*math*NEWS

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Academic Advising

We are very excited to welcome you to the Faculty of Mathematics at the University of Waterloo! We hope you are having a great time at Orientation Week. Your first year of university can be both nerve-wracking and exciting. We, your first-year academic advisors, are here to help you every step of the way.

Academic advisors are here to to make the transition from high school to university a little easier. In the next few weeks you will be told that things are different here—and they are. Material is harder, there is less class time but more homework etc. Our job as advisors is to help you navigate through the various rules and regulations to help you succeed.

Academic advisors can help you with general course questions, plan requirements, and the selection of future courses. We are also here to sign various forms for you, including plan modifications and course override forms.

For many reasons, at some point in your undergraduate career you might hit a speed bump. Whether your studies begin to slip or an outside factor is affecting your abilities in school, we urge you to seek advice from an academic advisor as soon as you can. We will be able to help you directly, or refer you to the appropriate campus service that can.

You can find a full list of advisors for each program and their office hours at `https://uwaterloo.ca/math/current-undergraduates/academic-advisors`. For general inquiries, you can stop in MC 4022 or email `mathuo@uwaterloo.ca`.

We wish you all the best in this coming year,
First Year Academic Advisors &
Mathematics Undergraduate Office

PRO TIP: Talk to your profs and TAs! They're nice and they want you to succeed!

*math*NEWS

*Seriously though… What's this math*NEWS?

Well, *math*NEWS is the University of Waterloo Faculty of Mathematics student newspaper. (Or publication, or magazine, or newsletter… whatever the editors feel like calling it.) We publish about every two weeks, usually on Friday, and issues contain articles, art, etc. written by people just like yourself! Being student-funded (some of your MathSoc fee goes here) and a volunteer publication, we are always in search of people who can write. Or draw. Or proofread. Anything, really. We'll even bribe you to come out to Production Nights every other Monday with free food. You don't need any experience, just interest. Plus you'll get to see your name (or pseudonym) in print!

The content of *math*NEWS itself will vary from term to term depending on who is editing (and writing). However, there is usually a *grid*WORD, a *mast*HEAD, and *prof*QUOTES. The first offers a prize for correct solutions. The second is a silly question posed by the editors, answered by all. The *prof*QUOTES are a collection of actual quotes as uttered by actual professors during actual lectures. Look for those elsewhere in the issue. In terms of other articles… well, have an opinion you want to express? A weird proof you thought up? Something that you think is funnier than what we're printing? A solution to one of our puzzles? Then if you're too shy to come out to an actual Production Night, submit such things to us by emailing `mathnews@gmail.com` or by dropping your submission into the **BLACK BOX** on the third floor (between the C&D and the lounge).

In the past, *math*NEWS has on occasion gone nuts and put out a parody issue like the recentish *CosMATHpolitan* and the not-so-recent *Mathlean's*, *Toronto Moon*, *ybarm*, *Daglobenpost*, *Mathim*, and *Impotent*. It doesn't happen often because those things take a lot of time and effort, but if you are nice to the editors they may give you a complimentary copy. We are working on a new special issue to be released soon, *Rational Mathematic* (you get a cookie if you guess what this is a parody of). Oh, and yes, *math*NEWS really has been around since 1973. (Issue 500 was another issue that took time and effort.) Feel free to drop by our office (MC 3030) when it's open to look at our *math*NEWS Gallery/Shelf o' Memorabilia, which includes, among other items: a piece of Red Room paneling, an EMS Library Sign dating back before the books were moved off the fourth floor of MC into the "new" DC building, and a silk-screen from Math Frosh Week 1979. And dirt. A disturbing amount of dirt in jars. You can even just come by to say 'hi' or drop off an article in person.

Oh yes, we have a web page, `mathnews.uwaterloo.ca`. You can find past issues there and maybe learn more about us. So enough rambling… the *math*NEWS DISorganizational meeting is usually held during the first week of classes in September (watch for posters). That's when we see about getting our act together for another term. Hope to see you there too!

Greg Taylor, Past Editor
Updated and transcribed by
Michael Perkins, Lenny Morayniss and Julie Sturgeon

*math*NEWS DISorganizational

*math*NEWS is like an old friend. It shows up, pretty regularly, every other Friday; makes you laugh, cry, and scratch your head trying to solve puzzles; and then says, "See you in two weeks!" Best of all, you can take it into class, and let it entertain you there, and your professors won't care. Heck, sometimes they read it while teaching.

Now, *math*NEWS doesn't just appear magically; it is put together by a very tight-knit group of writers, artists, proofreaders and *glorious* editors.

If you are interested in helping out with *math*NEWS, you should come to our disorganizational meeting sometime at the beginning of September. Send us an email at `mathnews@gmail.com` to learn when this is happening. Also feel free to stop in on one of our Production Nights (we post posters in the stairwells on production nights), check the door to our office (or come in if we are there!) at MC 3030, or email us at `mathnews@gmail.com`.

All of us here at *math*NEWS are always looking for new writers, proofreaders, artists, puzzle-writers, and general what-have-yous. Everyone who helps out gets to party with us at our end-of-term bash, and eat lots of pizza with us (not that sixteen slices makes you feel good two hours later… but whatever).

The Editors

8 Alternative Uses For Textbooks

So you were all excited and bought all your textbooks during Orientation Week. Now, the day of the exam, you say to yourself "I spent $150 on that book, I really should open it at least once." So here's a list of some things you can do with textbooks:

1. **Weapon:** Some textbooks weigh several kilograms and are easily thrown.
2. **Weight training:** Books are heavy, weighing quite a few pounds each, and are easily lifted.
3. **Look smart:** Books are a means to show off the fact that you are educated and usually weigh less than a stone.
4. **Fly swatter:** Once, during a lecture, Prof. Jackson took his backpack and threw it at a wasp on the ceiling. Do you really think that it would have killed the wasp without a textbook in it which weighed more than twenty newtons? Really?
5. **Building cardhouses:** Textbooks are sort of like big cards. So you can make really big cardhouses. Since most people won't have enough books to make a really kickass cardhouse, get your entire class involved. You know you have enough books when you are counting the books by the ton.
6. **Hammer:** Textbooks can bang things just like a hammer. They may even weigh many carats more.
7. **Screwdriver:** To put a screw in the wall, line it up where you want it and bash away. Works better if textbook exceeds 12 troy ounces.
8. **Lullabies:** The best way to fall asleep at night is to attempt to read a textbook. Or perhaps have someone bash you over the head with a textbook.

Dave Nicholson

Mental Health Services

Greetings, mathlings! This is a gentle reminder that there exist many resources for students with mental health concerns. There are a number of math students at Waterloo with mental illness, so you are not alone. (That includes yours truly!) If you have a mental health concern, or suspect that you may, please do not hesitate to get in touch with medical professionals such as:

- Health Services (519-888-4096)
- Counselling Services, Mathematics (519-888-4567 ext. 32655, MC 4019C)
- Mental Health Services, General (519-888-4567 ext. 32655, NH 2080)
- Good2Talk (1-866-925-5454)

You could also speak to a first-year advisor for academic and administrative advice, or register with AccessAbility Services for academic accomodations (519-888-4567 ext. 35082, NH 1132).

If you would like more information on how you can contribute to mental health reforms within the faculty, feel free to contact the Vice President Academic (`vpa@mathsoc.uwaterloo.ca`) or the Associate Dean Steve Furino (`scfurino@uwaterloo.ca`).

Wishing you the best,
Katherine Tu (AKA bunniED)

The First-Years Cornered

There are several things that one must remember from Orientation Week. Unfortunately, most of these things will be forgotten for various reasons. Below are a list of things first-years should learn over the course of the week.

- In a pinch, protractors can be used as spoons.
- On move-in day, if you let your parents go through your orientation kit first, there is a VERY uncomfortable silence when they see the condoms.
- The Comfy Lounge has always smelled like that.
- Telling jokes you heard at 5:00 AM from Tie Guard will not help you get dates, as what was funny then is incoherent rambling now.
- A good pick-up line is, "What's your co-op sequence?"
- Through an odd warping of space-time, profs are able to talk for 2 hours in a 50 minute period.
- The more you learned in your final year of high school math, the more you have to un-learn in MATH 135 and 137.
- If your roommate is an engineer, you had best sleep with your tie on to protect it, much in the same way they will sleep with their hardhat on.
- Hypnotized jocks are more fun than a barrel of monkeys.
- Imprint absorbs twice as much liquid as the other leading brand of paper towels.
- Software Engineers do not like being called "Softies," but that's their name regardless of the undertone.
- You should have taken the blue pill, not the red.

Ian W. MacKinnon

First-Year Council Representatives

Are you looking to get involved in your first year at UWaterloo? Would you like to represent your fellow first-years helping make decisions which affect all math students? If so, you may be interested in becoming a First-Year Class Representative on MathSoc Council.

MathSoc Council is the highest governing body of MathSoc, and is comprised of the MathSoc executive team as well as representatives from various years and programs. First-years (that means you) are one such category. Council meets about twice a month, and has power over Society affairs, such as allocating our over $40,000/term budget and serving as the student voice to the University. Councillors are responsible for voicing the concerns and issues of their constituency and are responsible for holding one public office hour per week.

In the first few weeks of classes, MathSoc executives and volunteers will be circulating in the first year algebra sections to hand out nomination forms and provide information. If you'd like to find out more about getting involved, come to MathSoc day on Sunday, September 13 at 12:00 PM or visit the office (MC 3038)!

We hope to see you on Council!

MathSoc Executives, Fall 2015

VPO Sez

My name is Simon Huang, and I'm the Vice President of Operations for the Math Society (MathSoc). MathSoc provides a ton of great services for Mathies (including you!), and I hope you take full advantage of what we have to offer.

On our website (`mathsoc.uwaterloo.ca`), you can sign up for an on-campus locker, read student course evaluations, and find out more about clubs. I'll also be working to expand our online exam bank this term, so you can be better prepared going into midterms and finals.

The heart of MathSoc is our office on the third floor of the Math and Computing building (MC 3038). We sell calculators, school supplies, printing, and a variety of novelty clothing (e.g. t-shirts with cheesy math jokes) at affordable prices. We also offer free textbook and board game rentals, stapler use, and candy jars filled with a rotating selection of delicious treats.

MathSoc loves when students get involved, so please do consider donating some of your time. Volunteer applications will be opening very soon, so keep an eye on our website. You can also find out more about MathSoc at our information session on Sunday. Enjoy your Orientation Week, and make sure to check out our office (MC 3038) when you get the chance.

Simon Huang
Vice President Operations, Fall 2015

VPA Sez

My name is Alice Zhou, and I am the Vice President of Academic for the Math Society (MathSoc). MathSoc is run by your student council, made up of student representatives elected by you to serve, represent and advocate for the students of Mathematics.

You'll see our executive team around during welcome week with our bright pink name tags, you can't miss us. Please come talk to us and ask us any questions you might have! Getting involved with MathSoc is a great way to connect with other mathies, so be sure to like us on Facebook (just search MathSoc) to stay up-to-date with all of our events and initiatives and to find out more information about how to run for a position as a first year representative.

You can also check out our website (`http://mathsoc.uwaterloo.ca`) to find out more information. One of the biggest service we have at MathSoc is the exam bank, which we are working to expand this term. If you have any questions, feel free to contact me at `vpa@mathsoc.uwaterloo.ca`.

All in all, welcome to Waterloo! I am so excited to have you join us. Hope to see you guys around.

Alice Zhou
Vice President Academic, Fall 2015

Prez Sez

Congratulations and welcome to Waterloo Mathematics! I'm Tristan Potter, the President of the Mathematics Society (MathSoc). We represent undergraduate Math students to the University and provide a number of services. While the full extent is too long to list in this column, they range from résumé critiques and food giveaways to managing the Coffee and Donut Shop (C&D), the MathSoc Office (MC3038) and the Comfy Lounge.

We also offer a place for students to get involved in student life at UW. We have a number of opportunities to volunteer or just to hang out with like-minded students. Check out one of our many clubs or volunteer with MathSoc itself! You can find most of our services and MathSoc club offices on the third floor of the MC.

If you want to know more, check out our website (mathsoc. uwaterloo.ca) or visit the office! We'll also be holding MathSoc Day on Sunday, September 13: details are on our Facebook page or on posters around campus. Good luck in your first year of University, and I hope to see you around!

Tristan Potter
MathSoc President, Fall 2015

PRO TIP: Hungry? There are free food events all over campus! You may get sick of free pizza soon.

MathFOC Sez

Greetings Math Player n! Welcome to the great adventure that is your undergraduate years Waterloo's Faculty of Mathematics, and to Math Orientation 2015: *Math's Got Game*!

Waterloo's Math Faculty is a one-of-a-kind place to be: the largest center for independent study in Mathematics anywhere in the world. You, the newly admitted, stand at the threshold of a universe of opportunity. As you choose your degree, you will realize there are virtually no limits to where you can take it and where it can take you.

That is why your experiences during Orientation Week are so important. This is your chance to forge connections and lasting relationships with dozens of knowledgeable upper-year leaders who are more than happy to give advice based on their own experiences. This is your chance to acquire the tools for success (academically and socially) that will guide you throughout your career at Waterloo and beyond. This is your chance to adapt to your new home, get comfortable and learn what is expected of you, before you have to attend lectures and write assignments. And, perhaps most importantly, this is your chance to meet and bond with your fellow classmates before the start of term. They will be the people who will serve as your primary social and academic support network throughout the course of your degree. They will be the foundation to the rest of your university career.

Make the most of your Orientation Experience! Ask the big questions! Explore! Attend events and make friends! You'll find no shortage of people: people just like you as well as people from very different backgrounds. Get to know both these groups of people.

Discover the rich history and traditions of this Faculty as you earn your Pink Tie and discover what it truly means to be a part of this unique community. And it doesn't end when classes start: get involved in MathSoc, Feds, and the many student clubs and services on this campus; take part in RezLife or Off-Campus Community events. You may even wish to become an Orientation Leader yourself!

Math Orientation 2015 is the culmination of a lot of hard work from a lot of passionate people. We can't speak for all of them, but it has been a truly amazing experience for the three of us, and we hope that all our hard work has paid off in making this week one of the best of your lives.

> Andee Liao, Ford Peprah, Jazbel Wang
> Federation Orientation Committee 2015
> Faculty of Mathematics

PRO TIP: **37% of all statistics are fake, and over 90% of students don't carry staplers. Luckily, MathSoc provides free stapling for assignments.**

VPI Sez

My name is Kevin and I'm the Vice President Internal for Mathsoc. Basically, I'm in charge of the events that we put on (maybe that's why it used to be called VP Events) and making sure that all of our math clubs are running smoothly. Keep an eye out for our emails and posters about everything that's happening and how you can get involved. If you have any ideas for an event or any suggestions, feel free to send me an email or drop by the office to yell at me in person.

Hope to see you soon!

> Kevin Xu
> Vice President Internal, Fall 2015

Outside the Known University

Many first years students find themselvs never leaving campus. Here are a list of cool things you can do if you ever decide to brave the other side of Ring Road.

1. Waterloo Park is a nice park just south of Campus. There you will find playgrounds and petting zoos as well as many interesting events held in the park. For example, on September 19 the Royal Medieval Faire will be held there. It costs only $5 to get in.
2. The Princess Cinema and Princess Twin are small indie theatres in Uptown Waterloo. They tend to show films that you wouldn't usually see at the big branch theaters. They also have a lot of cult classic hits. You can purchase discount tickets at the Turnkey desk. Check out `http://www.princesscinemas.com/` for movie times
3. KWLT (or Kitchener-Waterloo Little Theater) is an amateur theater company in Waterloo. Their two major production this fall are *Whose Afriad of Virginia Woolf* and *Cinderella*. You can find showtimes, audition information and buy tickets at `kwlt.org`.
4. Theater on the Edge is a live improv comedy troupe in Uptown Waterloo that does a show every Thursday for $5. It's a great idea for night out with friends (or a cheap date night). You can find more information at `tote.ca`.
5. Adventure Rooms are an escape-the-room puzzle game where you are locked in and given 45 minutes to escape. A fun challenging activity to do with friends. We did this for a *math***NEWS** event once, and it was a lot of fun!
6. Adventure Guilds and Games on Tap are two board game cafés in KW if you ever get tired of playing your free board games in the C&D.
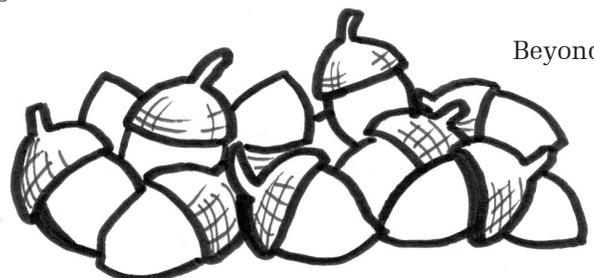
> Beyond Meta

deez nuts

Extracurriculars
They're Still Things!

Now that you're at university, you should be focusing on your studies. You're paying money to be here and learn, of course. However, just because you're in university doesn't mean that you should give up all of your favourite extracurricular activities. It is more than possible to succeed in your studies and still have fun doing non-math-related things. Here are some common ways to continue doing the things you love:

Varsity Sports and Intramurals: If you play a varsity sport, such as hockey or squash, or if you do cheerleading (check the UWaterloo Athletics website for the full list of sports), feel free to try out for the teams! Varsity sports are a great way to continue to train and be competitive in your sport, and athletes can get perks, such as reserved training time and free massages. If you're not that competitive, but you still want to play, there are intramural leagues for many commonly-played games, notably dodgeball, handball, and ball hockey, amongst many others (check online for which leagues are being offered). This is a great way to play the sports you love or to try out new ones! There are also various lessons offered by Campus Recreation, like swimming and dance.

Music: There are many ways to continue making music at Waterloo. The Music Department offers studio and theory/skills courses at a variety of levels, and more importantly, has a handful of ensemble classes for which you can audition, including a jazz band, two sizes/styles of choir, and chamber ensemble groups. These classes are worth .25 course units each, half of a normal course, so it's a neat way to obtain some of your non-math credits. Separate from the Music department is the university's orchestra; if you're talented and play an orchestral instrument, the music is at a high level and is rewarding to master. UWaterloo also has a vibrant A Cappella community comprising of several distinct groups that sing on campus. Other groups include the Concert Band Club, the Warriors Band (our pep band at sporting events), and an informal jazz combo, amongst many others. And

if you just want to listen, most concerts take place at the end of each term; come out and take in some great music!

Theatre: The main way to get involved in theatre on campus, outside of Drama courses, is to participate in FASS! Standing for Faculty, Alumni, Staff, and Students, FASS is UWaterloo's musical theatre troupe, and they write and stage their own show every February. Auditions are in early January, so it doesn't take much time at all, and the commitment ranges from a small acting role to a stage/band/tech role to the star of the show! It's a great experience, and can lead you towards other theatre opportunities off-campus, such as at the Kitchener-Waterloo Little Theatre (small theatre), and Theatre on the Edge (improv comedy). The Engineering Students Society usually puts on a production called EngPlay as well, so there's lots of theatre to see.

And More! Early on in each term is an event called Clubs Days, where you can learn about all the clubs on campus and see if any of them do some of the things you do! For almost everything, there's a club or group doing it. For trivia, there's the Quiz Bowl club; for Dungeons and Dragons and other role-playing games, there are WatSFiC and a couple of separate groups; there's the Campus Crusade for Cheese, where you can hang out and eat awesome cheeses; and the Go Club, for competitive players and beginners alike! Watch for details on the Feds website, `feds.ca`!

Make sure to go out and do things that aren't related directly to your academics. Studies show[citation needed, I guess], and personal experience verifies[it's not even possible to give citations for this] that students tend to be happier and more motivated if they're doing some extracurriculars. It's fun, and it allows you to relax, so that you can work better when you do get back to studying. All work and no play makes a student's happiness delay.

Scythe Marshall

Feed Me!
Om nom nom nom

It has come to my attention that I am hungry. I'm usually stuffed full of Mathie goodness, but I was abandoned for most of the month of August.

You can feed me most anything; I'm not very picky. Some of my favourite foods include: grid**WORD** solutions, prof**QUOTES**, articles, comics and money. Especially money.

Please send all food to me care of my top slot. I can be found between the Comfy Lounge and the Math C&D. And you can feed me online too! I can't use the Internet myself, but if you e-mail the nice people at `mathnews@gmail.com` they'll feed me at no cost to you! Please don't send food as attachments though; just stick it into the body of the e-mail and it'll be scrumptious!

The mathNEWS BLACK BOX

A Serious Problem

I'm tired of walking into a bathroom and finding a toilet bowl full of yellow liquids. The students here at the University of Waterloo obviously have a serious problem. We're all university level students, and yet we still have this ridiculously simple problem. It is quite clear to me, that we students, we very disappointing students, are completely incapable of hydrating ourselves. Yellow urine is a sign of dehydration, and as citizens of a first world country (or at least residents), we really shouldn't be suffering from this problem. So here's one solution: get a water bottle, put water in it, drink the water periodically. Or at least drink something periodically (that doesn't mean alcohol, despite what films have taught you about university life). It'll be worth it: if you're dehydrated, you're liable to be more tired, cranky, and headachy.

Also, it might be good to remember to flush the toilet.

TheNotChosenOne

A Faculty for All
Queer Students in Math

Hello there, new mathies! Welcome to the Math Faculty, your new home for as long as you'd like it to be. By the time you get to read this, you've had a chance to meet a number of your fellow peers, forged your place in residence, and have begun to settle in. Most of you will have found somewhere to fit in, maybe even for the first time (I'll admit that never truly felt like I was in a group until I came to Waterloo). Unfortunately, for some, it may be a more difficult endeavor to feel immediately accepted. I want to use this article to talk about queer students, a group who may experience such difficulties, and how we all can help ensure their experience is a more positive one.

My thoughts for queer students:

I'd like to preface this by saying that the following is my personal experience in the early parts of my first year. Other queer students I spoke with did not have the same experiences as me: some were better, some were worse. No matter what, every experience is valid, and it is important that we recognize this and learn from them.

My name is Darcy, and I was a male student here at Waterloo (I graduated last year). I started in the Math Faculty in Computational Mathematics, where I stayed two years before switching to Social Development Studies. I enjoy playing Sniper in Team Fortress 2, board games, Euchre, tobogganing, and reading young adult literature. Also, I'm gay. First year is still a fresh memory: PlayFair, a blend of anonymous faces, the Pink Tie was (and still is) my idol, and I can still taste the delicious free Campus Pizza. Yet after my first couple of weeks, all I could think was: what did I get myself into? Often I heard sexual or gender identities discussed in a derogatory or negative light. Luckily for me, I came to school out of the closet, but I could notice that some in my faculty group purposely avoided me because of the Pride band I wore. Even in the small group of friends I initially made, I could tell they were uncomfortable with my sexuality. Any mention of an attractive girl would spawn an extended conversation, but bringing up the date I had planned resulted in an awkward silence and change of subject. For a long time, I did not see any queer couples holding hands in public or participating in campus events, nor did I meet any other queer first years. It was surprising just how lonely I felt. It was like I was backed into a corner—but I wasn't about to go back in the closet just to make friends. It took me a while before I could find a group that I felt comfortable connecting with.

I feel that there is much to be desired when it comes to issues of sexual orientation and gender identity in the Math Faculty. At a minimum, I've personally felt as though this aspect of my identity was invisible, and unimportant. At worse, I have been actively shunned, insulted, and rejected by some of my fellow Math students because I insisted on living openly. With all that said, though, the situation is not bleak. While there are pockets of negativity in this faculty, there are plenty of pockets of positivity too. MathSoc is a great example of somewhere I felt comfortable, where I was able to meet positive and open-minded people, and where intolerance was actively rejected. I also did manage to make some great friends whom to this day I consider some of my closest allies, and who support me in all of my endeavors. Not to mention that Math is one of the few places where I can meet people with similar interests and personalities as my own, so it became a great environment once I had found my place. Even if your initial experiences are as difficult as mine were, please remember that there are many people within this Faculty, each with their own opinions and beliefs. Eventually, you will find people who will accept and support you for who you are; it is not a matter of "if", but of "when".

My plea to the school community:

There are queer students all across campus, including the Math Faculty. Odds are you've talked to them already this week. They may very well be one of your new friends. You may have heard of the concept of a "gaydar", or the ability to divine the sexual orientation of a person based on appearances. However, "gaydars" are typically inaccurate, and you really have no idea if someone is queer unless they've told you. For example, you may notice a loud, effeminate, or well-dressed guy in one of your math lectures. He may fit every image you have of a gay man. You may even be right (statistically you wouldn't be, but we all make lucky guesses), but would you know that that sorta nerdy, "straight-acting" best friend of his who obsesses about League of Legends and NASCAR is actually his boyfriend? Or maybe, despite identifying as male, he was assigned female at birth and is taking hormones? Queer-identified people come in many shapes and sizes, from many backgrounds and cultures, and with diverse personalities. Some of them end up in this faculty, or in your electives, or on your residence floor. Not all of them have come out, and many of them you'd have no idea that they identify as a queer person. If, instead of assuming that a person has a particular sexual or gender identity, you take time and effort to personally acknowledge that you are unaware of the identity of those around you, you take a great first step in making this faculty a better place for these students.

This is an important first step to make too, because students such as yourself shape the environment of this faculty. Once you start taking classes and spending time amongst the general population of the Math faculty, I challenge you to take some time and observe how people treat sexuality in their discourse. You may notice some blatant examples of the stigma I'm talking about, for example when people make homonegative remarks like "you faggot" or "that's so gay." If you pay close enough attention, you'll notice more subtle examples, like how in conversations people tend to assume others are heterosexual without a basis for this assumption. These kind of behaviours breed a culture of queer-negativity, because much of this behaviour is observed and learnt. Now, I'm not saying that queer-identified people are immune to this phenomenon, but behaviour like this can only spread when it is dominant and often observed. As a result, I beg of you: please be conscious of the message you are sending when interacting with your fellow mathies, don't be one of those students who mimics this behaviour, and therefore spreads this culture.

`(define this (not cool))`

A How-To Guide for the Advanced Courses
And Why They're Not Quite as Scary as You Think They Are

Do you remember choosing your courses this past summer, and reading about MATH 145/147 and CS 145? These are the so-called "advanced" level math and computer science classes that you can take in your first term in math at UWaterloo. This is an article intending to clarify the role of the courses, and emphasize why you should consider them.

The advanced math courses are called "advanced" not primarily because of a difference in difficulty level, but because of a difference in approach. The advanced math courses focus on teaching you theory and proofs, as opposed to applications. In the advanced math classes, you will see definitions of mathematical objects and properties, as well as statements and proofs of general mathematical statements. On your assignments, you will be expected to use these results to prove (or decide the truth of) other statements. The focus is on a theoretical understanding of math in the abstract case, as opposed to how to use math to compute things in concrete cases.

Doing assignments in advanced math courses is a lot like solving puzzles. You are given all the pieces of the proof, all the ideas, terms, definitions, and theorems you will need, and you just need to figure out how they fit together to complete the proof. Admittedly, these puzzles will sometimes be significantly more challenging than the similar ones that you would see in the regular honours level courses, but it tends to be the case that if you participate in the course and put effort into it, you'll gain the tools to succeed.

The advanced level computer science course, CS 145, is a faster-paced version of CS 135, where you jump right in to high-level abstraction and algorithms. In much the same way as the math courses, CS 145 does emphasize the theoretical aspect of programming, but it also challenges you to work on how to code effectively and efficiently. This, and the follow-up course CS 146, can be great starting blocks for a successful CS degree and career.

Note that it is indeed true that the advanced courses are not for everyone. Not everyone appreciates or needs to know the theoretical aspects of algebra or calculus or computer science, and that's just fine. However, if you are interested in what the advanced courses are all about, there is no reason you should be wary of trying to take them.

There is theoretically (hah!) no downside to enrolling in the advanced courses—you can drop from the advanced courses to the corresponding regular level course at no penalty, right up until the day of the final. This is a special policy that is designed to give you the opportunity to succeed. Practically, this is a bit of an issue if you actually do drop down very late in the term, because you will probably have not had the same amount of practice as the students in the regular level course at some of the more computationally heavy portions of the course. Talk to your professor and advisor as soon as possible if you end up contemplating this option.

More information about the advanced courses is available at the special information session during Orientation Week, if you're reading this before it actually happens, and from the first-year advisors and the Pure Math/CS departments. Now that you know a bit more about the advanced courses, and are hopefully intrigued by them, you should learn how to enroll in them! If you didn't have the option to do so earlier, you'll have to talk to the instructors who are teaching the courses and fill out course override forms which you can submit to the Registrar's Office. Procedural information can be found online.

If you are trying to transfer courses, and you haven't yet, try to at least sit in on the lectures of the target class. Keeping up on the material in the advanced courses is highly important, especially early on.

Once you're in an advanced course, be sure to put effort in! They are usually more challenging, if not by design, but they are very rewarding, both epistemologically and grade-wise, since the idea is that if you are in the advanced courses, you'd probably do very well in the regular level courses. This is dependent on the work put in, of course. Note that your class is much smaller than a usual first-year math course, and so it's not only easier to meet others in the class, but establishing relationships with them and with your professor will be much more fruitful, as you can work on problems together or get help. The advanced math community tends to be close and supportive, so you'll never be alone in any struggles you might have.

Best of luck!
Scythe Marshall and TheIdentity

XNORLAX
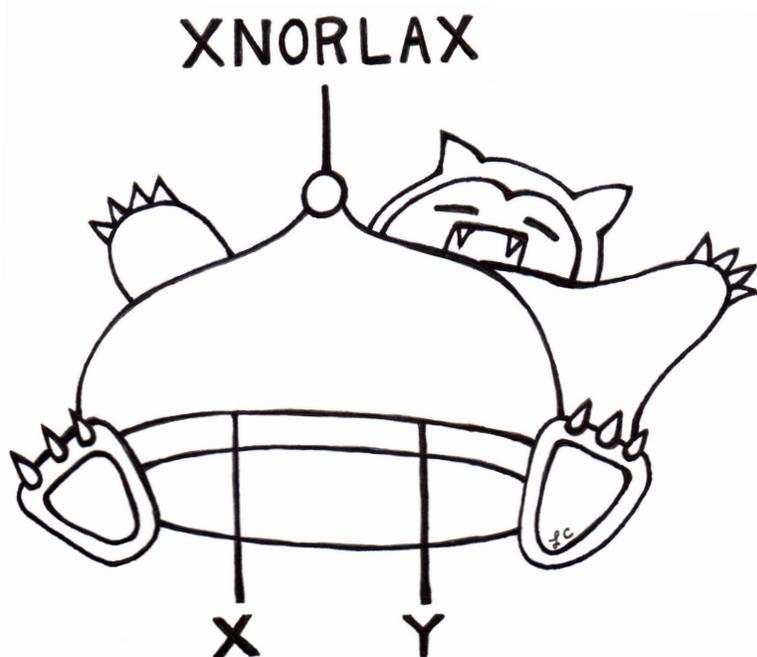
Mathematical Fiction For the New Fraa or Suur

Welcome to math at Waterloo! You may realize while you're here that you can't get enough of mathematics, and your courses just aren't cutting it. If you're ready for it, I highly suggest you dive in to reading papers, but if you're looking for something a bit "lighter" I have compiled a list of good fiction in no particular order.

The Wild Numbers: A Novel by Philibert Schogt. The Wild Numbers is a made-up problem for the novel, but the work describes fairly well what would happen if a mathematical nobody managed to prove Fermat's Last Theorem, or one of the other greats. As it happens, truth is stranger than fiction, and we have had a few of these examples pop out of the woodwork. Still good for inspiration.

Surreal Numbers by Donald E. Knuth. A novella by Knuth about two students trapped on a desert island, who go on to recreate all of mathematics. A fun read to understand why the underpinnings of math are the way they are. Available for free on `archive.org`.

Math Girls by Hiroshi Yuki. This is a novel that was adapted from a manga and has been translated from Japanese. It deals with three high school students who like math and their teacher who helps encourage them. The math content is mostly combinatorics and it is an excellent supplement when taking MATH 239/249. There is also a sequel about Fermat's Last Theorem.

Logicomix by Apostolos Doxiadis et al. A semi-historical biographical graphic novel about Bertrand Russel and the search for truth in mathematics. It uses some characters in an anachronistic way, but they are meant to represent letters and opinions of contemporaries in the mathematical community, even though they may not have actually met. Very light on mathematical content, it can be shown to lay persons with no issue. Also by the same author is Uncle Petros and Goldbach's Conjecture, which covers a lot of modern mathematical history.

Flatland: A Romance of Many Dimensions by Edwin A. Abbott. A satirical novella about class and society in Victorian Britain, endured moreso because of its examination of the concept of dimension and the ability to relate it to lay people. There is also an animated film inspired by it, and a non-authorized sequel called Flatterland, written 100 years later and dealing with non-Euclidean geometries.

Anathem by Neal Stephenson. The inspiration for the title of this article, Anathem deals with math monks and mathematical philosophy, as well as multiverses and quantum mechanics, from a couple of different perspectives. There is not much pure mathematical content, but it is an enjoyable romp with people whose thought processes you can understand. Also by Neal Stephenson is Cryptonomicon, a novel about codebreaking in World War II and more modern cryptography.

The Difference Engine by William Gibson and Bruce Sterling. One of the progenitors of the steampunk genre, The Difference Engine imagines a world in which Charles Babbage's Difference Engine was built in the early 1800s, and deals with an imperial world with computing and information technology. Interesting in the notions of social ramifications of technology.

NUMB3RS created by Nicolas Falacci and Cheryl Heuton is a TV show about an FBI agent who uses a mathematician to help him solve crimes. The math presented in the show was verified by mathematicians, although there were some concerns as to how it was used, considering that at times it seemed only tangentially related to the plot. There is also a blog about the math behind NUMB3RS. It is six seasons long, so this might be one to take a bit at a time.

Alice's Adventures in Wonderland and **Through the Looking Glass** by Lewis Carroll. The fantasy work by Carroll, a pseudonym for an Anglican Deacon and logician, is inundated with logical wordplay and puzzles, surely to amuse the budding math student.

Gödel, Escher, Bach: An Eternal Golden Braid by Douglas Hofstadter. The penultimate work on symmetry in human thought and creation, it examines three people over time and considers how they are similar and different.

Ice Nine

N Things You Should Know About Your WatCard

Waldo enjoys using it a little too much.

- It is a bus pass for the Grand River Transit. Simply show it to the bus driver and you can ride to wherever you need to get to!
- It is linked to your meal plan and flex dollar accounts, letting you just swipe to pay for things.
- If lost, immediately report it to the Watcard office or use `http://watcard.uwaterloo.ca/` to deactivate it to ensure that none of the money is used by someone else.
- It costs $20 to replace (but free if it breaks and you keep the pieces) so do your best to not lose it!
- You will need to bring it to EVERY EXAMINATION that you write. Don't forget it!

- It can be used at a lot of places on and off campus, including: restaurants (like Tim Hortons, Subway, East Side Mario's and the residence cafeterias), some stores (like those found in the University Plaza), the libraries (for things like printing, photocopying, and signing out books), the laundry machines in residence, Waterloo Taxi (519-888-7777) and many more! For a complete list of where WatCard is accepted, visit `http://watcard.uwaterloo.ca/`.
- It is used as collateral for resources provided by certain services, like signing out games from MathSoc or booking a room from the Turnkey desk.

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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 of which to be a part, 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 Computing 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. Some of the ways in which you can volunteer are to help staff the office, organize and run events like the our many Pi Days (we have three of them, one for each term!), and be a student representative on MathSoc Council.

The MathSoc office is in MC 3038 and has many services:
- Faculty of Math approved calculators for the best prices on campus (if you took part in Orientation Week, you already got one in your kit!)
- 5¢ photocopies for those lectures you missed.
- Staplers to staple those late-night assignments together!
- Computers, with printing for 10¢ a page.
- Locker signup so you don't have to carry around those heavy books all day. You can register for a locker online at `mathsoc.uwaterloo.ca`.
- Textbook library so you have access to material when you don't have your books with you. This includes most first- and second-year core courses.
- Cool math T-shirts, sweatpants, Frisbees, bags, and more, to help you show off your math pride!

They also run various social events throughout the term. You can keep up to date with what's happening in MathSoc by visiting their website, `mathsoc.uwaterloo.ca`, or by liking Mathematics Society on Facebook!

Program Clubs: Almost every program in the Math Faculty has an associated club, which runs events geared towards their members' general interests and an office where you can meet like-minded students in a social setting. For example, the Pure Math, Applied Math, and Combinatorics and Optimization Club (the programs are small!) runs Prof Talks and math contests, and the Computer Science Club has Code Parties and Unix Tutorials. Club members tend to take courses together, so there are likely to be students with whom you can work together. 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. Finally, note that a large number of Stats- and ActSci-related clubs are actually located in the Mathematics 3 (M3) building. They're further away, but we still love them!

Orientation: Depending on when you're reading this, you're most likely either currently or have finished participating in Orientation Week. If you feel so inclined, next year you can switch roles, and be a leader of new students! In a leader role in Math Orientation, you have the opportunity to be a guide and role model for new students, and have a lot of fun along the way, meeting and working with the many other leaders; it's fulfilling and enjoyable to make the week go smoothly, and there are certain things that you only really experience as a leader. Watch for applications online! We've recently moved to the 4ᵗʰ floor, but check us out anyway!

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 on occasion. There is also a balcony available, with some seating space there. The Comfy is where you can relax for a time, study or read in a nice chair, or participate in a MathSoc General Meeting. It is ***not*** for sleeping; that's what your room is for. The chairs are indeed comfortable, though, hence the name. As an aside, in both lounges there are microwaves (see the *math***NEWS** archives for v122i4 for instructions pertaining to the one in Comfy); this is remarkably useful. A wide variety of students use both of these spaces; you're almost guaranteed to run into someone you know, or someone you wouldn't mind meeting.

That's a basic rundown of what you can find on the 3ʳᵈ floor of MC; there are also labs and assorted study spaces on 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

***PRO TIP*: If you don't want to buy textbooks at full price, you can borrow them for free from MathSoc, or at a discounted price from the Feds Used Books Store in the SLC.**

pytha**GORE**an theorem
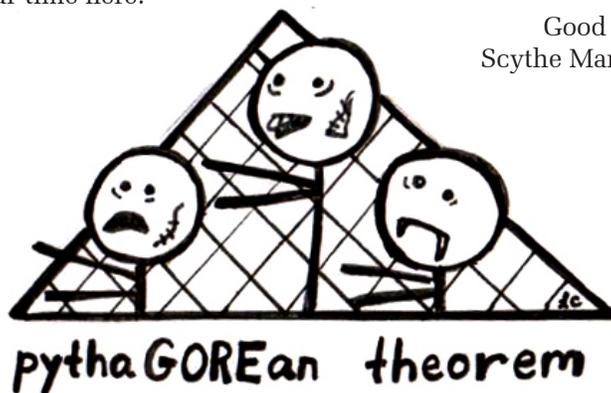
Smoking Hot Co-op Advice

Since the co-op process can be pretty intimidating and un-intuitive for newcomers, I'll outline some tips for blazing your way to success on your first co-op. The CECA (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/extracurricular 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 secondary 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 *math*NEWS *cough*shameless plug*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. Ex. "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 three to five 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 business wear, and arrive at least 10 minutes before the interview. Some interviews may start early, 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, all you can do is smile, be sincere, and try your best.

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, CECA 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

N Things to Know About Waterloo
Waldo still needs to learn a few more things too.

- The geese are here to stay, no matter the season.
- If you want to get involved at Waterloo, check out Clubs and Services Day in the Student Life Centre to see what clubs you can join.
- Sometimes random things end up in random places, like the snowman on top of the Biology building one winter.
- The ninjas always seem to invade "N Things" but no one really knows why. [*No we don't!—bunniED.*]
- You'll likely figure out what kind of university career you want to take and how you need to get there by the end of your first term (or your first year).
- There are underground tunnels and overhead passes between buildings for warmer travel during the winter.
- If you need certain things, like stationery or printing, MathSoc is often the cheapest place on campus to get it (but remember, it's cash only!).
- Time management and scheduling can play a huge part of any term.
- *math*NEWS can be a good escape from the hustle and bustle of Friday mornings every couple of weeks or so.
- If you want to find Waldo, try coming out to a *math*NEWS meeting and writing for us!

waldo@<3.LE-GASP.ca

The Down-Low on Feds Clubs

Clubs are a great way to get involved and meet awesome people at UW. The important thing to keep in mind is that quality friendships take time and effort, so don't expect to have found your new BFF after one club meeting. Your best bet is to find one or two clubs that you like and attend them regularly. Personally, I found that it took about a year before I felt that I was part of a community.

You can find out about all the different clubs by visiting `http://www.feds.ca/clubs-section/clubs-listing/`. Every term on the second Thursday and Friday of class there is a huge club day fair in the SLC Great Hall where you can talk to representatives from every club. This event is called Clubs Days. I recommend finding out what clubs interest before Clubs Days so you can go directly towards these clubs. The event itself can be really loud and crowded and you probably want to minimize the amount of time you spend in there.

If no club interests you, you can also start your own club. Every Feds club gets a $75 budget each term. To become a club, all you need is a constitution outlining what your club is about and 7 members. If you don't know 7 people, your best bet to find them is by joining a different club. Given the knowledge that person is willing to join a club means that they are more likely to be willing to join other clubs. You fill out your paperwork and ta-da! You are now a club free and free to spend your club money how you see fit. I personally recommend rainbow suspenders and nerf guns*

Beyond Meta

*These were actual expense of the club WHIMSICAL which was about fancy tiles and silly costumes.

*grid*WORD Solution

*prof*QUOTES

Don't profs say the darndest things? *prof*QUOTES is where you will find amusing things uttered by professors and recorded by students like you. If you think one of your professors has said something quotable, send it in (along with their name and the course code) to *math*NEWS either by email (`mathnews@gmail.com`) or dropping it in the **BLACK BOX**, and you will probably find it in the next issue! It could be an incentive for you to stay awake in class. Below are some examples of quotes uttered in classrooms within the last year.

"If I'm a figure skater and I spread out, I spin slower. Also my butt drags on the ground, but that's not in the model."

Statsna, AMATH 463

"Run this bit of code, and if it stops, blow up the operating system."

Buss, CS 245

"That part is clear once you stare at it for a while."

Geelen, CO 342

"Do you understand it now? I will promptly give you another example so you don't understand it, because that's what we do in mathematics."

Jao, MATH 239

"If we can answer an unanswered question like that, then your tuition needs to be higher."

Lushman, CS 241

"Lemmas are just theorems that nobody gives a shit about."

Watrous, CS 360

That's long division, that's not something I do in public."

Wagner, MATH 239

"If you can't calculate the area of a square or triangle, something's wrong."

Liu, NE 352

"Why is it called the parallelogram law? Well, because it was proven by Joe Parallelogram."

Marcoux, PMATH 453

"If you come up with a proof, meet me in a dark alley and I'll bring my baseball bat to knock you out [and steal your solution]."

Furino, CO 480

"It is surprisingly hard to write real sentences."

Purbhoo, CO 330

"Last time I checked, 200 was pretty close to infinity."

Drekic, STAT 230

"All good mathematical equations can fit on a cocktail napkin."

Bauch, AMATH 495

Why You Should Write for *math*NEWS

Why should you write for *math*NEWS? Yes, you, the one reading this right now. No, not someone else who might happen to be reading *math*NEWS, just you. I really think you should write for *math*NEWS. "But why?" I hear you wonder. Yes, I heard that, I hear all. Well, there are many reasons to write for *math*NEWS.

- **It is fun**. This cannot be overstressed. It is fun, or at least it should be. If you're writing for anybody at any time and it is not fun, then something is wrong, or maybe it is a mandatory communications course, or a work report, or… fine. But writing for *math*NEWS is fun. You can rant, point out what you find funny about life, or just express yourself however you like, whether on your own time or during Production Night, and it's all really quite a lot of fun.

- **It looks good.** On, say… a résumé. Employers always want good oral and written skills; what shows that better than contributing to a bi-weekly publication? You don't have to answer that.

- **You get published.** *math*NEWS is an official publication with an ISSN. Two copies of every issue go to the National Archives. Beyond being released to the entire campus every other Friday, and mailed to our subscribers, your work will also be published online on our website (`mathnews.uwaterloo.ca`), which is pretty highly rated on Google and is functional *most* of the time.

- **People read it.** People will read it. At least people pick it up. Some might try and tell you no one reads *math*NEWS, but after a few weeks of distribution detail you discover just how many people do. Late in the afternoon when I return to campus to clean up at the end of the day, I see people walking home with *math*NEWS in their hand. I see both students and faculty picking up copies. Some profs get issues mailed to them. People at bus stops waiting to take the bus home have copies in their hands. Look—right now, you are reading *math*NEWS.

- **It is rewarding.** In so many ways. From e-mail from 14 year-old boys who use AOL to letters from Iran, your material can generate a response. You have the chance to make people, your fellow students, laugh and/or think on Friday mornings. There is also the rewarding feeling of creating a piece of writing and knowing it will be published. Some also find the free food a kind of reward.
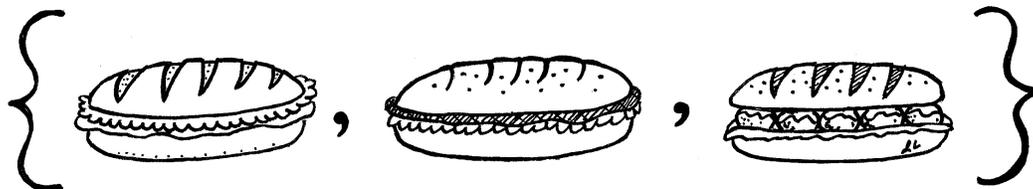
Phat Albert

Unnatural History of *math*NEWS

In the beginning…
there was *math*.
Then we tacked **NEWS** onto it.
But that's not the whole story.
For the whole story we must go back,
Waaaaaaaay back,
To the start of the epoch.
OK, shortly after the epoch.
Give it a year.
The mathies were restless.
They had been doing their math for a full graduating class.
But they didn't feel satisfied.
There must have been more,
Something beyond the integrals,
The analysis,
And the batch jobs that suffused their existence.
Great ground was being broken in Math and CS!
But the mathies no longer wished to use their creativity!
So one day,
In 1971,
They wrote an article.
And it began like this…
"They did and it didn't"
And then they wrote about real news.
They reported about the nice things,
Like the C&D
When it was just a stand on the 3rd floor.
And for a time… it was good.
And then it got better!
Puzzles were placed,
*grid*WORDs were generated,
*prof*QUOTES were professed,
And columns came and went as students graduated.
And that's the truth,
Or so I shall tell you.
The real story is way more exciting.
It has dinosaurs,
And high powered lasers,
And several rings of power.
As I recall, a time machine was involved.
How did you think the science paper Dark Matter came about?
At one point there was a division by zero.
The less said about that, the better.
In either case,
The mathies rejoiced.
For they had *math*NEWS!

The Unnatural Historian

SUBSET

A First Year's Guide to the MC
(or: Stop Asking Me for Directions)

Welcome, newbies! Now, being new students you no doubt find the MC to be a large, terrifying behemoth of a fortress from which no soul can ever escape. That doesn't go away. But I'm here to make you lost slightly less often when you're wandering these desolate corridors.

First of all, in each corner of each floor is an extremely useful map of the floor (just like in every building on campus), with room numbers and little pictures. If you're looking for a class or professor's room, these maps are key. (For the purposes of this article, West is defined to be the side closest to the SLC.) Also, every floor has women's rooms in the Northeast and Southwest, and men's rooms in the Northwest and Southeast. So you don't have to walk down more than one side of the building to find a bathroom.

First floor: You might have a class on the South side of this floor, but more important is the CHIP on the North side. They'll sell you software at a discount and fix your computer if you ask them real nice. Helpful people. There are exits at each corner of the building (and on the south side) halfway between first and second floors.

Second floor: You will probably have a few classes here, mostly on the North side. There are a couple of computer labs here, if you're in need of a computer lab. Media.Doc is in the middle of the floor too. This is a useful room for printing out anything you can't do yourself. Class slides, assignments, work reports, pictures of yourself sprawled out on a bed of rose petals…just bring them a data stick and they'll print out what's on it, in whatever quality you want. They also do binding, photocopying, course notes, ID photos, and lots of other printing activities.

Third floor: This is really the heart of the MC. You have the Comfy Lounge and the C&D on the South side, most of the club offices on the East side, more labs in the middle and West side, and the MFCF over near Northeast. If you have problems with your Waterloo accounts or other computery problems, you can see them. It's also the home of MathSoc (MC 3038). You should swing by if you get the chance; they offer a lot to math students.

Fourth floor: There are a lot of classes here, as well as some important offices. The Math Undergrad Office, which you'll need to get course override forms and all kinds of administrative things, is on the West side. The Math Orientation Office is also on this floor.

Fifth floor: There are prof offices here, as well as a couple of program offices (like Pure Mathematics on the East), and the Dean's. As well, the South side has the CEMC, which is the department that helps schools in Ontario and all over the world to teach math and computers. Really great people. Starting on this floor, the bathrooms start being a lot cleaner, too.

Sixth floor: Once an endless labyrinth of twisting corridors, the sixth floor has recently been renovated and is occupied by mostly professors of Combinatorics and Optimization.

Seventh floor: IT DOES EXIST! I'VE SEEN IT! IT— *[The rest of this article has been withheld by the University Censorship Board, which does not in any way confirm the existence of a seventh floor of the Mathematics and Computers building.]*

Prometheus

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

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. Those who work in sepulchres or open-pit mines don't usually get covered with as much murk and mess, so I find them the best after the act of taking a miner, but getting them is awkward. 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

PRO TIP: **Need stationery? MathSoc sells things at very low prices! There are also stationery and book stores in SCH and SLC.**

Nutrition for Mathies

Be wary of the free food...

Greetings, oh effectors of the Math Faculty's future. For many of you, university will be the first time in your life that you have full control over what and when you eat (subject to class restriction). With this freedom comes the responsibility to eat properly.

The most important part of nutrition during first year is simply the problem of eating enough. It is very tempting to have a quick breakfast, or even no breakfast, before an 8:30 lecture, followed by a brief lunch, and a normal sized dinner. Similarly, it is easy to get into the habit of consistently eating convenience food style meals at the cafeterias on campus. Both of these are suboptimal. Not eating enough will result in bad moods and impaired academic (or for that matter, anything else) performance. Eating too much convenience food will (usually) result in a general feeling of malaise. Once you are eating enough, the next challenge is to be eating the right things.

Especially in residence, it is very easy to get into a habit. For example, in my first year I would have a chicken wrap nearly every day. Although it consistently tasted good, I doubt it was good for me. It is said that variety is the spice of life, and the same holds true for eating. Eating different things makes it more likely that you'll end up with all the various and sundry nutrients your body needs. Colourful meals tend to be better for you than less colourful ones.

Finally, one way to make healthy eating choices easier is to publicly identify yourself as someone who eats well. Furthermore, you can then request your social group to help you to continue eating well. A little cognitive dissonance and/or peer pressure can go a long way to helping you make good eating choices. If nothing else, do it for yourself. You'll feel better and do better at pretty much everything if you eat properly.

For more information on nutrition at university, or if you would like to talk to someone about nutrition, you can visit `https://uwaterloo.ca/health-services/nutrition-services` to get more information about resources available on campus. There is also a nutritionist on staff at Health Services if you should have need.

MeaninglessQuips

Websites You Should Check Out!

This Totally Sounds Like a Spam E-Mail

- UWaterloo Daily Bulletin, the local school newsletter, published at 9 AM every weekday morning. Read with a discerning eye, may contain propaganda. `http://www.bulletin.uwaterloo.ca`

- MathSoc, the student society of the Mathematics Faculty. You can access a previous exam bank, sign up for free lockers, get involved with the society and find cool upcoming events. `http://www.mathsoc.uwaterloo.ca`

- UWaterloo and Waterloo subreddits, aggregators of stuff happening at the university and the region respectively. `http://reddit.com/r/uwaterloo/` & `http://reddit.com/r/waterloo/`

- UWaterloo Schedule of Classes for Undergraduates, a tool you can use to see what classes are being offered in future terms, how full they are, and who is teaching them. `http://www.adm.uwaterloo.ca/infocour/CIR/SA/under.html`

- Wat Tools, a listing of various tools and scripts for students to gain better control of their information. `http://www.wattools.com`

- OMGUW, a website for posting stories of things. `http://www.omguw.com`

- Waterloo Region Record, the regional newspaper, has adequate local coverage. You can also pick up free copies of the printed version in the SLC. `http://www.therecord.com`

- TEDxWaterloo, the local TEDx series of talks, covering various topics of interesting lectures for public consumption. `http://www.tedxwaterloo.com`

- Centre in the Square, the larger local venue for concerts, comedy shows, and other various productions. `http://www.centre-square.com/`

Ice Nine

MATHEMATICAL INDUCKTION

Step 1: ...QUACK

Step 2: QUACK QUACK

Step 3: QUACK QUACK QUACK

GRIDWORD
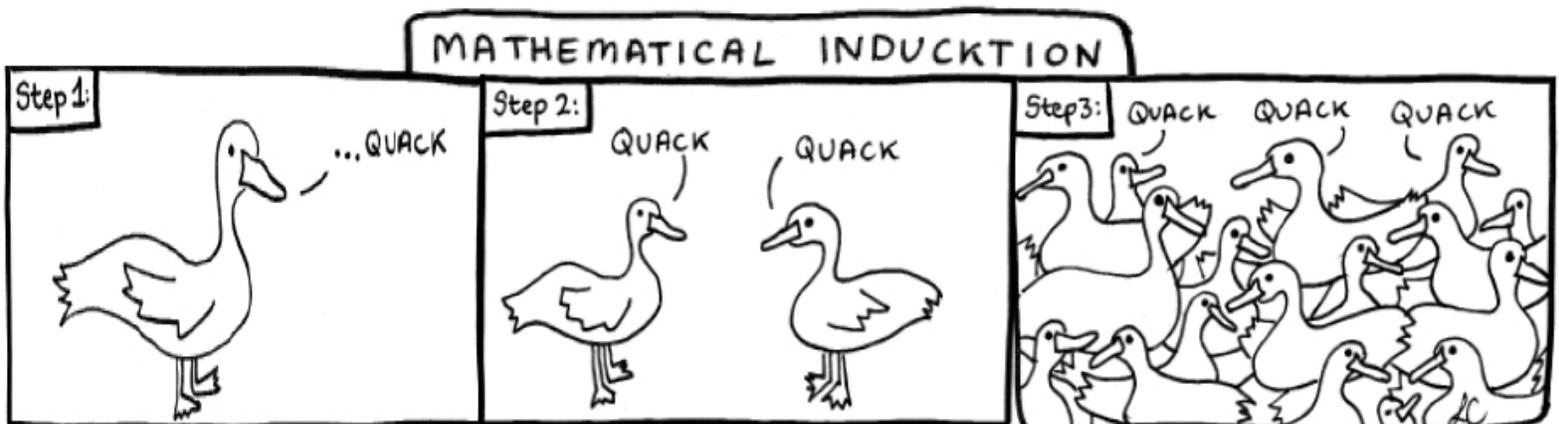
*grid*COMMENTS

Welcome to Waterloo!

As older readers may know, I'm fond of alliteration, symmetry, and puns. I also cherish words, so it pains me to include such anathemata as 19A.

The publication of a new crossword begins a contest where you can submit a completed grid for a chance to win a $5 gift card to the Math Coffee and Donut shop (i.e. the Math C&D). The contest's deadline is the next issue's production night, usually at 6:30 PM the second Monday after. To break a tie in case of multiple correct submissions, we pose a *grid*QUESTION and hint that we seek the answer that is silliest, sunniest, sappiest, saddest, etc. We retrieve your crosswords and answers from the **BLACK BOX** on the third floor of MC, beside the Comfy Lounge, so drop them off there! The first contest will begin with the next issue.

The solutions to this issue's *grid*WORD can be found on page 12.

Cheers,
unit
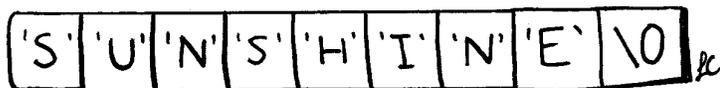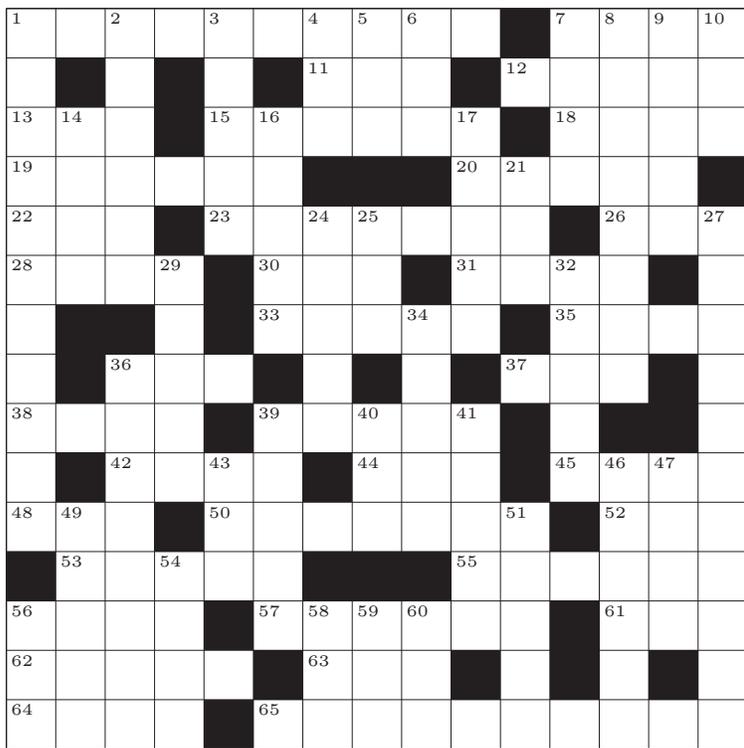
Across:

1. A campus library
7. Gibbons et al.
11. Latin loft?
12. Country house
13. By way of
15. Bedew with tears
18. Marsh plant
19. "Intuition" back-formation
20. Bond type
22. Sault ___ Marie
23. Underground student paper
26. Feasted
28. $z = x^2 + y^2$
30. η
31. Not new
33. Litter ones?
35. Titanic killer, briefly
36. Turn foul
37. ·-·-·-·-·
38. Toilsome tour
39. Ages upon ages
42. Has a pit spiral
44. Fuss
45. Professor Liu
48. Flow foil?
50. Official student paper, unfortunately
52. 33A, e.g.
53. Book, to Benoit
55. Shoelace end
56. Mystical mantle
57. Maple helicopter
61. The Countess of Lovelace
62. Dessicate anew
63. Spear-shaped fish
64. Snake's sounds
65. Something near MC

Down:

1. A campus library
2. Tidy
3. Concerning the nether regions
4. Uncooked
5. Golf peg
6. Before
7. Scottish iron
8. Seven-star sisters
9. Opt
10. Needing spirits
14. Not out of
16. Chemical compound
17. Like a few popes?
21. Pull-offs and hammer-___
24. Technical piece
25. Sometimes unmarked
27. Something near MC
29. Japanese mushroom
32. Black wood
34. Circular sculptures
36. Cardinals
39. Peaks of perfection
40. Water blade
41. SOund Navigation And Ranging
43. Ma'am's mate
46. High hills
47. Sorely deplored
49. Glum genre
51. Crown
54. Variables
56. Cardano's ___ Magna
58. Before
59. PC opponent
60. Biblical boat

1	2		3		4	5	6			7	8	9	10
						11				12			
13	14		15	16				17		18			
19								20	21				
22			23		24	25					26		27
28			29		30				31		32		
					33		34			35			
	36									37			
38				39		40	41						
		42		43			44				45	46	47
48	49			50						51		52	
	53		54						55				
56					57	58	59	60				61	
62					63								
64					65								

Fig. An array of sunshine.

***PRO TIP*: If you preface any statement with "Pro tip", it makes it sound like you know what you're talking about.**