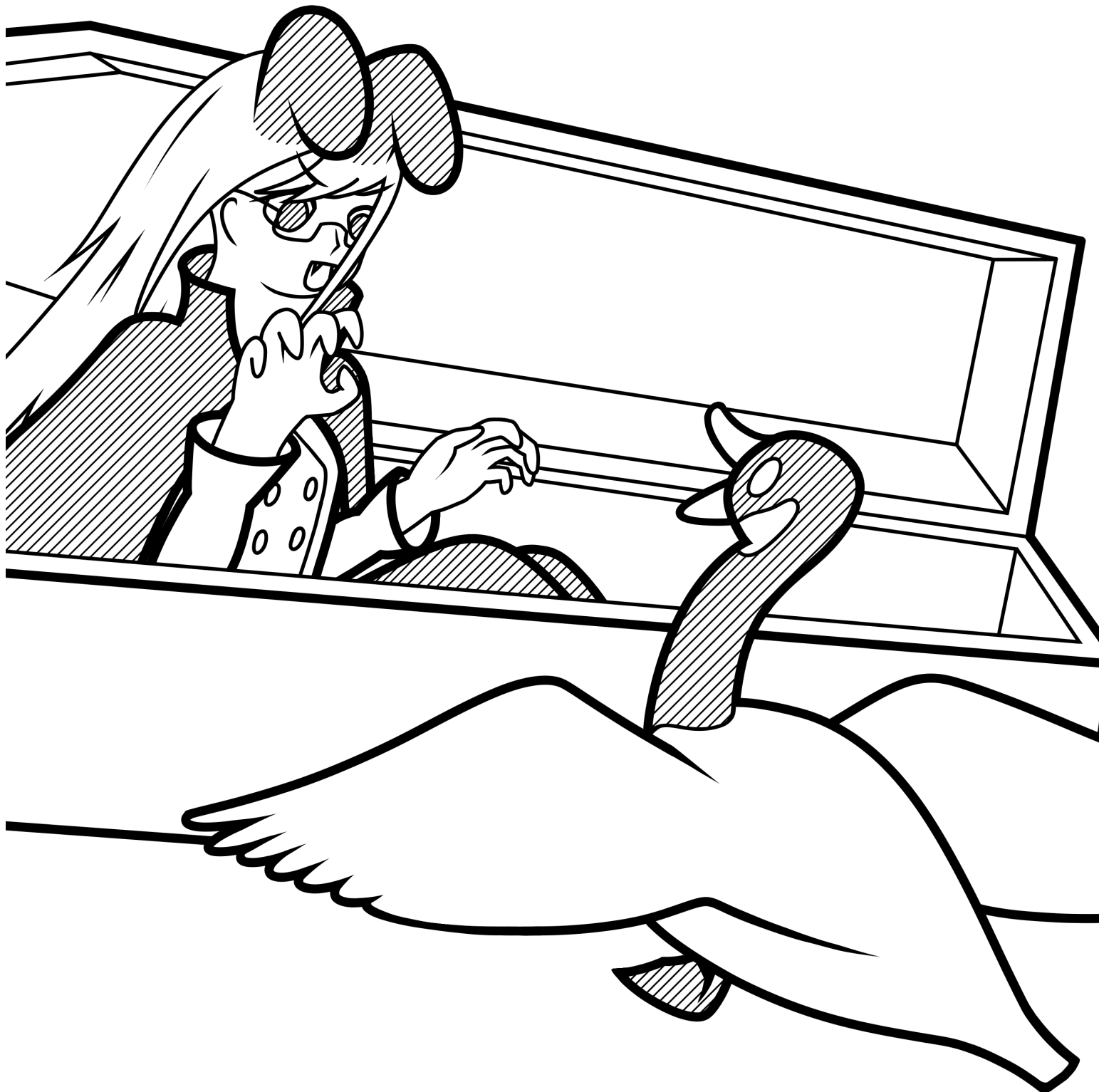


snowdozer



“WHAT’S YOUR ‘TRICK’ IN TRICK-OR-TREAT?”

Trick or treat, my loveliest readers!

As I write this **mastHEAD**, the calends of November is upon us... Halloween is but a distant memory in my mind, as I’m sure it is in yours by now (unless you happen to be reading this almost-but-not-exactly N years in the future, for an integer N). We’re halfway through the fall term, and even more than that through fall season. The leaves have fallen, billions must shiver.

But that doesn’t mean we didn’t have a fantastic time at this week’s day-before-Halloween production night! Well, I was The Only Person In The Entire Room Who Dressed Up... and the first years were gone again because they had *another* midterm this prod night... and I was told by a first year who showed up later for pizza that they have *another* midterm next prod night... and distractED didn’t get any anchovy pizza...

But it was great! Greatest prod night! Greater than all of `#{LEADING_COMPETITOR}`’s prod nights!

Speaking of `#{LEADING_COMPETITOR}`, did you hear that Iron Warrior is trying to make a return? They haven’t published an in-person issue since 2020, but a recent letter from the editor on their blog says that they plan to start printing again this term¹. I, for one, can’t wait to see them back. It’s been lonely at the top.

What do you mean they still put out an Imprint once a month?!

caffeinatED
Editor, **mathNEWS**

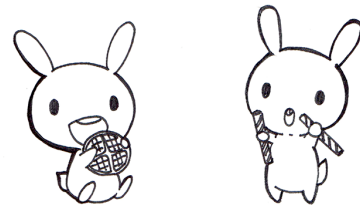
1. <https://iwarrior.uwaterloo.ca/2023/10/12/51019/letter-from-the-editor-autumn-has-arrived/>

ARTICLE OF THE ISSUE

someBODY. *The Horror of the Ineffable*. MC 3030. Conestoga Mall gift card. You know the drill.

evaluatED
Editor, **mathNEWS**

- BOLDBLAZER** | amogus
- ANDOOIII** | cuddles
- FIRSTIE** | fragmentation grenade, pin pulled
- TENDSTOFORTYTWO** | All the candies I give out say, “Best viewed on Internet Explorer 6.0 at 1024x768.”
- SEXY_SOFTWARE_BABE** | i solved the last **gridWORD**
- SOMEBODY** | Spiders
- YALEVOYLIAN** | Playing my recorder
- RAPIDEYEMOVEMENT** | Molotov cocktail
- DICK SMITHERS** | I do a backflip, land wrong, and break 100% of the bones in my body
- MOLASSES** | cocaine
- PIZZADONYM** | Me
- 0.423** | Remember how Jake Peralta started screaming when everything else failed. Definitely not that
- ROCKFACTS** | POCKET SAND (obviously)
- POPCORN ROCK EATER <3** | (as u hand me a hershey bar) “tenk u” *glomps your finger* OwO
- WATER** | revenge bedtime procrastination
- JEFF** | Parameterising you over arbitrarily many types
- HYPERLYNX** | you think it’s candy, but it’s actually the “candy” we got from Gols last weekend that turned out to be a sealed wrapper with nothing inside
- APHF** | Reignite the Vietnam War ☹️
- CAPITALISMISTHEBEST** | “Trick”-le-down economics
- LARS NOOTBAAR** | The Wuxi Finger Hold
- HELIx2** | a kickflip B) *I cannot do a kickflip
- SNOWDOZER** | I lace the candy with a slow-acting poison
- __INIT__** | Saying I’m going to write a short article and then actually writing a short article
- EVALUATED** | Spreading double spaces throughout the issue
- DISTRACTED** | “modifying” Pizza Nova receipts so I can embezzle tens of pizzas worth of **mathNEWS**’ money
- AWED** | Being awEsome
- CAFFEINATED** | Hire them as a **mathNEWS** editor before they realize what’s going on.
- CLASSIFIED** | flaming hot lava



Wait, is it November? Sucks, man.

EVAN GIRARDIN, **mathNEWS** EDITOR FOR FALL 2023
ALONG WITH DANIEL MATLIN, AWAB QURESHI, NAMAN SOOD, AND ISABELA SOUZA

mathASKS 153.4

FEATURING PROFESSOR JOEL DUBIN

RAPIDEYEMOEMENT: TELL US ABOUT YOUR WORK IN PUBLIC HEALTH! WHAT WAS THE MOST SURPRISING THING THAT DATA ANALYSIS HAS REVEALED?

I mention a little about some of my public health work in the next answer. As far as surprises in data analysis, sometimes a researcher sees something in a smaller study and assumes it will be seen a larger study as well. But results are often not replicable across different studies, even when the samples for the different studies are drawn from similar populations. I probably used to be more surprised when results did not replicate across different studies, but not so much these days.

HELI×2: WHAT'S YOUR FAVOURITE PART OF WORKING IN SUCH A WIDE VARIETY OF APPLICATION AREAS?

Keeping things fresh! There are some core principles when working as a biostatistician on a collaborative team of health researchers, which allows, for example, contributing on a project with geriatric researchers, then moving to a project working with teen health, then moving to a smoking cessation project for adults, then to air quality, then to making health predictions for patients in intensive care units, and so on.

NOT_A_UW_STUDENT_(YET): WHAT IS YOUR FAVOURITE COURSE TO TEACH?

Honestly, I like all the courses I've been lucky enough to teach, but, perhaps, STAT 932, Prediction in Health (short name), a graduate course taken mainly by Master and doctoral students in Statistics and Biostatistics, is my favourite these days.

NOT_A_UW_STUDENT_(YET): WHAT IS A CONCEPT IN YOUR FIELD THAT IS UNIQUELY DIFFICULT FOR PEOPLE TO UNDERSTAND?

Variation. It is easier to think that one dataset or one study or even one experience provides the information we need to know to make decisions for the future. But, even in a well-designed study, what we see as a result may be within expected variation, yet a result we might not expect to see on average had we carried out many similar such studies on the same population.

MOLASSES: ARE THERE ANY KEY OVERSIGHTS DO YOU OFTEN SEE IN HEALTH DATA COLLECTION?

Not fully thinking through the sample size needed to help, as best as possible, to accurately answer the primary question(s) of interest. Related to the above comment on variation, we may be lucky (or unlucky) with our result, even in a study that tries to minimize as much variation as possible. But if we cannot anticipate the amount of variation we expect to see, a study could easily enrol too few people, such that even if the truth is that, say, one method for dealing with smoking

cessation is superior to another, the data we may collect could very well lead to inconclusive results.

JEFF: WHAT'S YOUR FAVOURITE BATHROOM ON CAMPUS?

Ha, any washroom that is fully operable and open.

H: WHAT'S THE MOST INTERESTING PUBLICATION YOU READ THIS YEAR?

I read too many articles, one at a time, from journals, magazines, and newspapers, definitely a product of the digital age. All that said, I did enjoy what I read in these two issues of The Atlantic this year: <https://www.theatlantic.com/magazine/toc/2023/03/> and <https://www.theatlantic.com/magazine/toc/2023/07/>.

COMMONDIYAR: HAVE YOU ANALYZED THE DANGERS OF HITTING THE WOP (VAPE)? ANY DANGERS IN RIPPING THE NICC STICK?

Sorry, have not been involved in much vape research. I do know that research thus far on vaping suggests it is not as harmful as cigarette smoking, but it is still unsafe.

YALEVOYLIAN: DO YOU HAVE ANY RECOMMENDATIONS FOR BOOKS RELATED TO YOUR AREA OF RESEARCH?

Frank Harrell's *Regression Modeling Strategies, 2nd edition*, is a good one. It has a different but comprehensive perspective on many topics in regression modeling compared to other such texts.

For one of my primary areas of research, longitudinal data analysis, that is analyzing data collected over time (e.g., respiratory rate, or heart rate, or both) from a sample of individuals, a nice resource is *Applied Longitudinal Analysis, 2nd edition*, by Fitzmaurice, Laird, and Ware.

CUTLET: HAS ANYONE EVER TOLD YOU YOU LOOK KINDA LIKE PROFESSOR JEFFREY SHALLIT FROM THE SCHOOL OF COMPUTER SCIENCE?

No, have not heard that, but I don't get out much. :-)

Can't say shit in Detroit...

EVALUATED AFTER I QUOTED HIM IN THE PREVIOUS PAGE'S blackBOX AFTER HE REALIZED THAT IT'S NOVEMBER AFTER HE SAW ME WRITING THE mastHEAD

BOLDBLAZER: ARE THERE ANY OF YOUR HEALTH-RELATED FINDINGS THAT YOU ENDED UP USING IN ANY WAY IN YOUR EVERYDAY LIFE?

Physical activity is good.

BOLDBLAZER: WHAT ARE YOUR FAVOURITE KINDS OF SWEETS?

Pecan butter tart/pecan pie, pumpkin pie, blueberry pie, dark chocolate brownies... I could go on for awhile.

THE FINAL YEARLY REMINDER

This is the fourth and final yearly article reminding readers about the upcoming solar eclipse across North America happening on 2024 April 8.

This article will now be focused more on the final steps, mainly about travel plans. For details about the eclipse's path, refer to my previous reminders.¹ At the very least, the path of totality closest to Waterloo would need you to go to Hamilton. If you want an extra minute or so of totality, you could also go to Niagara. You can't go to Toronto though, since it sadly barely misses totality.

On my part, I have already figured out my travel plans, and if you don't want a headache trying to figure yours out, you better do it sooner rather than later. Not being in Ontario, in terms of costs I had expected around \$650 for a decent travel itinerary and I was able to make that goal.

If you want to make your own eclipse travel plans, and you don't live near by the path of totality, note that the prices of hotel rooms in the path of totality will go up as it gets closer to eclipse time, along with the chance of it just flat out being sold out. Niagara, a very tourist oriented location, already has many of its hotels with no occupancy available. Hamilton is also beginning to look like a similar story.

Also, don't forget that step 0 is to obtain at least one pair of eclipse glasses. The eclipse at its totality is only a couple minutes. You want to at least be able to see the before and after of an eclipse forming, after spending all that time, money, and effort into such a trip. Paying \$3 for some eclipse glasses early is totally worth it.

If you live in Waterloo, or at least somewhere close by enough in Ontario, thankfully you won't need to worry about hotel and flight costs. What you do need to worry about is the transit instead. The Lakeshore West GO train is a line that goes right into the path of totality, so at least there is a simple

way of heading to the eclipse. The only thing to note would be how busy it will be on eclipse day. From previous eclipses, there will be a lot of people heading to and from the path of totality at about the same time, so it will be best to anticipate the roads and transit being super busy on the day, especially in and around Hamilton and Niagara.

Now, what slightly sucks is that long term planning of transit with GO buses and trains is not really possible. Who knows how frequent the trains and buses to Hamilton and Niagara will be 5 months from now? I expect there will be a new Lakeshore West schedule released between now and then. Realistically, the trains might be running a handful of times per day. It'll probably be good enough.

On that note, if anyone is going to make a trip towards Niagara for the eclipse, feel free to say hi to me. I'll be there on the day of the eclipse obviously, but also a couple days surrounding it.

One last part is the weather. Sadly, just like GO transit schedules, it is impossible to perfectly predict what a single day's weather will be like 5 months in the future. Everyone hopes for clear skies, but it's just not a guarantee. Being in early April in Ontario, it isn't necessarily the best odds of clear skies, but not necessarily the worst either. Cloud cover being a factor that is not really controllable, it's probably best not to worry or stress out about it too much.

An eclipse is a rare event, and also rare is how well it lines up with locations close to where you are. I'm not saying necessarily to disregard your studies, but the eclipse does fall on the last day of classes of the W24 term, which will be a Friday schedule according to the registrar, despite it actually being a Monday.

The best case scenario is convincing all your profs to cancel that day's lectures for the sake of being able to go see the eclipse. If not, you could probably evaluate yourself if the eclipse will be worth it to miss the final lecture of the term.² Even cooler would be if **mathNEWS** goes to see the eclipse for the term's EOT event.

boldblazer

1. The yearly reminders started in 144.4 with *A Yearly Reminder*, then 147.4 with *Another Yearly Reminder*, and 150.4 with *Yet Another Yearly.. Reminder*.
2. I would say it is definitely worth it.



N mathNEWS ARTICLES YOU COULD BE COMPLAINING ABOUT OTHER THAN THE ONE ABOUT ISRAEL

mathNEWS IS NOT A REPUTABLE PUBLICATION, AND ANY PRETENCE OF BEING ONE SHOULD BE WHOLLY IRONIC

- The one about dipping balls in soy sauce
- Any of the ones about anime
- Any of the articles about Lobster Burger Bar closing
- The one featuring the words “sexy” and “Daddy Reynolds”
- The one talking about ingesting chlorpromazine to blind yourself
- Lazeeza
- Jesus comes back from the dead and says, “You might be east, but I’m Easter”
- Limits is edging
- You’re Telling Me This *mast* Gave me HEAD?

a hater

WHAT LIES BENEATH

SELECTED PHOTOS OF SUBTERRANEAN LOCATIONS THAT MAY OR MAY NOT EXIST



OBJECTS FROM THE mathNEWS OFFICE

I: THE BLACK BOX

Hey. You. You love **mathNEWS**, right? I'm sure you think you know plenty about **mathNEWS**—you've memorised all **blackBOX** quotes, you can predict the next album review that'll show up, and, if you've been here long enough, you've seen your fair share of profs re-using their one-liners in **profQUOTES** across course offerings. Ah. Laser-focused on these pages, most readers will graduate without ever stepping foot in the beating heart behind the paper: the **mathNEWS** office, MC 3030. And, even of those who have had the privilege of setting foot inside, almost none will understand the strange and varied objects contained therein.

But I know. Well, I don't know *everything*, but I know *some* things, alright?! Here; let me give you a tour of the office. Just you and me.

THE BLACK BOX

The **BLACK BOX** is, possibly, the *ultimate* relic of the past. In the modern day, writers congregate on production nights to write articles on our WordPress instance (or email them to us), they enjoy some hard-earned pizza, and then they leave the editors to put together the issue digitally over the next two days.



FIG 1: THE BLACK BOX, NEXT TO SOME SPARE mathNEWS ANTHOLOGIES.

Decades ago, though, things were different. Contributors would be expected to write their articles *before* production nights, and everyone would drop their hand-written article submissions into the **BLACK BOX** to be put into the issue on production night. The **BLACK BOX** sat outside the Math Coffee & Donut Shop on the third floor of MC, publicly accessible for anyone to drop something off; only the editors held a key to open it. Anyway, the technology to produce an issue digitally didn't exist yet, and so the actual *production* of an issue, layout and all, had to be done *manually*. Rather than spending production nights writing, folks would come by to help *physically put the issue together*. That meant typesetting and printing individual articles on a phototypesetter, cutting them out with scissors, taping them down to a page, and sometimes applying some pen ink and white-out directly to the page.

The phototypesetter used by **mathNEWS** was infamous for its unreliability, and volunteers would regularly be awake late into the next morning finishing it all to be run over to Graphic Services (now W Print) for photocopying. The line between “editor” and “writer” was much fuzzier; the difference was less in the work itself, rather more in the decision-making power and responsibility.

Not anymore, though. Today, the layout is all done digitally, and it's done solely by the editors. It's way faster, the issues are way longer, and there's a lot more pizza. Writers get to write what they want on Monday and wait for the issue to come out on Friday. The dividing line is thick. It's a very different dynamic.

Nowadays, the **BLACK BOX** sits on the top shelf above **mathNEWS**' main production computer. It bears a coat of deep black paint and brandishes its battle scars with pride, rough around the edges from years of use. The **mathNEWS** logo is proudly emblazoned on the lid in smudged yellow paint, echoing **mathNEWS**' scrappy nature past; the lid rests on the side of the box, a chunky hole cut out of it to stuff things in. **mathNEWS** actually still has a **BLACK BOX**—you can find it fixed to the wall outside the Math CnD. It's a damn sight smaller than before, and you'd have to fold up your paper really tight to slot it in, but it's still there. Legend has it that the editors still check it now and again, never to find anything inside.

Well, that's the **BLACK BOX**. Go see it yourself sometime if you want. Tune in next issue for another object from the **mathNEWS** office.

jeff

Note that the **BLACK BOX** is distinct from a **blackBOX**, i.e., one of the many handy implements in an editor's Layout Filler Toolkit. The term “**blackBOX**” was actually coined in homage to the **BLACK BOX**.

A DONKEY BY THE SIDE OF THE ROAD IN ROMANIA THAT I FOUND ON GOOGLE STREET VIEW 2 YEARS AGO

<https://www.google.com/maps/@43.8559447,24.2890563,3a,60y,121.71h,90t/data=!3m6!1e1!3m4!1s16KKTCVvpkmP A1Ga91PKVQ!2e0!7i13312!8i6656>

__init__

A SCATHING REVIEW OF C++

A word of warning: C++ is not my main language and I am rather biased due to my experience with another existing language (which happens to start with the letter R). [*Editor's note: I love Racket too :D*]

C++ is quite the language.

It's a very configurable—**very** configurable—language. Want `a = b` to mean something reasonable? Too bad, I can reconfigure it to mean something completely absurd. Hell, I can reconfigure `a = b` to mean something different depending on whether `b` is temporary or not. Oh and also, `a = b` is allowed to throw an exception. By the way, you're also allowed to make taking the address of an object... private? So it's like I hand you an apple and tell you you're not allowed to insinuate where it exists.

References are made and unmade implicitly. If I say `f(x)` in a context where `x` is not explicitly some kind of `const`, there's no way to know whether `x` is being mutated, copied, or passed by `const` reference.

References get way too specialized, `foo& x`, `foo&& x`, `template <typename T> T&& x` all mean different/overlapping things, not to mention the fact that you often have to write different functions for both of the first two, with identical contents.

The language praises “helping the programmer” yet is actively designed to make it easier to hurt yourself. `std::vector`'s `operator[]` will cause undefined behavior (UB) to happen if you try to index out of bounds. But, `at` will throw an exception if you do the same thing—other functions such as `pop` functions on `std` containers will just invoke UB without a safe alternative.

The language is designed around its ability to overload operators. It's almost as if they decided to make some crazy UI tests for the compiler while implementing operator overloading, and decided to actually make these tests part of the language. Oh, you want to print in *the vast majority of languages?* `something::print` or `something.print` or `something.other.print`, etc. C++? `std::cout << stuff << std::endl;` You want to use iterator adaptors? `vector | std::ranges::views::filter([](int x) { return x % 2 == 0; }) | std::ranges::views::transform([](int x) { return x * x; })`. Yes, that's `|... like bash piping`.

C++ templates are also one of the most poorly designed aspects of C++. The issue is that they're just that, *templates*, not generics. They're somewhere between textual substitution and actual generics. Whether a template makes sense with a particular type supplied is... based on whether substituting the type into the code actually compiles. This leads to the compiler emitting absurd errors which make no sense since the error isn't that the substitution doesn't inherently make sense, the error is that some line in the resulting substitution doesn't make sense. Also, some language servers for C++ (such as `clangd`) just flat out won't give you any completion nor

insights on templated code, because there are no constraints on the semantics of the types passed in.

C++ absolutely loves its implicit conversions. If I say `T x = y` and `T` has a constructor with a single argument of the type of `y`, you'll get implicit conversion from the type of `y` to `T`. And this isn't the only place this happens. It also happens in a much more implicit case when calling a function like `void f(T); f(y)` performs the same implicit conversion.

A common structure some people will want is a bitvector, namely a kind of vector where it's optimized to store boolean values using bits. But notice my wording—a *kind of* vector, not *the* vector. That's right, `std::vector<bool>` will *not*, in fact, be a vector of boolean values, it's a bitvector. So taking a reference to a `bool` in a `std::vector<bool>` will cause UB since it's not an actual `bool`, it's just a bit in some bigger integer.

C++'s pedanticism about when moving occurs doesn't come with its own exceptions either—sometimes the move constructor just *doesn't run* because elision happens. An example of this is when you construct an rvalue to pass into the parameter of a function—you won't get your move constructor to run, it'll just build the object directly in the frame of the called function. This means that the code which you write in said move constructor *just will not run despite you explicitly intending it to do so*.

The cherry on top is the fact that C++ tooling is often a terrible experience. So much so that it's *common practice* to just rebuild parts of other libraries in your own codebase because linking to those libraries is such an absolute pain. Adding a library? As easy as one, two, fuck you, the linker died. Libraries aren't the only painful part of the language. The spec added features in 2020 which were so complex to add to the language, that only one of the three mainstream compilers of the language implements them—namely `modules`, which have such poor support that the current advice is often “just don't”.

C++ also has a plethora of random features and design choices whose justification for existence I cannot fathom. `operator`, is overloadable. C-style casts will try a bunch of C++ casts and will *just pick the first one to work*. You can define operators on arbitrary types outside of your own library. For some reason, iterator types are split between `begin/end` and aren't unified... until you use `ranges::views`. And I'm just going to put this out there: the entirety of the C preprocessor still applies to C++.

This language actively makes my life a living hell, and the only reason I can barely tolerate learning it is because the professor who teaches it does so in an amazing fashion. Thanks, Prof. Lushman!

AN APPRECIATION POST FOR THE META JOKE MADE BY WRITER WATER IN mathNEWS 153.1 THAT IS NOT REALLY A JOKE AND MORE JUST ME MISSING THE POINT OF THE ARTICLE

On a warm September day, I opened my copy of **mathNEWS** 153.1, and stumbled on a joke I found so funny I audibly laughed. The joke read:

YOU WON'T BELIEVE WHAT JUST TRANSPIRED

WATER

Why is this so funny you ask? Well in science, transpiration is the act of evaporation of water from the soil through plants. Therefore, when the author states that “you won’t believe what just transpired”, and puts nothing after it. The joke isn’t just the fallen expectations of nothing actually “transpiring”, but it is water, *water*, the author, that is actually transpiring. In the haze of I am not sure exactly what, this appeared to me as the perfect joke, something so basic, but also so meta and impactful.

Upon further recollection maybe it wasn’t that funny. It had been a long two weeks, I had been sick, I was behind in school, and my room was still unpacked, my mind may have been just broken enough to allow a unique set of neurons to connect in my head.

I found this joke so funny I went to noted 4x Article of the Issue award winner *aphf*, and told them the joke. Somehow, they didn’t get the joke until I explained it in a manner similar to above. They then informed a shocked me that in fact, even *water* probably did not intend to make this joke. And that I actually missed the entire text of the article, and it was actually some sort of inside joke;

YOU WON'T BELIEVE WHAT JUST TRANSPIRED

I'm sitting beside $h\nu$ at prod night and just witnessed him Google “hwair” and copy the symbol from the Wikipedia page he does this every single time

WATER

So in my deep daze on September 22nd, I had completely imagined and created this deeply strange and complex joke, that only I found funny. Despite this, I would like to express my appreciation for the **mathNEWS** writer *water* for the joke they made in **mathNEWS** 153.1 that is not really a joke and more just me missing the point of the article.

Lars Nootbaar

DYNOING, THE DARK KNIGHT RISES, AND LIFE

Quick rundown of terminology:

Dynoing refers to a type of climbing move where the climber uses their momentum to push themselves off the wall to the next hold. This is contrasted with *static* climbing, where the climber is always (mostly) stable on the wall and moves from hold to hold.

The Dark Knight Rises is a Batman movie where Batman, at one point, is trapped in a big prison hole by Bane and has to climb out.

Last weekend, I did a training course in dynoing, run by the UWaterloo Climbing Club, run by a great guy named Spencer. He explained the basic mechanics of dynoing (use your legs to generate force and stay as close to the wall as possible), and then explained the core problem most people have with dynoing: fear.

Namely, people are *capable* of generating the force they need to reach the hold they’re going for, but they’re *afraid* of falling or of scraping their face on the wall, so they hold back and don’t apply the force they need.

This immediately reminded me of the *The Dark Knight Rises*, where Batman must climb out of the prison hole. Prisoners are provided a rope to tie themselves with, to avoid death when falling, but no prisoner has ever escaped the hole. Batman gives it a few tries, but finally realizes: the rope is holding him back.

He removes the rope and makes a fateful jump out of the hole. His life is at risk. Death awaits. But, he makes it out.

I realized that these two experiences were a great metaphor for life, that sometimes fear of failing to achieve a goal is holding us back from achieving that very goal.

I realized that we have to untie our metaphorical prison hole rope, and unleash our legs to generate the full, metaphorical power needed to push us to the holds we want to reach.

That’s how I scraped my face on the climbing wall.

UW Unprint

N THINGS TO KNOW/BRING BEFORE EXPLORING THE ENTIRETY OF CAMPUS

1. **map:** if you bring nothing else, at least bring this. it will stop you from getting disoriented, injured, killed, or worst of all caught. if there's no public map, start making your own.
2. **water:** water is also a good idea. this is less of a concern on campus because of the water fountains everywhere, but certain places can and do get very hot. also used to clean injuries.
3. **friends:** exploring is a great way to trap friends in locations they'd rather not be in. after that, you can make more friends! too many friends are a bad idea, but so is going alone.
4. **hard hat:** if you like to explore cramped or high places—or if you're just really tall—hard hats can protect you against injury. may be hard to explain. chin strap recommended.
5. **flashlight:** this matches 7, but it's a good idea to go with a flashlight separate from the one on your phone. or at least bring an old phone you're prepared to lose.
6. **don't ruin it:** note this article doesn't mention any specific places. just like your favourite study spot, publicising your adventures brings only attention and ruin.
7. **go only by dark:** in most places, security and plant ops work 9–5 or similar. do note that trespassing by night near a dwelling is a criminal offence in ontario.
8. **don't run if caught:** if you've never been caught before, the best options are typically to pretend like you belong there or own up and swear never to return.
9. **beware motion detectors:** some explorers encounter silent motion detectors, typically in dangerous or restricted places. research will reveal their locations.
10. **know your exits and alibis:** this goes with 9. discuss contingencies with your group including some exits, how to communicate if separated, and your alibis.

try unmarked doors, stay safe, and have fun!

firstie

WHY DID THE GEOLOGIST GET DIVORCED?

Because she felt her partner was taking her for granite...

rockfacts

SILENCE

Walking back from **mathNEWS**, late at night. Empty halls; no one in sight. It's perfectly quiet. Or is it?

The thing about silence: you can hear *everything*. The roar of the machinery; the ventilation systems. ESC is quiet, but EIT has a waterfall, and PHY machinery. More of the same through the engineering buildings. And the bridge across the road is flooded with ventilation noise.

I can pick out every single source of noise. As I walk through PHY, white noise behind me; different white noise in front. How can I tell them apart? No clue!

Machinery in PHY 358; more in 312. Ventilation on the bridge. Entering E2... *holy shit*, is E2 3403F loud!

Might it be quieter outside? Quite the opposite. The cars; the people; especially the train. And that's even without the train crossing chiming...

But there was a moment of true quiet. The top of the stairs in E2, next to the bridge to PHY, when the doors are closed. Other than the faintest of whirs, I could hear nothing but my footsteps.

Back in my dorm room now. The hissing of the pipes is so loud. So is the clatter of my keyboard, and the quiet chatter outside, and I'm dreading the sound of my electric toothbrush. But the hissing *never shuts up!*

The human ear really is amazing. Three nanowatts per square meter, and I'm complaining about the noise!

And finally, silence. The hissing has stopped; the people have left. Peace and quiet, at last.

finegeometer

INTERVAL NOTATION

[
 (we followed [the Path) crumbled beneath
 (our feet] became [one mind) can absorb
 (the truth] is that my Professor
 understands [nothing) can describe the
 joy of shared (thought] you understood
 math didn't [you) haven't lived
 as they (do] you wish to find [your future)
 is (predetermined] individuals will never
 find [answers) lie in forbidden (textbooks]
 bound by [shared dreams) will reveal
 (your nature]
 is not to [learn)
)

pixel

THE HORROR OF THE INEFFABLE

INEFFABLE: “TOO GREAT OR EXTREME TO BE EXPRESSED OR DESCRIBED IN WORDS”

Picture in your mind Cthulhu, the titular monster from H.P. Lovecraft’s *The Call of Cthulhu*. Have you pictured it? Is it there, in your mind? Well, sorry, but what you are currently picturing is not Cthulhu. It just isn’t. Many artists have drawn renditions of Cthulhu, but none of the drawings that have been done have actually been drawings of Cthulhu. Even within the story, the human mind cannot fully comprehend, describe, or picture Cthulhu.

“The Thing cannot be described — there is no language for such abysses of shrieking and immemorial lunacy, such eldritch contradictions of all matter, force, and cosmic order”

H.P. LOVECRAFT, *THE CALL OF CTHULHU*

The narrator then goes on to give a description that is “not unfaithful”, but makes it clear that the words they are using are not sufficient to describe it, nor could they ever be. It is simply impossible. Even if you were looking directly at it, you would not be able to picture it in your mind. That is the meaning of the ineffable.

It’s an interesting concept, to be sure, and a very unique brand of horror. A lot of horror is predicated on the fear of the unknown, unfamiliar, or unexpected. You don’t know when a jumpscare will come. You don’t know what’s lurking out there in the dark. You don’t know if the main character will survive. However, in most horror media, the underlying thing is something that can be described at the end of the day. This is especially true in visual media such as movies, TV shows, and video games, where the unknown creature eventually steps into the light. In the beginning of season 1 of *Stranger Things*, the characters are dealing with a monster whose nature they do not fully understand. It is this lack of understanding that makes the show unsettling. But by the end of the season, the monster is there, on the screen, for the characters and audience to see, in its full form. It is described. It is pictured. It is not ineffable.

You cannot show your audience the ineffable. You cannot create it with pencil or paint or CGI. You cannot jumpscare your audience with it, or create a fight scene with it. You cannot shock your audience with its gruesome design, for it has no design. You cannot have it engage your characters in a battle of strength, speed, or wits, for it is incomparable to anything we can understand.

Ironically, the best medium in which to write a story involving that which cannot be described in words, is the medium of words. A visual medium shows all its details, leaves no barrier in the perception of the horror by the audience. In a book, you leave all the little details up to the reader’s imagination. In an ordinary horror book, the reader’s mind will picture what it believes to be the scary thing the book has written about, and that act of picturing will scare the reader. If you read about a murderer who stalks the halls of a building, you are scared because you imagine them stalking the halls of your building.

You imagine what they look like, what weapon they are using, what their motivations are, if any, and what it would be like to get murdered by them. Leaving those details up to the reader instead of showing them is one of the things that makes text-based horror very powerful.

But if you read about the ineffable, something very different happens. No matter how hard you try, you will never come to a sufficient description. This has a very unique horror effect on the reader. You know that your description is always incomplete, and you are forced to concede how small you are. After all, everything is relative. Just as Cthulhu is so extreme as to not be describable by your language, you are so insignificant as to have no recourse to deal with or even comprehend it.

While other horrors scare you by adding something to your mental library, the ineffable makes you painfully aware of an empty space that can never be filled. It’s a similar feeling of the unknown, but on a higher order of magnitude. It’s not just that you don’t know because you haven’t seen the monster, or because you don’t know where it is, or because you don’t know how it works. Your mind can fill in those details. With the ineffable, you don’t know because your very nature forbids it. You can never know. Your insignificant mind is, not by circumstance, but by definition, unable to describe the horrors of what lies beyond the cosmic veil.

someBODY

RESULTS OF THE MURDER SURVEY

For Halloween week, here are the results from asking the writers of **mathNEWS** their preferred method of murder!

- A “natural” death
- Crossbow
- Feral stabbing
- Assassination (2)
- Move constructor
- Make them victims of capitalism
- Death game
- Forcing someone to write Java
- Normal stabbing
- Vehicular manslaughter
- Jeweled dagger in the back, in the middle of their secure facility
- Live in their head rent free (2)
- Stab in the back
- “Legally”

mathgeek

THE DEVIL'S STAIRCASE

Outside the optometry building, on the west side, you will find a series of stairs that climb up a gentle slope from the street level to the next floor up. As a chronic visitor of the optometry building—I have had a class there two out of three terms so far—I am very familiar with these stairs and the fact that they are one of, if not the worst stairs on campus. Only the stairs outside Needles Hall could possibly compare to its awfulness. Let me explain.

The problem initially stems from the fact that the ground the stairs are situated on is inclined enough that you can't make a ramp, but any configuration of stairs would be awkward. However, instead of choosing the least awkward configuration, or changing the terrain a little, the designers of these horrible stairs decided to go with 6 long flat sections each separated by 3 steep stairs. This is quite possibly the worst thing they could have done in this situation, save for perhaps a single 10-foot high stair. If you've never been to the optometry building, then imagine the Cantor function and you'll be pretty close to reality.

The reasons why this is so deranged first show themselves when you try walking up the stairs: they are a pretty big nightmare for accessibility. The mini-flights of stairs are rather small and nontrivial to climb up and down, and they have no railings. Furthermore, if you wanted to take a ramp instead, you are forced to walk on the grass.

But even if accessibility wasn't a problem for you, they are also just plain awkward for the average person especially when walking down. Because the depth of each stair front to back is so tiny, to walk down each step you have to slow your pace to a crawl, then you naturally speed up on the flat stretches, and repeat ad nauseam. And you can't run down the stairs comfortably either: the flat portions differ enough in height that after jumping down all 3 steps at once, you land on the landing harder than is reasonably comfortable, disrupting your stride.

Anyway, these stairs are an abomination. I don't know who designed them, but whoever was in the process of creating this abhorrent garbage should be locked up and forced to roll a boulder up the Cantor function for eternity.

hyperlynx

SHORTEST mathNEWS ARTICLE

Will the editors print just about anything these days?
[Editor's note: We've even published shorter articles!]

firstie

I'M GROWING DISILLUSIONED WITH AMATH

After all of the bullying I suffered in PMC for taking a few AMATH courses this term (thanks guys), I was hoping that I would have a good time, learn some physics and be able to really fulfill my desire for (sigh) applications. However, now that we're at midterm season, I'm feeling less and less interested in course content, and less and less willing to put a ton of work into assignments.

Of the two courses I'm taking, the best is definitely AMATH 271 (basically Mechanics 2: Electric Boogaloo). I was super excited about this one, but this course has fallen into what are the two most common pitfalls for physics at the Loo. First, you feel like you aren't learning anything; the first 7 weeks have just been mechanics review but with calculus. Second, you run into a wall because the assessments are hard, a problem made doubly frustrating because you feel like you already know the content. I know you're thinking "salty + skill issue", but this is a common problem that many people experience.

However, the worst offender is AMATH 251 (ODEs). This course also suffers from the 1–2 punch of disinterest followed by bad grades, but this course takes those problems and runs with them. It might just be an issue with my offering, but the marking has been extremely harsh, with marks removed for stupid stuff such as not factoring your answer the way the TA wants. Also, the assignments are crunchy and sometimes ambiguous, and there are two midterms (cringe). Finally, the content is super dry and mostly consists of "look at this calculus formula". For context: I have difficulty getting the motivation to go to my 11:30 lecture, but I always get up to go to my PMATH 347 at 8:30.

Anyway, I've had a stressful couple of weeks and I'm making my ranting everyone's problem. I feel better already.

>:(

PLEASE TAKE ME ON A MILEAGE RUN

I just think it would be so funny. Can you even take other people? I don't know. Either way, you can find me on the Discord.

terminal

mathNEWS

profQUOTES

CS 246E: BRAD LUSHMAN

- “ You don't need many friends.
- “ This shouldn't return `int`, it should be `void`. Oh my God, I really hate it that `void` is one letter longer than `int`.
- “ If a pillow is thrown at you, open your mouth and swallow it.
- “ Never do this in a code that you have been paid to write.
- “ This isn't what casual C++ programmers do, but we are not casual C++ programmers.
- “ You can think of this as ordering from a secret menu.
- “ “Superclass” does not mean a really good class, like CS 246E is.
- “ Friendship is not a thing to be taken lightly.
- “ A class isn't going to know all of its children.
- “ It's cap, isn't it.
- “ It's pretty easy to insert into a list... you could probably do it before you could walk, or go to kindergarten, or something.

CS 245E: SHAI BEN-DAVID

- “ You can ask me any question during the exams, the worst thing that can happen is that I tell you that “you should have known this yourself”.
- “ The only thing that the TAs think is to finish their PhD and flee the country.
- “ I was postponing my PhD, but the pile of assignments I had to mark kept growing higher and higher, so I figured my best option was to complete my PhD and then escape to a different country.
- “ I want my friend to get a job, so I write a set of job requirements that only my friend satisfies, then I post it and my friend gets the job. That's how it works in Israel, I don't know about here.

MATH 235: TY GHASWALA

- “ Why is Ireland so wealthy? Its capital is Dublin!

CS 241E: ONDŘEJ LHOTÁK

- “ Yeah, Ed's in Portugal. Good for him. Bad for me.

- “ Everyone's at OOPSLA, except for me. Not to blame you all.
- “ We're doing arrays because they're in this stupid 241 course. Wait, I didn't say that.
- “ If you're worried about this midterm, just so you know, when I was in 1A, I got 45 on my calculus midterm, but they curved it so it was out of 40.
Student: “Does this imply we'll be getting a curve on the midterm?”
Ondřej: “No.”
- “ When I was a kid I knew how to code, and I wanted to write a compiler. And, you know, when you're a kid, you think you can do anything...
- “ Another story: as a kid, I sorta failed grade 1 due to handwriting, but anyways.

STAT 240: YINGLI QIN

- “ I can see some people in the back of the class are laughing. Let's see if you'll still be laughing after the Poisson process.
- “ Yingli: “The probability of failing a course is 0.1.”
Student: “Is that your target distribution for this course?”

MATH 135: NICO SPRONK

- “ ...Does look like a whole lot of DIC to me.
- “ [Student walks in to class on time, there is only one other student there] What happened to everybody?

ECE 105: MATTHEW ROBBINS

- “ I have not started a fire yet in university.
- “ Bribery will lead to the TA being not happy.
- “ They're physicists, they probably just suck at sports.
- “ Physics is what keeps you safe. Physics is also what causes horrendous injury.
- “ Momentum is the reason you will survive a car crash... or not survive a car crash.

- “ If I were to throw this object into the air—no that's a dumb idea, I'd break something

- “ There's going to be a lot more pain.

MATH 115: RUIKUN ZHOU

- “ Look, our old friend is back again.

- “ If we assume this is true—I dare not to say this is true.
- “ The first theorem after midterm... and we will cover lots more in the future. It they probably be much harder to understand
- “ I think after two weeks you will forget everything.
- “ [Talking to a Chinese TA] 我现在教的, 是我们, 我们高一的水平 [Translation: “What I’m teaching now is our [Chinese] grade ten content”]

MATH 117: ELANA KALASHNIKOV

- “ As long as your work is sensible, then it’s reasonable.
- “ No using l’Hôpital’s or anything like that that makes our work trivial.
- “ Numbers come in three different flavors.
- “ There’s not that much memorization in math.

CS 137: VICTORIA SAKHNINI

- “ Next week is reading week! Yay! The week after is exam week! YAY!!!
- “ Even if you fail one course, you are still promoted to 1B—*[mic stops working]*
- “ Unfortunately, me and my husband share the same house.
- “ Can my husband build the same house as me? Sure. But I’m not sharing mine.
- “ I still love all of you.
- “ Do whatever you want with A.I.

SE 101: PAUL WARD

- “ Why did the Japanese cars win? Because they came with free anime.
- “ You should think of your team as a traditional 5 or 6 person marriage—no divorce.
- “ No matter what weird group you can think of, there’s a group for that on the internet. In fact, there’s probably two of them: green weird thing and purple weird thing.
- “ [Oceangate] is indistinguishable from the dollar store.
- “ Anyone like people who have smelly body odour, who haven’t showered in 3 weeks? That’s personal information, because that’s your opinion.
- “ Of course, there are organizations that won’t hire you if you *don’t* have a criminal record.

- “ [While considering cancelling the midterm] Do you want one or not? At the risk of somebody getting lynched by the rest of their classmates...
- “ You’re both in a UNIX lab Saturday at 7 pm, trust me, you’re compatible.
- “ Corporations exist because of the friction of not being in a corporation... Anyways, SE midterm!
- “ Who writes software for free? Besides Richard Stallman.
- “ Student: “If we had a midterm, what would it be on?” PW: “Paper.” Student: “What would it be about?” PW: “Software Engineering.”

MATH 239: DAVID WAGNER

- “ Are these graphs isomorphic, or not? The answer is yes: they are either isomorphic, or not. Gee, this may have been a bad example.
- “ Only 8! functions. We can brute force it out! Sometime before the heat death of the universe.
- “ Is 3 an odd number? Do you speak English?

MATH 249: DAVID WAGNER

- “ Something that simple can’t have a fancy name like “fundamental theorem” of *anything!*
- “ This is my favourite function, the identity function: it does nothing. It’s a “Saturday morning on the couch” function.
- “ Interesting things happen when n is prime; yeah, that’s always true.

CS 245: LILA KARI

- “ Taylor Swift is like a Waterloo student. Very hard working.
- “ The two things you need to remember from this course are Aristotle and Taylor Swift.
- “ I think you’re going to get PTSD from this.

ЛИСТОПАД

There is a word in Russian: «листопад» (roughly pronounced “lee-sto-pahd”). Literally, it means “leaffall”, and refers to the obvious. On one hand, when I look out the window and see the autumn leaves, I think it’s a little sad that I can’t describe it so succinctly in English, but on the other hand, I just silently think «листопад» and it’s my little secret to myself.

N REASONS I HATE COMPUTATION QUESTIONS ON ASSIGNMENTS

TOTALLY NOT A RANT ON A C&O ASSIGNMENT QUESTION

1. Easy to make mistakes
2. Time-consuming
3. Not understanding the computation messes you up
4. Worth too much
5. Makes you rack your brain for 2 hrs trying to find 1 mistake in 4 pages of work
6. Boring/tedious
7. It is a pain to constantly input numbers into Wolfram/MATLAB
8. Makes you cry in pain and anguish
9. It's hard to type set
10. Profs can't give good hints on answers

Fried Rice

FINDING MY JAM

MY NEW GAME, "LED ASTRAY"

I was sitting in a lab, talking to a stranger about how I was attempting to set time aside for personal projects. Their reply? "I thought upper-year Computer Science students didn't need to work on projects anymore." Bruh.

Before setting myself up for the atrocity that is Waterloo CS, I spent countless hours creating things *with passion*. But, through the two years I've been in Waterloo, I found it difficult to simply survive, let alone have the time to develop my many ideas. Instead of accepting the status quo, I rose to the challenge. I clearly defined my goals, and gradually developed the habits needed to juggle my health *and* coursework together in harmony.

AT THE RIGHT TIME, AT THE RIGHT PLACE

Hearing about the Game Dev Club's Game Jam coming up in two weeks, I decided to set some time aside to work on *something*. But, right as I was wrapping up my todo list, I saw a message on the GDC's Discord Server. A project pitch, for *another* game jam. The pitch caught my eye, literally and metaphorically. I realised I was prepared—it was now or never.

IN THE BLINK OF AN EYE

Months ago, I was impressed by the work of a member of the GDC, who had made several text-based story games. I contemplated the thought—am I capable of doing the same? While I had worked on dozens of projects in the past, I have never made a fully-fledged game, let alone been a part of a game jam. So, "In the Blink of an Eye" (the theme), I was on board. Our plan was to take the theme literally, and within the next 72

hours, create a game that acknowledges when you *physically blink*.

LED ASTRAY: THE HORROR OF JAVASCRIPT

After becoming a victim of JavaScript fatigue, repeatedly defeated by the latest framework fad, I made the decision to retire from web development. But alas! I was led astray, and couldn't resist getting my grubby fingers back into an HTML file. Ironically, the blink detection itself was trivial compared to dealing with the Javascript ecosystem.

Doing my research, I found an article on facial landmark detection... intertwined with a bird's nest of Javascript frameworks. No, I do not want to know how to build a Vue app with Pinia for state-management, and Monaca for cross-platform app development. It's shocking how much busywork is dumped onto most web-based projects.

With the core facial detection feature out of the way, I stumbled into my second hurdle. JavaScript automatically decides where to place (or not to place) missing semicolons. Looking at the developer console, I got a mysterious error emanating from tickState:

```
tickState()
[stream, ai] = await Promise.all([initWebcam(),
  ↵initAI()])
```

Later, I discovered that the error was from an attempt to interpret tickState()[stream, ai]!?

With my semicolons in order, I had a debug build of the blink detection working. I was ready to integrate it with the game engine we were using. After trying to hide the <video> HTML element from the screen, I realised that I could no longer access the data streamed from the webcam. Apparently, there is no way to *not* have a dependency on the website's Document-Object Model if you want webcam data, unless you use a Chrome-only API. Bound by our ever-encroaching 72 hour deadline, my solution was to make the element transparent, and have a tiny sliver showing in the bottom-left corner of the screen to keep the webcam data streaming.

A TRADE OF ALL JACKS

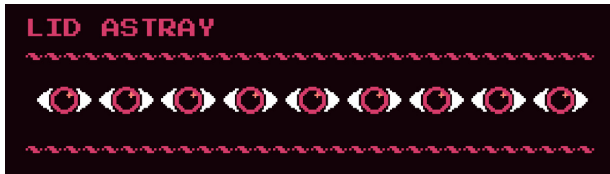
Me and my partner were perfectly complementary to one another. In the areas I was lacking, they were able to step in, and vice versa. It was fun being able to bounce and challenge each other's ideas, yet still trust each other to get our tasks done. We came up with an overarching lore and a theme for each of the five levels in our game. Then, with 24 hours left in the jam, they set off to implement the story, while I put my music and art skills to the test.

To my surprise, a trivial attempt at learning the piano a year ago came in handy. My mind flashed back to memories of the soothing sound of glass instruments, and I wanted to attempt to make songs based on them for our game. After hours of

messing with Audacity, I managed to create a background song and sound effects for each level.

However, my attempts at visual art did not go as smoothly. I came up with a colour palette and icon for our game, but I quickly realised that the background art I had created simply did not fit in with the rest of our game. Therefore, I needed to do the unimaginable: **kill my children**. We pivoted and went with another option—a solid color background, with particles zooming around.

At the end of the 72 hours, we had finished a prototype of our game! When put to the test, I realised that I was far more capable than I once believed. The feeling of challenging my abilities, and overcoming the atrocity that is Javascript, was unparalleled. Above all, I was able to see an idea come to life before my eyes!



Check out Lid Astray here! <https://averyhiebert.itch.io/lid-astray>

ROUND 2: THE AUTOMATON

My previous week's work was apparently not enough for me, because when I saw the GDC's Game Jam ongoing, I knew what had to be done. Machine-like in my ambitions, another week, another jam. I strolled in 5 hours before the 72 hour deadline, and created yet another game under the theme of "A Strange Machine". A visualization of cellular automata was one of my first UI projects, and I borrowed that idea here to create a succinct little game—The Automaton.

After a long hiatus, I went full circle and got back in touch with why I originally set out to learn programming. Or, one could say, I have found my jam.

RyanSamman

I NEVER RELATED TO DUMB HORROR MOVIE CHARACTERS

until I was in the creepiest building ever with a hot guy and fleeing from the evil spirits and the (possibly deadly) spiders lingering around didn't even cross my mind

BiMath

THE WORLD'S RICHEST* MAN ANSWERS THE ONE QUESTION THE WORLD NEEDS TO KNOW: "DO YOU STILL PLAY CHESS?"

WHAT DOES THIS DISTINGUISHED ALUMNUS OF QUEEN'S UNIVERSITY HAVE TO SAY?

Elon Musk, the CEO of [stuff], has lived a long and fulfilling life, reaching the age of [52]. Despite amassing a net worth exceeding \$200 billion, he believes money is not the key to happiness. For this reason, he has committed to giving away his fortune for [spite].

Many are familiar with Musk's rise, from a plucky son of an emerald mine owner, to a tech entrepreneur, to guy who buys things and does stuff(?). And many wonder, how can I emulate Musk's genius and achieve the true American Dream?

Well we are now one step closer to knowing, as Musk has revealed his most closely guarded secret, "Do You Still Play Chess?":

Do u still play chess?. @elonmusk

5 3 33



Elon Musk @elonmusk · 1h

I did as a child, but found it to be too simple to be useful in real life: a mere 8 by 8 grid, no fog of war, no technology tree, no random map or spawn position, only 2 players, both sides exact same pieces, etc.

Polytopia addresses these limitations.

129 114 810

Lars Nootbaar

Disclaimer: I once owned \$1.25 in Fractional Shares in Tesla and bought 1 DLC to get the Quetzali tribe. Nothing contained in the **mathNEWS** article is intended to constitute investment, legal, tax, accounting or other professional advice and you should not rely on the reports, data or other information provided on or accessible through the use of this **mathNEWS** for making financial decisions.

Hmm, well let's pretend this is right.

PROF. IAN MUNRO

AN OPEN LETTER TO SPOTIFY

Fuck you.

I got Spotify because my friends use it. I used to use Apple Music and that was fine. I had no problems with it and believed it to be superior, but out of a desire to listen to what my friends were listening to, I made the switch. Worst decision of my life. I have so many problems with Spotify and the only reason I haven't gone back is because apparently I am the only one who has a problem with it and my friends are staying.

Spotify queues are so dumb and I hate them. You can either commit to a queue or you can listen to an album. If you are listening to an album and want to listen to another album after that, tough shit, you can't. If you are listening to an album A and add album B to the queue, it puts *all* of album B next, and you listen to all of album B and then the rest of A. Alternatively, if you have a queue of music made and want to listen to an album, also tough shit. It will play the first song of the album and then put the rest after the whole queue. Literally why would I ever want either of those? Just let me listen to my album in full! All of this would be solved if hitting the play button on an album while you already have an album playing just added it to the queue, but that would make too much sense. Why is the queue separate from the album I'm listening to? Why isn't it just all queue?

The Spotify solution to this problem is to make a playlist, but I shouldn't have to make a playlist for a queue I only plan on using once. I listen to music pretty randomly, so maybe that works for other people, but I probably will only want to listen to Tom Petty's *Full Moon Fever* followed by Olivia Rodrigo's *SOUR* once in my life, so I would never use that playlist again.

Also, god forbid you want to listen to music that you have downloaded and then leave a wifi network. It struggles to stream the music even though I have it downloaded, and then I have to skip the song to get it to play off my phone. If I am connected to a VPN, it simply does not play music until I pull my phone out of my pocket and turn it off, and only then does Spotify realize I have that song downloaded and starts to play it. Why doesn't it just default to the local file if I have the song downloaded? Why would I want to stream the song if I have it downloaded?

The final fuckening is when you finally understand that, if you want to not be miserable, you have to add *everything* to a queue. Now suppose you'd like to listen to two albums from the same band shuffled together. Say it with me now, *tough shit*. The only way to add stuff to your queue and then shuffle it in is by dragging the songs around like a dumbass. I really should just switch back to Apple Music since I genuinely want to listen to Neil Young, but what if I want to listen to Joe Rogan even though I never have?

Spotify recently announced they were raising the price of the student plan from \$5 to \$6 and I nearly lost it. That was it, I

went to switch back to Apple Music, only to find they were *already* charging \$6, so I am stuck in hell. The only person who deserves my respect is Costco co-founder Jim Sinegal with his stance on the price of hot dogs, may god create more innovators like him.

Yamnuska

A STATISTICAL ANALYSIS ON THE BOSTON CREAM DONUT FILLINGS

PART 4: DATA AND ANALYTICS

As of the time of writing, I am glad to publish the following results, in no particular order. Note that some of the implications of the results as well as the validity of the results will be discussed in a further conclusion and discussion post. As this report intends to show only the relevant results in terms of the topic of discussion being volume percentage of donut fillings, full CSV file for the (still ongoing) experiment will be included in the appendix to be released at a later date.

- Math C&D: 10.9%
- Walmart (US): 16.8%
- Krispy Kreme (US): 15.9%
- 7-11 (US): 16.3%
- Dunkin' Donuts: 18.3%
- Tim Horton's: 19.1%, 16.6%
- Krispy Kreme (CA): 22.1%
- Sample Mean: 17.0%, Sample Std.Dev.: 3.19%

We note that this means that Math C&D Donut is about 2 standard deviations away from the sample mean! Almost seems like an outlier. Almost warrants a resampling, if my wallet warrants it.

We will discuss the implications, potential biases and errors, and any updates in another post. In lieu of a misleading graph, we will instead simply not provide a figure and leave it as an exercise for the reader.

RobotDonut

THE SPOOKIEST MIDTERM...

... is the one that isn't listed on Odyssey.

Happy Halloween!

finegeometer

MUSINGS ON MUSINGS, A REVIEW OF “POETRY” BY ANNE INNIS DAGG

PREFACE

First, a preface. The Anne Innis Dagg Foundation has an exhibit showcasing selected poetry and artifacts from the life of giraffe expert extraordinaire Anne Innis Dagg, henceforth referred to as Dagg. The title, “Musings of a Scientist, Feminist, Activist”, is very apt as the poetry does not seem particularly hung up about poetic form or other aesthetic properties of the words. As such, I will be reviewing the contents and the message of the poems and not their aesthetic value, as I assume is intended. Also, I will not be particularly harsh in terms of philosophy, as these are still just musings.

When it comes to the purpose of the exhibit, the main point seems to be to get people to engage with the concepts. So I hope I am making Dagg proud with this and I hope this can spark some conversations of its own.

For more information about the exhibit, you can go to the website <https://anneinnisdaggfoundation.org/poetry-exhibit> or go to the 3rd floor of the Laurier science building, where you can read these poems in full until March 2024 (or buy the full poetry book; but going to Laurier is much cheaper and more fun).

Without further ado, here are my reviews in order.

1. TOMBOY

This poem is short and sweet. However, I would personally say it's lacking substance. Even for being only 2 lines long, it does not really have much bite. I personally dislike the dichotomy implied, and I think that the overall point is a bit weak.

2. STUDENT RESPONDS TO THE SEXIST PROFESSOR

An interesting look into double lives and hiding feelings. Reminds me of the Japanese concept of 建前 (tatemae), which is the façade you put up to get what you want in social situations. The poem gets to the point and I appreciate that.

3. AFTER CLASS

This reminds me of a conversation I overheard years ago about how going home after dark can be scary for women, but also the funniness of men crossing the road and other things to look like they're not trying to follow a woman who's out after dark. Great memory, but the poem is missing the impact of the last one. The final line feels just a bit too heavy-handed. And this dislike makes me not engage with the secondary message at all.

4. LANGUAGE

This poem is a mess. I hate to say it, but the topic is all over the place and I think the cultural context that made it make sense is missing so I am honestly at a loss for half of it. It seems sarcastic for something that I cannot see. I can only hope the issues it mentioned have mostly be fixed, because otherwise this leaves my simply disappointed.

5. A MODERN COUPLE: HOME COOKED MEALS

I love this poem. Hilarious. I especially like that the husband can cook. Nothing more to say, just a well-executed concept.

6. GENDER?

Ok, a few things. First of all, who names their first child Omega? That's doubly bad, being a bad name and confusing as the first child but the last letter of the Greek alphabet. However, interesting concept and an oof look at hypocrisy in society. The very stark language shift in the last paragraph makes you feel the reality of the last line. “Now Omega has a gender as well as a sex”.

7. WHY HISTORY ISN'T

This one is less of a poem than an anecdote, even for this list, but it is appreciated nonetheless. It also has a lot less to do with gender or feminism and a lot more to do with legacy, which I find interesting. However, there is a certain irony in the last line. Telling Mrs. X's story publicly makes her part of our history. But to be perfectly honest, I think that was a good thing.

8. BY TRAIN ACROSS CANADA

The final and longest poem of the bunch. This poem details the fall and rise of a woman throughout her life in the 1980s. It offers 4 different perspectives, but focuses on a few issues which maintains a through-line. This highlights well the differences between them, and leaves the reader with a bit more than the previous poems, although admittedly that is not a particularly high bar.

SUMMARY

Overall, I feel like the musings of Anne Innis Dagg are just that, musings. Small thoughts and insights into the culture of the time as well as lenses with which to view culture now. It is not some deep philosophical wisdom about gender or feminism, but it doesn't need to be. These are not meant to fix society, nor be the works of a genius. It just needs to spark discussion. And I think it does that perfectly well.

A RATING OF THE STAIRWELLS OF MC

BUT FORMATTED IN A WAY THAT MAKES ME LOOK ABSOLUTELY DERANGED

I once in my youth toured the halls of MC and found myself within the walls of a stairwell, so it be. I needed to escalate myself beyond comprehend; prithee me be in good health to ascend.

The one in corner north-east is probably most well-known, with a number line snaking up and up ever since you're born. From the boiler rooms of epsilon to the dragons above 7, this iconic, whitewashed stairwell deserves a 10 out of 11.

There be-eth another stairwell, in the corner south-east, A tinier stairwell, much less grand, squeezed into the lease. Though it does pass near the C&D and the Office of MathSoc, so this one is a 3 of 7, or 5/8 ad hoc.

Right nearest to the above is the southernmost stairwell, Though it does not go fully up, which isn't quite swell; Though on its walls lie an iconic image of the PC of times before, Henceforth we must conclude it gets a 3 of 4.

Though there is another stairwell in the southwest corner, on floor 3, the QNC tunnel, it does border. While stashed away it lies adjacent to the grand entrance on floor 2, its hidden secrecy means it sees no use—so lambda out of mu.

And finally one last stairwell in corner northwest, next to the SLC tunnel it does lie, it might? be best; Hidden like the southwest, it lies just out sight. So a 258 out of 993, like the shadows in the night.

andoiii

CALLING FOR NON-ENGLISH PUNS!

One afternoon, I got a text from my friend.

"How would Dora call her kids?"

This was the setup of a joke that completely went over my head. I had him clarify that, yes, he meant Dora as in Dora the Explorer. No, he wasn't referring to kids as in viewers of the television show in their formative years. And yes, he was referring to the hypothetical situation where Dora the Explorer was a mother figure to children of her own. In many aspects, this joke was so lost on me (entirely my fault and not his), but he was lovely enough to walk me through it every step of the way.

He then sent the punchline (twice!!), and of course, I also didn't get it. It was a picture of a Doritos bag. ~~Just please trust me that it was excruciatingly difficult, painful, and awkward to deliver me this joke.~~ So I gave up and asked him to explain the whole joke to me and I'd appreciate it in my own way.

"Okay. See, her name's Dora and the snacks are called Doritos. And '-itos' is like... a sort of diminutive, so it's like saying Dora but tiny. Therefore if she had kids, they'd be called Doritos. Because they're miniature Doras."

It was a Spanish pun. To clarify, **I do not speak Spanish**. Also, my friend **knows** that I don't speak Spanish. Still, I got a good chuckle out of it and I'm glad he shared it with me.

I love that puns arise from humans all across the globe, like getting a chuckle (or groan) out of your loved ones is a universal experience.

I wanted more non-English puns, so I asked a bunch of my other multilingual friends if they had any to share and explain. One of my best friends is a polyglot and they just... assumed I was also fluent in Japanese? ~~What's with my friends and assuming I know lots of languages? I'm functionally monolingual.~~ So, when I asked them for non-English puns, they just sent a list without clarification. I called them later to work together to create comprehensible explanations.

There's a whole category of Japanese jokes based on wordplay called "駄洒落" (pronounced "*dajare*"). The online Japanese dictionary I used to aid in writing this part of the article, jisho.org, translates it as "a feeble joke; bad pun," which I think is a bit harsh. Wikipedia states that *dajare* are associated with "old man gags," so they're basically dad jokes. Here are a few:

Japanese: カエルは帰る (**kaeru wa kaeru**)

Rough translation: *The frog goes home.*

What makes it punny? The words for frog and "to go home" sound similar.

Japanese: イルカはいるか? (**iruka wa iru ka?**)

Rough translation: *Are there dolphins?*

What makes it punny? The word for dolphin is pronounced "*iruka*." The verb "is/are" "*iru*" and the question marker grammar particle is "*ka*," so when you ask if there are any dolphins, it'd sound like "*iruka*" as well.

Japanese: パンダのパンだ (**panda no pan da**)

Rough translation: *It's the panda's bread.*

What makes it punny? Panda sounds like when there's bread. Bread is "*pan*" and a way you can say "is/are" is "*da*."

Japanese: 虫は無視 (**mushi wa mushi**)

Rough translation: *Ignore the bug.*

What makes it punny? The words for bug and the verb “to ignore/disregard” sound similar.

(I highly recommend reading the Wikipedia entry for more *dajare* examples if you liked this!)

These are very short one-liners, so the amount of explanation I provided is probably disproportionate. But I think the language barrier in this case adds to the comedic lag (the amount of time between the joke is delivered and the moment you get it, when you have to admit that was kind of clever with a chuckle/groan). And over-explaining it kind of beats it into the ground ~~or if you're like me and denser than a brick, it's just the bare minimum level of explanation for you to comprehend it!~~

Here are two English/Chinese puns another one of my friends sent me. They've told these puns to almost all their friends, so I'm here to forward them. “*It's my entire inventory. I have no more,*” they said.

What's a vampire's favourite type of food? 不辣的

What makes it punny? 不辣的 (*Bù là de*) means “not spicy” but it also sounds like blood, which is what vampires are said to consume in myths and fiction.

What font do noodle restaurants write their menus in? 牛肉面

What makes it punny? Times 牛肉面 (*Niúròu miàn*) means “beef noodles” but it sounds like New Roman, referring to the font Times New Roman. Admittedly, my friend said this was the weaker between the two puns in their arsenal.

If you're a kind multilingual soul with a non-English pun and have the patience to write a translation and explanation to accompany it, please send it my way! The QR code below goes to a Google form where you can submit them. If I get enough, I'll share some favourites in the next issue :)



DISCOVERING ANDY SAMBERG'S PAST

I just knew him as the goofy guy from B99. But then I came across a clip of the legendary song “Threw It on the Ground” in my Instagram reels. I loved it so I watched the full video on YouTube. I loved it even more. I kept showing it to every friend I met. The song was stuck in my head. So much that I added to my Spotify playlist. And, on a casual repeat listening session, I observed that it is by a band and Andy Samberg is actually one of the makers and not just an actor in the music video. Considering how much I loved the song, I decided to explore the band more. That was not a good decision (~~it was a great one~~). I do not want to spoil anything by telling you about the options available or reviewing the songs. I just wanted to share this cursed bit of knowledge. I will leave the rest up to your curiosity.

Just search for the band “Lonely Island”. You will either thank me or hate me, but it sure will be an experience.

0.423

TO LEAVE OR NOT TO LEAVE



REVIEWING CHICKEN INTERNAL ORGANS

Since moving out of V1 last spring and starting to cook for myself, I haven't really bought and cooked any meat. It's quite expensive, and the reason I'm cooking is mostly to save money. If I want to eat better stuff, I can just eat out.

Recently though, I found some chicken internal organs being sold at the store on the plaza, next to Mel's, and they're cheap af. And they're honestly more fun than normal meat! I love the variety of texture! Anyway, here is a review of the different chicken internal organs offered at Waterloo Central Supermarket. I was going to include information about price, but they seem to fluctuate quite a bit... maybe one day I'll find the pattern.

LIVER

Mmm, not a fan. I've never quite liked the texture of liver. It's either too dry or too mushy and gross. It's tolerable, and if it's already prepared, I would willingly buy and consume it as a treat every once in a while. But if I cook it then I only have myself to blame for the texture if I fuck it up, and I figured I should shield my fragile math student psyche from that. The flavour is quite subtle, it's pretty nice. Not sure how to describe it other than just... liver flavoured. But I find that the texture overrides the flavour for me.

GIZZARD

Gotta love this one! Love the texture so much. It's like bouncy and springy and crunchy and QQ. The texture can be pretty different depending on how small you cut the pieces. I usually slice them for stir frying, which makes them have that bouncy texture all throughout, and keep the pieces whole for stew/soup, then the insides can be soft and tender. The texture is also quite variable in different parts of the gizzard, the connective bits are very crunchy. Only thing is it's kind of difficult to prepare. You have to blanch it first and watch it and and skim off the blood scum. Not the best for a quick and easy meal.

HEART

I also really enjoy this one! I would say the texture is less weird than gizzards, it's a little more similar to normal meat. It's very muscle-y but not as stringy as normal muscle. I like to cut them in half or slice them up a little more and use them in stir fries in place of beef. Also good in soup. A little easier to prepare than gizzards, I just dump it straight in the wok to stir fry, although I'm sure some people will be more careful with it. I also used to get it grilled on a skewer a lot when I was younger, but obviously I'm not gonna be doing that myself lol.

KNEES??

Uhhh not an internal organ, but honorable mention. It's... the... the texture sure is texture. It's a lot of texture. It's basically just cartilage, except for when there's bits of just

straight up bone attached too. I used to like it more than I do now, but now I'm just scared of it tbh. But when I am feeling brave enough for them, I like to cook them with a copious amount of chili and cumin powders.

RapidEyeMovement

TO ANDOIII

"If a Double Degree student walks from Laurier to UW, when do they stop being perceived as a Laurier student leaving school and start being perceived as a UW student going to school?" asked mathNEWS writer, andoiii in mathNEWS 153.1's [Campus to campus in 10 minutes: Part 2](#).

I've had this question stuck in my head ever since reading it, and I'm finalizing my answer as Lester St.

Please let me know your thoughts. Signed, a fellow 10-minute walk enjoyer.

molasses

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UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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6 WEEKS, 5 CITIES, AND 4 THINGS THAT MATTER

HERE'S WHAT I TOOK AWAY FROM THE TRIP

I travelled to 6 cities in the last 5 weeks. A lot of things happened, but it wasn't the tourist attractions that were the most valuable. It was the random learning experiences along the way, with strangers and family and friends, that mattered the most.

A God sweater in the bathroom. On a ferry to Vancouver, I had to use the washroom, and while I was there, I witnessed one of the most unique conversations I'd ever come across: two totally different people bonding over someone's actions in public. One guy was wearing a "God Bless Whoever Hates on Me" sweater. I'm not religious, but I can respect the boldness and commitment it takes to wear something like that, and this was exactly what the other guy at the sink thought, too. But unlike me, he acted on it, and mentioned he was impressed by the willingness to wear that sweater in public. After he pointed out this boldness, the two grown men had one of the most wholesome conversations I've ever seen, with two-way encouragement and authentic respect. Say what you will about religion, but when someone takes the time to support someone so different from them, over something so important, I'm all for it.

I realized after seeing this that every person has things they care about. When people care deeply about something different from us, we should do what this stranger did in a bathroom, and be willing to recognize this care and make someone's day.

A wedding toast. In Toronto, I went to the wedding of a friend from my first co-op job. He's an amazing guy, and the wedding was wonderful. I didn't know what I would give them as a wedding gift, so I figured I'd give a toast. But what sort of toast? He's been an amazing friend, but there've also been some ups and downs; I could tell silly stories, a mix of good and bad, but I didn't know how to make it great. Eventually though, someone recommended a solution: just share my four favourite stories of him being amazing. This allowed me to focus on concrete great things about him, with absolutely no reason to think about anything negative. This gave me the opportunity to be completely genuine in all my encouragement of him and the bride; I didn't have to force those happy tears at all.

What I learned from the groom afterwards was that "a toast is worth a thousand cards." I guess sharing good things about people really does mean as much as you think. Don't dwell on the bad things. When you share, share the good.

A hot tub and (almost) a graveyard. I stayed at my uncle's place for a while, and my cousin's crazy Australian boyfriend happened to be around. Friday night, he got absolutely hammered playing cornhole, and he and I were gonna end the night in the hot tub. He went to get changed, and then I did, but when I went to the hot tub, he wasn't there. For five minutes I searched the house, but I couldn't find him

anywhere. This was Steinbach so it was pretty freezing out already, so he couldn't possibly be hiding outside... but he was kinda sloshed, so I was worried. Another 5 minutes went by. He wasn't picking up the phone. Another 5 minutes. Where was he? Then another. At this point, I decided to just hop in the hot tub and wait it out, and all of a sudden he leaps, screaming, out from under the airtight hot tub cover. He then passed out. I realized he had been breathing densely chlorine-filled air for 20 minutes. My god.

When he came to, I asked him whether he took any breaths of fresh air while he waited. "No," he said sincerely, "I'd rather die than not be able to scare you." Lesson: please don't gamble your life on a prank, folks.

A wonderful dinner with my family. My sister and her husband have been living with my parents for a few years. Our family relationships have been... tumultuous, to say the least, and I often dreaded flying home to Victoria for that reason. But I was determined to make the most of my short time with them, so I entered expecting to be the damage control. But somehow, I didn't need to be. Something had changed in the last year, and the five of us—parents, sister and brother-in-law, and me—were all just getting along. Jokes were flying in all directions, and no one was bringing up grudges or acting on underlying hatred. It was my sister's birthday, and I ended up having one of the best nights of my life.

I realized that family time is limited, and the good times even more so. We should do our best to make the time with our family valuable, and truly cherish it if it's a stage of life where things are going well.

On the trip, the tourist experiences were cool too. But the real thing that made this trip special was the appreciation it gave me for the little things in life, like strangers showing respect in the bathroom, the authentic care for an awesome friend, and the healing of a broken family.

no pun indented

**mathNEWS isn't a cult.
We just lure people in
with free pizza and trap
them in our office. Come
by to get a taste!**

A mathNEWS CULT LEADER EDITOR

ANIME REVIEWS PART 6

NEON GENESIS EVANGELION (AND THE END OF EVANGELION) — 7/10

At long last, I have gotten around to watching that one really famous anime from 1995 that has since spawned a huge media franchise and an uncountable quantity of memes. The plot, I'm sure, needs no great exposition on my part—there's a boy named Shinji, and there are monstrous creatures called "angels" attacking the earth, so Shinji's father makes him pilot a giant mecha to fight them. There's a bit more to it, sure, but that's the part that matters. So does it live up to the hype? Well... I mean... kind of. Now, if you're one of those fanatics that absolutely *loves* Evangelion and are appalled at my considering it anything less than a masterpiece, you probably have one of a few things in mind:

1. "You didn't watch the original version!" True—I watched the 2019 Netflix dub.
2. "You didn't watch all of the movies and Hideaki's director cuts!" Also true—I watched only the main series and *The End of Evangelion*.
3. "You wouldn't get it unless you're depressed!" Maybe not. I'm not depressed and I never have been.

Am I judging the show unfairly, then? Perhaps, but I have a word limit to work within so I can't afford to care. At any rate, I think the core message of Evangelion about identity is conveyed well, and no doubt resonates with almost everyone who watches it, myself included. I don't take much issue with the plot or characters in general. One would probably understand some of the imagery more than I did if they are familiar with the psychoanalytical theories of Sigmund Freud, to which there are many allusions. Moreover, the visual art and design is great and the music is phenomenal—perhaps my favourite of any TV show or movie to date. The show's weaknesses, I think, lie in the specifics of how its story is told. The content of each episode is highly repetitive throughout the first half; and the fact that there are these big, dramatic fights against the angels that are ultimately irrelevant to the plot are a bit of a distraction from the development and explanation of Shinji, Rei, and Asuka's characters. More broadly, a lot of the details surrounding things like Seele, the first impact, that one spear that gets thrown into space, and the in-universe role of God seem to be glossed over. In my opinion, it's an odd choice for such a show with such grandiose themes and such an apocalyptic setting. I don't think Evangelion is "bad", by any means, but outside of its cultural significance to anime as a medium I didn't find it to be as revolutionary as some people said it was.

DEATH PARADE — 9/10

I must be getting better at predicting the kind of anime that I'll end up enjoying, because this was absolutely one of them. *Death Parade* begins much like a number of shows in the subgenre of "afterlife-comedy-drama" (which I might or might not have made up): two people step out of an elevator in a

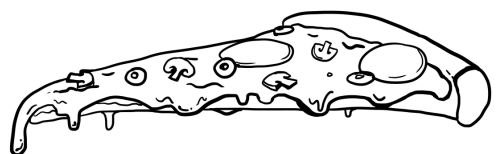
confused daze and wander through an ominous hall before meeting a mysterious figure and being given a cryptic greeting. Before long, they realize that they have died and been taken to purgatory of sorts known as "Quindecim" wherein their souls are tried before being sent to their final destination of either reincarnation as a new person, or the endless and solitary void.

The show is in part episodic, featuring a regular rotation of guests from all walks of life who arrive at Quindecim and depart during the same episode following their judgement. Decim, the stoic and impassionate arbiter of Quindecim, has the guests compete in a game that they believe they are staking their lives on (since they generally have little to no memories immediately after dying and can be manipulated accordingly), and tries his hardest to "draw out the darkness" from the recesses of the soul—as he puts it—to come to an accurate verdict. However, he is later accompanied by a woman who exhibited anomalous behaviour and thus had to be kept in the Quindecim with him, and who takes on the role of an assistant. Her memories were wiped so thoroughly that she does not remember even her own name, and within the context of the story she serves to impart knowledge of and empathy for the human condition as a kind of viewer stand-in.

I have a lot of appreciation for shows that can tackle philosophical topics in the way *Death Parade* does. Consider for instance, that Decim and the other arbiters are not human—at best, they're some species of demigod who staff the bureaucratic business of the afterlife without any real sense of what the people they judge go through. The setting of the show really gives new meaning to the phrase "soulless corporation". The fact that viewers get to reflect on the lives and deaths of so many people from the perspective of themselves, the nameless woman, and Decim's vantage point as the ultimate judge is nothing short of thought-provoking. The dramatic elements and overarching theme of the show come to a head near the end, when we remember that the nameless woman must also be judged. And all of this is without speaking of its artistic dimension, which is excellent in its own right—the scenic design is incredibly intricate, the eccentric look of the arbiters contrasts perfectly with the more plain appearance of the human guests, and the opening track is a certified banger. Honestly, the only real flaw is that the show isn't longer. For having only 12 episodes, *Death Parade* manages to flesh out its characters and story quite well, but there are some loose ends and minor subplots that I wish were explored more. That aside, though, it's well worth the watch in my opinion.

Anyway, this is probably going to be the last of these review articles for the term. Next week it'll be... a recipe, probably.

yalevoynian



RANKING EVERY BUILDING ON CAMPUS BY SCRABBLE POINT VALUE

Hello.

Today I will rank every building on campus by how many points you'd get for playing its acronym in Scrabble. I have added a couple of additional qualities which a building must have in order to streamline the competition, which are:

- Eliminated for being too far away: AVR, DMS, ECH, GA, IHB, RAC, TJB
- Eliminated for actually where is this? I can't open the floor plans on the plant ops site??: BAU
- Eliminated for using Characters not in Scrabble (CNIS): V1, B1, B2, C2, E2, E3, E5, E6, E7, EC1, EC2, EC3, EC4, EC5, EV1, EV2, EV3, M3, RA2 (If RAC was so good, why didn't they make an RAC2? Well they did, but they called it RA2, which is dumb)
- Eliminated for being two words (you can only play one word per turn in Scrabble): BMH & LHI
- Eliminated for not having a building name??? (But also too far away and uses CNIS): 180 KING ST S.
- Eliminated for everyone calls Dana Porter DP, why is the building acronym LIB?: LIB

With all of the disqualifications out of the way, here is my ranking you were all waiting for:

11. 2 points: AL
10. 3 points: EIT
9. 4 points: ML, TC, TH, and UC
8. 5 points: ARC, DC, ERC, ESC, HS, NH, OPT, PAS, SLC, and STC
7. 6 points: GH, GSC, MC, and REV
6. 7 points: COM, DWE, FED, and PAC
5. 8 points: CIF, CLV, HH, MHR, PHR, RCH, SCH, and UWP
4. 10 points: CMH and CPH
3. 11 points: PHY
2. 12 points: MKV
1. And with 14 points, to no one's surprise, our big winner tonight is QNC!

In conclusion, assuming we have the standard Scrabble ruleset of 7 tiles to name the fourth math building, and assuming it has to be a legal Scrabble word, it should be called the Math Epic Zany Universal Intense Terrific Emporium of Studies, whose acronym would be MEZQUITES (hooking of the Q from QNC, which is why it doesn't need to be in the acronym), and it should be built across two triple word scores along the edge of campus plus being a bingo for a total of 311 points, completely blowing QNC out of the water. If you are wondering why I didn't go with Quizzical, it wouldn't net the two triple word scores, because the Q from QNC would have already been played on one of the triple word scores on a prior turn. At any rate, we must avoid calling it M4: the math faculty

is already struggling in the Scrabble point department, and doesn't need another disqualified building.

aphf

STEAL HER LOOK



- **Hair clip:** Scarf Clip Scarf Ring Wrap Clamp Silk Scarf Clasp Holder, 3Pcs Scarf Rings Cross Hollow Scarf Buckle X-shaped Scarf Ring Buckle Simple Scarf Clips for Shawl Neckerchief Clothing, Color, Large, <https://a.co/d/bU1cHsb1>
- **Sweater:** SoSoft Cropped Cardigan Sweater for Women, <https://oldnavy.gapcanada.ca/browse/product.do?pid=7261681032>
- **Other sweater that she's wearing beneath her first one for some reason:** 3D Knit Souffle Yarn Mock Neck Sweater, <https://www.uniqlo.com/in/en/products/E460946-000?colorCode=COL09>
- **Skirt:** RENESEILLE Women's Long Maxi Skirt – Casual High Waist Fold Over Elastic Waistband Soft Flare Foldable Stretch Lounge Boho, <https://a.co/d/j0UxYrr>

I cannot believe I was *the only person on an October 30th production night* to wear a Halloween costume.

tendstofortytwo

1. I recommend using hair extensions since the way I was having it stay stuck in the hair was using nail glue.
2. If you can find a button-up light pink sweater *with a hood*, please let me know.

ETHICS OF STEALING OFFICE SUPPLIES: A COMPREHENSIVE GUIDE

INCLUDING AN ALL-NEW !!SPECIAL!! FOOTNOTE ABOUT CAPITALISM!

Disclaimer: For legal reasons, I (Sexy_Software_Babe), mathNEWS, and its affiliates, are not responsible for any actions taken as a result of this article.

By our society's standards, stealing is *generally* considered to be a bad thing. There are some exceptions to this rule; for example, stealing food to feed your children should not be considered to be a bad thing.¹ There is one place, however, where the ethics of stealing is a very nuanced topic and must be treated with the utmost care: the workplace.

SITUATION 1: UNPAID INTERNSHIP

It is always ethical to steal office supplies at an unpaid internship. Period. I'd even argue it isn't stealing, more like just collecting on what you're owed. "But stealing is wrong," you might protest. You mean unpaid internships? I AGREE. You're just making sure you're getting properly subsidized for your work.

SITUATION 2: PAID INTERNSHIP/CO-OP

This is a case where it truly depends on the company you're working for. If it's a small company who have hired you out of their own good will and are truly trying their best to teach you, I'd recommend not taking anything. If you do decide you need a bonus, only take minor objects that won't be missed. Some good examples of these types of objects are company pens, a few sheets of printer paper at a time, and maybe some one-use coffee pods or tea bags, if they're available.

For a larger company, you can supplement your income more than with a smaller company. However, this is the size at which you start to have to worry about proper security systems. Keep this in mind as you proceed. If they are doing their best to help you learn, I'd recommend only taking minor items, such as those listed above. If they leave you hanging, or perhaps the job description doesn't match up with the actual position, feel free to take some more significant items. Since they're a larger company, your *supplemental income* will most likely not even be noticed, especially if your tasteful choices are spread over many different categories. Some examples for this level are empty flash drives, printer toner/ink cartridges, and anything you can find in a dusty cardboard box in a random room that you took a peek into while running errands as the newbie.

For the largest companies,² any of the previous suggestions are good, in addition to anything that won't be missed. That old laptop that's been on that shelf for years because it has a dead battery and nobody's replaced it yet? Take it. Chances are that it won't be noticed, and on the off chance that it is, it will likely be considered such an insignificant company loss that they don't bother looking into it. As long as you don't

blatantly take something directly in front of a camera, or steal the newest prototype of a future product, you should be fine.

SITUATION 3: FULL-TIME JOB

I'll be honest, I've never had one of these. But I'd assume that the methods of garnishing your wages are fairly similar to that of a paid internship or co-op position. Please refer to section 2 for more information, replacing being taught at the best of the company's abilities with being satisfied with your job and workload for your pay.

SITUATION 4: RUNNING YOUR OWN COMPANY

You own the company. You can do whatever you want. Take your own materials. Hell, send yourself a huge chunk of company profits. Everyone who runs their own company does it. Wait, sorry, what's embezzlement?

Promoting crime and anti-capitalist propaganda? **WHAT? NO I WAS NOT—**

It has come to our attention that anti-capitalist propaganda is being produced by this author. This issue has now been rectified.

CapitalismIsTheBEST

1. Rather, this is the fault of capitalism... Maybe I'll write an article about that someday; for now, I'm content to just drift closer to socialism day by day.
2. *cough* FAANG *cough*

A SCATHING REVIEW OF RUST

This is a terrible language!!!! How am I supposed to make a list, they didn't even put in cons!?!?

Shahabee

A THIRD OPINION

Nobody asked me and I don't know what the two other programming language reviews say because I can't read them right now but I just wrote a game jam game in Rust and now I absolutely understand the hype, Rust rules, every other language sucks, etc. Hope this helps.

__init__

OH, WATERLOO CS...

Recently something incredible happened in a CS 246E lecture. In a course often reserved for teaching C++ and imperative object-oriented programming, we had a special guest. While on the topic of algorithms on containers, our course instructor, Brad Lushman—bless his soul—proclaimed,

Recall... your favourite function from your favourite language—map, from Racket. If it wasn't before, it is now.

And oh my dear reader, did we *recall*. The class awed (haha, get it?) together, as we all individually recollected the incredible time we had spent with the language. Realising this, Brad remarked,

Huh, maybe at this point in the term we're starting to miss programming in Racket a bit.

And no truer words have ever been stated. Not a day goes by that I—tilling in the fields of C++, bogged down by foot-guns everywhere—do not miss the charm, the love, the beauty, and the elegance of my dear Racket.

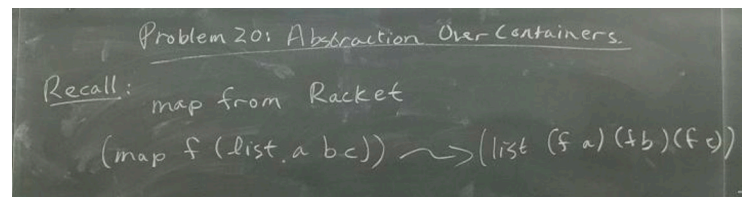
You see, I have come to realise that Waterloo CS is like Plato's allegory of the cave. For my whole life, I saw shadows on the wall and thought I “understood” programming. But then CS 14{5,6} came and took me *outside*. And I admit I was confused

at first. Things didn't work the way I expected them to. The syntax seemed clunky and awkward. But slowly I began to see the vision of the true world. A pure world. A perfect wor—

AND THEN WATERLOO FUCKING TOOK ME BACK INTO THE CAVE AND BEAT ME AAAAAA

IT'S LIKE YEAH HERE'S HOW GOOD YOU CAN HAVE IT, HERE'S PERFECTION NOW FUCK YOU GO BACK TO THE WAY YOU DID THINGS

I realise now that my eyes burnt when I first saw the blinding light of the Racket world, but now back in the C/C++ cave, adjusted to the outside light, I can only see *nothing*.



Save us all.

aaqsr

RANT ON MY INABILITY TO UPLOAD A FILE FOR AN HOUR AND A HALF

<rant data-time="pretend i got this published two weeks ago">as i am writing this it is the middle of *reading week* and i have just spent the past *hour and a half* trying to upload a *png* to one of the cs club's servers. **IT TOOK ME AN HOUR AND A HALF TO UPLOAD A FILE TO A SERVER BECAUSE OF MY INCOMPETENCE I AM A CS STUDENT (albeit first-year) FOR CRYING OUT LOUD. HOW DID I GET HERE?!?!?** I went through websites i have not even heard of before and even *chat-gpt* for goodness sake i almost went to the *second page* of google... and i thought i knew linux commands but oooohhh no you don't here is every error to ever *exist* which you will spend a quarter of an hour looking at *each* AND THIS ISNT EVEN AN **ASSIGNMENT** I JUST WANTED TO TEST IF I COULD UPLOAD FILES. Yes, I probably could have and should have and would have asked someone but it's reading week right now and all these *Ontarians* have to go see their "*families*" or something else that I, an out-of-province plebeian don't have the privilege of doing at the moment so here I am **aaaaaaAAAHHHHHHHHH** The worst part is I wasn't even successful in using your *ssh* or *scp* or *SFTP* or *STFU* or whatever I don't know it didn't work!?! I gave up and redownloaded *winscp* like I was taught in my grade 11 computer science class like some incapable ignoramus SO I STILL CANT USE LINUX... like "touch"? im about to "touch" your files dear

"HIGH FRUCTOSE CORN SYRUP" YOU BETTER WATCH IT (*sidenote* what funny—and *sweet*—bunch of server names the cs club uses). And the reason I'm uploading images you may ask? one of my **mathNEWS** ARTICLES GOT REJECTED SINCE IT WASNT *SUPPORTED* and im meant to fix it using images... prior to this i have written but *three* **mathNEWS** ARTICLES MEANING THIRTY THREE POINT THREE THREE THREE ThRee three three three *three* percent of my **mathNEWS** POSTS HAVE BEEN *REJECTED* AT SOME POINT!! If that's not a record than it must be up there somewhere!?! surely i am the *worst* student in the math faculty! this is a cry for help</rant>

Whole Number Haver

Racket is nothing but lies.

BRAD LUSHMAN

N REASONS YOU SHOULD CHECK OUT PAC POOL!

NOT AN ADVERTISEMENT; RATHER, A LOVE LETTER

- swimming is the *perfect* sport for math enjoyers; it's not a team sport so you can just have time to yourself to think through proofs while listening to the peaceful sounds of moving water
- there are different speed lanes and a dive tank; nobody said you actually have to be good at swimming to go to PAC pool... you can just go there and float... go with friends... pretend you're mermaids...
- they have open rec swimming every evening from 10–11pm on weekdays, it's a very nice way to end your day. alternatively, if you're actually awake between 8–9am there's swimming in the mornings every weekday as well
- bathe. cleanse. shower.
- ok but when you walk on that pathway behind PAC and there's a warm gust of chlorine-scented air... doesn't it call you home to childhood pools? to swim meets? to birthday parties at the pool? words can't even describe dude i am ADDICTED to that smell
- they also have swim times set aside for certain groups that have been/are still typically marginalized or excluded from swim settings, the times

are found on the warrior rec app but they usually happen like twice a week each?

- there are no windows :(so time is consistent and doesn't change in PAC pool (;
- except for the fact that there's a clock :) but what is the clock except for numbers): what are numbers except for math :(you can't escape

i've found that many people do not know how to get to PAC pool. you don't have to pay extra or anything, it's just the same as the gym, you just tap your watcard and you're good. you can get to the pool deck by walking through the changeroom or there's a hallway by the all-gender changeroom as well (i think?)

you can bring your towel and water bottle and uhh whatever out on deck, they have some metal bleachers that people usually set their stuff on. but you should fill your water bottle before you go out there since the water from the water bottle filler on deck tastes kind of bad.

hope to see you there :)

Popcorn Rock Eater <3

DO YOU WANT TO ORDER 3526.429 CHICKEN SHAWARMA WRAPS?

A COMPREHENSIVE TAHINI'S REVIEW

Inspired by Dick Smithers' "Comprehensive Review of Crush Social Eatery" in **mathNEWS** 153.3, I recently set out to experience and comprehensively review the new shawarma restaurant opened on Philip St across from Molly's, Tahini's.

Tahini's is the latest shawarma establishment to compete for the denizens of the university plaza. They have over 28 locations across Ontario, and originally hail from (the other) London. As a London escapee, this new Philip St location brings back memories of meeting last-minute dates amid the aroma of falafel and the lights of the Bitcoin ATM their London locations were famous for.

The new Tahini's on Philip St doesn't quite have the same atmosphere, but the menu remains strong. They're still in the early stages though; their service is abysmally slow relative to FreshBurrito or even Shawarma Plus, and their packaging could use some work—they don't even give you a bag or napkins, they just hand you the minimally-wrapped shawarma and wish you a nice day—but with time, it has potential to live up to its London reputation. Maybe they'll even raise their "Order here" sign after some time; I hit my head on it while trying to get to the counter to order.

That's basically the entire review. They need a while to get things together, but with time, I believe they'll be able to give Shawarma Plus a run for their money.

Can we revisit that Bitcoin ATM? What the *fuck* is up with that?

How often do you see a Bitcoin ATM? Maybe in the back corner of a shady convenience store, or in a forever-empty currency conversion shop in some forgotten nook of Conestoga Mall. Shawarma restaurants can often be liminal spaces, but there are limits, and Bitcoin ATMs are well beyond them. Maybe, *maybe* if you want to order 3526.429 chicken shawarma wraps¹, you can order them with a Bitcoin, but have you considered at that point just buying the restaurant instead?

That's not it though. The below image is a real t-shirt you can buy on Tahini's's website. This is not a joke. This is real Tahini's branding.



A CORE PART OF YOUR NEXT HALLOWEEN COSTUME.

It doesn't stop here. The reason for all this Bitcoin branding?

Every dollar they put into long-term reserves² is *invested entirely into Bitcoin*.

This is an *insane* business play. Almost all Canadian organizations keep their savings in \$CAD or \$USD, both of which being reasonably-stable options for long term savings. Time value of money aside, if your business puts \$50 CAD in a savings account in 2020, they can reasonably expect to still have about \$50 CAD in that savings account by 2023. Not Tahini's. In August 2020, they moved *all of their long-term corporate balance sheets* to Bitcoin.

When Bitcoin crashed in mid-2022, they would have lost around 66% of their earnings from 2021. For a chain of their size, that is probably enough to pay the full tuition of every Math/Teaching student at the University of Waterloo today. Randomly gone. Oopsies.

I want to be able to make this out to be a poor decision. I really don't want to say that this worked. I don't *want* to praise this business model.

It worked.

When the pandemic struck in 2020, Tahini's only had three stores, all in London, Ontario. They've now increased that number ninefold, spreading all across southwestern Ontario. In early 2022 they claimed to have never drawn from their Bitcoin savings, but given their rate of expansion amid a time of increasing interest rates, inflation, and engaging in a nationwide dance with recession, I think it is reasonable to conclude that their Bitcoin savings have propelled their expansion.

Renowned Harvard business professor Michael Porter suggested all businesses use a generic strategy, split along the lines of low-cost/high-cost and niche/focused. I'd like to suggest a fifth Porter generic strategy: fucked. Fucked up. Sick and twisted. The fucked strategy.

Businesses aren't supposed to be able to explode because of memeing all their profits into Bitcoin. They're supposed to grow based on genuine competitive advantage, well-structured

operations, and strong market fit. And Tahini's has those, sure, but simultaneously, their success is in no small part driven by *memeing all of their profits into Bitcoin*.

Tahini's is what happens when you give r/wallstreetbets complete ownership of a restaurant chain. It is a monument to spite. It is a testament to "fuck it, we ball" as one of the strongest business strategies ever conceived.

They have pretty good shawarma, too.

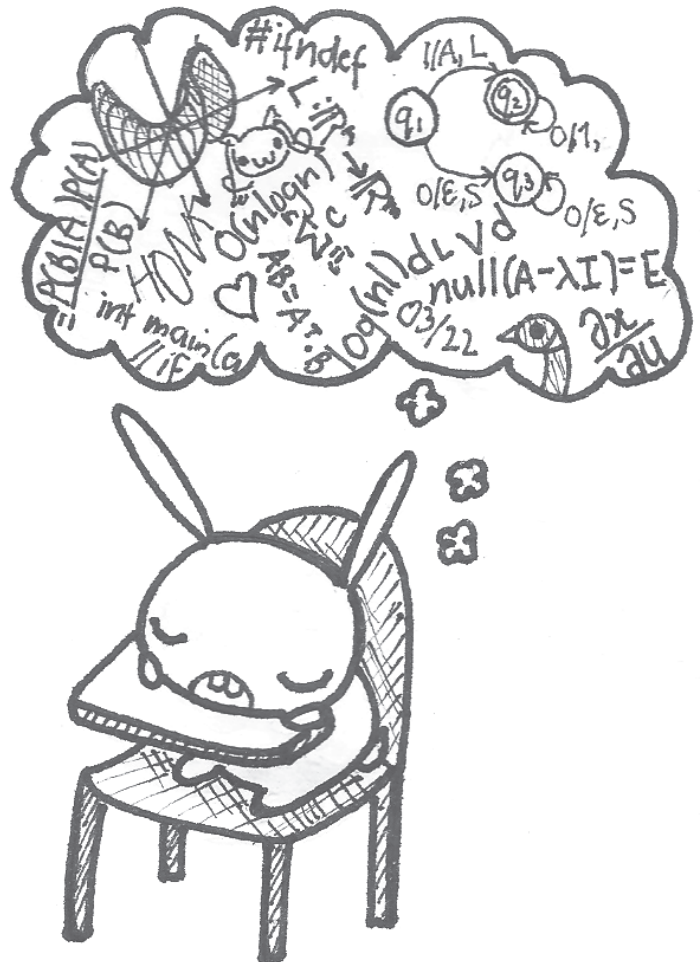
molasses

1. At the time of writing, Bitcoin was at \$47,778.53 CAD. One bitcoin paying for chicken shawarma wraps (\$11.99 * 1.13 HST) comes out to 3526.4291039 chicken shawarma wraps.
2. They always maintain enough Canadian currency in their account to operate for the next 3–6 months. Beyond that? Any earnings they make become Bitcoin.

A FOURTH OPINION

L + ratio + you fell off + **template<typename> L** struct You;

jeff



WHICH SOUVENIR FROM A GIFT SHOP ARE YOU GETTING?

ADD UP THE NUMBERS TO GET YOUR ANSWER!

Imagine this: You're on an epic road trip. You want to get something to commemorate the occasion. You stop at a gift shop but you are paralyzed by choice. Fear not! This quiz is here for you :)

Where are you going?

1. Home
2. On vacation!
3. Travelling
4. On a tangent

Where are you coming from?

1. A friend's
2. Over there
3. The past
4. Home

How are you getting there?

1. Carpooling
2. Trains!
3. Whichever way I need to
4. Driving probably

Who is going with you?

1. My Partner
2. Whoever wants to
3. Nobody
4. My Besties

Why?

1. Because
2. Why not
3. I travel alone
4. They make things fun

Who are you?

1. I am who I have always been
2. Whoever I want to be
3. A previous version of myself and perceptions, forever encased in uneven scrawl
4. Wouldn't you like to know ;0

What is going on?

1. Don't you know?
2. Fun I think.
3. A journey of sorts
4. Whatever

Help. Please.

1. Just say the word and I'll be there.
2. Help is all around you.
3. You only have to ask.
4. Of course, I will.

ANSWERS

(0–7) Boulder (mathematically impossible How did you get this answer)

(8–15) Mug—Cozy, Heartwarming, and Hot. You are everyone's favourite present. Your personality tends to be hit or miss. People either love you and see you every day OR hate you and leave you in the back of the cupboard.

(16–19) Key-chain—Fun, flirty, and always down to hang out! You bring sparkle and flair into everything. On the surface, you may not seem vital to everyone, but you bring flavour and light into a boring world.

(20–23) Postcard—Arguably a sleeper hit. Not many people actively seek you out, but everybody loves it when you show up unexpectedly. You tend to be a verbose individual and not everyone understands your prose but those who do are greatly rewarded <3

(24–32) Ironic T-Shirt—The comedian's choice. Many closets across the world hold ironic shirts from Dildo, Newfoundland and Roswell, New Mexico. So do many thrift stores across the world. The difference between the two is the love you have for others and receive in return.

rockfacts

HOW TO PLAY OFF A FUR-SUIT AS A HALLOWEEN COSTUME

... wait, this isn't google

???

Coincidence? Yes!

TY GHASWALA

ABSOLUTELY INSANE COOKING SPEEDRUN TECH (TASTY AND HEALTHY%)

This might be common knowledge, but as someone whose family never owned a rice cooker and always just made it on the stove, this OUTRAGEOUSLY effective strategy my roommate showed me fucking blew my mind.

Ingredientence:

- some meat or protein (any kind) (optional but recommended)
- an arbitrary set of vegetal
- mushrooms (optional but tasty and thus recommended)
- a spice cabinet (it can contain anything)

Stepz (there's no funny misspelling of steps I'm sad):

- oh btw you also need rice
- if your protein is not already in small pieces, make it that way
- grab a random assortment of things from the spice cabinet and throw it onto the protein (every combination we have tried has tasted good and we have no cooking knowledge)

- cut up vegetal, mince garlic and ginger here in arbitrary quantities
- throw rice in a rice cooker with the appropriate amount of water
- put vegetal on top and protein on top of that
- turn it on
- rice cooks and steams vegetal and cooks meat and then the seasoning from the meat and flavour from the vegetal goes down onto rice and makes it taste++
- these aren't steps anymore I'm just writing in bullet points for no reason
- anyways if you're using meat it'll get cooked through by the rice cooker so it's like even easier than one pot bc it gets cooked on its own and you only used one pot!!
- at the end, you get steamed vegetable with tasty brotein and rice and it's so easy to make and stays in fridge ez gg

nazz

KNOX UNITED GOSSIP COLUMN

Everybody knows that the United Church of Canada is where all the drama happens. Before I describe the events of this week, here are some necessary characters you need to know.

- **Van Hori:** He's my dad. He's not relevant to the story but he's really cool and very spiffy.
- **Elyse Hori:** She told me this story. Also cool.
- **Sayeeta:** She works with my dad in the outreach committee. She's actually not relevant either but I only know Herman as her husband so she has to be mentioned.
- **Herman:** Sayeeta's husband and a photographer. He once kidnapped me into an impromptu photoshoot after church.
- **Mike Lee:** He takes photos
- **Bob Lundy:** Very friendly. He does the announcement. My mother, when telling me this story described him to my roommate, as the king of my church, which is different from the pastor of my church.
- **Pastor Bright:** He's our pastor.

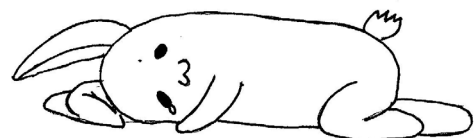
So last week, Herman sent a very long email/rant to many people in the church congregation, detailing the many ways that Bob Lundy has recently slighted him. To be clear, the email was *addressed* to Bob Lundy, but sent to *so* many people. Herman was very displeased by the way that Bob only thanked Mike Lee (a fellow photographer), and not him for his

photography contributions. Bob Lundy also failed to consult Herman on food decisions for the upcoming luncheon, and also has recently **not been saying hello to him** which has made Herman feel avoided and hurt.

After this email was put out, pastor Bright emailed out a reminded to the same *long* list of people that the original email was sent to, reminding everyone to be friendly and kind. He also thanked both Mike and Herman for their photography work, as well as Bob Lundy for his announcements.

As we come to the conclusion to this article, we are left with more questions than answers. Why did Herman send his rant to so many people? Was it a misclick, as many of the seniors at Knox United Church are prone to? Has Bob Lundy been purposely avoiding Herman, and is it out of guilt or anger? Is there a conspiracy against Herman? Why do I not have more interesting things to write about for **mathNEWS**? More questions and more in the next *Knox United Gossip Column*.

PandaPandaPanda!



PIPO PIOPIOIPIP (gridWORD)

gridCOMMENT 153.4

hahahahahahahiiiiii :ooooo

hope everyone is doing well this lovely day, today is new gridWORD day, and thus that means that a new gridWORD is coming out, and in case that wasn't clear, that means that there is a new gridWORD :0

last time, i asked you "how are you doing? :)", and you all said:

- mobpsychofan: *despondent ant with bindle reaction image*
- awmlet: *vevy good ty fow asking uwu :3*
- Partly Cloudy: *straight up not having a good time*
- snowdozer: *SUS! SUS!!! SUS!!!!*
- Lars Nootbaar and Aphf: *Suspending our Suspicion among Sustained Suspects in Jesus (sus amongus).*
- saucy saturn: *i cant concentrate and i got rejected so im doing great! how are you?*
- Rijrya: *I'm doing terribly, the only thing that could cheer me up is a \$5 dollar cnd gift card 🙄🙄*
- jerry's biggest fan: *jerry wang 🙄*

• Sexy_Software_Babe: *i failed a midterm lol*

Sexy_Software_Babe, my condolences, i hope that a \$5 CnD gift card can help your woes, so please come by MC 3030 (mathNEWS office) sometime to receive it!! :o

it's great seeing so many new people around, i hope you're all having a great time with these :)))

the theme this time is "i'm just a guy", because i, like many of you, am just a guy.

i also ask you this time, "what's on your christmas list?"

send gridWORD solution, along with gridQUESTION answer and your pseudonym to mathnews@gmail.com by november 13th at 6pm, and i'll see you thereeee!!!!!! :0000000

au revoir xoxo

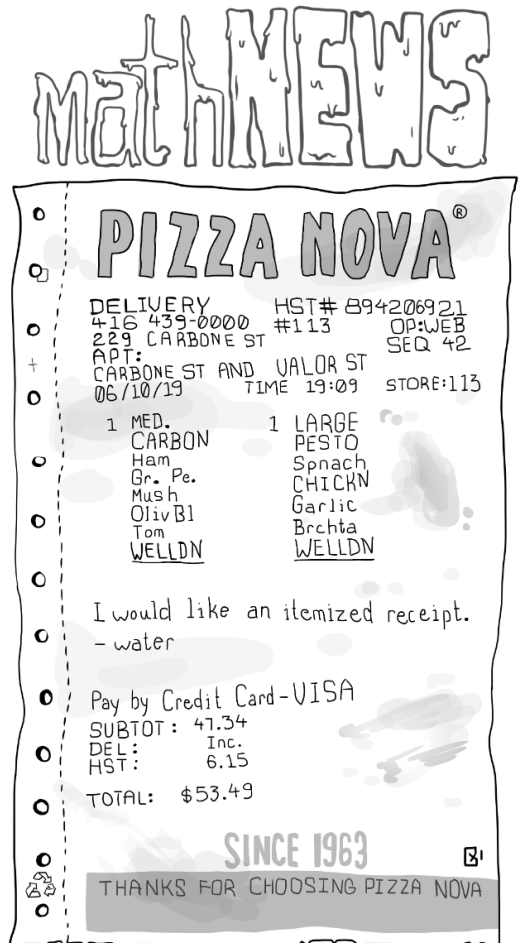
Wink wonk

ACROSS

1. Owns
4. Calculus calculation
8. Resting places
12. Fizzy drink
13. Dudes*
14. Opera solo
15. Like hot fudge
16. Smallest infinity
18. Relaxed a muscle
20. Razor handle?
21. "___ rang?"
22. Born, in bios
23. Wasted
24. Parentless child
26. Byproduct of cheesemaking
28. Poetic dusk
29. Stun gun
30. Crowd noise
31. Combines
32. "Hehehehe Lois" type dude*
35. Fabric
38. Chances
39. Jumps
43. Bank offering, for short
44. Yeet
45. Soft sound
46. Smoked fish
48. Feel sick
49. Lenient
50. English exam finale, often
51. Belittle
54. Conjecture
56. Doughnut in math
57. "Major" animal
58. ___ vera
59. Experimental or avant-garde
60. Himalayan legend
61. E-mail, e.g.
62. "Get it?"

DOWN

1. Casual encounters
2. Gulf of ___, off the coast of Yemen
3. Parting word
4. Banded stone
5. Be a monarch
6. Gave the once-over
7. Death on the Nile cause, perhaps
8. ___ Popular, a Puerto Rican bank
9. Belched
10. Expanded, as in pupils
11. Sockeyes and chinooks
12. State bordering Arizona
15. An undersea mountain type lad*
17. ___ cow!!!
19. Gymnast's goal
23. Of the ice variety
25. Bulk
26. Rolling tracts of open country
27. Makes bales for the barn
30. Frees (of)
31. Affirmatives
33. Night light?
34. Laments loudly
35. Know-it-all*
36. Start of a correction
37. Least factual
40. Loose
41. Troublesome type fella*
42. Male and female
44. Santa's sackful
45. Dead letters?
47. Kenyan tribesman
48. Inquired
51. Big name in bananas
52. Chipping choice
53. Was a passenger
55. Used to be



		1	2	3		4	5	6	7		8	9	10	11
	12					13					14			
15						16				17				
18					19					20				
21				22					23					
24			25				26	27				28		
29						30					31			
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35	36	37			38					39		40	41	42
43				44					45					
46			47					48				49		
50						51	52				53			
54					55						56			
57					58						59			
60					61						62			

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

lookAHEAD

SUN NOV 5

distractED's grandma's birthday 🍰🍰🍰
(Observed)

MON NOV 6

Marooned Without a Compass Day

TUE NOV 7

Cook Something Bold Day

THU NOV 9

National Pickle Day

FRI NOV 10

Remembrance Day

SAT NOV 11

SUN NOV 12

Chicken Soup for the Soul Day

MON NOV 13

awED Drops Out Day

WED NOV 15

Clean Your Refrigerator Day

THU NOV 16

Winter 2024 schedules available

FRI NOV 16

SAT NOV 17

LAST ISSUE'S gridSOLUTION

1	C	A	N	O	E		6	A	N	G	S	T		11	C	G	I		
14	E	R	U	P	T		15	B	O	O	T	H		16	O	U	T		
17	N	O	R	T	H	E	18	A	S	T	E	R		19	L	I	S		
20	S	U	S	S	E	X		21	T	W	O	T	O	N	E				
23	U	S	E		24	R	U	P	E	E		27	E	A	S	E	L		
28	S	E	R	A		30	D	I	A	N		31	A		32	U	S	A	F
			33	M	O	A	T	S		35	L	O	T	U	S				
			37	S	O	U	T	H	E	R	L	I	E	S					
			39	M	U	R	R	E		40	F	O	U	L	S				
41	R	E	N	O		42	S	O	U	L	S		44	T	A	R	P		
48	I	N	D	U	S		49		50	A	L	L	I	S		52	S	E	A
53	P	U	R	S	U	E	R		54		55	V	E	R	S	U	S		
57	P	H	I		58	S	L	I	P	P	E	R	I	E	S	T			
61	L	I	E		62	H	A	N	O	I		63	U	T	T	E	R		
64	E	N	D		65	I	N	G	L	E		66	M	E	S	S	Y		

PMAMC&OC WEEKEND UPDATE

The Pure Math, Applied Math and C&O Club is finally gearing up for some events for this month!

- **Wednesday, November 8th:** C&O Prof Talk with Bill Cook! 4:00–5:00 PM. Location TBD.
- **Thursday, November 9th:** Short Attention Span Math Seminars! 6:30–9:00 PM in PAS 2083.
- **Tuesday, November 14th:** C&O Prof Talk with Peter Nelson! Time and location TBD.
- **Wednesday, November 15th:** PMATH Prof Talk with Elana Kalashnikov! 5:00–6:00 PM. Location TBD.

We'll probably have locations once this issue is out, so come see us in MC 3030 for locations!

Evan Girardin
President, PMAMC&OC

