashouts. just imagine for me, okay? i have four separate channels dedicated to different flavours of crashing out.

18. SMFFUUCUAKAKWKKD

planet b612

1. genuinely don't remember what this was about
2. no fucking clue what this number was for, probably related to chemistry (gagging noises)
3. <https://uwaterloo.ca/secretariat/guidelines-pertaining-fees-third-party-learning-resources-0>
4. i did a school project on how quickly fanfics get produced post movie release, surprisingly the school wifi at my high school did not block ao3 despite half the fics i looked at being filthy smut
5. sink broke :((update now the fridge at home is broken too but i am (un)fortunately not home so not my problem)
6. how long it took for me to take a lap on the elliptical i have back home

DSC DATASET 3

000 DATA SO SPOOKY

hello baddies!!!

happy halloween!! hope you are eating some yummy candy, wearing your cool costume, enjoying some fun spooky activities (like our escape room yesterday!!) and hanging out w friends above all :)

not to be a nerd but i'm going as the void type and i'm very excited!!! like who doesn't want to be a sexy void?! also have a cat command costume for work and these (+DSC ofc) is what's keeping me going rn ☺ everything is fine guys

anyway we have been locking in so hard with so many upcoming events like:

- AI in Neuroscience: want to learn how our own brains' processes can help us make better AI? if you're interested in philosophy, biology or CS, come to STC nov 3rd 7:30–8:30 and enjoy some yummy food (either chungchun or lava cakes mmmm i would go if i didn't have a midterm then)
- SQLid Games: wanna have a fun night full of challenges and snacks (including bubble tea!!!) inspired by Squid Games? join us nov 6th 7–10 and make sure to compliment us on the cool name bc we love our puns
- Data Science Across Sectors: i know many people are intrigued in careers in DS, so this event featuring speakers across multiple sectors + academia is perfect to learn more about potential paths!! did i mention free food? if curious, come to STC 0100 nov 3rd 7pm
- Speed DATA-ing: yesss we are bringing the old name back and even better!!! stay tuned for a whimsical night nov 11th with bubble tea, snacks, socializing and karaoke ofc!!

these details are subject to change a bit, so make sure to keep updated with our socials @uwaterloodsc and our discord server for all things DSC!!! plus socials team is making some super funny reels so you should go watch <3

now for some silly goofy quotes from us execs:

- seasons change and so do her hoes
- name a hackathon that's had a maid cafe before
- when you climb a hard trail, you see an ube matcha at the end
- when can i take your job @presidents, i'd wear a maid costume if that helps
- alcoholic born and raised in saskatoon
- there's so many sounds coming out of you
- carrot soup
- have some good poutine for me and @ai-gf
- dsc furries 🐾
- every term there is a twink that wants to get in my pants

- im always the empress the concubine can wait
- if you don't hear from me tmrw it's because i decided to eat the week-old food in the unplugged fridge
- i love lesbian
- they stop releasing good female characters
- sweet dreams can be broth too if he puts noodles in it

if you remember from last dataset, i said i'd tell you which one I said and welllll i said "goon is one letter away from good" bc I mean it's true, right?? okay now new game, guess which one above i said while crashing out? will reveal in next dataset :)

also if you want to add to this lovely list, look out for exec applications in late november or december!! we'd be excited to apply your talents to the team

last but not least, a few words from one of our presidents (this is now saved on my work laptop):



oki bye bye

MY FAVOURITE SONGS RIGHT NOW

PONYBOY — SOPHIE

I had heard snippets of this song in thirst edits on TikTok before (don't judge, I'm being vulnerable), but I finally came across this song naturally on Spotify within the past month. I can't describe what I was thinking when I first listened to this song, because my mind went completely blank as the HEAVY bass took over my body and forced my hips to shake. My physical setting may have been my bathroom, but mentally I was in a club with just enough alcohol in my system to make my social anxiety go away. Once this song comes on, I'm a baddie and it's everyone's problem to deal with.

In many discussions about music, I find myself saying that I care much more about lyrics than the musicality, and I've come to find that there are a few key exceptions to this rule. I don't think I could tell you a single lyric from this song besides "pony" and "boy," not because I haven't listened to it enough, but because I always get distracted by the 20,000 sound effects used in this song that include:

- Tongue clicks
- Multiple sound effects that I'm pretty sure are something heavy smacking into a wall
- Panting/heavy breathing
- Switching a light switch
- A siren
- A zipper (I think)

It might seem like I'm saying this song is too busy, and I am, but I mean it in the most complimentary way possible. If you want to feel like the hottest girl within 5 square kilometres and don't mind your brain being turned to mush by disgustingly heavy bass, I'd recommend giving *Ponyboy* a listen,

PINK TRIANGLE — WEEZER

Walk with me here before you judge me. Sometimes you need a silly song with lyrics that are so deeply unserious that you can't help but smile. *Pink Triangle* by Weezer is my silly song. Hearing Rivers Cuomo sing "I'm dumb, she's a lesbian" with every chorus repetition and picturing a straight man saying that sentence with such sincerity never fails to elicit a silly little giggle from me, a "tee hee" if you will.

Besides that, I do genuinely like this song as a piece of music; the cutesy-feeling intro that comes back as the outro, Rivers Cuomo's slightly whiny vocals that add to the juvenile nature of the song, the guitar solo, I love it. At the end of the day, I'm just a man with gender envy for Rodrick Heffley who is also a sucker for music that sounds like he could have wrote it.

MY BOY — CAR SEAT HEADREST

For the first few months of our relationship, my partner and I were long distance. If you, dear **mathNEWS** reader, are currently doing long distance with a loved one, pretend I'm giving you a pat on the back in support (or don't if you don't

like physical touch) because it is certainly not an easy feat. Anyways, if I had found this during song that time I would've been emotionally, physically, and spiritually destroyed.

My Boy, to me, is the embodiment of the yearning, strain, and ambivalent acceptance that come with a long distance relationship. The lack of the traditional verse and chorus structure is replaced by a repeating set of lyrics that can mirror what feels like the never-ending repetition of the long-distance cycle: not seeing each other for a prolonged period of time, excitedly planning the next visit, visiting, inevitable tears, repeat. This repetition could also be interpreted as Will Toledo trying to assure himself that everything is going to be ok despite current circumstances, trying to answer his own cry for help. Feelings I can't express with words are so perfectly encapsulated in this song, Will Toledo is just like me frfr.

Despite this song having the ability to nuke any sense of stability in my mental state, it holds an incredibly special space in my heart. *My Boy* reminds me of a time that was definitely difficult, but was also filled with the joy of new love. Truthfully anything that reminds me of my partner makes me infinitely happy because he's so cool. As for actually recommending you listen to this song, I would only do so if you think you can handle it emotionally. I don't want to be held liable if everyone's having more breakdowns during midterms.

EEO — BAD BUNNY

I found this song thanks to the one audio on TikTok that is an "English translation" of this song (I say in quotations as it's a pretty loose translation that is meant to be comedic). I acknowledge that this might make me a normie for finding my music on TikTok, but I am of the personal opinion that where you find music doesn't matter and doesn't discredit your status as a fan of the artist.

Side tangent aside, this song is such a party to listen to—it's sexy, fun to dance to, and keeps you listening by seamlessly flowing between moments of high energy and moments of bringing it down. There's also an undeniable passion and pride present within this song that makes the listening experience so much more enjoyable; you can't help but to soak up the positive energy of Bad Bunny proudly proclaiming in the last verse of *EEO* that this, and more broadly the genre of reggaeton, is the music his generation of Puerto Ricans grew up on. When there's clearly so much love in an artist's work, it's hard not to vibe with it.

Do I think you'd enjoy this song more if you spoke Spanish? Probably. I doubt that you can translate this song into English and not lose at least some of its meaning/nuances. Do I think that a lack of Spanish understanding should stop you from getting into the song? Absolutely not. Branch out! Don't limit your music listening! Listen to *EEO* and have the time of your life!

CHAT, ARE WE GETTING PTSD

[Content warning: car accident, domestic abuse]

So boom, I was on my way up to camp on Friday to close up for the summer with a dear friend of mine. Bear in mind that I've been looking forward to this road trip for weeks. I was plotting and scheming, putting together a playlist, doing the most because road trips are an intimate experience and I'm quite attached to this friend and I wanted for us to have a good time. And for the first 1.5 hours, we did! We took the scenic route and saw the fall trees at their best, we went to my hometown and had DQ and made jokes and smiled, we listened to our favourite songs, we had good conversations; it all felt like a movie, where the main characters are coming of age.

So when we got hit by a car that was honestly going way too fast, that really was not the vibes.

I'm pleased to report that NO ONE GOT HURT (except the cars, rip), and that's only because of the grace of God.

I can't fully describe what it's like to be in that moment, but emotionally I went from chill, listening to Beach Bunny and talking about crossroads (rolling up to the light) to worried and confused because we were waiting to turn for a while (right before the turn) to feeling nothing at all but hearing everything (on impact) to feeling absolute terror and horror being in the after. Before people came to our aid, I asked my friend how he was feeling, and he said he was freaking out over the car. Fair point, I was seeing parts of a car that shouldn't be on display. The people that came to help were very kind, and gave me water. I was shaking like a leaf, and called my mom, disappointed that we were probably not going to camp. What followed after was me being in shock, texting my friends, and walking around, not contributing any help to

anyone, but also staying out of the way so people could work better.

Being in an accident where you aren't the driver is akin to another traumatic experience I had in my youth: my brother got beat for stealing a bag of candy hearts from school, and I snitched on him. Then, I was just watching the chaos that unfolded and blaming myself for my father's rage, because for the first time, mom stepped in to protect my brother because my dad was going too far past what was normal in our house. Now, I watched, mostly dissociated as the chaos of calling fire and insurance and cleaning up the wreck unfolded around me, blaming myself for... existing, I guess. My brain loves to pin blame on me for events I barely had any input in.

Regardless, I put on a brave face and tried making everyone smile and at ease with the whole situation by being hilarious. Also, my friend got to meet my parents and come to my house. It's unfortunate that the first guy I bring home is under these circumstances, but I'm also surprised that my parents were chill about it and not taking the angle that this man almost got their daughter killed. Where was this level of chill at 11 years old, hmmm??

Anyways, the repercussions.. I have a minor case of whiplash, lessened control of my pelvic floor muscles, I'm sore everywhere, and listening to music makes me a bit anxious, as well as any mode of transportation. Also, I just want to talk with my friend, and not lock in and do schoolwork, and play Hades 2 and Modded Balatro. I'm also a bit more depressed than usual, which is really NOT good.

I'm sure I'll be fine.

Jochemist

OCTOBER 27, 2025 - mathNEWS ARTICLE 49

ATTRACTIVE YET DESCRIPTIVE SUBTITLE

These are the introductory sentences. They are likely talking about something that's happened recently, or maybe something that's been on the writer's mind, in a half-serious tone.

In the second text block, it becomes apparent what the article is going to be about. Although, with the half-serious tone surviving beyond the introduction, the reader might begin to doubt their initial assumptions. Letting their eyes jump ahead, they scan for spoilers, hoping to get closure on the message of the article, without paying the proper dues and reading on.

A short sentence precedes a thematic paragraph divider, momentarily breaking the flow.



The central portion begins, properly now. Whether it is fully ingested by the reader or merely skimmed, it asserts itself as the most essential part of the article. The topic should be sufficiently clear in the reader's mind by now, so as to keep them trekking onwards; they know the conclusion will only stick with them if they make an honest effort, trusting the process.

A writer often thinks a lot, which often leads to writer's block. Fortunately for the reader, the struggle with such a trouble is forever obscured by the fact that nothing is ever produced by a blocked writer. As a reader, writer's block does not exist. Funny, that something so invisible to a reader can be so defining to a writer.

Through years of practice, a writer can learn to overcome their block, but they must do so genuinely. They should not dupe their audience into getting on a roller-coaster of dispassionate

fluff, borne out of professional desperation. They should bring into clear view something interesting, something true. A seasoned writer develops a personal technique, a strategy to conquer any obstacle in their way, soon proving even writer's block isn't too hard to break.

That is, until the day the writer's block proves itself too great.



The central section is not meant to stand on its own. If it were forced to, however, it might fool an inexperienced reader into believing it to be the whole. It is not, but rather a part of a greater whole, made complete by not just the humble introduction, but by a serious, thought-provoking conclusion.

Towards the end of the conclusion, the reader expects the tone to settle down, the ride to come safely to a stop, and to be given the opportunity to get out and reflect. Stepping back, the reader knows this article was not a waste of time, and that they were not manipulated by the writer into sticking it out.

There must have been honest value in the article. The writer chose to write it and the reader chose to read it, after all. At the very least, there better be a darn good punch line.

no pun indented

AN ODE FOR THE GUSTATORY ROMANTICS

Oh! Your rosy pink cheeks!
Oh! The way you warmly meet my lips!
Oh! The warmth you carry in your hearty scent!
Oh! The comforting sizzle in your laugh!
Oh! The tenderness of your touch!

Oh to what do I owe the pleasures of your qualities,
The privilege of your presence,
The perfection of your form.

You are the reason,
You are the purpose,
You are the 42.

The stars of near and those of far,
Burn so bright,
Yet never on par,
To the splendour of your light.

On the altar, I may make my oaths.
As buried as I may be, under groves.
You will forever be, my CMH Meat Loaf.

Death will never do us apart.

CMHMeatloafLover

N PLACES TO HOST A HALLOWEEN PARTY

1. Your house
2. Your friend's house
3. Outdoors
4. A rentable social space that requires a \$500 deposit
5. MC Classroom
6. MathSoc Office
7. MC 3rd Floor Hallway
8. MC Comfy
9. Math C&D
10. WUSA Board Room
11. **mathNEWS** Production Night Room
12. DC Library
13. In your dreams

Fried Rice

IN PURSUIT OF A NICE QUIET PLACE TO STUDY

I'm easily distracted by sound or seeing things moving. I also like fresh air. There's almost nowhere on campus to study other than the library (which does not have fresh air) that doesn't constantly turn into my personal hell. I won't reveal my personal favourites, but tables are outside and buildings are plagued by piano. Whether it's good or bad playing, classical or anime, I don't want to hear it when I'm trying to read the next section of Ben Webster's commutative algebra notes. Any study room or lounge is liable to suddenly become someone's irl or phone conversation spot. I've tried noise cancelling headphones with thunderstorm noises, but this hurts my ears and head and, while better, still disturbs my internal monologue. Even now, when I've thought I found a quiet undisturbed spot in a deserted back area of the SLC basement, people have started dancing with speakers and this noise is insufferable. I should've expected it I guess.

I don't mind that people are talking or dancing or playing their favourite instrument, but by god, can there be more places on campus that aren't utterly depressing AND are supposed to be quiet?

someone a bit hypersensitive to sound

FALL HAIKU

Leaves fall from red trees
Go outside while you still can
Winter is coming...

Whole Number Haver

POUMBA POUMBA POUMBABA

gridCOMMENT 159.4

hi guys

thank you to everyone who attempted my puzzle!! the answer was: MATHNEWSOFFICE. congratulations to thirdoffive for being the first person to solve it. please pick up your prize from the mystery location to save my life please

onto the **gridWORD**. it's the spoOoOkiest day of the year, also my second favourite holiday (to my knowledge). with the recent louvre heist, i was reminded of one sitcom by the name of "brooklyn nine-nine" and their signature halloween heists, which were, for me, the highlight of every season. clearly, i had to pay homage, so i hope you all enjoy this issue's theme, unless you haven't watched the show and don't want spoilers, in which case i recommend you do not actually complete the **gridWORD**. sorry :(

last time, i asked you all what the birdiest course at UW was, and you all said:

- *thirdoffive*: I think that AVIA 101 has got to be the birdiest course. The UWFlow reviews say that it's a whole lot of work, but hey, flying ain't easy. You gotta work hard if you want to be a bird.
- *awmlet*: avia 100 (bc birds are avian). also I will not be knocking on the glass of the mathnews office because there is no gridmaster there to startle

interesting how similar your thought processes are. it is said that great minds think alike, but fools rarely differ. checking uw flow ratings, i'm finding that 100 is reportedly easier than 101, so congratulations to awmlet, please pick up your prize as well from the **mathNEWS** office, located at mc 3030 (although it should be revoked for improper capitalization. you have been warned). this issue's **gridQUESTION** is: what is your halloween costume? please submit the completed **gridWORD**, a pseudonym, and your **gridQUESTION** answer (+ a photo if you wish) to the **mathNEWS** office or mathnews@gmail.com by 6 pm on monday nov 10.

BOO

spaghettiiinhalers

ACROSS

- Popular resume-padding extracurricular option among h.s. students
- Chance
- Gossip
- Winner of the 2018 Halloween and 2019 Cinco Mayo Heists*
- With 62-Down, winner of the 2019 Halloween, 2020 Valentine's Day, and 2020 Easter Heists*
- Gathered in support (for)
- Able to travel, biologically
- Nicholas, for one
- Covered in ash
- Satisfactory, in text slang
- Unwieldy
- "A Nightmare on ___ Street"
- Silicon Valley VIP
- Rush
- Electric fish
- Loaf type
- Winner of the 2015 Halloween Heist*
- "___ do something"
- "Yuck!"
- Do well, slangily
- Lode load
- "New phone, who ___?"
- Our province, abbr.
- Wood sorrel
- Protected hardwood species prized for its colour-changing heartwood
- Spam sender
- He/___
- Popular blasphemous sexualized Halloween costume
- Central
- Anger
- Fold

- Terminal
- Creepy performers regularly spotted in 2016
- Challenges
- Home of Odysseus
- Initially
- Devious
- Castle defenses
- Food additive
- First three coordinate axes
- Little bird

DOWN

- Where co-op students working in NYC might live if they don't want to pay NYC-level rent
- Winner of the 2013 Halloween Heist*
- Shakespearean call to an unknown beautiful person
- Winner of the 2014 Halloween Heist*
- Pet bird of a popular animation YouTuber
- d: ODE, ?: ___
- Type of pilot's license
- Completely
- "Tata!"
- Algerian nationalist org.
- Home of the NCAA D1 Aztecs
- Skin patch wearer, perhaps
- Seed leaf
- Adaptable truck, for short
- Bursae
- Number of skeletons that open their eyes in "La chanson des squelettes"
- Journalist-eliminating org., according to conspiracy theories
- Type of block
- Soap ingredient
- Looksmaxxer's non-negotiable
- Winner of the 2021 Halloween Heist*

- Confucian path
- Tolkien beast
- Lie
- A very long time
- Bath's county
- ___-Wan Kenobi
- Neither's partner
- Trachea
- Prompt
- Winner of the 2016 Halloween Heist*
- Chances
- Computer whiz
- Blokes
- "Stat!"
- Fond du ___
- See 13-Across*
- Dadaist Jean
- "___ be a shame if..."
- "Give it a whirl, girl!"
- Salary deduction
- Cook in hot oil
- "in which", mathematically, abr.



1	2	3		4	5	6						7	8	9
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64	65						66	67	68					
69							70							71
72								73				74		

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

lookAHEAD

SUN NOV 2	MON NOV 3	TUE NOV 4	WED NOV 5	THU NOV 6	FRI NOV 7	SAT NOV 8
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Look for Circles Day		King Tut Day			National Bittersweet Chocolate with Almonds Day	
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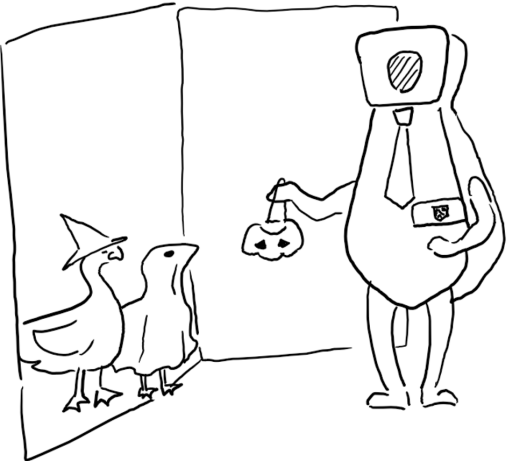
SUN NOV 9	MON NOV 10	TUE NOV 11	WED NOV 12	THU NOV 13	FRI NOV 14	SAT NOV 15
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mathNEWS 159.5 prodNIGHT (6:30PM, QNC 1502)			View next term's schedule World Pneumonia Day		mathNEWS 159.5 released National Pickle Day	
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LAST ISSUE'S gridSOLUTION

1	H	2	O	3	P	4	E		5	R	6	E	7	C	8	U	9	R		10	G	11	I	12	L	13	L
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17	P	E	R	S				18	O	N	A	L	E	F		19	F	E	C	T	S						
20	I	R	K					21	P	I	N	T			22	S	O	L	U	T	E						
		23	P	I	P	E		24					25	A	U	G		26		27	G	I	R	O	S		
28	G	O	N	A	D	O	T	R	O	P	I	C															
31	E	W	E	R				32	T	E	E	T	H	E			33	A	D	D							
36	R	E	S	E	C	T								38	O	S	P	R	E	Y							
40	M	R	S					41	R	E	S	I	S	T			45	L	A	C	E						
								46	T	Y	R	A	N	N	O		47	S	A	U	R	S					
48	S	U	S	H	I						51	G	S	A			52	O	N	C	E						
53	A	S	K	I	N	G				55	T	R	E	Y			57	A	M	P							
59	C	H	A	R	G	E	D	A	F	F	A	I	R	E	S												
62	R	E	T	D				63	M	O	T	E	T				64	S	I	N	S						
65	A	R	E	S													67	M	A	T	T						

KNOCK KNOCK



ith term

otherNEWS is made technically possible by club executives of the Math Faculty.

I say “technically” because if they had actually sent us some news, this box wouldn't be here.

THE mathNEWS EDITOR WHO PUTS THE "NEWS" IN mathNEWS