*math*NEWS

mathNEWS welcomes
you to some Space Jam

*look*AHEAD

Errata for "Scheduling is Hard"

In last fortnight's issue, there was a misprint in the article "Scheduling is Hard". [*Sorry!—bunniED*] At one point, the title "Certified Scheduler" was to be used; it was instead printed as "Certified Scheduling Engineer". The author would like to make it clear that the position was not meant to be an engineering position.

That said, those Management Engineers (whose courses are called Management Sciences…?) would probably appreciate some respect; maybe let this be their job.

Scythe Marshall

Julie Sturgeon (Michael Jordan), Katherine Tu (Bugs Bunny), Jose-Miguel Velasco (Bill Murray)

*mast*HEAD

I used to love picking up fresh copies of *math***NEWS** on Friday mornings. Sometimes, I even read them. And, since I've become an Editor, I still enjoy picking them up.

Most Editors, however, prefer to stay as far from issues of *math***NEWS** as possible after publication, since by Friday, they are usually sick of *math***NEWS** (and bitter at everything). However, this means that Editors like myself inevitably spot dozens of mistakes that can no longer be fixed—I say inevitably because there are mistakes in every single issue. Every single one. None are spared by our Editorial hands, which wreak havoc on all we touch.

Sometimes these mistakes include a trail of Vs in the middle of an article (and the confusion of an Editor during copy-editing, who wondered why on earth things weren't pasting properly), or deleting two paragraphs from Scythe Marshall's articles. Sometimes these mistakes include attaching the wrong byline to articles or neglecting to strike-through text. We are very sorry for these, but we have naught but pizza to offer as compensation for our shortcomings.

Thankfully (?), some of the most glaring errors in our recent issues were no fault of ours. Media Services seems to have forgotten how to print our publication, resulting in resized content and, most recently, a whole two blank pages! I hope you enjoyed them, and filled them with illustrations and proofs to open problems. If you did, you should submit them to the **BLACK BOX**, and we could have it published (because that's how desperate we are for content). But those are only some of the wonderful things you could have used those two glorious pages for. Surely, there were many more, so we asked our writers: "What would *you* use to fill the new extra blank pages in *math***NEWS**?"

theSMURF("Whitespace Sort"); tesseract("A fold pattern to produce a tesseract. I have to reproduce somehow."); SketchED("Why fill it? The blank pages are the best content we had since 2010."); Chance("Leave it blank"); waldo@<3. LE-GASP.ca("ART! *math***NEWS** could always use more art =)"); wibz("Advertise other events on campus!"); Beyond Meta("A colour by fractal."); \&("Nothing—I like writing assignments on them."); psychomath("Photos of cats. Drawings of cats. Endless cats. Cats in baskets and cats on faces. Cats on more cats!"); AltGr("`cat /dev/urandom`"); lp0onfire("Timecube."); Scythe Marshall("All ~~151~~ ~~251~~ ~~386~~ ~~493~~ ~~649~~ 721 (?!) types of Pokémon? Maybe not *all* of them…"); Shay Blair("Pictures of the editors in amusing situations. "); cat("A drawing of Erwin Schrödinger in a box. "); unit("vellus hair"); Zethar("The stainless whitespace represents the void beyond—of Lovecraftian eldrich horrors which which inhabit it and the endless nothingness beyond. To fill the gap we must go *between*, filling it with the oozing ichor of fallen creatures or an arcane ward so the balance of existence is preserved. Fill the space to seal the dæmons of whitespace and yonder therein."); ConvolutED ("off-stream editors' answers to the *mast***HEAD** question"); BlueberryMuffin ("Soviet-era-style FEDS propaganda");

bunniED("pages and pages of errata").

VPA Sez

Here's my promised update on the grievances filed regarding the no weather closure on February 2nd:

- Over 80 grievances have been filed
- The Secretariat has taken over the case and will consider each Policy 70 violation separately
- The first group of individuals to file should receive a response from the Secretariat no later than March 2 or 3
- The status of the Policy 33 allegations is unclear
- Stephane Hamade, FEDS VPE, will be taking over this advocacy work and coordinate with other concerned organizations

I've also booked a meeting with the Associate Dean of Undergraduate Studies to discuss:

- Improving accessibility of accommodations
- Reporting mechanisms and procedures for overt and subtle discrimination
- Mental health training for staff and concerns with the Standings and Promotions Committee

Feel free to contact me any time about these matters at `vpe@mathsoc.uwaterloo.ca`.

Elana Hashman
VPE

Wanted: DMs

Writing a fantastic D&D Tournament has consequences: we've got lots of teams planning on attending, and we may not have enough DMs to go around. If you would be interested in DMing at the WatSFiC D&D Tournament on March 21st (which will be using 5th edition D&D), please send an email to `stephen@wodenwebdevelopment.com`.

Stephen Gross

MathSoc Novelties Ahoy!

Have you come to the MathSoc office recently, only to discover that your favourite shirt was out of stock or didn't have the size or colour that you were looking for? Well, guess what, mathies? MathSoc will be replenishing its novelties stock over the coming weeks! Large sizes of old t-shirt favourites will be re-stocked over the coming week, with some new designs popping in just in time for (pretty much) every mathie's favourite day for free food: Pi(e) Day! I, for one, am anticipating a Pi Day to remember!

Feel free to come by the MathSoc Office (MC 3038) over the next few weeks and check things out! Maybe you'll find a new favourite for your wardrobe, or maybe you'll find something that just makes you want to show off your math pride.

Hope to see you around soon!
Lily H., MathSoc Novelties Director, Winter 2015

VPE Sez
Event announcements!

Invite your favourite professors to Games Night with Profs, this upcoming Thursday, March 5th in the Math C&D.

Pi Day is almost here! In recognition of 3.14.15, we will be holding double the Pi Day celebrations: on Friday March 13, 1:59 PM in the MC 3rd floor hallway outside the C&D, and on March 14th at the open house. We'll also be running a Pi Recitation Competition on the 13th.

I'm delaying Pints with Profs to the last week of classes due to prof and space availability.

Elana "e#" Hashman
VPEverything

UAC Mental Health Subcommittee News

The UAC (Undergraduate Affairs Committee) Mental Health Subcommittee was formed in November, headed by Barry Ferguson. The subcommittee's intent is to discuss policy changes within the Mathematics Faculty that could ameliorate circumstances for students with mental illnesses. The subcommittee had their first meeting on December 17th, in which ideas and experiences were shared.

A student forum was proposed, date TBA, since the formation of the subcommittee was prompted by a small group of students lobbying to Professor Furino.

Another subcommittee meeting is hoped to be scheduled for the beginning of March.

bunniED

CSCFlash

Were you considering swinging by the CS Club office? Perfect! We were just warming up the Linux terminals and stocking the fridge with pop and snacks! While you're at it, why not go to some of these:

- **Code Party 0:** Friday February 27th at 6 PM in EV3 1408 (coding challenges galore!)
- **mtrberzi's tech talk:** Tuesday, March 3rd at 6 PM in MC 2038 (SAT/SMT solvers!)
- **Mozilla tech talks:** Monday and Tuesday March 9th and 10th, 6 PM in MC 4040 (JITting!)

See you there!

Gianni Gambetti
President, CSClub

Bardish Chagger Elected as Waterloo Liberal Candidate

For those of you who pay some attention to political matters, some just occurred this past Sunday. Namely, the Waterloo Liberal Party just had their candidate election meeting. This is a pretty important event—it determines who will stand as the party's candidate locally, which influences policy, voter appeal, and directs the focus of community engagement. (All potential candidates tend to have pretty strong community ties—it's just a question of with which organizations). If they do get elected, it matters a great deal how they relate to constituents and how effective they are.

Bardish Chagger secured the nomination, which was contested by Dan Herman and Cathy MacLellan. Chagger has strong ties to the KW Multicultural Society (where she works), to public health (with the DrinkSmart responsible drinking initiative), and to past Liberal campaigns.

Anyway, this was my first time at such an event. It was interesting what was there—lots of people, coming in waves to stand, listen, and vote at the fancy ballroom of the Waterloo Inn. It was also weird to see how little dialogue there was—nominees had only a short time for speeches, and there was no debate. I suspect most people there had already made up their minds. It was also not organized to meet new people for anyone—such as myself, as a student who'd never been to one of these before.

Also, their security is old-fashioned and hilarious: they would not accept a PDF of my rental agreement as proof of residence, so I had to have someone vouch for me. However, to find a voucher, I just went up to a campaign organizer and asked them to vouch for me. Even though I'd never met them before. Yep. (It's not actually awful—you had to be confirmed on their database as being a party member before a certain date, and have photo ID. But the residency thing is silly.)

However, in spite of these flaws, it was cool to see the democratic process in action. The campaign staff got along well, in spite of their differences, and this spirit of friendliness is really encouraging. Because it's what makes democracy really effective, instead of angrily counting numbers and imposing the will of the majority.

tesseract

Kitchener Comic Con

Are you tired of spending all your time hanging out with nerds on campus? Do you ever feel need to explore the outside world and interact with new people? Well, you are in luck! This Saturday, starting from 11 AM at Kitchener Town Hall, there will a comic convention that will give you the opportunity to interact with *different* nerds outside of Waterloo! As part of the Kitchener Comic Con programming, there will be a Lego party, cosplay events, and a Ghostbusters reunion.

Beyond Meta

Things Happening

1. Kim Jong Un Got a Haircut:

Making global headlines was Kim Jong Un's horrendous haircut that looks like a black trapezoid on top of his head. Some have likened him to Guile from Street Fighter. It seems that the "glorious leader" has bad hair days like everyone else.

2. Square Enix Humble Bundle #2:

Normally, Humble Bundles are a great way to pay what you want for games and support a charity. The Square Enix Humble Bundle #2 charges $15 for great games such as Tomb Raider and Sleeping Dogs, and Thief and Deus: Ex Human Revolution for paying above the average of $7.52 on Hitman games (I personally have a deep hatred for Hitman). I own most of these games, and buying these games from Steam for 75% off seems like a better deal. Nevertheless, if you are impatient and want them all now, spend away.

3. It's Really Cold:

Pretty obvious to anyone who has walked outside in the past week in Waterloo or Toronto, really. Extreme weather warnings were issued, and Waterloo schools had a day off since it was so cold. I had a nice brisk walk on the UofT campus over reading week, and lost feeling in my fingers completely. Note to self: do not walk through minus thirty-degree weather with a McDonalds meal in hand. By the way, by the time I got indoors, the burger was cold, but the fries were still good.

4. Midterms Are Upon Us:

Now it is more than halfway through the term and midterms have been plagued upon the students. Some people may have them all in one week, some people may have them every week until exams. Everyone is hard at work studying… Except the people in the room next to me. Seriously, they're always screaming at the top of their lungs. *Help me.*

jat109

Games Sez

As reported in the previous issue (and page) of *math***NEWS**, we're hosting our second Games Night With Profs this term! Invite your profs to come and play board games (and card games) such as Ticket To Ride, Carcassonne, Dominion, or Dixit in the Math C&D starting at 6:30 PM on Thursday, March 5th.

The event lasts until at least midnight, but feel free to drop by or leave at any time. Refreshments will be provided throughout the night as well.

In addition, feel free to come to our regular Games Nights every Thursday at 6:30 PM in the C&D!

Your Games Director,
a crafty player

What Makes a Proof a Proof?

We begin the article with a quote by our former Prime Minister, the Right Honourable Jean Chrétien:

"I don't know; a proof is a proof. What kind of a proof? It's a proof. A proof is a proof. And when you have a good proof, it's because it's proven."

With all due respect, in mathematics, proof has a much less circular definition. Quite simply, a proof is this: a convincing argument which shows without a doubt that something is true. Notice how this definition has nothing to do with epsilons or deltas or quantifiers or even formal logic past understanding what 'true' means. Those other things have to do with the concept of rigour.

Rigour is a tricky concept to define. Intuitively, one might think of it as how much nitty-gritty is in your argument. More formally, rigour is the act of eliminating reasons for anyone to doubt your argument. This can manifest itself in many ways; one might use epsilons and deltas, or choose to write out explicit computations, or prove everything via series of lemmas. There is no one amount of rigour that everyone either uses or doesn't use; it varies.

Perhaps some examples are in order.

Theorem: There are infinitely many prime numbers (prime positive integers, of course).
Proof: Assume there aren't. Multiply the finitely many primes together and add one. None of the primes divide this new number, so it cannot be composite, and hence must be prime, which is a contradiction. ∎

How interesting; I didn't use a symbol! Does this mean that my proof wasn't 'rigorous'? Likely not. The Ancient Greeks did a lot of math with words and without the glorious notation we have, and it turns out that they wrote some good proofs.

Theorem: $\sin(x+2\pi) = \sin(x)$.
Proof: $\sin(x+2\pi) = \sin(x)\cos(2\pi) - \sin(2\pi)\cos(x)$
$= \sin(x)\times 1 - 0\times\cos(x) = \sin(x)$. ∎

What an about-face! I used no words, even in the statement of the theorem. This must not be a proof, since you have to include justification! Or not. Ostensibly, one might insist on noting that I used the addition law for sine, but if the audience to which you are expressing your proof knows this law well, there's no need, as it should be readily apparent.

This brings us to an important idea: the amount of rigour you use in a proof depends on the audience to whom you are giving the proof, and the situation in which the proof takes place. An analyst will insist on most of an epsilon-delta proof if that fits the situation, but occasionally they will be okay with a 'softer' approach if it gets the point across. A geometer will mind if an overly-analytic approach is used, even if it's rigorous, because geometry has its own rigorous arguments of a different flavour.

Rigour is often a contentious topic in mathematics courses. How much rigour do students need to use in a specific course? We debate this endlessly, and end up trying to figure out if proofs need to be emphasized in, say, an Applied Complex Analysis course. Or worse, what constitutes a proof in the course? Can one explain things with words, if the ideas are correct? Or must one show everything explicitly with symbols and computations? What's the correct answer?

As with most things, the 'truth' probably lies somewhere in between, right beside 'the golden rule' and the fact that different types of students have different needs in terms of rigour. The sooner we figure this out—as instructors and as students—the better off we'll be, and the more prepared we'll be to communicate with one another. Don't believe me? Prove it.

Scythe Marshall

Actual News: Waterloo grad shortlisted for one-way trip to Mars

A former University of Waterloo student is among seven Canadians shortlisted for the Mars One mission attempting to set up a human colony on Mars. Ben Criger is one of 100 men and women selected today to move to the third round of training for the one-way trip to Mars. Mars One aims to create a colony on Mars by sending four men and women in the first mission and following with four people every two years.

"I think everybody should want to go," says Criger, "To me, Mars exploration is the default, and not doing it is exceptional." An alumnus from the University of Waterloo's Institute for Quantum Computing, Criger has a PhD in physics from Waterloo's Department of Physics and Astronomy. He was selected from a pool of 660 candidates who participated in personal online interviews with Norbert Kraft, Chief Medical Officer of Mars One. Criger participated in his interview from Germany where he is currently doing a post-doctoral fellowship at RWTH Aachen University.

"I'm extremely proud of Ben," said Raymond Laflamme, executive director of the Institute for Quantum Computing. "He's a talented scientist and will be a great addition to the Mars One mission. This is an opportunity of a lifetime and all of us here in Waterloo will be watching and cheering him forward."

The Mars 100 will now have the opportunity to experience what life will be like on Mars by training in a copy of the Mars Outpost on Earth. "Being one of the best individual candidates does not automatically make you the greatest team player, so I look forward to seeing how the candidates progress and work together in the upcoming challenges." said Dr. Norbert Kraft in the Mars One press release. "I hope this is going to give me the opportunity to learn little bits of different scientific and engineering disciplines," said Criger, "which was one of the things I liked most about Waterloo."

From: https://uwaterloo.ca/news/news/waterloo-grad-shortlisted-one-way-trip-mars

The 10 Types of People Commonly Found in the MathSoc Office

1. **The Newcomers:** Everyone who has been in this office has been a newcomer at least once. Whether it be in their 1A term or their 4B term, the reaction is very similar. They make common mistakes such as trying to pay with their Watcard or debit, as well as trying to print from the computers without downloading their documents first. Common phrases are: "Can I print/scan/photocopy here?", "Can I please borrow one of your staplers?", "Is this candy free?", "How do I <insert something that should be dealt with by Exec here>?", "Is this the MathSoc Office?", and "Is this where I can get my calculator pink tie approved?"

2. **The Familiars:** The familiars are people we can always count on to make this office interesting. These guys come here on a regular basis, and treat the office as a place to socialize (which we, as office volunteers, totally appreciate). They also take advantage of the free candy (because seriously, who wouldn't?) and seem to enjoy the company and atmosphere of this beloved office. They often say things like: "I'm not actually using this computer", "Why don't people read the signs on the computer?", and "How long are you guys keeping the office open tonight?"

3. **The Candy Grabbers:** These people walk into the office with grins on their faces, hoping that their favourite source of sugar is here just waiting to be eaten. No one else walks into the office with more purpose than the candy grabbers. However, as happy as they may be when they get their candy, they are also known to be very disappointed when they don't get the candy they want. Common phrases from them are "Candy!!!", "I'm just here for candy", "Aw, there's no more candy", and "Jolly Ranchers *again*?"

4. **The Traders:** These are the everyday customers looking to simply trade in something in return for something else, from trading a question for an answer, a WatCard for a board game (or whatever else they may be taking out of the office), or even money for a particular good that MathSoc provides. Common phrases are: "It should be *x* pages [that have printed].", "How many board games/textbooks/things can I sign out?", and "Do you have <insert item we probably *do* have/sell/can sign out>?"

5. **The Bacon:** These are the people that come into the office to do hardcore business. Having some MathSoc affiliation more often than not, they get right to the meat of what it is they want out of their visit here and they are not afraid to come behind the desk and get exactly what they need. Common phrases include, "Is there mail/a cheque for <insert MathSoc organization/entity here>?", "Have you seen <insert name of (probably) the Exec they are looking for>?", and "I'm still just here for the free candy."

6. **The Office Volunteers:** These are the wonderful human beings who keep the office open and deliver you your wonderful services. They often don't know why or how they managed to get this position, as dealing with many customers can still be really scary. Common phrases are: "Did you download this document before printing it?", "I'm just here for the candy.", "Sorry, we run out of lockers in the first 5 hours of availability", "I don't get paid enough for this.", and "No, this is not a paid position."

7. **The Residents:** You know the people that are in the office literally every single time you walk in? These are the residents. Yes, they do live somewhere else, and yes, they are taking non-online courses this term. They, like everyone else behind the desk, are volunteers. They have not been forced by any outside source to stay in the office, and they are not physically tied behind the desk. We don't understand why we stay here for so long, but this place is like a second home for us. And once we get comfortable in one of the chairs, we are often too lazy to move. We often say things like: "I live here!", "Should I go home today?", "I should go to class", "Dammit <insert Exec's/fellow resident's name here>."

8. **The Exec:** The volunteers' overseers, the great ones we look up to, whose names are on our nice chalkboard. They often only come in here briefly to collect their mail, discuss office things, and radiate their awesome throughout the office. Specifically, the VPO, who is in charge of the office itself, is more often in here than the rest of them. In conjunction with his executive duties, he deals with frequent trolling from many of the office volunteers, and probably deserves a medal for it. MathSoc Exec are known to say things like: "Do you have the till?", "Has cash been closed?", and "God dammit, who vandalized the chalkboard?"

9. **The Tourists:** A tourist is one who comes into the office to look around, typically to see the novelty items and the games, as well as figure out why we give out free candy. They often don't make purchases or much conversation, and they would be so much cooler if they did. Their most common phrases are "Is this the MathSoc Office?" and "I'm just looking around".

10. **The Exam Rush:** We now keep a list of exam dates on the desk because of these people so that we can figure out when calculator rush season is. These guys either enter the office in groups or individually often with calculators in hand begging for us to approve of their calculators five minutes before their exams. They are also easily identified by the look of panic on their faces, especially when we tell them that their calculator can integrate, or worse yet, that it's the Sharp-531 W. Unlike most newcomers, these guys seem more stressed than nervous when they enter the office. They only say the following: "Can I get my calculator approved?", "I'd like to buy a calculator.", and "Can I borrow a calculator?"(Note: MathSoc cannot lend out calculators during exams.) Sadness is finding out you don't have a calculator five minutes before exams, so please, please, *please* go to your exams prepared. You may find a very nice person in the office willing to lend out a calculator for you, but don't count on that!

darshwanda & waldo@<3.LE-GASP.ca

Zen and The Art of FEDS Elections
What's the point?

The recent FEDS election student vote turnout of less than five percent is pretty pathetic, even by student government standards. Who, if anyone, do we have to blame?

People vote because they believe that their voice will count for something, make a difference. Even if one vote doesn't tip an election one way or the other, the parties that are ushered into power will typically have a meaningful impact on voters' lives, for good or for ill. However, FEDS and the student parties elected into power do not have sufficient influence on the student experience to make any sort of difference. In fact, this is by design.

Can we vote on substantive issues? What if we wanted a semester system instead of a trimester? Or what if the student vote is the final arbiter into introducing the Fall reading week or ending the Winter reading week? When we don't even have the power to retain Fed Hall, a building funded with student money, can we truly be expected to have any sort of meaningful impact on the overall student experience?

The truth is that student governance is an illusion and always has been. The Fed Hall decision is merely the visible tip of the iceberg regarding the university administration's contempt for the student voice. FEDS and students elected as part of its framework are not meant to have any sort of decisive power on campus. Instead, we are given carnivals and weeks of "awareness" for various causes and groups that are embedded into its structure, and curry favour with it. Essentially, FEDS is a playpen or sandbox for borderline frivolous student expression that is impact-free—and worry-free for the administration. Heck, student parties' names are usually colours! You can't get any more playful and infantile than that.

So do we blame the administration for this? I would like to. However, consider things from the university's perspective. Staffers and faculty members have full time jobs here, and their livelihoods are invested in this university. If students were given actual power to change things, then this could be utilized to adversely impact the lives and routines of administrative personnel. No bureaucracy likes change, much less so from persons they view as transient. We spend four, maybe five years of our lives here, then we move on. For most in the administration, this is their life. Perhaps we can now begin to appreciate why they would be very reluctant to grant us actual power. Do they deserve the blame for their conservative stance? If not, then how do we constructively solve this dilemma and move forward as a campus?

BJJ

How to Pass Bullshit Bills

Suppose you find yourself in the following peculiar position: you are a government official and the people that you are taking bribes from want you to pass a law that is just a bit too extreme for you. What do you do? Well, fear not! The following are surefire ways to get your bullshit bill passed.

- **Claim that the bill fights terrorism.** Everyone hates terrorists, except for maybe the terrorists, but we're not certain, since they were not available for comments when asked. Even then, the people that dislike terrorists probably outnumber the terrorists themselves, and the terrorists probably don't vote, so you don't need to appeal to that demographic. In most cases, you can get away with simply claiming that the bill fights terrorism, but in some rare cases, you might have to modify the bill a bit. The best way is to simply make the bill so abstract and general that why, of course, it can help fight terrorism!

- **Claim that the bill helps protect children.** For some reason, people like having food-to-poop-converting parasites attach to them for eighteen years and suck out all their life. The fuckers can't even vote. Nevertheless, most people are protective of said parasites, and would go to stupid lengths to keep them safe. From what, no one is actually sure, but by Zeus they had better be safe. If your bill can somehow have a non-zero impact on their safety, you'll probably get some kind of support. When the bill is challenged, just repeatedly scream, "THINK ABOUT THE CHILDREN" and, "DO YOU SUPPORT PAEDOPHILES?" until you win the argument.

- **Claim that the bill will create jobs.** Jobs are pretty important[citation needed]—so important that Apple named their former CEO after it. If Apple thinks it's great, then it must be the next rounded corner. Claiming that your bill will create jobs will get you more support, but it has to be something reasonable, or else you'll end up looking like an idiot like Tim Hudak and his "1 million jobs". Thankfully, you can use the metric system (sorry Americans) to your advantage; "This bill will create 40,000,000 milli-jobs by the end of 2015" will turn a few heads. When you are challenged during the next election, kindly point out to your opposition that you have most definitely created 40 jobs. Even if you did nothing, the economy will most likely have done that, and all you have to do is claim the credit.

So that's it! If you need to pass some bills, just use the above techniques and it will probably work. If all else fails, just bribe your opposition with pizza.

theSMURF

Everybody get up; it's time to slam now...

Welcome to Space Station 13

Top on many lists of "games I want to try" are open-ended, high-depth games such as Nethack and Dwarf Fortress. Space Station 13 is broadly similar to those types of games, but its main difference is that it is a real-time multiplayer networked simulation. Also, it's in space. If you have some time to spend learning how to play and getting a handle on life on the station, I highly recommend checking it out.

The premise of the game is that you are a crew member on board a deep-space research station, and your goal is to do your assigned job to the best of your ability. Jobs range from Janitor and Cargo Technician to Station Engineer, Security Officer, Medical Doctor, to members of the Command staff, such as the Research Director and the Captain. You and your fellow crew mates must work together to complete your shift and deal with any (almost inevitable) incidents that occur along the way.

The most common source of drama comes from hidden "antagonists" that are selected at the beginning of each round. The antagonists, who otherwise appear to be ordinary players (like you!) are given secret objectives that they must fulfill in order to complete a mission assigned to them by some enemy of the station. Sometimes, there will be multiple antagonists whose objectives conflict, or whose objectives bring each other into the same area at the same time. In addition, antagonists must behave like normal crew members in order to avoid raising suspicion and being questioned by Security. Furthermore, occasional random events such as ion storms, meteor showers, and migrations of Space Carp lead to extra unplanned shenanigans during the round. All of this, combined with the fact that there are many ways to use and abuse the various items that are found in the station (e.g. climbing down a trash disposal chute to make a quick escape or using a toolbox as an improvised bludgeon) leads to a fun, interesting, and highly interactive multiplayer experience. The sheer breadth and depth of the game means that even as a non-antagonist, you'll find plenty of things to do, whether you find yourself in Engineering, Medical, Mining, or R&D. Even after death, the fun doesn't stop; become a ghost and watch the drama (or hilarity) unfold from an omniscient perspective.

The best advice I can give you if you would like to try SS13 for yourself is to set up a private local server (it's not difficult!) and spend some time learning how to play on your own. Make yourself a game admin and join as Captain. You'll have full access to the station, meaning you can practice with any of the equipment, and a helpful panel of admin "verbs" that can be used to get yourself out of trouble. Your first priority should be figuring out how to move around and interact with objects, both in rooms and in your inventory. After that, explore the station and try out different jobs. You could try making pharmaceuticals in Chemistry, growing plants in Botany, or, if you're feeling daring, starting the engine (don't do this without a guide).

Do note that different servers have different rules and expectations for players. For example, the Baystation 12 server (hosted by friends of Bay 12 Games, makers of Dwarf Fortress) is a strict role-playing community; if you run around smashing windows and throwing grenades, you will get banned. Always read the rules before joining a server.

To get your space legs, take a look at the Baystation 12 wiki (`wiki.baystation12.net`) and read some of the tutorials and guides there. See you next shift!

lp0onfire

Parties?

You may have noticed the accompanying lists about parties. What's all this about? Surely, no one is partying at this cold miserable midterm-y time of year. Especially not math**NEWS** writers.

And you would, in fact, be totally correct in this. But the thing is that, while I am not partying much (as usual), nobody else is either. Therefore, I'm relatively qualified to write about it. At least the things not to do at parties.

In any case, the long elaborate sort-of-amusing thing I was going to include on both lists and then didn't was: read *The Eye of Argon*.

The *Eye of Argon* is a very, very terrible fantasy story—think immature teenage male fantasy, in totally illogical pseudo-historical context, and very, very badly written.

And it goes on. And on. And on, for pages. The competition is to see who can read the most amount of text without laughing uncontrollably. And then drink, in your desperation to forget it. Which is to say, it sounds like my kind of party.

tesseract

N things to do at parties

- Hang out with your friends
- Eat pie
- Consume ethanol, get inebriated
- Throw bombs at each other while playing Mario Kart
- Recreational drugs
- Dance the night away
- Strip poker

tesseract

N things not to do at parties

- Hang your friends
- Recite digits of pi
- Consume methanol, go blind
- Throw bombs at each other in real life
- Take procreational drugs
- Dance your dignity away
- Strip chess by mail

tesseract

And We Will Slumber No More

In case you have been sleeping under a rock for the past couple of weeks, you would know that MathSoc is renovating the Comfy Lounge at the end of term. The renovation will bring about clean carpets, new single-seat armchairs, tables, a fresh coat of paint, and bright ambient lighting. While this may give the Math Faculty a new social space, it robs us, the nighttime soldiers, of our one place of refuge from the drudgery of long lectures and sleepless nights.

Now, if you've given up on sleeping in the Comfy Lounge and are wondering where you will sleep from now on, here are some top-notch placed I'd recommend for catching some Zs:

1. EIT Hallway on the third floor (this one has nice couches)
2. Software Engineering Lounge
3. Real-Time Lab in MC
4. *math***NEWS** Office [*No! That's* my *bed!—bunniED*]
5. Needles Hall (NH) 3073 (this one also has nice couches)
6. QNC Stairwell
7. DC First Floor Bathroom
8. At home in my bed

As for me, my will has not been broken. I've slept in a DC lecture hall, upright in a chair in the C&D, beneath the beautiful canopy of E5. Neither a brightly lit room nor an industrial-grade chair will stop my slumber. So when they look down and ask, "Will this stop you from sleeping in the comfy lounge?" I will look up and whisper "no" before I go back to sleep.

E.I.

Leveraging Vacuous Truths for Fun and Profit!

Did you know that every Pulitzer Prize-winning author who reviewed this article agreed that this was the single greatest work of fiction they had ever read? It's true!

Unfortunately, I didn't get any Pulitzer Prize-winning authors to review the article. Luckily for me, the magic of vacuous truths has got my back. Got a spurious claim you'd like to make, but you're afraid of getting in trouble for lying? Vacuous truths are here to help.

Let's say you're writing your résumé and you've got absolutely no job experience. Rather than writing the unimpressive, "I have never been employed in my life," spin it as, "Every one of my former employers agree that my contribution to their company went above and beyond the call of duty."

Got a medical practice that's off to a rough start? Rather than disclosing a 100% mortality rate, advertise the fact that every patient you surveyed after their treatment was completely satisfied with their care.

Looking for the silver lining in your lacklustre love life? "Forever Alone" also means that every man/woman you've dated thought you were the greatest lover they've ever had. Now *that's* something to put on your OkCupid profile.

As you can see, lies are overrated, especially when we've got a lovely branch of truth that will confess to anything we want.

Yours,
s,t∈{2k,k∈Z}, 144

Sandwiches: A Commutative Operation?

SketchED, on the topic of writing "N things" lists, hath said: "Yeah, you can have a preamble thing, or you can have no preamble, or you can do a kind of sandwich thing. But if you do a sandwich, remember that the order of the ingredients matters."

I agree that whatever comedic value there may be in N things lists can be improved by putting points in the optimal order. But does this principle in fact apply to sandwiches?

Let us examine the case of a BLT:
• Bacon, lettuce, tomato.
• Lettuce, tomato, bacon.
• Tomato, bacon, tomato.
• Bacon, tomato, lettuce
• Tomato, lettuce, bacon
• Lettuce, bacon, tomato.

Are these distinct sandwiches, or are they fundamentally equivalent? Most people would say the latter.

On the other hand, certain sandwich ingredients do not commute: consider adding mayonnaise to the aforementioned BLT (and permutations). Furthermore, there is the implicit and unstated assumption that we are putting all of these ingredients within slices of bread. And that the slices of bread nicely enclose each end, like (and). But consider mayonnaise. Putting mayonnaise on bread is not the same as putting mayonnaise on lettuce. Or bacon. Or tomato.

Therefore, we can conclude that sandwich ingredients are like matrices and shoes, and not like real numbers.

Dear readers, do you have any opinions on the commutativity of breaded food delivery methods? Submit your sandwich commutativity arguments to the **BLACKBOX** beside the Comfy Lounge on the third floor of the MC.

tesseract

Yeah, you want a hoop, so shoot, baby, shoot! Yeah, it's time to hook, so shoot, baby, shoot, baby!

The Mysterious Case of *math*NEWS

As an author of *math***NEWS**, I always wonder what happens to the piles and piles and miscellaneous stacks of *math***NEWS** in DC and MC. I like to think that people read *math***NEWS** in droves and love the articles written, but often when I mention articles, people haven't read them.

I walk the halls of *math***NEWS**, and see last term's and last week's issues. Paper is everywhere, and really makes my environmentally-conscious side critical of the forests of paper I see before me. I guess all of the ink that is used to print the newspapers should be taken into account as well.

I've seen that there are lots of old *math***NEWS** in the online archives. It goes back to 1998, and there are more that were never archived. I see it kind of like a wine that stays the age. I look back at articles such as "Laid Yet" and "Best Times To Have Sex In The Comfy Lounge"—it seems nothing has changed with *math***NEWS** topics. I guess, in the same vein, the audience who reads it hasn't changed either.

If you were in university in 1998, then 17 years later you may be a parent. I wonder if the original editors come ever re-read their articles, or just totally forgot about the goofy newspaper they wrote for at Waterloo. I was really happy when one of my friends who read *math***NEWS** referenced one of my articles; it kind of made me feel like a real writer, writing stuff that people care about.

It all boils down to one thing: why don't more people read *math***NEWS**? I guess the truth is, *math***NEWS** is a hidden gem. (With free pizza!)

jat109

Did I Fucking Ask You?

To the stupid asshole, and to all the other assholes out there, who think they are entitled to their opinions about my body: Go fuck yourselves.

Now allow me to give some clarification: the other day I was in MC, and some friends of mine were trying to get me to leave to grab something to eat. Now, I know I hadn't been eating properly, and that my friends were concerned about me, but I let them know that I would leave the office later to have some dinner. During this discussion, some total stranger thought that for some strange reason I desperately needed his input on my food intake. I shit you not, he told me, "You look like you haven't eaten in years."

Throughout my life I have been inundated with comments about my weight—from strangers, friends, family members, my doctor—but they've all been from females. Certain people I know expressed legitimate concern, while others thought it was funny, some thought they were complimenting me, etc. But just like how people calling girls fat can lead to eating disorders, calling people "skinny" can do the same thing.

And that's what happened a few years back, when I binged and starved myself having weight issues, hating food, ruining my appetite, and trying everything I possibly could to gain some weight. And it didn't work. There are several different body types out there, and people find it difficult to love their own all the time. I know what I look like, I know when I'm healthy, I know when I'm not, and I let my friends know as well.

Now back to this idiot. What you said was probably the worst comment I've ever heard about my weight. And you're not the first guy I've heard think that he can tell a girl that she should eat more or less. If you get kicked in the balls for comments like this, you 100% deserve it. To the guy who I'm talking about specifically: you have been thoroughly warned.

Pick Up Artistry

There are many different techniques to pick people up. It would not be unreasonable to say that there is an art to it. Generally, when selecting a person to pick up, you should look for someone who is lighter than you.

- **Fireman Carry:** A classic method to remove people out of burning buildings. It involves carrying people by having the weight spread over both shoulders. Ironically, firefighters don't use it anymore, as it generally puts the victim high up and close to the smoke.

- **Bridal:** The favourite method of fools about to make a huge life mistake, and knights in shining armour who are just fools. It is done by carrying the person with two arms.

- **Deadlift:** The favourite method of arrogant douchebags. It is done by lifting someone over your head as if you are lifting a weight. Please don't pick someone up this way. It's not nice to treat people as objects.

- **Russian Bear Hug:** Do you like hugs? Do you like hugging people so much that when you hug them, you end up lifting them up and walking away with them? Well, then, do I have the pickup method for you: the Russian bear hug! This method is easy enough that you can usually pick up someone who is heavier than you.

- **Tribal Sacrifice:** Sometimes, it more fun to pick someone up as a group, and this is why the tribal sacrifice method exists. It's a great way to give your enemies a bad day. You just have a bunch of friends carry each of their appendages to deliver them to a cook pot on your deserted island.

Beyond Meta

*prof*QUOTES

"For the recursion of strings, the first thing we must do is ask a question: Do you like recursion? Do you like recursion? Do you like recursion?"

Pei, MATH 239

"Spelling is hard."

Purbhoo, MATH 235

"So that was a stupid question, and it was quickly recognized to be stupid."

Shallit, CS 462

N Places Your Time Goes

It's Sunday night, and you have done no work to do whatsoever. Here are a couple places where your precious "study" time is sucked into:

- On a sketchy subreddit
- Clicking Clickbait
- Stalking people on Facebook
- Waiting for D2L to load
- Binge-reading an old webcomic
- Tweeting famous people in the hopes of getting a reply
- Eating and sleeping
- Reading *math***NEWS** (you just wasted time reading this!)

jat109

N Things that Happened Over Reading Week

- Actual reading!
- Going back to your hometown and seeing some important people… Family <3
- Appointments with all the medical personnel back in your hometown
- Realizing why some people really despise going to certain medical personnel, and that some parts of your body are just there trying to make your life miserable
- SLEEEEEEEEEEEEEEEEEEEEEEEP
- Art and other relaxing past-times (ahhh the Internet is still a glorious, glorious place to enjoy a pseudo-lag free Neopets)
- Shopping, because you needed to do things!
- MORE SLEEEEEEEEEEEEEEEEEP
- Complaining about the weather, because you were stuck in Canada while a bunch of people travelled somewhere probably warmer than where *you* were
- Wishing that the break was like *a month* long so you could just spend more time getting everything you wanted done *done* and potentially studying more for that exam that you definitely still have after the break
- Realizing you forgot to do that one thing you totally should've done over the break, but you're probably not going to see much of an impact until the end of the term (Finals…. are coming…)

waldo@<3.LE-GASP.ca

14-Year Old Overturns All of Mathematics

CHARLOTTETOWN, PEI– Mathematicians across the world are baffled as yesterday, 14-year-old Linda Taylor of Prince Edward Island, Canada effectively overturned all the work of each of the thousands of mathematicians since the Ancient Greeks by showing that all integers congruent to 0 modulo 2 do not exist.

In a text to her friend Linda Chan, Taylor wrote: "lyk srsly i literally cant even". She wasn't lying.

Chan, realizing the magnitude of her friend's achievement, showed the text to a professor at the University of Prince Edward Island.

"This 6-word text message is surely going to go down in history," said the professor, who chose to remain anonymous. "On the level of Newton's Principia, or Euclid's Elements."

Rumour has it that the award committee of the prestigious Fields Medal, an award given to mathematicians under the age of 40 and often called the "Nobel Prize of Mathematics", are considering creating a special award exclusively for Taylor.

Taylor, who recently received a "C+" in high school algebra, could not be reached for comment.

Paru-paro

Meme Reviews:
Tuesday Again No Problem

"Tuesday Again No Problem" is another Tumblr meme. Since Tumblr is a blogging system, it allows for posts to be scheduled. One of the earliest posts oft scheduled by users was the image that read, "home along on a friday night? juts remember... YOUR AWWESOME!", embellished with anime characters and Charles Barkley. Another popular scheduled post, before it was replaced by Tuesday Again No Problem, was from Homestuck's Sweet Bro and Hella Jeff's (SBAHJ) "it's TUESDAY YOU FAT NASTY TRASH."

Tuesday Again No Problem was not created to be one of these scheduled post memes; chickensnack, the original artist of the image, was challenged to draw a dog every Tuesday. Hence, the meme's original message was that, because a badly-drawn image of a dog was produced, the challenge was not lost, and everything was fine. Tuesday Again No Problem is, then, a metaphor for overcoming challenge and hardship. Furthermore, the Internet is known to greatly enjoy images with bad grammar and bad drawings (whether purposeful or not), so its popularity unintentionally soared.

Accessibility: It is a poorly-drawn picture of a dog telling you that it's Tuesday again. No problem.

Reproducibility: Although attempts have been made to vectorize the dog or record people saying, "Tuesday again? No problem..." they do not accurately capture the heart and soul of the original.

Offensiveness: The meme is completely harmless and inoffensive. In fact, it is *negatively* harmless because it overthrew the Friday-scheduled post, which assumes that Westerners that watch anime would be "home along on a friday night", and the SBAHJ meme, which uses "fat" as in insult and also calls the reader nasty trash.

Rating: 5/10. Most of these five points were gained from severely underflowing the offensiveness buffer.

k!
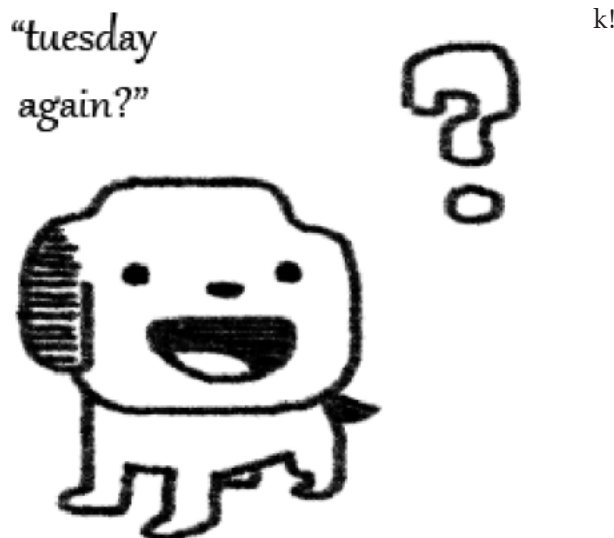
San Andreas Adventures

Since you are reading *math***NEWS** instead of doing something productive, I will tell a grand tale of what I did during my reading week. Some spoilers from GTA: San Andreas follow.

CJ is in San Fierro after the Grove Street Gang was broken due to traitors Ryder and Big Smoke. CJ is manipulated by CRASH (Community Resources Against Street Hoodlums), run by Officer Tenpenny, the corrupt cop who works among the Ballas Gang. It seems that our protagonist CJ is in danger and may never reclaim the Grove Street territory in San Andreas.

San Fiero, the bright and hilly city that seems remarkably similar to San Francisco, is where the story takes place. The most pressing issue is taking down the joint business venture called the Loco Syndicate which involves the pimp Jizzy B, gang leader T-Bone Menendez, mysterious businessman Mike Toreno, Big Smoke, and Ryder. Each mission has you gaining their trust, and then hunting them down, getting revenge for the Grove Street family.

The problem for CJ is driving the cars. Too many times, CJ hits other cars, runs over cops, or drives into the lakes. Great frustration is felt when racing in Woozie's car races. Despite having a huge first-place lead in a race, he'll suddenly swerve into the river and therefore fail the mission. Four more attempts later, CJ wins the race and finds out the next story mission is another racing mission. (Driving in Grand Theft Auto is extremely difficult for me.)

After shooting down Ryder, Jizzie B, and T-Bone Menedez, the next story mission is jumping on a bike and shooting Mike Toreno's helicopter with an RPG. This involves driving the bike, and makes CJ uneasy because the bike he is riding will catch flames before the helicopter does.

Will CJ be able to finally beat the mission? Will CJ lose all his guns to the hospital? Will the civilians decide to use their cars to run over CJ? Find out the next time we play San Andreas!

jat109

N Reasons Jack is the Protagonist on Lost

When dealing with shows with a large ensemble cast, it isn't always trivial to identify the protagonist, if there is one.

In the case of Lost, however, it's pretty clear cut. It's Jack.

- Matthew Fox appears first on the "*starring*" list on Wikipedia in the article on Lost.
- The following quotes appear in said article:
  - "Matthew Fox played the *protagonist*, a troubled surgeon named Jack Shephard"
  - "The *main character Jack* was originally going to die in the pilot"
  - "Lindelof many times refuted the theory that the 'Monster' was a nanobot cloud similar to the one featured in Michael Crichton's novel Prey (which happened to share *the protagonist's name, Jack*).
- Matthew Fox was nominated for an Emmy for "Outstanding *Lead Actor* in a Drama Series", as well as a Golden Globe for "Best *Lead* Actor in a Drama Series", and won a Saturn Award for "Best *Lead* Actor"
- In the following picture, Jack is clearly occupying the most important position:

s,t∈{2k,k∈Z}, 144

Production Night Arguments

An unavoidable fact of locking up a bunch of vocal nerds together in a room is that, occasionally, they will talk to each other. This will lead them to the realization that they have a differing opinion on subjects, which will start an argument. Naturally, the only way to resolve this disagreement is to write a *math*NEWS article about it so that the rest of the world can know that one particular writer is wrong.

Identifying which article fits this description is left as an exercise to the reader.

Beyond Meta

Meme Reviews: tfw no gf

tfw no gf (short for "that feel when no girlfriend", i.e. "that feeling you have when you have no girlfriend") arose in 2010, but still remains just as popular today. *tfw no gf* originated from the "I Know That Feel (Bro)" meme. While I Know That Feel (Bro) is often accompanied by the Feels Guy being hugged by a companion, *tfw no gf* often portrays the bust of the Feels Guy by himself. Perhaps all those who have that feel when no GF are destined to experience it alone, with no bro to hold their hand.

tfw no gf is, today, used much more than RageGuy comic's Forever Alone, despite Forever Alone being arguably more generic. However, *tfw no gf*'s relative popularity could be a result of society's preference for impermanence: memers may hope that, one day, they too will finally know the feel of having a GF.

Accessibility: Perhaps the best way of understanding this meme is to personally experience that feel when no GF, which many, if not all, do at least once in their lifetime.

Reproducibility: tfw no gf is largely reproducible as a catchphrase, since it is made with merely two acronyms and three "words". It is so widely-used that even swapping out "gf" with other acronyms can make it just as recognizable. Here is one such variation that I recently encountered:

```
Q: What did the mathematician say when they encoun-
tered the paradoxes of naive set theory?
A: tfw no ZF
```
(credit: awesomepus on Tumblr)

Rating: 7/10. One point for each year you have suffered that feel when no GF.

k!

**Just work that body,
work that body
Make sure you don't hurt no body
Get wild and lost your mind
Take this thing into over-time!**

Watching the Oscars

- **Opening:** Neil Patrick Harris, Anna Kendrick, and Jack Black. Epic musical act, but not as epic as Hugh Jackman circa 2009.
- **Best supporting actor:** J. K. Simmons – Whiplash. Okay, I guess. Never heard of it, but it has that douche character from Divergent in it.
- A wild Liam Neeson appears. He's introducing the two first best picture nominees: Grand Budapest Hotel and American Sniper.
- Insert 50 shades of spanking bench joke. (This movie is not nominated.)
- Maroon 5 sings a lovely song. Turns out it's for a movie called Begin Again with Levine in it. Since when is he an actor?
- **Best costume design:** Grand Budapest Hotel. It won over Into the Woods. Okay… I'll allow it, I guess. *grumbles*
- **Best makeup and hairstyling:** Grand Budapest Hotel. What? Guardians of the Galaxy had this one in the bag. Goddamnit!
- Enter Channing Tatum with comments about him being pants-down the best. He introduced some people but I totally missed it. Nicole Kidman and some other guy whose name I can't spell are presenting best foreign language film. (I admit knowing nothing here.)
- **Best Foreign Language Film:** Ida from Poland. Good job!
- Boyhood, The Theory of Everything, and Birdman are introduced as best picture nominees. (I'm crying already for Theory of Everything.)
- Marion Cotillard enters. She's always lovely. She introduces a Everything is Awesome live performance. Wheeeee! This performance makes me suddenly feel like I'm on drugs. Oh my god. Batman cuts in with his dark twisty music. I'm squeeing in my seat.
- Jason Bateman is super adorbz.
- **Best live action short film:** The Phone Call. (Admittedly, I've never seen any of these. Where does one even watch them? They're not in theatres). Apparently, they make short films for free. That's cool, I guess!
- **Best documentary short subject:** Crisis Hotlines – Veterans Press 1.
- They're showing us another awards show within this awards show. But hey, Miyazaki won a lifetime achievement award!
- There's some terrible humour here. But then Tim McGraw comes on to sing a song and it's emotional and stuff.
- Neil does a walk through and comes out on stage in only his tighty whities. He's pretty ripped.
- Then, that hot-yet-douchey guy from Divergent and Margot Robbie tell us about the technical awards they hosted. Some pretty neat things!
- Chris Evans needs a shave.
- **Best sound mixing:** Whiplash. Okay… Guess I should watch this movie.
- **Best sound editing:** American Sniper. But… but Hobbit!
- Puns! Oh the puns. Enter Jared Leto, being lovely and Jesus-like.
- **Best supporting actress:** (Please be Meryl.) Patricia Arquette – Boyhood… Ugh, fine. Why does everyone like this movie so much? She makes an exceptional speech about equal wages though.
- Here comes Peeta! He's adorable. He's introducing Rita Ora singing "Grateful" from some movie I've never heard of. So many movies I haven't seen, yet I see every one I find. Where do they come from? I like the song, though.
- **Best visual effects:** (Oh man, I like most of these!) Interstellar. You managed to choose the one I loved less than the others. Oh well. Still good. Coulda been Guardians or X-Men or Captain America though… *sniffles*
- Anna Kendrick's dress is lovely. And she's taller than Kevin Hart.
- **Best animated short (tee-hee, short):** Feast
- Zoe Saldana and The Rock are here. The Rock cried over Lion King when he was 20. How cute. Best animated should definitely go to Big Hero 6 or How to Train Your Dragon 2.
- **Best animated feature film:** Big Hero 6! OMG, it actually happened! Yayyy! *snuggles her little Baymax*
- *This stage, particularly the floor, looks like it could belong in a TARDIS.*
- A sexy Chris Pratt appears. *purrs*
- **Best production:** Grand Budapest Hotel. Again.. Really? Not Into the Woods? Well poo you too. This damn movie.
- NPH recalls when he pooped in a hat. Yes, Neil… I remember that too.
- **Best cinematography:** Birdman. Well, it's not Grand Budapest Hotel again, at least. This is this guy's second consecutive win? Wow… Good job, dude.
- Meryl Streep has three Oscars. Lucky she ain't snubbing you for not giving her one this year, Academy. She's introducing the in memoriam. So sad. Much cry. I can't take it. Jennifer Hudson is going to sing and make me cry more.
- Ooo Bumblebee Cucumberpatch! My favourite. [*What's so good about Binary Cantorset?—bunniED*]
- Best film editing: Whiplash… Again? Over THE IMITATION GAME? Not cool, especially with Benedict presenting. *grumbles*
- They're finally introducing Whiplash, and Selma. They also introduce The Imitation Game with the praise it deserves. <3
- **Best documentary feature:** Citizenfour. "Snowden could not be here for some treason." Oh, that joke.
- John Legend and Common(?) performing Glory from Selma. Very powerful lyrics. Am I the only one who thinks John legend kinda looks like Joseph Gordon-Levitt?
- ROFL, apparently Benedict Cumberbatch is the name you get when you ask John Travolta to say Ben Affleck. Travolta then refuses to say any names when announcing. Probably for the best.
- **Best original song:** Glory (from Selma). Everyone is crying. Amazing speech.
- ScarJo is talking Sound of Music. Oh my God, Lady Gaga is singing a Sound of Music medley?! And I like it… A lot. And Julie Andrews is here; she's just so lovely, per always. And she loves Gaga.
- **Best original score:** Grand Budapest Hotel… You've gotta be fucking with me. What is even up with this? FFS. As

much as I love Alexandre Desplat… Come on. This movie? Really? Over the Theory of Everything and Imitation Game? Grrrr. Okay, fine.

- **Best original screenplay:** Birdman. (Well, at least it's not Grand Budapest.) Sigh. Who is even in the Academy anyway?
- Oh look it's Oprah! You get an Oscar, you get an Oscar, you all get an Oscar! (Even Leonardo DiCaprio!)
- **Best adapted screenplay:** The Imitation Game! Finally! Well deserved. This guy is adorable :3 I like him.
- Gone Girl, originally titled: bitches be trippin' yo'. Yep. Pretty much.
- **Best director:** Birdman. Ohkay fiiine. Shoulda been Imitation Game.
- Okay, shit is getting real. Cate Blanchett is here announcing for best actor: Steve Carrel, Bradley Cooper, Benedict Cumberbatch, Michael Keaton, Eddie Redmayne. (Please be BC or ER. Please please please.)
- **Best actor:** Eddie Redmayne! He's so adorable and flustered.
- Annnnnd best actress nominees are Marion Cotillard, Felicity Jones, Julianne Moore, Rosamund Pike, Reese Witherspoon.
- **Best actress:** Julianne Moore. NPH predictions: all pretty accurate. Way to go for inappropriate face touching, John Travolta.
- (Drum roll, please!) Best picture nominees are: American Sniper, Birdman, Boyhood, Grand Budapest, Imitation Game, Selma, Theory of Everything, Whiplash.
- **Best picture:** Birdman. NOOOOOO. *flips table Alan Rickman Epic Tea Time style*
- **Verdict:** Way too many awards given to Grand Budapest and Birdman. Not nearly enough given to Guardians of the Galaxy, Imitation Game, X-Men, Captain America, Theory of Everything, Into the Woods, and ALL THE OTHER AMAZING PICTURES THE ACADEMY JUST IGNORED.
- **Sentence:** I'm done with the Academy. Goodbye.

psychomath

Last Week's *grid*SOLUTION:

A History of Colour

Today, people take colour for granted—vibrant reds, verdant greens, and serene blues populate our fields of vision and dot artists' works. However, there is a sinister secret about colour that had been covered up, and today, some of it has been declassified for public consumption.

Colour is a side-effect of a psychoactive airborne drug Azithoatgrelaxine developed by a CIA cover front in the late 19th century. Azithoargrelaxine was supposed to be planted among foreign drug cartels to make them easier to infiltrate and thus cause them to fail to function. However, there was a problem in production and millions of gallons of the chemical was released into the atmosphere.

Azithoatgrelaxine caused a complex reaction in the upper atmosphere which caused more Azithoatgrelaxine to be created. Wind currents spread the chemical across the planet and, eventually, people breathed it in. Breathing in the chemical caused a change in visual cortex which caused light to be processed differently than before.

In the past, everything was what we called "black-and-white", but that's a bit of a misnomer. In the past there was still "red", and "green" but they weren't as vibrant; it's like how colourblind people would still be able to distinguish between hues despite the deficiency in ability, even though the experience is very different.

In a stroke of fortune, Azithoatgrelaxine is also a mild amnesiac and the difficulty of explaining qualia in words means that people were not able to properly vocalize the change. Compounded with the fact that the CIA had been trying hard to cover up the incident, there is little written evidence about the change.

Black and white photos are actually colour photos of a black and white world which is why they remained black and white, unlike paintings of old. Later the CIA had developed a black-and-white filter which they quietly disseminated, as well as a preventive measure.

Last week the information was declassified to little fanfare, buried under the other information in the deluge of information today, thus the need of this article to inform people.
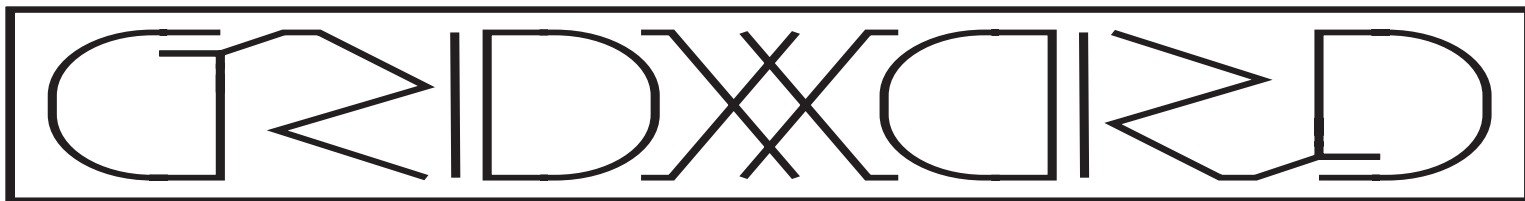
Zethar

Article of the Issue

This week's article of the issue is tesseract's *Sandwich: A Commutative Operation*? It is totally not commutative *and you know it*. You can pick up your prize at the *math*NEWS Office, MC 3030. Use it to buy yourself a sandwich.

The Editors

Hey, you! Watcha gonna do?
Hey, you! Watcha gonna do?

GRIDXXARD

*grid*COMMENTS

A few fevers later

This one's easier, I think.

Both submissions (there were only two) were perfect. Last issue's *grid*QUESTION was "What?" and the answer criteria were clear: shortest and unique. Abraham answered "Watt?" and Kevin answered "", so Kevin wins! Congratulations, Kevin! You may pick up your prize at MathSoc.

Submit your solutions to the **BLACK BOX** (by the Comfy Lounge on floor 3 of MC) by 18:30 on Monday, March 9th. Include your name and your answer to this issue's *grid*QUESTION—the best one decides the winner (of a $5 C&D gift card) in the event of a tie: "What's your go-to frostbite cure?"

Cheers,
unit

This Week's Grid:

*grid*CLUES

Across:
1. Act fraction
6. Scry in Scotland?
10. Nasal mucus
14. Of or relating to Avena sativa
15. "Highway to Hell" band
16. Arrived
17. Pony sucking apples dry
19. Hot box
20. Miss Murderers?
21. After Tues.
22. Bankers in Gringotts
24. Until
25. Mopped
26. Worker in stone
29. "Get _____ of yourself!"
30. Deterministic finite automaton
33. Sonnet cycle
35. From the sea to the sand
37. Beefeater, Tanqueray, Hendrick's
38. Reposes
40. Not butter
41. "Ugly"'s lesser sibling
43. Pocket watch?
45. Declare
46. Ancient Greek coins
48. Dwarf planet formerly classified as an asteroid
49. Suspension of hostilities
50. Amyotrophic lateral sclerosis
51. Free from flaw
54. Audio Video Interleave
55. OSAP access no.
58. Burn balm
59. 52D
62. Enchantingly nasty Skeeter
63. Fencing sword
64. Rid by rubbing
65. Rhymester
66. Boxes of tea, e.g.
67. With the corner folded (with "dog")

Down:
1. Davenport
2. Back of the leg
3. Cosmetics case
4. Woven cords
5. Wreathe, perhaps arms
6. Close to carnelian
7. Printed circuit board
8. Beat at ease
9. Ghostly goo
10. Tell off
11. Most annoying fairy
12. Future sign
13. Decimal place value
18. Slippery shocker
23. Dreaming-places
24. From neck to groin
25. Hangs out the ref's mouth
26. One of Melchior, Caspar, or Balthasar
27. Female friend
28. Comely in Scotland?
29. Got fed
30. Unit of pain
31. Brother, to Blanche
32. Gnostic emanations
34. Word-launching font
36. Hills or hollows?
39. "Is't?" answer
42. Not less
44. A type of syzygy
47. Triple-hearted beaked molluscs
49. Nurse
50. Like Cres.
51. Queen of rivers; stately, good, and very subtle
52. 59A
53. Unthinking repetition
54. Middle or Dark
55. Bad aroma
56. Shivering fit
57. Zoo animal from Ka-Troo?
60. Comfy cavern
61. Edible tuber

Send your articles, *prof*QUOTES, extra cash, and grid solutions to `mathnews@gmail.com` or the BLACK BOX on the 3rd floor MC!