



## "WHAT'S YOUR FAVOURITE THING ON THE INTERNET THAT YOU CAN'T FIND ANYMORE?"

Hello, and welcome back to our fourth issue of **mathNEWS**. Since the third issue, the world has seen some new additions to it, such as the opening of the ION rails, rightfully planned on the Summer Solstice. What better way to celebrate the year's first day of summer than riding the highly ~~delayed~~ anticipated lightrail (which is free until July 1)?

Readers, I wouldn't say that the delay was worth it, but I'd be lying if I said I didn't enjoy it. I don't know which cities you've visited where you heavily relied on public transportation, but let's just say that the scent of freshly minted plastic is something I'll always appreciate over Muni's ... "organic" perfume that never leaves you, even when you're at home taking a hot shower with your most fragrant hair and body potions. *You can leave San Francisco, but it'll never leave you.*

While the TTC streetcars are better than Muni's, I'm not a fan of the colour scheme, how claustrophobic the new ones are, and how the on-train ticket booth never seems to work (I prefer to use coins, as I can get away with the high school student fare, but that's another story for another day). The one thing I enjoy about the new TTC streetcars, however, is standing on the joints while they turn a curved road and you, too, become involved with the turn. I don't know why more people don't do it, because it's a lot of fun. When you're bored on a streetcar or subway ride, try that. Let me know how you like it. Don't do it with a friend, though. You both may get hurt.

Anyway, enough about trains — there is a better article about the new ION rails in this issue, which I encourage you to read! I'm one person, after all.

In other news, we were unable to get an instructor for this issue, which we apologize for, but! We, the editors, have answered a few burning questions that our regulars have had in their hearts, ranging from (one-side) love (ahem), a controversial pizza topping, and Disney movies.

Oh, and before I forget, itorED and I are friends again. Thanks for tuning in! We're seeing each other again in August and I really can't wait. Also, have a good long weekend! Can't forget.

stapLED  
Editor, mathNEWS

swindLED  
Editor, mathNEWS

ZETHAR		Tim Dawson's <i>Dragon Tails</i> .
BEYOND META		A job I am qualified for and want.
WALDO@<3.LE-GASP.CA		Classic YouTube and Neopets.
SOVIET CANADIAN		Old school flash animations.
PSYCHGIRL		Innocence.
EPSILON SCREWN		David McKinnon's official fanpage.
VESICA PISCIS		Nothing. I have no favourite thing on the Internet, after all what does it mean to say that I love a sequence of 0s and 1s? Same as colours, what does it mean that I particularly like one wavelength over another? Nothing. In a world overrun by raw emotions, I shall insist futilely upon cold logic.
FINCHEY		<a href="http://girlsense.com">girlsense.com</a> , an online fashion game and social network marketed towards tween girls. You know, I may take the piss on these <b>mastHEAD</b> answers sometimes, but I'm 100% honest about this one. A close second is <a href="http://ponystars.com">ponystars.com</a> , an online pony breeding game. Rest in peace, you two giants of my childhood. (Now I'm feeling nostalgic. Fuck this shit.)
SANDWICH EXPERT		The David McKinnon fanpage. Also, during the 2008 election there was this turn-based strategy game on Miniclip where Obama and McCain would fight each other with attack ads. It was fun, but I can't find it anymore.
XX_420SONICFAN69_XX		There was this one flash game website known as "Funny Games" that my dad showed us. We'd play as many games as we could. It had yellow boxes for the games and a pink background. I can't find it now, and other flash game websites lead acetate my sugar, so I rarely play flash games anymore. I want my fun pink website back ;.;
STAPLED		My neopets account from when I was a wee 7 year old.
TERRIFIED		Tetris Battle.
UNSOPHISTICATED		localhost:6969
SWINDLED		The single best folk album of all time; Fionn Regan's <i>The End of History</i> .

## ARTICLE OF THE ISSUE

This week's article of the issue, despite my disagreement with their taste in spirits, goes to Finchey for [How Give Your Upcoming Canada Day Plans That Extra Oomph!](#) I don't know if I can safely call it "good advice," so let's just call it "worrisome".

## All aboard the friendship train! Choo-choo, MFs.

ESTHER AHN, mathNEWS EDITOR FOR SPRING 2019  
ALONG WITH TERRY CHEN, ANUJ OPAL AND JOSH RAMPERSAD

# mathASKS 140.4

FEATURING THE mathNEWS EDITORS

**SANDWICH EXPERT: TERRIFIED, DO YOU LOVE US?**

[Editor's note: do the rest of us not get a shout out? 😊]

**terrifiED:** ♥

**SANDWICH EXPERT: HAVE YOU EVER NOT LET AN ARTICLE GET PUBLISHED FOR LEGAL REASONS EVEN THOUGH IN YOUR HEART YOU WANTED IT PUBLISHED?**

**unsophisticatED:** Nah, I only just got here.

**swindlED:** Hmm, there hasn't really ever been anything rejected for legal reasons during my tenure, y'all are pretty good about being critical while not being defamatory, and not stealing copyright.

**staplED:** No, but I've blocked an article before because the advice was pretty bad and it was an obvious attack on one person. Hopefully this doesn't happen again.

**terrifiED:** I talked to my lawyer and he suggested I not answer this question.

**XX\_420SONICFAN69\_XX: IF YOU COULD TURN ANY WORK OF FAMOUS LITERATURE INTO A DISNEY MOVIE (LIKE HAMLET INTO THE LION KING), WHAT WOULD YOU PICK AND WHY?**

**swindlED:** Atlas Shrugged, turned into 101 Dalmations. You just know that Cruella de Vil is a turbo libertarian.

**staplED:** Hannibal [the TV series] would be interesting. If they can turn Macbeth into a family friendly movie, I'm sure they can do it with Hannibal the Cannibal.

**terrifiED:** Jonathan Swift's A Modest Proposal. An orphaned protagonist is faced with the choice of starving to death or consuming the plump patrons at the local nursery. To the chagrin of society, he chooses the latter, leading to disownment and him being declared persona non grata in his community. Left to fend for himself in the wilderness, he befriends a ragtag band of cannibals hell-bent on gaining social acceptance, and falls in love with the chieftain's daughter. He starts a child cooking show with their support; though shunned at first, it quickly gains patronage as the population grows more and more desperate. As his fame grows, he is faced with having to decide between pursuing fame and his cannibal squad. His choice leaves the latter in shambles, but he soon realizes that he misses their familial presence, and so after a moving speech about how he can't sacrifice family for success, he reneges on his 8-figure network contract to return to the tribe, marry his lover, and in the post-credits scene, become the new chieftain.

How does this answer the question? The protagonist seeks something he cannot get, hits rock bottom, is faced with overwhelming odds, meets new friends, falls in love, rises back up,

is faced with a crisis, goes the wrong path, finds out he had what he wanted all along, and finally returns to glory. Admit it, it's a Disney movie plot.

**UW UNPRINT: HOW MANY YEARS OF YOUR LIFESPAN HAVE YOU LOST TO THIS JOB?**

**unsophisticatED:** One sixth of a year of this pitiful existence we call life. (Well spent due to free pizza).

**staplED:** I think being an editor added more years to my life, act-*shuall*-ly.

**terrifiED:** Infinity minus infinity is still infinity.

**swindlED:** Surprisingly few. Lost a few points on my eyesight from staring at Photoshop though.

**CIX: THOUGHTS ON ANCHOVIES ON PIZZA?**

**unsophisticatED:** Almost always a good choice. Honestly, people who flat out refuse a specific topping as a matter of principle are missing out on a whole world of amazing flavor combinations. As someone who has worked at a pizza shop, I can say with confidence that the question of whether a specific topping should be on pizza is less about what the topping is and more about what other toppings it will be sharing the pie with. For instance, I would not want a pizza with just anchovies. They are very salty and require something juicy to complement. I personally enjoy anchovies with pineapple, but fresh tomatoes are a solid choice as well.

**staplED:** Look, I grew up eating anchovies as a kid, even eating dried, salted ones when I used to help my mom clean them up before they could be stir-fried for *banchan*. I love anchovies, but I draw the line at pizza. I nearly threw up once I opened the pizza box and had a terrible time finishing the slice.

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

STEPHEN NEW

# INTERVIEWING TIPS 101: HOW TO IMPRESS YOUR INTERVIEWERS AND SECURE A JOB

Hi all! Welcome to Interviewing Tips 101 (also known as PD 1), where you will learn all that you need to know to really make an impression on your interviewer and land every single job that you want! So sit tight kids, and get ready for a real eye-opener as we look at interviews from a completely different perspective!

If you think about it, the resume scanning process is quite similar to the Tinder dating experience, where something about you caught the hiring manager's attention and led them to swipe right. Extending this comparison, you will see that the mystic process of interviewing is actually just like going on a date. Now that's clearly something that all of you mathies have done enough times to be true experts on. As someone with a non-existent romantic life, I compiled the course notes by turning to the best source of information — Google (in incognito mode, of course). Here, ladies and gentlemen, are some of the best pieces of advice as offered by "The Best First Date Tips: 40 Tips from 40 Experts." Happy learning!

## 1. NEVER GO ON A FORMAL INTERVIEW IF ALL YOU'RE LOOKING TO DO IS ENGAGE IN A SHORT-TERM WORK RELATIONSHIP.

It's just a 4-month internship, who needs an interview for that? If you're confident enough, just show up at the company on September 3<sup>rd</sup>, stride confidently into the CEO's office, and shake their hand firmly, stating "Good morning. I look forward to our partnership for the next four months. I assume you shall be moving next door?"

## 2. SHOW UP AS YOURSELF.

Posturing some "better" version of whom you'd like to present is misleading to your interviewer and sets the wrong tone for future employment. It's a game that can't be maintained and guarantees dissatisfaction for both parties. The goal of interviewing is to find someone who wants what you want, and wants that with you. That's only possible by starting with the "real you." If that means wearing a baggy T-shirt, ripped jeans, or even metal chains, that's okay.

## 3. THE SECRET IS TO NOT GIVE A DAMN.

Answer questions with the first response that comes to mind, no matter how embarrassing or revealing of your lack of knowledge and experience it may be. The interviewer will be impressed by your confident delivery, which will hopefully compensate for any questionable content you utter.

## 4. KEEP IT SHORT.

Even if the interview is scheduled for an hour, feel free to end it after five minutes if there's clearly no attraction. On the other hand, if you're really hitting it off with the interviewer,

you should still end it early, leaving the interviewer wanting more, not less.

## 5. MAKE SURE THEY GET HOME SAFELY.

Send an email to your interviewer to make sure they got home in one piece, or alternatively, ask for their phone number during the interview for this exact reason. Better yet, offer to take them home via the newly-running ION trains — after all, you have your "eye on" the job, and maybe the interviewer. It provides a great bonding experience, as well as showcasing how considerate and detail-oriented you are. Just the perfect skills needed to cement your offer.

## 6. DON'T BE A TELL-ALL.

Flirt and maintain a certain amount of mystery. If there's nothing left for your interviewer to discover, they wouldn't hire you for the position, would they? When they ask you to tell them about yourself, be sure to withhold details — after all, you're hoping to line up a second interview

## 7. SPEND 1 – 2 HOURS RELAXING AND HAVING FUN BEFORE THE DATE.

If you're too tense, it will show. The safest bet is to turn to the bottle. A couple of quick snifters will ensure that you're loose and ready to impress. If you really want to showcase your tough, rough and ready nature, go in with your collar unbuttoned and dab your clothes with enough alcohol so that its aroma will permeate the room. This will establish that you are a spontaneous individual who's not afraid to take risks — the perfect job candidate.

## 8. BREAK THE PHYSICAL CONTACT BARRIER.

You can quickly build rapport by establishing physical contact as early in the interview as possible, even immediately after the handshake that you can maintain for just a little longer than usual. Start off with a hug, and move your chair so you can sit side by side to allow opportunities for more casual physical contact throughout the interview.

## 9. IF THEY'VE GIVEN YOU A STRONG SIGNAL OF ATTRACTION, GO IN FOR THE KISS.

Surefire way of figuring out whether or not the interviewer is genuinely interested in you as a candidate. At the very least, this will leave the interviewer with a very distinct, memorable impression of you.

## 10. PREPARATION IS VERY IMPORTANT. MAKE SURE THAT YOU CARRY ONE (BETTER TWO) CONDOMS WITH YOU.

Preparation for the interview shows that you are likely to put thought into your work, and will make you seem like a better candidate. To convey this to your interviewer, grin slyly while saying "I came prepared," raising your arms to show one condom dangling slightly from each hand. This should arouse confidence in your future employer about the strength of your work ethic, and show them you're someone who likes to work hard.

In many ways, an interview is like a first date. You might be a little nervous facing this charming stranger sitting in front of you, but you know that you have to focus and make a good impression because in this person lies the difference between having your desires fulfilled or going home and being self-employed for a little while longer. Even if you haven't found success for some time, don't get discouraged—keep your chin up and put yourself out there!

sillycone, Vesica Piscis & Epsilon Screw

## HONEST REVIEW OF THE ION

### PROS

- It's fast.
- It's smooth.
- Going to the mall(s) is now faster.
- No need to yell "back doors please!"
- Selective door operation is *great*. I can't believe North America doesn't use it more.
- Might actually arrive on time, every time.
- Trains are **cooooooooool**.

### CONS

- It's literally a blue TTC streetcar.
- KW drivers are absolutely horrible and will find any chance they can to cause an accident.
- Weak-ass warning bell should be replaced with a 230dB siren.
- The concept of moving away from the doors is not universally understood.
- People will inevitably complain about having to push a button to open the doors, and that will lead to universal door operation, thus slowing everything down (see: TTC streetcars).
- All my favourite bus routes got discontinued (rip the 7E).

### VERDICT

$e/\pi$ , would ride again.

## N ANDREW SCHEER ROASTS

*[Author's note: This doesn't represent the political leanings of me or mathNEWS, and there's plenty of stuff to roast the other candidates on. It's just that Andrew Scheer is so boring as a person that it loops around to being funny. Also some of these are stolen; I will source their origins.]*

- Andrew Scheer is like eating untoasted white bread with water as dipping sauce (The Simpsons)
- Andrew Scheer is like if mayonnaise had no vinegar to make it sour
- Andrew Scheer is like considering flour spicy (Bob's Burgers)
- Andrew Scheer is defending a plain, beige carpet as peak home decorating
- Andrew Scheer is the leftover ice at the bottom of the iced capp
- Andrew Scheer is considering a Starbucks Refresher too bitter
- Andrew Scheer is a plastic waterbottle with the label removed
- Andrew Scheer is the off brand of the No Name brand
- Andrew Scheer has all the charisma of Stephen Harper, and all the experience of Justin Trudeau
- Andrew Scheer is using bleach on clothing to make it darker
- Andrew Scheer is the Coors Light of beers
- Andrew Scheer is what rose is to red wine
- Andrew Scheer subscribes to the entire Microsoft suite, including phones, computers, and Binging it
- Andrew Scheer is writing flawless code the first time on how to find the maximum of two numbers
- Andrew Scheer enjoyed Crime and Punishment
- Andrew Scheer thinks white noise is too exciting
- Andrew Scheer vapes water
- Andrew Scheer made dad jokes at age 10
- Andrew Scheer is too submissive to sub
- Andrew Scheer is the grass of flowers
- Andrew Scheer is a three leaf clover
- Andrew Scheer is a two leaf clover
- Andrew Scheer is a one leaf clover
- Andrew Scheer is a no leaf clover
- Andrew Scheer has his food frozen in gelatin
- Andrew Scheer wears salmon coloured shorts
- Andrew Scheer's Tinder profile says, "I just want someone to be the Pam to my Jim :). Dog lover! High school wasn't that bad for me. I love Marvel movies and Star Wars (nerd alert!). Looking for friends, or maybe something more :P. Swipe right if you want a good time with a quirky, funny guy. Let's go on an adventure!"

Xx\_420SonicFan69\_xX

Traaaaaiiiiiiiiins

# A LIST OF THE BEST AND WORST PLACES IN TORONTO TO CRY IN PUBLIC

What's up, sluts? Truly loyal **mathNEWS** bitches might be experiencing a bit of *déjà vu* right now when looking at this article's title. For good reason — you see, for issue #5 of last term's volume of **mathNEWS**, I wrote an article called "A List of the Best and Worst Places in Waterloo to Cry in Public". If you're on campus this term, I highly, *highly* recommend you to go read it. After all, you should be hearing back from your midterms by now, and co-op people should've received match results this past Monday — it's as good of a time as ever!

It's been two months since Spring term began and I arrived in Toronto to terrorize the local population. Early in May, I attempted to set the Four Seasons Centre on fire during a matinee production of Puccini's *La bohème*. However, a member of the audience sitting beside me spotted the tub of kerosene I had tucked away under my jacket and called security on me. Just when we were in the middle of *Oh soave fanciulla!* I was gonna wait til intermission at least. I'm still fucking salty about that. In the end, I got charged with attempted arson, and was thrown in a jail cell at 52 Division for a couple of days. What a goddamn buzzkill.

In the original version of this article, I went into a bit more detail about the physical, mental, emotional, and spiritual benefits of crying in public. The whole shebang. You should go back and read it if you need more background info, because for the sake of brevity, I'm gonna be leaving it out here.

Why am I writing this article? There's a good chance that you, dear reader, are in the co-op program. A lot of co-op positions are in Toronto. In other news, two and two make four.

Fellow **mathNEWS** contributor and comrade-in-arms License2Derive, if you're reading this, do feel free to follow up with an article entitled "A List of the Best and Worst Places in Calgary (or wherever you are in that portal to Hell we affectionately call Alberta) to REEEEE in Public". Just like last time, if you will.

Now, let's get to it!

## THE MIDDLE OF ST JAMES SQUARE AT RYERSONU

If you've never been to Ryerson University's campus before, they have this big building, Kerr Hall, that encloses this little 3.2-hectare park called St James Square. It's no High Park, let's get that straight. But I don't come here to look at prissy lil' flowers. I come here to do one thing, and that is to cry in public while lying down.

If there's anything crying in the privacy of your own room has over crying in public, it's that you can do it while lying down on the floor or on your bed. Standing can be really tiring. And sometimes, sitting just doesn't cut it. Anyone with an appreciation for dramatics knows that there's a special *je ne sais quoi* to flinging yourself onto a soft, horizontal surface and letting

all your internal adolescent angst flow out your tearducts like the currents of *La Seine*. And you can't forget the sulking session afterwards when you're done with your cry and you're just staring up blankly into your ceiling, regretting every life choice you've ever made that led you to where you are now.

I dunno who maintains the field at St James Square, but they're doing a solid job. The grass is always soft and mowed to a decent length. There are never any mosquitoes. The field's always clean and litter-free, and generally there aren't many people around. It's damn fantastic.

**Verdict:** Good

## THE ART GALLERY OF ONTARIO

Admission to the AGO is free if you're 25 or under. A free place to cry is the best place to cry, as I always say. So then, why not cry for free while being surrounded by beautiful, priceless paintings? It seems like a good deal — after all, atmosphere is everything — but there's an unfortunate catch. It's highly probable that some of the other museum patrons will think your impromptu crying episode to be a performance art piece. I was actually fine with that at first — it made me feel flattered. But it became less than ideal when they pulled their cameras out to start recording me. Like, hello bitch? I didn't give your permission to upload a video of me hysterically sobbing over the state my life to your fucking Twitter! Even if your bitch-ass only has 122 followers! It's safe to say that there were a few non-life-threatening injuries that day. If you were in my shoes, you'd probably have done the same.

**Verdict:** Bad

## PEARSON AIRPORT

Tim Hortons bathrooms, gas station convenience stores, and airport terminals all fall under the category of liminal spaces. They have an inherent essence of transience, ambiguity, and disorientation. That's the kind of shit we all need to be on when we're crying in public.

Airports are the most liminal space of them all. My favourite spot in Pearson to cry is the baggage claim. Looking at all the people, sore and haggard and irritable from being fresh off a 12-hour flight, stand around the luggage conveyor, waiting for their bags for what feels like forever — it makes me feel so sad, and I cry even more.

It may be a bit of a ride out from the city, but it's completely worth it. Especially since you'll likely be riding to it on the subway...

**Verdict:** Good

**ANYWHERE ON THE BLOOR-DANFORTH SUBWAY LINE**

...Speaking of subways! Public transport is *truly* the quint-essential location for having a mental breakdown in front of random strangers. If you've never cried on the bus or the subway on your daily commute, then I'm afraid you've been missing out on one of life's most powerful, rawest experiences.

I really do adore the TTC subway system. I've cried on all four lines and they've each offered me a bloody fantastic experience, unmatched by any other public transit system in the Americas. Just top-notch. However, the best line of them all is undoubtedly Line 2, the Bloor-Danforth Line. It gets much more busy than Lines 3 or 4, especially between Christie and Pape Station. Nothing enhances a public transport cry better than a vague clammy-in-your-hands-feeling of claustrophobia during morning rush hour when everyone around you is too mentally drained to even bother attempting to comfort you, despite the fact your bodies are squashed up against each other anyway and their faces are merely inches away from yours (they have too much self-awareness to turn their heads away, but when you look into their eyes, searching for a speck, a hint of anything that would suggest that somebody out there cares a smidgen about your personal well-being, you find that they're averted, staring blankly at the floor, their phone, out the window, the shine over their irises like fogged glass). Nothing.

Admittedly, Line 1, Yonge-University, also gets pretty busy when it reaches downtown. The detail that stands Line 2 out is that it still uses the old Bombardier T1 trains, while Line 1 uses the fancy-pantsy Toronto Rockets. The T1, with its harsh grey steel interior, low ceiling, and general screechiness sets a wonderfully bleak and desolate backdrop to weep your heart out to your content. There just ain't anything quite like crying on the T1 on your way to work, no sirree.

**Verdict:** Good

**A JAIL CELL AT 52 DIVISION**

I got thrown in here once due to the aforementioned attempted arson at the opera. If you need any deterrent for doing questionably illegal shit in downtown Toronto (I know I do), then the prospect of crying inside a 52 Division jail cell will serve as a pretty good one. Have you ever had to cry in semi-fake remorsement over your petty crimes in front of a cop? It's one of the worst things I've ever had to fucking do in my lifetime on this planet. I already hate those useless, power-tripping scumfuckers, and there's nothing worse in the world than showing weakness in front of your vilest enemy, inside a hot, smelly, and cramped jail cell that hasn't been cleaned properly in two years.

At least it's not prison?

**Verdict:** Bad

**CHERRY BEACH**

Ah, beaches. Who doesn't love them? Spending five hours under beating hot, melanoma-inducing rays of sunlight, getting sand literally *everywhere*, potentially contracting HIV by stepping on hidden, infected sharps with your bare feet, and generally doing nothing that could be remotely construed as a fun, worthwhile activity — that's my idea of a day well fuckin' spent.

Cherry beach is one of the nicer beaches in Toronto. Less crowded during the day, and it's absolutely gorgeous at night. One day, I had wandered over there after work, on the verge of tears as always. It was late in the evening and the sun had already begin to set. Looking out at the beautiful skyline of Toronto, with the reflection of the sunset striking off the rolling tides of Lake Ontario, tears began to flow freely from my eyes. It was like a dam had burst. I cried for hours. But it was so worth it. My soul was healed, repaired. Mother Nature caressed me in her arms that day with that beautiful sight and cleansed my heart of its sorrow and despair. Temporarily, at least.

**Verdict:** Good

**YOUR OFFICE BATHROOM**

Like crying on public transport, crying in a public bathroom is also one of life's most ubiquitous experiences. It really fucking sucks though. Who wants to have an emotional breakdown beside someone taking a shit one foot away to your left? The stalls may have dividers but that doesn't stop the smell from coming through. Now, when you combine this with the equally egregious act of crying at work (which is like my worst nightmare, worse than crying in a DC washroom five minutes before a math midterm), you get something truly, truly horrible. Just. Please. Whatever you ever do in your life, don't cry in the your workplace's bathroom. Try your best to hold it all in til work's over and you get on board the subway train to go back home.

At any rate, I'm pretty sure the only acceptable public bathroom to cry in is a porta potty. Toronto always has some parade or festival going on at any given time, so finding one should be easy. But only pull out the porta potty as a last resort. I mean it, bitch.

**Verdict:** Bad

Finchey

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## WHY WE NEED STRAIGHT PRIDE

We don't.

Str8 as Ring Road

# A PERFECTIONIST'S GUIDE TO MATH NOTETAKING TOOLS

Math is beautiful. Why shouldn't your notes be? But how much extra time and effort are you willing to spend to ensure it? You see, perfectionism can be both a blessing and a curse. How you manage it determines your success.

Taking good notes begins with the canvas. What do you use for writing notes? Are you getting the most you can get out of it? Alternatively, what don't you use for writing math notes? Have you ever asked yourself why? Every tool comes with a different set of expectations around the final product, which in turn determines what you do to reach those expectations. It's important to choose the right tool to guide or constrain yourself into the workflow you desire.

The following list is not meant to be exhaustive. I've gone through three different tools over first year, and here are my thoughts on them. Perhaps someday I'll republish this article with more.

## PAPER

The old guard, raw and authentic. You're limited only by the speed of your hand, its endurance, and your paper supply. Oh, the paper supply. Be prepared to take responsibility for the death of a sizeable chunk of a tree over the course of your studies, and to literally bear that weight on your shoulders.

We've heard it so many times: nothing beats writing things down by hand. There's no markup to remember, no shortcuts, no formatting constraints. The lack of that barrier makes it much easier to think about the math you're doing and not the math you're writing. This makes paper great for rough work. But for a perfectionist, how do you keep your work rough? How do you limit the amount of effort spent making notes look good, while keeping overall neatness? It's easy to get lost in your own internal formatting constraints, especially if you use pencil and eraser. Fortunately, some simple anti-perfectionism modifications to your workflow can help.

- Ruin part of the page intentionally. Scribble over a corner in pen, or tear it. If you're using a notebook, plaster both inside covers with rough work so there's no hope for having neatness in the pages between.
- Avoid alignment altogether; nothing *needs* to be centred. Not even your titles. Not even your equations. Not even the date. The consistency of left-aligning everything is enough.
- Adopt a mechanism for inserting corrections that doesn't involve erasing or crossing out. I use asterisks that point to stuff in the margins.
- The urge to colour-code can be overcome by only carrying one colour of pen. Likewise, the urge to erase can be overcome by not carrying an eraser.

The same raw purity of paper has its downsides. Are you manipulating an annoying series? Be prepared to write each and every sigma — no copy and paste or shortcut for you. Asterisks and erased pencil marks look messy in assignments, so you'll have to have at least a rough draft for your solution first. And if you ever need it, digitizing your notes is a bit of a pain — it always looks messier once it's in a screen.

## LATEX

### DID SOMEONE SAY SHORTCUTS?

The novelty of picking up a TeX editor for the first time is a true pleasure everyone should experience. It's also free, so there are almost no excuses. LaTeX is the tool that automates perfectionism and writes research papers, but there is some overhead.

The most notable barrier to using LaTeX is the learning curve. Be prepared to spend some time on Stack Exchange, debugging your math. Be prepared for your assignments to take a bit longer to do if you decide to typeset them in LaTeX. It takes a while before you can shoot markup from your fingertips like lightning, but once you can, you'll feel like a true academic. Anyone who can copy the prof real-time in LaTeX is a legend. Bonus insanity points if they're doing it all on the command line.

Writing markup is an added layer of burden when you're just exploring, so a chalkboard is very helpful in conjunction. There's nothing that beats perfectionism better than knowing that your work *has* to be erased. Just be careful about getting dust into your laptop. On the other hand, rendered LaTeX looks so perfect that anything messed-up sticks out like a sore thumb. You'll almost certainly be tempted to spend the extra time aligning your equations. You may also be tempted to change the template you're using, which will add even more time to your work.

The biggest benefit of using LaTeX (other than pure perfection) is code reuse. The simpler form of this is copy-paste. If you're doing some high school algebra, duplicating an equation and editing the copy can often be easier than typing out a whole new one. The more advanced form is defining your own shortcuts. This is an absolute must if you're using LaTeX for calculus.

## MICROSOFT WORD AND GOOGLE DOCS

Expect a bit of ridicule for this one, but it works. Just like how you can mess up your notebook to perfection-proof your physical notes, using either of these is a great way to perfection-proof your digital notes.

They're both awful. Specifically, their equation editors are awful. Even if they have built-in LaTeX, the interface feels

wrong and the experience is ruined. There's no chance for you to make them look good, so there's not much of a point in trying. Use this for whipping up a super-fast assignment solution, or if you're typing what your prof is saying but can't yet shoot LaTeX out of your fingertips.

The added benefit of a word processor is that it's WYSIWYG: What You See Is What You Get, no extra thinking about how to manage your markup. (But then again, you can also get LaTeX to do that too... just with a lot of work.)

water

## N DIFFÉRENCES ENTRE LE QUÉBEC ET L'ONTARIO

Bonne Saint-Jean!! C'est la fête nationale au Québec et pour tous franco-canadiens! Pour célébrer ce jour de congé pour les Québécois, j'écris cette liste de quelques différences que j'ai perçue en déménageant à Waterloo pour mes études. Avant que je vous donne la liste, je vais commencer en disant que cette liste est basée sur ma propre expérience et qu'il y aura certainement des opinions biaisées là-dedans.

### L'ÂGE LÉGAL POUR L'ALCOOL (C'EST 19 ANS ICI ET 18 ANS AU QUÉBEC)

Il y a assez longtemps, l'âge légal en Ontario était 18 ans. Mais quand ils ont ajouté la 12e année à l'école secondaire Ontarienne, ils ont rencontré le problème des élèves au secondaire qui buvait de l'alcool et en achetait pour leurs amis mineurs. Comme réponse à ces problèmes, le gouvernement de l'Ontario a incrémenté l'âge légal à 19 ans. Cela était une mauvaise surprise quand je suis arrivé, car après trois mois de pouvoir acheter les boissons moi-même je suis quasiment redevenu un enfant. Honnêtement, je trouve ça stupide qu'en Ontario, on est à l'âge de majorité à 18 ans, mais le gouvernement continue de limiter mes achats. De plus, on ne peut acheter l'alcool qu'à certains établissements en Ontario. Au Québec, par contre, on peut acheter de la bière aux supermarchés et dépanneurs.

### LA LOI CIVILE

L'Ontario et le Québec étaient les deux colonies originales qui formaient le Canada. La Nouvelle-France est devenu le bas-Canada et le Haut Canada. Les deux canadas partageaient la loi criminelle, mais la loi civile était différente dépendant de si on était dans le Canada anglophone où le Canada francophone. Le Haut Canada (maintenant l'Ontario) a emprunté le système des colonies de l'Empire Britannique, Common Law. Le bas-Canada (maintenant le Québec) a utilisé le système de la France, le Code Civil. Ceci n'est pas un article pour les avocats, donc je ne discuterai pas les détails qui différencient les deux systèmes. La différence la plus importante est que le Code Civil se base sur les lois prédéfinies et la règle du précédent, alors que Common Law utilise seulement la règle du précédent.

### LAÏCITÉ

Cet article n'a pas comme but de commencer un débat sur la loi 21, mais suffit de dire que je suis contre l'adoption de cette loi. Par contre, cette loi démontre très bien une grande différence entre les deux provinces. Après une

histoire tumultueuse avec l'Église Catholique pendant la révolution tranquille au Québec, la belle province place une très grande importance dans la séparation entre l'état et l'église. Par contre, en Ontario, il y a des commissions scolaires Catholiques dont l'argent public les fonds. Je trouve ça fou. C'est en part à cause de ces écoles religieuses que le curriculum d'éducation sexuelle en Ontario est si désuet.

### LA LANGUE

C'est clair que la langue est une des plus grandes différences entre la belle province et la moins belle province, mais pour les minorités linguistiques, je dirais que la situation au Québec est mieux qu'en Ontario. Si on regarde les statistiques du recensement de 2016, on voit que le taux de bilinguisme français-anglais au Québec est à 44.5%, alors que c'est à seulement 11.2% en Ontario. De plus, au Québec, on a Montréal, une ville entièrement bilingue où se trouve presque la moitié de la population Québécoise. À cause de ça, si on cherche des services au Québec, il y a une bonne chance qu'on a l'option de les recevoir en français et en anglais. En Ontario, ce n'est pas nécessairement le cas. À part Ottawa, les maigres services offerts pour les franco-ontariens sont difficiles à trouver.

### L'INFRASTRUCTURE

Les rues en Ontario sont tellement mieux qu'au Québec. La raison pour cela est simplement que l'industrie de construction au Québec est contrôlée par la mafia.

### LA CULTURE

Québec est plus laissez-faire et mieux pour les fêtes, les festivals, et plus chill en général. Ça se peut que je ne sois pas encore assez familier avec le Toronto pour le comparer à Montréal, mais j'entends toujours dire que la Montréal a une culture distincte et que le Toronto en a pas. De plus, à Québec on a le festival de Jazz, le festival Juste pour Rire, Heavy MTL, Otakuthon, et beaucoup plus. On entend dire que Toronto a aussi tel ou tel événement, mais que c'est beaucoup moins relaxe qu'à Montréal.

Pour conclure, j'aimerais vous rappeler, cher lecteur, que l'important ce n'est pas que le Québec est la meilleure province, mais qu'on apprécie les bonnes qualités de toutes les provinces. Joyeux fête nationale et vive le Québec libre (c'est une blague, je ne suis pas souverainiste).

Xavientois



# WHEN YOUR WIRELESS HEADPHONE DIES DURING A LONG RUN

Trust me, runner's high equals almost fainted when the glycogen in your body runs out. One second before you were happily going with the beats and a second later your imagination is locked in a cage when the music is suddenly off. But people have infinite imagination, below is a run where you don't have music for the second half

You woke up at 6:30, ate a banana, and get your gears and water ready for the long run. Oh you forgot to charge your headphones. Again! You rushed into your room, plugged the charger in and impatiently waited for 15 minutes while thinking about if the ads saying these headphones charge fast were lying.

Finally, you left your house at 8. You started running and it felt great during the first 30 minutes. The only disadvantage was the sun has already risen and you can feel the heat.

5 minutes later, you headphone started beeping warning you the battery has about 10% left. You thought it still can last for a while and kept running...but it just died unexpectedly. Your inner beast roared and kicked the ass of the person who said this model can be fully charged in 30 minutes and lasts for hours afterwards. Lying piece of shit. You unhappily tied a square knot with your "wireless" headphone wire around your neck but it still bumps around and rotates with your motions.

45 minutes since you started. You started to dehydrate and melt like ice cream. Your mind goes to the nothing box due to the boredom except the background is a dynamic wallpaper of you attacking the sun with a giant water gun.

An hour since the run began. Here comes the runner's high since you only had a banana. Your body started to shiver from head to toe and you felt the core started to get cold. Your legs maintained your pace due to muscle memory and your brain started to think weird thing like:

You and Prisoner of Azkaban

The Devotion of Suspect U

The Freak Out of the Furious

You and the Red Shoes

OR ...

The steep downhill is ripping apart your skeleton.

The blisters on your feet will explode like C4.

Choosing swimming over running is a wiser option.

Did you accidentally swallow a fruit fly?

What are your friends having for brunch? Oh no they are probably still sleeping.

Are your running shoes dying since they seemed to have lost the elasticity. How much does a new pair cost?

Are you wearing an anchovies mask?

That was a great run overall except you are drenched in sweat and tired af. You are hoping you are able to run 5 miles in your sleep someday.

*Autowired*

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## profQUOTES 140.4

ENGL 294: TRAVIS MORTON

“ Oxford English Dictionary or death

QIC 823: DAVID GOSSET

“ Computer scientist tends to write everything in CAPITAL letter, so I guess I will do the same... It's like receiving a email with all Caps.

“ If this is not clear, sit with it for 3 minutes

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## N SIGNS YOU'RE (PROBABLY) HAVING A DENTAL EMERGENCY

*TAKE CARE OF YOUR TEETH READERS...*

- Increased sensitivity to foods, temperatures
- Bleeding gums (especially if they're bleeding more than usual)
- Hearing a GIANT crack as you're brushing your teeth
- FEELING that giant crack as you're brushing your teeth
- Eating and drinking in general just HURTS no matter what it is
- ZOMG SO MUCH PAIN IN THE MOUTH WHYYYYY?!?!?!?
- A good and reputable dentist tells you you're having a dental emergency and need surgery like...today

waldo@<3.LE-GASP.ca

# MCU SPIDER-MAN SEQUEL PLOT

Next week the second installment in the new Spider-Man movie series comes out, *Spider-Man: Far From Home*. Based on the fact that the first movie title was *Spider-Man: Homecoming*, we can assume that the sequel movie will have home in the title and so by looking up colloquial expressions involving "home" we can predict the title of the sequel and infer the plot from the title.

## SPIDER-MAN: HOMEWRECKER

Peter Parker starts a scandalous affair with Deadpool what follows is an in-depth exploration of how infidelity harms. The fractured relationships that follow when trust is broken. How can you fight crime as a team when trust is broken?

## SPIDER-MAN: RETIREMENT HOME

Peter Parker discovers that not only he has acquired the abilities of a spider but also the lifespan. Rapidly aging spider-man tries to live out his last days with comfort all while learning touching life lessons from a quirky group of octogenarians who have seen it all.

## SPIDER-MAN: THERE IS NO PLACE LIKE HOME

As if Disney didn't own enough properties and that the MCU wasn't expansive enough comes the crossover that no one asked for of the MCU and Oz. Spider-Man finds himself lost in the lands of Oz. He has to teach the Iron Man how to love, help Ebenezer Laughton to come up with a smarter plan and help Sekmet find his courage all while fleeing the wrath of the Enchantress; only to discover that the true power was found in his ruby spidey suit all along.

## SPIDER-MAN: HOMEWORK

This is an educational movie. Follow along with Peter Parker as he tries to catch up with all the homework he missed while fighting crime. Get the booklet to get the best value out of the movie. Learn about law, history, geography and English with our favourite webslinger. Pay attention to all the deep symbolism that is inserted into the story. The Spider-Man movie that only teachers will love.

## SPIDER-MAN: HOME RUN

The earth is being invaded again. Spider-Man with some clever quips end up convincing the aliens to leave if the Avengers can defeat them as at game of baseball. The hijinx that follows are what would happen if you were to cross space jam with the MCU but this time with baseball.

## SPIDER-MAN: HOME ALONE

The Avengers are going on vacation as a team building exercise. Unfortunately due to Tony Stark no longer being around they forget Peter Parker in New York. Spidey is forced

to build elaborate traps to stop the robbers that have come to rob Avengers Tower.

## SPIDER MAN: HOMEOWNER

Due to the death of a beloved rich and eccentric family member, Peter finds himself owning a house. He was not, however, left with the resources to pay the property taxes. He has to find time to stay home so the contractor can do necessary renovations and finds himself dealing with a spider infestation in the property.

## SPIDER-MAN: HOMELESS

Peter Parker finds himself out on the streets and forced to interact with many of the people that he beat up in a more intimate way. He realizes that a lot of crime comes from desperation caused by systemic issues in society that keep people in poverty. Watch Peter discover that sometimes the best thing you can do to stop crime is show a little empathy to the downtrodden and given them to resources they need to succeed.

## SPIDER-MAN: HOME SWEET HOME

Probably the most likely title, however also the most boring. The friendly neighborhood Spider-Man finally finds his groove and the movie is a love letter to the city.

## SPIDER-MAN: HOMEOMORPHIC

Spider-Man faces his most fearsome villain yet: The Axiom. Riley Metzger, a former math professor, gets a little fed up with his students not doing his assignments that he decides to take matters into his own hands. He creates the Homeomorphizer, a device that turns theoretical math into something a little more real. The device transforms anything to something in the same a homeomorphic class. Spider-Man needs to study up on his math and understand the difference between a donut and a pretzel.

## SPIDER-MAN: TILL THE COWS COME HOME

The Skrulls plan to invade Earth involves disguising themselves as cows<sup>1</sup>. Spider-Man has to fight off this invasion and get the skrulls to return to their own planet. It's sure to be one hell of a MOOvie.

## SPIDER-MAN: HOME STRETCH

Here we are the last paragraph of the article. You start reading it eagerly expecting another clever plot description only to discover that the author in the final stretch slacked off and just resorted to a cheap meta joke. Okay alright I will make a better effort. Peter Parker is about to reach a major milestone, let's say graduate high school, however before he can get the degree he will have to contend with Professor Otto Octavius,

aka Doctor Octopus. Are you happy now? Good since this article is done.

### Beyond Meta

1. This is an actual thing see here: [https://marvel.fandom.com/wiki/Skrull\\_Cows\\_\(Earth-616\)](https://marvel.fandom.com/wiki/Skrull_Cows_(Earth-616))

## CRAZY THINGS PEOPLE DO WHILE LOSING WEIGHT

- Be too stressed planning for workouts. Gain 5lb due to stress eating.
- Eat carrots for a month and finally become a rabbitman. Gain 5lb due to fur growth.
- Work out too hard on the first day and end up staying in the hospital for a week. Gain 5lb due to “customizable” patient food services.
- Run for a month, then gain 5lb because of one cheat day.
- Look at a box of chicken wings while eating salad. Gain 5lb because you somehow accidentally switched the two boxes one day. Maybe lose 1lb due to food poisoning since the chicken wings expired.
- Run marathons in your dreams and wake up drenched in sweat. Gain 5lb due to aftermath recovery.
- Try to cook healthy food. Gain 5lb since your mom thinks you are broke and brought you snacks.

What are the right ways to lose weight then?

### 1. SCARE YOUR FAT CELLS AWAY

Buy a treadmill (or a set of dumbbells) and the fat cells will be scared AF and escape your body as fast as they can. You won't even have to use them.

### 2. FIGURE OUT THE IDEAL DIET

Yogurt, lettuce, and sweet potatoes...

Eat before or after each meal. Or both if you want.

### 3. BOOST YOUR WEIGHT LOSS PROCESS

Good food, good workouts, and good rest. You should be able to achieve all three in bed.

You will lose weight when you REALLY think giving up some of your time, energy, and hobbies is worth it. (And of course, live alone lol)

Autowired

## ALL PRAISE OUR LORD AND SAVIOUR RINGESUS

Today at **mathNEWS**: Toronto Edition, we decided what pizza to order using a random number generator for the vegetables. This is what we got.

Spinach, red onion, sundried olives, and bruschetta.

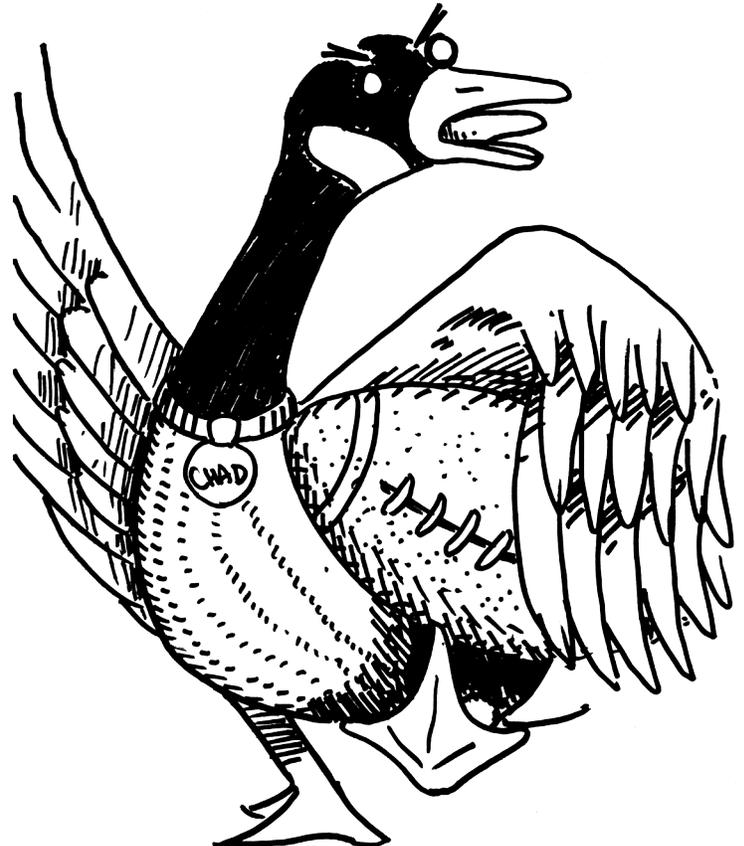
Broccoli, onion, mushroom, anchovies, and goat cheese.

As I said, we only used the RNG for the vegetables. We chose the anchovies — or, you could say, the anchovies chose us.

The anchovy pizza was actually quite disgusting. It was far too salty, and I questioned why anyone would ever order it. But as I moved on to the non-anchovy pizza, I realized why. After eating an anchovy pizza, everything else tastes so much better in comparison! It's amazing! The contrast from this disgusting abomination to a normal pizza makes the fast food pizza taste motherfucking gourmet!

My recommendation (as PD11 has taught me): whenever you eat pizza, have a slice of anchovy pizza first. It's worth it.

Pizza Expert



# INTERVIEWING TIPS 102: HOW TO NOT GET A JOB

## EVERYTHING THEY DON'T TELL YOU IN PD1

Now that you have mastered the skill of acing an interview, it is time to advance to the second class: how to fail an interview in such an abysmal fashion that the interviewers will plunge to their knees and beg you to withdraw your application. And no, this is not an article that was written simply for the sake of lengthening this issue of **mathNEWS**; with the beginning of the continuous round, you may find yourself applying to every single job there is out of desperation, and if you are offered an interview for an undesirable position, this lesson may save your life! (For the next four months, that is.)

### 1. DO ALL YOUR SABOTAGE BEFORE THE INTERVIEW EVEN BEGINS

Well begun is half done. Showing up late to an interview for no good reason is a wonderful way to unimpress the interviewer. Better yet, just don't show up. The con to this approach: the influx of angry emails that will be sure to follow. Angry CECA, angry employers, angry birds—just, angry everyone. Angry you for having to deal with the consequences of your actions. Ugh, who wants to do that?

An more daring alternative is to send an incompetent friend in your stead. Better yet, send a troll friend who is just competent enough to sound stupid without arousing suspicion.

### 2. DRESS TO UNIMPRESS

Sure, sending someone else can give you a great laugh, but then you would be robbed of the prime opportunity to see your interviewer's reaction to your evil schemes. Choose some highly inappropriate "business casual" clothes. You can wear a suit or a dress, but backwards, or even inside out. Accessories are also a great way to adhere to the dress code but show your personality! For example, a headband that says "no waifu, no laifu." Or a sword. Or a tire. Or a goose. Extra points for attacking the goose with the sword, and arriving in the interview room covered in feathers.

### 3. "WHAT DO YOU KNOW ABOUT OUR COMPANY?" (BE UNPREPARED VERSION)

Pretend to know nothing about their company, even if it's the University of Waterloo. Or just sincerely know nothing about their company, especially if it's not one of the big names. This is not fool-proof, since some companies have been known to

give out offers despite the candidates not having the slightest idea as to what they do, and some interviewers even skip the question altogether (to avoid the humiliation of not being known, presumably). One remedy is to state in an assertive tone, whether the question arises or not, "I know that your company maintains Pornhub, right?"

If acting dumb is against your principles, you can also suggest that they use a competitor's product. However, this requires being actually prepared, and it is also dependent on the interviewer being knowledgeable enough about the market to take offense at your comment. This should be used at your own discretion.

### 4. "WHAT DO YOU KNOW ABOUT OUR COMPANY?" (WEIRD PERSONAL STORY VERSION)

Tell them you found them on the personals section of Craigslist. With a wink, tell them you're interested in the "services" they offer. Extra points for not-so-subtly displaying a large roll of bills in your wallet.

### 5. HAVE A STRONG BACKUP

If you're too scared of putting on an eccentric monologue act—a la Hamlet—the best way to fix that is to make it into a duet. Bring your mother and glance at her—a la Hamlet—before answering each question. When asked, "Tell me about yourself," discuss violently with her in a foreign language before answering. Then tell them about your mother. Extra points if she walks out in rage halfway through.

### 6. EXAGGERATE THE INSUFFERABLE OCD IMPERSONATION

Walk into the room and centre the chair for about five minutes. If you want to be extra, bring a tape measure and consult it while rearranging everything, including the stuff on the interviewer's desk, while their hand is awkwardly extended, waiting for you to shake it. Conclude by placing the tape measure in their outstretched hand. If you have a flair for the dramatic, you can play the superstitious old woman, mumbling about the chi while performing the aforementioned tasks.

### 7. NETWORK, NETWORK, NETWORK

Text a friend during the interview. Better yet, arrange for a friend to call you and set a cringy ringtone ("Despacito," perhaps?) that you undulate to for two minutes before picking up. Then converse heatedly, inserting excessive profanity, and slam your hand on the table right in front of the interviewer. Then hang up, burst into tears, and throw yourself on the interviewer's neck sobbing, "I'm sorry..."

**Being a mathematician  
requires imagination.**

PROF. BARBARA CSIMA

### 8. "I CAN'T HELP IT, I'M JUST HANGRY!"

Bring snacks and loudly consume them—but not before profusely thanking your deity of choice for blessing you with sustenance (and with an interview, but hopefully that'll go away soon). The crunchier the better. Extra points for bringing an old, mushy banana and offering it to your interviewer, saying "You look like you could use some nourishment too."

### 9. GET TO KNOW YOUR INTERVIEWER

Assert dominance by sitting on their desk in front of their chair and giving them a shoulder massage. Extra props for gazing lovingly into their eyes and telling them, "I can feel the tension in the air. Let me see what I can do about that." If you feel genuine sparks, you can even up your game: sweep an interviewer and land a hot date by asking them out.

### 10. KEEP THE TONE LIGHT

Challenge your interviewer to an arm wrestle. Cheat at the arm wrestle and celebrate wildly. Deny cheating. Then massage their arm.

### 11. EMBRACE YOUR 21<sup>ST</sup> CENTURY IDENTITY (A.K.A. SOCIAL MEDIA ADDICT)

Take a selfie with the interviewer and post it as an Instagram story, whether or not they give you consent. Extra points if you do a face swap and post it to subtle asian dating.

### 12. SHOW YOUR PASSION

Offer to get the company logo tattooed on your forehead for publicity's sake. Tell them that branding is also an option. Not as in marketing, as in a red-hot iron.

### 13. "DO YOU HAVE ANY QUESTIONS?"

Ask for help debugging your CS 246 assignment. If they say no, then ask to see photos of their children. If they oblige, grab the photo/ device out of their hands so you can look at it more closely. Moan a little. If they refuse, pat their shoulder and say consolingly, "Ah yes, I too am a lonely, loveless nerd..."

And there you have it! Master these 13 lucky tips and you will fear naught when it comes to interviews! No longer will you tremble as you walk into the room, dreading the prospect of acing an interview and becoming employed. Never again will you wow an employer with your irresistible panache and charisma or your encyclopedic knowledge and command of your field of study.

*sillycone, Vesica Piscis, Epsilon Screwn & he  
who shall not be named*

The authors are now pondering their Google search history:  
"dating tips" -> "Pornhub" -> "how to use Tinder" -> "subtle asian dating"

## GET OVER HERE

After returning home from 8 months of intensive math and no video games at UWaterloo, I've been doing intensive gaming and no math to balance my life this summer break. However, as a diligent mathie, I seem to be constantly having Beyond Ideas™ where I make connections between the games I'm playing and mathematics. One such game is Mortal Kombat X.

I feel that doing a proof is pretty similar to Mortal Kombat gameplay. Initially, you learn some basic moves to attack a problem with, like direct proof, induction, contradiction, etc.

But harder proofs require more than one proof technique, so we then learn to string these basic moves to create Kombos for solving the more complicated problems. As beginners, we may have thrown whatever approach we could think of for a proof, which is like button mashing in MK X when you haven't mastered the Kombos yet. But as we get better at math we are able to quickly execute a well thought out series of steps for a proof, just like a Kombo.

I looked at some proofs from my first year and saw how they could be viewed as Kombos of proof techniques:

- Induction, Direct proof
- Induction, Induction,  $\Rightarrow$  + Direct proof
- Intros, Pose proof, Rewrite, Rewrite, Rewrite, Rewrite, Apply, Rewrite, Rewrite, Rewrite, Rewrite, Rewrite, Exact
- WOP, WOP, WOP, Contradiction
- Facts + Logic
- $\Rightarrow \Rightarrow \Leftrightarrow \Leftarrow \Downarrow \Uparrow$  (if then if then if and only if if then if then if then)

I also remembered how we all had different styles of finishing our proofs. This reminded me of how each player would finish off a match with their Fatality of choice. Some common proof Fatalities are:

- Qed.
- Halmos square
- "(theorem statement), clearly."
- $\therefore$  (theorem statement)
- "... contradiction."
- (David McKinnon's Fatality)
- "Proof is left as an exercise." (Marcoux's Fatality)

Having read this, I hope you as a reader will emerge as a stronger Kombatant and be more prepared to attack your proofs and problems in your math courses. Perhaps you will become so much smarter and braver for midterms and exams that you can be like Scorpion and yell "GET OVER HERE!" while the proctor is handing out exams. I must now return to video games to continue finding wisdom like this that can boost our academic careers.

## MINORITY REPORT

We're back, and — to everyone's surprise, including you, the current reader of this article — we got an email:

Hello UWUnprint:

Something about your article, "Minority Report", really struck my eye. You see, I do consider myself "weird in an endearing, non-criminal way" (at the very least, I hope that I am no crook. I like to think I'm nice). Well okay, suppose I'll get straight to the point — what would you say is the way of the majority when putting on clothes in the morning? I like to put on socks, then my shirt, then any outerlayers (like a sweater or a jacket) on before I put on my pants. I don't know, my torso just gets cold. The order of putting on clothes really isn't a common conversation topic, however much I would like it to be, because then I would be able to find out if I'm some sort of self-dressing deviant or if I'm actually not too alone in this. I would greatly appreciate it if you could elucidate me, oh UWUnprint.

Many thanks,

Ambrose

First off, thanks Ambrose for reaching out. Your email made me consider something I don't actually consider. Now, I don't pay too much attention to my morning routines, but I'm fairly certain one thing I don't do is leave my pants for last.

A careful analysis of your email indicates that there is a point where you are standing around wearing absolutely everything except for pants. I gotta admit, that's pretty much in the minority.

Of course, it's bad practice to ask just myself, so I asked my fellow writers. I found a few archetypes:

### THE BASELINE HUMAN

This one is pretty simple: pants/shirt first, then outer layers. Socks go whenever. I spent a lifetime forgetting to put on socks and going back upstairs so I put them on last. Other

people put them on first. This is a large category, but we accept all kinds here at the Minority Report.

### THE PERMUTATION

If there's one thing that's constant, it's change. And if there's one thing that's never constant, it's how this one puts on clothes in the morning. Whatever you can reach goes on. If you want to optimize for efficiency, (or weird fashion) this is for you.

### THE FIGHT CLUB

If you wake up with unexplained bruises and random people on the street recognize you, you might fall under this one. This is for people who straight up can't remember what they did that morning. I hope your alter ego representation of masculinity has good taste.

However, one thing I didn't find, Ambrose, was someone like you. So congratulations! You really are a minority.

I'd ask you to come claim an award, but I'm worried you might forget the pants.

Want to join the ranks? Shoot an email to [minority.report.mail@gmail.com](mailto:minority.report.mail@gmail.com). The more emails I get, the longer I can keep this shtick going.

UWUnprint

## A REVIEW OF THE ART GALLERY OF ONTARIO

I recently went to the AGO (pronounced ah-go). It is free on Wednesdays for everyone, and free all the time if your age is less than or equal to 25 years.

We saw an exhibit called the Friendship Centre, which was art by an Indigenous artist who repurposed various pieces of consumer trash into art pieces. One of my favourites was a giant whale skeleton made of old plastic chairs. It was suspended from the ceiling with string, and I was really tempted to just give it a big push to see what happened, but my friend stopped me.

After we viewed some art which I was also not allowed to touch, we noticed a party happening on the first floor. So we crashed the party and ate a bunch of free food, which was pretty good.

Art Expert

**Solely to provoke an argument, I will say that I don't believe in infinite sets — they are merely convenient fictions.**

PROF. DAVID WAGNER

# HOW GIVE YOUR UPCOMING CANADA DAY PLANS THAT EXTRA OOMPH!

This year's Canada Day will be a very special one. And I mean VERY special. Fuckin' get out of here with that "*but Canada's 150<sup>th</sup> was two years ago!*" shit. Yaaaawn. You see boys, the 152<sup>nd</sup> is where it's fucking at. In the titular spirit of this student zine, lemme throw you down the facts, fair and square, with some actual math for once.

First of all,  $1 + 5 + 2 = 8$ . Then,  $152 \div 8 = 19$ . Guess what fucking year it is? That's right, it's goddamn 2019. And that's not all. I'll also direct you to the fact that  $9 - 1 = 8$ . Bada bing bada boom—back to where we started. It's symbolic of the cycle of life and the cyclic nature of human experience. What's in circles? Pi. And I'm sure we all agree on the sheer amount of Big Dick Energy that radiates from that number, oh mighty king of the irrationals. It's bringing that sweet, juicy BDE to this coming Canada Day, making it extra special. Just something I wouldn't want you all to miss out on.

I hope you're convinced from my mathematical analysis that this Canada Day will not be one to squander! What can you do, then, to make this year's more memorable, and give it the oomph it deserves? Why, it's simple. Deceptively simple. Just take a few suggestions from the list and you'll make yourself into a true patriot during the celebrations this long weekend.

- Instead of going to see fireworks at a park, fire some of your own in your backyard or apartment garage instead.
- Grill organic, all-Canadian AAA-grade beef patties for hamburgers.

- Walk all the way to Ottawa and back, without stopping for breaks. If you are already living in Ottawa, walk all the way to Iqaluit and back.
- Relax in a nice, warm bath of room-temperature maple syrup.
- Chase down six separate tequila shots with maple syrup, preferably the same maple syrup used in your bath. [*Editor's note: the correct choice was rye whiskey, you faux-patriotic fuck*]
- Make your own maple syrup mimosas, preferably using the same maple syrup from your bath.
- Eat dog shit off the road.
- Get "Canada's 152<sup>nd</sup>" tattooed in red ink all over your face.
- Sneak onto a Canada Day parade float and enjoy the parade as a performer instead of a viewer.
- Commit every single word of the Wikipedia page on Hostess Potato Chips to memory.
- Put relish on a hot dog and eat it.
- Bash your face into a fully-inflated basketball multiple times per minute (to celebrate the Raptors' win earlier this month, in true Canadian spirit).
- Perform pre-mediated matricide, framing your father and any siblings you have for the crime.
- Wait for the Martians to come and vaporize you and half the country with their giant UFO laser beam.
- Sodomitize a goose.

Finchey

## THE FIRST N WORDS OF THE NOVEL I'M WORKING ON

I'm pretty sure being insane runs in my family. I'm not insane yet, but I know it's coming. Every year since I was little, I check myself to make sure I haven't gone insane. Mind you, I don't know what it means to "go insane" and I'm not sure how I can even be able to tell. For all I know, I've already gone insane and I just don't know it yet. The way I see it, the very fact that I can question myself on whether or not I have gone insane means I haven't yet. My sister Evelyn with three syllables is totally, verifiably insane, and from what I've been able to gather, she never ever thinks about her insanity or really even anything other than makeup, clothes, money, and getting in bed with boys. I'm pretty sure older siblings are supposed to be role models, but I'm just disgusted when I look at my sister. We share a roof but I never look at her if I can help it. The way I see it, I'm pretty much destined to end up just like her if I don't get my act straight in high school. It doesn't help that I look just like her, only she is gorgeous, beautiful, and sexy and I am not. I mean, far from it. I don't really know how that works, but my face is a lot flatter and my eyes are a lot smaller. I don't have my sister's perfectly perky breasts, the ones that she uses to entice men and probably

lesbians. She is a goddess. Those are not my words. Also, I once went two months without bathing or showering. That was a long time ago, though. I've been asked a lot if I'm envious of my sister's looks, and I'm surprisingly not. We're alike enough already. I think those looks come with the insanity, and if I'm lucky enough, I just might scrape by without catching the worst of it.

The reason I say that I need to get my act together in high school is that that was when my sister went insane. I don't remember what she was like before, but I heard the 'rents complain about it, that she was such an angel before she went to high school and then came out being a devil. I'm sure there were much more colorful metaphors involved, but I don't understand Chinese too well. I can't imagine my sister ever being an angel, even if people call her a goddess. Goddesses and angels are different things, anyhow.

# N WRITING TIPS TO MAKE THE mathNEWS EDITORS LOVE YOU

One of the best perks of being a **mathNEWS** editor is being exposed to a dazzling variety of writing styles, opinions, and senses of humour. That being said, editing and layout headaches are not uncommon in the **mathNEWS** office, and while most stem from our own mistakes, here's a few tips for maximizing your share of precious editorial affection.

## AVOID AWKWARD STRUCTURE/PHRASING/FLOW.

About half of the time we spend on copy-editing is devoted to cleaning up repetitive sentence structure, confusing phrasing, and other issues with sentence flow. Although these issues are relatively uncommon, when correcting them we must carefully consider preserving the writer's original intentions and tone, versus eliminating the awkwardness completely. We'll often prefer the latter, so avoiding awkwardness will also minimize the chances that your article will be mangled by the editors.

## READ YOUR ARTICLES ALOUD BEFORE SUBMITTING THEM.

Not only will this help you avoid the above, but it can also help catch grammar and spelling mistakes that you might miss with a cursory read-along. This tip also applies to writing in general; you'll find yourself catching a lot more mistakes if you read your drafts aloud. If you're not comfortable with the idea of vocalizing your writing, reading aloud in your head also works.

## WHEN WRITING SATIRE, ERR AGAINST SUBTLETY.

As anything-goes as **mathNEWS** is, the editors do have to make judgement calls on whether to publish articles at times, which is a decision that we very much do not enjoy. Satire is especially troublesome in this regard as we must not only consider its quality, but also how our audience might interpret it. In general, potentially troubling satire falls into two categories:

1. Works with humour subtle enough that they could be taken as serious (or serious works so absurd as to be possibly satirical).

2. Satirical works that, if taken seriously, would gravely harm either **mathNEWS** or the writer's desired outcome.

Articles falling in only one of the above two categories will be approved most of the time (though we may request workshoping). Where we must make judgement calls lies with articles that fall into both categories—dangerous if taken seriously, yet subtle enough that a serious interpretation is likely for an insignificant portion of the readership. Though we will always err on the side of publishing, sometimes the risks of misinterpretation and/or legal action are simply too great to ignore.

## MINIMIZE LATEX USE.

Our workflow when dealing with LaTeX looks like this:

1. Copy the raw LaTeX source into an online editor
2. Render to image
3. Save the image to the **mathNEWS** desktop
4. Place the image into our InDesign layout
5. Cuss profusely as InDesign inevitably (1) screws up layout, (2) screws up the image placement, or (3) crashes
6. Ctrl-Z until a workable state is reached
7. Repeat 4-6 until the desired result is achieved

As you can tell, LaTeX does not work well with InDesign. Please try to use as little LaTeX as possible.

## SEND US COOKIES DURING COPYEDITING PERIOD.

Or pizza. Or just food in general.

terrified

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## MY THOUGHTZ ABOUT THE CS136 MIDTERM

First thought: fair but looooooong!!!!

Second thought: \*insert screaming gif\*

psychGirl

You shouldn't anthropomorphize computers, they hate that.

PROF. IAN GOLDBERG



# gridCOMMENT, FIREWORKS EDITION

gridCOMMENT 140.4

Nothing is more celebratory of one's nation than watching someone handle flammable chemicals by setting them on fire in a controlled manner, it seems, and while the everyman might not be able to acquire the correct chemicals, it is not difficult to go and enjoy the visual spectacle of watching canines hide under chairs and bedding at the noise of the celebrations. Go outside, light a charcoal flame and have a barbecue before it's far too warm to be outside for any reason as climate change make the region suffer through ever more warm summers. At least MC will be air-conditioned, right?

To prevent the lump of fat known as your brain from liquefying in the heat, train it to run hot by solving the **mathNEWS gridWORD**. Evidently, the stuffy **mathNEWS** office air and heat has melted my brain because I couldn't figure out how to fit easier words into the grid and I wanted my pizza. Good luck.

From last issue, sillycone had submitted the most correct solution by being the only person to have made a submission before the deadline. Their answer to the previous issue's

**gridQUESTION**, "What are your best goose attack defense tactics?", was "Grab it by the neck, then either 1. yeet it, or 2. eat it". Please come by the **mathNEWS** office and badger the **mathNEWS** editors for your prize.

As usual, the person(s) who submit the most correct solution to this issue's **gridWORD** (either physically to the **BLACK BOX** found outside the Math C&D in the 3<sup>rd</sup> floor of MC or electronically to [mathnews@gmail.com](mailto:mathnews@gmail.com)) with their grid, name (plus optionally an alias to be credited under), and answer to this issue's **gridQUESTION**, which serves as the tiebreaker in the case of tie for most correct. before the deadline of 1800hrs on July 8<sup>th</sup>, 2019 shall get a prize (assuming the editors do their job).

This issue's **gridQUESTION** is, "Where are some exotic locales that the LRT have taken you?"

Good luck solving,

Zethar

## LAST WEEK'S gridSOLUTION



### ACROSS

1. Public-health concern
11. They're primarily in the Tatham Centre
15. Ubiquity
16. Usually with "I", initialism before doling out advice online
17. The energy in melting?
18. 0
19. Pick
20. Prognosticators
21. Navy OF-3, alt. representation
22. Chitchat
24. To macerate
25. Inner Mongolia City
26. Tweets
28. Summer treat
30. Sprays (down)
31. Noblemen
32. They translate to IP addresses
33. Wildcat
35. Map abbr.
37. World Banking grp.
40. Halt
42. Lexicographer's concern
46. Smallest meaningful unit in a language
48. f [Ed: U+0192]
49. Early event
50. Draft org.
52. Breathe hard
53. Loft
54. Asian mountain goat
56. Currency and Foreign Transactions Reporting Act abbr.
57. Slope
58. Hearts
60. Leader opposed by the Bolsheviks
61. Lei flower
62. Stitches
63. Outings hunting for mollusks

### DOWN

1. Stain
2. Great Plains tribe
3. Stings
4. "\_\_\_ got it!"
5. Khakis
6. Edits
7. Titter
8. Resistance to change
9. Andes edible tubers
10. Court divider
11. Well-known for his ternary set
12. Passed
13. Great Plains language family (not used by 2D)
14. Warnings, to Shakespeare
21. Large reseivour in northwestern Ontario
23. Fall (over)
25. It tintinnabulates
27. Pokémon type
29. Néhinaw
31. Final, e.g.
34. Indian lilac
36. Brandy label abbr.
37. Reveals
38. Link
39. Design-cutting tool
41. Spanish ladies
43. High-spirited horse
44. Chinese root
45. Curve in columns
47. Tooth-extractor
48. Rim
51. Attack locale
54. Bloody
55. Den
58. Corp. bigwig
59. A British computer (abbr.)

# haltingPROBLEM

## FOUR FOURS FOREVER

haltingCOMMENT 140.4

This week's puzzle is both an open challenge and a sequel to [6.The.Hard.Way](#). Using the same rules as last week's puzzle (no adding new numbers or letters, any other arithmetic is allowed including ! and √, and you must use all of the provided numbers) your challenge is, using only four 4s and exactly four 4s, create the largest continuous range of natural numbers possible. For example:

$$\begin{aligned}4 + 4 + 4 + 4 &= 16 \\(4/4) + (4/4) &= 2 \\(4/4) - (4/4) &= 0 \\4 + 4 - (4/4) &= 7\end{aligned}$$

And so on, until you have a set of statements who yield a continuous range of natural numbers.

The club's record is the range [0, 36]. If you beat this record, feel free to send us your solutions at [uw.puzzle.club@gmail.com](mailto:uw.puzzle.club@gmail.com), we'd love to see it! This puzzle is brought to you by the UW Puzzle Club, who meet every Friday at 6 p.m. in QNC 1507.

UW Puzzle Club

1	2	3	4	5	6	7	8	9	10		11	12	13	14
15											16			
17											18			
19				20						21				
22			23		24				25					
26				27			28	29						
30						31						32		
			33		34			35			36			
37	38	39		40			41			42		43	44	45
46			47					48						
49							50	51			52			
53						54				55		56		
57					58						59			
60					61									
62					63									

GRIDXCIRD

GRIDXCIRD

GRIDXCIRD

GRIDXCIRD

# lookAHEAD

SUN JUNE 30

Last day to become fees arranged for Spring 2019

MON JULY 1

☛ Canada day  
No class - University closed for Fireworks at Columbia lake

TUE JULY 2

Monday schedule, makeup for Canada day  
Continuous round co-op interviews begin

WED JULY 3

🇺🇸 Independence day (U.S.)

THU JULY 4

FRI JULY 5

SAT JULY 6

SUN JULY 7

MON JULY 8

TUE JULY 9

WED JULY 10

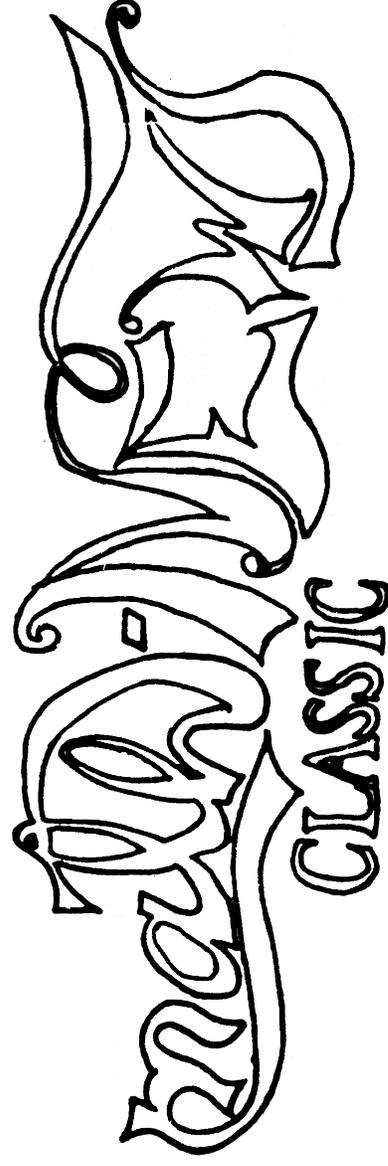
THU JULY 11

FRI JULY 12

SAT JULY 13

mathNEWS 140.5 production night

mathNEWS 140.5 published



otherNEWS is made technically possible by club executives of the Math Faculty. I say "technically" because if they had sent us more news this week, this box wouldn't be here.

THE mathNEWS EDITOR WHO PUTS THE "NEWS" IN mathNEWS

# mathNEWS