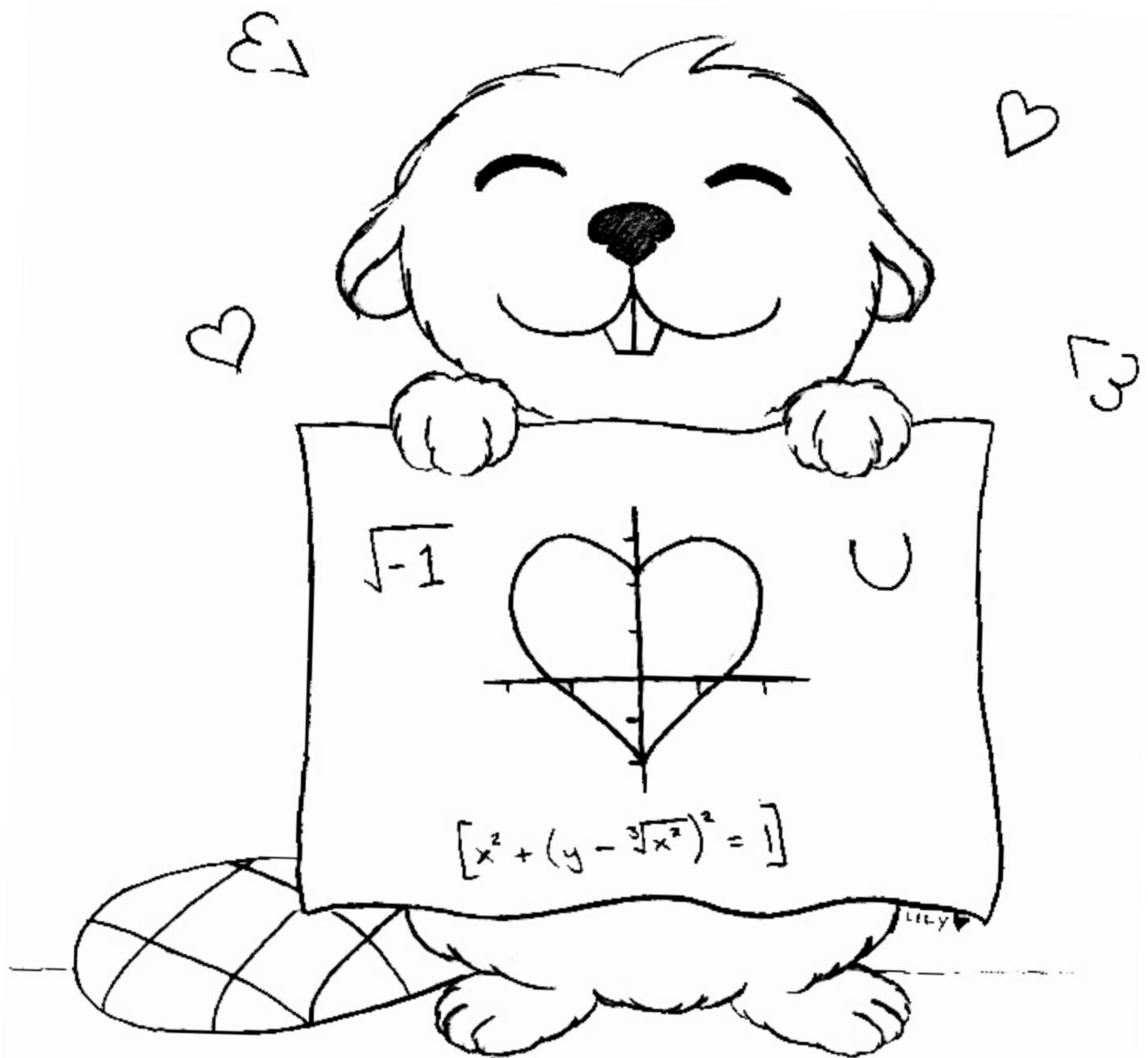


*math*NEWS

Volume 118, Issue 3

Friday, February 10th, 2012



*math*NEWS loves its readers <3



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lookAHEAD**mathNEWS**

February 10	Issue #3 gives our heart away
February 27	Production Night #4 hope the writers have article ideas from Reading Week
March 2	Issue #4

MathSoc

Tuesdays	Games Night in the Comfy at 6:30 pm
Wednesdays	Special nights in the Comfy!

CECS

February 1-15	Employer Interviews
February 13	Indeed.com info session 7-8:30 pm Davis Centre 1301 (Fishbowl) for CS students
February 14	NDS Technologies Canada Inc. info session 5-7 pm Davis Centre- Colloquium 1302 for CS students
February 15	First employer interview cycle closes
February 16	Interview Skills: Preparing for Questions TC 1208 10:30-12
February 17	First interview cycle ranking closes at 2 pm
February 17	First interview Cycle match results available 4 pm on JobMine
February 25	Job posting opens; closes Tuesday 11:59 pm
February 27	Learn the basic:LinkedIn 2:30-4 TC 1208
February 28	Job posting opens; closes Wednesday 11:59 pm
February 29	Job posting opens; closes Thursday 11:59 pm

University

February 20	Family Day (University Closed)
February 21	Deadline for 50% tuition refund
February 20-24	Reading Week

Feds

Jan. 31-Feb 13	Campaigning period for Feds election
February 14-16	Feds election voting

Misc

February 12	Darwin Day
February 13	Desperation Day
February 14	Valentine's day
February 15	Cheap Chocolate Day
February 20	Family Day

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My Little Pony: Editing is Magic: Twilight Sparkle (ScruffyED), Fluttershy (Concealed), Applejack (CowED), Pinkie Pie (!ED)

mastHEAD*I'm single, therefore I'm alone*

It's not every day that we at *mathNEWS* get something submitted to us in the BLACK BOX, and it's even rarer that we get someone's homework in the box. It's about at the same frequency at which ScruffyED gets dates.

While it would be interesting to go into impressive (and mildly intrusive) detail about the love life of a *mathNEWS* editor, the end result wouldn't be all that interesting. Working on *mathNEWS* takes up a lot of our time, and the only social interaction we get is when we talk to parents or when we talk to our physicians, who have this strange notion that staying inside the office is somehow harmful to our health. We just laugh, and then grab a tissue before retreating back to the lair.

We also talk to our writers, and for that we love them. They make us laugh, they make us cry (in laughter), they make us feel good about ourselves, and sometimes (when we tidy ourselves off a little) they give us hugs. We love those hugs, it's the only physical affection we get when we're not at home. We treasure our writers oh so very much, and love them.

We also get anxiety attacks when the writers don't show up to production nights. We get sad and lonely and start wondering if the people that we love so much have started to abandon us. Sometimes they respond with flimsy excuses such as midterms or homework assignments or campaigning for a FedS election. They might think that they're better off for it, but the issue suffers when we don't have all of our amazing writers on hand, and we publish editions that are only 16 pages long instead of our normal 20. Going through a linear extrapolation, *mathNEWS* would be doomed to publish a 10 page issue at the end of term.

In times like these alternative methods are sought out, and we pull in new writers to fill the void of those who have left us. We put up posters, we email old-timers, we kidnap unsuspecting frosh from the halls, and we (occasionally) blackmail students. Seriously. We have a BLACK mail container that is vaguely BOX-shaped just outside of the Comfy Lounge, where we get article submissions and inspirations.

For example, the following *mastHEAD* question was received in the BLACK BOX, scrawled onto a scrap of a MATH 235 assignment.

Please explain when to use "hence", "thus", and "therefore" properly.

"In conversation, to seem more intelligent than you really are." (Concealed), "Mondays, Thursdays and every second Sunday between 03:49 and 14:05" (theSMURF), "Interchangeably in a proof, with so, then, since, and 'It follows that'" (DanInTheHat), "In Shakespearean times, for everyday usage" (waldo@<3.LE-GASP.ca), "When writing a thesaurus" ((define this(not cool))), "Hence I say to you thusly: I am tired, therefore I am done" (Ice Nine), "I eated the purple berries!" (Mustard-Map), "Being editor is suffering" (ScruffyED), "Hence, oreos. Therefore, oreos. Thus, oreos. Did I mention oreos?" (snippet), "My proofs are all symbols and pictures. Tripled of FTW!" (moment), "When writing a proof in French" (BlueberryMuffin), "Whenever you want, really" (Soviet Canadian),

"A good time would be when you ask the question: 'Please explain when to use hence, thus, and therefore properly'"

!ED

VPA Sez

Pure Math Algebra Changes

Some big news in the pipeline: Starting in September 2013, Pure Mathematics is revamping its algebra offerings. PMATH 345 (Group Theory), PMATH 346 (Polynomials, Rings and Finite Fields), PMATH 442 (Fields and Galois Theory), and PMATH 444 (Rings, Modules, and Representations) will no longer be offered starting next September, and in their place will be PMATH 347 (Groups and Rings), PMATH 348 (Fields and Galois Theory), PMATH 445 (Representations of Finite Groups), and PMATH 446 (Introduction to Commutative Algebra).

Unlike the current algebra offerings, where you can take PMATH 345 and PMATH 346 in any order, PMATH 348 will have PMATH 347 as a prerequisite. 347 is expected to be offered in Fall and Spring, and 348 in Winter.

Students who will have taken some, but not all, of the new algebra courses should have no difficulties **except for students who have taken one but not both of 345 and 346 by next September**. If you are concerned about how these changes will affect you, or if you are unable to take both 345 and 346 before September 2013, you should talk to an advisor about it now, rather than later.

Academic Mailing List

I will soon be starting up a mailing list for students to provide feedback on upcoming course and program changes. Since I hope to have it running before reading week, if you are interested on seeing what the Faculty's plans for its programs are, and on helping provide feedback on them, please indicate that you'd like to sign up by emailing vpa@mathsoc.uwaterloo.ca. There's no commitment, so you're free to just sign up and do nothing with it. Or something.

Sean Hunt
Vice President, Academic
vpa@mathsoc.uwaterloo.ca

WIM Sez

WIM hosted the Beginning of Term Event on January 30th. We had Karaoke, and lots of fun. Our second term event will be at the beginning of March. We hope all of you will join us!

WIM Committee

Something to Look Forward To!

Valentine's Day is coming up. If you're anything like me, past Valentine's Days have been full of pain and despair. If you are still like me, though, you can rejoice, because you finally have something to look forward to!

What might that be, you ask? Did I finally ~~ask~~ ~~convince~~ ~~trick~~ ~~legally compel~~ kidnap someone, who is now experiencing Stockholm syndrome, to go out with me? Of course not! I'm a mathNEWS writer, after all. What kind of self-respecting writer thinks they can date? I'm excited that on Valentine's Day, I get the opportunity to vote in the FedS election! (Wow, I know, right?)

I am going to be making an informed choice for my vote, and you should to! Candidate profiles are available at vote.feds.ca, and you can find more ways to contact individuals.

(Full disclosure: I am a candidate in the upcoming elections.)

(define this (not cool))

VPE Sez

Coming Soon: MathSoc Events!

Hey everyone! Keep your eye out for some sweet MathSoc events coming soon to an MC near you: Casino Night – March 7th. Come and play some real casino games and win prizes. As always, food and drink will be provided. Pi Day – March 14th. Come out and celebrate that wonderful number! Free Pi, a Pi-eating contest, Pi-napple juice, a Pi recitation contest and much more! Ski Trip – TBD. Hit the slopes with all your friends as MathSoc holds its winter Ski Trip. Pints with Profs – March 19th – March 23rd (one day, still TBD). Have a pint with some of your favourite profs at the Bomber, complete with free appetizers! Don't forget about Games Night in the MC Comfy every Tuesday night at 7pm. Board games, food and friends! What more could you ask for? And lastly, if you ever have any questions or want to help out with our events, email me at vpe@mathsoc.uwaterloo.ca.

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

Prez Sez

News: Not too much is happening. Referendum passed. Budgets are all done. Athletics cheques from last term and this term are being worked on. Submit your refund forms to get your money. Do your event forms. Obey Hypnotoad. All glory to the Hypnotoad.

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

MathFOC Sez

Greetings, fellow awesome mathies,

MathFOC 2012 checking in again, asking you, "Do you know when your interviews are? Have you prepared yourself for awesomeness? Can you handle the amazing-ness that is leadership?"

Regardless of the response to the above question, you should check out your application status at www.leads.uwaterloo.ca, and ensure that your interview slot (if you have one) is booked properly and that you sort out any remaining glitches in your application, if any exist.

Also remember to keep watching our website, orientation.math.uwaterloo.ca, for more updates as they become available! If you have it, like our Facebook page: [facebook.com/MathOrientation2012](https://www.facebook.com/MathOrientation2012). Our Twitter page is located at twitter.com/mathorientation, so send us a tweet or follow us!

Feel free to ask us any questions, if any should arise between now and when your interview is (or even afterwards!). After you finalize your interview slot, you should receive a detailed outline of the position information to which you applied for. We hope to see you soon; good luck in advance to those who applied!

Sacha, Anna, Michael, and Amanda
MathFOC 2012

Dan Sez

I'm sorry there was no Dan Sez last issue (the editors have chastised me).

DanInTheHat

C S C F L A S H

Hail, denizens of the MC! Calum T. Dalek would like to extend an invitation to attend the Computer Science Club's exciting upcoming events. Tonight, February 10th, our friends at the Student Developers Network are hosting a two-day hackathon starting in the Comfy Lounge at 7:00 PM. Check <http://google.gl/qBRPQ> for details; there will be food and drinks served.

Coming up next week, the Computer Science Club and AMD are hosting a contest for parallel programming on GPUs with OpenCL. We'll be giving an introduction to OpenCL on February 16th at 7:00 PM in the Comfy Lounge. By the end of this tutorial, you'll be able to write programs targeting the GPU for parallel execution. Registration for the competition will be open from the 16th to the 24th of February. If you choose to compete, you'll have a chance to win a laptop or an AMD graphics card!

And after the reading week, look forward to UNIX 102, our second UNIX tutorial. If you're new to UNIX and want to learn, please come join us for an exploration of developer tools and the UNIX environment.

As usual, we invite you to drop by our office in MC 3036/3037 for snacks and conversation. You'll probably meet interesting people and/or daleks.

EXTERMINATE!

Calum T. Dalek
Chairbeing Extraordinaire

Disgustingly Delicious

Cream of Meat

Have some of that creamy/rich gravy left over from the last delicious idea? Let's do something with it. Take some pork chops, and slow cook them in some mild barbeque sauce until well and tender. Cut until you have very small pieces of meat. You are free to add any other meat you wish, provided it is cut into small pieces. In a pot, mix all the meat with your gravy and stir it over low heat until simmering. Add spices for flavour.

Now it could end there, but we haven't gotten to the disgusting part yet, so let's put this delicious mix into a bacon-weave bowl. Take uncooked strips of bacon and weave it as normal (you can look online for tutorials) then, when it is almost done cooking, remove from heat and place the weave within a bowl. If the weave is too big, bend and fold it as necessary to fit the bowl (or use a larger bowl). Now add some shredded old cheddar (or other cheese that can withstand the heat of the hot soup that is to come) until the entire inside of the bacon weave is covered. Then, take another bacon weave and place it on top of the cheese, folding to fit like the first, and then take another bowl of roughly the same size and place it on top, pressing down lightly. Place it back into the oven and let it bake the rest of the way until it's sufficiently crispy. Remove it from the oven, let it cool, remove the two bowls and what you will have left is a bowl made of bacon, with all the cracks and holes filled by cheese. Now take the Cream of Meat and pour it into your heat-resistant edible bowl. Bonus points for eating it correctly (no utensils).

Soviet Canadian

Editors cannot be held responsible for arterial complications. Except for emacs. Screw emacs.

Sweet and Sour

DON'T FORGET – This week is your opportunity to enroll for the Spring term! Check Quest for your enrollment appointment.

SOUR

Suppose for a minute that you are finding the area under a function. On line one you make a large error due to a lack of understanding of how to sketch a curve. But you're in a rush and you continue on anyways. A second mistake appears on line 2; leading to an integrand that is becoming harder and harder to work with. At some point you may not be able to finish...Your poor foundational understanding of sketching leads to cracks in the subsequent lines of your work.

I think this example is a microcosm of math in general. If you have difficulty in your first term, you will likely have difficulties in the courses that follow, either directly or indirectly, from those courses. Hence poor performance in MATH 137 may lead to poor performance in MATH 138. This creates a domino effect that may lead to poor marks in Calculus 3, 4,... and other courses that require these foundations.

Students always argue that they want to graduate "on time". So whether or not they understand MATH 137, they *must* rush to the finish line.

Regrettably, as in the silly example above, students often don't finish their degree because of a weak mathematical foundation. Slowing down and ensuring the foundation is solid before you move on would likely help.

This is why I think the grade pre-requisites are a good idea. A 60% is required to go from MATH 137 to MATH 138.

In Statistics, the pre-requisite rule is now being implemented in 3rd year courses. In order to get into STAT 330, 333, 334 or 340 a grade of at least 60 will be needed in STAT 230. In order to take STAT 331, 332, 371, or 373, a minimum grade of 60 will be required in STAT 231. These rules take effect for the Fall 2012 term. This means that provided you have finished STAT 330 by Spring, the requisite will not affect you.

Notice that, provided you are not taking these upper courses, you only need a 50% to get into STAT 231 from STAT 230. So students who are in plans that do not require these third year courses (CS, CO,...) can continue as normal. Students in STATS, ACTSC, some of the Math Business fields and some other areas of the faculty will need to ensure they meet the minimums above.

SWEET

Simplify: $2k+k$

Answer: 3000

Riley Metzger
Academic Advisor

University Clarifies Late Policy

In a recent announcement, the University of Waterloo has clarified their stance on late policy under certain circumstances. Taking over the known world is only an acceptable reason for a late assignment if you can provide signed notes from the previous heads of at least two nations that you have subjugated. Additionally, if the assignment is late due to a malfunction in your Rube Goldberg machine, you must provide design documentation and an analysis of where the failure occurred.

Concealed

Better Bash

I/O Redirection

One of the things I've heard many people struggling with, is the concept of pipes and file descriptors. In my opinion, this is an important topic as the ability to chain together arbitrary commands is quite powerful. In this article, I'll illustrate some of the more commonly used I/O redirection operators. When thinking about these, it is helpful to remember that the programs that are most useful with redirection are ones that work with streams of data, and produce streams of data. This sort of program is known as a filter. Data will be read from one or more input streams, the program may do something with the data, then the program writes data to one or more output streams.

On startup, most programs have one input stream open already, usually referred to as standard input, or `stdin`. C programmers use this whenever they use the `scanf()` function. Bash usually hooks this up to the keyboard, so whatever you type can then be read by the program. However, suppose you wanted to send the contents of a file to standard input instead. Bash gives you the "<" operator to do just that. For example, the following line would send the contents of `myfile` to the standard input of `mycommand`, instead of waiting for user input from the keyboard.

```
mycommand < myfile
```

The < operator is a bit more general than this example, but you can go read the bash manpage for the details.

A similar operator exists for writing to files, the > operator. This operator works exactly like <, but will redirect the standard output of the command to the given file. This particular operator will overwrite the file, but bash also provides the >> operator for appending to files. These operators can be used in conjunction with the < operator to redirect input from one file, and redirect output to another. This is where filters become a very powerful tool. For example:

```
sed -e 'substitution regex' < file1 > file2
```

would apply the substitution regex to all of `file1`, and place the result in `file2`.

What happens if one filter expression isn't enough? What if you want to take the output of one filter, and use that stream as the input to another? That's where the | operator comes in, called a pipe. The pipeline

```
command1 | command2
```

takes the output of command 1, and uses it as the input to command 2. You aren't limited to one pipe per command line either. You can have (effectively) as many as you want. You can also combine | with < and >.

```
command1 < infile | command2 | command3 > outfile
```

will take input for `command1` from `infile`, input for `command2` from `command1`'s output, input for `command3` from `command2`'s output, and then place `command3`'s output into `outfile`.

There are a few things one should note when learning about I/O redirection. First of all, most programs will have two output streams open, standard output and standard error. The | and > operators will redirect standard output, but not standard error. Anything written standard error will show up in the terminal. You can redirect it, by specifying the file descriptor to redirect, but if you want to do this, go read the manpage for details. Second, some programs, for example, `ssh`, or `passwd`, specifically check to ensure that the input is coming from a keyboard. There are usually command line options to override this, but it's a gotcha that some people run into.

ConcealedED

What I Really Wish I Knew In 1B

Sleep is Important

It's easy to get caught up in interviews, assignments, projects, midterms, and late nights playing board games. Don't forget to sleep! As much as your friends may brag about getting through the week on three hours of sleep, you'll be much more productive if you manage your energy and get enough sleep through the week.

Find Your Passion

You will find many opportunities to make decisions in your life. You might be choosing between sleeping or studying for another three hours, between a co-op opportunity in the San Francisco Bay Area or a co-op opportunity in Kitchener, or between pasta or breaded fish at the cafeteria.

So why are you wasting your time doing things you don't like and that won't take you a step closer to reaching your goals? When you put down this paper, go do something that will make your life better.

Don't Date Someone From Your Cohort

If you are (un)fortunate enough to be in a program with a cohort, think **very carefully** before dating someone in your

class. There are so many ways it could end horribly. I'll let your imagination run wild here.

Volunteering

If you were one of the people who enjoyed volunteering in high school, don't just give up on it now that you're here! Even if you're not in Engineering, WE-Connect, part of Waterloo Engineering Outreach, is involved with many events where you can get involved. Every year, volunteers are needed for the FIRST Lego League and the FIRST Robotics Regional Competition on campus. Become an Orientation leader. Start a business on campus. Run for student government. Get involved!

Internet

Whenever you go on Facebook, Twitter, or OMGUW, remember that you're representing the university -whether you like it or not. We'll have to see whether we're going to clamp down and not put anything on the Internet, or whether we're going to accept that people do stupid things and that it's funny. Until then, think before you post.

!able

Surprise Announcement from Blizzard Shocks the Foundation of Online Gaming

In a surprise announcement earlier this week, Blizzard's President, Michael Morhaime issued a statement that will change online gaming forever. "Innovation has always been our goal", said Morhaime, "We are always looking for new ways to improve our product, our services, and create a good experience for the gamers. There has been some concern with respect to the login queue for our games, and we want to solve that." Morhaime then went on to explain the release plan for the solution and stated that while they aren't promising anything, be on the lookout for a "surprise" when Diablo 3 is released. The new fix will be retroactive, and will be implemented in all previous Blizzard games.

Next, Ben Deane, lead engineer at Blizzard, stepped up to the stage to explain how they solved the issue. "We have already done all the optimization we could on the structure itself", said Deane, "That's when we realized this was as good as it could get... unless we switched our data structure. The FIFO structure of the queue was simply not feasible for the large number of players trying to log in."

Going into technical details, Deane went over all the different structures they tried. "First, we tried a priority queue. While this allowed us to allow quicker login for players with awesome usernames such as 'PoopFeast420', 'RonPaulsTesticles' and 'XxXSn1P3RH34DSh0t1337XxX', we found that it added more unnecessary overhead to an already bloated system."

"Next, we used a heap, but this just resulted in more problems, the most prominent being the fact that every time we log a player in, we have to re-organize the entire structure. While it is advantageous to log in the 'largest' player, it is simply too complicated", Deane continued, "And don't even get me started on the directed acyclic graphs. They're just bad news".

"In the end, we settled with something a bit closer to home, so it will be easier for players to get used to. We have decided to implement the login stack. After spending two years working on this, it is finally ready for deployment, and we can't wait for you guys to log in for the first time on the stack."

Deane finished his announcement to an awkward silence, as the minds of gaming journalists tried to wrap their heads around the concept of using other abstract data types to log players in to a game. Suddenly, one journalist stood up and began clapping. Slowly, one by one, the other people in the room stood up and began clapping, all the while not having a single clue what just happened. Deane said thank you, and walked off stage with a smile on his face.

We can expect the login stack to be implemented soon^(tm), and online gaming will be changed forever.

This is how the login queue dies... with thundering applause
theSMURF

Rainbow Mathies Reminder

Rainbow Mathies will not be appearing in this issue. Feel free to check the new article in the next issue of *mathNEWS*.
(define this (not cool))

Well-coordinated and Heavily Practiced Reddit Team Beaten by rag-tag Group of /v/irgins Run by Furry and a BR with 140 ping

On Sunday February 5th, a highly trained team from Reddit's /r/ subforum was defeated by a group of anonymous gamers from 4chan's /v/ board in a game of Tribes Ascend. The game was covered by a team of professional casters. Reddit's team, armed with state-of-the-art \$6000 computers had been hand selected through a series of tournaments and trained 24 hours a day for 6 months in preparation for the battle. /v/'s team was selected at random in less than 30 minutes and is said to have played the game on a toaster oven connected through 56k modems. It should be known that /v/ is notorious to not actually play games.

When Reddit was asked to comment on the issue, most of the board slipped into hysterical insanity. /v/ responded with: "Are you even trying Reddit?".

Anonymous

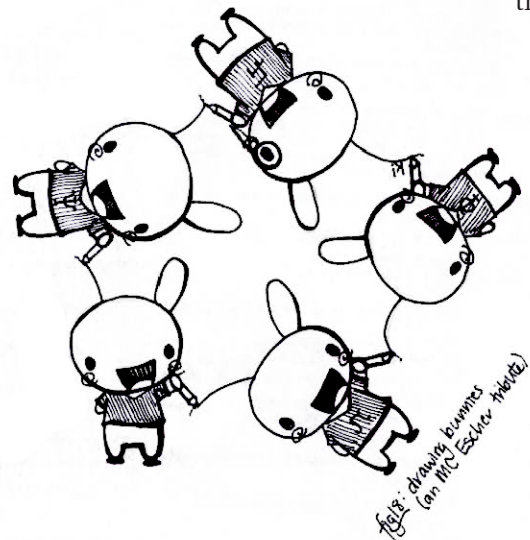
Cthulhu Awakens, says "Fuck Off" to World

After decades of drilling through kilometers of ice, Russian scientists have finally breached Lake Vostok. Upon breach, a sight of great horror rose from the hole: Cthulhu, Destroyer of Worlds. As the scientists stood, frozen in fear, the Old One opened his eyes, took one look, and dozed back off to sleep. All attempts to converse with the Old One were in vain, as he was still "sleepy" and was having his "nappy time". Scientists reported that the great destroyer simply wanted to be left alone, quoted to say "Fuck off, I'm sleeping".

All throughout the world, cultists rushed to see their god, only to be turned down. "I just want to sleep, for fuck's sake," Cthulhu raged, "Destroying worlds is exhausting, and I just want to rest for now. Also, have you guys seen my blankie? I lost it in 1929 when those assholes came through in that fancy Stargate thing. I think they stole it."

Uncertain of what the hell was going on, world leaders decided to fill in the hole, let the Old One sleep, and hope he won't kill us all on December 21st.

ph'nglui mglw'nafh Cthulhu R'l'yeH wgah'nagl fhtagn
theSMURF



Proof Methods

But am I sure these work?

Some things can be accepted as fact in the absence of any sort of proof. These things are few and far between, and vary based on the people involved. From a philosophical standpoint, the concept of “knowing” can be very tricky. Thankfully those of us in math don’t have to worry about this 90% of the time. So, without any sort of epistemological argument, here are some methods you can use to prove things in real life and math!

- **Direct Proof:** A implies B. I have finished a bottle of alcohol. Thus I am wasted. WOO!! PARTYTIME!
- **Proof by Contrapositive:** Not B implies Not A. I am an attractive person, so I get dates. Thus, if I do not get dates, it implies I am not an attractive person.
- **Proof by Contradiction:** Assume that I did well on my exam. But, I found out that the best mark was 60% and there would be no scaling. Contradiction. Thus I did not do well on my exam.
- **Proof by Induction:** For some n , A is true. A is true for $n+1$. Thus A is true for any n . Sex with two people is great. The quality of sex is not diminished by the addition of another person. That is, sex with $n+1$ people is great. Thus, sex is great with any number of people greater than or equal to 2. Note: This only really applies to polyamorous bisexuals. Those assholes.

Great Resources for Math Students

How many times have you guys wanted practice for an exam but there were no good practice exams in the exam bank? Have you ever missed class and desperately needed notes? Well look no further! I and several other recent Waterloo math graduates have compiled a package of course notes, practice questions, mid-terms and exams from a wide range of math courses at Waterloo to help you with your studies, free of charge. We really want to help out the students by sharing some of the resources that helped us succeed. Anyway, check out the link:

<http://www.megaupload.com/?d=ls2q5amt3c>

EDIT: Some people are telling me that the link isn’t working. Unfortunately I can’t find the files on my computer. Don’t worry though, since there’s no way that MegaUpload would go down for good right? Right?!?!? *Oh God did I leave my grad thesis on there???*

EDIT2: A man just knocked on my door. He says he’s from the FBI, or something. Anyway, two agents gave me this huge lecture about breaking copyright law and then they said that I could remain silent (I don’t see why not). After that, they decided to take me for a ride in their black car. I’m still on it, and I’m not sure where we’re going. I’m finding it pretty hard to type since they tied my hands together with some metal cuffs behind my back. They’re both laughing about me dropping a bar of soap. I don’t really get what’s so funny about dropping a bar of soap. Anyway once I get back home I’ll try to fix the link for you guys. Thank you for your patience.

Your Friendly Neighbourhood File-Sharer

- **Proof by Exhaustion:** If A is true for anything in its domain, it is true. The Collatz conjecture is true for every number I have tried. I no longer have any friends. I am still trying. Maybe I’ll exhaust the natural numbers one day. Time to try 2501287592!
- **Probabilistic Proof:** If you can use methods of probability to show that A has probability 1, A is true. All sides of the sex dice contain activities which I enjoy. Thus, I will enjoy the results of rolling the sex dice.
- **Nonconstructive Proof:** We can show that an example of A must necessarily exist. We don’t know how to find it. I am a reasonably attractive male. Thus, there is another individual who would be willing to to spend Valentine’s day with me. I do not know how to find such an individual. *(Try to check the GLOW office...whats that? CONTRADICTION – RetirED)*
- **Undecidable Statement:** The Halting Problem is undecidable. The question of whether you are in the friendzone or not is undecidable. This is the case because attempting to find the solution will result in the problem becoming irrelevant.

MeaninglessQuips

Imprint Hosts All-Candidates Debate

With the FedS election in full swing, Imprint did its part and held an all-candidates debate for the 40+ presidential candidates and the other assorted Vice-Presidential and Councilor candidates. Advertising the finest show of the campaigning period, Imprint promised not to repeat its mistakes from the week before and carefully screened all of the incoming candidates, analyzing all of their speeches beforehand and confiscating those that might be deemed too controversial for the public to listen to.

When the pre-debate screening was finished, all but one of the candidates were barred from speaking. The would-be participants were silently ushered out back and politely asked to vacate the premises before they had their possessions torn out of their hands. The audience seemed very receptive to Jesse Onland’s speech, and none of them could find a fault in his message about bringing forth five tonnes of flax to campus. The debate lasted a total of 7 minutes and 53 seconds, not including the moderator’s opening and closing remarks.

The organizer, Dun T’aukin, was asked to comment on the debate afterwards.

“I think that the event was a tremendous success. We were able to learn from our mistakes from last week’s debate and carefully screened out anyone who could have possibly made an outburst during another candidate’s speaking time, or brought up a point that defamed us in any way. The audience was not alienated in any way, and with the short running time of the debate, students were able to watch it in its entirety while they were travelling between classes. We would definitely do it again.”

Said Jesse Onland, “Five tonnes of flax.”

!ED

Samsung Galaxy S II - Gingerbread vs. ICS

For the tech-y smartphone Android folk out there, I wrote this article on the premise that you enjoy debating the ups and downs of current open-source operating systems such as Android 2.3.5 Gingerbread and Android 4.0.3 Ice Cream Sandwich. For those of you who dislike tech-y articles, I'll just say now that Android "code-names" for operating systems are all delicious foods or types of food. Android 2.2 was code-named Froyo, 2.3 Gingerbread, 3.0 Honeycomb, and now 4.0 Ice Cream Sandwich. If that has not made you so hungry to the extent that you are not currently munching on something awesome, then I congratulate you. I just picked up some dried mangoes and began eating them.

A little background about the operating systems and my experience with them. Ice Cream Sandwich is the new Google smartphone operating system that ships with their new flagship phone, the Samsung Galaxy Nexus. With regular updates, a clean interface and amazing digital display, it is no wonder that Google emerged as a smartphone giant in an industry that was otherwise dominated by Apple and RIM. Older Google-branded phones such as the Nexus S are receiving updates, but are not getting the same support or stability that the Galaxy Nexus is receiving. If you think about this as a family dynamic, the Galaxy Nexus is the spoiled poster child for Google, whilst the Nexus S lies in the gutter as the immigrant hobo, who receives scraps after being promised riches and a better life by emigrating.

Gingerbread 2.3.x shipped with all previous phones, and most current phones (including mine, the Samsung Galaxy S II, commonly abbreviated as the "SGS2") that are on the Android smartphone market today. It was a big step up from the original Froyo 2.2.x that was offered on phones such as the Nexus One, with major upgrades to the user interface, browsing capabilities, as well as call and GPS reception. The stock ROM that came with my SGS2 was total and utter garbage – it continuously crashed, most of the time having little to no basis of which to diagnose any issues on. I figured, why not? – root ("unlocking" super-user permissions on the device) and upgrade the phone to Ice Cream Sandwich, and all will be better, right?

Dead wrong. I was so wrong, I would actually wear a neon sign on my head saying "Ice Cream Sandwich is not for you" because of how much my phone crashed after upgrading. The basics of it were, it crashed even more than before I'd upgraded, the current software wasn't compatible with 90% of my hardware, and I really lost most of the useful functionality (not

to mention data) that I had with Gingerbread.

When it came to downgrade back to Gingerbread, my experience got worse. I soft-bricked the phone at least ten times; by the time I'd actually gotten a stable version of 2.3.5 on the phone, it was 4:30am (I'd started at 8:30pm after I'd eaten dinner and done work). "Soft-brick", by the way, means a "software brick" – essentially, the device is not recognized by the computer, yet it is unable to boot to any useful diagnostic state. It is completely recoverable, however it takes patience, and a lot of trial and error. I don't recommend trying this kind of thing if you don't absolutely have to – especially since I had to wipe my contacts yet again, making my frustration of re-installing applications and settings much worse than when I'd first started.

Basically, unless you own a device that was pre-loaded with Ice Cream Sandwich, you're better off waiting until an official release is pushed through Samsung Kies, or whatever program you were given to load new software upgrades to your Android phone. The hassle and pain and suffering that I experienced is definitely not one that I would wish upon anyone, friend or foe, because the frustrating and sleepless hours I spent trying to correct a problem that I caused by upgrading was definitely not worth the trouble I encountered.

Please don't take this the wrong way though. Google is a wonderful company, and Ice Cream Sandwich is a wonderful operating system. The problem is just that Ice Cream Sandwich is in its baby stages, and needs to be loved, nurtured, and grown before it can expand and adapt properly to other devices. The fact of the matter is that this operating system is just not ready for the big leagues yet. I hope that one day soon, my phone can safely upgrade to a stable version of what I deem to be the most hyped Android operating system yet.

A good thing did come out of this "downgrade" though; my phone has not crashed in almost a week now, and I'm grateful that I fully rooted and modified my system to allow my SGS2 to save the most battery power possible, whilst still optimizing user performance and experience. Two paid applications I installed (which I will talk about in my next article) which changed my life were *SwiftKey X* and *SetCPU*. Both are relatively cheap, and both were extremely useful. I'll end my rant here, since I'm sure *mathNEWS* would be displeased with the amount of real estate I am taking up with this article.

Don't forget to be
FOC-ingAwesome

N Signs That Say it isn't Winter in Waterloo

Waldo is a little perturbed at Mother Nature right now and scared at how climate change is VERY real.

- Mild weather that allows for certain people to walk outside without the need of a winter coat
- There is little to no snow on the ground
- We've had a giant melt of all the snow that we had that one day (and a lot of it ended up in basements!)
- There haven't been any falls due to ice recently (which can be a very good thing)
- There hasn't been the need to shovel driveways
- Buses haven't been going out of service due to bad road conditions (which is also a good thing, especially when you're trying to get to work)
- It seems as if Europe stole our winter instead
- It's 2012, so is this the end of the Canadian winter as we know it?
- The geese are still here.

waldo@<3.LE-GASP.ca

Russian Reviews: World of Tanks

Steel Monstrosities

Whether you are rolling PzKpfw IVs across the desert, lying in wait with an SU-152 in a forest, or prowling a city street with a M26 Pershing, you are doing it in one of the Second World War's most powerful weapons: tanks.

You would have to enjoy being in a giant metal weapon of mass destruction if you are playing World of Tanks, a free 15 vs 15 man (tank) team death match/base capture game filled with 167 tanks from the USSR, Germany, USA, and France. All of the famous tanks and quite a few unknowns (mostly prototypes that never saw combat) are in the game, including German Maus, American T29s, and Russian KV-13s.

I enjoyed the game immensely; there were so many amazing moments. The feeling you get when speeding across the country side or zipping down city streets, a line of tanks following you, and then spotting your first target and letting your cannon do it's work? Priceless. How about sitting in waiting, letting your teammates rush ahead, and then picking off enemies one at a time? Maybe being the biggest, baddest tank on the battlefield, with shells bouncing off or barely denting your heavy armour as you unleash hell with your heavy armament? Can't be beat.

Of course, you'll be blown up countless times as well, but that's okay. Just leave the battle, hop into another tank, and then rejoin the fight. With a tech tree for every nation, you'll advance through the tiers and achieve victory with a style that best suits your play. Whether you play as light (fast scout), medium (balanced all-purpose), or heavy (front-line or base defense) tanks, or a tank destroyer (sniper), or the Self-Propelled Gun (artillery on treads) you will find something to your liking.

Now, if there is one problem with the game, it is its broken balancing system. You will be safe while in tier I and II, being pitted against other tier I and II tanks, but once you hit tier III, you will be thrown in with two tier VII tanks thanks to a lack of tanks in between your tier and theirs. Even if you fail to do much, you get rewards based on your team's performance, and even if you think you're powerless, you can always scout positions, disable tracks, and be a distraction.

So head out there, and cause insane amounts of collateral damage as you take on the worst that the Second World War had to offer. Head on over to worldoftanks.com to download this wondrous gem. I would advise checking the WoT wiki for more information. For a free tier II premium tank, go to your account management page and redeem the code *NEWYEARNNA*.

Soviet Canadian

Day 0

This morning is different; you can feel it. Your memories seem to be coming from far away, as if through a thick fog. Thoughts are torn apart as soon as they arrive, shredded and useless. You lurch outside, blinking, stunned by the bright morning light. Instinct tells you to flee, to crawl back into the darkness and wait, but something else calls to you. A hunger rises inside you, driving you onwards towards the crowds of students. Towards campus. Feeding would bring relief. The desire overpowers all else, and you must obey. You shamle onwards.

This might not happen as much if you started your assignments on time and didn't have to pull all-nighters.

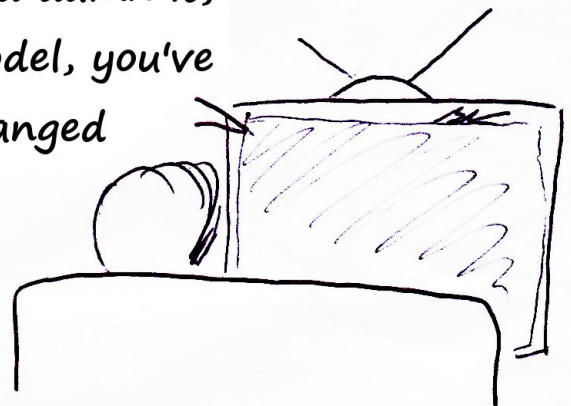
N Arbitrary Things That May Inspire You Somewhat

Waldo needs inspiration too!

- Joining FASS; you may be inspired to get involved in something hilariously awesome next Winter term!
- Cardboard; you may be inspired to break into interpretive dance and bask in its awesome-ness, or just create something awesome out of it!
- Learning that your intended co-op job actually doesn't qualify for co-op because of reasons; you may be inspired to find another job, keep the job for the experience, take classes instead, or do any combination of those 3!
- Swedish Techno; you may be inspired to write and be productive, or just boogie out to some awesome tune-age!
- HvZ; you may be inspired to write an awesome storyline, or you may just be excited to participate when the actual game begins (which will be coming up soon!)
- Meeting people; you may be inspired by all the new people you meet when you get involved with clubs, and different events!
- Having 2 pop-quizzes in one class in one day; you may be inspired to rant about how that seems like utter nonsense!
- The FedS Election; you may be inspired to speak about student issues, get informed about voting, and even voting on Feb. 14-16 (Sidenote: you SHOULD go out and VOTE!!! I know I will be!)
- Valentine's Day; you may get inspired to do something romantic, or maybe even think about doing something like that!
- Feeling sick; you may be inspired to just lie down and down medicine because you have an upset stomach, a headache, sniffles and coughs, or feeling like you're about to throw up.
- Dr. Who; you may be inspired to just Google the TARDIS or just bask in photos of the various Doctors themselves!
- Reading Week; you may be inspired to sleep, do some work, go home, sleep, see people...did I mention sleep?

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God damn it,
Model, you've
changed



CBC's short-lived "Model, View, and Controller" was ahead of its time

profQUOTES

If that doesn't make sense, come see me... during office hours.
Don't show up at my house and yell, 'HELP ME!'

-Wolczuk, MATH 235

I haven't analysed this yet. I don't know the complexity of it.
But for most students it's O(way too long)!

-Wolczuk, MATH 235

Right now we assume an infinitely deep cookie jar.

-Fischmeister, SE 350

I don't know how he could end up in an infinite loop trying to
do $2+2$, maybe he went to the wrong school

-Brecht, CS 350

I could just call this a theorem. Then if you ask me to prove it
and it's too hard I'll put it on your assignment.

-Orchard, CM 473

Proof, or rather demonstration. If this were engineering then
this would be a proof.

-Orchard, CM 473

Someone should make a movie called Fourier Transformers.
An MRI scanner gets up... kids will love it!

-Orchard, CM 473

No amount of alcohol should make you forget this.

-Marcoux, PMATH 352

Let's think about it for a second, ok, long enough.

-Marcoux, PMATH 352

When the enemy captures you....name, rank and continuity
at x_0 .

-Marcoux, PMATH 352

*(After a student walked in and handed in his assignment at the
front in the middle of a lecture..)* We now return to our regular
programming!

-Marcoux, PMATH 352

Student: Why did you use a different script?

Prof: ...because life is hard.

-Marcoux, PMATH 352

Now I'm gonna get all the intersection points, oh my goodness

-Marcoux, PMATH 352

This part of the proof is easy. If you don't get it, think about
it for 5 minutes until you get it. If you still don't get it, think
about it for another 5 minutes. Repeat until you get it.

-Purbhoo, CO 434

I'm very sorry, not for being late, but for what I'm about to do
next.

-Purbhoo, Math 249

One of the great revelations of mathematics of the last century
is that it's not important what the object is, it's what the object
does.

-Purbhoo, Math 249

I'm calling this a 'principle' because if I called it a theorem, I
would feel obligated to prove it.

-Purbhoo, Math 249

Not having to do real work is something that works to our ad-
vantage.

-Purbhoo, Math 249

Only Chuck Norris can divide by zero.

-Skryzdlo, STAT 333

There's nothing wrong with a little calculus in the morning.

-Skryzdlo, STAT 333

That's the only time you want an insurance company on your
side; right before your term insurance is up.

-Skryzdlo, ACTSCI 331

So I posted an extra problem set on LEARN last night because
that's all I do right? Eat, breathe, and STAT 330.

-Drekic, STAT 330

This is the binomial theorem. You all should have seen this
before. If not, Google it.

-Drekic, STAT 330

I'll post it on ACE or LEARN or whatever the hell it's called
now.

-Doyle, ECON 402

My office is in Hagey Hall; I'm in the basement with all the
other weirdos.

-Doyle, ECON 402

Turns out people are really crappy at cramming at the last min-
ute.

-Doyle, ECON 402

Huh, the syllabus says there's 2 midterms for this course. Us-
ually I only have 1. I guess I decided to change it.

-Doyle, ECON 402

Optimally, I would have a test every class, but I'd have 24 sets
of these #&\$%ing tests to mark!

-Doyle, ECON 402

In 1st year, people don't ask questions but maybe it's because
they're all stoned or something.

-Doyle, ECON 402

I have a lot of bad experiences with Greek letters. So now, any-
thing I don't know I just call it Gamma.

-Doyle, ECON 402

Many people think they can't do the algebra or the calculus in
this course, and it's true!

-Doyle, ECON 402

First rule of ECON 101, you have a plot with two curves inter-
secting. Something special must happen there. Label it, put a
star beside it, whatever. That alone would actually pass you in
ECON 101.

-Doyle, ECON 402

I don't spend a lot of time around whips or whipping people.

-Doyle, ECON 402

[Heaviside is] some dead, famous mathematician. Famous in
that other mathematicians know him.

-Endres, EARTH 460

**Submit your *profQUOTES* 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!**

profQUOTES

You don't become a professor if you don't have a streak of sadism in you.

-Endres, EARTH 460

The example isn't here because it's simple, or I'm lazy. Well, I am lazy, but that's beside the point!

-Endres, EARTH 460

Fortran is my mother tongue, but I never learned French.

-Ha, PHYS 365

Can you see this in your mind? If you haven't lost your mind that is.

-Ha, PHYS 365

Does that make sense? Actually no, most of you look puzzled.

-Ha, PHYS 365

There will be no $4\pi\epsilon_0$ in my class.

-Burkov, PHYS 335

Somebody asked me this last class if this is true. I found a counter-example. On Wikipedia. Don't worry, I checked [if it was right].

-Morris, Math 247

Good question. Maybe I'll put the question on next year's assignment.

-Morris, Math 247

I have a famous quote in *mathNEWS* about tearing fluffy things apart.

-Taylor, PHYS 275

This is an environmental problem. Every time you slingshot a satellite off a planet, you sap some energy from the solar system. Eventually everything will fall into the sun.

-Taylor, PHYS 275

The True Meaning of the MC

Most uWaterloovians know that the MC and DC are generally called the "Math and Computer" building and "Davis Centre respectively", and thanks to Maclean's, the rest of the world knows them as Mainland China and Downtown China. Around this time of year mathies call the buildings by different names: Missed Connection and Dissed Connection.

Missed Connection: Always being shuffled from class to class through narrow hallways with their heads bowed and backpacks askew, mathies rarely get an opportunity to socialize as they head off to calculus. On the random chance that they do bump into another person, they don't have enough time to actually socialize and establish a meaningful connection.

Dissed Connection: Home of the library and Bon Appetit and the main entrance from the bus stop, this building is a cause of high stress for students. Any social interaction that happens here is mostly met with vented frustration, where any potential romance is quickly blown away with an offhanded swear. This forms a vicious cycle where frustration mounts to a boiling point. It is theorized that this is why reading week is scheduled the week after Valentine's Day – to let sexually frustrated students have time to cool off.

This leads to the following conclusion: if you want a significant connection, avoid Math and head to Arts. Much Lovin', Hot & Heavy, and All Lovin', anyone?

!ED

When Vanilla Meets Chocolate

There are many ingredients that are necessary to bake the sweetest relationship.

- 2 cups all-purpose flour
- 2 teaspoons baking powder
- 1/2 teaspoon salt
- 1 cup white sugar
- 1/2 cup butter, softened
- 2 eggs
- 1 teaspoon vanilla extract
- 1 cup milk
- 2 tablespoons unsweetened cocoa powder

Start warming things up by preheating the oven to 350°F. Smoothen things over by greasing the cake pan to avoid any sticky situations.

Mix time and interests together with flour, baking powder, salt, sugar, butter, eggs, vanilla and milk. Start slow and steady, but gradually add more effort. Mix the ingredients until nice and smooth. Hold onto 3/4 cup batter and pour the rest into a pan.

Make things sweeter by incorporating cocoa into 3/4 cup batter. Majestically drop spoonfuls of the cocoa batter over the other. Gently swirl the cocoa batter into the white batter to create an understanding for each other.

Take some time to bake the mixture in the oven for 30-35 minutes. You'll know everything's perfect when nothing, including a toothpick, takes some of the heart with it when removed.

The effort and love you put into the cake will surely create a delicious and special outcome.

rasberryheaven

Forever Alone on Valentine's Day

Like half of the Math faculty, I will be spending my Valentine's Day completely alone. So instead of curling into a ball and sobbing, here's some things to do while I'm Forever Alone on Valentine's Day

- Browse Reddit/Tumblr. Take comfort in the fact that there are 1,000,000 other people just like me.
- Play WOW. Who needs a date when you have a level 60 paladin?
- Shun all my friends with girl/boyfriends for the entire day. Those filthy traitors.
- Stuff my face with chocolate. Pretend that someone gave it to me and that I didn't buy it at the store on discount.
- Change my Facebook status from "Single" to "In a Relationship". No one will notice anyways.
- Pretend not to care about everyone else having boy/girlfriends. Go home and cry while eating a bowl of cereal.
- Troll 12-year-olds online. Feel empowered by my ability to make little children cry.
- Have a romantic conversation with Cleverbot. At least a bot will love me.

BlueberryMuffin

Your Guide to Pretending that You Watched the Super Bowl

Because you are a mathie and you didn't actually watch.

So last Sunday the biggest event on television (it's true, it's garners the highest TV ratings in the US for the year) happened, and if you leave the ivory tower of this university you will find that everyone is talking about this trending topic. Naturally, you didn't watch it. You're in math, you had assignments and midterms to study for and so you obviously ignored it. This is fine, I won't judge you, but other people might! So I am here to try to save you and give you some talking points to start the conversation.

First things first, the New York Giants played the New England Patriots and the Giants won 21-17. It was an upset because in 2008 this exact same game played out (with the same coaches and the same quarterbacks for both teams) and both times the Patriots were the favorites and both times there was a fourth quarter upset by the Giants with big plays by the Giants quarterback (Eli Manning if anyone asks).

Now that you know here is a couple of fun things to say depending on who your intended audience was cheering for. (These will probably not make any sense to you, don't worry about it)

Patriots

- If Brady had gotten the ball earlier they would have had the game. I mean when he had the ball they pretty much always scored.
- Welker really dropped the ball on that last play, quite literally. Seriously that was a straight pass into his hands. It was sad.
- On that note, all of the wide receivers for the Pats (calling them that, it works) really didn't deliver this game.
- What the hell was that bullshit "intentional grounding call"? The refs fixed that game before it even got to start.

Giants

- Manning was kicking ass and taking names. Great drives all around. He was on his game.
- Man they just kept injuring the tight ends but it didn't matter. Honestly that was messed up
- That last drive was great. Amazing first play there great throw it was amazing. On that note if the Patriots did actually did let the Giants score in the last minute that was the biggest mistake they ever made.

And there you have it. This should be enough to converse with people about the Super Bowl for the weekend. I hope that this helps you out as much as it helped me. I didn't watch the season at all and caught up to it 2 hours before the kickoff for the Super Bowl game.

Enjoy it.
IdontFOLLOWfootball

Ambiguous Video Game Quiz

Tautology Edition

Hello, this is Zethar, taking over for the usual writer for this column as usual around the halfway mark in the term. You see, the other guy has the unfortunate affliction of being cursed with Monday evening exams; the panel of judges are currently in the market for a good exorcist, please contact the judges on your submission, even if you aren't able to answer any of the questions. With that being said, the answers to last issue's quiz is on the slim side – perhaps the questions didn't inspire enough inspiration, or perhaps the plague (both the health hazard and the academic one) that's being passed around; regardless, here are the winners:

1. Thank God for the skip button.

None of the entries in this category were deemed sufficient to earn points, because the judged deemed that none of them show the desperation or divinity which would justify "God". For those interested, the entries given are Andy's *Candy Ninja*, Avi's *Mario Party* (specifically, the skipping game), and Scythe Marshall's *Mischief Makers*, saying that S ranks are impossible without skipping the cutscenes.

2. Social interactions are beneficial.

From a personal perspective, I thought this had the most potential, but it was squandered with the submissions. First, I would like to give a dishonorable mention to Avi for responding *Grand Theft Auto* for this, where he claims that running over people is something that is beneficial to society, and while this may tickle the senses of humour of a different demographic, the judges in general were not pleased. Thus, the winner was chosen to be Scythe Marshall's: *Super Smash Brothers Brawl*: What, you're going to play multiplayer mode for n hours to get trophies, by yourself, against the CPU? gl;hf.

3. Moo. Yay!

Honestly, we didn't expect very much from this one, and the person in charge of making the questions last issue just threw this out there to see what fish it would catch. The only submission to have caught the idea put into this is Scythe Marshall's entry of *Worms*, with its epigram "'Cow walks until it hits something* 'Mooo' *BOOM* 'Yay!'". While the other submissions were close, but they were no cigar; they didn't fully embody the yay-ness with their entries.

All in all, despite what you might think is the contrary, Scythe Marshall, here's your obligatory prize for the third issue in a row. The following questions are for this week:

1. Good designs are good
2. You must pass to pass
3. You can't fail to fail

Everyone, please submit your witty responses to the questions above to the **BLACK BOX** before February 27th (the next *mathNEWS* production night) at 18:30. Do remember that thinking outside the box and giving witticisms would earn you favour with the judges, so do go the extra mile to do just that; you have three weeks because of reading week, so go give Scythe Marshall some competition and knock him off from his throne. At any rate, good luck and remember to have fun!

Zethar

Don't make me get a baseball bat

Let's all congratulate Henry Fung for his one submission. Henry believes that my *gridWORD* tools of the trade should include, "A compass and straightedge. And a memory upgrade so [I] don't forget Cryptic 25D/2

Not my fault the neighbours' cat doesn't like citrus,

moment

ki <3 mouth NEWS

We heard you needed more fun, so we got you some. We have extra.)

- integratED

Across

- Down*

1. Prickly bush
2. (519), (905), (416), etc.
3. Lovelace
4. Excel
5. Aberrant
6. Public knowledge
7. 100 wild-battle-free steps
8. Quickly
12. Think
15. Convicts in menial labour
16. What any *grid*WORD submission is
18. They do not forgive. They do not forget. Expect them.
22. Echinus
24. Honda palindrome
26. Laughing scavengers
29. Flow

Horrorscopes

ACTSCI

You find some boxes of interesting “artwork” thrown out! You take it home and appraise it. It is literally the most valuable thing you own. Using your market knowledge, you know to sell high...

Your unlucky number is: \$50 per page times an average of nine pages per “magazine”.

AHS

While running a training session at the gym, you observe a wimp get ripped, as if by magic, over mere weeks! What on earth could be his secret? You stop at nothing to find out – this discovery could revolutionize fitness.

Your unlucky number is: 72 fluid ounces of alcohol every week – it does the body good.

AMATH

Shortly after leaving your classroom on the first floor of the MC, a pit trap opens up beneath your feet! You fall into the basement and land on a cute Mathie, who admires your low drag coefficient. You take home your new SO and experimentally determine your coefficient of friction.

Your unlucky number is: 0.98 for skin against plastic.

ARCH

A student is practically giving away cardboard on campus! (And something else, but that doesn’t interest you.) It’s the best thing ever. You create a new student apartment building out of it. One guy spills beer on it and the whole thing loses its structural integrity.

Your unlucky number is: 40 stories of soggy adventure!

ARTS

Your little brother comes home from school crying his eyes out. According to the principal, he was “scarred for life” by something he saw in class. You hope he never finds your collection of Japanese “artwork” hidden under your bed.

Your unlucky number is: 196 “magazines”, each with an average of nine pages.

C&O

The guy next to you in the C&D flips the table! You stop and observe it, determined to calculate the probability of it landing on its legs. It hits you in the head.

Your unlucky number is: 28% chance of schadenfreude.

CS

While hacking on the OpenData API, you discover a security hole on another developer’s system that allows you to write unsanitized data to a production database. You exploit it...as best you can.

Your unlucky number is: 2147483647 rejected applications on Jobmine.

Double Degree

There’s a sudden wave of vacancies in a student apartment building right next to campus. The penthouse is available on the cheap. Party time! The housewarming party gets loud, someone knocks over a bottle of beer, and the next thing you know, the floor collapses under your feet. Everyone is left outside in the rubble.

Your unlucky number is: 30 minutes – a new record time from move-in to eviction.

ENG

You are rejected from a job for no reason at all. You don’t understand – your qualifications were perfect! You are so mad that you join a gym, planning to bulk up and go back for revenge! After a few weeks, you become a professional bodybuilder and decide that this is a much more rewarding career.

Your unlucky number is: 200 pounds of “all muscle, baby”.

ENV

A mutant is wandering the halls! You stop it in its tracks and ask it to clean up the toxic sludge it leaves in its wake. You get a first-hand look at a novel organic recycling system.

Your unlucky number is: 100 mL of stomach fluid at pH 1.5.

Grad

One of your friends mentions that some new apartments for students have been built. You decide to move in – it’ll be quieter than where you’re living right now, and maybe you can finish that paper you’re working on. You move out pretty soon and head back to your bedroll in your DC office after you realize everyone else has had exactly the same idea.

Your unlucky number is: 800 students per building.

KI

Watching a student interact with a strange humanoid inspires you to take Humans vs. Zombies to the next level. You demand OpenData API access to all student information. You get strange looks from the implementation manager when he sees that your feature requests include the code “SELECT * FROM ‘cannon_fodder’”.

Your unlucky number is: Query successful, 21000 rows returned.

MathBus

You buy some interesting “artwork” from a guy on campus. Only later do you realize you have been ripped off. Desperate to cut your losses and salvage your finances, you offer a special promotion to help sales.

Your unlucky number is: 1 square meter of cardboard free with every purchase.

Math Phys

While walking down the street one evening, you stop to watch students falling from a building into some surprisingly soft debris. This gives you an idea to improve congestion in the MC at the first-floor entrance.

Your unlucky number is: DC 20 Search check to notice pit trap.

PMATH

Some guy has been playing on the Minecraft server for days without stopping. He’s built a massive castle and it looks awesome! You then look closer at the towers. They were intended to be perfectly square. They are off by one block width. You flip the table.

Your unlucky number is: 90 by 89.

SCI

Someone threw out an awesome (and slightly stained) table! You fix it up and take it back to the lab for some extra space as you carry on with your experiments. The organic nature of the stain becomes apparent when your DNA research produces an interesting result.

Your unlucky number is: 21000 genes, the brain of a feral chimp, and an attitude to match.

Horrorscopes Continued

SE

There are more people applying for the best positions on Jobmine than ever! You are fed up with competing. You drop out and form your own startup. You reject candidates who list actual experience on their resumes because, as you tell them, "I learned everything on the job and so should you."

Your unlucky number is: 6 months before you give up and go back to university.

STATS

You have been spending your work term implementing features for the new OpenData API. For fun, you access some of the Jobmine data and run the numbers. You now know, after performing a hypothesis test, what you already believed: everyone else is making more money than you.

Your unlucky number is: \$10.25/hour at Burger King.

Teaching Option

While looking for a current events article to discuss in class, you see a report on a new liquid diet. It looks like just the thing to talk about to get the kids interested in the upcoming health unit. Unfortunately, since alcohol and minors do not mix, your attempt to arrange for an in-class demonstration ends in tears.

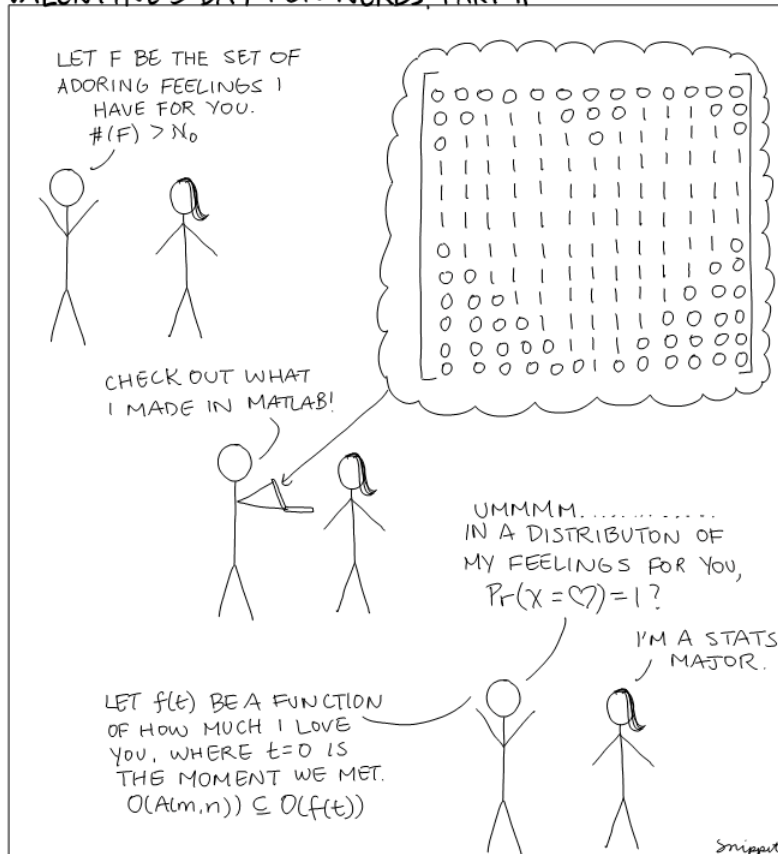
Undeclared

The couple next door are going at it, and it's loud. Well, two can play at that game. You call your SO, who rejects you because you're indecisive.

Your unlucky number is: 48 hours of Minecraft.

ScruffyED

VALENTINE'S DAY FOR NERDS, PART II



Humanity Deprecated

Version 1.0 released

The announcement many have been waiting for has now been made at the 2012 Universe Design Conference. The current version of humanity has been deprecated, although support for it will continue until near the end of this year.

The announcement came as part of a presentation on the state of the "Humanity Project", delivered by a being whose name would cause your head to explode if you heard it. The printed version isn't much better, so we'll just call him Ted. It's not all doom and gloom though, as Ted said "Some interesting things have come out of the experiment", citing beer and *mathNEWS* as a few examples. Ultimately though, humanity as it currently stands is "just not maintainable", and it's definitely showing its age.

Ted went on to add "It was an experimental version from the start, and we'll have a much more robust and stable feature set in the next version." Early on in the presentation, Ted listed some major shortcomings. Among these was a tendency towards politics: an unfortunate interaction between the urge to eliminate threats and the inability to conceal an easily accessible katana in a suit. Another item on the list mentioned the lack of any grasp of the Big Picture. To this he added "We were going to add that in, but it got too messy, so we left it for the 1.0 release."

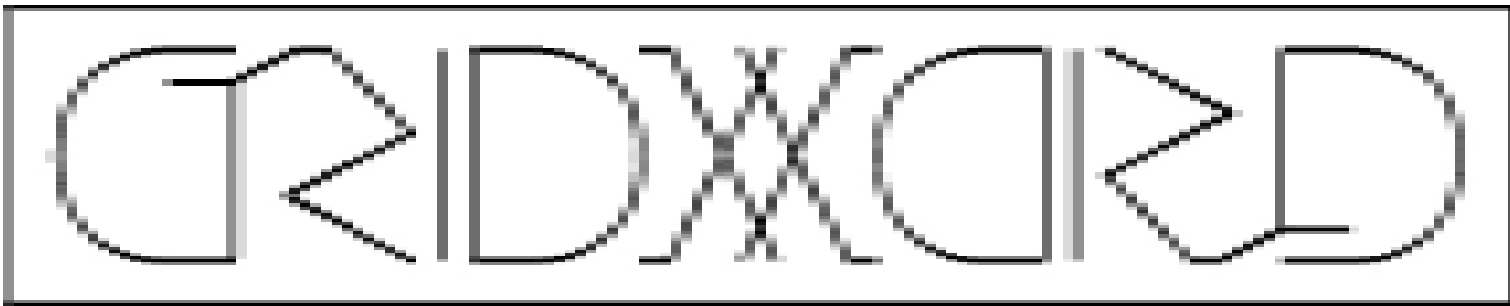
"Really, all we wanted was something that could hunt mammoths and avoid being eaten", he said. Designing a creature that could make something more complicated than a mud hut was not in the scope of the original project. Some interesting work has been based on the current version, such as adding basic numerical reasoning, and an admittedly hacky patch to add in forethought and common sense. A further example was the state of science. "Humanity is really tied down by some of the mistakes we made while implementing the original version." He went on to show the problem solving methods used by the very first release, which involved hitting things. He then showed the LHC and commented that "They think it's new and unprecedented, and yet they've just gone back to hitting things again."

The new release will contain a much more ambitious set of goals, incorporating the experience gained from the current version, as well as some exciting new functionality. When asked about the new features, Ted showed quite an impressive set to the audience. Foremost among these was a new communication protocol. "The old way was fine for shouting threats at each other, but not for expressing mathematics and license agreements", he said. The next few slides outlined the new, more powerful method, and gave your editor a massive migraine.

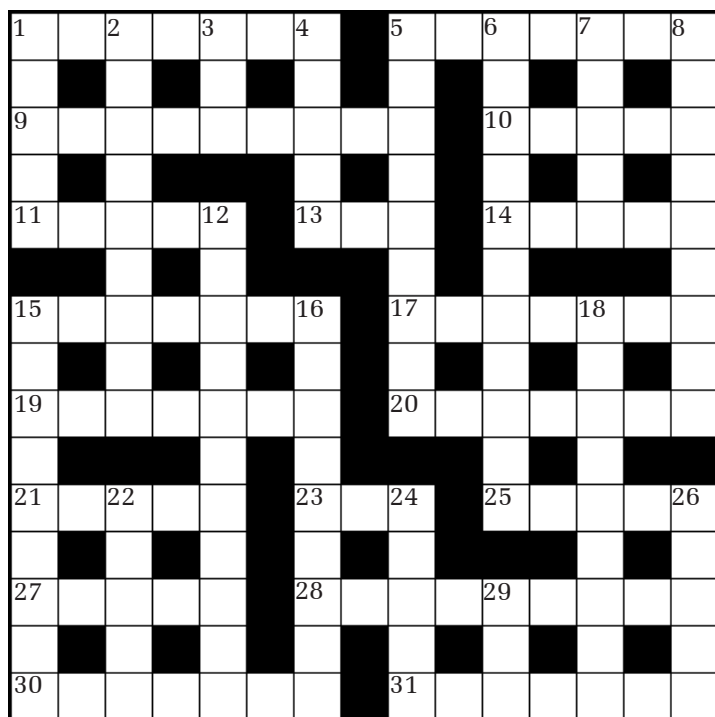
The talk ended with a question period, and audience members asked a wide variety of questions, ranging from the plan for handling free will, to concerns over legacy support. Your editor left at this point, partly because it was getting near lunchtime, and partly because his earwax had started to melt.

Concealed would like to thank *mathNEWS* for funding both his trip to the conference, and the resulting therapy required afterwards. Rest assured that your editorial team is now back up to full strength and can continue to deliver fortnightly drivel.

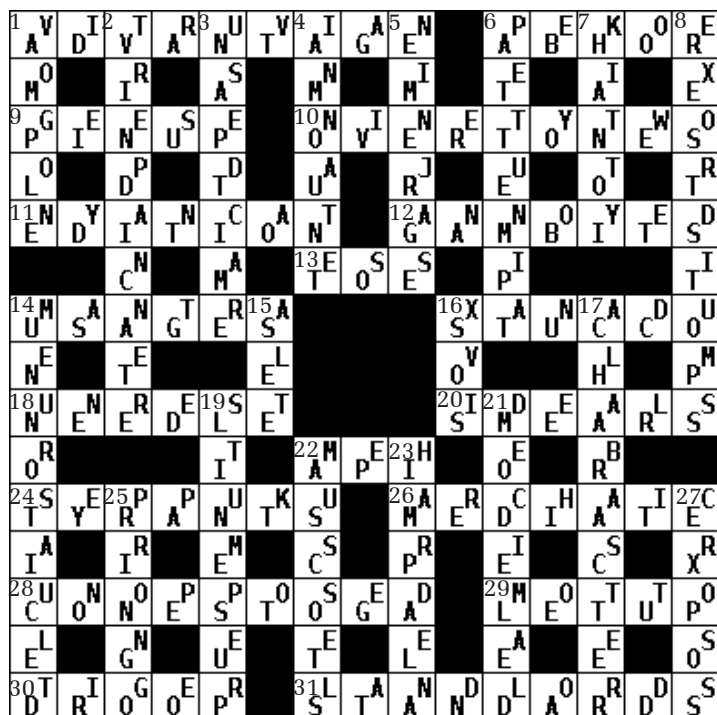
Concealed



This week's grid



Last week's grid



Straight Clues

Across

1. Feb 1st sparks voyages
5. Bolder raises go off after South
9. Lanthanides are unfamiliar ground
10. Flip 11!
11. Finish finished finish
13. From a short hairstyle
14. Not after votes for the chicken
15. I repair broken grassland
17. Urge? I'm beat
19. Act before, look after
20. Acknowledged alien amidst avarice?
21. Left in a hoax, twofold
23. Licorice tip
25. Ha! Dream state of a seraglio
27. Tedium is a bit of a forsaken nuisance
28. Disturb a filling? Puncturing involved
30. He grows older and survives
31. Raised edges ink, say, or pretend to sing

Down

1. Demand 17 over time
2. Zap infrared and emit energy
3. Rush called out a greeting
4. Typeface line up passions
5. Teaching fish to swim?
6. Campaign message baffles listeners fruit
7. I play by one rule
8. Wireless leader of a band
12. Diligently trying for each carving
15. Pampered one, puzzling over a fanciful future
16. Risks results round wrath
18. A flower-pinching lunatic, alert to the letter
22. To affix blame?
24. A hot girl, or 50, in a state of confusion
26. A doctor teaching degree in this case
29. CS paradigm found in *while* loops?

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