math NEWS

So three stereotypes walk into a bar...

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*look*AHEAD

***math*NEWS**	
March 16	Issue #5 goes green!
March 26	Last time writers get free pizza
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MathSoc	
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The editors: Sacha Koohgoli, Murphy Berzish, Michelle Conway, and Will Morrison: Addition, Division, Subtraction, and Multiplication.

*mast*HEAD

A party of non-sequitors.

Whew, what a week. With Humans vs Zombies, St Patrick's Day, and Pi day all in a span of seven days, it's amazing that none of us have collapsed yet with the sheer amount of fun to be had. Our profs insist that we also complete something called "homework", but we're pretty sure that it's not mandatory.

Our editors almost didn't make it this week, though. One was bogged down with projects and was babbling incoherently for most of production night, one got mauled by a group of zombies in a gladitorial death match, one was busy doing his job, and one had to do all the rest. It's amazing that this issue was completed, with all of the randomness going on.

Which leads us to this week's *mast*HEAD question: If you were going to a basr with pi, a leprechaun, and a zombie, what would you drink?

ConcealED ("A rabbi, a priest, and a Newfie"). Ender Dragon ("Pi"), tesseract ("My life away"), snippet ("Puréed irrational green brains"), theSMURF ("Marry leprechaun, fuck pi, kill zombie"), (define this (not cool)) ("Cider. Who drinks beer? Beer is gross"), MustardMap ("Do people even read this?"), Jerf ("Whatever I drink, it'll be enough I don't remember it later."), moment ("Eggnog made with Easter eggs"), waldo@<3.LE-GASP.ca ("Rainbow Fizz with a hint of mind-numbing number series"), Soviet Canadian ("Vodka, Brandy, Amaretto, Sprite, cranberry juice, and something to get tipsy"), Zethar ("Dragon fire ale"), CowED ("a Brown Cow")

!ED ("A pan-galactic gargle blaster")

Dan Sez

The Zombie Apocalypse should be ending today, so you should once again be able to walk the halls in peace (or pieces, for those of you already infected). I did not participate, despite the brightly coloured headband I wore throughout the week.

DanInTheHat

FedS Sez

Hey Mathies,

Here is a quick report about what's going on with feds.

Feds GM

Thursday March 22nd at 12:30pm in SLC Great Hall. The agenda can be found on feds.ca. If you can't make the meeting, fill out a proxy form and hand it in by March 21st at noon. You can find the proxy form on their website or pick one up outside the mathsoc office. An item of particular importance is a Feds fee increase.

Feds Fee Increase

The Feds exec are advocating for an increase to the Feds fee by $3.95. They will be holding an information session in the V1 Great Hall tonight at 7pm and Monday March 19th at 7:30pm. More information can be found on feds.ca

Study Space Survey

Have you say about Study Space on campus! Just 5 minutes of your time for a chance to win an iPad2 or Playbook! Fill out the survey now on feds.ca/space

Quality Forum

What does Quality Mean to You? March 20th from 10am to 5pm in SLC Great Hall. Come out and let us know what you think it means.

I hope that you participate in all these great things! Have a great rest of the term!

Prez Sez

So I screwed up as the MathSoc President. I forgot to open the Capital Improvement Fund applications. They are now out, and are sitting outside of the MathSoc office. If you have capital expenditures that your club wants to get funded, apply by March 26th. Put the forms in the President mailbox in the MathSoc office.

We also have a General Meeting happening on March 27th at 4pm in the Comfy Lounge. Agenda items will be accepted until March 20th, please email me at prez@mathsoc.uwaterloo.ca with your agenda items.

Also, I have no regrets about running the empty campaign for the FedS election. I believe my own failures spoke for themselves.

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

VPA Sez

Hey mathies,

Things are mostly quiet on an academic front from what I can tell. I do have three pieces of news regarding advanced courses, though:

The first is that AMATH 251, the new advanced version of AMATH 250, will be first offered next fall, rather than fall 2013 as was previously thought. If you are looking for a more advanced introduction to differential equations, then you should take this course.

The second is that CO 355, the advanced introduction to optimization course, is being renumbered to CO 255, as the C&O Department feels that it fits in better as a 2B course. This is a follow-up to the renumbering of CO 350 (the usual version of the course) to CO 250 that happened last year. In order to accommodate schedules better, it's
being moved to Winter term. Unfortunately, due to some ill-timed sabbaticals, the department can't provide an extra offering of this course. As a result, CO 255 will be offered in Fall 2012, and then in winters starting in Winter 2014.

The last is that MATH 247, Advanced Calculus 3, will be offered this spring term, and it appears at first glance that this will become a regular feature.

Sean Hunt
MathSoc Vice-President, Academic

VPE Sez

Hey Math Students,

It is nearing the end of term, and before you go into exam lockdown, we want you to join us for one more event. Pints with Profs will be on March 20th at 5pm at the Bomber. You can come out to talk to your profs in a non-academic setting and get to know them a bit better. As always there will be tons of free food. Did I mention lots of free food? There should be lots of free food.

You can also invite any profs you would want to see, there are invitations outside of the MathSoc office for you to give them!

As always, email me if you have any questions.

Ty Rozak
Vice President, Events
vpe@mathsoc.uwaterloo.ca

MathFOC Sez

Hello again, mathies!

Quick update on post-retreat leader things: you should check out leads.uwaterloo.ca, and ensure that your leader training (and First-Aid, if that is required for your role) is completed in a timely manner, or that you sort out any glitches in enrolling in these sessions, should they exist. The Returning Leader's Quiz is available on learn.uwaterloo.ca, under a new section called "Waterloo Orientation 2012". It should be open – if you are unable to access this quiz, but completed OLT in 2011, please let us know ASAP so we can sort problems out.

Please remember that you must complete the quiz on or before April 27th, at 11:59pm, otherwise you must take the First-Year Experience Institute training sessions with the first-time leaders.

Now is the time to be constantly watching our website, orientation.math.uwaterloo.ca, for more updates as they are slowly roll out! You can find out about our theme, co-ordinator positions, the First-Year Experience Institute, and First-Aid Training. Stay tuned as we roll out our full forum! New stuff is coming, we promise! If you haven't already, like our facebook page: facebook.com/MathOrientation2012. Our Twitter page is located at twitter.com/mathorientation, so send us a tweet or follow us!

Applications for remaining coordinator positions will be available in early April. If you have any questions, e-mail us at mathfoc@gmail.com, or visit us in the MOO!

Good luck on your last assignments for the term, mathies!

MathFoc 2012
Michael Shao, Sacha Forstner,
Amanda What's-her-name, Anna Merklovitch
mathfoc@gmail.com,

Canadian Undergraduate Technology Conference

Hey Mathies!

CUTC (The Canadian Undergraduate Technology Conference) is an annual gathering of the most passionate tech students across the country. Over two days, we introduce as much technology as possible, in as many ways as possible – talks from industry leaders, hands-on tradeshows, technical competitions, ideation challenges, and intimate breakout sessions.

We want you to grow. We're going to hand you a lot of opportunity to learn about technology, prove your dominance, and make an impact on the shape of the industry for the next generation. Carpe the hell out of the diem.

And this year we're giving you two choices: Calgary or Toronto. That's right. You're in co-op out west? Choose to go to the Calgary conference. Want to stay close to uWaterloo? Toronto is the place for you.

Tickets are just $120.00 with our early bird special (until March 30th), not to mention the fact that we have a limited number of subsidies that would bring the cost down to a whopping $30.00 for a two-day event, food, AND lodging.

CUTC is happening April 27-28 at UCalgary and April 28-29 at the University of Toronto. You can register for either conference, and check out some of our content at www.cutc.ca. If you have any questions, send us an email at info@cutc.ca.

CUTC Commitee

Investigating the Root Causes of Failure

Like it or not, University acts as a filter. Upper-year classes are often hollow shells of their first-year selves, as students are hemorrhaged over the terms. In [1], Kalpin argues that students' failures are the result of an inadequate secondary school system. In this article, we hope to propose alternate hypotheses and paradigms for this "problem".

First, we note that Kalpin's argument considers a specific case, and does not consider students who do not enter the University from an Ontario High School. In particular, a number of students are admitted from other post-secondary institutions, CEGEP, other provinces, and from abroad. Without demonstrable evidence that these groups are doing better than students who enter immediately after obtaining their OSSD, it's hard to conclude that the school system is at fault.

We again note that Kalpin's argument considers a specific case, and does not consider the effects of early childhood learning and reinforcement. In [2], Bronson summarizes the result of a paper out of Columbia, noting that students who are told they are "smart" would avoid risk-taking and were less able to recover after failure. Arguably, this, as much as exposure to difficult concepts in high school, could have a huge effect on students ability to recover after, say, failing a midterm or assignment.

In [3], Roman discusses how preconceptions developed in high school can interfere with students ability to develop their mental model of programming and with computers. We note that Kalpin is not required to take Scheme, as a result of curriculum changes in the Software Engineering program, and thus may not yet realize the benefits of exposure to functional programming, or the paradigm shifts required to write code in a functional style after having programmed imperatively for many months.

Finally, I'd like to explore some potential solutions to the issues presented by Kalpin in [1]. Many students encounter difficulty at all grades as a result of a poor understanding of the fundamentals — it's not uncommon to send a student on their merry way if they get a 60% tests on addition or multiplication in second or third grade. If a student only understands 60% of multiplication, how do we expect them to understand integration, differentiation, or for that matter, feedback control systems? Self-paced learning and review from organizations such as Udacity, MITx, and Khan Academy can help students review the basics, so that they'll be better prepared for the real learning, thinking, and innovation that can happen here.

Realistically, innovation is what we want here. I highly doubt that Kalpin will be able to gain enough political support in order to dictate policy changes to the Minstry of Education. Instead, it makes more sense to disrupt education from the bottom up — schools are starting to realize that YouTube can be a useful learning resource, and at Waterloo we really do have an opportunity to make the future better for incoming students, and, eventually, for our own children. Don't think that level of disruption is out of your grasp — in [4], one Waterloo student has already documented how he's changed the world of education.

How will you change the world today?

!able

[1] J. Kalpin, "Why High School is Too Easy," The Iron Warrior, vol. 33, no. 4, pp. 10, Mar. 2012.
[2] P. Bronson. (2007, Feb. 11). How Not to Talk to Your Kids [Online]. Available: http://nymag.com/news/features/27840/
[3] Roman. (2008, Oct. 9). The Disadvantages of High School Programming [Online]. Available: http://compsci.ca/blog/the-disadvantages-of-high-school-programming/
[4] D. Hu. (2012, Jan. 2). My Internship at Khan Academy [Online]. Available: http://www.youtube.com/watch?v=fUiHSaoXQOs

Leafs Unable to Make Playoffs

Toronto fans shocked

Torontonians reacted in a mixture of shock and sadness when they realized last week that their beloved hometown team, the Maple Leafs, would be once again unsuccessful in making the NHL playoffs this season. This makes the league's most profitable team also the only team to still not have made the playoffs since the infamous lockout of 2004-2005. Some angry fans have been making calls for the team's coaching staff, personal trainers, General manager, and the catering crew all be sacked in hopes that it would improve the team's chance of winning a game.

Despite the frequent rumors, the Leaf's management team will not be instituting a new policy in which the players will be paid relative to their performance on the ice. Said the GM: "If we did that, then our players wouldn't be able to afford the price of living in Downtown Toronto. We'd lose our entire team to injuries from attacks by the local homeless population."

In other news, the sky is blue, the sun rises in the east and sets in the west, tax returns have to be filled out soon, and Phil's is still a disgusting nightclub.

Go Sens go!

!ED

Engineering Design Symposium

The cumulation of 5 years of PAIN

The Faculty of Engineering is releasing its yearly set of design symposia, where graduating engineering students in teams of four people attempt to justify why they spent thousands of dollars more on their education than any other Faculty. This year's symposia is promised to feature projects that advertise all of the multifaceted skills taught in the Faculty, such as how to tie a tie, enunciate clearly, and make eye catching posters about technical material.

This symposium is often noted both by students and external corporate representatives to be an excellent way for the University to advertise the abilities of its graduating class. Corporate representatives are reported as "glad to see that the graduating class can correctly spell 'synergistic' and other heavily used terms in many technical contexts. Such communication skills are necessary in the workplace of tomorrow."

In other events, the Faculty of Arts held its own annual symposium, featuring its graduating class in teams of four serving corporate sponsors beverages and hors d'oeuvres while pleading for odd jobs and other forms of employment.

Impulse Vector

How to Play Polish Euchre

Around this time of year is the perfect time for activities do to instead of studying. I recently discovered one to add to the list, Polish Euchre. It's a trick-taking game for 3-4 players. Take a regular 52 card deck and remove all cards but 9 through Ace of all suits; this 24 card deck is what you play with. In terms of card rank from lowest to highest, the order is 9, J, Q, K, 10, A (yes, 10s outrank Kings). Each card also has a point value 9=0, J=2, Q=3, K=4, 10=10 and A=11 (the sum of all cards is 120). The dealer deals 7 cards to 3 players (himself excluded in a 4 player game, where the dealer sits out for that round) and 3 to a kitty. A round of bidding then starts. The player to the left of the dealer must bid 100 and the player to their left then has the opportunity to pass or increase the bid by a multiple of 5. Any player that passes may no longer bid in the current round.

When all but one player has passed, the contents of the kitty are shown to all players and that player adds these 3 cards to his hand. From his hand of 10 cards, they give 1 to each player. They now have the right to increase their bid. Then they lead play by playing a card from their hand and the other 2 each do the same in turn. They must follow the suit lead if able. The highest ranked card of the lead suit wins the trick and the player that won takes those 3 cards and now has lead.

The other way to win a trick is to have the highest ranked trump, which outranks the lead suit. Initially, in each round, there is no trump. A player can declare a suit trump when have lead, a King-Queen pair of a matching suit in hand, and plays 1 of those 2 cards. Trump can be changed multiple times per round, with overrides any previous trump. Play continues until all cards in players hands have been played.

All players add up the point values of the cards they won, and also scores points if they declared trump, (100 for Spades, 80 for hearts, 60 for diamonds and 40 for clubs). Players round their score to the nearest 5, except the player that won the bid, who rounds down. If the person who won the bid scored less than the bid, they lose points equal to the bid. If they scored more, they only gain points equal to their bid. The dealer can score points while sitting out by what was in the kitty. They score 50 per Ace and the value of declaring trump for an appropriate King-Queen pair. The first player whose total score exceeds 1000 is the winner. The player left the dealer is now the dealer for the next round. If any player is dealt 4 9s before the bid is won, they may declare a re-deal (they next player deals, not the same person again). If you are forced to bid 100 and the other players both pass, you may throw in the hand and take the 100 point loss, the others both score 40 points in this case. when a player has at least 900 points they are "frozen", and cannot score points in any way, other then bidding and making their bid. As a General rule of thumb when bidding, losing 1 trick will cost you 30 points, losing 2 will cost you 50. Enjoy!

Scarred Tiger

Error in last week's issue

I would like an error corrected in last week's *math*NEWS. I submitted a correction to my article fixing "Tony" La Rossa's name, well in time for publication, and now I look like someone who doesn't know anything about baseball, which is false.

Cheers,
Scythe Marshall

SE 380: Introduction to Feedback Control

What is this I don't even

We've all heard stories of first-year physics destroying engineering students. It's… like a rite of passage. First-year physics is that kind of course. Turns out it's not the only one. As someone in my class aptly pointed out, SE380 is "another course to cull the weak."

What do you do in SE380? Well, as a software engineer, I had to take a bunch of required courses in first- and second-year, courses that (generally) have little relevance to writing software. Courses where you try to forget the concepts as soon as possible after you hand in your final exam.

Here's a list of some of the prerequisite knowledge which we're assumed to have not forgotten:

- Basics (differentiation, integration, complex numbers)
- Linear algebra (matrix multiplication, determinants, adjugates, Cramer's Rule, inverting matrices)
- Calculus (multivariate calculus, Jacobians, Taylor polynomials)
- Physics (mechanics, circuit analysis, electromagnetism)
- Differential equations (Laplace and Fourier transforms, solving ODEs, convolution)

As proof of how ridiculous this course is, here are some stats from our midterm:

- Good bell distribution… until you realize the marks span from 2.5% to 101.7%
- 49.7% average, 50.4% median
- 23.9% standard deviation

Oh, I forgot to mention that these statistics are after the prof adjusted the marks by making 25% of the midterm bonus. Yes, our 80 mark midterm was marked out of 60.

Anyway, now that I'm finished with this article, I should probably pay attention to class. Which class is this? Oh, wait…

!bob

Schrödinger's Tao

A tree is in a forest, along with the following device: in a Geiger counter, there is a tiny bit of radioactive substance, so small that perhaps in the course of the hour, one of the atoms decays, but also, with equal probability, perhaps none; if it happens, the counter tube discharges, and through a relay releases an axe that deftly chops through the tree. If one has left this entire system to itself for an hour, one would say that the tree still stands if meanwhile no atom has decayed. The wave function of the entire system would express this by having in it the standing and fallen tree mixed or smeared out in equal parts. It is typical of these cases that an indeterminacy originally restricted to the atomic domain becomes transformed into macroscopic indeterminacy, which can then be resolved by direct observation. But were no observation to occur, having neither people nor cats nor birds within earshot, the question remains: after one hour, has the tree made a sound?

Rainbow Mathies 20

(Likely) Queer-Identified Mathematicians

Hello mathies! At production night I was asked by a couple of my fellow writers how I planned to celebrate the 20th article column. This got me thinking about our strange and seemingly arbitrary fascination with numbers that end in a zero (or, more accurately, a number with a zero to the immediate left of the decimal point). In any case, yay 20 articles, let's move on. Today we have a topic which has long been coming. There are a number of distinguished mathematicians whose genius we regularly celebrate and whose ideas and developments we learn and use on a regular basis. It just so happens that a number of those more esteemed contributors to the mathematical coffers identified as (or were highly suspected of being) queer. This article will share a bit about four of them (four men, specifically: as hard as I could look, I just couldn't find any female-identified or transgendered mathematicians). If I missed anyone, please let me know and I'll include them in a future article.

Alan Turing: I figured I'd start off with the most well known one. Alan Turing was a revolutionary English thinker in the field of computational mathematics. His most popular work on Turing machines gave a theoretical model for computation capable of finding the solution to any computational problem representable by an algorithm. While this model was never intended to model computers directly, they provided an interesting conceptualization of a CPU's main operation, not to mention providing significant contributions to the theory of computation. Many of his other ideas and inventions, such as the concept of ordinal logic (which earned him a PhD in Mathematical Logic from Princeton) and the breaking of the German Enigma code during WWII caused revolutions in their respective fields. Turing was clearly a genius, but unfortunately he would not be able to reach the full potential of his life. While working for the Government Code and Cypher School, he was known to be an openly gay man, which did not cause issues to his work initially. However, in early 1952 Turing would meet a suitor who would eventually break into his house and rob him. During the police investigation, it became known that Turing and this man had had sexual relations, and both were arrested, charged, and convicted of indecency. This conviction cost Turing his security clearance at GCCS and shame him to suicide in 1954. He was 41. To this day, his work is greatly celebrated and the fields of mathematical logic, computation, and computer science mourns the loss of the advancements he may have provided in his later years.

Pavel Aleksandrov & Andrey Kolmogorov: Here we have the story of two Russian mathematicians who met as a result of their field of work and managed to establish a long and celebrated relationship. Both were students of the University of Moscow in the early 1920s, where both returned to teach only a few years later. However, the two did not meet and begin their lifelong partnership until 1929. Both made significant contributions to the field of topology in the 30s, working together to author a book on the topic in 1935. They each found prestige and respect in their field. Aleksandrov was president of the Moscow Mathematical Society for over 30 years, the president of the International Congress of Mathematicians from 1958 to 62, a corresponding member of the USSR Academy of Sciences from 1929 until his full membership began in 1953. Kolmogorov received one of each of the Stalin, Balzan, Lenin, Wolf, and Lobachevsky Prize throughout his lifetime. In 1982 Kolmogorov was quoted to have said "for me these 53 years of close and indissoluble friendship were the reason why all my life was on the whole full of happiness, and the basis of that happiness was the unceasing thoughtfulness on the part of Aleksandrov." This story of lifelong happiness in face of the harsh cold of the north, especially in their time, is deeply inspiring.

Paul Erdős: Known for the pride bestowed to mathematical researchers based off of their esteemed "Erdős number," the infamy of this Hungarian mathematician reaches across Math departments in every academic institution. Erdős was known best for his collaborative nature, publishing 1525 different articles with 511 different co-authors. The applications of his work, as a result, reach essentially every nook and cranny of mathematical thought, from logic to calculus and from probability to topology. He was also known for his eccentricity and particular habits of language (he refereed to children as epsilons, for example). Despite his wide involvement in the mathematical community of his time, he did not receive much distinction for his work. He never received a Fields medal (the highest distinction in mathematics), though he was bestowed with a Wolf prize in 1984/84. One commonly unknown fact about Erdős is that he was asexual, instead devoting his life and his love to his field because, to use his words, "If numbers aren't beautiful, I don't know what is."

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.

Join me next issue when we discuss queer resources outside of UW campus. KW is a big place, so we will take a closer look at just what it can offer to queer-identified mathies.

(define this (not cool))

Queer's Rights Organization Moves Against the OED

In recent news, several English queer rights organizations have opposed the change in the Oxford English Dictionary to amend its definition of the word 'fabulous' to be more inclusive of heterosexual individuals. The Oxford English Dictionary proposed amending the definition of the word with "Barely credible; astonishing, but in a way that does not require full grown men to erupt in fits of giggling and referring to each other as 'sister'."

This movement echoes a less influential event last year, where a series of Women's Rights groups mobbed an annual general meeting of the Oxford English Dictionary to demand changes to the definition of the word 'penis.'

Impulse Vector

FedS Fee Increase Explained

A Clearer View on How we Stack Up

On March 9th data was published in *Imprint* giving a breakdown of the Federation of Student's proposed fee increase. Following the breakdown on how the new money would be allocated, a comparison of the fee that UW students paid to their student government was compared to the fees that students at other Canadian universities paid to their governments. The curious thing about these numbers was the fact that the information was "normalized", leading to some speculation if the numbers were tweaked to make the fees we pay seem better in comparison.

After contacting both *Imprint* and Luke Burke (FedS VP Internal), an explanation was given as to why the numbers were changed:

Essentially, if we were to simply publish the entire fee that each student union across Canada charges, it would be misrepresentative. In fact, FedS would look much better than (in my opinion) is fair to an accurate comparison.

For example, Queen's Alma Mater Society charges a yearly fee of $678.84 + health and dental, optional and society fees to each student. On the chart we provided Imprint, that fee is listed as $74.72/term, because there are some resources and costs included in the total fee that represent services or programs that FedS does not provide (i.e. student newspaper, refugee program and athletics are not areas covered by the FedS fee, so we didn't feel it was fair to represent them in the Queen's AMS fee when comparing the two).

All of the Student Union fees listed are either equal to, but in most cases lower, than the actual fee charged to their students in order to make it the most relevant to comparison with the FedS' fee.

–Luke Burke

A PDF detailing the numbers can be found online at `http://bit.ly/x1iw6D`. Note that the numbers still don't all correspond to how much each student pays/4 months or says which fees were removed from consideration.

!ED

String Terminators Outlawed

Just last week, computer scientists and programmers received an urgent warning from physicists. They have been warned to avoid using string terminators at all costs. Since string theory quietly assassinated all of its rivals, using a variety of faked accidents and ingenious poisons, the entire universe it now officially composed of strings. Thus, string terminators are potentially deadly, annihilating mass-energy arbitrarily, and will continue to do so until we eventually run out of universe. This would be a bad thing. The other possibility – thought this is calculated to be less frequent – is that the use of string terminators may unleash Terminator robots. This would be oddly appropriate, since it is computer science's fault. Fortunately, this has not been reported – or at least there have been no survivors.

This development is expected to screw over all attempts to use strings ever, and mean memory leaks everywhere. Oh well, at least the universe will still exist.

tesseract

Find the Bullshit

This is what daily life is like for an Arts Prof

Every once in a while, something happens in the world that is so outrageous that you can't help but do a facepalm at what the world has come to. Can you figure out which of these events actually happened?

A Modest Proposal

With Apologies to Jonathon Swift

Many major cities have homelessness problems, but very few of them are taking the "Lemonade" approach to dealing with this problem. Most of them prefer the "return the lemons", as endorsed by Cave Johnson. This approach tends to run into difficulties when there is no "return to sender" on the homeless people, or the city in question is in a climate such that it attracts homeless people. However, an American company has taken an innovative approach to this problem.

An advertising company, based in the United States, decided to use the homeless people as roaming wi-fi hotspots. Equipping each of more than a dozen homeless people with 4G devices, and the ability to use these devices to project a hotspot. People wishing to use these hotspots were required to pay for access via Paypal. Homeless people that were creating the hotspot were given a percentage of the profit, to use to try and get themselves off the street. The company claims that the purpose of the exercise was to raise awareness about homelessness.

In the opinion of this *math*NEWS writer, this sounds like an attempt to use the efficient market hypothesis to reduce homelessness. In reality, this will likely lead to failure, as people will not wish to pay for a service that can literally wander out of range at any time.

A Modest Proposal

More Apologies to Jonathon Swift

Many cities have homelessness problems, as exposited in the other article of this name. However, a moderately sized city in British Columbia is considering an innovative solution to this problem.

Due to labour difficulties, the city's park maintenance staff has not cleaned the parks in over a month. In order to ensure the usability of the parks in the upcoming spring, the City has decided to experiment with hiring homeless people for park maintenance. Work largely consists of picking up garbage, including used needles and other drug paraphernalia, as well as hard labour for grass maintenance. Since these homeless people do not have other jobs, the City is able to pay them minimum wage.

It is the opinion of this *math*NEWS writer that this is a very crass way of addressing labour problems. However, given that it is providing homeless people with jobs, albeit doing hard labour for minimum wage, it is my opinion that this is a fundamentally valuable exercise.

Believe it or not, the first article actually reported a true story. This actually happened.

MeaninglessQuips

Kony 2012

Earlier this week, Joseph Kony of the LRA party announced his intent to enter the 2012 race for the President of the United States of America as an independent. His platform was heavily focused on early education. "Children are our most precious asset", said Kony in his announcement video, "and we will make every effort to ensure that they receive the proper education so they can prosper". When asked about his positions on other matters such as the economy, foreign policy, trade regulations and marijuana legalization, he responded with "No comment".

However, there has been great controversy surrounding Kony's campaign. One issue is his stance on religion with respect to the government. He strongly believes in theocracy, and proclaims himself as a spokesperson of God. Furthermore, when asked to see his birth certificate, Kony denied it, promising that he is, without a doubt, American. "You guys believed Obama, why not me?" replied Kony. However, these are only a minor issue when contrasted with his proposal regarding to replace the Secret Service with children.

Nevertheless, Kony's support has been rising without any sign of stopping. While most American politicians skeptical, Kony has exploded throughout social media such as Facebook. The announcement video, "Kony 2012", has been shared by millions of teenagers hoping to change the world from the comfort of their chairs by clicking a conveniently placed "share this" button next to the video. When spoken of, people became very serious about the subject. "This isn't funny", said one very serious Facebook user, as he mistook a picture of actor Carl Weather in Predator for the president candidate.

theSMURF

Robocalls plague MPs vote on giving Elections Canada more power

In light of recent potential election violations (at the federal, not FedS, level) members of the Canadian Parliament are voting on whether or not to extend the powers of Elections Canada to investigate parties and any election irregularities. However, several members of Parliament have expressed concern that the Conservative Party, the current majority government, may have resorted to alternative tactics to defeat this motion.

Several MPs have reported receiving automated phone calls at their homes and places of work which gave them incorrect information as to what the resolution before them in Parliament is, and giving them faulty directions to the House of Commons where the vote is to take place. The New Democratic Party is expected to make a statement on Monday condemning the use of such 'robocalls' to affect the outcome of any voting process, let alone a Parliamentary motion.

Impulse Vector

Follow us on Facebook (mathNEWS), on Twitter (@ *UWmathnews*), or in person (MC 3030)!

Sun Flashes Earth

In recent astronomical news, there has been a flurry of solar activity, including a high numbers of solar flares. When word of this reached Rick Santorum, he realized that he had a small vocabulary and just yelled a lot. He promised that if he was president, he would stop anyone, including the Sun, from flashing Americans. He called the Sun's behaviour sinful and disgraceful, and said that it would burn in hell. Since he is a man of action, he promised to put a giant disk up in space to shield the world's corruptible eyes.

He did not seem to realize that this would remove the source of life on Earth, as well warmth and food and stuff. When this was pointed out, he said "Only hippies like the sun and plants and stuff. We don't need no solar enerjee; we can burn oil here to kingdom come!" When it was pointed out to him that with zero funding to space programs, it would be impossible to make a giant disc to block the sun, he proceeded to stand there like a stupid child and make ad hominem attacks at someone he thought had a descendent four generations back who went to the Middle East.

His rival, Mitt Romney, when faced with the same problem of the Sun flashing Americans, took a more practical approach. Figuring that the children need to be protected the most, he said he would protect their innocence by stabbing all their eyes out.

tesseract

Random Happenstances

Here are some things that I have noticed over the past week that don't really matter overall but its funny anyway (or not deal with it)

- Rush Limbaugh says that taking birth control pills implies you are a whore. This echoes his earlier comment that wearing a seat-belt implies you are a reckless driver.
- Vladamir Putin wins yet again, especially in Chechnya where he got 102% of the vote. His approval rating soars to a record high of 117%.
- House of Commons speaker threatens to have Anonymous be held in contempt of the House. The news is met with screams of "OH RLY" and "SO BRAVE."
- Kony 2012 makes us believe that were better people if we like a video or retweet something. Hipsters say that they were upset about children dying before it was cool.

DaFink

Sun Shines

Humans Awestruck

In the news, weather happened. Apparently we had a time change that brought us forward an hour and two months. I'm serious, there was sun and stuff. People were seen in trees in abnormal numbers. It has been hypothesized that early in humans' evolutionary history, there were higher concentrations of UV light in the atmosphere. This would mean that when levels of UV are high, people revert to a more primal, simian state. This, among other effects, causes them to have a strong urge to climb trees. It also causes them to become roughly as competent as monkeys at algebra, computer science, and other technical concepts. They do peel bananas roughly 244% more efficiently, though.

tesseract

A Hungry CS Student's Guide to Snacks

With the midterm season finally dwindling down, and finals looming ominously around the corner, now is the time Mathies flock together and attempt in the reprehension of their previous study habits. For CS students, this inevitably requires trying to optimize how they code. Since it is incredibly difficult to just make yourself a better programmer, the next best thing is to determine the ultimate food to eat while spending late nights trying to hack together an assignment due the next morning. With this in mind I present a hungry CS student's definitive guide to snacks:

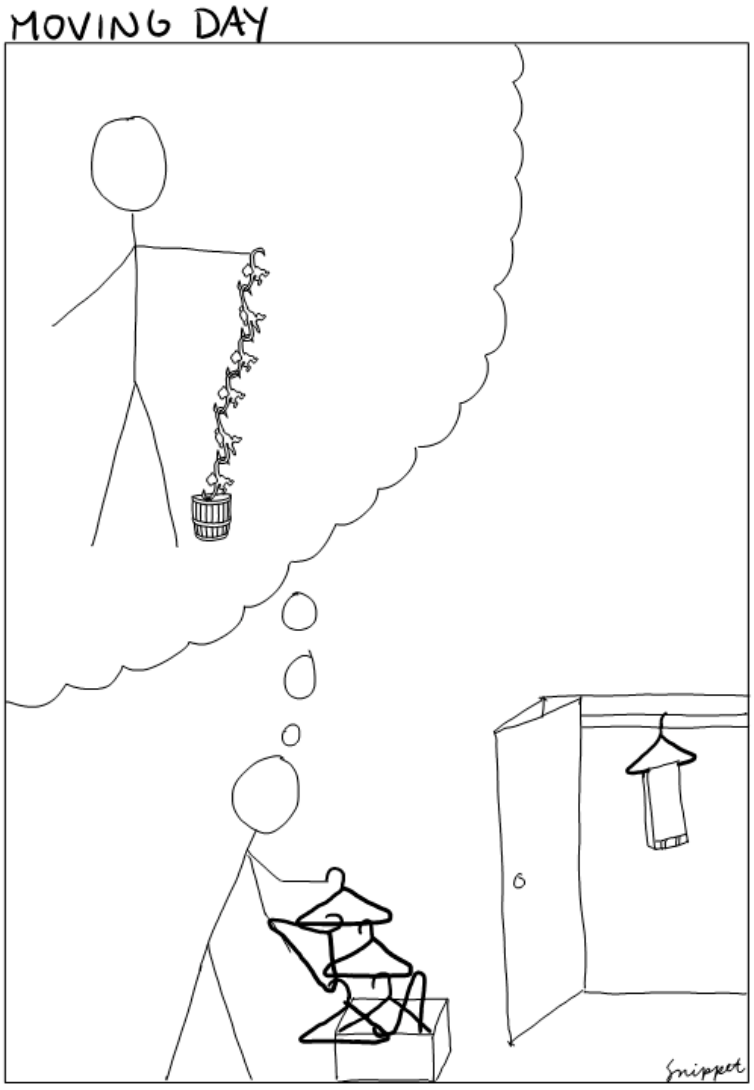
- **Fritos –** Although they serve as a delicious snack, Fritos function as a very problematic food to eat while coding. While the fact that they sticky up your keyboard is balanced out by their amazing taste, the real problem with Fritos lies in the salt content. The inevitable trips to the fridge in search of hydration, as well as the subsequent trips to the bathroom as a result of that hydration really eat up your productivity time. Although Fritos provide an excuse to sing Code Monkey, and as a result may lighten up your lonely night of programming, their irreversible flaws mean that they are regrettably a very sub-optimal choice for snack food.
- **Pringles –** In most circumstances in life, Pringles are recklessly tossed together with Doritos and Miss Vickie's under the subcategory of potato chips. As a programming snack, however, Pringles deserve a special accolade for being the optimal choice of potato chips. The whole design of Pringles, right up to the packaging, screams optimization and efficiency, which above all, a CS student's primary concern while eating. The form of a Pringles can is both compact and durable, allowing you to store an endless supply wherever your computer may be located. It is my opinion that every computer case should house at least one can of Pringles, if only in case of emergency. Of course, since they still are at some level potato chips, snacking on Pringles does come at a cost. Pringles are powdered and salted, which leads to them sharing the very same downsides as Fritos. The salt content of Pringles, however, is minimal enough that I would still recommend it as a resourceful snack to consume while you code.
- **Bagel Bites –** As far as luxury programming snacks go, these are it. Bagel Bites represent everything you could possibly want while hacking away to the glow of your computer screen. They are bite-sized pizzas that serve to fulfill all the aspects where pizzas come short! Don't want to wait for delivery? These are beckoning you from your fridge! Don't have any clean dishes? You don't need any! Too busy to eat? Just devour it in one bite, and continue to work away! Of course the immense luxury of Bagel Bites comes at a large cost: If your microwave is not within arm's reach from your computer, you will spend more time cooking Bagel Bites than coding! That said, these delicious snacks are more than enough reason to put your computer in your kitchen or your microwave next to your computer, and once you have that set up, you have reached the epitome of snacking!

maplebaconburgr

N Events to Make the Upcoming End of Term a Little More Sociable

- **A Cappella Club's Concert:** Awesome songs and acts all using some awesome voice-work, happening March 23 & 24 at ML with the doors opening at 7:30 pm, tickets available at FedS or at the door! Get them before they're sold out!
- **FIRST Robotics Waterloo Regional:** See robots made by high school students compete for the regional title and a chance to go to the World Championships in St. Louis, Missouri, happening ALL DAY on March 22-24 in PAC, it's FREE to come see!
- **Pints with Profs:** See YOUR prof potentially get tipsy, happening March 20 at Bomber at 5 pm as hosted by MathSoc. Note to self: need to invite more profs!
- **St. Patrick's Day:** Get drunk in general at a place of your choice, strictly BYOA
- I'm sure there ARE more events going on than this, but these were the MAIN events that are in my mind to advertise at the moment…OH WAIT!
- **The FINAL HvZ Mission:** TONIGHT (March 16, assuming that things go according to plan), ALL ACROSS CAMPUS (find the nerf gunned people!), IT IS AMAZING TO WATCH, I LIKE ALL CAPS :D

waldo@<3.LE-GASP.ca



Re: The Three Deadly Sins

Or how I missed five interviews and lived to tell the tale

So I read last issue's article The Three Deadly Sins, which list three things that CECA (didn't you hear – they're now Co-operative Education & Career Action) really doesn't like students doing. One of the sins was not showing up for an interview, and I decided that I wanted to share a story.

I caught a cold earlier this term, and as a result, I missed five interviews. I contacted the then-named CECS to inform them of my illness, and they offered to set up phone interviews for me, but I declined because I was feeling too sick. I had to write apology letters the next day, though.

This was fine until I missed my third interview. Then I got a notice that, unless I submitted a doctor's note, my Jobmine access might be interrupted. Fortunately, I had already obtained doctor's note (since I missed a lab), so I submitted it and then everything worked out. CECA even offered to contact the employers on my behalf and reschedule my missed interviews.

So what are the lessons? If you ever get sick and have to miss an interview, contact CECA before hand and tell them. Try to arrange for a phone interview instead. If that's not possible, then depending on how many interviews you miss, you'll need to get a doctor's note. Always be polite and honest when you contact CECA.

Once you confirm that you're an honest student who just got sick (and you weren't intentionally skipping interviews), CECA will genuinely try to help you reschedule your interviews.

!bob

N Things to Do Over Everyone Else's March Break

Waldo thinks Reading Week isn't the only time to do various things!

- Write a midterm, because they're STILL not done yet!
- Participate in a game of Humans vs. Zombies, because it is just THAT fun
- Write a report for PD2…wait, why would I want to do that?
- Promote various events that are coming up, but we'll get to that later I guess
- Do some work, it's supposed to be a co-op term you know!
- Be successful at work so you feel good about work for once!
- Evaluate some high school produced websites
- Get mad at how you didn't promote various events enough and how you wanted more people for them
- Become annoyed at how you failed to do something you thought you were going to do in Reading Week, but it's ok because you are NOT the only one!
- Read a very depressing textbook and rant in your head about how you wish you had time to do more research to make things not as depressing
- Ponder when the next pop quiz is going to arrive…along with it's friend, the OTHER pop quiz (at the same time, obviously)
- Eat some pie for Pi day and show off some Mathie pride for some proto-frosh :D

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Omigosh: The Best Number Ever

Move aside E

If you've watched Vi Hart's movie about **F** ("Wau"), you'll know just how exceptional a number wau is. But today, I'm going to introduce you to an even more amazing number. Pretty much any society that knew about **F** knew about this number. Except, this number was so mysterious that it took them a long time to figure it out.

This symbol for this number will be based off of the Greek letter "omicron", but we don't like that name because it doesn't carry the same kind of "wow" factor as **F**. So instead, we'll use a slight derivative, "omigosh", which we'll define as an omicron with a horizontal cross in it.

The number omigosh is truly amazing. Just like **F**, it's a rather inane exercise to try and write omigosh in decimal notation. The number literally has no digits. The ancient Indians had to invent a special symbol to represent the number omigosh.

Besides being a number just as special as **F**, omigosh happens to be related to it too. For example, if you've watched the **F** movie, you'll know that e to the 2 i pi equals **F**. But what Vi neglected to mention is that if you remove the 2, leaving just e to the i pi, the resulting expression plus **F** equals omigosh.

How can you calculate omigosh? We can try the following procedure:

Write a fractional line with 2 below it, followed by a plus sign, followed by a fractional line with 3 below it. Then, repeat this procedure above each line. The result should be a fractal fraction, the value of which is omigosh.

There are some properties of **F** that also work with omigosh. For example, omigosh to the power of pi to the power of omigosh to the power of 2pi to the power of omigosh to the power of 3pi to the power of (etc.) is all equal to omigosh times the square root of (omigosh times the cube root of (omigosh times (etc.))).

Omigosh is so special that some simple arithmetic actually breaks down when applied to it. You know how taking the logarithm of base **F** is meaningless? So is taking the logarithm base omigosh. And dividing by omigosh? Forget it, it can't be done. You can't even divide by **F**.

Now, for any number x, take y as x + omigosh. x to the y minus y to the x = omigosh. x to the x to the y minus y to the y to the x = omigosh. In fact, you can take any power tower of x's and y's and subtract them (as long as you keep the number of x's and y's the same on each side of the subtraction), and the result will always be omigosh.

And what does all this mean about what omigosh is? As it turns out, absolutely nothing at all.

What properties of omigosh can you come up with?

Ender Dragon

Video on **F**: `http://www.youtube.com/watch?v=GFLkou8NvJo`

What to do on St Patrick's Day

Drinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrink-drinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrink-drinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrink-drinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrink-drinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkdrinkpuke

Russian Reviews

Realms of the Mad God

Do you like bullet hells? Do you enjoy MMOs? RPGs? Do you yearn for a quick fun time with friends? Perhaps you should try Realm of the Mad God. Although it initially seems to be a bullet hell, it is actually a co-op MMO RPG featuring numerous powerful bosses scattered throughout the world and randomly generated "quests"of various size that spawn groups of minions to harass you and can (occasionally) have multiple stages/forms to fight.

The game is fun, and challenging, why? You only have one life. Once you die, your character is gone forever, only their stats recorded on a leaderboard to remember them by. This is okay though since you can make a new character and hit the maximum level and find rather powerful items in about a half hour, so a new character is only a few fights away from joining the massive player-parties who kill gods.

The game has basic graphics, very retro (8-bit style), which is cool and all. A problem though is it's soundtrack, which is rather lacking and repetitive, making you likely to turn it off and listen to something else. This doesn't subtract from the simple fun of the game though, where you and a few friends can wander out into the wilderness, slaughter mobs, do instances, and join dozens upon dozens of players trying to kill a god within that god's domain (insane numbers of deaths occur when doing so).

Leveling up with one class will unlock other classes that you can use for future characters, so although you start with only the wizard, you can soon become a priest, archer, rouge, warrior, necromancer, etc. Every class plays 'differently', with range, speed, and damage of attacks, along with special abilities (explosions, piercing arrows, life drain, etc) and class specific items splitting the classes up.

So if you want to spend some time playing about in this game, bring a friend and download the game for free from realofthemadgod.com or by downloading it off Steam, either way, it is free and waiting for your enjoyment.

Soviet Canadian

A Game of Thrones Season 2

March sucks. Why, you say? Because it's in the way of April. Imagine if we just removed March. Then it would be April already, and GoT season 2 will have started already. If you haven't read the books or watched the first season, you should. Based on the books by George R. R. Martin, the first season of GoT aired last summer and was received extremely well, and season 2 is set to air April 1st.

For a lack of better words, the show is fucking awesome, with an emphasis on the "fucking". After watching the first season, I started reading the first book and noticed one Stark (pun totally intended) contrast between the book and the show: the show has way more sex/nudity. Besides that, the show remains quite true to the books (within production restraints, obviously).

The story (as far as I know, being only finished the first book) is that of Westeros, the Seven Kingdoms and the conflicts between them as the lords fight over the Iron Throne. While the story is focused around its characters, there is also a splash of the supernatural, such as the extinct dragons. It's a great show and you should definitely watch it.

theSMURF

The Benefits of Working from Home

Why I was able to make it to mathNEWS for example

I am a Software Developer. That's a fancy way to say that I spend a lot of time on Reddit and every once in a while write code to make things do stuff. Mostly Reddit though. Notably, most of my job description is stuff that I do on a computer + therefore does not require my presence. In light of this fact, I occasionally take the oppurtunity to work from home, the greatest thing since icing in a can. In my adventures I have catalogued the best parts of working from home, which I come to share with you today. Without further ado, the top X benefits to working from home:

- **Pants:** More importantly, the lack of pants. Nothing is better than an entire day doing work without pants. Pants are garments designed to bring you sadness, and not wearing pants is liberation. I'm sure Richard Stallman is totally for the freedom from pants movement.
- **Sleep:** When you work at home, if you start at 9, you can wake up at 8:59 and you are totally on time. If you don't need to contact anyone, you can retroactively be at work on time and wake up after 9! In the end, the amount of extra sleep you will get will make you just that much more productive later once you start playing minecraft after work. You could also use that productivity on work, but the minecraft will probably be more fun.
- **Entertainment:** It's an ideal time to do a movie marathon! Sure, you're working, but everyone knows that multitasking is a great way to not be terribly board while working. You've got 8 hours of work, but it'll just fly by if you watch a trilogy of films through it. Heck, if you watch Lord of the Rings Extended Edition, you'll be working enough overtime to balance out the lost productivity!
- **Travel:** Did you go somewhere for the weekend? Sad the weekend is over? Work from "home" that Monday and stick around! I'm sure you can quickly get that 8 hours of work compressed down to something manageable and enjoy the extra day wherever you are.

All these benefits and a myriad of others will be yours if you can only convince your employers that you're not the slacker you probably are. Just remember, the office isn't going to keep you any more productive, just more secretive about your unproductivity!

Jerf

Speaker Requires Anonymous' Spokesperson to Speak Before Parliament

In response to threats against Defense Minister, Vic Toews, the Speaker of the House of Commons has required the spokesperson of Anonymous, Guy Fawkes, to appear before the House. Anonymous, the large, internet-based protest organization has replied stating that it's spokesperson has unfortunately passed away in 1606, and thus will not be appearing at the House of Commons' next sitting.

Impulse Vector

profQUOTES

Now with 20% less course material!

You must get out of this idea that money is real… books are real… cars are real… [points to a student] HE is real!

-Smith, ECON 102

A massive party, no savings, all spending… machines break down. Everybody dies.

-Smith, ECON 102

What you are saying makes sense to me but I want to say no.

-Jason Hinek, CS 240

So I gave my grad students a programming assignment…
Student: How old are these guys?… They are grad students, but from that assignment I think they went to the University of Walmart.

-Kennings, ECE 124

Since you guys actually showed up for this second makeup lecture, I've brought you guys cookies *throws boxes of oreos*

-Dupont, MATH 119

If L = 1, FML!

-Dupont, MATH 119

You should know something about e other than its delicious taste.

-Dupont, MATH 119

I actually know very little about drugs even though I look like a crack head.

-Dupont, MATH 119

Now I'm going to take the mother function and use her to give birth to other things.

-Dupont, MATH 119

If you are in Uptown Waterloo and see something of this form.

-Dupont, MATH 119

Let's add a bad-ass bracket right here.

-Dupont, MATH 119

Big O is a monster that eats everything smaller than it.

-Dupont, MATH 119

Big O is the cookie monster… It even looks like a mouth.

-Dupont, MATH 119

Big O is like a black holy sucking in all powers greater than it.

-Dupont, MATH 119

If you have a low testosterone level you wear clothes like Clinton does.

-Dupont, MATH 119

You need a 4-dimensional brain to do that. That's when the drugs help.

-Dupont, MATH 119

There isn't a good representation of Mexicans in math. That means no Sanchez Theorem.

-Dupont, MATH 119

I'm gonna take this and go down on it.

-Dupont, MATH 119

This could be a block of ice or a block or crack cocaine. It doesn't matter.

-Dupont, MATH 119

Oh, I'm Abraham.

-Dupont, MATH 119

fer-MAH, not Fer-MAT. It's French bitches!

-Loo, MATH 135

I just want to clear something up, between me and Eddie only one of us does drugs and the other one is me.

-Loo, MATH 135

Engineering already thinks I'm dealing drugs.

-Loo, MATH 135

The whole drug, gay, reddit, Chinese thing needs to stop. Now, let's talk about the Chinese Remainder Theorem.

-Loo, MATH 135

You always want to use your dick!

-Loo, MATH 135

So I can understand people wanting to take a break, after midterms this week, and people doing assignment 4 and handing it in late. So today, I have a topic that's somewhat appropriate… Exhaustive Search.

-Lubiw, CS 341

Man, all these years of waiting to get respiratory problems, and I don't even get a cool puffer.

-Doyle, ECON 304

It was students and deadbeats, and you can argue if they are two different classes of people.

-Doyle, ECON 304

It's phone day today. By the way, that's a lame 1980's ring.

-Doyle, ECON 304

You can only buy half a clown with $5000, and it's not very funny anymore.

-Doyle, ECON 304

This is the one thing in the course you can actually make money out of.

-Doyle, ECON 304

We've got a central bank. They're not morons. Well, maybe they are morons, but they have some skills. -Doyle, ECON 304

I don't even like my actual friends and I'm trying to get rid of them.

-Doyle, ECON 304

If you ever become an evil supervillan… you really want to go drinking with the central bankers and slip them something.

-Doyle, ECON 304

I'm still convinced that PAS is designed as an experiment on what happens if you turn people into rats.

-Doyle, ECON 304

Fortunately, we've never got the results of the research because they couldn't find their way out either.

-Doyle, ECON 304

This is not a model of banking. It's a model of loansharking.

-Doyle, ECON 304

When it gets to bankruptcy court, the bank can't take away that for 3 years I was the biggest bigshot in Waterloo.

-Doyle, ECON 304

[On Monday]
Prof: When are things due?
Student: Wednesday.
Prof: And you've started them already? Come on.

- Ragde, CS 442

[at a goose outside the classroom window] "Honk Honk!"

-Cormack, CS 241

We're using "proof by check mark" again, although I advise you if you want marks on your assignment not to do this.

-Purbhoo, MATH 249

Some people say that infinity is a number, but that depends on what you define a number to be.

-Purbhoo, MATH 249.

profQUOTES

Now rat-poison free!

I even had a note I wrote after class which said "What was I thinking?" and still promptly forgot.

-Purbhoo, MATH 249

Your hypothetical question is a bit too hypothetical.

-Purbhoo, MATH 249

I'm going to have the worst caffeine crash in 20 minutes. *[checks clock]* Cool! Class will still be going on!

-Katz, MATH 239

But I digress. Man, I digress!

-Katz, MATH 239

The brain isn't very good at finding isomorphisms in graphs. Not your brain in particular.

-Katz, MATH 239

Wow, I digressed and it was about math!

-Katz, MATH 239

I'm totally tweaked out of my mind. I'm on chai tea.

-Katz, MATH 239

This is the "oh shit" moment.

-Katz, MATH 239

I'll give you a sec to write all this down, and see why you should care.

-Katz, MATH239

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

The Ballad of the [Un]Dead

From light illuminating eternal
Into the realm of creatures rational,
There beget tales of sin most infernal.
High upon a court with gold encrust'd,
In hushed darkness the vile triumvirate meets
A ruffle of cloth sweeps across the floor,
The candles are lit, and a voice thus spake:
"O Scepter'd King, O Lord of the Nethers,
Heed our cry; time for open war is now
With us gatekeepers, pandemonium
Shall reign. Tartarean sulphur and strange fire
Spread from your unearthly throne, ravaging
The enlightened and the pious, sending
Them to our desolate land, tortured and
Forsaken. Accept! Start this glorious era!"
Belial, to whom no temple revere
and Azazel bearing the lord's standard
Appeareth when invoked and spake as thus:
"Floods and winds of tempestuous fire
await the insolent who call upon
The Assembly of the Damned without due
Purpose nor respect; adhere to your ploy
We shall not do. Yet the vine is ripe;
Aid we shall send to this crusade of yours."

Millions of bodies form a crimson rose
Covering the earth with this sanguine ritual;
Again and again howls of depression
Follow the battles whence these demons come,
With diabolic birds most vile and foul.
Aevum resurgere, the dead shall rise
Distilling fear and trepidation to
The shattered sanctums of all mortal men;
To face a fallible afterlife, so
Easily controlled, crushes the spirit.
From the horde of rotting arms,
Maniacal laughter erupts in the
Desolation undead leaves in its wake -
Yet these people know not of true despair
Since the lake of fire did not open
As it was written in the books of yore
And only then shall people understand.

Blares of trumpets rings out from the heavens,
Seraphim, Malakhim and Cherubim
Descend in a blaze of feathery wings.
Millions of minute cuts lacerate
Rotting flesh, made by a silver
forest of lances in shining armour.
These Valkyrjur decimate the undead
As swift as they come, saviours to those
who still claw at the Stygian waters.
The demons are again banished from light
They bide their time, growing ever stronger
While the angels descend into weakness
One day the seal will and true despair
Will run amok in these lands unchallenged.
Hear ye now of this cautionary tale,
And arrest this calamity at its core.

Aevum resurgere,
Zethar

The Ambiguous Video Game Quiz

I totally didn't phone this in

Winner of last week is Glorious Nation of Paraguay.

This week's questions:

- Stealing from people for benefit
- Attacking people for their belongings
- Take all the glory for yourself

Submit answers to the BLACK BOX.

Quick Master

The Modern Ape

Vibrations pulse into coclea, activating the neuron chains
Weaved plantae fibers sheath skin, blocking from the rains
Fused sand bends beams to lens, resting in alloyed place
Smaller than a held rock, device links to cyberspace

Crawl, walk, climb, ride, we are the modern apes

Ice Nine

Voldemort Makes Backups

You should too

Recently I had a good look at my backup strategy and decided it wasn't good enough. I'd been doing full daily backups onto a big external hard drive sitting on top of my computer, which may be better than most people, but isn't good enough. In the case of a fire, or theft, both my backups and computer might disappear. For some things this might not really matter, (Do I really need all my assignments from 1A?), but for other things, it's crucial that I have access. I can't regenerate cryptographic keys for example, and some of mine protect a lot of data that would be lost if I lose the keys.

Clearly, I should be backing up the few important things better than the large amount of unimportant ones. This gives me the need for an extra, small backups, as well as my daily full ones. To ensure I've always got access to at least one copy, There should be lots of redundant ones, and ones that are physically separate as well. Given the sensitive nature of some of the important things, mainly the encryption keys, the backups shouldn't just be accessible to anyone. That means that the backups should themselves be encrypted. To summarize, I need to take the Voldemort approach to backups; make lots of copies of important things, and protect them well. Barring a few 17-year-old kids hunting down and destroying my backups one by one, I should be able to survive catastrophic failures.

To make lots of copies, I need lots of places to store them. I've taken to carrying around a USB drive on my keychain. It's not big enough to hold a full backup, but it can easily hold the most important files. It's also convenient if I need to transfer files around between other computers, but that's a side effect. I've also got space available to me on various servers and web accounts, such as my CSC server space, or my Google account. All these places are excellent for storing small backups that change infrequently. They also are geographically dispersed, which means that one disaster is unlikely to take them all down. (And if a natural disaster takes out half of North America, I've got bigger problems than my backups going missing.)

To protect the backups so that people can't abuse them, I first encrypt them using PGP and a reasonably large encryption key. But how can I restore the backups if I lose that key? Well, I can't, so I need to back that key up too. This looks like a chicken and egg problem, but I can protect that key with a password. It's easier to brute-force a password than a key, but if I keep the password-protected key only in storage locations I trust to have reasonable physical security, then I deem it to be a reasonable compromise. With this, a potential attacker must either break through encryption with a large key, or get physical access to something and then crack the password. Since this is at least as good security as that of the files I'm backing up, it should be fine. Effort spent increasing security past this would be better spent securing the originals.

ConcealED

Brainless Musings

The BESMASter regrets sleeping with a Zombie

I don't always write for *math*NEWS, but when I do, it's too complex for you to understand why. Please remember now, for me, the last time you heard of necrophilia being cool. You're not wrong, it's another Twilight reference. Anyone can identify a flaw in someone else but it is hardest to identify a flaw in yourself and sometimes in those whom you love dearly. This article's agenda is to help you become more self-aware. To help you become a better person, to guard you from silly mistakes, and maybe to help someone who really needs it. Most people soldier on when they make a mistake while some will sit and bawl their eyes out over every single one. The key is to find someone who either cares very much or doesn't care at all about you. Sometimes a diner or a pub can provide a suitable environment for this. Don't be afraid, this method is tried and tested, with thousands of years of evidence to support it.

Are you ready?

I really tried to build some anticipation there. Probably went awry with that attempt. Do not talk to this person. Complain about all the things! That's right, skeptical as it may sound, a solid hour of complaining has been shown to relieve stress, backaches, itching, burning, and dry scalp. Your friends usually try to help you, make you feel better, and generally support you. Unless they attempt to ditch you often, then I'm probably right. This is the problem. You might deter your friends away from you with your incessant complaints. Maybe it's best to just… bribe someone with food to ignore your complaining and get all those issues off your chest. If you have read this far, odds are you know what's up. Remember to try your best and give it your all, complaining doesn't get you anywhere. Have you started yet because only the first 2 people with the correct answer will recieve the prize.

One more thing – Good luck, and the prize is at MathSOC

Captain BEDMASter

Horrorscopes

ActSci: It's tax season and it seems that you're the only one who seems to know how to fill out all of those forms. You start running a business and make a lot of money in the next 3 weeks. You go up one tax bracket.
Your unlucky number is: 22% of your income.

AHS: It's warm and sunny out, so you decide to do your homework outside. That doesn't take very long, and you get diagnosed with rickets.
Your unlucky number: Only 20 minutes outside leads to vitamin D deficiency.

AMATH: You start modelling your differential equations in Matlab and realize that most of your courses are useless, since you can now tell a computer to do the work for you. You start living life as a hobo.
Your unlucky number is: 1 computer language.

ARCH: You find that your prize-winning igloo has melted. You want to erect a monument in its honour, but you can't decide on a material. You settle on obsidian, and accidentally spawn a portal to the nether.
Your unlucky number is: Over 50 blocks to choose from, and you picked that one?

ARTS: Some people take Psychology of Evil to learn why people in history have inflicted such atrocious acts to others. You see the course as a How-To guide.
Your unlucky number is: 0.000043 Hitlers of evil committed so far.

C&O: You don't want to do your homework, so you create a generating function that does it for you. Maybe if you actually paid attention in class, you would have learned that generating functions don't work that way…
Your unlucky number is: 4 hours before it's due.

CS: You hear a Laurier student bragging how she knows over 10 languages. You scoff, saying that's nothing. She responds in Ancient Mesopotamian.
Your unlucky number is: 12 programming languages under your belt, none of them verbal.

Double Degree: You hear of a really awesome Waterloo party happening this weekend, but it is in directly conflict with a Laurier kegger. You wish you had a time turner to attend both parties.
Your unlucky number is: 2 for twice the hangover.

ENG: Setting up your project for the design symposium, you realize that it'll never be as cool as the contraption that the Mech Eng folks have put up in the booth next to yours. Everyone ignores your diagram about preventing sediment run-off.
Your unlucky number is: 5-6 years in Geo Eng spent forgotten.

ENV: Due to the unseasonably warm temperatures and extreme amount of sunlight, you decide to harness the energy and set up solar panels around campus. Unfortunately, you forget that the geese are flying back now and fail to get a single Joule.
Your unlucky number is: 3 acres of cells covered in goose poop.

Grad: Your supervisor threatens to postpone publishing your paper until you can give a proper explanation as to why it was so late. You point to yet another pile of homework that you have to mark for him.
Your unlucky number is: 12 assignments down, 93 to go.

KI: During the Open House a lot of parents ask you what your program really is. You shrug and say that you're not quite sure either, but it's a lot of fun anyway.
Your unlucky number is: 44% drop in enrollment next year.

Math Bus: With some quick thinking, you pull off a "Romney" and get away with only having to pay 14% tax. Not bad for a university student!
Your lucky number is: 1% less than what you should really be paying.

Math Phys: You watch Quantum of Solace for the first time, in anticipation of the next Bond film. To your great disappointment, the main villain is not a mad scientist trying to take over CERN. Maybe in Skyfall…
Your unlucky number is: 23rd time's the charm.

PMATH: It's warm and sunny out, so you decide to do your homework outside. You earn the dubious honour of the first person getting skin cancer from doing LIFA.
Your unlucky number is: 8 weeks to live.

SCI: Due to a miscalibration, you burnt out the Hubble telescope when you pointed it directly at the sun. You have to contract out the Russians to fix it, since NASA isn't going up anymore.
Your unlucky number is: $5 000 000 000 down the hole.

Soft Eng: It's warm and sunny out, but how would you know? You spend all day in the lab working on UI and OS. The last time you saw the sun was in Minecraft.
Your lucky number is: 16-bit illumination.

Stats: Your final Stat 231 midterm is next week, don't mess it up. With any luck, you'll never have to take it again and you can move on to the more fun courses next term.
Your unlucky number is: 231*2! You fail the midterm.

Teaching Option: The elementary students have March Break next week, but you don't! Have fun drowning in assignments while the teens are not drowning in beaches!
Your unlucky number is: 5 extra days of class.

Undeclared: Shamed by the sheer number of high school students that seem to know what program that they want to be in, you finally make a decision. You enroll in high school.
Your unlucky number is: 14 again.

!ED

GRIDXGRID

*grid*COMMENTS

Mauve Bovines and Other Thoughts

Submissions! Two submissions, but both get blue ribbons! Congratulations to the two winners: Venus Lo, who submitted a complete correct solution to the Straight Clues, and Mike Wi, who generously took it upon himself to submit a blank submission as I asked so many times.

Venus, winning the Straight Prize this issue, answered the *grid*QUESTION of "" with "?"

Mike, winning the Cryptic Prize this issue, because I said I would, answered "/[\n\t]*/", which I have been informed is a regex for finding the three main forms of white space.

This issue will actually have a *grid*QUESTION, though, and it is, "Are there any grey areas in mathematics?" Submit your solutions to the **THEMED** puzzle this issue to the BLACK BOX before 6:30pm, March 26th for a chance at winning! Also include an answer to the *grid*QUESTION (in the case of a tie, I choose the winner) and your name (obviously).

No cryptics any more; I'm waving the white flag,
moment

Straight Clues

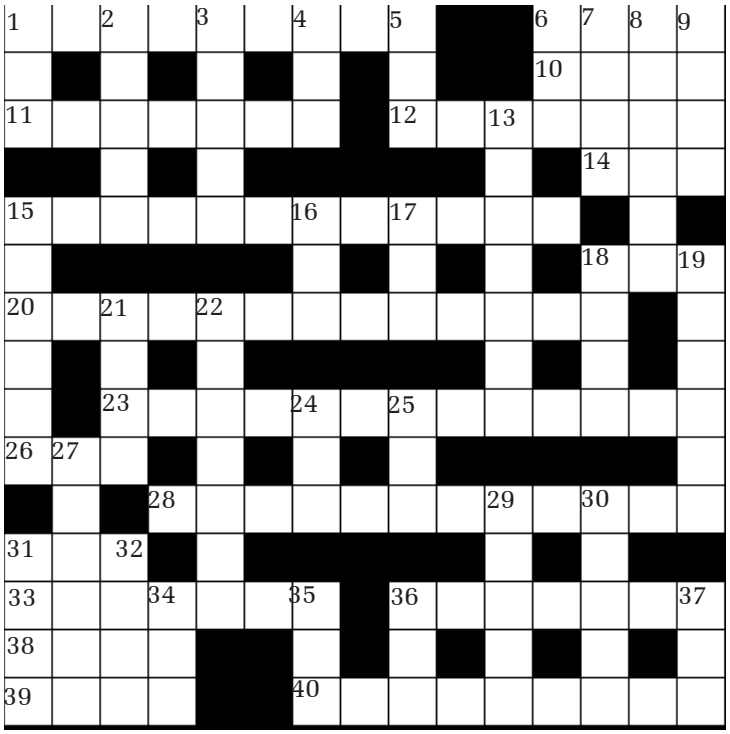
Across

1. Celebrity treatment*
6. Deficit
10. Frank
11. Bug
12. Famous Falls
14. Brim
15. Valve game combo*
18. Senior
20. Gutless*
23. Jealous*
26. Eye
28. Sudden*
31. Imitate
33. Blandest
36. Burrowed
38. About 12; "a dozen __"
39. Enthusiastic
40. Oddity*

Down

1. Unprepared
2. Lament
3. Thespian
4. Spot on a die
5. 0x15A/0×22
6. Inverse pow
7. Gemstone
8. Continuing
9. Cinch
13. Prohibit
15. Affairs
16. Steal
17. Lamprey
18. Ruler of the Aesir
19. "The Rock" Johnson
21. Chute sled
22. Run into the ground
24. New prefix
25. (-NAT)U{0}U(NAT)
27. Realm
29. Mount
30. Violaceous
31. Haywire
32. If (false) call
34. Enrobe
35. Spigot
36. Neither partner
37. Moisture

This week's grid



Last week's grid