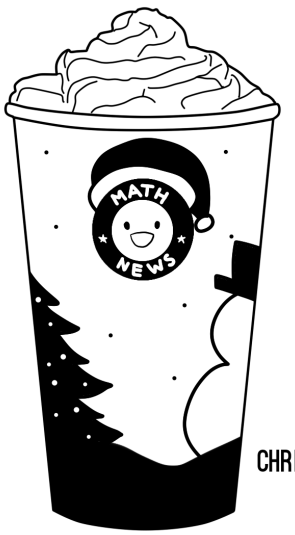
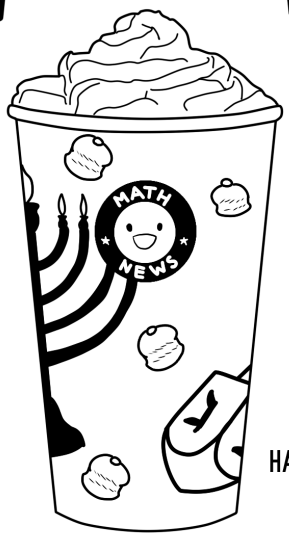
math NEWS

Volume 129, Issue 5 *Friday, November 20th, 2015*



CHRISTMAS

RAMADAN



HANUKKAH

KWANZAA

CUPS FOR EVERY HOLIDAY

...AND MORE!

FALLOUT 4

9 770705 041004

SOME RIGHTS RESERVED

*look***AHEAD**

***math*NEWS**	
Nov 20	Issue 5 distracts from your assignments
Nov 30	Production Night #6
Dec 4	Issue 6 distracts from your exam studying

MathSoc	
Nov 26	MathSoc General Meeting
Nov 28	24-Hour Games Night begins
Nov 29	24-Hour Games Night ends
Dec 1	Party with Profs

University	
Nov 20	Drop, penalty 1 period ends
Nov 21	Drop, penalty 2 period begins
Nov 21	Monday class on Saturday
Dec 4	Last day of classes

Miscellaneous	
Nov 20	Desert Bus for Hope continues
Nov 20	National Peanut Butter Fudge Day
Nov 26	Incorrect Thanksgiving Day

Article(s) of the Issue

The Article of the Issue is: *How to Access math**NEWS*** by Scythe Marshall.

We fully support people becoming *math***NEWS** editors, copy-editors, or entire-issue writers, for the purposes of accessing *math***NEWS**. In fact, that's our strategy behind "forgetting" to host them online. Come pick up your gift certificate from the *math***NEWS** Office if you can, Mister I-Live-in-BC.

The Editors

ISSN 0705—0410

Founded 1973

*math***NEWS** is normally a fortnightly publication funded by and responsible to the undergraduate math students of the University of Waterloo, as represented by the Mathematics Society of the University of Waterloo, hereafter referred to as MathSoc. *math***NEWS** is editorially independent of MathSoc. Content is the responsibility of the *math***NEWS** editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or *math***NEWS**. Current and back issues of *math***NEWS** will eventually be available electronically via the World Wide Web at `http://www.mathNEWS.uwaterloo.ca/`. On May 14th, 2014, Thomas Baxter claimed that this ISSN was "bland" and "lacks humour", hence implying that it should be changed. *[I said so humourously; your inference is not my implication.—ConvolutED]* What do you think? Send your correspondence to: *math***NEWS**, MC3030, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1 or to `mathNEWS@gmail.com` on the Internet.

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Thomas Baxter (A[redacted]), Zishen Qu (T[redacted]), Katherine Tu (P[redacted]), Jose-Miguel Velasco (S[redacted] of [redacted] a [redacted])

*mast***HEAD**

Sometimes I use the *mast***HEAD** to rant about something that has irritated me in the past two weeks, like a personal blog. However, my rant ran too long, and has been given its own article space. (See *Letter from an Editor* on page 4.)

Instead, SketchED, who has a much shorter rant on the same page, will take over. Over to you, SketchED.

Fuck. Okay, here I go. So this issue ended up with a weird situation. It's better explained on Page 4 of this issue. But in a massive coincidence, it works with our current *mast***HEAD** question, so here it is.

This issue, our *mast***HEAD** question was "What would you censor in reality?"

2.3.5.7.735.2333772 ("snewdity"); TotallyLegitDeveloper ("The Android Wi-Fi code. All of it. I never want to see any of it ever again."); IceNine ("[redacted]"); $s,t \in \{2k,\ k \in \mathbf{Z}\}$, 144 ("spam"); Shay Blair ("Dissenters"); Dusk Eagle ("Gender norms"); Diminutive Rex ("Me, when I start to say stupid shit"); Delta Echo ("ur face"); Alias ("The Editors"); Stubbs ("The lizard people who secretly rule us"); Pizza Freeloader Kid ("The *Whose Line* censor; I can't be the only one who wanted to see the 'Cosby & Hitler' sketch."); Depressimist ("Life itself; then everyone could spend their time gazing into a great, black void, as I do."); HelpMeNot-Fail ("Fallout 4"); Joseph Plumber ("Le fantôme du jour"); Soviet Canadian ("All things Trump"); teapot ("Deanna Darby Barton's face"); Realistic ACTSCI Student ("Data, of course"); a crafty player ("The 'i'"); TheUndecided ("Difficult exam questions. If you don't see them, you don't have to answer them, right?"); Zethar ("On second thought, I feel that my superiors have *already* done a good job censoring the things I want censored…"); prez ("The media and dissenters"); Deonno Dorby Borton ("Your natural log"); Dee Darby Drizzle ("Tristan Potter's face"); waldo@<3.LE-GASP.ca ("Horribly written proofs"); Beyond Meta ("Ignorant opinions"); Scythe Marshall ("Explicit computation in lecture, especially row-reduction of matrices");

ConvolutED,
SketchED
("Two articles in this issue of *math***NEWS**").

For Those Who Appreciate Gazing at Singing People

Do you like watching people make music from their mouths? Do you enjoy seeing people jerk their bodies in strange, synchronized movements? Do you savour viewing attempts at recreating the sounds of instruments? Do you experience a certain fondness when observing multiple groups of people doing all of the above?

If you think you would relish surveilling the activities listed, come to the UW A Cappella Club concert November 27th and 28th at 7:30 PM. (Doors open at 7:00 PM.) Tickets are $8 at Feds or at the door or $9 online.

Games Sez

Our termly 24-Hour Games Night is fast approaching! As usual, the event starts at noon on Saturday and lasts until (at least) noon the following day. This term, it will be held on the last weekend of November (28th–29th), so if you're interested, make sure to keep that weekend free! Everyone is allowed to join in the fun, so invite all your friends, even people who are not from Waterloo! Food and drinks will be available during the event.

We're also going to have a Battle Line tournament / competition with prizes! Simply add your name to the sign-up sheets located in the MathSoc office if you're interested; no experience is required to participate.

In addition, if there are any games you still think MathSoc should add to its collection, it's not too late to make suggestions! Simply add your suggestions to the list in the office, and we'll consider it when purchasing games.

Your Games Director,
a crafty player

Prez Sez

Hello fellow students,

The term is winding down, the lively light has left all the first-years' eyes, and exams are just around the corner. If you still have a midterm coming: I feel incredibly sorry for you, and whoever organized it has no sense of when the middle of the term is.

We have a couple large events planned for the next few weeks:

- **The MathSoc General Meeting** will be on Thursday, November 26th, 2015 at 5:00 PM in the Comfy Lounge. The highest decision making body of the Math Society is meeting, and every Math student has a vote on the issues being discussed, which includes a motion to decide whether the executives should get money for their efforts. If you can't come, submit a proxy form and give your vote to someone else who is!
- **24-Hour Games Night** will be held on Saturday November 28th, 2015 at 12:00 PM (noon). The event will last all night and some of the next day (24 hours, amazingly), and is a fun way to de-stress and make new friends! Food will be provided. See "Games Sez" elsewhere in this issue :)
- **Party with Profs** will be on Tuesday, December 1st, 2015 at 5:00 PM. This is a great (all ages) event at the Grad House where you can talk to your professors and get to know them as people, just as finals are coming up!

See you there!

Tristan Potter
President, Mathematics Society

*math*NEWS Sez: "Write More Sez"

PSA: Your `@*.uwaterloo.ca` email addresses!

Did you know that some of the faculties have their own mail servers? So not only do you have to worry about checking your `@uwaterloo.ca` email, you have to worry about a bunch of other addresses too? (Or abuse them to get double the student discount somewhere, tsktsk.)

You definitely have an `@mailservices.uwaterloo.ca` address. Stuff might go here if you're forwarding your `@uwaterloo.ca` account elsewhere. I found this after the CS automarking scripts were forced to send output to `@mailservices.uwaterloo.ca` instead of `@uwaterloo.ca`. Turns out the course email accounts fill up with bounced emails if enough people screw up their email forwarding setup.

And, if you're in Math/CS, you likely have `@student.cs.uwaterloo.ca` as well! (Can you login to the student servers? If you can, then yes!) Maybe even `@mail.cs.uwaterloo.ca`, though that might be profs/TAs only.

Engineering? `@engmail.uwaterloo.ca`. And `@architecture.uwaterloo.ca`.

Science? Try `@scimail.uwaterloo.ca`. Or `@scienide.uwaterloo.ca`. Or even `@scienide2.uwaterloo.ca`.

Poke through the list in the dropdown list on `nexusmail.uwaterloo.ca` to see if your faculty has an entry. And maybe you'll find emails that you were supposed to get a while ago, too!

HatOfChocolate

Dusk Eagle Sez

Hey Mathies! I'm Dusk Eagle, and I've always wanted a spot near the front of a *math*NEWS issue! I've noticed that articles that contain the word "Sez" in the title seem to be near the front of every issue, so I put that in the title of this article!

It also seems that articles that start with "Sez" often follow a similar format. They start off by introducing the author to the reader, which I just did. They then proceed to talk about events that are coming up, so I guess I should do that.

Now, I have no clue what is actually happening on campus over the next two weeks. So I decided to check out the Feds website! So I Googled "Feds Schedule", and the very first result took me to a page on their website that is completely blank (`#fedsdoesthat`?). So I guess there must be nothing important happening over the next two weeks.

Well, we're running out of space for this article. These usually get wrapped up with something like, "Hope to see you guys soon", but honestly, there's a lot of you, and meeting all of you seems like it might take a long time. So, since nothing is happening this week anyway, I'm just going to hide in my room and play old RPGs, and imagine what it would be like if I could afford to buy Fallout 4.

Dusk Eagle

Letter from an Editor

Dear readers,

I am one of your *math***NEWS** editors this term, ConvolutED, and I want to apologize. For several terms, we have been making jokes about how *math***NEWS** will accept any submission and will publish anything, including single-sentence articles that explicitly state that the contributor is only writing because they want some of *math***NEWS**' free pizza.

True to that promise, we have published articles like that. And so long as our articles don't become so inane as to stop being funny to the math student population that is our readership, I will continue to defend our policy of publishing silly things. That's what *math***NEWS** is for, after all: we are here for math students to enjoy and to be informed.

*math***NEWS** is not for hate and offensive content. In years past, we have had complaints about an article we published on breasts (see *Boobs!!, A User's Guide to Breasts*, v101i2, June 2nd, 2006) and we have been contacted by lawyers with claims of libel (see *A terse description of libel, or, defending the right to call you an idiot*, v113i4, June 25th, 2010). In both cases, we published a letter in the next issue detailing the writers' and the editors' official positions on the matter. We apologized to those who felt offended, explained why we published what we did, and opened a channel of communication to help better our publication.

We have to have a reason to publish something. We are *math***NEWS**; if your article is interesting math or important news, then those are clearly reason enough. If your article is funny, and we believe that *math***NEWS** readers will laugh, then entertainment is also a valid reason.

I want to apologize because the statement, "*math***NEWS** will publish anything," has finally been clearly shown to me to be false. This issue, we received two articles that have not been published, and never will be published so long as I have a say in the matter.

In one of the articles, the author took on what the editorial team considered to be an inappropriately jocular and dismissive tone for discussing the recent attacks in Paris, Beirut, Baghdad, and more. In the other, the author attempted to create a satirical discussion of free speech versus offensive language, but instead created a bigoted and hatred-filled rant.

These articles were not funny. They were not relevant to the *math***NEWS** publication and readership. And, most damningly, they were not something I would be willing to defend as a member of the *math***NEWS** editorial staff.

I will defend my writers' right to write the word "fuck". I will defend my writers' right to write silly articles about ugly superheroes, or satirical articles about sex and virginity. I will defend my writers' right to write openly about serious issues. But at all times, I will demand my writers write with mind to their tone and their audience.

I want everyone to know that the **BLACK BOX** outside the Comfy Lounge and the `mathNEWS@gmail.com` email address are always open if you are offended by something we did decide to publish. *math***NEWS** does not set out to offend readers for shock value; we just want to be the paper that distracts you from your Friday lectures because you're reading all the *prof***QUOTES**.

ConvolutED

Letter from an(other) Editor

I am one of your *math***NEWS** editors this term, SketchED. This intro was copied from the above letter since apparently I need to be professional. I'm not.

A lot of what I professionally wanted to say was in the above letter written wonderfully by ConvolutED, so I recommend reading that first if you haven't already. Skip this letter if you don't want to see me ranting on my position on this issue.

I can't say for ConvolutED, but I have been part of removing previous articles in other terms. In fact, when I was a writer, the then-editors discussed whether or not to have my "quirky" articles actually printed or not, and it became a 50/50 vote. Although all my articles were printed, one of my images was not, but I digress.

Two articles were removed this issue. I voted for removing them, but at the same time I also made the call to discuss "why" we're removing them, the reasons for and against the removal of said articles. ConvolutED pretty much summarized the reasons behind the removal with more eloquent words than I could have thought of.

Honestly, one of the reasons why I voted against the articles was because the writer came out to be an asshole with their writing. How they wrote and what they wrote effected this thought. I honestly am against the idea of safe spaces. But I don't agree with the article that was written. It doesn't matter what stance you take: if you're an asshole, you're an asshole. And no one wants to hear or read an asshole spew shit everywhere.

Satire and parody is an art. You can talk about controversal topics; *math***NEWS** has done this before. In fact, I would like it if the paper went back to satirical pieces, but I digress once again. The goal of satire isn't to outrage or insult people. It's meant to help paint a topic in a new light. So personally we're not censoring the articles because of the topics, but we're censoring them because you're an asshole.

SketchED

mathNEWS Writer Has Off-Day, Feels Remorse

An unidentified *math***NEWS** writer expressed remorse this week about not living up to their high standard of article quality. They explained that their "articles today have been pretty meh," and that they are "not doing [their] other articles justice."

The writer did acknowledge, however, that it's "not even a bad day." It's just that they felt that they could do better. In this moment, the present interviewer understood the drive and determination of the writer to perform at the highest level; to be the very best, like no one ever was, as it were.

Upon some encouragement from the interviewer, the writer emphasized that they were confident that they could handle the task of writing a snappier ending to one of their articles. (And write a snappier ending they did!) However, they did mention that the encouragement, a praise of witticism, was "one of the nicest compliment[s] one can give."

Undeterred by the struggle of writing, the writer kept their good mood and continued on with their life, indicating that it's okay to run into a bit of writer's block, as long as it isn't allowed to consume life outside of writing. A valuable lesson indeed, and one that the present interviewer might well wish to heed, if they don't wish to end up writing articles entirely by transcribing Facebook chat conversations.

This is, of course, somewhat distanced from self-reference.

Scythe Marshall

We Need More Ugly Superheroes

Over the years, superheroes have crossed many boundaries and as a whole have diversified greatly. With the occasional misstep they have come to represent the different genders, races and even sexual orientations. But there is still one group that is sorely underrepresented among the ranks of superheroes: ugly people.

Yes, those with below-average exterior qualities, but undiminished interior ones. They are precious few in a group where appearances are, if not absolutely stunning, well above average.

The support for this group is admittedly small, even compared to the other previously excluded demographics that are now included among the superhero ranks.

Despite this apathy it is perhaps more important for ugly superheroes to exist more than any other. This is because, unlike other groups, the ugly have a high incidence of resorting to joining the ranks of super-villains instead of finding a more mundane job. Perhaps with more positive examples, more of this group will find places away from a life of crime, villainy and world ending.

Glec

NationStates

NationStates: where dorfs run nations

The leader of Bigtopia sits, thinking. The advisors have all said their piece on the pressing issue facing the nation, and it is now time to decide. Eventually, having gone through all of the alternatives and the consequences they carry, the decision is made. The formal policy is being written as the leader looks out the window, and thinks of how the nation will react to the decision. It will be better now though; now that automobiles are banned, and skateboarding is mandatory. Yes, the nation will be better...

Have you ever wanted to be in charge of a nation constantly bombarded by real and imaginary issues? Would you like to dictate policy in a reactionary manner? Are you prepared for sheer ridiculous results? Welcome to NationStates (NS), where you make your population deal with weaponized morning commutes and the banning of all digging implements. A mostly-casual webgame, you can choose to play a serious national leader doing the best for their country, or (more likely) a crazed dictator imposing their insane will onto the people, by choosing one of the options available to the 'issues' that pop up twice per day.

Issues include things like whether to use or ban fracking, and how to implement a nation-wide disaster alert service. Choices range from the obvious solutions, to solutions like setting up public loudspeakers that nominally warns the citizens, but usually tells them to remain happy and love the leader. Easy and with little time commitment, NS can easily be added to a daily routine where you spend 10 minutes per day to deal with issues and take a look at the changes in your nation. You can see plenty of stats you weren't aware of in the analysis screen for your (or anyone's) nation, such as just how well your cheese exports industry is doing, or how inclusive your population is. You can also go further than that if you want, as there is a massive roleplaying community in the forums that like to act out various international events, and to generally roleplay the leader of their specific nations.

So if you want to run a nation (into the ground), hop on over to `nationstates.net`, where you don't even need to give away your email to make an account—always a plus in my book—and get straight to work as the new leader of your own nation.

Soviet Canadian

Unmuzzled Scientist Running Free On Parliament Hill

I, like many others, rejoiced when I heard that scientists were once again free to roam the capital. At least, that's how I felt before I learned the horrifying truth. While I may not always agree with Stephen Harper, I realize now that everything he did was to protect us. The muzzling of the scientist was a necessary act, because the scientists are rabid. They are infected with a terrible infectious and potentially lethal disease: curiosity.

Beyond Meta

How to Access *math*NEWS

As someone who no longer lives in Waterloo, it's hard for me to pick up physical copies of *math*NEWS to read, on campus. I do this basically once a year, at most (due to visiting Waterloo during the summer). If you find yourself away from UW and wishing to read *math*NEWS, there are some options for you.

- **Subscriptions!** The *math*NEWS editors offer a subcription service, for a reasonably light fee. This information can usually be found in the last issue of every term; otherwise, ask the editors about it. The money pays for the postage needed to mail every issue in the term directly to your provided address. The issues (as noted in previous articles) arrive between half a week to two weeks after they are put out on campus, depending on where you live and the vagaries of Canada Post. This option is great when you like having a physical copy of *math*NEWS to hold in your hands, and to do the *grid*WORD on paper without having to copy it or print it off, like in the next option:
- **Webbing!** The editors usually put the PDF version of the issues online, on the *math*NEWS website. This is a free option! Namely, accessing *math*NEWS this way costs you nothing, and once you save it, you'll have a digital copy of it forever, or at least until your hard drive explodes, or something. Great! The downsides to this are twofold: you can't hold this form of *math*NEWS in your hands, and you have to print or otherwise copy the *grid*WORD. Additionally, some people are already looking at computers for most of the day, and thus more screen-time is perhaps less desirable. Also, as mentioned in another article in this issue, sometimes the editors don't necessarily web the issues promptly. This downside could lead to...
- **Scanning!** If you have a friend who is on campus while you are not, then they can pick up the latest issue of *math*NEWS, scan it at home or at, say, the MathSoc office, and then e-mail you the file. This remedies the timeliness issue, but it requires much more effort from parties who are only indirectly involved (as opposed to being an editor or reader). It also only gives you a digital file, and the downsides to this have been mentioned previously.

At this point, it seems like there aren't many options left. Balderdash! There are many other options for the enterprising *math*NEWS reader. Let us have a look at some of them.

- **Write the Entire Issue!** Obviously, if you write the entire issue, then you've already read i—well, okay, I suppose if you didn't proof-read, then perhaps you didn't actually read some of the words you wrote. But you know the content, and that's the important part. While this works quite well, especially because you can write from anywhere as long as you have an Internet connection, you would have to put a lot of work in: quite a negative point to this approach. You're not even guaranteed to write all of the articles, since other authors do exist, and the editors aren't going to prevent them from writing too. Instead, you can be helpful in a different way:
- **Proofreading and Copyediting!** There is a decently-sized army of volunteer copyeditors who proofread *math*NEWS, to make sure the ticky-tack mistakes are kept to a minimum. You can be one of them! Just ask the editors, and they'll e-mail you a copy of the issue to proofread and send back with corrections. This way, you get what's pretty much the final publication, albeit somewhat unedited. Again, however, this suffers from not being a paper copy (in general), and you have work to do, unless you're okay with feeling really really really guilty. (Hint.) Instead, one might try...
- **Personal Communication!** If you know the authors, you can privately message them to send you the articles they wrote. This way, you could even read the issue before it's published! This is a pretty cool thing. The downsides to this are, of course, that you'll read unedited articles, potentially rife with spelling and grammar errors, and you won't have the pleasure of sitting down with a nicely laid-out publication. It's not really the same, though you get the general idea. Now, it may be the case that you don't write for *math*NEWS ("may", as if there are people who read *math*NEWS but don't write for *math*NEWS), and therefore you don't know all of the authors, or you forget the face-to-pseudonym mapping. In that case, you might try the following:
- **Hacking!** *math*NEWS has a production system; it shouldn't be thaaaaat hard to hack it? Right? Maybe? You could just go in and read all of the articles in the system. I mean, this has the same issue as the previous method, but hey, doing unscrupulous things shouldn't be more rewarding than picking up a copy of *math*NEWS fair and square. This idea does have its merits, though. Is there a way to gain access to the system without breaking through security systems? Sure!
- **Become a *math*NEWS Editor!** Obviously the best idea. You get to read all of the articles legitimately, AND you get to do it multiple times! And you get to do layout and hang out with the authors and eat food and do a bunch of other work, like deal with the moral implications of publishing an article that on the surface seems reasonable but then encourages readers to do horrible things like hack the production system and become editors. Doesn't that sound like fun? I mean, it requires having a teleporter or something, but that's the easy part.

See, look at all the ways there are to access *math*NEWS that don't involve you picking up a physical copy of it on campus. Don't let not being in Waterloo stop you!

I'm so sorry.
Scythe Marshall

Hey clubs! Want your Sez in *math*NEWS? Then submit them to us!

Taking the High Road

If you participated in the recent game of Humans vs Zombies, you probably received an unsolicited email[1] from an individual (who shall remain nameless[2]) promoting an event they run. While some people might be tempted to respond in kind to this sort of unscrupulous behaviour, I implore you to take the high road instead.

Tempting as it may be, acts of petty revenge such as signing him[3] up for miscellaneous spam lists, or endorsing him[3] on LinkedIn for "Spam", "Bacterial Marketing", or "Sketchy Business Practices" only brings you down to his[3] level. Let's take the high road. Just because this individual violated the privacy of over 300 people doesn't mean they deserve to have their own privacy violated. It's the golden rule. You shouldn't try to steal[4] their email address, and use it for petty revenge. Like signing them up for indiscreet web services[5], or trying to get it on a spam blacklist.

Let's keep things civil.

$s,t \in \{2k, k \in \mathbf{Z}\}$, 144

1. And potentially LinkedIn request
2. To maintain the individual's anonymity, the author requests that you not look up their contact details in the email[1] that they sent
3. Or her.
4. If they sent you an email[1] first, I guess that means they're ok with you having it, though.
5. Like Ashley Madison. That would be inappropriate.

How to Insult People

Insulting people is an art. It is all about proving superiority to people by way of wit. Any plebeian can dish out a rudimentary insult, but only a true master understands the necessary components of the craft. First, one should familiarize themselves with the many different kinds of insults.

There are the basic insults. These are the one that you find in the dictionary. These insults are like tiny little pin pricks. The only offensive thing about these insults is how little effort you put into them.

There are the joke insults. In this class falls all the your momma jokes and many a terrible pun. These insults are slightly more original than the basic variety. But they have a similar problem: they lack a personal touch. However, they have an all-purpose quality to them that makes them useful in any scenario. My personal favourite of this type of jibes is, "I would rather watch the Star Wars Holiday Special than spend time with you."

The best insults are the ones specifically tailored to a person. These are the loving insults. The insults that you hurl at your friends to tell them that you are intimately aware of their every flaw and, despite that, you still decide to spend time with them. Or maybe just that they are fun to tease.

Now stop reading *math***NEWS** and actually pay attention in your lectures, you slacker.

Beyond Meta

X Ways to Make the *math*NEWS Editors Mad at You

- Forget to sign your articles
- Hit publish on your article instead of save draft
- Submit articels wit intentional speeling misteaks and ask them nott tu ficks eet [pls dont fics]
- Use X instead of N
- Bring Nerf guns to shoot them with because they told us not to
- Insist on having anchovies, entropy, pie, and pizza on your pizza

Forget to put an entry in a bullet point

- Use several nested footnotes [1] [3]
- Screw up your footnote numbering [G]
    - Fuck with indentation

1. Switch the type of list

- Write an article containing both math and news [10]
- Use emojis
- Have fun with CSS

Yours in ,
Shay Blair

[1] Like this, where an example can be found here [3]
[2] Mutually recursive footnotes [6]
[3] A particularly nasty variation is the type referenced here [2]
[4] This article [5]
[129]
Just like this footnote!
[G] As found here [4]
[5] *math***NEWS** article #q
[6] These are literally the worst, as demonstrated here [2]
[10] It makes everyone else look bad

N More First-Year Realizations

I'm back!

- I'm concerned about Alice's and Bob's relationship. This RSA crap is not helping them out.
- I thought MATH 137 was supposed to be the easy math course??
- All I want for Christmas (or another holiday of your choice) is a passing grade.
- Can someone post the notes from MATH 135??? My house burned down and I couldn't make it.
- Thank God for Starbucks; I was worried I'd have leftover meal plan money at the end of the term.
- Selling my MATH 137 notes for $100. Serious inquiries only pls.
- Crowdmark is acting more desperate than me when I ask someone for answers.

Happy National Pickle Day! *[This article was written on November 14th, and this salutation is now out of date. Happy National Peanut Butter Fudge Day!—ConvolutED]*

A Yam

N Things I Learned in Ottawa This Past Weekend

The nation's capital is DEFINITELY a great place to get away for a bit.

- It is VERY important to keep an eye and an ear out for the traffic conditions, especially when you're heading through Toronto at rush hour on a Friday.
- Despite the traffic, you never know what you'll enjoy along the road. (Trip to the Big Apple anyone?)
- As you head to Ottawa, on your left, you see nothing but darkness, and on your right, you see the United States, and in front of you, you see winter. (Silly northern Canada having colder weather...good thing the snow didn't stick!)
- Where you are staying in Ottawa is very important. It is ideal to be in walking distance of everything you want to visit. (Thank you, Novotel, for your convenient central location!)
- Even in Ottawa, you can't escape eduroam connectivity problems. (CURSE YOU EDUROAM!!!) Good thing the hotel has internet!
- King-sized beds are the BEST
- Ottawa's a busy city. There's a lot going on outside and there's definitely an exciting night life! If you want to be sure you sleep, bring some ear plugs.
- If you knew nothing about Claude Monet or his work, the exhibit at the National Gallery would have you thinking he painted NOTHING but bridges. *[If you're the sort of person who does mathNEWS puzzles, maybe you should look up some other paintings by Monet. Hint hint.—ConvolutED]*
- Monet's painting of the Waterloo Bridge in the fog was definitely the best painting of that whole exhibit. (I'm totally NOT biased.)
- You can REALLY get lost in art for like 4 hours before you feel all art-ed out.
- You may recognize a few people along the road, but you're probably not going to bother them unless you REALLY want to.
- Sometimes things may not go to plan, but it all works out in the end. Sometimes with no thanks to Google Maps.
- The library in the Centre Block on Parliament Hill is DEFINITELY the best part of the whole tour. (Thank goodness it was saved from that fire!)
- You can get to see Parliament Hill FOR FREE! That said, apparently it'll be closing to the public for some major renovations in the near future so go see it sooner than later if you want to, eh?
- Sometimes you may get lucky and see someone important at Parliament Hill. Other times, you just get to see their portrait.
- On a cold day, walking by the eternal flame on Parliament Hill is definitely heaven!
- The Byward Market is for tourists, but the Glebe is for locals.
- There are so many AWESOME things to see in BOTH the Byward Market AND the Glebe that it'll probably take a week itself just to see it all!
- Unexpected Date Nights consist of a very intimately lit two-person dinner, seeing a great show and doing the typical "stretch and pull the other person in close", and coming back late to that king-sized bed ;)
- It's great to try out the food in so many new places! You can find new favourites or sheer disappointment. (I very much recommend the Elgin Street Diner if you're ever in Ottawa; it's open 24 hours a day!)
- Although the maps may not be very helpful, the attraction and restaurant recommendations that Google can provide you with are definitely worth checking out.
- There's so many awesome things to experience that you're going to have a VERY hard time choosing what you would like to partake in. (Thankfully, student discounts can help make that decision easier!)
- Student discounts are AWESOME.
- The Ottawa Little Theatre REAAAAALLY isn't that little, especially when comparing it to the Kitchener-Waterloo Little Theatre.
- Plays about hardship in a time of war can definitely have their emotive and heart-wrenching moments, but are not about to leave you without implanting some warm fuzzy feelings before you go.
- Remembrance Day takes on new meaning when you see just how many people dedicate their poppy to the Unknown Soldier at the National War Memorial. Lest we forget.
- Don't you just love it when you only have to walk a few minutes to get back to your hotel after adventuring on a cold night out?
- You may not completely like the hotel's provided toiletries, but DAMN the shower is NIIICE.
- Did I mention the king-sized bed?
- Getting your own personal walking tour is just fantastic and a GREAT way to see the city from a more local perspective.
- The Papery stores are the most beautiful stores in the world if you are as invested in stationery, greeting cards, and other cute things as I am. (Not gonna lie, definitely spent QUITE a bit there.)
- In Ottawa, there's likely a museum for that.
- After a fantastic and relaxing weekend, coming back to assignments and schoolwork can be a bit jarring.
- Long drives back are the perfect time to catch up on all those assignments you missed out on doing while you were busy enjoying yourself!
- ALWAYS MAKE SURE YOU HAVE ENOUGH GAS!!!
- You can't escape construction. (Or the geese.)
- ON Route pit stops are AWESOME. Plenty of bathroom stalls and space, good food options, last minute souvenir shopping, gas...just make sure you follow ALL the one-way signs properly when you visit one!
- There's nothing like doing some Britney Spears karaoke to celebrate finishing those assignments and having a truly amazing trip you'll remember for quite a while :)
- You can never take too many pictures, especially of that beautiful Canadian sunset.

A Great Canadian Escapee

Weeping for the Privileged in a Time of Tragedy

Bringing to light a prominent facet of humanity.

Over the weekend, a series of deliberate and brutal attacks were carried out in France. Earlier in the week, equally brutal attacks were carried out in Lebanon, Iraq and Syria. Earlier this year, many more attacks were carried out in Kenya, Nigeria, and other countries. Why is it though, that when tragedy strikes, our universal outpouring of support and attention only seems to go to the most privileged of places? That is to say, when we look at a tragedy, why does our gaze always wander to those who have greater wealth, greater power, greater status, and greater cultural significance?

This is not an uncommon occurrence. When Ebola ravaged the western countries of Africa in 2014, killing thousands of people, the world only seemed to pay greater attention to it after one lone American became infected and died. When tens of young elementary school children were brutally murdered in the United States in late 2012, tens of other young children were murdered in Pakistan. The reality is that today's society is fixated on those who are privileged, and that there is an unspoken expectation for these people to remain privileged. This leads to the notion that privilege is something for those who do not have it, to strive for and work towards, and struggle or do everything possible to maintain that privilege. We see it every day in the media from our scrutiny of those in power, to the fascination with entertainment personalities.

Peace itself is a privilege. Many people who are fleeing war and conflict understand this. They seek the places that are peaceful and the opportunity to have the privilege of just simply living, as opposed to living in fear and anticipation of death. Once peace is disrupted in a privileged social climate, there is an outcry that the privilege of peace was taken away. We want those who have privilege to stay that way and very little attention is given to try and elevate those who do not have equal privileges to the same level. The places and events I have mentioned so far all differ and have varying levels of privilege, but the ones you are more likely to remember are the ones who have the greatest privilege in one societal area or another. Our media is so unfortunately biased to those who have privilege that it is hard to keep track of the less privileged stories that deserve equal attention.

At the end of the day, when tragedy strikes, of course we will weep. We are human and the losses that are experienced will always be understood, empathized and sympathized with. The important thing to maintain is that when we weep, we should weep for and maintain our focus on the humanity that has been lost on all levels of privilege, no matter what they are.

Continue to pray.
Send whatever you can to help.
Never give in in the fight for humanity.
The world needs you and your support for peace.

I stand for this world in any tragedy.

How To Steal Your Friends' Identities

or How I Came to Understand TF2

In keeping with my theme of me being an ambiguously bad person, I've picked up a bad habit of stealing my friends' hats. I've noticed that most people have a 'signature' piece of clothing, and if you steal it and wear it people will be surprisingly willing to accept that you are now them. Accessories like hats are your best bet when you're starting out—pulling off a sweater or shirt is more difficult to do without being noticed, and is frankly an expert-level procedure unsuited to the beginner.

Hats, though, are rarely secured to the head particularly well. Approaching someone to steal their hat is dangerous, as they will expect you to have a purpose for nearing them and so will be paying attention to you. Luckily, it's not usually that difficult to bait your friends into invading your space. I've found that merely suggesting that they are unable to do so works pretty well. Failing that, you could pull up a funny picture on your phone, and start laughing at it and showing people. Your friend will likely approach you to join in the amusement.

This is when you strike! Reach out and pull their hat off their head! If it has a brim, you can use that for leverage, else you are better off grabbing the peak of the hat. Make sure you have a good grip on the fabric. If it is a soft hat, don't accidentally grasp some of their hair through it. You will either fail at stealing the hat, or rip out some of your target's hair—and this is a tutorial on stealing hats, not hair.

Once you have the hat, dart out of reach. Your target will likely attempt to regain their hat, and you must dodge. If they manage to snatch it back immediately, they will now be on guard and you will have to wait hours if not days to try again. Use whatever non-lethal means necessary to get at least two metres away—less is fine if you are separated by a heavy desk or a window . If you manage to keep hold of the hat, jam it on your head as quickly as possible and announce "I'm [target] now!"

That's all it takes! They may ask for their hat back, but do not be fooled! It is your hat, and your identity now. The polite thing to do would be to give them your hat, so they aren't left completely identity-less, but this is by no means a required step in the identity theft process. You're now free to do amusing impressions, to eat their food, and maybe to weasel some of their secrets out of their friends.

I do offer you one warning, though: if you accidentally wear their hat home, you may begin to feel some confusion as to who you actually are. Spending too long as someone else, you might find yourself unable to remember how you normally act. If you're worried about this, try only to steal hats from people that you wouldn't mind too much if you end up stuck acting like them for the rest of your life. That's what I do!

DiminutiveRex (currently pretending to be Dusk Eagle)

profQUOTES

"Do not fear the algebra. It is more afraid of you than you are of it."

Purbhoo, MATH 249

"So I hope that you can see that...I've done nothing."

Purbhoo, MATH 249

"There are very strict protocols of what to do/not do when you meet the queen. You don't say, 'Hi Liz!'"

Goldberg, CS 458

"I just found a great acronym for the 7 network layers: People Don't Need These Stupid Packets Anyway."

Goldberg, CS 458

"And these devices are commonly used by yours and my favourite 3-letter agencies."

Goldberg, CS 458

"This is Bob—he kinda looks like me. This is Alice—not so much."

Goldberg, CS 458

"I would never take an uncountable intersection, it would destroy measure theory! Actually, I'm going to do it in 6 minutes."

Spronk, PMATH 451

"These are countable sums, almost everything is legal!"

Spronk, PMATH 451

"I don't want to live in a world without the Lebesgue measure. I actually eat because this exists!"

Spronk, PMATH 451

"Go-go-gadget compactness! Does anyone still know that reference? Am I dating myself?"

Spronk, PMATH 451

[Looks at phone before class] "Oh! I got a message! Someone actually wants to talk to me!"

Wagner, CO 430

"That gives 90, which is good because that's what I got in my office 2 times out of 3."

Wagner, CO 430

[To solve a problem]"You have to sit alone in a room, boil a cup of tea, assume the lotus position and eventually it will come to you. This is how mathematics is done."

Wagner, CO 430

"Did any of you dress up for Halloween?"
[silence]
"Of course not, you're all math students."

Wagner, CO 430

"You may be thinking 'Ah, this assignment is done. I can take a breather!' NO! You have a midterm coming up very soon!"

Wong, CS 350

"We have to document the sexual....TEXTUAL...wow, that was a Freudian slip."

Safayeni, CS 432

"Anyone here not know Zorn's lemma? Go look it up, it will change your life!"

Bell, PMATH 445

"This is like doublethink...you know, in 1984. Good book! I think...I don't remember it."

Bell, PMATH 445

"My handwriting is terrible today."
[points at sloppy writing]
"Look at that! Should I clean it up? Actually, it's got a certain charm to it."

Bell, PMATH 445

"This is a nice proof. I envy you for seeing this proof."

Bell, PMATH 445

"I don't want to overwhelm you with too many methods, otherwise we would call what we're doing 'engineering'."

Al-Masri, CS 230

"English says, 'What're you doing, Latin? You need prepositions!' Latin goes, 'Screw you! I don't need prepositions!' Latin's kind of sassy."

Kroeker, LAT 101

"Hephaestus made golden fembots! It was in the Iliad so it's true."

Kroeker, LAT 101

"Grammatically, males have priority, just like in society! At least...in those days."

Kroeker, LAT 101

"Manliness is feminine. Gender is illogical."

Kroeker, LAT 101

"Latin lives on in English all over the place. It's a great mummy!"

Kroeker, LAT 101

"Some people email me and ask, 'Tell me about Latin,' and these are people who are actually doing something with their lives and not watching Supernatural 12 hours a day...like me."

Kroeker, LAT 101

"Most of the Supernatural spells are in proper Latin except for the special ones. Those are Ionian...I'm a real NERD."

Kroeker, LAT 101

"Drawing on three-dimensional paper is really hard."

Wolczuk, MATH 235

"I don't know the answer to that. That is an excellent exercise. You should try it."

Wolczuk, MATH 235

"I think every Greek letter represents at least 30 things in mathematics."

Wolczuk, MATH 235

"I've seen people prove zero equals one."

Wolczuk, MATH 235

profQUOTES

"It's not going to work in real life: you can't go up to a child you've never seen before and say 'I'm your parent.'"

Lanctot, CS 341

"Do you have any children? If you do, I'm going to process them."

Lanctot, CS 341

"Because it is a friend it has access to all your private parts."

Naeem, CS 246

"This would be a lovely assignment question which would probably bring everyone to their knees."

Buhr, CS 343

"As soon as you have a protocol, users will not follow the protocol."

Buhr, CS 343

"My goal is to make it through life without owning a cell phone."

Buhr, CS 343

"Dying of exposure and starvation at a 4-way stop is the worst way to die."

Buhr, CS 343

Student: "You said Bill Gates, Linus Torvalds, and Steve Jobs aren't doing anything..."
Prof: "Especially Steve Jobs."

Buhr, CS 343

Student: "If we do more than five [questions], can we get bonus marks?"
Prof: "No […] but you can come and talk to me about your solutions and I can, uh, congratulate you."

Nica, PMATH 351

"So we have this, uh, let me call it "implication ♥," because diamonds were already used so it's time to go on to the next suit."

Nica, PMATH 351

"We're just going to shove the hard thing down your throat."

Roegiest, CS 135

"Executing a plan is good, unlike executing people."

McKinnon, MATH 147

"Once upon a time some years ago, I saw a proof of this written out horribly."

McKinnon, MATH 147

"When you grow up and become a real person, that's the definition of continuity you will use."

McKinnon, MATH 147

"If none of that makes sense, ah the proof still works."

McKinnon, MATH 147

"Some jerk came up with this example, I think that jerk might be Weiestrass."

McKinnon, MATH 147

"Cos(1/x) is wobbling furiously."

McKinnon, MATH 147

"[The image] has 256 shades of grey."

Labahn, CS 370

"Torus, my favourite kind of doughnut!"

Postle, CO 442/642

"We are graph theorists; we give up after 35."

Postle, CO 442/642

[About 'dynamic programming'] "Magic! I just said two words and you all get what I am saying... I haven't even told you the problem yet!"

Postle, CO 442/642

"Proven in 1941. Wow, 74 years ago! That makes me feel..... I don't know what that makes me feel."

Postle, CO 442/642

"Nets are just like sequences, except...harder."

Davidson, PMATH 753

Student: "So long you assume the axiom of choice."
Prof: "But we do assume axiom of choice! We are mathematicians, not logicians."

Davidson, PMATH 753

"Yes! I am not sup-ing! I am inf-ing!"

Davidson, PMATH 753

"Uh oh, in my notes I said $(x_0 - U)$ is not important. It probably isn't."

Davidson, PMATH 753

[After a fire drill] "Is everybody here? If anybody is not here, speak up!"

Davidson, PMATH 753

"The adjustment was pretty hefty, so that if you got a zero on it originally, you would have received this passing grade."

New, MATH 145

"You better check my factoring. Even though I'm insulting your intelligence, that doesn't mean I can do it."

New, MATH 145

"I haven't checked my quotes yet; I'm not sure if I'm mad at you."

Gauthier-Shalom, CO 456

"Stop talking!" *[slams desk, laughs]* "Please really stop talking. The anger was a joke."

Gauthier-Shalom, CO 456

"[If I detect anything fishy,] minus 100 on everything. Minus 100 on your life! I'll contact all your other profs."

Gauthier-Shalom, CO 456

"You can copy and paste, but don't turn off your brain."

Wong, CS 350

"So if someone asks why something is true, and you don't know, you can usually trick them by saying "Oh, it's just a simple consequence of the triangle inequality" and you're usually right."

Forrest, PMATH 351

How to Get Discount Chocolate Milk All Month

I grew up in Asia, land of cheap goods but expensive non-staple foods. So when I got to Waterloo, I was fascinated by the (comparatively) stupidly cheap chocolate milk. And then I found out it periodically went on sale for $1/carton. The first time I saw it on sale in first year, I bought 8 cartons at one go and filled my fridge in V1.

You can imagine my happiness when Zehrs had chocolate milk on sale recently! Except I made the trek to Conestoga Mall 4 days in a row, each time failing at my bid to obtain discount chocolate milk.

Then I hit on a sneaky plan that ensured I could chocolate milk almost whenever I wanted!

1. Wait for chocolate milk to go on sale
2. Go to (Zehrs|Sobeys) on a student discount day after ~7:00 PM (Reminder: 10% off on student discount days, Tuesdays at Zehrs, Tuesday–Thursday at Sobeys!)

2.5 Double check that they are actually out of chocolate milk. (99% certain this will be the case on student discount day.)

3. Go to customer service and ask for a rain cheque on chocolate milk. Trivia: there was a guy who bought 36 cartons at one go; the customer service person was complaining about that.
4. "I'm buying for *n* people, could I have *n* rain checks please?" With 2–4 cartons on each rain cheque, of course.
5. Return to (Zehrs|Sobeys) every week for *m* weeks.
6. Buy your discount chocolate milk!

Note: *m* is usually max 4 (rain cheques are valid for 30 days normally)

And if that doesn't work, I'll eat my hat. And drink the 6 cartons of chocolate milk in my fridge.

HatOfChocolate

N Reasons UW is Getting a SECOND Starbucks

Just found out that the new AHS building is expected to have one inside when it's completed ...or, at least, it should.

- More opportunity to stand in lines!
- The first one is CLEARLY very successful. (Especially considering how it's been open for a whole week.)
- MORE CAKE POPS FOR EVERYONE. (Because cake pops are the best thing they offer. They're the best thing anyone can offer.)
- UW wants even MORE of your money and this causes us to lose less students to Laurier's FULL Starbucks on University Avenue.

Cake Pop Crooner

N Ways You Can Tell Your Roommate Is Obsessed With Chocolate Milk

- He's gone to Conestoga Mall every day for an entire week to try and catch a sale. (Somehow he arrived after they ran out every single day.)
- He learns what rain cheques are—seriously, does anyone use rain cheques anymore?—in order to get himself more cheap chocolate milk.
- You open the fridge, and all your food has been pushed to one side to accommodate ten cartons of chocolate milk.
- Even though he bought ten whole cartons, they're all gone within four days.
- He once drank chocolate milk that had almost certainly gone bad because it was his last carton.
- More of your friends know of him as "that chocolate milk guy" than as your roommate or by his name.
- The ratio of cartons of chocolate milk to people in your house who like chocolate milk is 10:1.
- He once asked you if you could plug in your mini-fridge so he could have more space to store his chocolate milk.
- He always knows exactly how many days it has been since the last time he drank chocolate milk.
- You can't remember the last time you saw him drink a liquid that wasn't chocolate milk or chocolate-milk-based.
- You're pretty sure you saw him eyeing the shower speculatively while holding a carton of chocolate milk one day.
- You've heard the phrase "chocolate milk" so often, it doesn't mean anything to you any more.
- He only came to *math***NEWS** production night because he heard there was free chocolate milk.

DiminutiveRex

N Fun and Creative Ways to Destroy a Terrible Laptop that Doesn't Work Anyway

This article is motivated by the fact that my laptop has frozen about 5 times in the 2 hours I've been trying to write an article, and I am currently writing this on my phone.

- Run it over with a car.
- Drop it in a large bucket of water.
- Microwave it?
- Cut it up with a chainsaw.
- Feed it to a tank of hungry piranhas.
- Drop it into a volcano.
- Smash it with a hammer.
- Take out the parts inside and use the empty shell to hide all your favourite illegal substances.
- Give it to a group of toddlers to do with as they please.
- Throw it at a wall.
- Make a pinata out of it.

TheUndecided

Let's Investigate: A Supposed Proof of the Riemann Hypothesis

Recently, a friend of mine posted on Facebook a link to what would have been astounding had it been true. It claimed a Nigerian mathematician had solved the Riemann Hypothesis, calling it a "156-Year-Old Mathematics Puzzle". Intrigued, I searched Google News for Riemann Hypothesis, and a number of hits did appear. My suspicions were first raised when no major international news source covered it. Admiral Ackbar spoke to me in my mind, "IT'S A CRANK," but I had to know more.

Looking more, the name of the scholar who had written this supposed proof was Dr. Opeyemi Enoch. Searching for him only resulted in a variety of what seemed like plagiarized versions of the same article. (Bogus articles. Bogurticles. Nah, that sounds awful. Bogons. Much better.) These bogons (and the original article) described him as a professor at the Federal University, Oye Ekiti. When I went to their website, I decided to look at the Faculty of Science. They had a Department of Mathematics, but sadly, the staff page was blank. Searching for Enoch anywhere in their site was also a blank. It seemed I was looking for an invisible professor. It was even more suspicious when I found out that he did not exist on the Mathematical Genealogy Project. One point in his favour is that he was listed as speaking at an ICMCS conference in Vienna here: `http://computer.conference-site.com/proceedings_icmcs_2015.pdf` but it was not for an actual proof of the Riemann Hypothesis, leading me to suspect that some bad journalist overreacted to some news that he was going to a conference.

There was a further web presence for him though, a friend had found what seemed like his "`academia.edu`" profile page. I had never heard of it before, it seems it intends to be a research paper sharing site, though it seems woefully inadequate for the task compared to say, arXiv or PubMed. It has a more social media vibe to it, which is odd for a research-oriented site. Nonetheless, Dr. Enoch had 11 papers uploaded, or so I thought. There were only 7, none of which was his own work. They all had to do with RH, and one of them claimed to be a proof of RH by a 'Werner Raab' which is located at: `https://www.academia.edu/1188935/Proof_of_the_Riemann_hypothesis`, if you would like to follow along. By now, it seemed quite clear that Dr. Enoch was using `academia.edu` improperly by uploading copyrighted material by other persons to create a repository of sorts to work from, or someone was simply impersonating him posting nonsense. Either way, this was all very strange. But I had not yet reached the total depths of strangeness. Namely, who was Werner Raab?

Werner Raab received his PhD in 1960 from the University of Innsbruck, one of the top universities in Austria for his work in differential geometry about higher-order curvature tensors in Riemann spaces. "Oh ho!" I hear you say. "He had interest in Riemann all along!" Yes, of course he did. Everyone did. Riemannian geometry was and is still in vogue, considering the fact that it is the underpinnings of general relativity. This doesn't mean he knew anything about how to solve the RH however. The Mathematical Genealogy Project listed him as having no known advisor, and only two students, in 1979 and 1983. Assuming he got his PhD in his mid-to-late twenties, this puts him as an octogenarian. I doubted he would still be working now. From what I could ascertain, he was a full-time professor at the University of Bonn in Germany until at least 2001. There is a Scribd page for him that has five different attempts at papers explaining his proof of RH, though the most complete version that I could find was `http://www.open-science-repository.com/mathematics-70081985.html` which was longer than all the others, and quite similar to the one posted by Dr. Enoch. Amusingly, at least for me as a lapsed Catholic, they both ended with A.M.D.G. which is an acronym for Ad maiorem Dei gloriam, the Latin motto of the Jesuits meaning For the Glory of God, indicating that Prof. Raab is likely a strong Catholic, if not an actual Jesuit. I am rather saddened however, as this singular focus on RH seems to imply that he has left the realm of real mathematics, and ventured into the world of the cranks.

What can we learn from this? A healthy amount of skepticism and distrust is needed in any academic venture, and an even larger amount is needed for the news, especially minor sources. Though major sources can also get things disastrously wrong, it seems like it happens less frequently since they have so many people reading them who can find issues with their articles. Staff websites for smaller universities are very important to verify identities. And finally, just because it's in LaTeX doesn't mean it's correct.

Next issue I intend to dive in to each of these "proofs" and see where they go off the rails, as the first paper was from 2013, implying that, if they were true, Prof. Raab would now be a rich man, and that Dr. Enoch would likely not have gotten away with news reports claiming he solved it by posting someone else's proof.

IceNine

Innovative New Bay Area Startup

New Bay Area startup *Tweeter* is, according to CEO Tanner Carson, "like Twitter, but we create an office atmosphere that allows employees to work more than previously thought possible. We made a real breakthrough."

Many critics call it backbreaking labour, but Carson says that the open concept office space includes a massage space to ease work-related back pain. The progressive service offers the same shit as before but it promises great new features that will likely be replaced next quarter by up-and-coming *Twooter*.

Alias

Follow us on Facebook (*math*NEWS), or in person (MC 3030)!

Learn The Rules…

So that you'll know how to break 'em

Good day, fellow math nerds. If you don't know who I am by this point, I am sorely disappointed. Unless of course this is the first issue of *math***NEWS** you've ever read, then to you I say, "Congratulations! You are in for a real treat. I am the Pastry Genie and I am here to help you with your baking needs."

Last time, I told you that baking is a science and an art. That there are set rules that need to be followed. And then I promptly got distracted by accidental toffee without telling you any of those rules. So today I will share the fundamental rules of baking with you.

1. **Carefully read the entire recipe before beginning.** You don't want to get halfway through making the recipe when you realize that you should have saved the egg whites or cooled the pie shell before starting on the filling.
2. **Make sure you understand the terms and techniques.** If a recipe calls for you to cream 1 c butter, 1 T sugar, and 1 t salt together. Do you know what those all mean? C = cups, a big T = Tablespoons, a little t = teaspoons. If you are unsure how to cream something, look it up. There is a youtube video for everything. Just don't get distracted by videos of kittens falling over.
3. **Avoid distractions.** Distractions make it difficult to remember if you already added the salt. Or how long you had been mixing the batter.
4. **Timers are your friend!** Remember to set the timer when you put something in the oven. Never rely on your internal sense of timing. Don't get me wrong. If you feel that your cookies should be finished but the timer hasn't gone off, then go check them. Just do not rely solely on your internal timer.
5. **Check your ingredients.** Before you begin, make sure you have all the ingredients you need to complete the recipe. Sometimes once you start a recipe you can't stop until it is complete. If you don't have everything you need at the beginning, it can be a big waste of time and money.
6. **Follow the instructions.** Unless you've made the recipe a hundred times or are an experienced baker, don't deviate from the recipe. There is a reason it asks you to sift the cocoa powder or butter a baking dish.
7. **Preheat the oven!** Yes, it does make that big of a difference. When an oven is heating up, it uses both the top and bottom elements. Once it is at temperature, it just uses the bottom element to hold the temperature. Letting your oven preheat is especially important when something requires a high temperature and a fast bake time. You wouldn't want the outsides to burn but the middle still be raw.
8. **Measure, measure, measure.** Don't just eyeball your ingredients. Get out the measuring spoons and cups and even a kitchen scale if you have one.
9. **Have fun!** Play around with things. Try almond extract instead of vanilla. Stir orange zest into your cake batter. Add nuts or chocolate chunks.

So there you have it. A nice list of rules to follow. As you get more familiar in the kitchen and create more and more delicious food, you'll learn how to break the rules without ruining your masterpiece.

I can honestly tell you that out of those nine rules I only follow rules 1, 5, and 9. As your skills grow you'll learn when you have to stay in the box and when it's okay to colour outside the lines.

As Julia Child said "The more you know, the more you can create. There's no end to the imagination in the kitchen." Now enjoy this recipe for chocolate peanut butter fudge.

Chocolate Peanut butter Fudge

Ingredients

- 8 oz semi-sweet chocolate
- ¾ cup sweetened condensed milk
- ½ cup Peanuts, roasted and chopped
- 6 oz white chocolate
- ¼ cup peanut butter, smooth

Directions

1. Line an 8x8 pan with parchment or waxed paper.
2. Combine and microwave the semi-sweet chocolate and milk on high for 2 minutes, stirring after 1 minute.
3. Stir until completely melted, and then stir in peanuts.
4. Spread onto the bottom of prepared pan.
5. Microwave white chocolate for 1 minute and 30 seconds, stirring after 1 minute.
6. Stir until completely melted, and then stir in peanut butter.
7. Once peanut butter and chocolate are smooth, spread over semi-sweet chocolate layer.
8. Refrigerate 2 hours or until firm.
9. Slice into squares and enjoy.

Your Friendly Neighbourhood Pastry Genie

Red Squiggly of Doom

Shhhh, be queit. No, com over heer. Keep yur vois down. Pls, i need yur help.

Theres a monstur following mee around. i can cee it every time i tri to speek. i cant even—no dont look around! Dont trai to sayy nething, it might notis yu. No dont!

Wait, it didnt even notis u. How? TEECH ME YUR WEIGHS.

You dont evan ce it? How can yo mis it! Its big an read and keeps weighving its tearifiing arms at mee.

Wat? No Im not crazy I—wait, yiss. Thats eggsactly wut it loks lik. Wht doo yuou meen itss teh reaed squiggley lin tat apears wen mai speeling iis wrog?

Yurs in terrer,
Shay Blair.

Why I Am Not a Bad Person, Despite What My Friends Say

I'm not a gamer. At all. My computer is kinda shitty, and I'm too poor for a console. My parents thought video games made people fat and lazy[1] anyway, so I don't really know what I'm missing. I do have a soft spot for idle games, though, mostly because I like the feeling of gaining things while doing absolutely nothing[2].

So I've started playing Clicker Heroes. Basically, you buy heroes to slaughter animals for you, which makes you money[3] to buy more heroes, to slaughter more animals[4]. Somehow, my friends have decided that since I spend so much of my spare time slaughtering animals[5], I must be a Bad Person[6].

This is clearly ridiculous[7]. I mean, sure, I spend significant amounts of my spare time killing cute[9] things for money. They make these pained little squeaking noises when they die, and if you level up far enough you can kill them so fast that their death squeaks kind of blend together into one endless, pained, high-pitched moan[10]. But how is that any worse than what anyone else does?

One of my friends drinks Nestlé-brand bottled water, while Nestlé is contributing to the drought in California[11]. Another friend had chicken for lunch today[12], but eating non-ethically sourced chicken means that the chicken you're eating lived a terrible life[13] squashed in a cage in a factory farm. Yet another friend wears Nike shoes, from a company that has been repeatedly been accused of using child labour.

Don't get me wrong, I do things like this too, probably every day. But I don't think that most of us would call ourselves bad people, even if we are sometimes negligent. And I think we can therefore agree that if causing some small[14] harm in the real world doesn't make someone a bad person, then when I slaughter virtual animals—no matter how adorable they are—that that doesn't make me a Bad Person[15] either, given that it doesn't make anything worse in the real world.

Well, I mean, *that* doesn't make me a Bad Person[16]. I might be a bad person for other reasons. But as for those… Oh! Hey! Pizza's here[17]!

DiminutiveRex

1. Even, bizarrely, DDR and Wii games.
2. Wow, good thing those video games didn't make me lazy!
3. Somehow.
4. I'm not really sure on the mechanics of how killing a ghost gives you untold billions of dollars, but if I can accept that there are 29 knuts in a sickle, I can accept that.
5. Don't judge unless you have less than 20 hours logged in Fallout 4.
6. Trademark pending.
7. Please ignore that article I wrote a few months ago about how much of an asshole[8] I am.
8. Actually, are being an asshole and being a bad person equivalent? You can be an asshole without being a bad person, but I think being a bad person makes you an asshole.
9. I mean, depending on how cute you find an unholy gerbil-bee crossbreed.
10. It's kind of adorable, for a death rattle.
11. And some worse stuff, but this is a *math*NEWS article, not an anti-Nestlé manifesto.
12. And they didn't even share, the bastard!
13. I just kill them quickly, I don't torture the damn things.
14. Or even large…
15. Trademark pending.
16. Trademark pending.
17. Hey, who ordered the anchovy, entropy, pie and pizza on a pizza[18]?
18. I didn't even know you could have four toppings on one pizza…

My Story of Alice and Bob

And why they should not be hated, but rather loved

When I hear most of my friend complaining about MATH 135, there were always two names that pop up, the wonderful Alice and the magnificent Bob. Those two names seem to be the most rejected names within frosh community. I started to feel sorry for those two individuals, so I decided to write an article to defend them.

The truth is that when I first saw Alice and Bob from the MATH 135 problem set, my first reaction was not filled with hate or frustration, but rather with a smile on my face. This was not the first time I witnessed the many wonders that they have done. My first encounter with Alice and Bob was during the summer of 2013, when I studied cryptography online with Professor Boneh. (I was really bored that summer.) Throughout the course, the names 'Alice' and 'Bob' would often pop up as an example, where Alice is always trying to send a love message to Bob, but there will always be that evil Craig who is trying to mess up the message. Throughout the adventure of Alice and Bob and how they manage to secure their message, I began to develop a great insight about the general scheme of cryptography. However, one question always remain within my head, why 'Alice' and 'Bob'? Who are Alice and Bob and why should I care about them. So with the curiosity I had, I ventured into Google and began to explore their past history.

It turns out, there is a Wikipedia article related to Alice and Bob, where they are the two most used placeholder names. The names are often used as a convenience, to replace the usual meanings of 'Party A' and 'Party B'. They were first used by Ron Rivest in 1978, interesting enough, about the RSA cryptosystem. Since then 'Alice' and 'Bob' have been used in fields such as cryptography, game theory, and even in the sciences such as physics. So those of you interested in finance or sciences are in luck, because these famous couples will cross paths in your future journey. Or perhaps later on in the year when RSA is introduced in your course.

While the question that employs the famous couple might be annoying within the assignment, they are merely placeholders and should not be blamed along with the questions. Imagine this problem does not use their names, but rather 'Party A' and 'Party B'. For some reason, Charlie, Daniel, and Eve decided to join the mix. So now you have pages of 'Party C', 'Party D', and 'Party E'. Wouldn't this be an absolute nightmare!

So next time you see the good old Alice and Bob in a problem set, be sure to smile at them and be amazed by how much they have simplified the world of mathematics.

Pogey Wills

Android Basics

Have an idea for a killer app but no place to start? Ever wanted to learn how to develop an Android app but didn't know how? Well, today is your lucky day because I'm going to be writing about just that!

Here are some things you need to know before we start. First, you'll need a good grasp of Java to make Android apps. Not for this article though, because I'll just be covering the basics. Also, Android apps don't just run on Android smartphones; they also run on Android watches, Android TVs, and even BlackBerry devices like the PlayBook and anything that runs BB10! (Windows phones were going to get Android-app-running capabilities, but apparently that's been axed, sorry.)

Let's dive in! As I said this will be purely theoretical because there are concepts to be understood before you dive in to coding. Next post we'll set up the tools we're going to use: Android Studio and the Android software development kit (SDK). Android Studio is the Google-recommended integrated development environment (IDE) that helps you write Java, manage app assets, and design activities. The Android SDK is a collection of objects and functions that allow you to access all the functionality that Android has to offer. The SDK is versioned with each revision (called an "API level") targeting a specific Android platform; the latest API level is 23 for Android Marshmallow 6.0. The SDK also comes with an emulator which allows us to run Android on a desktop computer so that we don't need a physical device to test on. (Although the performance isn't comparable to a real phone.)

Enough about the tools though, let's get into some meat: the important definitions. A fundamental concept in Android is that of an 'activity'. An activity is a screen of your app, the thing that contains the visuals that you see and interact with. They're like windows on Windows or Mac or Linux except they take up the whole screen. An app should have at least one activity to display things to the user, but an app can have any number of activities. The simplest app is a single, empty activity...which is basically a blank screen with a bar at the top.

The things inside the activity are called 'views'. Buttons, text fields, images, password areas, drop-down boxes... they're all views. If you understand model-view-controller architecture you'll immediately understand why. For example, a "`hello world`" app contains a single activity with a single view—a text field that displays "`hello world`". Activities are laid out in XML with views being individual tags with Android-specific attributes. Callbacks can be registered with views so you can, for example, do something when pressing a button.

Finally, we'll touch on 'intents'. Intents are the mechanism by which we change to a different activity, a different screen. You can use intents to change activities within an app, e.g. from a login screen to the main application, or even to a different app. For example, we can make an app that accepts text then launches the browser to do a Google search. Android keeps track of each activity change in a stack, which allows the back button to function like it does.

Now that you understand activities, views, and intents we can begin! ... in the next article.

TotallyLegitDeveloper

Economic Crisis Worsens

AFFYRE—The recent migrant crisis affecting several of the world's countries poses a very real problem, not only for the countries where the migrants are streaming in, but also further away as the economic instability ripples through the increasingly globalized world.

The region of Affyre, historically spelled Afire, had been hit particularly hard. Situated in a picturesque valley surrounded by its world-renowned sulfur fields and scorching siroccos that buffet the region, the region has historically been a top destination of retiring politicians and businesspersons and had a strong industrial sector in the mining sector. However, after the historic agreement between Mephistopheles and WTO, the region had been in decline as it cannot compete with the lower costs of business elsewhere, exacerbated by the influx of cheaper labour being on the move.

The Malebranche, the ruling tredecemvirate of the region, issued the following statement in a recent press conference:

"It is most tragic that our illustrious region has fallen upon hard times. In times past people would flock to the region in a feeble attempt to secure a slice of the lucrative pie we have here—despite the high cost-of-business in our remote region. Those fiery days are no longer with us; our extraction is faltering and our rich and varied secondary industries are but a shadow of their former glory. This is but a phase in development; we need to seize our chance and re-surge into the global landscape stronger than before!"

In the meantime, the age-old advice, "Go dye in Affyre," should be temporarily changed to something which is more reflective of the current situation, like, "Go start an architectural, software, or materials fabrication consulting and/or design service company in the Bay Area." Maybe a Bay Area advertising firm can come up with a catchier saying.

Zethar

Submit your articles in the BLACK BOX outside the MC Comfy or email them to `mathNEWS@gmail.com`!

Lose-Lose Situation

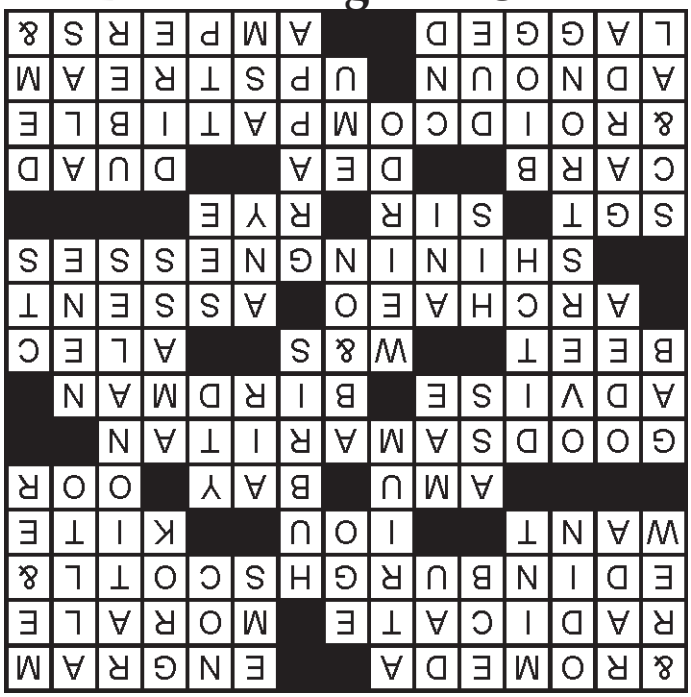
I often find myself locked in heated, passionate, sometimes violent arguments over a variety of topics with myself. Essentially an internal brawl takes place around a subject on which I have not actually formed a fully fleshed out position. These debates take place after I read/hear/watch something that makes me stumble over an inconsistency in my alarmingly arbitrary beliefs. I never feel that I emerge out of these conflicts a victor; I always feel defeated. I think it's due to the undeniable fact that I was always the loser. The greater my victory, the worse my defeat and I dislike losing more than I enjoy winning.

For example: Should I buy a cake? Of course you should! It's there and it will be delicious. You could get some cream and drizzle it over the decadent little chocolate cake and it would be glorious. But, you said it right there, it would be decadent and thus bad for you. You haven't had a fruit in what might as well be years and should make a sincere effort to clean up your act and your diet. But it's a cake, one little cake would be but a drop in the ocean. Besides, you walked to the store, see healthy healthy exercise so cake it is. No, it's only actually healthy if you do the exercise and don't get the cake. If you ever want that ocean to drain, you should stop throwing cakes into it. Getting the cake would make that work basically void. Worse, the cake is probably a bigger negative than the walk is positive. Doubly so when you consider the cream. Wonderful cream. How the cake would just soak up all that goodness. You could even get whippy cream! But...

And this goes on and on for a while before I realize that I've been standing, staring maniacally at this cake in Sobeys, drooling. Ashamed of myself I make a decision one way or the other before walking away ashamed of my loss.

I didn't buy the cake,
Stubbs

Last Issue's *grid*WORD



Encouraging Editors to Web Issues

One of the many duties of the *math***NEWS** editors is to web the issues so that people may access their beautiful publication online. This also a task they often forget to do often having the websites being behind by several issues. Desiring to read the most recent *math***NEWS** and unfortunately being far away on co-op, I decide to investigate how best to encourage the editors to web the issues more promptly.

I briefly considered just politely asking them. However I quickly dismissed this idea as being just too darn reasonable. Why do the decent thing when I could instead write a long drawn out article that they would have to edit where I kind of passively aggressively complain about this. I am confident that the editors will definitely appreciate this method of communication. It gives *math***NEWS** content and they don't even have to feed me pizza.

This is without even addressing the fact that the editors despite all the hard work they put into making a publication that is appreciated by hundreds of people are rarely shown appreciation for the countless hours they put into each issue and this while trying to complete a bachelor of Math. Instead they get to hear the thousand complaints about every single minor mistakes that slips past them.

So thank you editors for making *math***NEWS** and can you please web the issues. I would really like to read them.

Beyond Meta

*grid*COMMENTS

That was the most difficult puzzle I've ever made. Congrats to the *seven* submissions that found that the circles should contain **&/AND**s. (I apologize for the suffix fest in SHININGNESSES; I wanted to joke about it in the clues, but they had an extra hint to the &/AND: only the &-clues had extra phrases with "and".)

Where would people use Catalan numbers to count everything, that is relevant to the theme of &/AND? A few submissions tried C&O as their answer, but that's not a place. Besides, those would be **the Catalan numbers**, not just Catalan numbers. The only way to read the phrase "Catalan numbers" is numbers in the **language** Catalan. Where do they speak Catalan? It's named after the Catalonia region of Spain, but that's not theme-relevant. However, Catalan is the only official language of **ANDORRA/&ORRA**.

As the only ones to fully break the code, with the help of a history major, the winner this issue is **Big Meaty Natters**. Their submission came with a fan letter and a statistical analysis, which has joined the *math***NEWS** Wall of History in MC 3030.

Due to co-op, I won't be making *grid***WORD** next term, but I will ensure that you do not go puzzle-less while I'm gone. Enjoy the first of the new *math***NEWS** puzzle ideas, **TRI△NGUL△TIONS**.

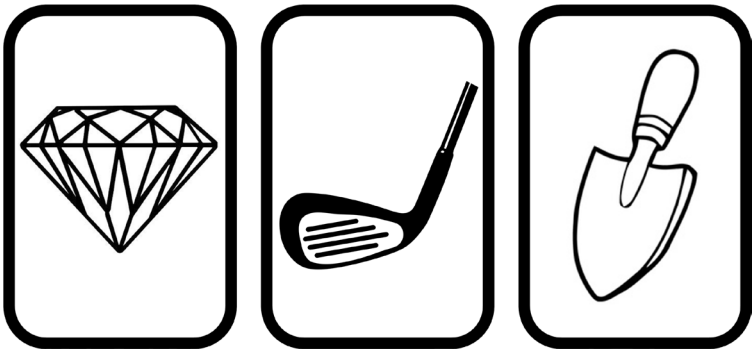
ConvolutED

TRIANGULATIONS

In computer graphics, a triangulation is a representation of a surface by a series of triangular faces. The benefit of using triangles is that each triangle remains planar when deformed. Similarly, this puzzle involves a single face with three heavily deformed vertices. The purpose of this puzzle is to find the connection between the three pictures.

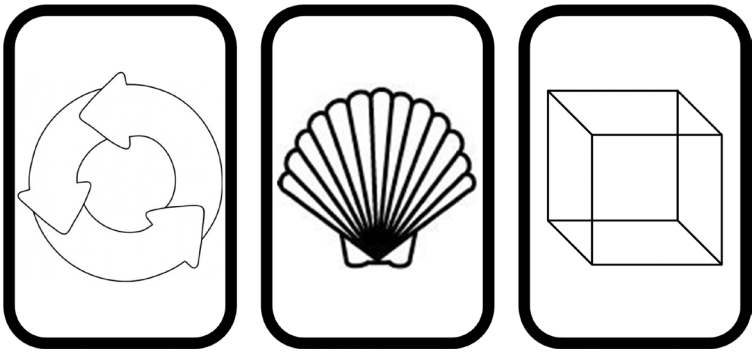
For example, the pictures to the right show a **DIAMOND**, a golf **CLUB**, and a garden **SPADE**. The connection is **PLAYING CARD SUITS.**

Remember to submit your answers to the **BLACK BOX** beside the Comfy before **6:30 PM on November 30th**.



Connection: PLAYING CARD SUITS

EASIER



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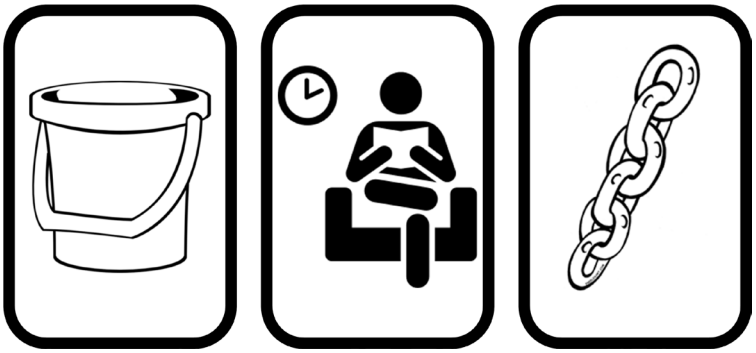

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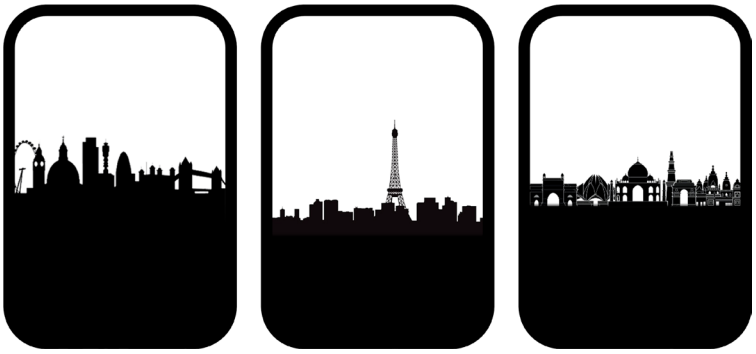

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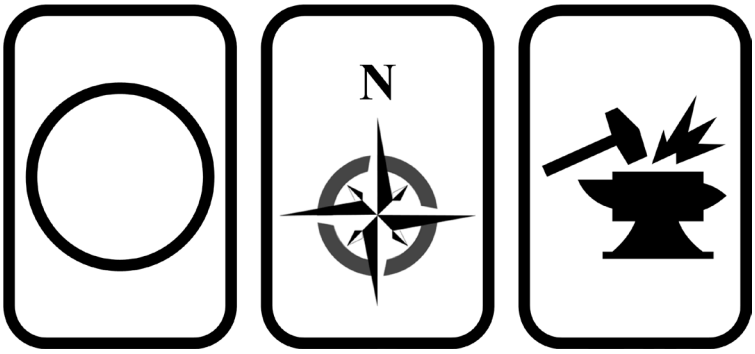
EVILER



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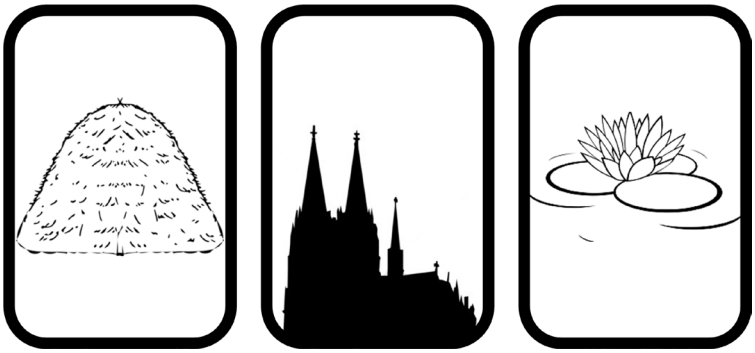

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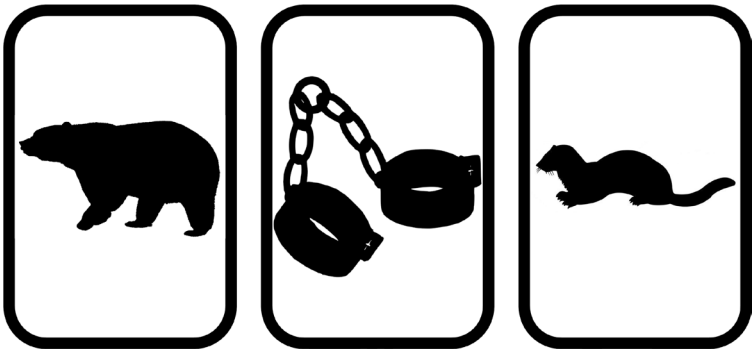

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