# *math*NEWS

## Dennis Ritchie
## 1941 - 2011



```
printf("Goodbye, dad\n");
cout << "Goodbye, grandpa" << endl;
```

9 770705 041004

## *look*AHEAD

## Zombies Ahoy!

### *HvZ fun for everyone*

Hey there guys and gals, I come to you with an announcement of great importance (at least to me), and that is that this coming Monday (Oct. 24) marks the start of the Waterloo Humans versus Zombies game! There was one held last term, but this one should be bigger!

For those who don't know HvZ, it is a fun game of manhunt/tag where you (as a human) try to outrun or evade zombies when you're not fighting for your life with socks and nerf guns, or (as a zombie) getting some cardio and tasty craniums by ambushing humans and being clever. The game is open to any UW students and you should expect to be playing all day, every day, as a secondary part of your school life, with in-game events on certain nights and the weekend. Don't worry though, you are safe during classes and at work, and it will be ending on Hallowe'en night, most likely in a final, fun, event.

For more information and sign-ups check out www.hvzsource.com/uwhvz/

Soviet Canadian

### ISSN 0705—0410

Persona 3 weapons: knife(Harrison), bow and arrow (Will), spear(Sacha), ax (Murphy), sword (Michelle)

## *mast*HEAD

### *The fall of a giant*

In the past few weeks, two veritable titans of computing passed away. While Steve Jobs revolutionized the perception of modern computing and made his company ubuiquitous with the thought of electronics as toys, his impact was minimal compared to what Dennis Ritchie did. The man wrote the language that has been the industry standard ever since it was unleashed to the general public. In fact, the language was so influential that the program that is being used to write this article was written in C. This language is so important that it is the reason why this issue is quite anemic. Damn midterms...

So yes, the cat's out of the bag. The reason why our issue is so small compared to issues from last fall is because someone decided that it would be a brilliant idea to schedule all of the first-year midterms during *math*NEWS production nights. Please oh please, do not schedule any more midterms. We love our writers, and we love our huge issues that we print biweekly. Please do not take this joy away from us. It'll break our hearts again.

Speaking of breaking hearts, the Charity Ball is coming up next month! Take a chance, get a date, buy a ticket, and wear a funny hat! This is a great opportunity to get all swanky in formal clothing and have a great night out. The tickets go on sale next week at the MathSoc Office for $35 each if you get them early. Bigger discounts if you buy tickets for couples or groups. Come on out!

So while everyone gets the dancing bug, people have been getting the disease bugs. So this is what we asked our writers this issue: What will you catch next?

cowED ("Foot in mouth disease"), snippet ("H4N2"), theDreamer ("Magic"), RedMetal ("Friendship"), BADx101337 ("Rage"), waldo@<3.LE-GASP.ca ("Dalmationitis (and the spots will totally clash with my stripes!)"), MustardMap ("Dysentery"), Uuo ("incurable british gonorrhea"), Lich ("Lycanthropy"), Soviet Canadian ("Solanum"), Zethar ("A javelin"), Forked Process ("Life"), GrooveyED ("Anal Poisoning"), theSMURF ("Pikachu")

!ED
("midtermitis")

## Why I Shouldn't be Alive

### *AKA: Why my roommate bugs me*

It all started when I was nearing the end of Persona 3.

Most of my housemates had gathered to watch me battle the final boss, which made what I did even worse. Being near the end I was saving constantly in case I totally messed up against the final boss. So I go to the save point and as I go to save I accidently click to save over (let's call him "Tom") Tom's save file. As soon as I see what I've done I just say of whatever I'll just cancel the save but smart me let muscle memory come into play. As I was saying "nonononononononononono" for some reason my fingers went *right* *x* instead of just *x*. Needless to say I curled into a scared little ball of embarrassment as everyone in the room laughed at me... everyone except Tom who just turned his head and gave me a nice, slow clap. So now whenever the word "saving" is mention around him and me, he always finds a way to bring up this dreadful subject.

cowED

# Prez Sez

*Midterm Season*

Hey Mathies!

I hope your midterms are treating you well. I know I'm trying to buckle down and study now as well. Here is what I've been up to these past 2 weeks:

I've been working on the Strategic Planning Work Group with the dean to figure out where the math faculty should be in 5, 10, and 20 years. A big topic of discussion that has been coming up has to do with teaching quality. We believe Waterloo should put emphasis on being innovators in the way we are teaching our undergrads but implement more online technology solutions to help teach undergrads better while maintaining or improving quality. This was also a topic of discussion at the Education Advisory Committee which is coordinated by Feds. At EAC we talked to executives of the Ontario Universities Student Alliance about how to move forward on this for all schools in the province.

The next thing I want to talk to you about is the 6th decade plan and the mid-cycle review session that was held by President Feridun. All students were invited to it and this was a great opportunity for students to let the administration what **OUR** priorities are. Unfortunately, not many students attended. Fortunately the students that did attend, like myself, had a loud voice. There were a lot of great suggestions made but the clearest message portrayed was we, as a university, need to work together to create a better social atmosphere. With a better social life for students, the reputation UW has sometimes of being strong academically but weak socially will no longer put off the brightest future leaders of the world. It will no longer make students dread coming here but instead love all aspects of their lives here. Also, it would create alumni with strong ties to the university and want to help the university grow further. To find out more about this go to `http://midcyclereview.uwaterloo.ca/` or email me (in the signature).

Also there has been work for the near future of math students with CnD renovation work being done. I have been working with other students and the dean's office to figure out how we can best improve the space in the CnD. For those of you that don't know, the CnD is the MathSoc Coffee N Doughnut shop on the 3rd floor of MC near MathSoc. If you have ideas to how you think the space could be improved, fill out an online survey I've created at `tinyurl.com/cndreno` or email me.

Then there was the Committee of Presidents, better known as COPs. COPs meetings are where myself, the other society presidents, and Feds VP Internal meet to discuss things that affect us all and to collaborate to resolve these problems. Currently we are working to create an agreement of understanding. In this agreement, we understand to abide by rules that if one of us were to break could cause serious problems to all of us. These issues many have to do with liabilities at events and maintaining proper accounting. The aim is to have this agreement completed by the end of the term.

Finally there are a couple of big issues still ongoing and it's important to get informed and speak your mind. In particular there are talks about making Orientation week not a week anymore (again) and Fed Hall being taken away from student control. To get more information and give your thoughts about it, contact myself or your council representatives. For a list of representatives, go to the council page on the MathSoc website at `http://mathsoc.uwaterloo.ca/Council` under the class representatives section or you can contact me.

To get more details on all of this, go to the mathsoc website and check out the exec blog at `http://mathsoc.uwaterloo.ca/Blog` or email me and I'll be happy to respond to any concerns or comments. My email is below.

Knock those midterms dead!

Andre Gomes Magalhaes
MathSoc President
`prez@mathsoc.uwaterloo.ca`

# VPE Sez

*Get your charity ball tickets!*

Happy midterm season everyone! If you've got the middle-of-term blues, don't worry! MathSoc has the perfect remedy - lots of awesome and fun events!

Join Alice in Wonderland at MathSoc's "Math Hatter" Annual Charity Ball on Saturday, November 12th at Federation Hall. $40 single, $75 couple, $280 table of eight. All proceeds go to the Ontario Federation for Cerebral Palsy. Come out and enjoy an evening of dinner, dancing, and much more!

Variety Nights are up-and-running now! Come join us for a Halloween Man-Haunt on the third floor of MC next week (Thursday, October 27th, time TBA), and stay tuned for updates about more amazing events!

As we celebrate the grand opening of Math 3 today, Friday, October 21st, we also celebrate the birthday of our faculty's esteemed founder, Ralph Stanton. Check out his birthday party on the third floor of MC from 11am until 3pm - we have cupcakes!

Then get into the Halloween spirit on Monday, October 31st by joining MathSoc for Halloween games, a costume contest, haunted house, free candy, and much more on the third floor of MC all day!

And if you're looking for something a little more relaxing, games nights continue to run every Tuesday starting at 6:30pm in the Comfy Lounge (MC 3001). Come out for board games, snacks, and great company!

As always, keep an eye out for updates on these amazing events by liking MathSoc on Facebook (`http://www.facebook.com/mathsoc`), following us on Twitter ( `http://www.twitter.com/mathsoc`), or checking out our website (`mathsoc.uwaterloo.ca`).

Feel free to contact me if you have any questions!

Alex Russell
MathSoc VP Events
`vpe@mathsoc.uwaterloo.ca`

# VPA Pantomimez

**Undergraduate Calendar Dates:** The Student Experience Group in the Student Success Office is seeking student feedback about possible changes to Orientation ~~Week~~. Every faculty is going through focus groups and Math's was this past Wednesday. Stay tuned for more details!

**WatPD Course Proposals:** As alluded to in the first VPA Sez of term, the Cooperative Education Council (CEC) has been entertaining a number of course proposals for WatPD. These have been a mixture of new courses and "improvements" to existing courses, and were in response to a Request for Proposals (RFP) put out by the council early in the spring term. At the September CEC meeting, the council agreed that in order to approve any formal proposal there must be a way to ask the author questions, so to properly consider the course change. Also decided at that meeting was that only two of the proposals were worth vetting through this secondary process. These proposals, due to confidentiality reasons, are censoredcensoredcensored#1 and censoredcensoredcensored#2.

censoredcensoredcensored#1 is a course built around the assumption that people play on their censored and that with a better understanding of the censored, we can reach censored and make censored censored censored. This course briefly touches on some topics offered in the on-campus course CNSRD### but is more concerned with practical censored rather than the censored theories found in the on-campus version. The regular campus course is one that is either a hard or soft degree requirement for many co-op students, in particular Arts & Business, but not all. With this minimal overlap to a basically optional course, censoredcensoredcensored#1 is intended to complement the teachings of CNSRD###. In the presentation, there was not a lot of structure offered to the proposed course, and the intended outcome of the course was somewhat wishy-washy. All in all, the presentation left me unsatisfied and uneasy with how censored and censored, the main focuses of the course, seemed to be heavily dealt with in PD7 Conflict Resolution already.

The presentation for censoredcensored#2 had a heavier emphasis on the approach of the course and teaching methods to be employed. After receiving the initial feedback from CEC regarding the original proposal, the author, Censoredette Censorberg, Ph.D, returned with a proposal which quelled many worries I had, mainly with respect to censoredcensored#2 being too much of a fluff course. This course focuses on censored censored expected by employers of our students, aligns itself to UW's UDLE #X and complements stand-alone workshops offered at the university. The delivery of this course makes use of video lectures by guest speakers, screencasts, TEDtalks and has comprehensive assessment methods which steer away from the usual passive discussion boards. Discussion boards may be brought in to discuss just-in-time topics arising in around the world in real time throughout the term.

Tuesday, there will have been a decision made on which of {censoredcensoredcensored#1,censoredcensoredcensored#2} are to move forward if any (or maybe both). At the time of *math*NEWS production, unfortunately, no such information was available. Check www.mathsoc.uwaterloo.ca/Blog to find out the results!

Bryanne Pashley
MathSoc VP Academics
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# VPF Sez

Hey Yo!

I hope everyone's term has been going super de duper! The MathSoc budget was approved and things are in full swing! Are you playing Intramurals this term? If you are then you should fill out a Mathletics form and MathSoc will give you money back for playing sports! Forms can be found outside the MathSoc office in MC 3038 and are due on Monday, October 24th at 5! Get your form in soon!

MathSoc is looking to invest in your future! There are some flexible funds remaining from this past term that we would like to use towards capital improvements so to help enrich math students' lives. Previous capital improvements include the MathSoc Comfy lounge, and we have budgeted and are currently in planning stages to renovate the Math Coffee & Donut shop. What we are looking for is your input. We'd like to hear your thoughts as to what you deem to be a worthy investment in your future MC/DC/M3/etc. Contact us by email at mathsoc@mathsoc.uwaterloo.ca and let us know what you want to see and where you want your money to go!

Jessica Janssen
MathSoc VP Finance
vpf@mathsoc.uwaterloo.ca

# VPO Sez

Hey *math*NEWS readers!

Hope you are having a fantastic morning reading *math*NEWS!!

I don't have too much to update you on, but we do have a few new things in the office you might want to check out:

1. Colour Printing - I mentioned this before, but we now have a brand new colour printer in the office. I've used it and it prints beautifully! Definitely check out MathSoc for all your colour printing needs. It's 30 cents per page, and B&W printing is 10 cents per double-sided page as always.

2. Binding equipment and paper cutters have moved! If you come visit us in the office, you'll see that some of the equipment has moved to a side table beside the main desk. We now have lots more space at the main desk to serve our customers :D SO please come visit!

Also in the coming weeks, you'll see some new updates on the website! The navigation bar is being changed up, so now it will be much easier for you to find your favourite pages on our website :)

If you're involved in a club and hosting an event, you might be excited to hear we have a photography director to photograph all your events! Email Jasmine at photography@mathsoc.uwaterloo.ca if you need her services! :D

Finally, just want to throw out that CHARITY BALL is coming up soon… and the theme is incredible! Keep on the lookout for information about that, or visit us on the third floor.

Good luck on midterms, and have a fantastic couple of weeks.

Anna Merkoulovitch
MathSoc VP Operations
vpo@mathsoc.uwaterloo.ca

## *dean*QUESTIONS

**math**NEWS: What was going through your mind as you handed out pink ties to the new students during Orientation Week?

**Dean:** Since I'm not too coordinated, I was mostly worrying about shaking with my right hand while handing the tie with my left, but NOT dropping the remaining pile of ties… Seriously, I was very pleased to be able to meet a very enthusiastic group (the winning team) of our first year students, and I really enjoyed the positive spirit that all the volunteer work from senior students had created during orientation.

**math**NEWS: How have you optimized the time with your family this Thanksgiving?

**Dean:** I had two turkey dinners on Saturday and Sunday, one with my mother and other family members, the other with my mother-in-law and family, both really fun events for all ages. After many years of eating too much at such events, I was pleased that I didn't need a wheelbarrow for my belly afterwards. Then on Monday, my wife explained how I needed to finish some items on my "honey-do" list, leading to an afternoon of chores…

**math**NEWS: What can we expect at the official opening of Math 3 later this month? Will there be fireworks?

**Dean:** I really appreciate & placing the grand opening invitation on the back of the Oct 7th issue, since I hope that students will attend this milestone in the history of our Faculty - they make events like this a lot more fun. We promise to keep the speeches short: Feridun, MP, MPP, me. We'll be cutting a big pink ribbon and there will be cookies! Sorry, but no fireworks - the atrium is high, but not that high, and anyway, it would be a shame to break all those nice new windows.

Do you have any questions that you'd like the Dean to answer? Drop questions in the BLACK BOX or email us at `mathnews@student.math.uwaterloo.ca` and we'll send them in for next issue!

## Feds Sez

### *FEDS Annual General Meeting*

The Federation of Students Annual General Meeting is coming up on Wednesday, October 26th at noon in the SLC Great Hall. All Feds members (that's you!) are invited to attend!

You might be asking, "Why does this meeting matter to me?" Well that's an easy one! During this meeting a number of important decisions are brought forward to students:

First, the organization reviews and approves its audited financial statements. This is a chance for general students to scrutinize and better understand how their funds are spent by the organization.

Second, the organization approves changes to bylaws of the corporation. The bylaws of the corporation set the broad rules that must be followed by executives, council, and the board and staff members everyday.

In addition to this, there are times that other major motions, such as the approval of honourary memberships come forward to the members for approval.

The agenda will be released shortly at `feds.ca`. If you have any questions, or want more information, feel free to contact us! See you there!

Saleem Khan, Andre Magalhaes, Jesse McGinnis, Josh Shabtai & Alex Russell, Your Feds Math Councillors

## C M C F L A S H

Sandwiches are beautiful, sandwiches are fine…

We here in the CMC like sandwiches. Pitas and subs are necessary for student life too, but you can't beat two slices of bread with meat, veggies and cheese in between. If you're in the MC and need a solid lunch, here are the best places to get a sandwich:

- Mudie's (Village 1): They have a very fancy sandwich/smoothie bar, with a few different fresh breads like foccaccio and baguettes. They have all the standard meats and cheeses you want, plus a few specialty ingredients like sun dried tomatoes or avocado spread. What I like best is that they have a Sandwich of the Day, which gives a good variety if you want a sandwich but don't know what kind. A fairly quick walk if you go on the right of the PAC, but not always worth it in rain or winter. Price: $5.63

- Modern Languages Coffee Shop: This little place is hidden away in a building you're not likely to ever go in. But it has fancy bread and cheese (sourdough and havarti, so good), and basic meats and veggies. The cheapest one around, but not a huge varied selection. You can probably find a sandwich you'll like here for two lunches per week. To get to it, go out through the Rock Garden towards B2 (right by the construction) go through there and you'll find yourself going towards Needles Hall. Just past it is Modern Languages. Go inside, find the stairs down. At the bottom of the stairs, take a right and you'll find the cafeteria with a Tim Hortons and a sandwich bar. A bit of a walk, but if you have a class on that end of campus it's convenient. Price: $5.10

- Brubakers (SLC)/CEIT Cafe (Dinosaur Building): Getting to paninis (toasted sandwich, usually Italian), both the SLC and dinosaur building cafe have a few types of sandwiches pre-made, wrapped up on their shelves. You pick one you want, ask them to grill it, and you have a tasty toasted treat. They have interesting choices, like Ham and Apple Butter, Buffalo Chicken, and Italian Stallion (only place in Waterloo I know that serves horsemeat). They're pretty greasy, though, so be ready to wash your hands afterwards. The one in the dinosaur building is usually less crowded, and I'll take any excuse to spend time in that building, so that's the one I recommend. Exiting towards the Rock Garden, go past the Egg Fountain towards Ring Road, you'll pass the building on your right. Quite close, and minimal outside time. Price: $6.77

- Williams Coffee Pub: The fanciest of paninis, Williams has a very fine selection, like chicken pesto, or vegetables and goat cheese. If you want to treat yourself, this is the place. There about a ten minute wait for them to assemble and grill it, though, so bring a book. It's located in the plaza, past the Egg Fountain to Ring Road, through it and just past Mongolian Grill and Phat Cat. Price: $7.90

For more expert sandwich advice, please consult the honorable Mr. Penner (Youtube search 'penner sandwiches'). Or stop by our office, MC 3034; we'll get a sandwich and a cup of tea.

CMC

## First Year Focus

Exams sessions are in full force! Always tired and stressed and don't know what to do? No worries, there is always the libraries to help you. As first years, it is quite easy to get intimidated by the presence of massive libraries and countless resources and just as easy to get lost looking for what you want. Here are some tips to ensure your next trip to the library ends with a pleasant satisfaction:

1.  Your WatCard is also your library card. You can use it at any library to sign out books or journals, place holds, use the printer, and even get a bite to eat at the nearby cafe. (If you happen to lose your watcard, there is no need to panic, simply go to the watcard office located on the SLC lower floor with twenty dollars, and they'll get you a brand new one in 5 minutes with all the FLEX dollars transferred!)
2.  Subject guides are available for almost every program or topic that you would need. These guides are a great resource and display such things as the best database for the subject. There are also subject librarians available to answer any questions you have and to redirect you to the right spot. (Text books for most subjects can also be found in DC, DP, or MathSoc whenever you need them, so you can now put the heavy text books at home now!)
3.  You can still connect to the library even in the warmth of your residence/home. You have access to a large amount of resources, such as research papers, databases and other documents, at all times. Our university has paid for us for many resourceful databases; if you are using a computer in the library, you can go directly into each database and search for scholar articles/information you need; if you are at home, simply type in the barcode number on your watcard, and you will have access to everything just like on campus!
4.  If you are still confused about how to use any of the library services then there are workshops available throughout the term. Workshops include tutorials on RefWorks, different research strategies, and how to use Primo, a new smart search tool.
5.  A good rule of thumb is to ask a librarian for help if you are lost. There is always a friendly librarian who is happy to help or answer any questions. Students don't even have to be in the library; they can get help online using the library's new Instant Messaging service. With a turn-around of two days, students can also send an email and get their questions answered in a quick and timely manner. On top of this, there is always a technical co-op student sitting in libraries who can help you with basic excels, printing issues and much more
6.  Group study rooms and individual rooms can be booked out for quiet studying. Simply search "group study book online" on the uWaterloo website, and you will be able to book your own room with your quest/Ace/D2L/WatIam ID. Use it to your advantage! (there are limitations such as 10 hours per week for each account)

Keep these tips in mind the next time you head down to the library. Perhaps you'll be the one to help out a lost fellow friend.

First-Year Affairs

## Response to Rainbow Mathies 14

Dear (define this (not cool)),

I am a long time reader of *math*NEWS despite being an Arts student and a long time ignorer of your column. It's not that I have anything against it but I read *math*NEWS for amusement and your column is not amusing. I tend to skip to the HorrorScopes, it's a personal choice. Anyway, this year my boyfriend read your article and got me interested enough to read it. Then I read the next one and I have one thing to say to you: YOU HAVE NO RIGHT TO CALL *math*NEWS CENSORING!!!!

Upon reading those words that you wrote I immediately ran to my archives, nearly 3 years of whenever I happened to be in MC when it was published, and found the first 10 or so Rainbow Mathies articles. They are published almost every two weeks, usually near the front of the issue and have continued into the new year. I have no idea about the summer because I wasn't there but they seem pretty consistent despite the fact that they are neither funny nor satire and therefore seem oddly placed in *math*NEWS.

If you would like to know why Rainbow Mathies wasn't in the Frosh issue I can tell you: they were right and it was negative. Furthermore it had ALREADY BEEN PUBLISHED. That's right. I checked and under a different title, It Gets Better, the bulk of the article had been printed already, by you, nearly a year ago. You weren't even committed enough to write new material. Therefore here are the facts:

You are angry because an article was not published. This article was:
*   Negative and for a positive time period
*   Self plagiarism
*   Had already been published in the same medium
*   The paper also published your derogatory comments about themselves

So lay off because you are simply wrong and leave my *math*NEWS in peace!

Σ truth

## Studies Show

### And How to Use Them

Trawling psychological papers is one of my favourite past times. You learn all kinds of useful things for success and happiness in life. Here's a sort list of things I've learnt recently.
*   Wearing skirts improves people's perceptions of you.
    **How to use it:** Wear a kilt to all your interviews. 100% success rate.
*   The best decisions are made when you have to pee.
    **How to use it:** Alcohol is a diuretic (that means it makes you have to pee). All exams should therefore be done drunk.
*   Dog owners can't actually determine if their dog is guilty, and are likely to believe you when you say they are.
    **How to use it:** If you ever want to rummage throw someone's garbage or piss on their carpet, you can just blame it on their dog. They'd never know.
*   If a painting is staring straight ahead, humans assume they are looking right at us.
    **How to use it:** Ok, hell if I know. Paint a picture to creep someone out or something? Screw off.

That's all I got for this edition. I hope you learnt something useful, or at least something Quite Interesting.

theDreamer

# Sweet and Sour

## *Sour*

So you're smack dab in the middle of midterms. Math 135 was last week… so how'd you do? After a midterm it's always wise to re-evaluate how things are going. This is your opportunity to make a change. Take it seriously.

First of all, no matter how well you did, take responsibility. You are responsible for the grade that you obtained. External factors **generally** play an insignificant role in the outcome of a test and the quicker you agree to that, the faster we can get you on the right track.

Secondly, make a call. Your parents want to know how you're doing. Let them know! The lake of parental love is deeper than your performance on any test.

Finally, remember that you're not the only one in this situation. Other students in the class failed, or passed with flying colours, or saw their marks plummet,… You are NOT alone. What makes you different from the other students in the same boat is what you do from here. Here are some simple suggestions:

- Grade ≥ Class Average. Congrats! Keep up the good work! Sure your high school grade may have taken a beating… but this isn't high school. Students often find their grades drop between highschool and university.
- Grade ≥ 60 Keep up the good work; but keep in mind that your final grades should be above 60 (see below).
- 50 ≤ Grade < 60 This is the grey area. In many cases, although a 50 is a pass, a grade of 60 is needed to progress to the next course.
  
  Example 1: To get into Math 136 you need at least a 60 in Math 135.
  
  Example 2: To get into CS 116 you only need to pass CS 115.
  
  Example 3: One of the requirements of Stat 230 is a 60 in Math 137.
  
  Have you been doing what you should? Are you studying, going to tutorial centers, visiting your prof, doing your assignments (and picking them up!), …? Have you gone to the counselling services' study, exam prep, procrastination sessions, etc? If you are in this area it's time to change something significant. Talk to an advisor.
- Grade < 50: If you received a grade less than 50%, it may be wise to drop the course. I strongly recommend you talk to an advisor.

On the 3rd floor, across from the comfy lounge there is a very very pink bulletin board. On it you can find a list of advisors, counselling workshops etc… Have a look!

Riley Metzger
Academic Advisor and Stats Instructor

# What are the odds that the next issue of *math*NEWS has no filler? The same odds CorruptED will not fail out of math.

## *Sweet*

A mathematician was pulled aside at airport security Wednesday. She was carrying tools of math instruction.

The following contains links to forms you may need, my contact information, enrolment information (see Waitlist), advising office hours (both for Riley and other advisors), calculator policies, S&P meeting dates, enrollment information for Statistics courses, etc: `https://uwangel.uwaterloo.ca/uwangel/section/default.asp?id=UW-MCL-101005`

Advising Hours: `http://www.math.uwaterloo.ca/navigation/Current/yearoneadvising.shtml`

# Surefire ways to (not) procrastinate

## *Hello world - It's midterm season!*

This issue's dose of advice is simple, and is directly at especially those first-years who feel lazy or as if they can't seem to be productive.

- Have a main, backup, and alternative scheduling system. This is important because most times things that you expect to get done in $x$ length of time actually takes $x^2$ or even $x^3$ the length of time. Your alternative schedule should be the bare minimum of what you require to complete before the end of the night.
- Assume all assignments take up to three times as long as you preliminarily assume. Twice the time is a good assumption, but don't underestimate the difficulty of any major assignment.
- Know exactly when your breaks are, and ensure that you completely forget about your work during those breaks.
- To avoid taking undeserved early breaks, set alarms that repeat every 55 minutes to an hour. Your mind (which you will almost **always** assume is ADHD-oriented) can only take a specific amount of focus before it is broken.
- Don't work or study past a certain hour. You may have to find when this hour is. For me, it's early - sometimes as early as 11pm. Nothing useful or rational is every remembered or completely properly after this hour. Try your best to avoid working overtime into this period.
- Even if it means starting work early, it's better to get into the habit now than to panic in the days prior to the due date and pull unnecessary all-nighters on assignmeents that would otherwise take a couple of days, max.
- To complete the above point, ensure that you end your study or work day at precisely hour $x$, then you can take a break, go to bed early, and be on top of your work or studying again by the morning. Contrary to popular belief, SLEEP IS IMPORTANT!
- Sleep well and sleep in well-defined hours. Ensuring a constant sleep schedule has shown to improve efficiency and health in university students our age.

Whether or not you want to follow this "advice" is completely up to you. As Morpheus from the Matrix once said, "I can only show you the door. You must be the one to walk through it." I believe I have shown you the door. It now becomes your choice as to whether or not you would like to walk through it.

Best of luck to you in your midterms and projects.

t3h_BROm1n4t0rz

# Rainbow Mathies 15

### *The Power of Validation*

Hello there mathies! Let me begin by saying I'm very excited about the passionate response last week's article generated, on both the positive and negative sides. The more strongly we talk about these issue, the less impact a culture of silence can have on the stigma queer students experience. There are a couple of points I would like to address, however space is valuable and I do have another topic I promised to approach this week. Luckily, this week's topic speaks a bit on one of the points brought up, but for my contributions on the rest I have decided to publish my response on a new website, rainbowmathies.blogspot.com. If you are interesting in my feelings on the purpose of the frosh issue, the nature and purpose of my column at its core, and the seemingly contradictory idea of queer-positive organizations, representatives, and people taking queer-negative actions (including myself), I strongly encourage you to check it out! Of course, I am more than happy to receive additional feedback, you can find my email near the end of the article.

On to this week. I originally approached this topic from the stance on "how to improve Orientation week." As I expanded on this idea, I noticed one idea beginning to pop up again and again, and that is the idea of validation. When fleshing out this idea, it turns out to be meaty enough for an entire article, so we're gonna roll with it. Since the origins of this topic came from this basis of Orientation week, much of the context presented or ideas used will spawn from this basis. Keep in mind though that these concepts apply much more broadly, not only to other organizations focusing on socialization but also in areas like the workplace, the classroom, and even our own interpersonal lives.

So what is validation, and why is it important? I have a bit of an experiment I would like you, my leader, to try. Think of a time when you felt as though your thoughts, ideas, and perspectives were most valued by another person. Preferably a time when they were taken strongly into an account, or even ultimately resulted in an action being taken or a change being made. How did you feel? (I know the prevailing opinions on math students and expressing emotion, but just try for me :) ). Was it positive, did it give you confidence, or happiness, or increased trust in the other person? This the effect of validation, or recognizing the validity and importance of another's experiences. By validating someone, you are telling them that who they are and what their life is like is valuable and acknowledged. Validation is a primary motivator in how we behave and respond to others, and not only positive qualities need to be validated. We often hear that the first step to changing a problem is to admit that the problem exists. We do this because validating the problem inspires this motivation, and recognizing it as a problem gives us the best perspective from which to face it, in whatever way "facing it" means. Validation is a very effective way of creating positivity since it motivates people and makes them feel good.

Orientation Week has a history on doing this fairly well. OLT focuses on the importance on validating various experiences first year students may have, and there is often programming available which directly acknowledges the struggles some students may face. A great example of a group that benefits from this are international students. This is understandable, it can be difficult adjusting to both a new environment with vastly different culture and a new academic situation. Combined with how different it may be interacting with one's peers in and Orientation setting, I can only understand the experience as a sort of culture shock. Thankfully, Orientation recognizes this and plans a number of events, like a social and an information session, specifically catered to international students. By having these events on the schedules, Orientation validates the unique experiences and issues that international students face, and although I am not one of these students, I hope that it plays its part in improving the Orientation experience for them. A similar assessment can be made for off-campus students and even the college students, though this argument has become weaker since the removal of Residence Orientation Committee.

The question then becomes, how are queer students being validated by Orientation? After all, queer students are being affected by the heterocentric culture of the university in ways similar to how international students are affected by ethnocentricity. And in all fairness, Orientation does take steps to try and accomplish this. OLT includes queer-related material, queer-identified students are regularly hired in leadership positions and queer-positive accessories are permitted to be worn by choice: these are all admittedly big steps. But there are two contrasts I want to draw which are very important. The first is that these actions are leader-centric, but the problem is rarely with the leaders. Most issues that queer students face, such as coping with an invisible status/coming out, stigma, the culture of silence, and such are much more structurally based. Validation needs to come from the top down, not from the bottom up. The second contrast I'd like to draw brings to question on what validation is. In order for these queer students to be validated, their unique experiences need to be acknowledged, recognized, shown importance and value. This can only be accomplished when a student is communicated with directly. Validation needs to be blatant, not subtle, otherwise the meaning is lost. That was the primary purpose, the reasoning behind Rainbow Mathies: Frosh Edition. It was intended to provide some validation to students it applied to. It told them the ever-important message that what they may be happening to them is not right, that it was ok to feel the way they were feeling about it and that it should be changed, as "negative" a message as that may be.

Expanding on this a touch, a positive environment cannot be created by simply saying it is such. A space does not become safe simply by putting a sticker up, or by telling others it is. As much as we want to and try to tell queer students that this university and this faculty will be and is great for them, that doesn't make it necessarily true. Often times it can have the exact opposite effect, because it denies these students the validation they need. Our Orientation culture makes it tough enough to provide this validation as is. I mean, our first year students are sorted and placed in groups with similar people (as minimum, they are placed with the same faculty, but at most they are put with their program and given special programming). These students are given the same clothing (which they are forced to wear), and go to the same events, learn the same dance, and are all told mostly the same things by mostly the same leaders. The process is rather assimilatory, and strongly focuses on how we all are alike. This works great for those who are

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### *Continued*

comfortable in this kind of environment, but ultimately what is bred is an environment which structurally disregards differences. There are options, of course, that students who are not comfortable with the environment can take, but these often include separating one's self from the group or opting out of orientation activities altogether. I'm sorry, but these are not solutions to me.

So what are some solutions? One I have, which is narrower in scope and is more of a "band-aid," is to include programming in Orientation targeted specifically towards queer students. This can be as simple as having a movie during variety night which is advertised as queer-themed, as well as a queer meet-and-greet before Toga so a supportive group can form and go to the party and dance with people they feel comfortable with. A more elaborate solution would involve scraping the entire Orientation structure as we know it. Residence and Faculty events would be kept as brief as possible and would not be responsible for separating the first years into "teams". Instead, a first year student would fill out a questionnaire where they choose the activities they would most like to participate in. They would then be put into groups based on these choices with other first years in all faculties, and then assigned leaders, again from each faculty. To those of you thinking that this might negatively affect "faculty pride", I disagree. Any of the traditions, like the awarding of Pink Ties, would still be present, as well as the symbols for each of the faculties. Beyond that, I think that this pride may be more developed, since now students would be encouraged to represent their faculty well in these new groups. In the end though, whats more important: faculty pride, or making sure each first year has the best Orientation week they can possibly have?

If you are queer identified, and are looking for someone to talk to or for supportive allies, there are always resources available to you. You can learn more about GLOW and its offerings, including a phone line at `www.knowyourglow.ca`. Counseling Services is always available to you; their offices are open 8:30-8MTTh and 8:30-4:30WF, located in Needles Hall across from Student Awards and Financial Aid. If you need support and assistance immediately, you can call the Waterloo Crisis Center at 519-745-1166. If you'd feel more comfortable speaking with someone from a queer specific service, please contact the GLBT Youthline at 1-800-268-9688. Finally, if you have any comments and concerns about this column, including ideas on topics you'd would like to see, you can contact me at `dtaleman@uwaterloo.ca`.

I do not have a topic picked out for next week, though I do hope that once I have one chosen that it will prove as compelling as these past few. If you have anything you want me to talk about, please let me know!

(define this (not cool))

## Rainbow Mathies now has a blog! Check it out at
### `rainbowmathies.blogspot.com`

## Lessons From my Thanksgiving Trip Home

1. Buy a round-trip GO bus ticket ahead of time so you can laugh at all the people in the very, very long line-up.
2. Be flexible in your schedule. Very flexible.
3. Have *several* alternative connections you can take when you get delayed. Because you will be delayed.
4. Even if you're good friends with your traveling companion, you will run out of topics by the time you hit the fourth or fifth hour of travel.
5. Rolling suitcases. Didn't they sound like such a good idea? Yes they did, right up until you hit several areas with broken or nonexistent elevators.
6. Union Station means a lot of walking and a lot of stairs.
7. Don't bring homework that requires heavy textbooks. Because you have to carry them, and really, what are the odds you'll do it?
8. Signs are your friend. They prevent you from asking stupid questions.
9. When you've been traveling for four hours, you're going to ask stupid questions anyway.
10. Be nice to the bus drivers so they'll answer your stupid questions.
11. Leave lots of room in your suitcase. Because otherwise you'll have to take another bag.
12. New kettles still in their box are impossible to transport.
13. 5:30am trains. Need I say more?
14. Night class until 9:30pm the same day as 5:30am train. Terrible idea.
15. Rolling suitcases are very loud on pavement. And on brick. And on the SLC floor.
16. Express buses are your best friends.
17. So are extra express buses they add because it's Thanksgiving.
18. Pack lighter than your traveling companion, or they'll laugh when you have trouble carrying stuff.
19. If you're hoping to get work done on a laptop, good luck fitting it on your lap in a crowded bus.
20. Start and stop highway traffic. So much fun!
21. It doesn't matter how many bags you have or how heavy they are. Always be ready to run.
22. Thank God for smartphones that tell you where you are.

Shay Blair

## N Things Mathies should wear/be dressed as on Hallowe'en
### *There are going to probably be more Waldos out there that night!*

- PAAAAAAAAAAAAAANK!
- Equations, especially the one found on the "Limit Shirt"
- Protection
- Those glasses to show off nerdism
- A calculator
- The Blue Screen of Death
- Socially Awkward Penguin… oh wait, it's interview season! We got this!

waldo@<3.LE-GASP.ca

# Interesting Math

## *Bernstein Sets and Transfinite Induction*

In the past six weeks first years have been dragged kicking and screaming into the strange place that is the real number line. Older students will have spent several terms wrestling with it. Some of them might even think they've seen its strangeness and are done with it. This fortnight we will be discussing a strange type of subset which you may not have seen, the Bernstein set.

**Theorem.** There exists a set $B$ of real numbers such that $B$ and $B^c$ each have at least one point in common with every uncountable closed subset of **R**.

**Sketch of Proof.** What we would like to do is consider the set $\mathcal{F} = \{\, F : F \text{ is closed and uncountable} \,\}$ and use the Axiom of Choice to pick out one element from each. There is a problem with this: Choice does not tell us how it is choosing things, so it may be the case that the set $B$ we get is the entire real line. We might try to fix this by proceeding by induction on the members of $\mathcal{F}$, taking them one after another and taking two elements from each set that were never taken before. This too fails, since $\mathcal{F}$ is uncountable. We do not have to give up though, there is a form of induction that works up to uncountable cardinalities. To introduce this we need to discuss orderings.

**Order and Transfinite Induction.** The central form of order that we need is that of a well-order. Let $X$ be a set and $\leq$ an order relation on this set. To be an order $\leq$ must satisfy

- $x \leq x$ for all $x \in X$
- $x \leq y$ and $y \leq z$ imply that $x \leq z$ for every $x,y,z \in X$

However this definition is too permissive, it allows orders that are degenerate. The order on the natural numbers that gives power to induction has two further properties. First it is *total* in that we can compare everything: if $x \neq y$ then either $x \leq y$ or $y \leq x$ for all $x,y \in X$. Second it is *strict*, if we know that $x \leq y$ and $y \leq x$ then $y = x$. Finally, the natural numbers have the property that every subset has a least element. So we say that $\leq$ is a well-order if it is strict and total and has this least element property.

**Examples.** The natural numbers with their usual order, 0, 1, 2, … are a well-ordered set. The real numbers with their usual order are not, the set *(0,1)* has as its lower bound 0, but 0 is not in the set. We can also well-order the natural numbers in the following way: 0,2,4,6,…,1,3,5,…. This order is somewhat peculiar, in contrast to the usual order both 0 and 1 can not be written as "the least element greater than x" for any element "x" (a less cumbersome way to say this in the usual order is "x+1"), that is they are not *successors* in the ordering. We can, in this special ordering, think of 1 as the least upper bound of the even numbers, and in this way we feel justified in calling it a *limit* element. It is clear that limits and successors are very different, and if we want to perform induction over more complex orders we might need to deal with them differently.

To avoid having to deal with limits and successor differently, we recall the principle of strong induction on that natural numbers: *"For a proposition* P *if* P(0) *is true and for every* n*"*P(k) *for all* k < n*" implies* P(n) *then* P *is true for all natural numbers"*. With this as inspiration we can state:

**Lemma** (*Transfinite Induction*). Let $X$ be a set and $\leq$ a well-order on $X$. Denote the least element of $X$ as *0*. If $P$ is a proposition about elements of $X$ such that

- *P(0)* is true
- For every element $\alpha \in X$, *P(β)* for all $\beta < \alpha$ implies *P(α)*.

Then $P$ is true for every element of $X$.

**Proof** Let $X$ be a set and $\leq$ a well-order on $X$. Suppose for a contradiction there is a property $P$ satisfying the hypothesis of the theorem but not the conclusion. Then there is some $a \in X$ such that $P(a)$ is false. Also, $a > 0$ since by supposition $P(0)$ is true. So the set $Y = \{\, a \in X : P(a) \text{ is false} \,\}$ is non-empty and a proper subset of $X$, so it has a least element $b \in Y$. Then for every $c < b$ we have $P(c)$, so by supposition this implies $P(b)$, a contradiction. Hence $P$ must be true for all elements of $X$.

**The transfinite construction of the Bernstein set.** So, now with induction sufficiently strengthened, we return to our original proof. It is a consequence of the axiom of choice that every set has a well-order, known as the Well-Ordering Theorem. We order $\mathcal{F}$ using this theorem, call the order $\leq$. We also well-order the real numbers **R**. Let $Z$ be the least element of $\mathcal{F}$ and let $p_Z$ and $q_Z$ be the first two elements of $Z$ according to the order on the real numbers. Then, for later $F$ in the order let $H_F = F \setminus \bigcup_{G < F} \{\, p_G, q_G \,\}$ and let $p_F, q_F$ be the first two elements of $H_F$ in the real well-order (a slight technical problem might arise from $H_F$ being empty, this is resolved by looking at the interaction of cardinality and order, which I lack the space to discuss). Then we take $B = \{\, p_F : F \in \mathcal{F} \,\}$. This intersects every closed uncountable set by transfinite induction, and so does its compliment, so we have our desired set.

$B$ **is really strange.** This transfinite construction has given us one of the more monstrous sets of the real line. It is uncountable, but any closed subset of it must be countable since its compliment intersects every uncountable closed set. If you are familiar with Lebesgue measure it is easy to show that the intersection of B with any set of positive Lebesgue measure is non-measurable. $B$ and its intersection with various other pathological sets also relate strangely to Baire category.

**Problem of the Issue:** Transfinite induction can be used to create other strange sets. This fortnights problem is to continue with the idea but in a more subtle fashion. Show that there exists a subset of **R**$^2$ (the plane) such that this subset intersects every line exactly twice. You'll need to figure out precisely why we don't run into size issues in the construction of Bernstein sets to work this one out. Also, contrast it to the theorem of last fortnight's installment. Perhaps that suggests an alternate proof, I don't know. It is possible that no one knows and you can publish your work—the *Waterloo Mathematics Review* might be a good place for that.

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# Hallowe'en Tricks and Treats

*Ways to scare your friends, in the spirit of the season!*

If you didn't notice from underneath the rock you reside under whilst you are in University, it is that time of year again! That's right, folks, it's the time of year where small children dress up in their favourite characters and hop outside to beg for free candy from random strangers in their residential neighbourhoods.

Since I most likely will not be participating in any looting this year, I would like to take that time to instead inform you of ways to "trick" your friends, should they decide to not "treat" you to free candy or treats of the like.

- Consistently overuse worn-out memes. Things such as carrying around a Mudkip plush toy and stating, "I heard you like Mudkips" is generally a good way to annoy someone well. They will either reward you with a punch in the face, or some much-wanted candy.
- Another meme to piss others off: carry a box of cardboard "scouters", breaking them at every house and screaming "it's over 9000!" as loud as possible.
- If you are with a group of friends walking towards any establishment, scream as loud as you can, "ALL RIGHT, CHUMS, LET'S DO THIS—LEEROY!…" I'm sure you can deduce the rest.
- Traditionally, when one approaches a house, one will say "Trick or Treat!". Instead of over-using this mindlessly cliche phrase, one could instead use "Candy Please!", or some other three syllable ringer that has to do with either pranking the victim, or receiving candy. I've yet to hear any good ones.

Hopefully that's a good enough start as to the attitude one should take when approaching others on Hallowe'en. I wish you good hunting, and hopefully you fulfill your candy quota before midnight.

Be mindful of candy thieves! I've also heard that ninjas prowl around these days, snatching up random loose candy from those who are least expecting it.

t3h_BROm1n4t0rz

# Wanted:

After many trials and tribulations over the past while, the frustration built within certain individuals surface. Even though the season of mercantilism is still far off, vague corporate strategy suggests one should declare early and declare often. If there is anyone who does happen to obtain one (or in some of the more abstract cases, how one would obtain one), please hand them to a *math*NEWS editor.

- **1** Nerf axe
- **1** valid letter from Hogwarts School of Witchcraft and Wizardry
- **1** amicable dragon
- A prepared set of extremely nerdy shots
- **1** figure and plushie of Nyx's avatar (inquire)
- A working *math*NEWS production system
- An excess of free time

Thanks,
Curious
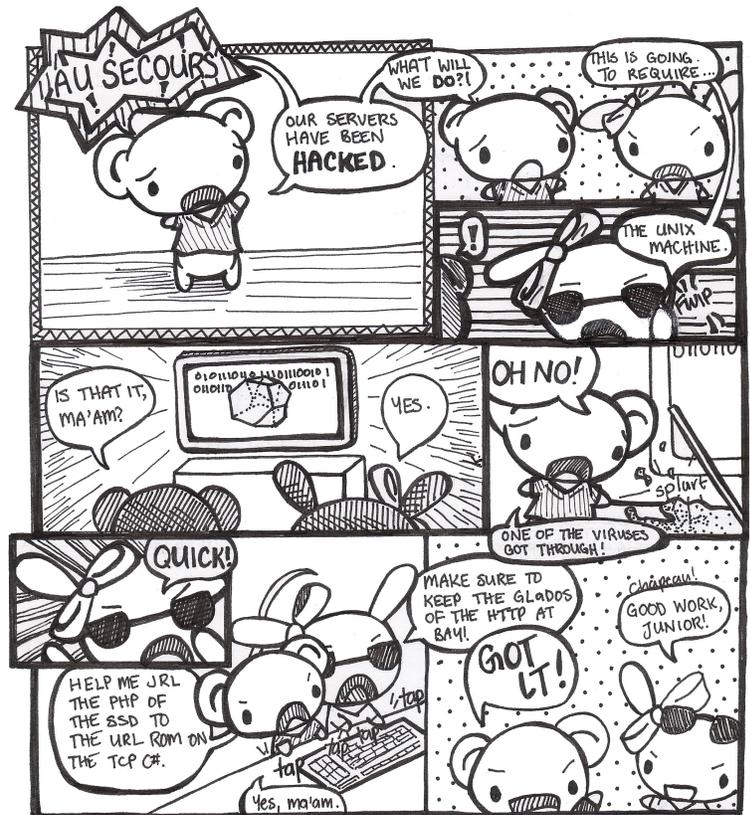


fig 12: One day, junior, l33t h4xx0rz you too will be.

# Rules for Driving in the Interwebz

*Just because we already have a few of these…*

Here is a list of "basic knowledge" that one has to know upon entering and while frolicking around the Internet, stirring up the masses and possibly causing emotional trauma through accessing thousands of uncensored, unadulterated content.

- The person whom refers to Godwin's Law first, loses. Always.
- Rule 34 is **always** active while online.
- The internet is public domain. Remember that now.
- There is no such thing as "roadkill". It's probably Chuck Testa.
- Misleading or exaggerated highway signs most probably lead to a rickroll.
- "Beware of Trolls" is a legitimate warning.
- Regardless of how many e-mails you receive, Nigerian middlemen are usually as helpful or as nice as they seem.
- In order to avoid possible internet backlash from anything you post, proclaim your infinite loyalty to /b/.
- In doing so, launch the masses against any non-believers you find.
- There is always a finite amount of time before the next post is made.
- Internet memes are actually a lot more appealing than mot would like to admit.
- There is an infinite supply of cute kitten or cat photos on the Internet.
- Regardless of what others think, there is no such thing as "the Internet police", and they cannot track you by checking the reverse IP address.

t3h_BROm1n4t0rz

# Orange News

### *It's an Orange disguised as an Orange playing another Orange*

Good evening and welcome to another magnificently satisfying edition of Orange News. At always, we bring you incredible, high-quality, well-researched fake news that affect YOU, the real students of the Math Faculty of UW. You have to read it and be very, very gullible to believe it.

As is public knowledge, Steve Jobs, co-founder of Pixar Studios and technology giant Apple, has passed on earlier this month. Jobs served as a golden standard to entrepreneurs, inventors and innovators worldwide. His influence on modern society via such products as the Mac computer, the iPod, and Pixar films like *Toy Story* has changed the world as we once knew it. This column makes fun of him, but the Orange News Editorial Team would like to say we're doing so in good spirit and out of respect. So please don't sue us.

Steve Job's death, like those deaths of many influential creators and celebrities, has spawned countless rumours. The Orange News Editorial Team was sent on a mission to investigate one of these rumours that hit pretty close to home—Jobs was not, as claimed, a victim of complications due to relapse of pancreatic cancer. Rather, Jobs was assassinated by the UW CS ninjas.

This rumour is supported by several suspicious facts. First, it's a notable fact that Steve Jobs has never graduated from an institution of higher learning. As such, his undeniable success in life could entice more people to drop out of school, which would hurt the tuition revenues of any university, UW included. Second, Waterloo has significant ties to both Steve Jobs's archnemesis Bill Gates, and to Apple's competitor RIM. This suggests UW would have both the financial means and technical know-how to carry on such an assassination attempt.

According to several highly-unreliable sources, the CS faculty has been secretly training a squadron of code-ninjas for several purposes. This comes in addition to the Math Faculty's traditional Black Tie Guard, an honourable warrior team. The CS ninjas are selected among the top students at the end of 2nd year, they reside in the 7th floor of the MC, eat nothing but Campus Pizza, and are deadly with both keyboard and mouse. Their black-box fast-coding abilities transcend normal human capabilities, they can infiltrate any firewall, and can even throw shuriken, which is pretty awesome.

While I was undertaking my mission of locating the CS-ninjas and confirming whether or not they had a hand in the death of Steve Jobs, I also found the time to look into what YOU, the real math students of UW, think about this horrifying but cool possibility.

Max said "Steve Jobs is dead?! Nooo! I was stuck in a computer lab for weeks working on my CS assignments and I didn't know. This is so tragic. I'm sad now".

Lauren said "I don't think we have ninjas in the math faculty. We're not very physically intimidating. But the Campus Pizza part could be true".

Sara said "That's pretty creepy. And I think what you're writing is pretty offensive to Steve Jobs. You suck".

Daniel said "Dude, totally. You didn't hear this from me, but you can find the secret entrance to the hideout if you push the statue in that weird fountain in front of the MC around 360 degrees counter-clockwise".

After following Daniel's advice, I was ambushed. I woke up hours later in the comfy lounge. A note next to me said *"Wasn't us. Will avenge Jobs. Ninjas rule. Peace"*.

And that was the end of our investigation into the death of Steve Jobs. I think it was our best journalistic mission ever. Join us next time, as we prod more nonsense into the life of UW students and stuff.

For death-threats and virus attachments, `orange.crush.uw@gmail.com`. Here's a shout-out to Holger, who was awesome enough to email me, proving that someone actually reads the stuff I write. Maybe I should put more effort into improving the quality of my articles... Anyway, have a good week, and good news.

Orange Crush

# The Esteemed UW Crest

### *What it's being slapped on these days*

So upon looking at the new diploma, I was admiring the UW Crest. I always enjoyed what should be what we celebrate, research and learning in accordance with truth. Yet when I went to the UW Shop I found it plastered on everything. Here is what I found it on.

Spiral notebooks (in blue, red, and black), journals (in red, blue, green), whiteboard calendars, 1" 3-ring binders, leather clipboards, plastic clipboards, plastic folders, hoodies, t-shirts (colour and white crest), golf shirts (in white, black, and blue), windbreakers, hand clocks, art deco clocks, letter openers (in silver and gold), star-shaped paperweights, tie clips (in silver and gold), cuff links (in silver and gold), pocketwatches, necklaces, bookmarks (in silver and gold), photo albums, gift bags, wallets, leather portfolios, ball caps, stickers, metal steins, glass cups, coffee mugs, glass steins.

That's a lot of shit with the crest on it. Do we really need a new logo?

GroovyED



# The Waterloo Crest:
# They put that shit on everything.

## profQUOTES

*And the onslaught begins…*

[*Showing heap initialization*] "That should be right. Now that we're done, it's so messy that you can't even tell."

<div align="right">Stinton, CS 240</div>

[*When hearing that WLU has accepted answers sent with iClicker 2*] "Oh no! Waterloo is technically behind Laurier!"

<div align="right">Becker, MATH 135</div>

"You might hear someone say coroutines are a kind of concurrency. Bzzt WRONG! Hit them in the side of the head with a fish."

<div align="right">Buhr, CS 343</div>

"Let's start with a useless example. That's always the best way to start."

<div align="right">Buhr, CS 343</div>

When we get to concurrency you will know. It. Will. Hurt.

<div align="right">Buhr, CS 343</div>

## Slitherlink Puzzle

Rules: Put walls on the grid. The walls must form a simple closed loop. Numbered cells must have that many walls.
A small example is provided below. Puzzle taken with permission from `http://www.puzzle-loop.com`.
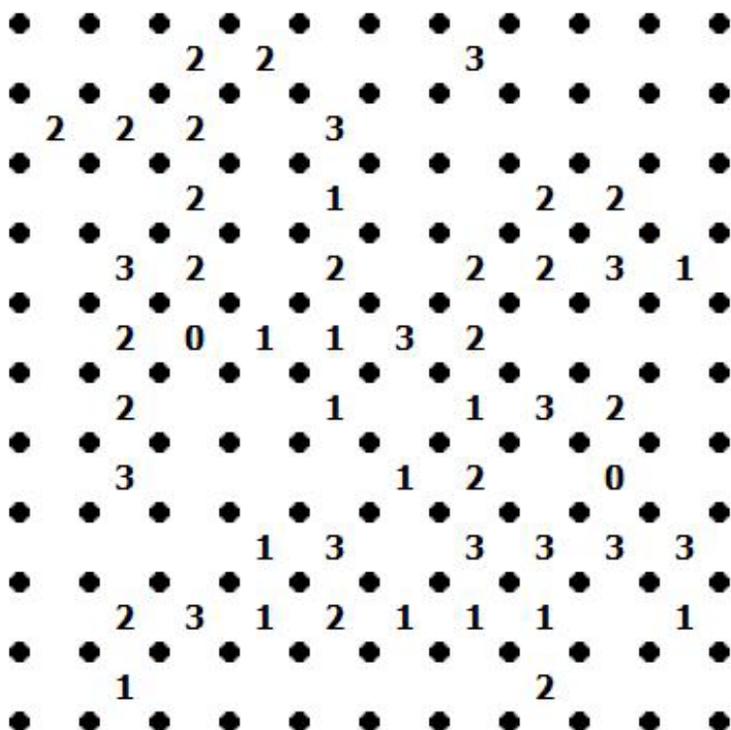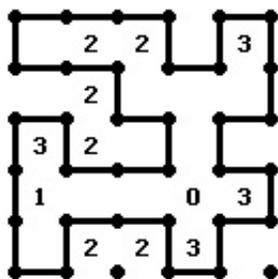




## Staying Awake in Class

*Ahh ahh ahh ahh staying awake, staying awake…*

I should note that when I first came up with this idea for an article, I had been previously awake for close to 46 hours. Please take what I have to say with a grain of salt, especially since I had forced myself to drink copious amounts of caffeine.

What follows is a brief list detailing the strategies that I used to stay awake through my 8 hours of class that fateful day. I'll likely expand on these ideas in future issues, but for now these will have to do.

- Learn to penspin. I watched, fascinated, as my companions whom had also stayed up with me were able to stay awake by spinning their pens in an entrancing pattern, which allowed me to survive roughly five minutes of painful review.

- Become a "musician" in class, silently. Transform everything the lecturer says into some kind of dubstep, electronica, or dance music. Usually that kind of thing keeps one awake for at least ten minutes, while making lecture content at least slightly more bearable.

- Create "to-do" lists for assignments or work to complete in the near future, or day-to-day chores that you're "excited" about completing that day.

- Write ideas for **math**NEWS articles, then come out and write them! :D

- Bring other readings for lectures you have that day, especially if you haven't already read them like you were supposed to.

- Inform otheers around you to poke you if you nod off easily. This is especially useful if you're a sleep-deprived maniac like myself.

- Fidget. Usually a good way to keep from dozing off, if caught, is to continuously distract your mind by physically fidgeting. I find that randomly tickling yourself is especially useful if you're ticklish.

- Massage yourself. Not such that you fall asleep, but in such a way that any comfortable part becomes slightly more uncomfortable, for the sake of staying awake in class. I find that jabbing the areas near the base of the neck tends to wake me up for a few minutes.

- If you're seriously that tired and none of these tips help, you should probably skip class and take a nap. It's better to miss a class or two and catch up on sleep than to show up in class and fall asleep anyways. The prof will dislike you if you do that.

I don't think there's much else to say. I would write more, but I'm starting to…

<div align="right">t3h_BROm1n4t0rz</div>

## Because I Can

### *Halloween Approaches*

Coming up is the spookiest night of the year! However, this is not from the attempts from people to be spooky. Rather, the spookiness arises from the utter lack of self-respect people must have to dress up in the outfits that they do. On Halloween night, you realize that the current generation is largely composed of degenerates, and that the human race is royally screwed. So, to help you not have to deal with this, here are things to do!

- Spend time at home dealing with trick or treaters. When they ask you for treats, give them tricks. Though, you will have to learn some tricks to show them. Last year I stayed home and did front flips for anyone who came trick or treating.

- Completely contrary to the previous one, ensure that you will have no memories of the night so that you do not lose all faith in humanity. Note that I am not advocating heavy drinking, but it is the most efficient way, short of drugging yourself.

- Wander the streets, pretending that you are from another time. Dress up as such and deny that you are in costume at all. This is especially good if you use archaic or fake language to up the verisimilitude.

- Hide from the world, ideally in your bedroom sleeping or studying. This will result in either an increase in your position on the curve, or a decrease in your sleep debt. Either way, this is probably the healthiest option, but also the least fun, and leads to the least decrease in faith in humanity.

MeaninglessQuips

## When Life Gives You Lemons…

### *Screw Lemonade*

- Get sugar, ice, vodka, and make daiquiris!
- Squirt them in the eyes of your enemies!
- Have a party with the lemons!
- Find someone with a citrus fetish!
- Make life takes it's lemons back! What are you gonna do with lemons?
- Get mad! Demand to see life's manager!
- Make grape juice. Then kick back, relax, and watch the whole world collapse as they try to figure out how you did it.

MeaninglessQuips

## Email your *prof*QUOTES to `mathnews@gmail.com` or drop them off in the BLACK BOX outside of the Comfy Lounge.

## *prof*QUOTES

### *No one is safe*

"You'll know when we get to full coroutines because your brain will explode. For now you'll only feel a little bit of steam coming out your ears."

Buhr, CS 343

"Now something comes out the backside, and what comes out the backside is… moi."

Buhr, CS 343

…and you hand it in and you get a zero. Why? Because there was no Zen!

Buhr, CS 343

"Atomic" from the Greek "at" meaning "deepfried" and "omic" meaning "running shoe"

Buhr, CS 343

*[A student explained how they thought something worked]*
"Yes! Exactly! Except now I'm going to tell you that was a lie."

Buhr, CS 343

"Generally, doing steps wrong gives you the wrong answer."

Kennings, ECE 140

"Engineering is applied laziness."

Mansour, ECE 105

"In this course we love animals - don't ever forget that."

Mann, PHYS 121

"We live in a world where we're getting our butts kicked all the time."

Mann, PHYS 121

"I hope I've confused you. I hope you can't sleep tonight."

Vrscay, MATH 137

*[About the CS midterm]* "You can bring your calculator and cuddle it if you feel insecure."

Ragde, CS 145

"I keep a mental list of those who answer and award them… 500… cool points."

Dupont, MATH 138

"Roses are Red, violets are Blue, I am a Schizo, and so am I."

Dupont, MATH 138

"Let's hope none of *you* are on drugs right now."

Dupont, MATH 138

"If you lose marks on the midterm for using $dx$, tell me and I'll fix that, then we'll find the TA and smack them."

Dupont, MATH 138

"A prerequisite of the course should be to watch Memento."

Dupont, MATH 138

"It's Friday, what would Rebecca Black say?"

Dupont, MATH 138

## Orange Comment

### *Regarding: RE: Rainbow Mathies 14*

Dear *math*NEWS editors,

In your response to Rainbow Mathies 14 (which, by the way, I completely support and I really think you did the right thing in that case), you mentioned that your general policy was to print most articles so as to "give less-than-optimal writers a reason to return".

Was that a hint? You weren't talking about me, were you? You were probably talking about me. I knew it, I'm a terrible writer. And I'm fat and ugly. And nobody likes me. And I have low self-esteem. My ex-girlfriend was right, I *do* suck. Sniff sniff whimper whimper.

*[Editor: *HUGS*]*

Orange Crush

## How to be a Russian Mathematician

Russia has produced many of the top mathematicians in the world. Most notable of late is a certain Gregory Perlman, who solved the Poincairé Conjecture. Obviously you can never hope to be *that* awesome but there are other ways to enjoy the mathematical culture of the motherland.

1.  Eat like a Russian mathematician. The Russian mathematical diet consists of one super-high calorie meal per day. The options are as follows: 1L of borscht, ham and cheese on black bread, half a glass of vodka and 2 pickles.
2.  Do math russian style. Confiscate the only blackboard in a town "for science" so that you can cover the hole in your apartment wall while working. Move in with your parents so you can save on the heating bill, your wife will love cooking for your parents. Drink. A lot. Seriously, if you don't finish a bottle of vodka a day you're doing it wrong.
3.  Miscalculate on purpose. The government is going to steal your work and use it incorrectly in various fields. However nothing is better than a free fireworks show when you redirect that new multi-warhead nuke over the village 30km north. Also now nobody is left to take that chalkboard back.
4.  Get government subsidies. Yes, the vodka is free for government employees. But if that isn't incentive enough; go die in a fire.
5.  Math supplies: the classic method. Pay the street urchins 1 ruble to bring you chalk from Chernobyl. Then pay the orphans at the local church to steal the urchin's cardboard boxes. What? You thought you have paper?
6.  Hide from the KGB unsucessfully. It doesn't matter if they changed their name. In Russia it's still the KGB and one drunk day (any day of your life) you'll accidentally solve a real problem and get some unwanted attention. This is where you regret abusing the poor serfs surrounding you and go to join their ranks. That or move south to China where the government will let you live a dozen more years before you selling you back across the border.

Ruski

# In Other News

*You want the news? You can't handle the news!*

- In UW news, there's a new `uwaterloo.ca` homepage coming soon. This comes in response to a survey gathering comments on the current new homepage. You know, the one with the giant random picture and no useful links. The new page will also feature better usability on smartphones. Just don't expect it to replace Facebook anytime soon.

- In local news, Oktoberfest, K-W's biggest annual festival of culture (but mostly beer), is over. The Orange News Editorial Team hopes you all had a fun and safe time. Now all the Germans can go back to designing efficient cars, eating schnitzel, and whatever it is Germans do on their spare time. (Note how I didn't mention "plan invasions into Poland". That joke is almost 75 years old).

- In Canada and beyond news, "occupy" protests have sprang up in most major cities across the world. Protesters are protesting economic disparities, leadership apathy, and other issues that afflict the working class, students, the unemployed, and other demographics. Protests ranged from tiny and peaceful (about 20 people in Winnipeg) to loud and obnoxious (thousands taking over Toronto with a handful of arrests) or the plain dangerous (riots in Rome). Meanwhile, UW in being occupied… by midterms. Blah.

- In global news, the world's population is set to hit 7 billion by the end of the month, according to the UN Population Fund. This big number raises old concerns about the sustainability of population growth on an Earth with limited resources. in the meantime, I'm setting up the "Support Orange Crush" fund. Hey, if every person in the world donated just \$1, I'd have \$7 billion. Now that's math I like.

- In wacky world news, a real-world superhero vigilante has unmasked in Seattle. He was then accused of assault and arrested, but he wasn't charged so he's probably released by now. Seriously, a superhero. Costume and everything. He calls himself Phoenix Jones. I'm not making this up. Man, somebody watched *Kick-Ass* one time too many.

- In sports news, Don Cherry is in hot water after making comments about how fighting is an integral part of hockey. He refused to apologize. Then he did apologize for offending some league enforcers. But the real question is- where does he get those sick suits? I want one.

- In entertainment news, Coldplay's new album is set to hit stores this week, and fans are waiting anxiously. And yes, I'm being sarcastic. If you wanted to hear the new songs, they're already on Youtube.

- In other news, today (Oct 21) marks Orange Crush's birthday. In response, my family drove out of the country for the weekend. I'm not even kidding. I plan on celebrating by eating frozen bananas and crying myself to sleep. Yeah.

That's all for this edition of In Other News. For comments, complaints, and tips on where to find suits like Don Cherry, contact us at `orange.crush.uw@gmail.com`. Until next time, good night, and good news.

Orange Crush

# Interesting Costume Ideas

*If you're lazy or feeling un-creative…*

I've noticed a trend of unoriginality these past few years. Everyone enjoys dressing up as the easiest possible thing they could think of and thus, the experience of everyone else when this unoriginal person shows up to the party instantly decreases upon their arrival. I've attempted to devise a list of simple, "creative" costume ideas that one could use to avoid the awkwardness of showing up as the same thing as someone else this coming Halloween. I'd suggest breaking up into your own ideas, as these will probably go fairly quickly upon being posted.

- Superheroes. There was an entire ORIENTATION WEEK THEME to this, so if you have a favourite childhood memory of some awesome comic-book star or an anime, use it here! An unpopular choice would usually be something like Aquaman.

- Cartoon or fictional characters from a TV show. I stole this next idea from the Big Bang Theory, but Scooter from the Muppets television show was once considered to be the "Aquaman of the Muppet babies".

- Video Game Characters. These usually get creative when you consider the vast numbers of protagonist/antogonist relations from a lot of series of games. I've seen crossover hybrids which I thought were awesome. For those that play both Mortal Kombat and League of Legends, people have dressed up as Scorpion/Shen combinations, or SubZero/Smoke-Shen combinations. Try it yourself!

- If all goes South, just become a common character from your favourite movie. Creative ones will go towards movies that nobody has heard of.

- If you want to be unoriginal and lame, but "cheap" and effective, wear a thick trenchcoat, slick shades, and a gangster hat and go as a 1920s mafia member.

- If you actually have TIME to think of things (unlike me), do strange hybrids of things that you find at cheap thrift stores (such as Value Village or Winners).

I sincerely hope that you actually have something decent this time around. After $x$ years of Halloween experience, you'd think you'd have found a unique idea, no?

t3h_BROm1n4t0rz

# Orange Proofs

*Back by popular supply*

Today we prove the Orange Theorem: orange ≥ infinity.

red + orange = orange. Thus, subtracting orange from both sides, we get red = 0.

By a similar argument we have yellow = 0.

But, orange = red + yellow = 0 + 0 = 0. So orange = 0.

Wait… that can't be right… oh, dammit, never mind.

Orange Crush

# The conspiracy behind Occupy Wall Street

If you have been paying attention to the news at all, you should be well aware of the current OWS protest. If you don't pay attention to the news, allow me to bring you up to speed: Americans are angry because they are 99% and not 1%, and because of this, they pitch tents in a park in New York. Confused? Me fucking too. To be fair, if our milk came in cartons, we would be irrationally angry at sets of numbers that add up to 1 as well.

Now, this is when we put on our tin foil hats and scream about the existence of a secret elite group bent on global domination that are reading our thoughts through the CIA, how aliens used the pyramids as landing pads, how 9/11 was an inside job, and how Raptor is supposed to come Oct 21 (in the insane case that Camping was actually right, that is today. There is probably a raptor sneaking up behind you right no— CLEVER GIRL). I'm going to tell you something so insane that all of the above will pale in comparison. Get ready for this: OWS is created by the Canadian government to destabilize the American government and create social unrest.

Am I insane? You may think so at first. There are important questions that must be answered, such as "What? Canada? But we're friendly!", "What motivates Canada to damage our neighbours in the south?", "Why start a peaceful protest movement based around sets of numbers that add up to 1?", and most importantly, "HOLY SHIT WHY IS THIS RAPTOR EATING MY ARM?!". Don't worry, my friends, I will explain exactly why this is true, and why you should be concerned.

First of all, the largest red flag is that the entire protest was started by a Canadian activist group, Adbusters (I'm not even making this shit up — it was on Wikipedia). Of course, this group that appears to challenge the Canadian government is actually a secret division of CSIS. The lack of evidence that connect the two simply enforces the fact that they do not wish to be associated with each other. The connection is so deep that even the lower ranking members of both organizations do not know of it.

Motive is, of course, the next question. The reasoning behind this is simple: we are preparing the United States for invasion. We get them to realize the things that their government has done and all the negatives, put that in contrast to our system, and the people will be begging for us to invade. It will not be a military invasion, rather a economical and political one. The public are already under our control through OWS; as long as Canada continues to "suggest" things to them, we will soon be in control of the entire country.

Finally, we discuss the purpose of the numbers 0.99 and 0.01 (aka 99%, 1%). At first you might think these numbers are chosen randomly, but as always, this is false. The first thing you should note is that they do, in fact, add up to 1. Being the multiplication identity, we can see that when we combine the 99% and 1%, we have multiple identities. You know what else has multiple identities? Spies. That's right, the 99% and 1% are infiltrated by Canadian spies. Also, if you divide 1 by 0.01, you get 100. This is a power of 10, which signifies the metric system. Americans use the Imperial system. Clearly, by this invasion, Canada aims to bring Metric to the US.

For the bonus question of why the Raptors are eating you, it's because they are fucking vicious carnivours and you are meat. Omnomnom.

One more for you. Think of this: 1% + 99% = 100%. I am the 100%. I am pissed off about the 0%. Fuck those guys. What was this article about again? I'm angry. Let's go protest.

Being dragged away by Men in Black,
theSMURF

# N Things to do at a Party When You're Sober

*Hanging with friends as they do shots = another Waldo experience!*

- Watch your friends receive the message "Would you like to temporarily change the game to easy mode?" as they fail at playing video games.
- Enjoy the hilarious answers given to the Cards Against Humanity questions.
- Listen to nostalgia in music and go on a group pseudo-karaoke round.
- Let the girl power come out!
- Share some intimate moments and watch more intimate moments being shared.
- Treasure that one moment you'll always remember, even though everyone else may not.
- Mimic the environment around you and totally act drunk even though you're not. Your friends may be baffled at how you'd ACTUALLY act drunk, but you'd still have good times all around!

waldo@<3.LE-GASP.ca

# Dri**ve** n**ow** k**ids,** be**for**e r**etiring.**

CLOSURE
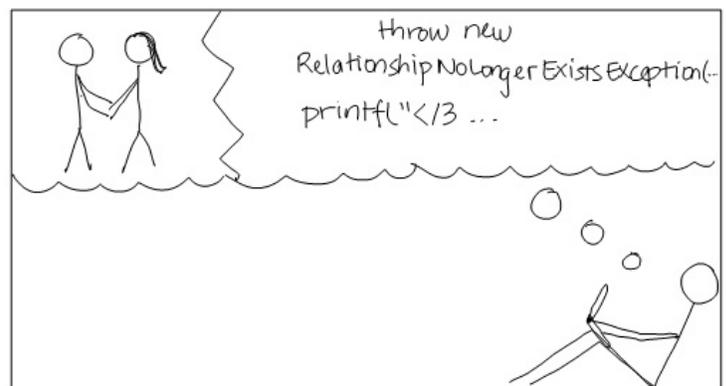


SINCE YOU LEFT ME...
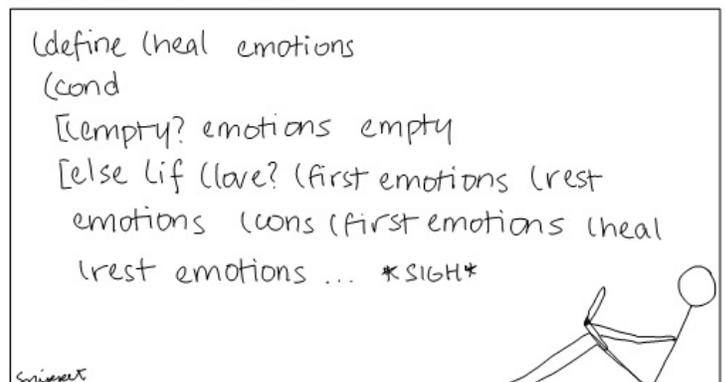


LIFE JUST DOESN'T PARSE...

## *prof*QUOTES
*Sending the final blow*

"Anybody who pays for pornography has failed the internet."

Smith, ECON 101

Student: "Where'd you get that number?"
Prof: "I did a calculation in my head twenty years ago."

Wagner, MATH 249

Student: "Was there any method of birth control in the 1700s?"
Prof: "Just coitus interuptis."

Taylor, HIST 243

"Ha ha, I wrote 'F U' on the board"

Speziale, MATH 117

"Did someone just say take it out? You can't just take it out unless you put something back in."

Kennings, ECE 140

"It's because of the Charter of Rights and Freedoms that we question the right to go through a Tim Horton's drive-thru nude."

Briggs, HIST 388

"I went to the doctor's to get checked out for college and they said, 'Uh-oh! You're colour blind!' I said, 'Well, what can I do?' They said, 'You can't do biology, you can't do chemistry, do math!'"

Wu, STAT 230

"How 'bout this penis-sized chalk, eh?"*[later]*"Ok, this chalk is getting annoying."

Dupont, MATH 138

"Back when I was a TA for MATH 135, I had students try and calculate the last two digits of pi to some modulus. This one guy had a brand-new hundred-dollar calculator and punched in the question. When he did the math, he found that the digits didn't fit the screen and thus wrote, 'The last two digits of pi both must be 0.'"

Celmins, MATH 225

"I have $n$ balls, how many positions can I put them in?"

Wu, STAT 230

"I'm going to get our balls outside. Imagine a big hand."

Wu, STAT 230

"I'm talking about people instead of balls, but you can see that they're the same thing."

Wu, STAT 230

"This is a famous formula, it's called the BS formula."

Wu, STAT 230

"This is the foundation for BS statistics"

Wu, STAT 230

"Stop stealing my boy!"

Roh, MATH 235

"Professor Roh wins! No, I don't drink tiger's blood."

Roh, MATH 235

"This is a nice vector with no fractions, so hopefully you won't come after Professor Roh anytime soon."

Roh, MATH 235

"Expect profound changes if you change your inner product."

Roh, MATH 235

"Yaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaargh!"

Schonlau, STAT 231

"If it looks like a duck and walks like a duck and talks like a duck it might be a duck. But this is where the duck goes wrong."

Schonlau, STAT 231

"I don't want to be a hard-ass, but I'm German. It's easy."

Schonlau, STAT 231

## Trip to China Part 3

Ah, how can one talk about China without talking about its food. Yes, the Chinese eat everything, their food is full of grease and MSG, and the many regions of China have their own specialty cuisine, leading to the diversity of Chinese food one of its most attractive things. That's probably not news to anyone. In the recent years however, food in China has taken on a lot of western elements, while retaining its many quirks.

I was pretty surprised how cheap food is in China. Basically, however many Canadian dollars food costs here costs the same amount in Chinese yuan (with the exchange rate around 6). I figure that one of the reasons is that there is so much competition. Given the population density of Beijing, there can be entire streets filled with restaurants. Another less appealing reason is the lax food safety standards. I saw a sushi stand wheeled on the back of a large tricycle. There's no refrigeration equipment, and the stand is usually going out in the streets in 35 degree weather with the humidity around 80%. I stayed away from that even though their sushi costs 1/6 as much as here.

Western fast food chains have made a lot of penetration in China, but finer western restaurants can't get a foothold, probably because nobody can stomach a steak that can cost as much as 1/6 of someone's monthly wage. Even fast food chains not that popular here (e.g. KFC) are thriving quite well from what I observed in Beijing. I also saw quite a few Pizza Huts, but they sell mostly dishes with rice. Moreover, western fast food is regarded as fine dining in China, and the restaurants renovate with that in mind. Given that, "fast food" is actually quite expensive. One meal at McDonald's can cover an entire day of food expense for someone thrifty. Pizza actually costs as much as it does here, so one large pizza is more like two days of food expenses

What I found most charming was the roadside stands. Food safety laws are enforced very loosely, if at all, which is both good and bad. I got to sample many specialty food items, but was always apprehensive that my stomach would retaliate later. Overall though, I do prefer that to the relatively boring (and not to mention overpriced) stuff we have here.

Lich

# Horrorscopes

**ActSci:** With the death of two big names in computing, you decide to see when the great ones in Actuarial Science will pass away. You then realize that this is impossible to calculate, because there aren't any big names in the ActSci world. You go back to studying.

Your unlucky number is: 34 tears shed as you cry yourself to sleep.

**AHS:** With the advent of Siri on your new iPhone, you realize you don't need to use your hands anymore to communicate. This opens up many possibilities, including playing baseball while still responding to text messages and Facebook status updates. You get called off the court when the ref hears you sexting while heading up to bat.

Your unlucky number is: 1 foul ball.

**AMATH:** You decide the stuff that you've been modelling in class is actually way cooler than what you actually do in real life. You vow to take up skydiving before winter sets in. During your first jump, you fall into a flock of migrating geese heading south before the cold sets in.

Your unlucky number is: 14 newly-pecked holes in your parachute.

**ARTS:** It's the middle of job-hunting season, and you have yet to catch anything. Steeling yourself for the hells of continuous cycle, you decide to go off training in the ancient arts of kung fu in isolation, like in that movie you saw last week. Upon returning, you see that you missed half a dozen interviews to high-paying jobs.

Your unlucky number is: 6 more weeks of Jobmine.

**C&O:** With midterms just beginning you prepare to optimize your study schedule. You fail to realize that one of your classes has two midterms, and you're caught completely unprepared when you're informed of it. You pass 5 but fail 1.

Your unlucky number is: 6 choose 5 successes.

**CS:** You decide to write a new system for CERN that takes into account the relative motion of the satelites orbiting the Earth to the LHC, so the tachyon scare won't get repeated again. You see that the system has some other major issues anyway, so you rewrite that too. In the end, there is an entire new OS ready, but it's command-line only. after all, GUIs are for n00bs.

Your lucky number is: Actually 0.e7 c. Einstein's laws still stand.

**DOUBLE DEGREE:** You try your hand at table-top roleplaying games, but you can't decide which class you want to be, since there are so many compelling ones. You decide to go as a multiclass Rogue/Wizard with a speciality in Illusions. After spending several hours building your character, the GM asks you why you didn't just pick bard.

Your unlucky number is: Level 4 but your intelligence hasn't changed.

**ENG:** The midterms are upon you, and your profs have also decided to be extra cruel and inflict big projects on you at the same time. You decide that you can kill two birds with one stone here and build a robot that can write your midterms for you. After importing all of the necessary libraries, you power on your creation for the first time. It promptly starts attacking the TA. Maybe next time you should remember "`import soul`".

Your unlucky number is: 49% on the midterm.

**ENV:** Seeing the protests happening down on Wall Street, you decide to protest something in university. You march onto the student success office with banners with descriptions such as "I have a 70%!" and "We will not suffer in silence!". The protest goes through your midterm. Time to change the banner.

Your unlucky number is: "I have a 50%!"

**MATH PHYS:** You see the Environment students marching to the SSO, and wonder what all the fuss is about. After all, if you have a 70% in this program, you're failing. Nineties all the way! You decide to troll the other students for a quick break from the mountain of differential equations you have to solve.

Your unlucky number is: 7 pickets in the face from angry Enviros.

**KI:** It's midterm time, and you have the worst midterm schedule ever. Your math midterms conflict with the courses you have in your native Environment faculty. You go to the SSO to get them to rechedule, but you have a hard time navigating through the mob. Seeing a Math Phys student there, you bribe him to write your math midterm for you while you write your other one at the same time.

Your unlucky number is: 20$ for an easy 80%.

**PMATH:** It's your last chance to get ice cream at Fed Express before it gets too cold out for it to be sane to have frozen desserts. You pick up your jacket emblazoned with "I love $\pi$" and head out for some frozen treats. The server getes confused when you ask for the Strawberry Cheesecake.

Your lucky number is: $e$ scoops of ice cream to go.

**SCI:** You have managed to breed a new species that can mimic the traits of a similar item in its vicinity. The electrical current running through the lab is the first thing to get copied. Followed by the lasers being fired all over the place. You market your bacteria to nightclubs and raves, and get filthy rich and have your name for every sinlgle night venue. It still doesn't help you get laid.

Your unlucky number is: 20-year-old virgin with a Ph.D.

**SE:** You have been getting calls and offers from Amazon, Google, Microsoft, Facebook, and Oracle. You don't know what do to, so you write a program to help you decide. The program is written on a Mac however, and develops a mind of its own. Next day you get a call from Cupertino to work on iOS 6.

Your lucky number is: 5 rejected companies while still getting a dream job.

**STATS:** You realize that the program you are in will most likely not be applicable to any jobs that you are likely to get. You check the past history of Stat majors with your marks, and see on a box-plot that none of them are working where they want to. You try to switch out of your program, but the advisor tells you that unless you switch into a tougher program, you will have to retake older courses and stay in Undergrad longer.

Your unlucky number is: 6 years of undergrad.

**TEACHING OPTION:** To get into the Halloween mood, you decide to cover everything with scary decorations, just like how you will be decorating your future classroom. When the time comes to carve the pumpkin however, you realize that you get a guilty pleasure stabbing the thing through its top. The pumpkin is now fully carved, but the feeling remains. You go on the prowl for other things to carve.

Your unlucky number is: 25 years to life in prison. The Joker would be proud.

!ED

## Ambiguous Video Game Quiz 3

At this moment the person who is in charge of this column is in the middle of a midterm examination, so this week this column is brought to you by someone else instead. Of note, this week we had a submission with the following answers:

1. Exaggerated motions required to play: *The Legend of Zelda: Skyward Sword*
2. Protagonist with teen angst: *Final Fantasy XV*
3. Managing an army to defeat the enemy: *Pikmin 3*

Since these games have not come out at the time of publication, the good Doctor was consulted if it was possible for him to procure a copy of these games for the team to evaluate before determining the merit of this submission. After several hundred hours of gameplay, several hundred hours more of grinding and hours of cutscenes, it was ultimately decided that many exaggerated motions are required to play Skyward Sword, the angst in Final Fantasy was expected from such a veteran of the series, and the creative interpretation of "managing an army" surely fits for Pikmin 3, even if traversing the Japanese game was difficult for the writers. In the end it was decided that this was surely the best submission of the fortnight, considering that the complement of this submission happens to be the empty set. With that in mind, RedMetal is requested to drop by Math-Soc to receive your prize.

As for this issue's quiz

1. Managing an economy to reach an objective
2. Great evil threatens the world after long slumber
3. Timing is of vital importance

Do submit answers to the BLACK BOX by noon October 31st, 2011; although there exists an obligation to remind all readers to that the most creative, unique and thought-provoking answers would be given the most points, considering that the number of submissions is dwindling, this is about as good as *math*NEWS giving out free prizes.

<div align="right">Zethar</div>

## *grid*COMMENTS

*Apparently, accented letters are bad.*

For the record, 'naoveti' was meant to be 'naivete', properly accented. Last week's *grid*QUESTION was, "How is a dolphin like a continued fraction?" and we had a couple correct submissions, but the winner on all counts is (again?) Benson Lung for the best solution to both clues. Benson "would like nothing more than to frolic in a school of [dolphins/continued fractions]", so congratulations, Benson. Your ability to frolic with abstract concepts awes us all.

Speaking of abstract concepts, your solutions need to be submitted in the BLACK BOX, right outside the C&D before 6:30pm on Oct. 31st. Be sure to include your (full) name and your answer to this issue's *grid*QUESTION, which is "As we approach Halloween, what is the SPOOKIEST mathematics out there?" Remember: the answers to the *grid*QUESTION are used as tiebreakers in the case of more than one correct solution. As a thank you for continuing to read this long rant of information you may already know, note the starred clues this week. There's a theme which may help you solve those clues; I might like to see who gets the theme with your submission as well, who knows?

<div align="right">Thanks for reading my signature, too,<br>moment</div>
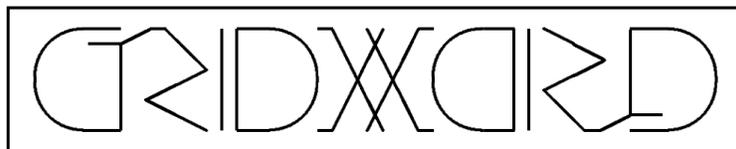
**GRIDWORD**

## Drop off *grid*WORD solutions in the BLACK BOX outside of the Comfy Lounge.

## Straight Clues

### Across

1. *Command
4. Voicing
9. Mountainous prefix
10. The Huntress
11. Convolute, circumlocutedly
12. Investments
14. Pests
16. Steal
17. Raincoat
19. Pierre's some
21. A period of undivided attention
23. Snorts
25. *Mesh
26. "Look!"
28. Went indie in 1947?
29. 1 Da
30. Step counter
31. Dah-and-dit Samuel

### Down

1. Uncontrolled
2. Samples
3. Argentinian city
4. Birdsong
5. *Facts
6. Fit
7. *Plot
8. Necessities
13. Excel cels?
15. Greek 'H'
17. Purchase for delivery
18. Deadlock
20. Big bird
21. *Tiny amount
22. Why chemistry?
23. *Club
24. *Deploy
27. Listen

# Cryptic Clues

### A +

1. Awkward glare from the king
4. Confusing Berra's loud with a medicinal branch
9. Condescending manner of a song
10. Chew chain follower?
11. Chemical causes cleaner conversion?
12. Downwind of the shelter is a defensive position
14. Lease nothing to that crazy madman!
16. Asked to, again, take care of the search
17. Insect meeting
19. Perfectly expected
21. *A signal quality
23. *Branches of minerals
25. Pop the opposite of the right clue?
26. *The complete ruler in a soak
28. A trio off-kilter relatives
29. Sum-sounding commercials
30. Deep rests for confused racers
31. Relaxed, not sick!

### Feather

1. Painted, again, with a distorted yell on the record
2. Disgusting imperial work and amazing quotes
3. *Operator: This is the French place...
4. ...a twisted plot curve...
5. *.Ends Operator
6. Bloom or Calrissian?
7. The right prefix for those disguises
8. I heard ya! Time to sail!
13. *Indent the terminal, endless, factor
15. Propless purpose?
17. Cash under the cushion? That makes a score!
18. Soiled badly, without an edge, and a flatter ball
20. A Franc and an Anglo make an Italian?
21. Bent over twice
22. Opposite in song
23. *Coil up but, first she throws stones
24. Cotton on Lionhead Island
27. Muck up rat

## This Week's Grid

My name is:

_____

My answer to the *grid*QUESTION is:

_____

_____

_____

## Answers to Last Week's Grid