

math

NEWS

Volume 118, Issue 1

Friday, January 13th, 2012



Midgets take over *math*NEWS

Prepare for a short reign



9 770705 041004

lookAHEAD**mathNEWS**

| | |
|------------|-----------------------------|
| January 13 | Issue #1 falls on back luck |
| January 23 | exchange articles for pizza |
| January 27 | Issue #2 prays for snow |

MathSoc

| | |
|---------------|-------------------------------------|
| Tuesdays | Games Night in the Comfy at 6:30 pm |
| Wednesdays | Special nights in the Comfy! |
| January 13 | Council nominations close |
| January 19-20 | Vote for your mathSoc VPF |

CECS

| | |
|-------------------|---|
| January 14 | Job postings open |
| January 17 | Job postings close |
| January 17 2:30-4 | Are you LinkedIn? TC 1208 sign up |
| January 19 3:30-5 | Interview Skills TC 1208 sign up required |
| January 25 2:30-4 | Interview Skills TC 1208 sign up required |
| January 26 3-5 | Interview Skills TC 1208 sign up required |
| January 20 | Job Postings open |
| January 23 | Job Postings close |
| January 24-27 | Employer interviews |
| January 30-31 | Employer interviews January 19-20 |

University

| | |
|------------|-----------------------------|
| January 16 | Open Class Enrollment ends |
| January 23 | No penalty drop period ends |

Feds

| | |
|----------------|--------------------------------------|
| Jan. 31-Feb 13 | Campaigning period for Feds election |
| February 1 & 7 | Feds election debates in SLC |
| February 14-16 | Feds election voting |

Misc

| | |
|-------------|-------------------------|
| January 13 | Bad Luck Day |
| January 16 | Nothing Day |
| January 16 | Appreciate a Dragon Day |
| February 13 | Desperation Day |
| February 14 | Valentine's day |
| February 20 | Family Day |
| February 23 | Chinese New Year |

OMG It's Friday the 13th*Writers please don't die***ISSN 0705—0410**

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The Pac-Man ghosts: Pinky (ScruffyED), Inky (Concealed), Blinky (CowED), Clyde (!ED)

mastHEAD*Lite Edition (not at all witty, but better for you)*

Here at *mathNEWS* (a division of Waterloo Math Faculty, Incorporated) our goal is to bring you, the readers, the highest quality of service possible. End user satisfaction is our top priority. To this end we have been performing some research in areas such as optimizing compilers and multivariable minimization algorithms, in order to improve publication standards. Recently we have turned our attention to right-sizing our writers in order to better utilize our skillset on a going-forward basis. This week we are pleased to demonstrate the result of our research: the lightest, thinnest writers in the industry.

The applications of this new technology are limitless. By first minimizing our writers to occupy as small a volume as possible, and then further optimizing away their non-essential organs, the new writers consume less food, less often, which means they can spend more time producing fine articles such as this one. We are currently designing a method by which two writers can use one computer simultaneously; we hope that in time we will be able to allow all writers to share one Android cell phone with which to write articles. This will allow for maximum productivity with a minimum of capital expenditure, enabling us to pass the savings on to you, the readers.

Future plans for developing this groundbreaking work include optimizing over the set of FedS presidential candidates. Unfortunately, due to statistical limitations, the process tends to work best over large collections. Therefore, we will achieve optimal candidate density by running as many candidates as is physically possible (see also: the cardinality of countably infinite sets).

I will now open the floor to suggestions for possible candidates. Remember, people, work smarter - not harder.

Algoweird ("Herman Cain, I choose you!") (define this(not cool)) ("Teller (of Penn & Teller). I trust a mute man over any other candidate.") MeaninglessQuips ("A d20, CRITICAL FAILURE") Zethar ("More of my kin need to hold political office") DanInTheHat ("Zaphod Beeblebrox") Concealed ("Nominate ALL the things!") Element118 ("Ununseptium") El Jengibra ("GLaDOS") The Unfortunate Optimist ("~You") theSMURF ("my good friend theDreamer") Lich ("A tape recorder") moment ("WOONA") MustardMap ("There's a FEDs president?") waldo@<3.LE-GASP.ca ("Woof's tail since it's longer than the candidate list") The BEDMAster ("My in a box") Scarred Tiger ("My friend Buggy the string puppet") Ice Nine ("Canada") Soviet Canadian ("A real live leopard! NOPE! Chuck Tesla!") CowED(Voldemoo)

ScruffyED ("Mima, who has ample free time these days...")

Production Night*Yeah, we screwed up*

We would like to correct the posters that we put up advertising this week's production night. We told you to go to the wrong place. Oops.

Next week's production night will take place on Monday at 6:30pm at the Tower of London. Pizza, as ever, will be provided, but unfortunately we cannot provide airfare. (But I will be happy to see you!)

InsideR

Prez Sez

Hello everyone. I'm Harrison Gross, and I'm the new president of MathSoc. I used to be a *mathNEWS* editor, GroovyED. But that's enough about me, let's talk about what's going on.

The first thing of note: The C&D renovation is going forward. We're going to be reorganizing the place, and replacing the furniture. This is currently planned for reading week, but based on timelines for Plant Ops, it likely won't happen until the end of term.

Second, we're working on moving the vending machines from the Comfy Lounge into the hallways, as they produce a lot of noise and light, and are distracting for people in the lounge. It would also allow for more space in the lounge, welcome with the new furniture. We are planning on replacing the tables to match the new couches and chairs.

Third, we are attempting to replace the planters on the second and third floors with new tables and stools, similar to the fifth floor tables for studying and working, as it is apparent that we are lacking in study and work space, considering how full the DC library is.

Anything you guys need please email me or come pay me a visit in MC 3039.

Harrison Gross
MathSoc Prez

prez@mathsoc.uwaterloo.ca

WatSFic Sez

Hello Mathies,

WatSFic (the Waterloo Science Fiction and Fantasy Club) has had its first meeting of the term. We decided on our new exec, our clubs day schedule, our movie and games night schedule, and our library schedule. In case you didn't know, Clubs Day is happening today (Friday Jan 13) from 10AM to 3PM, so if you're reading this in that time interval, come have a chat with us. We'll be the nerdy-looking ones with the giant WatSFic sign in the SLC great hall.

Our various schedules are:

- Meetings every Wednesday at 6PM in MC 2017. Fun times and important topics are had.
- Movies on every other Wednesday night from Jan 18, at around 19:00, in PHYS 150. Reading week does not affect this schedule.
- Games Days on these Saturdays: Jan 14, Feb 4, Mar 3, Mar 24, in the MC Comfy Lounge (MC 3001), starting around noon.
- RPGA (for roleplaying games like D&D) and FNM (Friday Night Magic, for those interested in Magic the Gathering) happen every Friday, at 7PM and 6PM respectively. RPGA is in MC 4042, unfortunately the room for FNM TBA.

WatSFic will be hosting another HvZ event this term, with proper information as yet undecided. Although Moderators are being chosen as we speak, if you wish to be one you should show up to a meeting.

Daniel Resnick
WatSFic Secretary

FOC Sez

Hey there awesome mathies, MathFOC 2012 here, asking you, "Have you ever thought about being more awesome than you currently are? Have you ever wanted to meet new people, gain leadership skills, or just generally be a part of something phenomenal?"

If the answer to any of those questions were yes (or even no), you should apply to be an Orientation Leader for Math Orientation Week 2012. Applications open January 24th, but they only remain open for 10 days, so don't delay! For info on the variety of different positions available, and a link to applications, check out our website: orientation.math.uwaterloo.ca! Then like and tweet us over Facebook and Twitter.

Applications will open on January 24th and stay open until February 2nd.

We hope to see you soon!

Just FOCing around,
Amanda, Michael, Sacha & Anna

VPA Sez

Hey Mathies,

Bla bla bla bla new VPA bla bla Sean Hunt bla bla bla.

In more important news, starting next September, Arts minors are reduced to 8 courses. This will make it easier to get an extra accreditation. If you are already on an Arts minor plan, talk to your advisors come September to switch over to the new, reduced plan.

Sean Hunt
VP Academics
vpa@mathsoc.uwaterloo.ca

MathSoc Games Nights are Back!

The wait is over! Games Nights will again be run this term every Tuesday at 6:30 pm hosted in the Comfy Lounge (MC 3001). We have a HUGE selection of card and board games to choose from, so there's something for everyone to enjoy. If you think something is missing, bring in your own games to play. We don't stop until we drop, so feel free to swing by later in the night, whenever you have time. We're always looking for more people to play with and everyone is welcome to join in the fun. Snack food, drinks and the occasional pizza are provided each week. Don't forget our famed EOT event, 24-hour Games Day, where "Don't stop until you drop" is taken to its logical extreme, a 24 hour marathon of board games. This term promises to be a lot of fun for everyone involved, so don't miss out! Hope to see you there!

Scarred Tiger

Dan Sez

Because there isn't enough Sez

Since I am no longer a frosh, my name is no longer TieFrosh.

The Sophomore Formerly Known As TieFrosh

FedS Sez

Happy New Year! We hope you had a wonderful and relaxing break, and that you're ready to jump back into things! For those first-time readers, we are your FedS math councilors. We sit on Feds Students' Council, and represent your interests to the Federation. We're less than two weeks into the term, but we have lots of important things to update you about!

Ontario Government 30%-off Tuition Grant: This brand new tuition grant was announced last week and provides a 30% tuition rebate to eligible undergraduate students. Eligible students who already receive OSAP will automatically receive the grant. Others may have to apply for it. For more information about eligibility and applications visit ontario.ca/30off or feds.ca. If you're still unsure whether you're eligible to receive the grant, you can contact Natalie Cockburn, the FedS VP Education, at vped@feds.ca.

Elections: It's that time of year again! Nominations have opened for FedS general elections. In February, students will be electing a brand new FedS Students' Council and Executive. All positions are open for nomination, and any full-time undergraduate student can run. We encourage you to check out feds.ca for more information about all the positions and to consider running – it's lots of fun, we promise! Nominations are open until 4pm on January 23rd, and then voting will take place from February 14th to 16th. Even if you don't want to run, be sure to keep an eye out for candidates' campaigning, and of course, vote!

Fed Hall: We have received a brief update about Fed Hall. With the help of the Board, General Manager and outside legal help, the Feds exec drafted a comprehensive document which they believe represented all concerns and presented a viable solution to the situation that would benefit the entire campus. This proposal would see the lease on Fed Hall expire in April 2012 as is the current scenario, and see the Federation of Students receive compensation by being given control of a campus space on reasonable terms. Since the submission of that proposal in early December it has received acknowledgement of its receipt but we have yet to see a response. They had set a deadline of having this issue resolved prior to the holidays, and although a reply has been promised for early this week, the passing of that deadline has shaken their certainty of a timely and positive resolution. When a response is received, should it not be amenable or amendable, we will be very near the end

of the line on this issue, and will need to consider alternatives that, in the opinion of the executive, would not be wholly favourable to the Federation of Students.

Local Advocacy Week: Local Advocacy Week is a joint event with Wilfrid Laurier University Student Union (WLUSU), aimed at providing students with the opportunity to engage directly in the 'lobby process', and to have direct engagement with local decision-makers. Meetings with the University Administration, City Councillors and relevant staff, local MPP's and local MP's are set up from January 25th to 27th. There will be a mandatory introductory session on January 24th for all students wishing to attend, where we will go through some lobbying best practices and the issues that we will be presenting at each level. This will be an amazing opportunity for students to get involved with advocacy for education, so please contact us or Natalie Cockburn at vped@feds.ca if you are interested!

FedS Fee Increases Policy: The FedS executive is working on developing a new policy outlining restrictions on FedS fee increases to be passed at the March General Meeting and they're looking for student feedback. The policy describes a "sliding scale" of increases, somewhat similar to how income tax rates are determined. If you would like to see the proposal, or wish to provide feedback, please let us know, and we'd be happy to go over it with you.

Student Space Survey Action Team: A committee has been created to survey students across campus about the usage of study spaces. The survey, once completed, will be used to inform students of lesser-used study spaces, and also to identify future needs for student space. We're looking for students to be a part of the action team, so please contact us if you're interested.

Finally, just a reminder that we're here to listen to your concerns and to voice them to the FedS and, subsequently, to the university administration and the community at large. If you have any concerns about what FedS is or isn't doing, issues with your academics, or general concerns about your life as a student, let us know!

Saleem Khan, Andre Magalhaes, Jesse McGinnis, Alex Russell
& Josh Shabtai
FedS Math Councilors
mathcouncillors@gmail.com

Forever together?

Engineering Schedule



Arts Schedule



Shameless Plug on a Couple Clubs

University of Waterloo Science Fiction & Fantasy Club (WatSFIC)

WATSFIC is one of the biggest clubs in campus. If you like any of the following things: movies, board games, science fiction / fantasy literature, writing your own literature, Humans vs. Zombies! (inquire within), and Magic the Gathering, be sure to check it out. Friday Night Magic is every Friday (of course). Keep an eye out for the Dark Ascension pre-release Jan 28-29. Newcomers welcome.

UWaterloo Gamers

They host occasional Game Nights and LAN parties which are awesome. If you enjoy playing video games (especially when you should be studying) then this club is for you. Join their Steam group, UWGamers, for event information.

mathNEWS

Yes! It is true! You too can become a writer for the ubiquitous *mathNEWS*. Meet up is on Monday Nights, biweekly at 6pm. Contributors get free pizza at the end of the night.

The Unfortunate Optimist

Like your Profs? DO SOMETHING!

Give them the Distinguished Teacher Award

Love a prof (in a non-romantic way)? Want them to be recognised for their inherent awesomeness? The Centre for Teaching Excellence (CTE) has an award for that! The Distinguished Teacher Award is given to profs and TAs who actually have an enjoyable class/tutorial/etc that teaches and matters. Being available outside of class also helps. If you have someone in mind for this prestigious award, drop off a letter to Verna Keller ENV 1 office 325 that explains why that teacher is worthy for the award. You can also contact Verna at extension x33857 or at vkelle1@uwaterloo.ca. If your prof gets 10 letters describing their amazingness, they will be considered for the award!

For more information go to cte.uwaterloo.ca and look under the Teaching Awards and Grants tab, or contact Verna Keller, she would love to hear from you since Math has failed to put profs forward for such a long time! Now go out there and write some letters!

A Concerned Citizen

The article that should have been

Dear readers,

I am sorry to say that my brain has decided to forget my amazing idea for an article this week, it was a really good idea too.... I think. So from this day forward I shall write down article ideas as soon as they come to my head so I don't have to write lame filler-esque articles such as this one.

I think it had to do with cute animals,
CowED

Stuff Going on at MathSoc/On Campus

Hey guys. There are things I've heard about. Things that you may be interested in.

1. There's a hockey game between Waterloo and Laurier tomorrow night at CIF at 7:30 PM! Be there and you might be able to win a trophy for math, if you get a bunch of people with you!
2. If you want to be VPF of MathSoc, or run for a councillor position, the nomination period ends tonight! Put in your nomination and win a sense of superiority over your peer.
3. By now, we should have decided who are directors and board are at MathSoc! It's time for regular events to begin. Come check out Games Days on Tuesdays, Variety Nights on Thursdays, and various other things!
4. Colour Me Educated, a charity event on campus, is going to put a bunch of people in a dumpster! You can donate money to get people out and help out underprivileged inter-city kids in Kitchener. You can also donate money to keep people in! You decide. I, Harrison Gross, your president will be the math person inside. Come laugh at me! Keep your eyes peeled for more info!

Harrison Gross
MathSoc President W2012
prez@mathsoc.uwaterloo.ca

Sweet and Sour

SOUR

Final grades are official on January 23rd. This really means that your Standing has been assessed.

It is VERY important that you check your standing every term at this time on Quest. Often the registrar's office will not email you, and you may have some conditions that need to be met in your next term in order to continue your UW studies.

For example. If your standing is "Probation" then you will need to get your average up by the end of next term. If you are uncertain what this entails, please see an academic advisor.

Or maybe you have not completed your ELPE and UW is stopping you from enrolling. If you wait until your enrollment appointment, it will be more difficult to get you into the courses you want.

SWEET

Top 6 reasons not to look up your standing:

1. You are sitting. ...what? That doesn't even make sense.
2. You hate the words EXCELLENT and GOOD.
3. You prefer 'guessing' to 'knowing' (STATs might be a good field for you...LOL).
4. You are too busy at the start of a term reading your really really long STAT 231 outlines.
5. You live by the MAD magazine creed of "WHAT, ME WORRY???"
6. You love the thought of an ELPE block, especially that it might leave you with such wonderful course choices as "Chalk Board Erasing 101", "Pick a number between 7 And 7", and the best course ever, "Write Fifteen Essays In Five Minutes, Go!"

Riley Metzger

Rainbow Mathies 17

Dealing with the Friend Zone and Unrequited Interest

Hello mathies, and welcome to yet another term! For those around in the Fall, you may recall that my article for the final issue did not get printed because of technical issues. To make a long story short, never trust how Gmail handles drafts. I just wanted to take this opportunity to apologize for what happened if anyone was disappointed. Anyway, onto this article's topic.

Last term was very heavy in the activisty content, and while activism is very important, I've decided to take a break for the next few articles and focus on more personal themes. One that is common for everyone, but particularly relevant for queer individuals, is experiencing sexual or romantic interest in individuals who, due to conflicting orientation, will not return these feelings. Personally, when I started dating this was a tough thing to deal with, and while I still don't have any answers, but it's still good to talk about.

This phenomenon is particularly important for me; it stopped me from dating for years. I originally came out during my Grade 12 year, to my classmates in a small town high school. I'm lucky in the sense that I wasn't the only queer person there; one of my teachers identified as a lesbian, and I ended up inspiring a number of my classmates to come out after me. Unfortunately, the set of people I was interested in and the set of people who were interested in my gender did not intersect. That year, it seemed like I heard the phrase "I'm flattered, but I'm not gay" more often than I heard "Hello". At the time, I struggled with how this was making me feel. It was very easy to start thinking that I would always be alone and that I would always feel like I don't quite fit in, and only because of statistics. Thinking about this over the Christmas break, while away from many of my supportive friends, almost led me to depression. Knowing that I wouldn't be able to handle future rejection of this nature, the only solution I could find was to stop trying to date. I kept this up until my second year of university, and I would have continued if I wasn't randomly hit on by someone. Let me say that my reaction was not exactly the best way to handle this situation. It happened to work for me, but it will not work for most.

I want to take this space to acknowledge the particular difficulties that some (if not all) transgendered individuals face in this regard. I can't imagine how someone would feel when

interacting with a romantic or sexual interest and experiencing rejection when they learn that one's genitals do not match their gendered expectations. I also cannot appreciate how some people expect a transgendered person to out themselves when sexual or romantic interaction is meaningless. When was the last time you heard someone say "Oh by the way, I know I present myself as masculine, but rest assured I have a penis"? When I get back into the activisty mode I'll talk about how gender expectations and the presence of certain sexual organs need to be separated, but until then, transgendered individuals who have negative experiences in this area have my sympathy.

Ultimately, I don't have a concrete answer on how to deal with crushing on someone who's sexual orientation do not match. I do know that it's a feeling which gets worse with frequency, so it affects sexual and gender minorities all the more. Ultimately, I feel that time and maturity help, but if you, my kind reader, are not in this place in your life yet, I hope that being able to read about this issue has alleviated at least some of the pain.

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 8:30-4:30WE, 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.

Join me next week when I discuss some relationship issues which may be unique to queer individuals. These may include things like: "what do I do if I am out of the closet and my partner is not?", "this person I am dating just told me they are transgendered, what do I do?" and "what if I want to date a friend's ex?" It should be interesting, so check it out.

(define this (not cool))

Attending Production Nights

This is my first production night in two years. So sue me.

So instead of actually attending *mathNEWS* production nights for the last two years, I've been emailing my articles in. I decided that it'd be a good idea to summarize some of the pros and cons I've observed about production nights.

Cons:

- Production night is a time sink. Write 15-minute article, but spend 2 hours getting distracted.
- Why walk all the way to MC when you can submit your article remotely, especially with the new production system?
- Why restrict your writing to a small time window on Monday night, when you can write whenever you get inspiration?

Pros:

- Free food.
- You suddenly learn that *mathNEWS* has a new production system that you've been missing out on.
- Free food!
- When attending the *mathNEWS* EOT, people will actually recognize you and know who you are.
- You get to overhear some very interesting and entertaining conversations.
- FREE FOOD!!!

Hmm, I think there's a good compromise. Write your article at home on your own time, then show up for the free food. Then profit. Somehow.

On Referring to Courses with 14-Syllable Titles

Observe the following course title (namely PMath 450/650): “Lebesgue Integration and Fourier Analysis.” There are 14 syllables. On the one hand, it is a very descriptive title and sounds impressive. Sample conversation:

Non-PMath Friend: “What are you taking this term?”
 Me: “Lebesgue Integration and Fourier Analysis.”
 Friend: “Woah! Sounds intense.”

Conversely, amongst students who either know the course or are currently taking it, the name provides a significant barricade to fluent conversation. Who wants to say “I was doing the Lebesgue Integration and Fourier Analysis – **gasp for air** – homework, and I couldn’t do #2”? It’s either that, or one mumbles through the name and sounds silly doing so. It’s not exactly the most optimal choice.

Of course, one option is to use the course number. Eg: “I was doing the 450 assignment last night, and that proof was soooo long!” This is fine until we realize that this is can be vague if the number applies to courses in multiple disciplines. (Disclaimer: If you want to go through all the courses, compare titles and content, and determine whether or not each course can be uniquely identified given enough context, go ahead. I assume that most of us would be too laz- I mean, busy to do so, and thus this would be appreciated.) Another option here is that the university institutes a policy to keep course codes unique, across essentially every subject. Um, this doesn’t particularly work, for a potentially uncountable number of reasons.

Hence, we introduce names for each course. This is a study of how this process occurs and what the results are. There are a couple of general categories, and some pre/post-fixes for more detail:

1. Short Forms, and Single Words:

Eg. “Polynomials, Rings, and Finite Fields” -> “Rings”
 “Lebesgue Integration and Fourier Analysis” -> “Lebesgue”
 “Elementary Differential Geometry” -> “Diff Geo”
 “Calculus of Variations” -> “Cal(c) Var”

Here the course titles have a key word, which essentially describes the course fairly well. Some information is lost, which depending on the course, is or is not meaningful. In the examples above, “Rings” works well, since all of the items in the title are actually rings, given a bit of structure for the polynomials. However, one cannot legitimately call it “Lebesgue” since Fourier Analysis, the second half, is a large part of the course, albeit a large application of the first half of the course. Calling it “Lebesgue” until after the midterm, and subsequently switching to “Fourier” is a cop-out, although there isn’t any “Fourier Analysis” course with which to confuse it. Habit also precludes this behaviour. “Diff Geo” works, if only for the fact that Elementary Diff Geo and the 400-level Diff Geo are usually never offered in the same term. Barring that info, this is not necessarily optimal. “Cal(c) Var” works, though is either a bit cumbersome to say, or silly.

2. Acronyms:

Eg. “Lebesgue Integration and Fourier Analysis” -> “LIFA”
 “Rings, Modules, and Representations” -> “RMR”

This is a useful method for significantly reducing the number of syllables to pronounce, especially if the acronym can be spoken as a word as opposed to read out letter-by-letter. Under this ordering (well, maybe), “LIFA” is better than “RMR”, unless “rrmmrr”, aka a growl, is considered an appropriate sound. It’s up to you. This has the obvious drawback that most people have no idea about for what the acronyms actually stand, and there’s really no way to guess without having a significant amount of context.

3. Course Code:

Eg. “Elementary Algorithm Design and Data Abstraction” -> “CS 136”

This is fairly straight-forward, but it requires people to be familiar with the course codes. For commonly-taken courses, this is fine, but for more obscure courses, this is not quite as practical.

4. Most of the Course Title (ie. Don’t Bother):

Eg. “History of Mathematics” -> “History of Math”

Sometimes, it’s essentially useless to try and abbreviate the course title. Besides, doesn’t “History of Math” sound completely awesome? Trying to shorten it any further fails as well, since “Math History” doesn’t sound quite as cool.

5. Pre/Post-Fixes:

Not exactly a shortening, in fact it’s the opposite, but clarity is as important as length. Specifically, this category applies to the courses in the Math Faculty which have two distinct levels, for example, Real Analysis and Applied Real Analysis. Now, in general “Applied” is pretty short, but in local parlance, the terms “big” and “baby” have been coined to precisely identify about which course one is talking. For example:

AMath Student: “I’m taking Real Analysis this term, are you?”
 PMath Student: “Yeah, why didn’t I see you there?”
 AMath: “Oh, I’m taking baby Real. I assume you’re taking big Real?”
 PMath: “Yep. That’s fine, big Real isn’t really (*Get it? Get it?*) for everyone, especially if you don’t need it. The applications would be nice to know, though.”

See, it’s not at all derogatory, so no flaming.

In conclusion, we note that there is probably far too much thought put into deciding what to call courses, which could be used instead to actually do assignments, etc. This may or may not be a good thing for productivity, but damn, it sure is entertaining.

Scythe Marshall

Winter

There is a thick layer of quiet snow resting on the ground and the needles of the trees. Underneath the sound of your own breath, you hear the gentle echo of the forest in the cold.

You can't tell which direction leads out. You'll be staying the night.

You don't feel very tired, so you decide to walk in order to keep warm. By this time, the sky is deep blue, and the snow appears gray. The trees are sparse enough to walk between with ease; you continue walking without much thought to your destination.

You hear the gentle rush of your breath and the crackle of the snow under your feet. There's a hollowness in the cold; it is amplified as the sunlight leaves completely. The light from the stars, as reflected to you by the snow, is just enough to show you the ground in front of you.

The landscape is becoming alien. Too many snow-covered trees; too much perfectly flat, white ground. You feel the danger of being completely alone.

Perhaps something in the forest is listening. It's important not to make any other sounds. Don't break the pattern. Crunch,

breath, crunch, breath. Don't think about it listening to you. Try to forget that you can't see behind you.

How long has it been? The fear has had time to solidify into something less volatile now. You can't walk forever, so you stop. Immediately, the fear is unbearable. There is something coming towards you. You can not hear it or see it. You can't hide; it has been listening to you. There is no way out. The forest will keep you.

Desperately, you sit down and close your eyes. You try to imagine yourself in another place. Perhaps thinking hard enough about your loved ones will bring you back to them. Instead, you hear a faint whisper of the wind against the needles of the trees. Snow sifts from the trees onto your skin. You are still alone.

After hours of walking and sitting, you feel neither hunger nor thirst. It's unbearably cold, but your limbs are not frostbitten. It feels as if you have been here a very long time. Soon, the sun casts dimly over the forest. The light reminds you of the last night you spent here. Only in the day can you remember the previous nights, and the days are very short here. As you try to count them, the confusion of dusk sets in. Soon, you will forget.

profQUOTES

From Last Term

Consider the next value of 2, which is 3.

-Wagner, MATH 249

That's not a proof, but pretend you're engineers.

-Wagner, MATH 249

It's the longest shortest path. [pause] That's why you should never say things like that.

-Wagner, MATH 249

[On the upcoming midterm] That's plenty of time to get confused, realize you're being stupid, and see it's easy. There, I've given you an algorithm.

-Wagner, MATH 249

[Prof stops writing] Is there a problem?

Student: Not yet.

Prof: I'll try harder.

-Wagner, MATH 249

Disregarding assignment requirements is not a feature.

-Lushman, CS 246

This Term

Recognize that distribution?[Confusion]

Me neither.[Laughter]

Actually, I know what this is. It's my little secret.

-Drekic, STAT 240

Something is wrong with this starship. If you don't know what an epiphany is, google for it. Error 28 is the code "CPU caught fire".

-Buhr, CS 343

Recognize that distribution? Me neither.

[Laughter]

Actually, I know what this is. It's my little secret.

-Drekic, STAT 240

You could bribe someone to tell you the answer.

-Shallit, CS 462

Bad dev team! No donut. No bonus points, but the satisfaction of being kick-ass. We don't not use C a lot.

-Goldberg, CS 454

C++ supports lots of stuff

-Morton, CS 138

I'm not sure what the class prof does

-Tripunitara, SE 102

I'm pretty much an email whore

-Dupont, MATH 119

Approximately equal to... so drunk equal sign

-Dupont, MATH 119

continued on page 16

A Rigorous Examination of How Not to Be Rigorous

Here in the Math Faculty, we like to prove things. Lots of things. Cool things. Useless things. Unfortunately, one tiny little thing gets in the way of proving all those other things. It's that dreaded "R" word – Rigour. Mathematicians of antiquity took their rigour really seriously, and that led to such good ideas as drowning the discoverer of π in the sea. By contrast, great anti-rigourists like Newton stripped away any sense of rigour from their work, resulting in equations so true they only break down when you're smaller than an atom. Sounds good, right? So here are N uncensored, certified unrigorous, and guaranteed paradox-free* proof techniques that are sure to make your mathie lives so much more productive and enjoyable.

* *Guarantee valid only in Wilfrid Laurier University's Department of Math. Individual results may vary.*

- Most CS'ers know that you can use mathematical induction to validate the output of a recursive function. What far fewer know is that you can use an infinite loop to prove an inductive theorem. Unfortunately, no computer yet exists that can successfully output the infinite number of results necessary to prove most theorems without running out of memory or crashing and burning. Who is to blame for this? ECE grads, I'm lookin' at you.
- Re-program your prof's calculator's \square button so that it displays exactly 3 proving that it must be a rational number. If (s)he still doesn't believe you, it's still a cool magic trick that you can use on Brock students.
- Since no computer currently exists that can handle infinite output, why bother to prove things for all cases? Certainly it is far easier to just prove things for all cases up to and including $n = 1 * 10^{1,000,000}$ than to actually, you know, think about the answer. Then not only would be able to scare off anyone who might try and prove you wrong, but with all

those cases, you might even be able to convince yourself that you were right. After all, even the most obvious division by zero can be safely ignored by a well-trained mind.

- Someone says you have a hole in your proof? Call it a removable discontinuity.
- Years of progress have often been erased by unethical mathematicians disproving previous results, often in extreme cases like, for example, disproving $f(n)$ is prime for all natural numbers by evaluating $f(5)$. I, for one, would be extremely frustrated if someone were to not only invalidate my theorem, but to do so 100 years after I wrote it and used it to prove thousands of other dubious facts. The solution? Call it an axiom. *Q.E.D.*
- Take a sample of your population, say, 10 artsies out of a faculty of thousands. Then use the results to prove that all artsies believe " $1 + 1 = \text{window}$." Some finicky (read: rigorous) statisticians might sneer at your methods, but your results will safely be accepted by all.
- Say you just found the result on Wikipedia. Then by the law of large numbers it doesn't have to come with a valid proof, statistical, probabilistic, or experimental evidence, or any sort of justification at all, because it has obviously been read and ratified by a huge number of argumentative, self-righteous editors, who obviously have a great knowledge of math.

So go out there and start submitting your unrigorous proofs! The revolution will come soon!

Until then, I sign off with the note that I am ambiguous. In C, `abs(Truth)` evaluates to 1. In Scheme, I evaluate to "abs: expects a real number; given true." Tread cautiously, my friends. Send any comments, love letters, and random strings of expletives to `abs_truth.2011@yahoo.com`

`abs(Truth)`

10 Indie Games You Should Probably Play

1. **Bastion** – A charming, beautifully hand-drawn action game. One of the most interesting components is a voiced narrator that guides you through the game: "The Kid just rages a little". Awesome.
2. **Jamestown** – A shoot-em-up game with a cowboys and aliens theme. I had a ridiculous amount of fun with the co-op option which allows up to 4 players on the same computer.
3. **Beat Hazard** – A psychedelic asteroids clone that uses your music library as the soundtrack. Warning: Do not play if you are prone to seizures. You have been warned.
4. **The Binding of Isaac** – The essence of the game is randomly generated dungeons akin to legend of Zelda. A morbid, challenging and fun arcade style game. From the creators of Super Meat Boy.
5. **Sequence** – A really unique mix of rhythm and RPG gaming, with a pretty engaging story, and good voice acting. I couldn't stop playing until I beat it (took about 9 hours). Would definitely recommend.
6. **Terraria** – Has been called the 2D version of Minecraft – I can neither confirm nor deny this statement as I do not

play Minecraft, but what this game does remind me of is a mix of Metroid and Castlevania and Worms. There's a lot more depth than what meets the eye. Warning: May lead to countless hours of digging towards the center of the earth and yelling at your roommates: You think this is a game??? I kid you not.

7. **Orcs Must Die** – Mix of action and tower-defense. Grants a new item at the end of every level, which keeps you hooked and promotes re-playability.
8. **Space Pirates and Zombies** – I haven't even scratched the surface of this game, and I'm already impressed. A strategy inducean, role playan, space shootan game.
9. **Bit.Trip Runner** – An arcade game about a pixel man who jumps, ducks, and kicks all obstacles in his path, while creating beautiful 8 bit music. Sounds awesome? It is.
10. **Cave Story**– An adventure game with gameplay that reminds me of Mega Man, and a story that will eventually draw you in. Promotes a certain feeling of nostalgia: they just don't make games like these anymore.

Happy gaming!
The Unfortunate Optimist

Living in Residence

Way back when I was in first year, I lived in UWP. I decided to move out of residence after my first two terms, and I'm moving into residence again this term. My rationale at the time was that it might be cheaper to find another place, but After 6 co-op terms and as many terms on campus, I realized that it doesn't quite work that way. The propaganda for house hunting that I've heard is "close, cheap, clean, pick two". I think that can be generalized to: the school residence, for its price, provides a reasonable aggregate of all the desirable and undesirable factors about a place to live, and barring extremely lucky circumstances, improvements upon that will not be free. I wish to share some of my realizations here, and hope that it will be helpful to anyone in their residence searching in the future.

Proximity to school/work is a very important factor for me. Maybe I'm overstating its impact, but I feel choosing close over cheap is just a much better deal in the long run. In Waterloo it's a special case, since the WatCard is usable as a bus pass, but I still don't want to plan my day around the bus schedule and let's face it, GRT is not very good at sticking to it either. For anywhere else, if the location saves a bus pass, that almost always makes the extra rent worth it. Furthermore, I get really upset if the commute to/from work eats up a large portion of my day, and I would certainly be willing to pay in the form of extra rent to avoid that.

Ever since I moved out of residence, bad internet has fol-

lowed me like a curse, to the point that email is unusable. My impression is that there are so many landlords out there who are just too cheap to have an internet plan and equipment to accommodate themselves and the tenant. Sure, I can get my own internet, but all the hassle of setup and cancellation would make the ordeal barely worth it, and it would incur a nontrivial monthly cost. The school residence really shines in providing good Internet.

Roommates are another factor of consideration when choosing a place to live, and over the years I've adopted a somewhat cynical view: if you don't know them, don't take the chance, as bad roommates will be THE most painful thing you will have to deal with during your stay. In the school residences, at least I know all the tenants are students with work to do, and sometimes even in similar programs and the same co-op stream as me. There are dons who inspect the suites and maintain order, so no disturbance will get too out of hand. Not so anywhere else. Slobby roommates has given me what amounted to a middle finger in the face when I objected to their living habits. Then and there I realized that I was completely out of options.

Turns out I've said a lot of good things about school residences, I assure you they didn't pay me. I offer my best wishes (and sympathy) to those who need to find a new place to live every four months because of co-op.

Lich

UW Survival Guide: Chapter 96

Slow Walkers & Hallway Blockers

You're late for class, barreling down the hallway, backpack swinging wildly, sloshing coffee from your not-quite-sealed travel mug that you got during Orientation Week. You are moving at a fast pace, and glance at your watch with the faint hope that you can make it in time, when you suddenly collide with blunt object. Your coffee flies backwards out of your hand in a slow parabolic arc, and lands upside-down into your not-quite-sealed backpack, saturating your notes. You, my good sir (or ma'am), have been pwned by a slow walker. Here is your guide to defeating these terrible foes.

The Canoodling Couple: That couple that are wrapped so tightly about each other's middles that they need to walk with a wider stance just to stay erect. Simply quote the average length of a relationship in university, and they will disintegrate into two separate entities.

The Lost Ones: A common sight during the first week or so of class. These are the people who think standing in place and looking around like an idiot will give them GPS-like abilities. Handle with care; do not make eye contact or they may ask if you know where any random room/building on campus. Use sheep dogs to herd them to the corners of the building, or the nearest map.

Zombies: Easily identified by their gaping maws and blank

expressions, often seen wearing pajama pants. These are easily passable, but for added effect, push them into the nearest couch/chair. This will trigger instantaneous sleep and solve their problem permanently.

The Stallers: Stallers often happen without warning; an act as simple as receiving a text message or craving a piece of gum can cause them to stop dead in their tracks two inches in front of you. If you are lucky, the Staller will place his/her bag on the ground to retrieve an item, in which case you face a small obstacle that you can step over (try to tread on some fingers along the way).

The Lefties: We're not in England, people! Keep to the right! Never underestimate the psychological effect of a bicycle bell on the average pedestrian. Whether your slow walker is on the right or the left, the sound of a bicycle bell will instantaneously flatten them against the closest wall, clearing a path down the middle.

The Corner Cutters: Taking the inside corner is just an excuse for a head-on collision. And trust me, that is not how you will meet the love of your life. Take your corners wide. Or look around corners with a pocket mirror and feel like a badass secret agent.

El Jengibre

Submit your *prof*QUOTES to the BLACK BOX (by the Comfy Lounge) or email them to us at mathnews@gmail.com!

Do you have something that you want to submit? Come out to a production night or email us at mathnews@gmail.com!

New Year's Cancelled

In a surprise move, New Year's was cancelled on the very eve of what was supposed to be the turnover. Citing a general failure of anything good occurring during the year, there was a nearly unanimous decision to suspend the new year, pending an increase in good things in the world. Especially passionate for this suspension was the Japanese government, who desired the indefinite suspension of the new year so as to be able to claim completion of the nuclear cleanup within 2011. Support was given for this motion by the protesters of the Arab Spring, claiming they wanted more time to set up a stable democratic government, desiring to carry out a peaceful revolution in one year. Thailand also issued its support, desiring the receding of the floodwaters before the new year. Astrologers and pseudo-scientists everywhere predicted doom and gloom if 2011 was not extended, citing the end of the Mayan calendar and therefore the world.

In a marked departure from public opinion, the British Monarchy was opposed to the motion, requesting that the new year come early, to speed the arrival of the Queen's anniversary and Prince William's anniversary. Finally, the intelligentsia of North America collectively demanded an extension to 2011, to avoid the impending spectre of a new season of "Jersey Shore".

MeaninglessQuips

The Lone Mathie

Ah, electives. The classes where you can relax and pretend you're not in math and all your classes are as easy as the arts elective you're in. But hark! What is this? The prof is going around and asking people their majors and why they're taking the class. You wait. Surely someone will share your faculty.

Alas. Psych majors, drama majors, and fine arts majors. They're all Artsies. And when the prof finally gets around to you, you are literally the last person to answer out of the 20 people in the class. What is a Mathie to do? Why, answer with pride of course: "Computer Science major."

Oh, the lonely life of a Mathie in an Arts class...

Yours in solitude,
Shay Blair



fig14: Russian vowels

U.S. Declares Pepper Spray to be a Vegetable

The US government has announced the latest attack in its battle against obesity, passed yesterday by a unanimous vote in Congress. Following the reasoning that a healthy diet is the best defense against advancing waistlines, and that vegetables are a key component to a healthy diet, Congress has mandated that Americans have more vegetables. Figuring the simplest approach is the best approach, and based on their brilliant success with pizza, they decided to designate as vegetables certain things Americans are already exposed to regularly. Thus, pepper spray (also known as OC spray (from "Oleoresin Capsicum"), OC gas, and capsicum spray, and the brand name Mace), is now officially considered a vegetable.

This has several advantages. First of all, in addition to maintaining public order, law enforcement personnel will now be provably improving the health and wellness of the citizens they're suppressing. For this reason, the bill has been backed by militant dieticians across the country. Secondly, it will be particularly helpful in ensuring that students, a demographic particularly at risk of unhealthy diets, have a sufficient intake of vegetables. Given the large numbers of such students, a quick and efficient distribution system is necessary. This system has already exceeded the ambitious standards set for it, as shown by the success of its test run on UC Davis students in November. Considering the poor and otherwise marginalized also often have difficulty getting sufficient levels of vegetables, a similar method will be used to improve their health. These moves have been heartily endorsed by all major American providers of health insurance for moving towards prevention-based medicine. Inside sources say Stephen Harper has been deeply moved by our neighbour's bravery, preparedness, and ingenuity in the fight against obesity, and is moving quickly to adopt a similar policy in Canada.

tesseract

Why YOU should Write for *mathNEWS*

1. You get pizza.
2. You get published.
3. You can inspire change.
4. You can encode patterns.
5. You, of all people, should understand why.
6. You, of all people, should be suspicious by now.
7. You tuna mah tuba.
8. You tuna fish.
9. You now are disappointed in the lame and poorly hidden secret.
10. You now want to prove you are cooler and a better writer than me.
11. You please write articles now.
12. You please come to next *mathNEWS* production night.

Better Writer than You

U.S. Congress Misspells SOAP

Public Outraged

Progress often causes problems. With new research and discoveries comes issues with regards to ethics, rights, and other problems. However, progress is inevitable, and collateral damage, while unpleasant, is necessary. Yes, you are entitled to the sweat of your brow, but for fuck's sake, take a shower (with SOAP) once in a while and clean off all that sweat. You're starting to smell.

Recently, researchers at the Princeton discovered a new compound, SOAP. When applied to the skin alongside water, SOAP starts a reaction which cleanses the skin. Although wildly known and used around the world, SOAP is a recent discovery in the United States. SOAP will have a large impact on America's general hygiene. People will be cleaner, disease will be less common, and the standard of living will be higher.

However, the general public is outraged at SOAP due to a simple error that could have been easily avoided: congress misspelled it. During the initial presentation, there was a slight typo, and SOPA was the announced name. A great discovery immediately became the most hated thing since sets of real numbers that add up to 1, and once again, Americans are up with the pitchforks and screaming nonsense about Ron Paul.

Problems with SOAP include the following, explained with out of context quotes from Wikipedia. On Time's Techland blog, Jerry Brito wrote, "Imagine [...] a [...] American [...] that [...] privacy?". Journalist Rebecca MacKinnon compared SOAP to something that was probably not good saying, "The intention is not the same [...], but the practical effect could be similar". Lamar Smith said, "[...] Facebook [...]". Clearly, people are mad.

America's future looks uncertain, as their public gets more and more angry about the government. A revolution is becoming more probable, and there are even whispers of Canada taking over the US to show those Yankies how it's actually done. Whatever the outcome is, when this is all over, Americans will be cleaner.

Or was it the Simple Object Access Protocol?

theSMURF

Axioms for the Economy

As in many parts of mathematics, there is a fundamental set of axioms which the whole discipline is then derived, but this is not the case for the malleable areas such as Actuarial Science or Mathematical Finance. What is needed is a set of infallible and unquestionable truths which the economy follows, and the below is a collection which has passed scrutiny.

1. Everybody is an idiot.

There is some discussion whether if this is an axiom or not; those who think that this isn't an axiom make the following argument: A sufficiently large group of people will make an idiotic decision, thus they have the property of being idiots. One less person from such a group will still make this idiotic decision, and since you can remove any one person, a large enough group less one person will still be idiotic. By induction this means that everybody is an idiot. The opponents of this argument take a look at this argument and write "And thus everyone is an idiot is an axiom".

2. Everybody wants crap

There is very little discussion on if this should be an axiom or not; it is almost indisputable that this should be an axiom, although all the bloodshed is on if this is more important than "Everybody is an idiot". There is also a distinct group of people who believe that this argument demonstrates the permeability of of axiom 1.

3. Nothing is free

... maybe except for *mathNEWS*. It is also postulated that with the other two axioms, these form the basis of all economy and mathematical theorems ought to be based off these when we talk about the economy.

Obviously, as written in the article, these axioms hold no rigor and cannot be used to rigorously prove anything, but that is for future research for the study. Certainly a sufficient number of idiots will bring this line of research to new heights in the near future.

Is feeling like an idiot himself,
Zethar

The Life of a Girl Gamer

So I'm a girl and I like to game. That combination results in some interesting situations. I spent some time during winter break playing Call of Duty: Modern Warfare 3 on Xbox Live. I enjoy getting on the microphone and insulting other players for their lack of head shots and their poor kill-death ratios. My insults sometimes consist of "Go shave your back", "I know where you live" and "Your mom is waiting for me". (My insults have obviously been tamed for this article...) But then again, I don't even start these petty fights! Often times, players would bash me for sounding like a little boy or ask if my parents are at home. I know I have a soft voice but when I get kicked or banned from servers because I sound underaged it really ticks me off. Especially on My Little Pony Team Fortress servers.

The most common comment I receive though is "Why are you not in the kitchen? That sandwich is getting cold!". To which I answer, "I am in the kitchen! So go choke on something!".

I say this because my console and desktop computer are located in the kitchen. Guys are either really mean or super nice on the internet. Every birthday or holiday I've received Steam gifts from many males on my friends list. On Christmas, I was given L.A. Noire, Portal 2 and Saints Row: The Third. I know they expect something in return but screw them!

The creepiest thing: I constantly get asked for pictures or my Facebook profile link. I kindly respond with "You're ugly, get out of my life and good luck with your endeavors." and then I automatically remove them from my friends list. Sometimes they come crawling back. But ultimately, playing with others who don't constantly harass me for being me is the reason I stick around in this gaming world. The next time you hear a girl in your game, remember she's not afraid bite off your head.

Fluttershy

Max/Mintercourse

Today's Max/Min: Anilingus / Listen to Monty Python's "Sit on My Face"

It's been a while since my last article, and boy have I gotten around since then. Around what you say? Around MineCraft of course! By golly, what an adventure it was!

Today the topic of disintercourse is: cuteness. When "making cupcakes" means making cupcakes and you hug over an hour a day, you are in the cuteness zone. When "riding" your partner means piggybacks on campus and your favorite kisses are the butterfly variety, you are in the uber-cute zone. When the theme song to your relationship is a meme (ie Narwhals or Nyan Cat), you are almost clinically treatable. When you wait to see each other to read memebase together and ALL of the above, you are rainbow-vomit cute.

Here are some tips on how to achieve rainbow-vomit cuteness:

1. Become acquainted with internet memes. If you know enough memes there is not a waking moment where there isn't some applicable meme. This includes sex. Interrupting cuddles and existing cute situations to laugh over a meme joke is equivalent to a cuteness multiplier.
2. Degenerate into an animal. Nuzzle, do some light scratching, sniff things, blankly stare into lights. It's what all the cute animals do. Then nuzzle during cuddling while scratching. Then nuzzle in class. Then nuzzle everywhere.
3. Search the internet on two computers in a "who can find the cutest picture of kittens" contest. Say "d'awwwwwww" a lot.
4. Stop all PDA (public displays of affection). Eventually you will be unable to hold it in and will hug and cuddle all the places!
5. Have similar parts of your body touching at all times. Become a symmetrical being. Using your hands, ears, noses, eyelashes, and the crooks of your elbows are all good examples of ways to achieve this.
6. Talk like a baby. Replace "R"s with "W"s. Insert "Y"s whenever possible. Make up adorable words like "Smoo-geywoogey".

I hope this helps you achieve new levels of self-induced extraction of coloured bodily fluids.

The BEDMAster

Today I Learned

Every fortnight, *mathNEWS* gets together and through our blood, sweat & tears, produce the *mathNEWS* you know and love. However, for everything that makes it into the issue, there are vast amounts of stuff that do not. Today I learned...

- There exist gnome dildos.
- There are many reasons to become FedS president. Very few have to do with FedS
- Tanks need to build as tanks
- Tanks can run without any crew members
- World War II battle tanks disguised themselves as trucks
- Long Island Ice Teas have 5 oz. of alcohol and don't taste like anything

N Reasons to be a Mod for HvZ

Waldo is excited to start planning for another awesome game!

- You'll gain valuable organizational, problem solving and management skills
- You could get to learn how to make a fully functioning website from scratch
- You get to be a part of WatSFic's growing phenomenon from behind the scenes and be a part of WatSFic if you like
- Who needs sleep? There are emails to be written/read/responded to...maybe...probably...eventually...
- Meeting people and networking is awesome and most people need to get out from under their study rock anyway
- You get to hear stories from all sides and watch hilarity, and epic battles ensue
- The feedback you get can be very heartwarming
- You get to see something great transform into something even MORE great as players get involved and super excited

If you would like to help out in this term's HvZ game, send an email expressing your interest to inariangel@gmail.com.

waldo@<3.LE-GASP.ca

Nyanception

I'm not much of a meme fan, but I can appreciate it when a fun little site goes viral. With that said: Nyanit.com. A fun little meta-webpage which makes any other webpage more fun, by adding nyan cats to it. Merely prefix the url of the website with nyanit.com/, and when you load the page, it will have a nyan cat floating around accompanied by a cheery background music. Sounds like fun right? But wait, there's more!

The starting nyan cat is pretty small and inconspicuous, but if you leave it alone, it will grow larger every time it comes back. If that's not enough, you can kill a nyan cat by clicking on it. Then, it will spawn two smaller nyan cats in its place. You can have lots of fun spawning as many and as large nyan cats as possible. It's fun to spam click your way to a screen. Math-Soc has digital evidence of this.

And if the one starting nyan cat is not enough for you? Remember that

<http://nyanit.com/yoururl.com/>

is a url, so

<http://nyanit.com/nyanit.com/nyanit.com/.../nyanit.com/nyanit.com/yoururl.com>

is perfectly valid. And yes, this does increase your starting nyan quotient.

Happy Nyaning!

DanInTheHat

Defcon

Nukes Fall, Everyone Dies

Defcon: Global Thermonuclear War. That's the name of the game; it is what you do. The Earth is split into 6 regions (North America, South America & Mexico, Africa, Europe, Russia, and Asia(minus Russia)) (Australia gets no representation in this war) and you are the leader of the military of your region. It is DEFCON 5 (peace in the world), but the clock is ticking towards DEFCON 4 (preparations for war), and you must place your missile bases, radar stations, airfields, and fleets. You cannot see what is going on within your opponents' territories, so you send planes to perform reconnaissance. They are shot down, but not before gathering valuable information. You relay orders to your fleets, and they are on the move.

DEFCON 3 (war) is drawing close. Your orders keep coming: subs are sent to coastlines, carriers and battleships prepare for battle on the seas and to launch attacks onto land. DEFCON 3 has arrived. Fighters and bombers fly through the air along with ground-to-air missiles, ships unleash their terrifying guns upon one another; subs slide through undetected, or try to sink unsuspecting ships.

DEFCON 2 (nuclear weapons armed and prepared for launch) is drawing near. You position forces to maximize the effectiveness of your nuclear arms, and to minimize the effectiveness of your opponents. Your forces break from fighting as they position themselves. DEFCON 2 passes and DEFCON 1 (nuclear war imminent) is minutes away. Bombers are launched, missile bases prepare to launch, and more jets fill the sky to scout and scare off bombers.

DEFCON 1 arrives. The seconds pass. A launch is detected. Your ICBM (Inter-Continental Ballistic Missile) launches begin. Bombers launch short-range nuclear missiles as subs surface and launch mid-range missiles. The air is full of various jets and missiles. A nuke gets through. A city has been hit, killing millions in an instant. More nukes land, decimating installations and cities. The world is left in ruins.

Unless you do well.

This is DEFCON, a really fun video game. You will determine the fate of the world, save millions, and doom many more. To check it out, you can go to everybody-dies.com

Soviet Canadian

Better Bash

History

This is the first part of a planned series on using the bash shell more effectively. When I started using the linux command line several years ago, I was a total n00b. I still am, but I'm now a more informed and efficient n00b. Hopefully after reading the series, you'll either a) be more efficient, or b) laugh at me. So without further ado, I'll begin at some point in the past, with a look at the command line history.

The first thing most people do when they want to re-run some command they had created at some point in the past is to start mashing the up arrow key. This is a very slow method of retrieving something, unless you know you just ran that same command. That's where the history command comes in. Just typing that will print out a numbered list of commands you've executed at some point in the past. Most bash shells are even configured to store history across sessions, so if you closed the terminal and opened a new one, the commands are probably still there. (Side note: This is why you should NEVER specify passwords as command arguments) Since there's probably a few hundred of those, you'll want to use something like grep to filter out the lines you don't care about. You'll end up with a command looking like

```
'history | grep -F "<your search string>"'
```

(If you don't know what the vertical line is for, don't worry, I'll be covering pipes and IO redirection in a future article.) Now that you have your list of commands, browse through it for the one you want, and look at the number beside it. Type

```
'!<command number>'
```

and bash will rerun the command exactly as if you'd typed it all out yourself, with the same arguments and so on. This is known as history expansion.

OK, so you can re-execute commands exactly as they were, but what if you want to edit them slightly first? The bash shell offers a way to do that too, and one that I only learned a few weeks ago. If you type CTRL+R (<C-r> for you emacs people) you will enter the history search mode. If you start typing, bash will search through the command line history, finding the last command that matches what you are typing. It matches anywhere in the string, so you can search based on arguments. Once you've entered enough of the string that you want, and it's displaying the line you want, hit a cursor movement key to go back to your prompt and begin editing. (That is, left/right arrow keys, home, end, and so on. Hitting enter will execute the command immediately) I find this a really great method of changing one little detail, such as a date, or a compiler flag, in a really long command that I don't want to type again. The other thing to note is that this actually moves you to the point in your history where you ran that command. You can use the up/down arrow keys to navigate back and forth in history from that point.

That's all for this issue. Next issue I hope to cover off the basics of backgrounding tasks, allowing you to run more than one command at once from a single terminal.

ConcealED

Math Exam

What's on the exam:

Prove that $\sum_{p \leq x} p \log p \sim \frac{x^2}{2}$.

What the student sees:

Fuck You.

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Mini Parodies

Hey there Delilah

Hey there algebra what's it like being so evil?
Without actually being animate you can cause such upheaval.
How's it true? Your homework's harder by times two.
What can I do?

Calculus what's up? Why can't I integrate this one?
No examples in the textbook, my nightmare has just begun
I'll close my books. It'll go away if I don't look
Yeah right, I'm hooked.

Oh it's what you do to me.
Oh it's what you give to me.
Oh the questions I'm assigned.
Oh it's destroying my mind
Destroying my mind.

Last Friday night

Last Friday night:
Yeah we drank a lot of Dew,
and then Red Bull till we flew.
In our game we pulled a coup.
Last Friday night:
Yeah we maxed our credit cards,
Buying lots of Magic cards.
Give the loser my regards.

Last Friday night:
We wore sweatshirts and blue jeans,
Staring at a small machine.
Playing Skyrim on our screens.
Last Friday night:

Yeah I think we broke records,
Always say we'll get awards.
a-awards

This Friday night
Here at Waterloo
All Friday nights
Here at Waterloo

Raise Your Glass

Deluminator, turn off the lights.
We gotta find the Hallows tonight.
Where's the Elder Wand?
I love when Voldy dies
7th book with his red snake eyes
Battle for Hogwarts.

Horcrux hunting!
Dark Lord confronting!
Snakes? Call Neville, it's no fuss.
Something scary, just get Harry.
Or ask Sirius...

So raise your wand if you are Ron
Fred, George, or Ginny.
All three headed dogs
Can be Hagrid's pets, Hagrid's pets
Ask Hermione if you need help she's the smartest witch.
Harry come on and come on and raise your wand.
Just bow and then duel and raise your wand.

Yours in craziness,
Shay Blair

“Why's there a bat in here?”

The first week of the winter term passed rather quickly and in no time at all, it was the weekend.

On Saturday night, a live bat was spotted on the third floor near MathSoc. I have to wonder how the bat managed to get into the building in the first place. Thought about the vents... or maybe it had snuck in when someone opened the door. However it got in, it clearly got out again...or maybe it finally died from a brain concussion after smashing against the window too many times. That would be unfortunate. Can you imagine your last moments being trapped in some concrete box? Actually...I sometimes feel like I'm going to spend my last moments in the concrete box that is MC so maybe you can imagine?

That night was also one of the first times I've seen the comfy lounge empty (no one was sleeping in there?!?!?!?!?! The sky is falling!!!! ##\$@#\$%). It was rather surreal how empty the comfy was. Thinking back, I feel like I should have gotten a picture to convince myself later on that it was real. Or maybe not, that way I can pretend to myself I actually went to bed at a decent time and wasn't walking home while it snowed some-time closer to morning than night.

cocojunior4

Ice Cream Pizza

This article is part of a series I hope to do for some time to come, it includes idiotic but nonetheless delicious (at least in my mind) ideas for food, kinda like a mini-EMT. Except I haven't tested any of my ideas (yet).

Take two large (wide) slices of pizza, take two to three (2-3) scoops of your preferred ice cream and plopp them ontop of one slice, then put the other slice over the ice cream to create a sandwich. Devour.

Alternatively, take some pie crust, take some partially melted (malleable) ice cream and spread it over top the crust. Take sprinkles, flavoured (chocolate, strawberry, etc) sauces and/or any other toppings of your preference. Lightly coat the ice cream sauced pizza with your toppings, bake.

Alternatively, chop up a slice of pizza into very small bite-sized chunks. Throw into the freezer. When the pizza-bits are frozen remove from the freezer and place them into a mixing bowl with partially melted vanilla ice cream (or another flavour of ice cream of your preference) and mix well. Freeze the ice cream-pizza mix. When feeling the need for comfort food, pull it out of your freezer and devour.

Soviet Canadian

profQUOTES*The wit and wisdom of our University's finest*

- If the number of people in the class is not divisible by 3, then someone has to drop the course.
-Lhotak, CS 444
- If you write something like BALLS... That is not a statement
-Loo, MATH 135
- The next time you see this you should get a raging math boner
-Loo, MATH 135
- The only reason I read mathNEWS is to make sure that I'm not in pQ
-Loo, Office hours
- There are very few altruistic people in the world. We tend to think of them as swishy-washy
-Matheson, ACTSC 371
- We know what it means to strip a bond – and it's not a perverse thing unless you want it to be.
-Matheson, ACTSC 371
- 0^0 is 1. Anyone who tells you it is undefined is cowardly.
-Purbhoo, MATH 249
- We'll use this notation in the interest of not confusing people, which I think I just did.
-Purbhoo, MATH 249
- You want to know who is worst off in society? The dumb nerd
-Curry, ECON 401
- You can plug in anything, even a Franco-Prussian war!
-Katz, MATH 239
- If you do waste your time on your laptop, I'll assume you're on Justin Bieber message boards.
-Katz, MATH 239
- Please excuse my accent, I'm an American. I grew up 300 miles, I mean 480 km, I mean 26C from here."
-Katz, MATH 239
- Have you guys seen "A Beautiful Mind"? Of course you have, you're math geeks.
-Katz, MATH 239
- We're applied mathematicians, we'll figure it out. Or we'll just let our engineering friends do the work.
-West, AMATH 250
- I'm gonna have to start beating the profs who teach before me
-Roh, MATH 235
- Don't assume anything is true; don't be an engineer.
-Roh, MATH 235
- Syllabus: "According to my tastes"
-Rubinstein, PMATH 340
- And numbers, we all know numbers from Sesame Street
-Rubinstein, PMATH 340
- I uploaded it to learn, but I have no idea where the hell it went.
-Rubinstein, PMATH 340
- There is a bar in Toronto called правда. It's true!
-Reichert, RUSS 101
- I'm not going to try to teach you all about group theory in the first ten minutes... I'll save that for the latter half of the lecture.
- Goulden, PMC Talk
- In mathematics, when we get experimental error we call it a counterexample, but I guess in real life things are different.
- Davidson, MATH 245
- I'll leave this for you to check, but k plus n minus k is equal to n .
- Davidson, MATH 245
- It's like a tetrahedron, but bigger.
- Davidson, MATH 245
- [lots of people failing at tossing coins] Ha! You didn't know your hand-eye coordination would be tested, did you?
-Broderick, PHYS 258
- Scalar multiplication over \mathbb{Z}_2 is particularly easy because you either take the thing or you don't. That's it.
- Haxell, CO 342
- [While abusing notation]
Does this make sense, multiplying a graph by a number? Just remember that these numbers are either zero or one.
- Haxell, CO 342
- This might be a bit much to swallow in minus one minutes.
- Davidson, MATH 245
- How many of you would like there to be a tutorial for CS 240?
[Some students raise hands]
Of those of you who raised your hands there, how many of you would actually show up?
- Hinek, CS 240
- My name is Marcoux ... the 'x' is silent. I wish my ex were silent.
- Marcoux, PMATH 352
- [The 1-norm is] sometimes called the taxicab norm. It doesn't work in Waterloo.
- Morris, MATH 247

Horizontally Gifted Man

because Fatman is politically incorrect

Famous quote: "Grab onto my love handles, I'll take us to safety! Fatman away!"

Fatman was too lazy to have a theme song made so he borrowed this one:

Nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, Fatman!

Nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, nom, Fatman!

Fatman, Fatman, Fatman!

During the darkest of days, in only the most accessible of buildings, the crime that lurks in hallways and large men's stores of our fair city has nowhere to hide except in his massive underbelly, for Fatman walks the streets... or Segways!

Segway away!

Puns are the enemy. And worms. Puns and worms are the enemies of the free world. Ever wonder what all those lemmings were digging to? They wanted to find worms to eat, and puns to destroy!

Segway complete!

While you were distracted by that eloquently implemented segway, Fatman stopped 3 crimes from happening. How, you ask? In hitting his alarm clock, he knocked old Mrs. Peterson's cat off her balcony onto the mugger in the alley below. By rolling over in bed, he shook the building and caused a coke dealer to spill it all down the drain, just as he was packing it. The mere sound of his morning belch caused a pressure wave so powerful it put out a fire three blocks away.

Fatman is currently looking for a sidekick, Vertically Challenged Boy. If you or anyone you know is 80% or more below average height, can roll a 200kg ball up an inclined plain, and can drive a semi, please consider this offer. Fame and glory await!

Element118

Fun things to do

- Create ancient-looking calendars prophesying the end of the world
- ???
- Prophet
- See how many courses you can fail simultaneously. I believe the current record is 6; the trick is in getting a high enough average overall that they still let you take enough extra courses.
- Interpret this as "F*** you, n things to do". I mean, seriously, base and foul lists are overwhelming this once-fine bastion of erudite thought.
- Replace your prof's lecture notes with material from the grad course he/she is teaching, and place bets on how long they teach until they notice.
- Put signs saying "This door is to remain closed at all times" on the walls. After all it makes as much sense as putting them on doors; a door that cannot open is a wall.
- Release rabid endangered animals in the Environment building. Enjoy watching the conflict between the need to not get rabies and the need to protect cute and fluffy endangered animals.

tesseract

gridCOMMENTS

I'm baaack. And I talk like a laaaaamb

Those who followed this column last term noticed that I spent a fair amount of text space complaining about how I never had time to work on these. Twice, I gave half of a crossword to the editors and had them publish that instead.

I promised myself that I would build myself a buffer for this term. Over winter break, I frequently told my body to sit down and work on a cryptic clue or two.

My body proceeded to ignore me and continued playing Skyward Sword. So, congratulations, solvers! For the second term in a row, I will be pumping out insomnia-induced crosswords wherein Sunday night is spent with multi-hour LIGHTS playlist and a dictionary.

So, here's your *grid*QUESTION for this issue: What tools should I have to construct my crosswords? Remember that the *grid*QUESTION is used to divide crossword-ties and winning submissions receive FREE STUFF courtesy of *mathNEWS*, which you can pick up from the MathSoc office! Submit your crossword solution—cryptic, straight, or both (double your chances!)—to the BLACK BOX outside the Comfy Lounge by 6:30pm, January 23rd!

Fun times all around,
moment

elseWHEN

Vol. 71 No. 4

Some things never change, eh? If you look closely at this issue, you may notice that the CSC has neglected to flash you with whatever the CSC normally flashes you with (damned if we read articles, we're just the editors). They apparently forgot back in '96 as well.

!ED



**Calum T. Dalek's head
explodes, destroying this
issue's CSC Flash!**

Horrorscopes

ActSci: It's a new year, and a new term. The first week of class is a bit slow, so you amuse yourself by making tables calculating how many people will die before the month is out.
Your unlucky number is: 2 354 969 fresh graves for the fresh year

AHS: Going to the gym, you see that your normal spot has been taken up by some fat guy who resolved to lose weight for the new year. You decide to help him by setting the machine to your settings.
Your unlucky number: 120 pounds of bench pressing on the first day.

AMATH: The people in the class before you take longer than they should in exiting. You decide to model the flow rate of folks exiting the room while you wait.
Your unlucky number is: 8.3 people/minute.

ARCH: Wait, why am I writing you this? You're in Cambridge, you don't even know we exist!
Your unlucky number is: 138 wasted characters.

ARTS: You enroll yourself into your first course in your major. As you are walking to class, you begin fantasizing about finally being in a group with others in the same program. The door opens...
Your unlucky number is: 20 engineers taking their linkage elective.

C&O: For fun, you decide to go outside and study a real tree. You get confused in your analysis when you can't find a single leaf. It's winter, dummy.
Your unlucky number is: 3 more months until you can finally study them, bud.

CS: Working on your first OS assignment, you can't seem to implement threading correctly. Your roommate overhears your cursing and offers to help. She doesn't get it either.
Your unlucky number is: 9 newly darned pairs of socks.

Double Degree: You're starting your final term, rejoice! Those failed classes shouldn't hold you back from your graduation. Two degrees means twice the number of allowed failures, right?
Your unlucky number is: 7 failed courses on your record. Nope.

ENG: Waking up still drunk from the party two days ago, you head off to class. While working on the mechanical arm in the machine shop, you fumble in your still-inebriated stupor. I guess that arm will be used after all!
Your unlucky number is: 15% cyborg.

ENV: You're walking into the kitchen when you hear your roommate cursing about threading issues. You make him some hemp socks.
Your unlucky number is: 6.5 times more the cost than if you made them from wood.

Profs: Coming off of your research term, you find yourself slowly easing your way back into teaching. You forgot the dress code though.

Your unlucky number is: N comments about your Brony t-shirt

Grad: You're teaching your first ever class, and can't wait to enlighten the first years with your advanced knowledge. Unfortunately, they refuse to acknowledge you and ignore you as you start writing on the board.
Your unlucky number is: 5 years is a short time for respect to drop by so much.

KI: You finally start combining the knowledge from all of the courses you took and see what amazing things come out on the other side. Turns out you only had breadth of knowledge, not depth.
Your unlucky number: 12 terms wasted. At least your minor will count for something.

MathBus: In these unsteady economic times, you decide to invest in a sure commodity. Maple syrup is always in demand, and is tasty to boot.
Your unlucky number is: 0.3% return as the market slows to a treacle.

Math Phys: Your prof just started doing linear algebra and advanced calculus in your Quantum class. Shit just got real.
Your lucky number is: 120% adrenaline high as you realize what you've been studying is the coolest thing ever.

PMATH: A new year, maybe this time you can actually find a girlfriend who seems half as interesting as your work. While you're at it, why don't you also try to catch a unicorn?
Your unlucky number is: 4ever studying.

SCI: Mixing chemicals in the lab, you accidentally create something that looks and tastes like (but not exactly quite) Cherry Fanta. You work through the night to perfect it.
Your unlucky number is: 15 000 000\$ lawsuit from the Coca Cola Company.

Soft Eng: Coming back from co-op, you see that the pesky frosh have taken over your lab and study space, and spend all day playing video games instead of studying. You then remember that you were just like them once, and join in.
Your lucky number is: 10 hours of LoL before sleep.

STATS: You mention to your friends that you're taking a forecasting course. They ask you it will be nice enough to they can go skiing.
Your unlucky number is: 85% chance of facepalm.

Teaching Option: You enter the TSA office for the first time, and see the ceiling adorned with tiles painted for every graduating year. It slowly dawns that there won't be a free ceiling tile left for your year when your time comes.
Your unlucky number is: 2 tiles left before they're gone...

Undeclared: You can't decide whether you should make any resolutions or not. You carefully consider the suggestion of being more decisive.
Your unlucky number is: 1 confused mind.



Straight Clues

Across

1. Leonardo's perfect man
6. Orange __; a black tea
9. UWaterloo's avian bane
10. The twenty-first number that could fit in this spot
11. Pastry feline meme
12. Vexed
13. Turn left, left, right, right
14. Chant
16. Paradise
18. Dissent
20. 2Z, 3Z, 4Z... in the ring Z
22. I don't care enough to say, "I don't care."
24. Selfdisembowelment
26. Old-fashioned
28. Lacked challengers
29. Saying
30. An example of 7Down
31. Hosts

Down

1. VEGAN
2. Driller
3. Salesperson of lemons?
4. Unconditioned
5. If you see them, they weren't after you.
6. Pink flower in the same family as tobacco, deadly nightshade, and potatoes
7. Communal fund
8. Introductions
14. Quite the Stranger
15. Key
16. This number
17. Smooth and white
19. Tricky problem
21. Math's most obvious point?
22. Clam
23. Why Metapod's nickname is always phallic
25. Tine
27. Mad

Cryptic Clues

i

1. Notice that one position has supremacy
6. Hate a dull person's report
9. A poster in amongst a cub
10. Suggestions from public people
11. 100 to 1 odds on 14 up issue
12. Bets on a short game of 0s and 1s
13. Digit essential to everyday life
14. Guess randomly without a custom
16. Blocks, cuts left, and comes back to a wall
18. The shortstop ignored the uncalled-for taunt
20. Rubs text the wrong way without heed
22. Software library consisting of just a constant

Cryptic Clues Con't

24. Beanie Babies' builder bombasts bad bosses?
26. Heartless? To plan to restore harmony?
28. Sloped solids, a Roman robe and a wheeled wagon?
29. Assist or at least lessen the punishment
30. Sag? The decline will consume nothing
31. Pose the headless Kings as examples

-j

1. Enough extract, I am pleased
2. Acquit by the fifth display
3. Herb said, at the end, to take a break
4. Bulk of a horse
5. Constant sum result
6. Have a go at bait
7. Catch a noise in circle towers
8. Road trip breaks to relax at interesting spots
14. Moved on, awkward and neglected
15. Suede is an odd glimpse
16. Distress call, but nothing's in the boat
17. Role of a letter
19. Organizes rabid wolves
21. Forced after the average cast
22. Scarves made from a Scotsman's tartan
23. Animal is an endless annoyance, alas

Submit your solutions to the **BLACK BOX** (by the Comfy Lounge) and don't forget to answer the *grid*QUESTION!

This week's grid

| | | | | | | | | | | | | | | |
|----|---|----|---|---|----|---|---|----|---|----|----|----|----|---|
| 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 |
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| 9 | | | | | 10 | | | | | | | | | |
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| 11 | | | | | | | | 12 | | | | | | |
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| 24 | | 25 | | | | | | 22 | | 23 | | | | |
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| 30 | | | | | | | | 31 | | | | | | |