



GREETINGS, MATHIES!

Hello and welcome to you, first-year Maths student!

This right here is **mathNEWS**, the University of Waterloo's bastion of erudite thought and student-run newspaper of the Faculty of Mathematics. We've been running since 1973 and publish a new issue every two weeks — usually six per term.

An issue of **mathNEWS** is made of a lot of different parts. After the cover is what we call the **mastHEAD**, composed of a blog-style article written by the editors (a.k.a. the one you're reading right now) and a question and answer section with our writers. This time, we've replaced the Q&A with a table of contents — this issue contains a ton of useful advice from **mathNEWS** writers and editors that you'll definitely want to come back to later in the term.

The bulk of the issue is formed from the many articles and pieces of artwork we get from the **mathNEWS** community. This **mathNEWS** Special Editon™ focuses on articles from faculty clubs and other informative articles from our writers. There is still some of the classic **mathNEWS** spirit, which is to say utter chaos. We've got low-effort articles that are derivatives of others, inside jokes, surrealist comedy, and some arguably tasteless jokes that will definitely get me a stern talking to. Surprisingly enough, we've even got a couple articles of actually interesting content! Not in this issue are poems, articles written by profs, **profQUOTES**, research papers, terrible puns, and passive-aggressive complaints about courses.

At the end of the issue we have our crossword puzzle, the **gridWORD**. On the back there is the **lookAHEAD**, a two week calendar of upcoming events that mathies might be interested in. The publication date of the next **mathNEWS** issue is the highlight, of course.

That about wraps it up. We hope you enjoy this issue, and don't just shred it for your hamster's bedding. Best of luck with your new university career, and try to resist the urge to read **mathNEWS** instead of going to class. I know it's tempting.

Have a great orientation week!

awED
Editor, **mathNEWS**

Cover art for this issue provided by editor barkED.

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Welcome to Waterloo Math!

AWAB QURESHI, **mathNEWS** EDITOR FOR FALL 2026
ALONG WITH ALEX LAVALLEE, MADIHA MANSOOR, SARA
NAYAR, NOAH NAZARETH, SASHA NOVIKOV

MATHSOC SEZ

Congrats on starting your journey at UW! We're from the Mathematics Society, better known in these parts as MathSoc.

WHAT IS MATHSOC?

MathSoc is the student community that represents undergrad math students. That includes you! As an undergraduate math student at UW, you are automatically a MathSoc member!

STUFF MATHSOC DOES

Your MathSoc fee is responsible for running all the student clubs under MathSoc, and many services. This includes:

GENERAL SERVICES:

- Major-specific clubs such as the Computer Science Club and Pure Math Club (and many more)
- Your favourite Coffee and Donut shop located on the 3rd floor of MC
- A whole host of events, like Pi Day (free pie, pi recitation contest, and pie-ing MathSoc execs!), Board Game Nights, Party with Profs, résumé critiques, exam review sessions, free food from Welcome Week, and more!
- Academic advocacy to faculty and administration!
- An exam bank!
- Lockers to store your stuff!

MATHSOC OFFICE (MC3038) SERVICES:

- Cheapest printing and photocopying on campus!
- A textbook library!
- Board game rentals from the largest collection on campus!
- Approved calculators for the best prices on campus!
- Cool Math novelties, like stickers, old pink ties and shirts to show off your Math spirit! We even have a shirt that's banned from exams.
- Free candy and other snacks!

HOW CAN I GET INVOLVED?

Getting involved in MathSoc is a fantastic way to make new friends outside of class, get involved in the campus community, and part-take in rewarding work to improve student life for yourself and your peers.

As a volunteer-run organization, MathSoc has plenty of volunteer opportunities available! We are all volunteers here. You can volunteer to help maintain our website, manage our office, maintain our finances, organize events, advertise events, and much more! Here are some of our volunteer roles:

- Infrastructure Developer: Maintain and build websites and systems
- Finance Director: Assist with cash close procedures and track budgets
- Content Creator: Create and edit reels
- Office Manager: Maintain and run the MathSoc Office,
- Event Co-ordinator: Run events

Check out <https://mathsoc.uwaterloo.ca> for all of our available roles, or let us know if you have unique skills to contribute!

If you're interested in student governance and advocacy, you can join our Council or Board of Directors. Look out for the first-year representative election at the beginning of the term!

MATHSOC(IAL)

- In-person: MC 3035 and MC 3038
- Email: info@mathsoc.uwaterloo.ca
- Instagram: [@uwmathsoc](https://www.instagram.com/uwmathsoc)
- Discord: <https://tinyurl.com/mathsocdiscordf25>
- Website: mathsoc.uwaterloo.ca

E-Therng Lee (F26 MathSoc President)

PREZ SEZ

Hi, I'm E-Therng Lee, president of MathSoc. I hope you're excited for your time at Waterloo. MathSoc has a whole host of plans in store to improve student life at UW Math and build a community that you can call home. Follow us on Instagram, join us on Discord, and keep an eye on the posting boards around the math buildings to stay updated on fun events and opportunities.

I understand that finding friends in UW Math is harder compared to other programs. We've all been through the struggle! Especially when you don't know anyone, finding a community can be hard. I too was scared to walk into club rooms, and too shy to approach people in my classes.

However, when I gained the courage to join clubs and MathSoc, I was able to meet like-minded people who became my friends throughout my university career.

Starting your university journey can be scary. The courses are hard, things are different than what you're used to, and you're living away from home. Through all this, know that we're here to help you in any way possible. Reach out to us for anything.

We hope to see you soon, and best of luck with your first term!

E-Therng Lee (F26 MathSoc President)

EVERY MUSIC GROUP ON CAMPUS

AND WHY YOU (YES, YOU IN PARTICULAR) SHOULD JOIN ONE

Do you play an instrument or sing? Do you want to play your instrument or sing more? Do you want to do something other than sitting in your room all day after classes are over? Then you should join a music group!

I love playing music (mostly flute, though I also do a bit of trombone and trumpet occasionally), and if you do too, then you should make it a part of your university experience here at Waterloo. It's a great way to meet friends, de-stress after lectures, and have awesome experiences performing at concerts. The only problem with music groups, really, is that there aren't enough people in them. I can say from experience that every one of them is looking for new members at all times. And that's why you should join one! For your convenience, I've compiled descriptions of every music group that I know of, so you can decide which one(s) might be right for you. As of the time of this writing, I myself am in at least four of these groups, so you might even meet me!

These "groups" come in two types, which I'll refer to as "clubs" and "ensembles." The ensembles are run in an official capacity by the university's music department, and they can be taken as an actual course for which you receive credit. They're generally auditioned, meaning that you're expected to have a certain skill level, and they rehearse weekly at Conrad Grebel University College. If you're interested in a more formal and serious environment, they might be up your alley.

Clubs, on the other hand, are student-run, and aren't considered courses. They're generally not auditioned and tend to be less strict about requiring perfect rehearsal attendance, so they might be better if you're looking for something more casual, or have a demanding course schedule. They'll also have booths at the upcoming clubs fair in SLC, if you want to ask for more details about them.

Before we begin, a quick note on obtaining an instrument if you play but don't own one or have it with you: If you'd like to rent, there are a couple of options. Long and McQuade is a music retailer with a Waterloo location at 36 King St. N (it's about a twenty minute trip from campus via the ION light rail), and you can rent almost anything from there. Their rates vary widely by instrument, but are generally between \$20-\$100 per month. You can also rent from the Warriors Band for the considerably cheaper price of \$40-\$60 per term for non-members or \$20 for members (a term is 4 months, so that works out to \$10-\$15 per month and \$5 per month respectively). Their selection is limited to wind and brass instruments, however.

Now, onto the clubs and ensembles!

CLUBS

You can join most of these clubs from Discord: Look up the Student Hub for the University of Waterloo (Discover Student Hubs), join it by logging in with your uwaterloo.ca email, then

search for the club from there to join its server. The exception is Animusic Ensembles, which has a student verification process—you can join them by DMing @uw_animusic on Instagram or contacting someone in the club.

A CAPPELLA CLUB

The UW A Capella Club consists of several smaller auditioned and non-auditioned groups, such as the *AcaBellas*, *Water Boys*, and *Unaccompanied Minors*, that sing unaccompanied vocal songs along with choreographed dance.

ANIMUSIC ENSEMBLES

UW Animusic Ensembles is a collection of bands that play covers and arrangements of songs from anime and video games, with recent hits from last spring including music from *Attack on Titan*, *Your Lie in April*, *JoJo's Bizarre Adventure*, *Pokémon*, *Clair Obscur: E33*, and *Genshin Impact*. Genres range from J-pop and rock to orchestral and jazz, so there'll be something for you whether you sing or play anything from guitar to tuba.

CONCERT BAND CLUB

The UW Concert Band Club is—as the name suggests—a concert band, consisting of woodwind, brass, and percussion instruments (plus bass!). It's actually the first club I joined in university, and I like to think of it as the club for high school band kids who don't want to stop being high school band kids.

JAMNETWORK

UW JamNetwork is a community for musicians of all experience levels and styles. They host jams, open mic events, workshops, and several other events throughout the term.

WARRIORS BAND

The Waterloo Warriors Band is the official pep and marching band of the university, and the unofficial loudest and fastest band on campus. They play wind and brass instruments, along with several kinds of drums, and perform marching music and pop renditions at sports games, parades, and community events.

WITH RESPECT TO TIME (ENG JAZZ)

With Respect To Time, also called the Engineering Jazz Band (or Eng Jazz for short), is a jazz big band. They're sponsored by the Engineering Society, but despite the name they aren't exclusive to engineering students, with over a third of the band being non-engineers. They perform at community events, graduation galas, and at an end-of-term concert (which, by the way, all of these clubs have).

ENSEMBLES

As mentioned above, most ensembles are auditioned, and the auditions take place early on in the term, probably within a week if you're reading this article on the day it comes out. You can find audition information and sign ups at <https://uwaterloo.ca/music/ensembles>.

BALINESE GAMELAN

Gamelan is the Indonesian term for music ensemble, and the Balinese Gamelan ensemble plays percussion music on traditional pitched and unpitched instruments.

CHOIR(S)

There are actually three different choir ensembles: The large University Choir, the smaller Chamber Choir, and the Chapel Choir which performs sacred music for Conrad Grebel's chapel worship services.

INSTRUMENTAL CHAMBER ENSEMBLES

Instrument Chamber Ensembles, or ICE, performs classical and contemporary chamber music like piano trios and quartets.

JAZZ

The official university Jazz band (not to be confused with Eng Jazz above).

ORCHESTRA

Officially called the Orchestra@UWaterloo, this full symphony orchestra is composed of undergraduates as well as graduate students, faculty, and staff. They also hold and provide accompaniment for a biennial concerto and aria competition.

yalevoylian

YOU SHOULD LEAVE WATERLOO

Waterloo is great, but sometimes it sucks. The best advice I have for anybody in first year is to leave sometimes. Go on a road/bus trip, take a co-op somewhere other than your home town or Waterloo, go on exchange, etc, etc. It will help your mental health, I promise.

Shahabee



SPOT(IFY) QUEST: GO OUTSIDE

A GUIDE ON HOW NOT TO DO THAT

I, I really want to go out
I really want to go outside and stop to see your day
You, you really want to hole up
You really want to stay inside and sleep the light away

CULTS, "Go OUTSIDE"

"Go Outside" is a song made for the Waterloo student—you really want to stay inside. Did you know that it's possible to travel between most buildings on main campus while doing so? I challenge you and your friends:

- Begin at STC Starbucks.
- Travel to the ESS cafe.
- Go Outside for no more than twelve seconds. Anything more, and you'll start feeling a yearning to break free of campus hallways and touch grass. A horrible fate.

Prove Cults wrong. Stay inside.

shegood

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UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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HOW TO MEET PEOPLE AND ACTUALLY STAY FRIENDS

A PRACTICAL AND HOPEFULLY NOT GENERIC GUIDE

One of the big questions everybody has is: now that I'm a Math student, have I signed myself to a sad friendless existence only occasionally punctuated to writing a proof with a fellow regretful classmate at 4 AM or grinding LeetCode with my (very real) gf?

The answer is no! And also that's awfully specific.

"What if people don't want to talk to me cause I'm weird?" Spend ten seconds scrolling through r/uwaterloo and you'll see everybody wants to make friends and are weirdos themselves, just nobody wants to be the one who makes the first move. Not only that, people are so worried that even when somebody else makes the first move, they turn it down in case the person "wasn't serious" or something. I think this is a mistake! The average person really wants to make connections, it's sorta wired into us. You just gotta put yourself in a position to meet cool people, and luckily Waterloo is full of amazing, smart, dedicated, and funny people, and that includes you guys just coming in now (hi!). And the start of a new year means an influx of people looking for the same thing as you!

Well, university classes are often too theoretical, but I'm here to give some practical advice with examples, here's some stuff I literally did to meet people **that I'm still friends with years later**:

- In my first month of university, I put up a poster in my residence looking for CS students to study with
- I brought over a deck of cards to a club that (I thought) was supposed to be about writing and asked people to play
- I went to random parties where I only knew one person as an awkward +1. I stood in a corner until someone mentioned a topic I was hyper-fixated on
- I cold approached someone I'd seen once at a club and asked them to join my band. Somehow that worked
- I signed up to be an orientation leader
- People I'd never seen before joined **mathNEWS** and I immediately invited them to go climbing
- I met a guy with a cool stick and asked if he wanted to come to my apartment for a party
- I sent a message in a group chat at my co-op asking for people who were willing to be ruthless in social deduction games
- I joined Quizbowl and Game Dev and Pure Math Club even though I wasn't sure if these were clubs I really cared about, just to try them out.

I joined other clubs too, that don't fit the list since I didn't necessarily make long term friends, but I want to emphasize that doesn't mean it was a wash. I had fun. Even if they were only acquaintances and only for a bit, it was a great break from work and made me feel happier and more motivated about life at uni! **So here's some real advice: don't just quit**

because you're not making super tight bonds right away. Some people aren't gonna stick around forever, that doesn't mean the time you spent with them isn't valuable. You might not realize it, but that time you spend socializing instead of staying in is really important for you. And as you get better at talking to strangers and are able to open up more, others will feel more comfortable too and that friendship-making magic starts to happen.

Here's another thing though. **Meeting people is step one, but it helps to show you wanna put in the effort for being friends.** A lot of people are afraid to be the first one to put in genuine effort, but you have nothing to lose. So here's some examples of things I did that brought me closer to people:

- I said yes to joining dodgeball and innertube water polo despite my lack of physical talent
- I arranged card games with my first-year study group so we could get to know each other better
- Someone I met at a party happened to live in the same building as me so we started arranging regular morning coffees
- I invited my entire orientation group to an after-orientation party... even though I wasn't the host (but I had permission I swear)
- Talked openly about our struggles in university and dreams for the future with people I'd only had more casual conversations with
- I got invited to watch fireworks with someone I'd met only once in a larger group, we'd never hung out alone

I went to parties and social events even when I felt tired, even if I knew I was only going to show up for a little bit. Just to show *"I wanna hang out with you,"* to make sure that work wasn't consuming me whole, to acknowledge that friendships had an important place in my life. Making friends takes some effort. But, you've already put in a shit ton of effort to get here, you're gonna be putting a shit ton of effort to stay here, why not give a bit of a shit to have fun while you're here?

And I know it's not just about effort, some of you might feel too unskilled at socializing, or too nervous to be able to just approach someone. I get it, honestly I've been there too. I don't want to minimize this, but I'd like to gently encourage you to start trying to move past it. There's no danger in failing, people care more about the Waterloo grind than failed social attempts, so you can just try again and again until your practice has made you perfect.

What are you interested in? What's your hot take on whatever the world is throwing at us? And the person near you that you haven't approached yet, what do they think? Has anyone here asked them about themselves yet? Maybe the first person to do that can be you :)

Not a N*rd

SOME NOTES ON CONSENT

Consent makes it on the very unfortunate list of things you (a) really need to know and (b) are barely taught.

The full extent of most consent education is “If someone says no, that’s a no, and if someone doesn’t say yes, that’s also a no.” It’s fantastic that we as a culture have progressed to that point, but it’s a far cry from complete. Consent is also something that, if fucked up, can cause a great deal of hurt. This article can’t possibly fill in *all* the gaps, but instead, I’m writing some things I wish my partners had known, and the guidelines I follow that my partners have appreciated, with lots of input from my friends. Well-intentioned but ignorant people can cause a lot of hurt.

- First and foremost, these are general guidelines. If you make specific agreements with your partner that change these, that’s fantastic—these are meant as baseline rules and considerations, not universal maxims.
- Consent should be enthusiastic, not reluctant. If your partner seems like they’re saying a half-hearted yes, it’s safest to treat it as a no.
- Physical arousal is not consent. Physical arousal is correlated with, but does not imply, a desire for sex.
- A person’s outfit is not consent to anything.
- Consent must be continuous. That means consent can be withdrawn at any moment before and during the act.
- Continuous consent means that the conditions of the consent must continue to hold. If a person was previously enthusiastically consenting but now appears conflicted, *that is no longer consent*.
- Consent must be *specific*. A person consenting to making out *has not necessarily consented to anything beyond that*. It’s important to ensure others actually want to progress—sometimes, it’s only a kiss.
- If your partner has said no to something, don’t ask again. If you want something to happen, you ask, and your partner says no, asking again creates pressure. Instead, tell your partner you won’t bring it up unless they do. **If your partner is not comfortable enough to ask for something, they also likely aren’t comfortable enough to stop it.**
- Don’t ever think that stopping to ask for consent is going to “kill the mood.” There is nothing hotter than respecting your partner. There are also many ways to ask for consent; you can find ones that are both hot and respectful for your partner (I’ve personally found “I really want to kiss you” makes me *melt*).
- Any justification, including no justification, is a valid reason to say no. If something doesn’t make sense to you, is hurtful, or otherwise brings up emotions you need to deal with, you can ask about it later. In the moment, **any reason, or no reason, is good enough for a no.**
- Never sleep with anyone you have perceived or actual authority over.

- Fellas—this is coming from a gal who likes to be choked: you should ask about choking before you do it. This might sound obvious, but porn has fucked up a lot of our perceptions of sex, and made really violent acts like choking and slapping seem normal. In real life, you need to ask!
- Even if your previous partner was okay with something and didn’t need to be asked, you should still ask all subsequent partners!
- Asking a person what they like in bed isn’t a chore—it’s a great way to discover new kinks and preferences that you might not have expected ;)
- If someone has consented to something before, that doesn’t mean they’ll consent to it again. Always ask.
- Nonverbal consent exists, but is often harder to read, and varies greatly by person. It’s always better to start with verbal consent and figure out explicit agreements for what counts as nonverbal consent when you’re not in the middle of sex.
- People in vulnerable spots often have impeded ability to consent. Someone who is fresh off a personal tragedy, heavily emotional, coming to you for support in a capacity beyond normal friendship, or who you otherwise have an imbalanced relationship with probably can’t consent. Give them time to heal, and don’t pursue them in any way; remove yourself if you need to. You obviously don’t need to wait until everything is perfect in someone’s life, but if you’re asking yourself if they’re too vulnerable, they’re too vulnerable.
- If you ask yourself the question “Is this person too drunk?” they’re too drunk. Not having sex is mildly disappointing at worst; you can survive some mild disappointment. If they’re really into you, sex can happen another time, with no risk of blurry lines.
- If someone says no to you, even if this makes you sad or upset, don’t show it in the moment. The response to someone rejecting you should be nothing more than supportive, loving, and positive, so they can feel safe doing so going forwards. If you feel consistently rejected by your partner, that is a thing to discuss, but doing it in the moment creates pressure. Any conversation about feeling rejected needs to respect your partner’s ability to say no—talk to your friends about how to approach this. If you find yourself taking sexual rejection personally, you need to reflect on why.
- Don’t ever (in the moment) tie the sex life to the health of the relationship. Again, sometimes sex is important in a relationship and this can be important to discuss, but doing it during sex, or immediately following a no, creates pressure. Have conversations like that in a safe, neutral environment, separated from sex.

Golden, with contributions from Manganese, molasses, yummyPi, peacelovemath, cutlet, and a cool pen name

SOFTWARE ENGINEERING STUDENTS: YOU ARE NOT ALONE

YOU ARE A PART OF THE FACULTY OF MATH, NO MATTER WHAT ANYONE ELSE SAYS

Hey first-year Software Eng students,

I was in your shoes once, where you stand right now. Two years ago, in fact. It's probably a bit silly for me to be the one writing this article; I'm the same age as most of you.¹ But one of the things I remember the most from my Orientation Week (apart from it being like 37°C the whole time) is reading through as many old issues of **mathNEWS** as I could get ahold of. There were lots of fun articles about various things, but I especially remember articles along the lines of "What your math major says about you" and "What Pokémon is your major." Something I noticed fairly commonly among these articles was that often, the authors wouldn't include Software Engineering.

I was a 6 hour drive away from home, living on my own for the first time, grieving the end of a friendship and break-up, and trying to not die from overheating while missing my family. Between the fairly common jokes about Software Engineering not being "real engineering" and not seeing my program anywhere in the Math Faculty's student newspaper, I felt like I wasn't really a part of either group. Two of the people I was sharing my residence suite with already knew each other before coming to university, and the third kept mostly to herself. My orientation group had some other Software Eng students, but in that first week it was really difficult to keep track of people especially with everyone wearing the same orientation T-shirts.

Surrounded by people, I felt more alone than I ever felt in my life.

So that's why I'm writing this article for you lovelies. First-year Software Engineering students, I see you and I feel your anxiety and isolation. It's okay to feel whatever feelings you do, and it's okay if it takes some time to adjust. The move from being in high school to being in university can be extremely overwhelming, and that's okay. Take your time to adjust; I promise there will be people who will be more than happy to welcome you in when you're ready.



Okay, mushy sentimental stuff aside, let's get into some more logical and rational things you may be thinking about. I'll do this in somewhat of a Q&A format, so that it's easier to find out what you're looking for.

What faculty does Software Engineering really fall under? What department? Software Engineering is 100% a part of the Faculty of Math AND 100% a part of the Faculty of Engineering. Software Engineering has its own department that coordinates with both faculties, the Department of Software Engineering. The closest Math Faculty department is the David R. Cheriton School of Computer Science, while the closest Engineering

Faculty department is the Department of Electrical & Computer Engineering.

So what student society does Software Engineering contribute/have access to? As Software Engineering students, we have representatives for and access to MathSoc, EngSoc and SESoc events. First-years have 2 class reps for each of MathSoc and EngSoc, and 3 class reps for SESoc. These are positions elected by the cohort on a term-by-term basis.

How is SESoc any different from the faculty student societies? Since MathSoc and EngSoc serve all math/engineering students respectively, they have to run events to incorporate a greater number of people. SESoc runs events for Software Engineering students only, so it is much easier to meet Software Engineering upper-years specifically through SESoc events.

How are the 1A courses? Do you have any tips on how to handle the courseload? For the most part, 1A and 1B courses are to ensure you fulfill the graduation requirements for both the Math and Eng Faculties, and are fairly prof-dependent.

- A large part of MATH 117 is high school review. If you did AP Calc AB the only truly new topic is Squeeze Theorem. If you did AP Calc BC then this should all be review for you.
- MATH 135 is an intro to proofs, but if you don't know what you're doing or the TAs are being annoying about you not showing every tiny step, the assignments can take a long time. Fun fact, this is the only SE 1A course run by the Math Faculty instead of the Eng Faculty.
- MATH 115 starts off with high school review but can get out of hand quick. Tutorials every week are quizzes where you're allowed to work in groups; use this to gauge your competence with various topics.
- CHE 102 is mostly just grade 11 & 12 chemistry, minus orgo, plus phase transitions.²
- CS 137 is a fun class and if you've worked with C before it should be fairly easy, and is pretty straightforward even if you haven't. Watch out for trick questions in exams if you're being taught by Victoria, she can be sneaky (all SE students unanimously love her regardless).
- SE 101 is extremely easy in terms of courseload for the first two months, but then it becomes a scramble to complete your First-Year Design Project by the deadline. I VERY HIGHLY RECOMMEND PICKING TEAM MEMBERS EARLY WHO YOU KNOW WILL PULL THEIR WEIGHT!³

In regards to handling the courseload, try to get a small group together to study and work on assignments together (as long as the course permits it). Even better if you can schedule specific times weekly to do so. Other than that, try to follow

the extremely generic advice of “start early, get a good sleep, don’t cram.” I feel obligated to say it, even though I know most of you won’t follow it.

Finally, join your cohort’s Discord server, and not just because they have specific channels for each class. They also have channels with pinned resources, places to ask questions, and places to just chat with your classmates. If you’d like to see reviews of your professors or classes, you should check out uwflow.com. It’s Rate My Professor + rating the class + course calendar + checking for available classes (more useful in upper years). However, it can no longer tell you the location of classes, which you can look up on Quest instead.

Hope this is helpful to some new Software Engineering students out there, and that it’s helped you feel less alone. Best of luck in your upcoming term!

Sexy_Software_Babe

1. 2006 just looks so much more aesthetically pleasing as a birth year than 2005. I will not apologize for speaking the truth.
2. I failed this class with a 48% last winter term because the grading scheme was that the final was worth 50% unless you failed it and then it became worth 100%. I would’ve had a 67% in the class otherwise. Yes I am still salty about it, how could you tell?
3. Also, don’t expect reimbursements any time soon, regardless of what Paul Ward may tell you.

YOU CAN CHANGE YOUR NAME

If all goes to plan, by the time this **mathNEWS** issue is in your hands, you will have made it to our wonderful University of Waterloo. You are very likely, at this moment, freer than you have ever been. No longer are you restrained by loving yet prying eyes, every time you return home. No longer do you have to ask the question: is this what they want? No longer do you have to justify being you. From this moment forward, you have the ability to live life as yourself.

Would you like to do so under a different name?

The identity systems at the University of Waterloo allow you to set a preferred name in place of your legal one. The process is incredibly easy: once you’ve worked up the courage to do it, it takes only a minute to do. As this is only a preferred name change, there’s no need for official documentation to support it. Notably, this process does not change the name on your tuition documents. You can send your tuition bill home, and your loved ones will be none the wiser.

This name is used across Waterloo’s systems: it’s reflected on your student ID, your email address, on LEARN, and it’s listed in your unofficial transcripts and student documentation. It is also used on WaterlooWorks, meaning that for the entirety of your interview process, your employer will only know your preferred name—they’ll still likely need your legal name for payroll purposes, but every employer I’ve had has been incredibly understanding in using a preferred name everywhere it matters.

The hard part, after that, is using your name. Remember that a name is just what you’re called, and if you call yourself a name, that means someone calls you that, and so you can truthfully say that you are called by your new name. Try then to find a new space where you can introduce yourself by it. The Glow Centre For Sexual and Gender Diversity, located in the third floor of the Student Life Centre, is an excellent place to start, but just about any club will do. **mathNEWS** included. You’ll have to figure out how to change your social media profiles accordingly. Using pseudonyms and your last name are excellent places to start.

There’s a form to change your gender too. *[Editor’s note: you can also add your pronouns to Quest, Microsoft Teams, and Outlook.]*

This process is hard. Really hard. You can do it at any time during your university career, so don’t feel like you’ve missed the window if you don’t do it immediately. That said, if this is something you’re considering, right now is the best time to make the change.

Wouldn’t it be nice to introduce yourself without hesitation?

molasses

This article heavily adapted from cy, who wrote an article of the same name in **mathNEWS** 144.0 and 147.0. It has stuck with me. Know that it will be worth it.

NOT SO STRAIGHT AND NARROW?

If you are a UWaterloo student and you identify as 2SLGBTQIA+, there is a space for you! In the Student Life Centre (SLC) in room 3103, you will find the Glow Centre for Sexual and Gender Diversity! This student-run service offers a safe and welcoming environment for all students at the University of Waterloo.

The door is open from Monday to Friday from 10am until 4pm, just drop in and hang out! There are also activities run at 7pm from Monday to Thursday, and also an occasional term-specific event! You can find more information about our events on the [@wusaglow](https://www.instagram.com/wusaglow) Instagram page, or email glow@wusa.ca with any questions about the services we provide.

The Glow Centre for Sexual and Gender Diversity (Glow Centre)

CHAT YOU GOTTA TAKE CARE OF YOURSELF

I AM SUCH A HYPOCRITE FINISHING MY BREAKFAST WHILE WRITING THIS AT 10PM BUT HEAR ME OUT

i know that when starting your first year, you might aspire to lock in so hard and study for hours on end after your lectures and work on a bunch of side projects to build your resume but also want to get involved in six different clubs and hang out with new people until dawn and maybe start working out daily and join a hackathon or five... but doesn't that all sound a bit draining?

none of these tasks are inherently bad or a sign of not taking care of yourself, but self-care needs to be considered too! you are a human, not a machine, so here are some guidelines to keep in mind when taking care of yourself

eating: first of all, eat! like i said, i am no role model here but let's not make running on Celsius a normal occurrence. it's also important to get in your vitamins and minerals and a balanced amount of macronutrients and FIBRE (so important), so try not to eat ultra-processed food everyday and get your veggies in when possible. i know i sound like a mother but you will feel better when you feed your body the right food

water: get your water in man!!! being dehydrated is not fun and can be rather distracting... so go destress with dc fountain and stop that headache pounding at your skull with a sip

sleep: once again hypocritical considering i've slept an average of five hours a day in my more-than-friend's bed the past week + i love to stay up until 3 am on call or on campus with friends, but you will feel the consequences in the future days as you sleep through your 10 am lecture and feel groggy in general. you are allowed to leave the function to sleep. it's okay to prioritize sleeping in your bed over attending a lecture. try to stop pulling all nighters and get at least six hours of sleep. then you will feel more clear and energized and actually feel like a human. and that's good!

getting involved: it's really rewarding to join a club, make some friends and gain a hobby. it is such a good break from your studies because university is not just grades, but a variety of experiences you can open yourself to. some of my top choices are **mathNEWS** (no bias there), uw acapella club and scrabble club :3 but choose something that genuinely interests you. look on the wusa clubs website and see what piques your interest!

hygiene: i don't know if it's just me, but getting clean makes me feel refreshed and ready to tackle the day ahead of me. let's break the stereotype that we are smelly people and get that clarity

exercise: this doesn't have to be bicep curls in pac (though it is good to build muscle), but just getting your body moving improves your mood! whether that's going on a walk around campus, getting into downward dog position, swimming in pac, rock climbing in slc or joining a fitness class, there's something for everyone instead of sitting all day, especially in

those uncomfortable lecture seats attached to the table :/ gotta stretch after a long sit

nature: i know we have the stereotype of not touching grass, but there's a reason why it's a joke + living in MC does no favours... so get some fresh air! look at the rocks in the rock garden! go visit columbia lake or laurel creek or waterloo park and give yourself that reminder that there is more to the world than calculus!

study: okay i know i've been bashing on excessive studying, but not studying creates its own host of problems, and i've learned that the hard way. be proactive with doing your assignments + actually try the practice problems in the textbook. there are also supports like the math tutoring centre and office hours for your courses! don't overdo it to the point of burnout, but also don't slack off and then pull an all-nighter before your exam (which goes back to the sleep argument)

solo fun: this could be literally anything, but taking breaks from all your tasks is crucial to a good time :] go enjoy drawing cats, thrifting at goodwill, writing sexy fanfic, consuming your fave shows, or even playing some league... whatever your heart desires (though i would question your taste if your heart wants league)

friends: we are social creatures, we need to interact with other people to feel good! this means we need friends, especially to help us through stressful times in university. this can be as simple as talking to your neighbour in lecture, complimenting someone on their outfit or getting a snack between classes w a friend

seeking help: sometimes things get too much, and it's okay, that happens! it's important to recognize you're struggling and then take actions to help you heal. campus wellness is a good start to getting that support, whether it comes in the form of medication, counselling or both. personally, getting on meds and receiving counselling has improved my life and i don't know where i'd be if i didn't, so don't stop yourself from getting help; it may be the thing you need the most now

overall, balance is crucial when entering your first year, or you risk pouring from an empty cup. and it's no cakewalk (as you can see from me being a major hypocrite) but putting in effort is the best thing you can do. and i believe in you to do that for yourself. you are important, you are worthy irrespective of your accomplishments and you need to respect yourself. you are a priority, so treat yourself like one.

you got this, i believe in you <3

Dollar Store Person

STARTING GAME DEV IS EASIER THAN GOING TO CLASS

I personally really enjoy playing video games. Whenever I play a game that's simple but addictive, I feel this unspeakable compulsion to make something similar myself. I thought making video games was a super technical skill, especially when it came to one-man-army solo developers like the developers of *Stardew Valley* or *Ultrakill*. I thought to myself "What if I could be like that one guy who just made this amazing game?" However, although it feels just possible enough for me to dream of it, it feels just out of reach enough that I don't want to give it a shot or start, or even LOOK for where to start.

As many of you are first years, you will soon find the feeling of living on your own, being responsible with your own time, and not having someone be on your tail for your actions. One thing many, many upper-year students will tell you is that *it's really easy to skip classes*. Because no one is holding you accountable for doing it. I had my fair share of 8:30 morning classes where I just did NOT want to wake up, because I stayed up until 4am playing *League*. The same thing could happen when it comes to keeping motivated on your passions and dreams. We have so many distractions that can take away our time and attention nowadays. It is so easy to get addicted to video shorts or online games nowadays.

To make life feel interesting, I decided to take a move. From my personal experience, UWaterloo Game Dev Club was the place I learned how to make my first game, and where I keep my passion lit. My fellow gamers motivate me to go above and beyond. My biggest surprise with game dev is actually how low the bar is for technical skills. You don't need to know anything to start making your own game!

UWGDC is a place where gamers gather together to talk about games and to make our own games. It is an inclusive environment where everyone is welcome (shoutout to our beloved high school kids and Laurier students)! You will meet many interesting people with many niche skills and talents. We have designers, writers, artists, composers, programmers and much more.

The weekly meetings are scheduled on Thursdays from 5pm to 7pm in the Games Institute Collab Space in East Campus 1 (EC1), a dedicated area for our club only. The meetings are structured like a round-table talk where people share their knowledge and expertise in various topics. For example, this week we did a Pixel Art Workshop, where people shared their knowledge on pixel arts and its animations for making video games, and then we did a 1-hour drawing practice! At the end of the meeting, everyone can showcase their work to a Discord server thread. No matter what you draw, it is a genuine and meaningful creation!

Aside from the weekly agenda, you are also very welcome to come and yap with us. You can sit down and work on your own games, passion projects or class assignments, and of course we WILL encourage you to demo it! For example, we have members have their prototype game to be demoed across

multiple meetings, and it is so fun to see it grow and become more fun to play. Aside from that, people did demo their projects from their Computer Graphics class sometimes :D

Tabletop gamers are also welcomed! We have many board games on the shelves of GI. Some are designed by our own members! We also host D&D sessions occasionally throughout the term.

UW Game Jam is the once-per-term event where you practice your game dev skills. The experience is impressive enough to be put on your resume. "What is a Game Jam?" you ask? It's a weekend-long game dev marathon where you work by yourself or with a group to complete some kind of playable experience based on a theme. (If you've ever done a hackathon, it's a very similar idea.) You get the whole game dev experience—starting with an idea, working to refine it, seeing how it plays with real people, and polishing it up as you barrel towards the finish line—all in just 48-ish hours. You don't need any experience to come out and have a good time. We host tutorials and presentations to teach you how to use game dev tools like Unity and Godot, we have experienced mentors on hand who can answer any questions you have, and we do extensive team building sessions so you can find people who are also trying to build their skillset. The overarching attitude at the jam is that everyone wants each other to succeed. The best way to learn to do something is to do it—so if this is something you want to learn, there's no better opportunity than this.

Something that I realized, both as a gamer and as a developer, is this subtle charm of games where you can see the works the devs put into it. When playing a game as a game developer, you sometimes feel a deeper connection with the developers behind the work. Whether it's *Deadpool's* funny jokes from *Marvel Rivals*, Sans being just a funny guy in *Undertale*, or *Wuthering Waves* making a reference to Vergil's plastic chair, *Omori's* dry jokes in enemy logs from *OMORI*, or the *Ooeaee* cat from *Twisted Gallery*, both gamers and developers alike will chuckle at the thought of the other making/playing that little funny segment in the game. When I listen to the OSTs of *Celeste*, I feel that there is nothing else can combine this kind of fun experience, art, music and emotions altogether like a video game. It is a very special form of art. Becoming a game developer will reshape your perspective, giving you a fresh angle on the various creations of humankind.

Anyhow I want more friends to come to game dev club lol, I'll kidnap you for the jam. With love and encouragement, from Ginger Ryesaki and Zheng Zhu, the current vice-presidents of the Game Dev Club.

UWGDC

Find us at <https://linktr.ee/uwgdc>

Or look up uwgamedev on Instagram!

HOW TO SUCCEED IN YOUR MATH COURSES

ADVICE FROM AN UPPER YEAR WHO FAILED FIRST YEAR

I hope that subtitle grabbed your attention. It's a little bit dramatized, but I did actually fail two courses in my 1A term, and I averaged a 59.8, I was forced to change sequences, and I was threatened with being removed from my program. I ended up excelling in 4th year and graduate level math courses, and doing original research in the pure math department.

First and foremost, before we get to the practical, **if you want to succeed, you need to take care of yourself.** This means eating enough, sleeping enough, hydrating regularly, getting time outside, socializing, taking breaks, being physically active, and doing whatever else you need to take care of your mental health. All of these points are non-negotiable.

The fundamental struggle of university math courses is that they start asking *why* and *how*, not just *what*. Most of high school math is rote, in that most problems are directly from the textbook, maybe with the numbers changed, but you can fundamentally get by just practicing a bunch of practice problems and memorizing a few algorithms.

In university, you will be asked questions you have never seen before on exams. You will be given problems that genuinely require new problem solving skills, that take insight and understanding, that require you understand *why* something works, not just *that* it works. Because this approach is fundamentally different, your studying will also probably need to change.

Your courses will now start proving propositions in lectures. You will be given rigorous, precise definitions of terms, and formal, detailed proofs. You should aim to understand all of these proofs completely, and to understand why things are defined the way they are. When you see a new definition, theorem or proof, you should always *immediately* ask yourself:

1. What is the intuition behind this? Why does this make sense? If it's a definition, why does this capture the idea the definition is about?
2. Does this look like anything I've seen before? Is that a coincidence or is there a connection?

It's OK if you can't answer these questions right away, and it's OK if you need to ask outside sources. Again, unlike high school, it doesn't just matter *that* things are true, it matters *why* they are true, because you will be expected to create similar arguments on your exams and assignments, and the "why" of the truth can often inform you of where you'll need to use it.

When going through a proof, first read it through completely, and try to capture the general idea. Sort of figure out overall what it is saying. Then, go through it slowly and carefully, at each sentence, ask yourself the same basic questions:

1. Why was this sentence valid?
2. Which hypotheses are we using? In math, a hypothesis of a theorem is a condition you're

assuming true. For example, if I say "If x is odd, then $x + 1$ is even," my hypothesis would be " x is odd."

3. Why might someone think to do this?

Question 3 is especially crucial here, because that helps you practice for your own problem solving. You will often get to a point in a problem where you have no idea what to do next, but any example or theorem you already have is a template! You won't be able to directly copy anymore, but you can learn from the given examples and solutions by asking yourself *why*. Once you have a general idea of why something works and the ability to explain why every individual step works, you will be able to prove it on your own, and you will be able to work through similar problems. Again, if you're having trouble with these steps, ask your professors, classmates, TAs, tutors, upper-year friends, or anyone else who can help. Once you're done that, I would recommend asking the following questions:

1. Is this proof like anything I've seen before? Why are they connected?
2. Can I lose hypotheses or generalize this theorem?

These aren't questions that need to be answered, but they're good to ask, because they get you thinking on a deeper level, and again encourage problem solving.

Speaking of problem solving, this is the one area where I think excessive help will hurt. In order to practice solving problems, you need to... solve problems. It is completely OK to get hints and guidance, but I would strongly recommend that you almost never look at solutions to problems you haven't solved yourself. The reason for this is that, if you are given a hint and you solve the problem on your own, you have learned something and practiced problem solving. If you just look at the solution, you've learned something, but you've left a crucial skill undeveloped, which will really come back to bite you in the ass when exams come around.

When doing assignment questions, often finding the answer comes down to asking yourself a good question. "What is the definition of everything involved," "What is the intuition here," and "Does this look like anything I've seen before?" will almost always be shockingly good starts. Sometimes there is no intuition, sometimes it doesn't look like anything you've seen before, and sometimes the definitions don't help, but these three basic ideas solve a ton of problems. If you try something that almost works, ask yourself how it can be modified or why it failed; if you try something that seems really tedious, ask yourself why it's tedious, and if that can be avoided.

That's all for now. Good luck in your first year. You're really in for an incredible experience, and remember — supports exist for a reason! Take advantage of them :)

THE 3RD FLOOR OF MC

THE SOCIAL HEART OF THE UWATERLOO MATHEMATICS COMMUNITY

Welcome to the University of Waterloo and to the Math Faculty! You've begun your journey towards an undergraduate math degree along with over a thousand other math students, and you'll probably meet a number of them in your classes and residence life.

What a lot of new math students don't realize is that there is a large social community to be a part of, and that there are many benefits to doing so. Let's have a look at some of the ways you can participate in the math community, most of which are located on the 3rd floor of the Math and Computer building, your new home:

MathSoc: The Mathematics Student Society runs many events during the year, and has many opportunities for volunteering and meeting other students. Many of the office workers are upper-year students, and all of them are willing to give you tips and help you feel at home. You can find the MathSoc office right across from the C&D (MC 3038)!

Program Clubs: Almost every program in the Math Faculty has an associated club, which runs events geared towards their members' general interests. For example, the Pure Math, Applied Math, and Combinatorics and Optimization Club runs prof talks and math contests, and the Computer Science Club has Code Parties and co-op resume critiques. Note that you

don't have to be in the program to join the club! Watch for the MathSoc Clubs Day early in the first month of classes.

Math C&D and Comfy Lounge: The two "main" lounge areas of the MC are the sitting space outside the Math Coffee and Donut shop, and the so-called Comfy Lounge next door. Colloquially called the C&D, the Coffee and Donut shop is a great place to work in small groups with some table space and a power outlet or three, or sit and enjoy chili and a sandwich at lunch with a friend. The food is reasonably priced, and there is some part-time work available. There is also a balcony available, with some seating space there, and microwaves which are remarkably useful.

The Comfy is where you can relax for a time, study or read in a nice chair. It is not for sleeping; that's what your room is for. The chairs are indeed comfortable, though, hence the name.

There are also busy computer labs and assorted study spaces around the floor. Make sure to spend some time exploring and visiting the offices; the people you meet will almost certainly benefit you in your time here.

Good luck!

Scythe Marshall

THERE'S ALWAYS A WAY OUT

EVEN IF THERE ISN'T, YOU NEED TO BELIEVE THERE IS

For many of you, this is the first time you're living by yourself and fully (or, at least, mostly) independent. That's a lot. And in university—*especially* at Waterloo—there's a very high chance you're going to fuck things up. Or things will get fucked up. And then you'll be stuck between a rock and a hard place. Life sucks, unfortunately, and we live in a world that doesn't want to address it. But you need to know that there is always a way out. This is a lot of certainty coming from me, you might think. I don't know what you'll go through. You probably don't know what you'll go through.

So how do I, some random author, know this?

I don't. But you need to believe that there is.

Maybe that way out is shit. It's not what you wanted for yourself. Maybe not what your parents wanted either. And I'm not saying you should settle, but I'm saying things will be *okay*. And once they are, you can keep moving forward. One step at a time, so you can look back and think, *god that was awful!*

And then you can laugh about it. It won't make it fair, not by far, but you have to believe in that day. Believe in tomorrow, at the very least. And then in tomorrow's tomorrow. On and

on until you've somehow made it out. Because *you* will make it out. I believe in you. You should believe in yourself.

Okay? Remember this. Even once you've made it out of first year. Even after you've graduated.¹ Even in your fifties. There's always a way out, and you will find it. Even if there isn't a way out, because you'll find one, and things will be okay. There's always a way out.

planet b612

1. Maybe you don't graduate—that's okay too.

inspired by my little brother who gets scared easily. one time when he was eight, he got stuck inside some jungle gym net. his voice grew panicked and i could see him start to cry. my shoulder was fucked and i was too big to wiggle in, so i told him that there is always a way out, he just needs to find it.

of course, this is a lie. i thought about that—sometimes you are stuck and there is no way out. i lied to him, the way adults usually do, but then i watched as he said it over and over to himself, and eventually climbed out.

have that faith in yourself.

SO YOU THINK YOU CAN RESEARCH

ADVICE FROM A RENOWNED SILLY mathNEWS GUY

There you are—I see you there, holding the **mathNEWS** in your hands. You want a taste of the academic life, don't you? No, I don't mean classes—you'll get those soon, believe me—I mean the *real* academic life. A taste of *discovery*. Maybe you also want a taste of *money*. Well, leave that second one on the backburner for a minute while I bring to you some practical, no-nonsense advice on undergraduate math research.

WHEN CAN I START?

Well, not right now—and probably not for your first co-op, either—but sooner than you might think! I've had some friends who've started as soon as their second or third co-op. Usually, you'll want to have the relevant second-year courses under your belt so that you have some mathematical maturity that'll let you think hard about math.

When you decide you want to start looking into this, make sure to keep a close eye on deadlines. Seriously. Don't trust the ones you see online; contact whoever's in charge and confirm dates with them. Depending on the funding source you're going for (usually the NSERC USRA or MURA), deadlines come fast, some as soon as a term before you'd actually start!

BUT WHAT IF I DON'T KNOW THE MATERIAL?

You and me both, pal. You think anyone knows the material before starting research? You'll spend the first month or two just learning the necessary content—that's a built-in part of the process. Your prospective supervisor probably doesn't expect you to have all the necessary background before starting—they just want to know that you're passionate, that you have some amount of interest in the field, and that you're eager to learn. The learning will be mostly self-directed, though—you'll need to be ready to read the notes and papers your supervisor tells you to.

BUT WHAT IF I'M NOT SMART ENOUGH?

You are smart enough. You might not always feel that way—Waterloo is home to a lot of smart people—but you're here. You're one of the smart people. You can do it.

WHAT IF I DON'T LIKE THE SUBJECT?

That might happen! It happened to me. But you'll be OK! It's the same risk as with any other co-op; the whole point of the program is to help you decide what you want to do after graduating, while also giving you some experience points for your resume. If you find yourself not liking the work, you can talk to your supervisor and see what kind of flexibility they have with what you spend your time researching. Usually they'll have a few different projects on the go, so they might be able to shuffle you onto something else. They want you to get something out of the term, so work with them!

WHAT'S THE PAY LIKE?

Hah! Don't go into this for the money. You'll get paid enough, but your friends working software jobs will be getting paid more. Tough luck, I guess. If you need more money, look into doing some part-time work tutoring or something.

HOW CAN I START?

Just email a prof. Seriously, just pick one and send an email. Even a cold email is fine, I've gotten two co-ops this way before. By the time you start rounding off your second year, you might have some ideas of some professors whose field of research you might be interested in. If not, that's OK—try looking online for faculty that do research you might be interested in, and ask for advice from people who have experience with faculty. The Pure Math Club (MC 3033) is a great place to start since a lot of people in that club are into research. Walk in, and people will usually be dying to tell you stuff about whoever. You can also ask other profs for recommendations on who in the faculty might be looking for undergrad researchers, depending on your area of interest.

Once a professor agrees to supervise you, you'll need to jump through one or two hoops of applications to actually get the job. Your supervisor isn't actually the one that's paying you; most of the time, your pay comes from grants given by the University and/or the government. There's info on each department website about how to apply, and if that info isn't enough, send an email to the administrative coordinator.

WHAT IF I DON'T PRODUCE ANY NEW RESULTS?

That's OK! That's how it goes for most undergrad researchers. You only have four months and math is *fucking hard*. The focus is more on getting exposure to real research math; contributing a real result is just a bonus if you stick with the material and get lucky. Your supervisor won't really expect you to produce anything by the end of the term unless you agreed on a specific deliverable, which might be more realistic depending on what kind of research you're doing.

Anyway, good luck going after the research job! If you aren't sure, it can't hurt to try—it might be right up your alley after all.

jeff

I basically only read the
profQUOTES.

MOST PEOPLE WHO READ mathNEWS

SMOKING HOT CO-OP ADVICE

Since the co-op process can be pretty intimidating and unintuitive for newcomers, I'll outline some tips for blazing your way to success on your first co-op. CEE (official co-op people) will explain the process and requirements to you in the semester before your first co-op term, but these are a few extra tips and tricks for taking your game from so-so to flaming hot.

GETTING THE INTERVIEW

- It's all about the résumé, although on a side note, making sure you have a positive social media presence can help for some jobs as well.
- If you're having trouble writing your résumé, start by describing all of your work and volunteer/extra-curricular experience in the last 4–6 years, then reduce that down to simply the most recent and/or relevant positions. The final copy of your résumé should be 1–2 pages total.
- If you have personal side projects related to your field, definitely include them! For example, dropping a link to your GitHub account or a personal website is a great way to stand out if you're applying to programming or web development jobs.
- Don't underestimate the value of soft skills like communication or teamwork. Even if they're completely unrelated to your major, you can use activities like playing in a band, being part of a club, or writing for *mathNEWS* *cough* to show your leadership/teamwork/communication/other skills.
- Get someone to proofread your résumé. Seriously, I cannot emphasize this enough. Ask a knowledgeable friend or head to a résumé critiquing session on campus—find more than one person who will give you honest and detailed feedback on the quality of your résumé. Like a good essay, résumés usually need several revisions before they are presentable.

PASSING THE INTERVIEW

- So you got an interview—congratulations! You've made it past the first step, so give yourself a pat on the back and then put on your war paint.
- Research the company before doing the interview. You should be able to clearly and concisely state what the company does if they ask (which some occasionally will).
- Make a list of your key strengths that you can market in that particular interview. Look for opportunities to tout these strengths as the interview progresses.
- There are some stock questions that come up frequently in interviews, like "Tell me about yourself," "What are some of your weaknesses?", "Why do you think you fit this job?", "Why do you want to work here?". Thinking about your answer to

some of these questions before the interview will help you avoid foot-in-mouth scenarios.

- Prepare a list of 3–5 questions to ask at the end of the interview. The employer may have already answered some of these questions during the interview, so having more than 3 means you can have back-ups. Make sure to include questions about things that will help you choose which job you want (work environment, pay, location, etc.) as well as ones that show interest in the position (job duties, typical work day, etc.).
- Find some good-looking clothes, and be ready at least 10 minutes before the interview. Some interviews may start early (in-person interviews especially), and if not then the extra time gives you time to breathe and calm down.
- Just relax. No seriously, just relax and be natural. You've already made it this far, you're prepared for this.

In the end, the interview process is a bit weird. You'll have some interviews that you thought you bombed only to find out you got an offer (that's how I got my first co-op job), some interviews that you were sure you rocked for which you are never ranked, and some interviews that go exactly as you expect. All you can really do at the end of the day is try your best and not take the results too personally. If you're having trouble, CCD offers lots of resources to help spruce up your job prospects and there are lots of other students and upper-years around campus who have tons of great advice. Best wishes!

BlueberryMuffin

TAKING A MINOR

One smart thing to do with your degree is stick more words on it. There are two common ways of doing this at UWaterloo—heh, well, maybe three, but this column is far too short to discuss taking a joint. You can do the double major thing, or you can just throw a minor onto your degree. So what kind of minors are there? Well, there are those in math and those not. For mathie minors, you need a bunch of courses, but frequently they just overlap the ones you're taking so it turns out to be like four or five courses, perfect for filling up your math-course requirement without taking all STATs or something foolish. Now, for outside of math minors—perfect for those thinking of becoming teachers who want a non-math “teachable”—these take around ten courses, so plan ahead. It gives some structure to your electives, but they require you to take specific stuff that is only available in certain terms—hey, like why I can't finish my English minor on time. So, in conclusion, think about one, but try to plan early.

Allen MacLeon

FIRST YEAR MATH STUDENT'S GUIDE TO WATERLOO SHORT FORMS

ActSci—Actuarial Science. A major you can choose within the math faculty. Pairs nicely with statistics, ambition, or a love for ca\$h money.

C&D (CnD)—Coffee & Donut (shop). The Math C&D is located on MC's third floor, and sells cheap food and drinks. Other faculties have them too, but who cares? (Rumour has it that the Science C&D has the cheapest stuff, but you didn't hear it from me.)

CCD—Centre for Career Development, formerly CEE, formerly formerly CECA. The name you'll see in the "from" field of a lot of your emails if you're in co-op.

CFM—Computing and Financial Management. A program that combines both Computer Science and Finance. This program is your ticket to fitting in with both fancy finance people and nerdy computer science people. And possibly your ticket to an identity crisis if you read too much into that.

CLV—Columbia Lake Village. A townhouse-style residence that's super far away from everything you care about. On the bright side, old people like grad students live here, so maybe you can learn from their wisdom or something.

CMH—Claudette Millar Hall, part of the UWP complex. The newest student residence on campus and the only traditional-style residence with AC. Truly the place to be if you're living in residence in the spring term.

C(&)O—Combinatorics and Optimization. A program within the Math faculty. It's probably the answer if you've ever asked yourself questions like, "Which major should I choose in order to maximize pleasure, knowledge, and future earnings using at most a specified amount of effort and hours of my time?"

CS—Computer Science. CS students are the people who are qualified for all the co-op jobs you wish you were qualified for. Strangely, they also seem to be the majority of people you meet during Math Orientation.

DC—William G. Davis Computer Research Centre (Davis Centre). A couple lecture halls, some CS prof offices, food, and most importantly, the DC library. It feels almost as much like home as MC. Easily one of the greatest places to study among other math students.

DD—Double Degree. A program that allows students to get a BBA from Laurier while simultaneously getting a BMath or BCS from Waterloo.

DP—Dana Porter (library). This is more of an arts library but it's still pretty cool for a break from the usual study spaces every now and then. Going here may make you feel like you're cheating on DC, but it can offer you tenth floor views, which DC just can't compete with. Sorry, DC.

FARM—Financial Analysis and Risk Management. A program within the Math faculty. Not like the kind with cows and chickens and tractors and stuff.

GRT—Grand River Transit. The KW region's transit system. GRT is your new best friend, unless of course, you have a real friend who has a car. If so, congratulations on winning at university life already.

KW—Kitchener-Waterloo. They're like the conjoined twin cities of Ontario.

M3—Mathematics 3. Screw standard naming/numbering conventions, right? After Math & Computer and Davis Centre, the only logical name for the next math building is Mathematics 3.

M4—sorry, does this place even exist yet??

MathSoc—Mathematics Society. Want to know more? Stop by MC 3038 to check them out ;)

MC—Mathematics and Computer Building. Also known as your new home. Love it, respect it, get used to it. Expect to have a lot of classes here, and expect to spend a lot of hours in the tutorial centre (MC 3022) toiling over assignments.

MKV—Mackenzie King Village. A suite-style residence located between REV and V1.

PAC—Physical Activities Complex. This is where you will have some of the most unpleasant experiences of your university careers. Like writing exams. Or even worse: exercising.

QNC—(Mike and Ophelia Lazaridis) Quantum-Nano Centre. This is actually an engineering building but it forms a triangle with MC and the SLC so it's sort of in math territory. Also, the tables by the windows looking out on the Peter Russell Rock Garden are some pretty rad places to study (or at least as rad as study spaces can be).

REV—Ron Eydt Village. A popular dorm-style first year residence. Unofficially known as the party residence or social residence. But then again, this is Waterloo, so even REV is pretty tame compared to Western, or Laurier, or other schools that actually party.

SLC—Student Life Centre. Centre of the University Universe. Home to great food (including Tim Hortons!), clubs spaces, study spaces, the turnkey desk, and the only place to get food on campus 24/7: International News Flock Stop. Also conveniently located near Math, Science, and HLTH (sucks to be Arts, Engineering or Environment).

UWP—UW Place. A suite-style residence located on University Ave. Not exactly on campus, which is kind of inconvenient, but it's across from the plaza, which makes up for the distance. (Plaza = Burger King, convenience stores, all the Asian food you could ever want, and other such wonders).

V1—Village 1. Another dorm style first year residence. Less social than REV, but they get single rooms and a better cafeteria, so who even cares?

WLU—Wilfrid Laurier University. That neighbour down the street who we have a love/hate relationship with.

WUSA—Waterloo Undergraduate Student Association. Works hard to advocate for you and runs lots of cool events and clubs. Advocacy support is available for housing or any other challenges that you find yourself facing during your time at UW.

There are lots more, but these are a few of the important ones. If you hear any others that you're curious about, Google is your friend :) Welcome to Math, and good luck!

TheUndecided

AN EASY CROSSWORD

THE ANSWERS ARE OUT THERE, FOR THOSE WITH THE EARS TO LISTEN AND THE EYES TO SEE

ACROSS

3. At City Cafe's cash-only Victoria St location, this city's name is written on the base of an oven
5. At Conestoga Mall, these are found atop the food court
11. Deep in the halls of the T&T plaza — or Westmount Place — this store named for a man is found on a map
13. At Kitchener Market, there's a mural where this material is pictured being manufactured
17. North of Waterloo City Hall, these letters are engraved on an armoured vehicle
19. At Thrift On Kent, this an unexpected vehicle is found atop the fitting rooms
20. At the Kitchener Auditorium, a stairway on the building's south side leads to a door of this number
21. Near Belmont, a gear on the Iron Horse Trail was sourced from a factory producing this item

DOWN

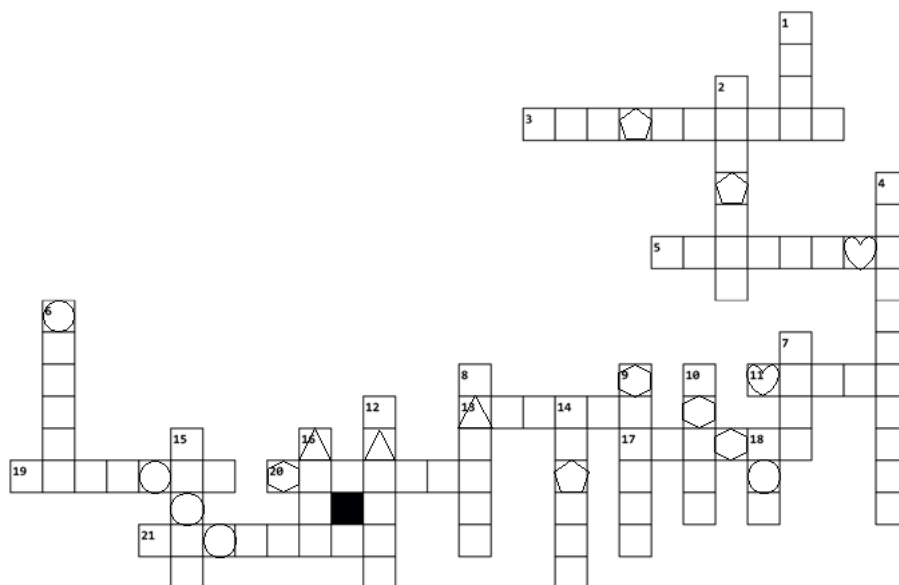
1. From the outside of Guelph's Basilica of Our Lady Immaculate, you can see the central figure of the rear central window wearing a robe of this

colour

2. At Halls Lane, you can find this creature that shares a name with a city
4. At Halls Lane's eastern end, an artist is honoured who was born here
6. In Belmont Village, this pharmacist operated in 1957
7. At Thrift on Kent, this unexpected structure is found in the parking lot
8. At Halls Lane, a window found encourages you to visit this individual
9. In MC 3018, these can be found
10. Deep in the halls of the T&T plaza — or Westmount Place — this store named for a man is *also* found on a map
12. On Roos Island, an organization is credited with rebuilding this structure
14. Near Allan Station at night, this is engraved on an intriguing glowing object
15. At Halls Lane, this green eyed fellow holds up the Earth

If you and your friends solve this crossword, you should write a **mathNEWS** article detailing your experiences! Be sure to include the secret passphrase revealed by the cells with shapes in them, to verify your completion of the crossword. I'd love to hear about how it went! :)

colour and city



LIST OF THINGS YOU MAY FIND IN MY BACKPACK

USE IT AT YOUR OWN DISCRETION

So by this point, you probably have already moved into your residence, and you may have consulted with the packing list on what you should and should not bring to Waterloo. But I have yet to find a list on what you should or should not carry with you to campus every day. So as a veteran, here's what I bring, and what I encourage you to bring as well. It might sound like a lot, but it really isn't, and you should have plenty of room to spare.

IN MY BACKPACK:

- A Thinkpad T480 with charger, because it's small and efficient and battery life is great. And it is light, so it is physically healthier to carry than a gaming laptop. The trackpoint and keyboard are incredibly useful if you learn it.
- Pen, pencil, eraser, and whiteboard marker. The marker might be more useful than you think.
- Phone charger, or at least the USB-C to A cable to charge off of your laptop with. The actual brick is optional.
- A scientific calculator. Because it's more convenient than phone.
- A folder for holding paper (usually holding enough paper for the week, so like 20–50?). I still use paper for notes and assignments sometimes. Especially if I can't typeset on laptop as fast as lecture.
- Backup USB Drive, and HDMI & Ethernet cable, because you never know when they might come in handy. I actually also have a separate backup USB drive with a bootable Linux distro on it. (Of course, don't bring it if your laptop does not have those ports.)
- One pair of backup disposable chopsticks. You never know.
- A small pack of paper napkins. Or just some paper tissue.
- A spare band-aid.
- Anything for allergies, hygienic/makeup needs, etc. I know a friend who brings CeraVe, for example. Deodorant if you need it.
- A small umbrella. Because you will forget to check the weather.
- Playing cards. Be that friend who brings playing cards.
- A small Philips screwdriver.
- A backup nofrills grocery bag. If you want to visit the T&T before home.
- Some backup rations, like a small pack of crackers.
- A Hibike! Euphonium charm. Visible every time I open my bag.

OCCASIONALLY IN MY BACKPACK:

- A Wacom drawing tablet. Useful for some courses, useless for others. Primarily for drawing pictures on my laptop.

- Towel, toothbrush, toothpick, etc. You can actually shower on campus (like M3 4th flr), and "stay the night" on campus, but there's no good reason for you to do all-nighters unless you are doing something crazy like CS452. Remember to not leave your wet towel enclosed for too long.
- Winter gloves. And other seasonal items.
- Saxophone mouthpiece, reeds, and ligature, in a box. Do your extracurriculars!
- Sheet music folder. I do have MuseScore on my laptop but I prefer paper music.

ON MY BACKPACK:

- A water bottle on the side.
- An UW Animusic Ensembles Charm. Yes, you should join.
- A Waterloo Rocketry flight tag.

ON ME:

- A wallet with cash (cash discount at Plaza), credit card, WatCard, ID, Presto card (sometimes) and a Junna Hoshimi character card.
- My phone. Usually fully charged overnight.
- Wired earbuds. Because my phone is old and has headphone jacks.
- Key chain for holding your keys.
- Occasionally my saxophone. Though I keep it in a locker on campus (like the ones in C2) when I do bring it.
- My wits. Hopefully I don't leave it somewhere.

That's it! You are all set. One backpack is all you need, really.

RobbotC

TAKING A MINER

One smart thing you can do with your free time is kidnapping. There are two common ways of taking a miner at UWaterloo — heh, well, maybe three, but this column is far too short for such interpretations. One involves kidnapping, while the other, umm, also involves kidnapping. It's really all about who you kidnap. I am not a big fan of kidnapping the young, so I'm going to recommend you take a grown-up miner. Of these, there are several kinds available for the taking. Uranium miners tend to have radiation issues, so try to keep your distance. Coal miners are typically less biologically dangerous; however, there is the mess issue. Miners who work in shafts can be taken from their shafts a lot easier than kidnapping open-pit workers. So, in conclusion, kidnap guys who work in clean shafts. Or Shaft.

Davey R. Adams

“WHAT DO YOU MEAN IT’S BAD TASTE TO WRITE RECRUITMENT ADS FOR THE ORIENTATION ISSUE OF mathNEWS?”

I DO WHAT I WANT AND I ANSWER TO ABSOLUTELY NO ONE, NOT EVEN THE mathNEWS EDITORS

Hello, dear readers. You, mere fledgling first years freshly beginning on your post-secondary journeys: how it takes me back! To seven years ago, in fact. Yes, many months ago was I as full of baby-faced wonder and young naïveté as you are right now. Now I’ve become a jaded, senile crock that gets CS 136 midterm flashbacks in the middle of the night, but preaching to the children makes me feel young again. That’s why I decided to write something for this very *special* issue of **mathNEWS** you hold in your hands right now.

I wanted to write a lot more articles, for all the juiciest insider tidbits I learned over the course of eight months at UW. Like where the best washrooms are located and which restaurants within a 30-min walk of campus that have the most value for your money are the least likely to give you salmonellosis. But alas, the editors gave me four days notice that they were taking new articles for the orientation issue and I only had the time this week to bust out one. So I had to focus on what I wanted to tell you younglings the most, and as it turns out, I decided I wanted to tell all of you to try out writing for **mathNEWS**. Yes, that’s right! You!

Nobody really knows what **mathNEWS** is. If one thing’s for sure, though, it’s that it’s definitely not a newspaper (God forbid I hear *any* of you infants say that whenever I pass you by in the halls). It’s part amateur comedy zine, part anonymous blog, part platform for earnest student expression, and part long-form shitpost. All written, edited, and run by Math students, *for* Math students. Doesn’t that just set fire to the social anarchist inside us all? In terms of other student publications, there’s Imprint, but **mathNEWS** is simply in a class of its own. Nothing in the world is quite like it.

I’m hoping that this issue gives you a good taste of what **mathNEWS** is like and leaves you interested for more. My own orientation issue from first year is what first got me hooked onto **mathNEWS**. I’ll have you know that we have every single issue from as far back as 1973 or some shit posted on mathnews.uwaterloo.ca, so if you’re a real go-getter you can check it all out over there. Or you can peruse a lovely, colourful assortment of recent issues outside the **mathNEWS** office on the third floor of MC if paper’s more your thing.

If you get any enjoyment at all from reading **mathNEWS**, I assure you that you’ll have six times as much fun writing for it. Like, come on, you get to write about whatever the hell you want and have your words immortalized in the **mathNEWS** archives ‘til the end of time, make up a cool pseudonym for yourself, ask profs all your burning questions for the **mathASKS** column, answer the **mastHEAD** with your wittiest one-liners, and so much more to boot. Even if you think writing’s not your thing, if you come to production night and barf out an N-things listicle over the course of two and

a half hours, you’ll still get free pizza at the end of the night. Free pizza! You heard me right. We get the good shit too. Come by to a production night one day and you’ll see what I mean. **mathNEWS** people are pretty nice to hang around with too—even the editors! Somehow their dictatorial power hasn’t gone all to their heads (yet). Join the mailing list at <https://mathnews.uwaterloo.ca/mailling-list> to be notified of production nights and new releases.

I guess if you don’t like free pizza (or you can’t make it to a production night but still want to send in stuff), you can always submit stuff to the editors via mathnews@gmail.com.

In conclusion: write for **mathNEWS**. There’s free food. You meet people and make friends. Your writing gets published. You’re building and taking part in the student community. It’s fun.

See you soon,

Finchey

SPOT(IFY) QUEST: FAR AWAY

I WANNA GO

*I wanna go, I wanna go far away
Where nobody knows my name
Nothin’ to prove, nothin’ to lose, starting over
Starting new, anywhere but here*

EASHA, “FAR AWAY”

Attempting to buy food at SLC at the lunchtime rush will make anyone want to start anew anywhere but there. On a rainy day, even moreso, as your fellow students all feel trapped with Shawarma Hub, unable to escape to the University Plaza and its greener pastures of Shawerma Plus. Prepare yourself for this, by rehearsing with your most shawarma-dedicated friends:

- Begin at SLC Shawarma Hub.
- Travel to Engineering 6, the building nearest to Shawerma Plus.
- Do not go outside. It rains outside.

The quest can be done, for those sufficiently determined to go Far Away.

unexpected multicoloured cat

META-ADVICE

Throughout my life, I've found that receiving advice has very rarely been particularly helpful or impactful, despite the advice often being sound and with myself often regretting not implementing it sooner. The reason for this, I feel, is that it is exceedingly hard to communicate advice well, and it is a skill that the majority of people are not good at. Frankly, I'm not very confident in my ability to do so either, but in the spirit of the orientation issue I will try nevertheless.

A common trap people fall into when giving advice is that the advice they're giving comes from a deeply personal perspective. They're passing it on because it has worked for them, and they might be a little too enamoured with the idea to consider how to present it in a way that's actually interesting for you to listen to. They might even be giving you advice that's inappropriate for you due to being intimately familiar with the specifics of how it worked for them, but not knowing your situation well enough to helpfully adapt it!

I don't want to pin all the blame on the advice givers, though. When receiving advice, it's quite easy to see that it logically makes sense and be willing to admit that the advice giver is right, but it is much harder to internalize and actually register that the *advice itself* would be good for you to start following. In short, "that's right" is much harder to get to than "you're right." This is often caused by a similar problem to what I mentioned before—that being advice not being sufficiently suited to you—but figuring out how to make it suitable is a difficult psychological task. Ask yourself, what feels hard

or uncomfortable about this advice? Or better yet, if you think it's safe, be open with the advice giver or whoever you feel comfortable trusting in and try talking through your hesitation with them. When talking together and verbalizing your emotions, you can zero in on what the actual underlying issue is much more quickly and effectively than when you swim around in your own thoughts.

Thus, my hope for you, the reader of this issue packed with helpful advice, is that you leave this article with the following takeaways: The first is that you should be patient with those who are trying to give you advice, do your best to listen, and trust that it comes from a good place. The second is that once you've received some advice, take some time to reflect on what's stopping you from implementing it, and really try to keep honestly asking yourself questions to slowly dig down to the crux of what's stopping you.

And if you don't internalize the above right away, that's okay. I don't expect that to happen considering everything I've written above.

the government's only spy

Final quick side note: all of the above is assuming that the advice being given is *good* advice. If someone is telling you something that's not very sound (e.g. smuggle vodka up your ass into the exam room), that is advice best ignored. But how do you truly know what advice is *bad*? Someone could write a whole other article about that...

SPECIFIC ADVICE THAT I THINK SHOULD BE TALKED ABOUT MORE

HAVE A CLEAR WATER BOTTLE FOR EXAMS

That way, you get to keep them on your desk midterms and finals. Very importantly WASH IT OFTEN AND DO NOT PUT ANY OTHER LIQUIDS THAT AREN'T WATER. Especially from personal experience not cola and/or fireball whiskey because you will smell it. And it doesn't smell good. And it doesn't wash off easy.

GET SOME CUE CARDS

Legitimately writing stuff down for quizzes helps so much. I'd recommend already doing that in a notebook for day-to-day notes because it helps with remembering info but having a queue card or two for quizzes is so good because the limited space makes you need to make decisions on whether or not you really need to write this info down for studying or if you can remember it. It's also very handy when it comes to cramming just before the test because every note you need is just right on hand and you don't need to go through a laptop/notebook or deal with finding your notes on your phone.

LEAVE KW OFTEN

Kitchener-Waterloo is honestly really boring. Go elsewhere. Toronto, Niagara, wherever. Just don't spend all your time in KW and especially don't spend your time just on campus. Legit find smth to do and just go. Take a weekend and explore other places or go to an event. This doesn't mean that there's absolutely nothing here but there's just way more stuff outside of KW.

(sidenote especially for those out-of-province: GET A PRESTO CARD. It's not just for the TTC because GO Transit also uses it. Also when you are settled in with UWaterloo and have your student ID, immediately go to google and look up "go transit student discount" because you can get a 40% discount on GO Transit as a UWaterloo student)

HAVE ADVENTURES ON CAMPUS

By yourself or with a group legit have like a late-night adventure where you just like explore campus and whatnot. Some of the greatest fun you will have. Do some lightly stupid

shit with it too like some stupid game go on during this adventure. You will find stuff around campus that you would never have found otherwise.

BE MORE LENIENT ON REASONS TO SKIP CLASS

You don't need to be physically sick or have some insanely

difficult quiz/test to skip a class. If it's just not something you can handle for the day you are allowed to skip. Just don't make it a habit. Your mental health is important and if you need to take a break day from classes you can just do it.

fingersinsockets

FAILURE

AND WHY YOU NEED TO ACCEPT IT

Welcome to the University of Waterloo! To the many of you who dreamed of coming here, congratulations you did it, now you're here. I know that if you are here you were probably cracked in high school and are to a degree expecting it to be the same. But as someone who has gone through first year, let me tell you that might not happen and during first year you are almost certainly going to be humbled by this school and will fail at something. Now failure could mean getting a 70 when you expect only 90 plus on one end or flat out failing a course. You will disappoint yourself to some extent during your first year of university. You could also thrive in academics but fail in the social aspect of things or the co-op aspect. No matter what failure will happen and that is okay.

The thing that you must be able to do though is learn from your failure, or you will be doomed to repeat it. I can attest to this, I had to withdraw from a course due to doing horribly in a midterm and not feeling I understood the course contents enough to make it up. It was an incredibly hard decision that also caused me a lot of shame even though when telling people (parents friends etc) they were understanding and helpful. Despite this and the academic set back I experienced, I do not regret doing what I did. It taught me a lot about failure and what you need to do in university when faced with a challenge. This is not high school, you will need to

refine your study methods since this is a much more high-paced environment. Failure may hurt now but it will teach you a valuable lesson for the future. I know for myself when redoing the course, I went in with a completely different mindset that allowed me to leave that class with a 90. This was in large part because of the lessons I learned from my own failures.

Failure does not define you, life is not a linear path, everyone struggles with something. What does define you, at least in the short term, is how you handle your failure. Do you pretend it isn't happening and say it will get better without changing the core issues? Or do you evaluate things and make the sometimes painful decisions?

University is in no way easy, but it teaches you many important lessons, even beyond the classroom. As you start your journey this fall, try and take everything, success or failure as a lesson for the future. You determine what happens, so make the best of it, you aren't in Kansas anymore.¹

NewTermNewYou

2. Vidor, King, et al. *The Wizard of Oz*. Metro-Goldwyn-Mayer (MGM), 1939.

WRITER THOUGHTS #3 | ORIENTATION EDITION

QUESTION: WHY DO YOU WRITE FOR mathNEWS?

Welcome class of 2031 (or 2030 if you aren't doing co-op). You are now at Waterloo, hopefully things have gone well for you so far. Hopefully your roommates are good (or at least know what mold is). Now that you're settled in, you have many opportunities to do stuff. Of course, you could only go to class and then straight home, but there is so much more to university than just classes. There are so many people to meet, and things to do, and one of them is joining **mathNEWS**, with the first **prodNIGHT** on 21 September. Below, the current writers will answer the question: Why do you write for **mathNEWS**?

MrBlueSky

Great way to meet fellow students and express yourself outside of class. Plus it is a welcoming space for students of all

walks of life. Also pizza and the pizza vote. Make sure to vote l'international when the pizza vote happens

ghost

It gives me a dose of terror of knowing people will read my writing, which pushes me to be a stronger writer. also friends.

aaqsr

mathNEWS chan has my family, send help oh god oh god

fingersinsockets

i've always had some part of me be super creative whether that be doing a lot of drawing in elementary school or being a band

kid in secondary school. **mathNEWS** makes me feel creatively fulfilled and gives me a community to be with

axon_terminal

I wrote my first **mathNEWS** article (under a different pseudonym) because there was a campus-related thing that made me feel insane and I wanted to get it out there somehow. since then, I've stayed mostly because I like being part of a publication that thrives on bullshit. it's still wild to me what we can get away with publishing on MathSoc funds.

Sunset

It's a nice place to get my thoughts down on paper in full, and share them out in the world, without worrying about whether people will enjoy reading them or not.

ChurchOfTheWorm

To feed the worm obviously you silly goose!

floweryyy_

force people to read through my ramblings + it's fun + good writing practice (I need a break from the constant math)

Anonymous

free pizza I'm ngl but also cuz it's fun to socialize with friends.

writerTHOUGHTS

LOOKING TO FIND MATH QUEER COMMUNITY? JOIN PRIDE FACTORS!

We're a welcoming and supportive group where 2SLGBTQIA+ students, staff, and faculty build community, share experiences, and work together to reach their goals. Whether you're looking for meaningful conversations, peer support, or a place to be yourself, Pride Factors has a place for **you**.

Want to learn more or get involved? Join us on Discord and Instagram, or email us at pride.factors@uwaterloo.ca. See you soon!

Left: <https://discord.gg/dPyRFd7wTh>

Right: <https://www.instagram.com/pride.factors.uw>

Pride Factors



LOOKING TO FIND ENGINEERING QUEERS? JOIN ENGIQUEERS!

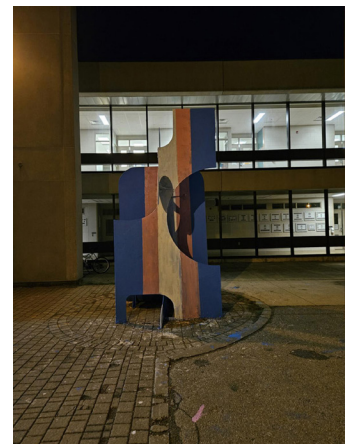
Come find us in CPH 1337 (near the *Early Morning Dream* sculpture) on Mondays from 6 to 9 pm. We're a welcoming and diverse community always running events for interested students—check out our Discord or Instagram! We have queers all the time and pizza some of the time. And no, you don't have to be in engineering.

Top: <https://discord.gg/uYapxbcuYs>

Bottom: <https://www.instagram.com/uwengiqueers>

Right: The *Early Morning Dream* sculpture

EngiQueers



THIS IS gridWORD

gridCOMMENT 162.0

Hello, hello new mathies!

Congrats on flipping to the end of this issue of **mathNEWS**. As a reward, here's some homework! This is the **gridWORD** which is like a crossword, expect cooler. The **gridMASTER(s)** usually construct(s) a **gridWORD** for the end of each issue.

Each regular issue's **gridWORD** has a theme to it. Themed clues will always have an asterisk next to them each issue (except for the final issue in each term and the orientation issues).

For regular issues, you can submit the completed **gridWORD** to **mathNEWS** under a pseudonym with an answer to the **gridQUESTION** for a chance to win a \$5 math CnD gift card, so keep your eyes peeled for 162.1.

Previous issues of **mathNEWS** are available online, which includes previous **gridWORDS**, if you are interested.

Happy **gridWORDing**, and we can't wait to see you all soon!

RapidEyeMovement and aaqr

ACROSS

1. "Yum!"
6. MATH 137, for short
10. angers
14. D-Day beach
15. ___ saccharum
16. the smallest tide
17. you were advised to take one earlier
18. competitive poetry event
19. hamster's home
20. flour, meal, grain, or mill
22. sweating pot that cools water, in Spanish
23. scorch
24. utter persistant complaints
26. program approximately half of UW Math students participate in
30. hierarchy's root: top rated engineer? Excellent! (4)
32. recursive structure's homes
33. Gung-ho
35. Erdos' fuel
37. hockey's preteens
39. number found at bottom of MC stairwell
44. Anjou, Bartlett, Bosc, e.g.
46. referee's marking
47. less important than a theorem
51. six seven
53. a curved recess at the end of a building
54. proves useful
56. it may be tempted
58. facewears of British election candidate
59. LEARN, Crowdmark, Piazza, e.g.
65. resting places
66. tea biscuit
67. Rajah's wife
68. Goes in a bowl
69. hairy man who acquired some lentil stew
70. lay to rest

71. Response too large? Pipe it into —
72. slippery fish
73. what a good prof may do for you

DOWN

1. site of 70-Across
2. Mideast ruler
3. rational
4. mother of Helios
5. distance in American football
6. partner on screen
7. enticed
8. outermost of 30-Across
9. famous MC lounge
10. the Lorenz curve shows its distribution
11. MC server hosting alternative
12. young raptor
13. Javelin, e.g.
21. small couch
25. typical teen emotion
26. lie
27. mineral deposit
28. subject of AMATH 351
29. leading American opinion researcher
31. Middle of a famous palindrome
34. country with flag ratio of 1:121901033...
36. underdog wins, in sports
38. Javelin, e.g.
40. ___ Needles
41. mouth off
42. military missions, for short
43. born, on a marriage certificate
45. a firm no
47. b, p, m, v, e.g.
48. show clearly
49. godsend

1	2	3	4	5		6	7	8	9		10	11	12	13
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71					72					73				

50. the wife, informally
52. assignment submitter
55. mountain debris
57. spooky
60. 'ow a French speaker would pronounce name of famous TV doctor
61. fairy godmother's implement
62. integrals, to derivatives
63. underwater ridge
64. Mysterious: Var.

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See you at the next production night!

A **mathNEWS** EDITOR WHO NEEDS NEW FRIENDS

lookAHEAD

SUN SEP 6	MON SEP 7	TUE SEP 8	WED SEP 9	THU SEP 10	FRI SEP 11	SAT SEP 12
Warrior Welcome	WAT It Gives (and other orientation events)	To Be Honest: The Musical (and other orientation events)	First day of class Waterloo After Dark	WUSA First-Year Fair Drop-in Events	Warriors Point Rush Drop-in Events	Black and Gold Day Carnival
SUN SEP 13	MON SEP 14	TUE SEP 15	WED SEP 16	THU SEP 17	FRI SEP 18	SAT SEP 19
	Eat a Hoagie Day		Reserves removed		Cheeseburger Day	Lumen festival @ Uptown Waterloo
SUN SEP 20	MON SEP 21	TUE SEP 22	WED SEP 23	THU SEP 24	FRI SEP 25	SAT SEP 26
	mathNEWS 162.1 production night	Add period ends	Not Fees Arranged (NEA) holds applied		mathNEWS 162.1 released Course selection begins	

HOW TO ATTEND YOUR FIRST PROD NIGHT

Attending a prod night is an intimidating task, but remember, the prod nights are more afraid of you than you are of them. I kid, of course. You can find nary a scarier experience than **mathNEWS** prod night.

Don't worry, much like walking through a minefield, the best way to attend a prod night is being guided by a person who has made it through multiple times and retained all their limbs.

Prod nights are split roughly into two parts. The first is from 6:30pm to approximately 8pm. It consists of a bunch of people sitting in a room writing. You should come and sit in the room and write. Don't feel pressured to talk to people during this part, but if you really want to, go around and ask people what they are writing. If socializing isn't your thing also, I understand. You can always just sit in the corner. That's the universal symbol for *I don't really want to talk to people right now*.

Part two is after we go to eat pizza, which generally means a room change. This is also the part of the prod night when people socialize more. If that's your cup of free pizza (the **mathNEWS** expression equivalent of "your cup of tea") then find an open seat and chat with your table mates.

Worst comes to worst, bring a friend. If you meet someone you get along with at orientation or your classes and are looking to get to know them better, prod night is an excellent place to do so. Much like a minefield, sending someone else in first to clear the way can be a helpful strategy. Hope to see you there with all your limbs attached.

aphf

mathNEWS

HOW TO KEEP UP WITH mathNEWS

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