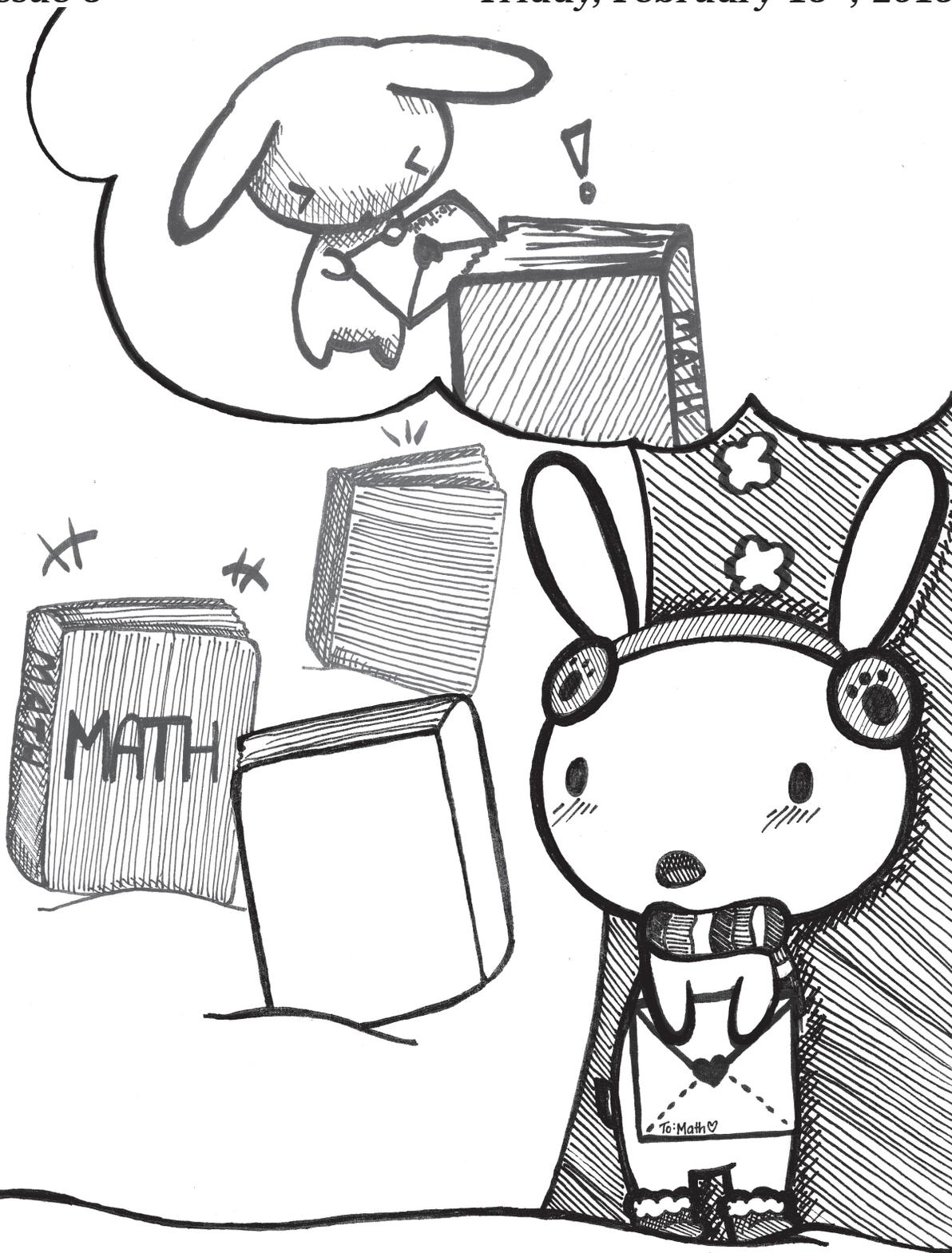


math

NEWS

Volume 127, Issue 3

Friday, February 13th, 2015



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Have a Mathie Valentine's Day!

lookAHEAD**mathNEWS**

February 13	<i>mathNEWS</i> takes you out on a date to watch <i>50 Shades of Grey</i>
February 23	<i>mathNEWS</i> gathers in MC to wallow in shame and regret
February 27	<i>mathNEWS</i> takes you out on a better date, probably

University

February 16–20	Reading Week
February 20	Deadline for 50% tuition refund

Miscellaneous

February 13	Friday the Thirteenth
February 14	Valentine's Day
February 15	Cheap Candy Day
February 16	Family Day
February 18	Ash Wednesday
February 19	Chinese New Year

MEF Director Sez

The Mathematics Endowment Fund is looking for students to take part in this term's Funding Council. Year representative seats or department representative seats can be all yours – all for the reasonable price of going to <http://www.student.math.uwaterloo.ca/~mefcom/forms/>, printing out the Nomination form and getting your friends or a Department Advisor to nominate you. Nomination Forms are due March 4th.

The Mathematics Endowment Fund is also currently accepting funding proposals for the Winter 2015 term. Proposal forms can be found at the above URL. Proposal Forms are due March 6th.

Ifaz Kabir

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Julie Sturgeon (Cinnamon Hearts), Katherine Tu (Candy Hearts), Jose-Miguel Velasco (Lindt Lindor)

mastHEAD

I am surprised at how fast the term goes by sometimes. Right now, we are already on our third issue. And with every issue, I learn more and more about the people around me. The first issue, I learned that learning new things can be hard. Last issue, I learned that if you make any mention of a random theme for a few articles, everyone will jump on the bandwagon. I still hate people for that. This issue, I learned that many people have thought of ways of dealing with dead bodies and dating. I am not sure if these two skills are related or not.

On a brighter note, Reading Week is coming. Soon I will have a week-long break to catch up on work. Which makes me calling the week a break useless. So I decided to ask a simple question in order to brighten up my mood. Of course, I did not care for the writers' answers; I just wanted to ask the question. This week we asked: "What makes you smile?"

GingerbrED("rap battles"); hieveryone("4 hammers and a tow truck."); SketchED("The potential future that awaits"); Depressimist("Nothing. A pile of burning, dead babies comes close though."); $s, t \in \{2k, k \in \mathbb{Z}\}, 144$ ("Dopamine"); theSMURF("You, smiling as you read my articles <3"); ShayBlair("Hip thrusts"); WolverinePanda("The Monty Python Bunny"); Mensa("That sketchy guy who tried to steal *mathNEWS* food"); BeyondMeta("Scar cheeks"); Krimzon("puppies, with candy"); PizzaFreeloaderKid("Route 113. Every time."); Pockets("Snow Days"); IceNine("Bacon"); Scythe Marshall("Packing up my troubles in my old kit bag."); bunnyED("raisins"); Zethar("You would think for a dragon the answer is 'treasure', but it's not quite so simple in the modern world. Nowadays, not everyone has gold to pay as tribute, so we actually need to *invest* our money so we can buy treasure. Also, probably a nice evening under the moon and stars.");

With answers like these, I hope the writers never smile.

SketchED

Eviction Still Pending for Napping Students

Originally reported in *mathNEWS* v127i1 to take place over the upcoming Reading Week, the highly-anticipated Comfy Lounge renovations are still being negotiated in terms of execution date. That said, there's no doubt that it *will* happen in the near future.

Since the renovations were announced and further publicized last week, the students' reaction have been mixed at best. Everyone seems to be excited about new couches, but not excited at the fact that they will lose their apparently "well-valued sleep space" with that. I still would rather the space return to a place to socialize than maintaining the current status quo, but only time will tell how students will adjust to the change when it happens.

We're still counting on a good renovation ahead!

waldo@<3.LE-GASP.ca

VPE Sez

Greetings, my wonderful Mathies! MathSoc has many upcoming events planned for you, and it is my pleasure to inform you about them in this fine publication. I hope you enjoyed our Valentine's Day events today!

We're doubling our Pi Day celebrations this year in recognition of 3.14.15, so we will be serving pie in the MC 3rd floor hallway on Friday, March 13th in addition to Saturday, March 14th at the Open House! Send me an email if you're interested in volunteering.

Games nights are on Thursdays this term. My games directors have informed me a Games With Profs Night will be happening on Thursday, March 5th, so make sure you come out to that if you're not already a regular!

Pints with Profs should be happening the week of March 16th. I'm waiting to hear back about bookings before I can give you a final date, but it'll be on either Tuesday, Wednesday or Thursday at 5:30 PM.

If you're interested at all in helping out, shoot me an email at vpe@mathsoc.uwaterloo.ca! In particular, I would love to hire a director to help me with each of Pi Day and Pints with Profs, and I'd also be happy to provide the resources for someone to run a Chinese New Year's celebration.

Elana "e#" Hashman
VPEXtraordinaire

VPA Sez

Because we have no official VPA this term, Tristan and I have been splitting the executive's academic responsibilities. Here's what I've been up to:

- Helping students to file official grievances about the lack of snow day on February 2nd, despite dangerous conditions. Additional grievance forms are still available for all students to fill out in the MathSoc Office (MC 3038); there is no time limitation. I especially urge you to fill one out if your professor refused to excuse missed academic deadlines for weather-related reasons, or if you missed a co-op interview.
- Scheduled a meeting with the Associate Dean to address student concerns of an academic nature that have been brought to me. These include issues with the accommodations process through the Accessibility Services office, advocating for better staff training on issues of mental health, and allegations towards staff/faculty of sexist conduct.

I will keep you up to date on social media and in the next issue of *mathNEWS* on my progress!

Elana Hashman

CCA Workshops

Working Effectively in Another Culture

(Monday, February 23rd, 10:30 AM–12:30 PM, TC 1208)

Explore the impact of culture and inter cultural communications on the work environment, plus find strategies for success in a new work culture. This workshop is geared both toward students who will go abroad to work, and students who want to work in Canada.

Business Etiquette and Professionalism

(Monday, February 23rd, 2:30 PM–4:00 PM, TC 1208)

Proper etiquette is crucial to a successful job search and your career. This workshop covers appropriate behaviour at interviews, employer receptions and other networking activities, as well as dining etiquette.

The "Who Am I?" Self-Assessment Game

(Wednesday, February 25th, 10:30 AM–1:00 PM, TC 2218)

As a game player in this innovative approach to self-assessment, you will gain insights into your interests, values, abilities, and personality as they relate to your career decision making. During the game, you will develop a Career Profile to help you better understand who you are and what you want in the world of work.

Exploring Your Personality Type (Myers-Briggs Type Indicator): Part I

(Wednesday, February 25th, 1:30 PM–3:30 PM, TC 1214)

Two-session workshop: attend the first session to learn about your personality type and preferences for learning and decision making. In the second session, discover how to apply your Myers-Briggs Type Indicator to explore potential careers. NOTE: There is a materials charge of \$10 payable at the Centre for Career Action prior to the session. Once you have registered and paid, you will be given information on how to complete the assessment online. The assessment must be completed at least 2 business days prior to the workshop.

How to Start Your Own Business

(Thursday, February 26th, 2:30 PM–4:00 PM, TC 2218)

Beth Esenberg, Business Advisor with the Waterloo Region Small Business Centre, will explain best strategies and tips on how to start your own business. Bring your great ideas and questions!

Success on the Job

(Friday, February 27th, 10:30 AM–12:00 PM, TC 1208)

Are you ready to unleash your full potential to be successful at work? Learn how to seize every opportunity to make the most of your work, volunteer, and internship experiences. Discuss responsibility, motivation, ethical dilemmas, first impressions, reputation, and tactics for staying organized.

You can find information for all workshops at <https://strobe.uwaterloo.ca/cecs/cs/index.php?page=Public.Workshops>.

Christopher Smith
Co-operative Education & Career Action

Life as an Interviewer

Confessions of the Recently-Employed

So, I'm not at UWaterloo anymore, but I somehow magically fell into a development position, and was in Waterloo on Production Night to interview potential coöps. It's so weird. Here is a collection of my thoughts on the process.

- If you've ever thought that CECA cared more about employers than students, you were right. If we're late to do anything, they'll bend over backwards to accomodate us. We've brought people from out of Jobmine in and other shenanigans. I'm so sorry, students. We have abused this a few times.
- The problem of determining what makes a good programmer in a single 30-minute interview (we can not afford to spend more time doing it) is still open. I choose to ask abstract "programming" questions, and ask you to walk me through the process of solving it without real code. It's not ideal, but it seems to work. When I say "OK, thank you, we have to move on" don't think you've done poorly. We just have very limited time.
- I took (almost) all of the same classes that you did, CS and SE students. Don't pretend CS 246 prepares you for the real world anymore than PSYCH 101 prepares you for grad school.

- Please be honest. Telling me you've never used language <x>, framework <y>, or concept <z> is better than telling me you're a super-ninja-ultra-extra-rock-star-guru-Lahima with 10 years of node.js experience. I spend most of my time reading random CS and programming articles and know inherently that node.js is both awful and newer than you claim.
- Early interviews are better. By after lunch, I hate everything and everyone and just want to sleep. Of course, your mileage may vary depending on the interviewer. This isn't an endorsement to stalk your potential interviewers, but...
- Bring a copy of your résumé. You never know when your interviewer is going to accidentally save someone else's resume under your name and be confused why you're lying to them.
- Ask questions. I strongly recommend asking things like, "What is an average day in my position look like?" or "What would I have to do to make you feel I was a successful coöp?"
- Don't be nervous. Seriously, we're humans too. I don't bite. Well, I wouldn't in an interview, anyway.

theDreamer

A Rant on Depression

This article talks about depression. Obvious content warning for suicide.

When people struggle, they usually have something to gain for it; they do it to eventually meet a goal, or become better and stronger people as a result of their efforts. But people with depression are too often stagnant. When I'm depressed, I am incredibly bitter at and envious of people who are able to work hard and actually produce something from their hard work. (When I'm not depressed, these people are an inspiration—I know that someday, if I ever have my life together, the things they do are real and possible goals.) No matter how many depressive episodes we go through, another will inevitably rear its head again, as if the last one never happened—no matter how many times we conquer it, it comes back again; it never gets easier, and, for those for whom depression is permanent, it never goes away for good.

Most of the times I attempted suicide, I did not actually want to die (which is why I am not currently dead). I would think a lot about trying and being found early enough that I wouldn't suffer any physical repercussions, and then be part of that Hospital Scene that probably every kid with depression dreams about. You know the one: that scene where you're surrounded by loved ones, who tell you how much they love you and how

glad they are that you're alive (not to be confused with Bad Hospital Scenes, where your loved ones are crying hysterically, are awkwardly silent, or are furious with you). For people like us, it's the equivalent of walking down the red carpet to collect the award for that thing we've been working so hard towards, the moment we are finally recognized for our efforts. It's that dream where, for a moment, we're no longer struggling alone and forgetting that we matter.

But what happens after that? Depression doesn't magically disappear. Just because people tell you that you're important once doesn't mean that your depression-wracked brain will stop telling you that you're worthless and that you should die. And what are you going to do then, land in the hospital again? Re-enact the scene all over again? People get tired of that. People get tired of telling you that you matter, that they want you to be alive—for goodness sake, isn't that *obvious*? They don't realise how persistent and unforgiving depression is, that no matter how many times you try to convince a person with depression that they matter, no matter how many times a person with depression tries to fight it, they will eventually stop believing that their life has value. Depression makes you fight pointless battles over and over and over again, and no matter how many battles you win, you can never win the war.

a subpar cat

Resources are always available

On Campus:

Health Services (519-888-4096)

Counselling Services (519-888-4567 x32655)

Off Campus

Good2Talk, a post-secondary student helpline (1-866-925-5454)

iamalive.org, an online crisis network

Telehealth Ontario (1-866-797-0000)

Scheduling is Hard

No, not like that.

As I'm sure you've figured out, UW has somewhat recently changed how they schedule courses. This has caused no small amount of hand-wringing from the student population. Complaints range from "courses which don't start at the same time each day" to a departure from the usual MWF 50-minutes / TTh 80-minutes format. Perhaps the most troublesome thing is the new 'enrolment' system, whatever that is.

It turns out that scheduling is hard! Whether it be courses or exams or seminars or whatever, scheduling requires a lot of work. And often, no matter what happens, there will be people who are unhappy about it. The general goal is to minimize the number of unhappy people, along with some other criteria, which usually involve time constraints and money considerations. This gets to be quite challenging at times, especially when the factors other than 'how unhappy are people about this?' begin to loom quite large and very... coercively.

Therefore, I propose the following: any scheduling, done via computer or otherwise, shall be overseen by a "Certified Scheduling Engineer". These talented professionals shall go through a challenging certification process, including the following:

1. High standing in scheduling courses, as taught in, say, the CO department;
2. Successfully pass two industry-standard comprehensive exams;
3. Apprentice under a certified scheduler for at least six months.
4. Pass a detailed criminal records check;
5. Pass, with flying colours, an extremely rigorous ethics training.

Each of these points is important. We need our schedulers to have both the requisite theoretical background, but also the practical know-how to schedule things in the real-world, complete with on-the-job experience shadowing a certified scheduler. The last two points are required to maintain professional integrity; in the case that scheduling goes awry, there needs to be some sort of damage-control. Either the scheduler will shed light on the attempted manipulation of the scheduling, or they will refuse to work under the given conditions. A professional union would be helpful, and likely to be a thing.

The main portion of the ethics training would be maintaining the emphasis of arranging the schedule to be as people-friendly as possible. In many cases in real life now, this does not happen. The goal of this professional certification would be to remedy this.

Admittedly, this is radical, far-fetched, not likely to happen, and frankly probably ridiculous. But it would create jobs! And that, my dear readers, is more than Stephen Harper can say for his Economic Action Plan.

Zing!

Scythe Marshall

Exciting New Startup Looking for Candidates

We're a new revolutionary start-up based in SF, and although we're not sure what our product is or how we will monetize it, we've got some VC funding. With all this money, we're looking for talented and passionate super-ninja-ultra-extra-rock-star-guru-Lahimas to join our team so we can be fast-growing.

We're not sure exactly what you'll be doing, but it's a fast-paced environment, including a ton of ping pong, pool, Foosball and Smash. Our super sexy office is also filled with free pop, food, and, of course, beer!

Candidates should have the following skills:

- Strong background in object-oriented programming and design.
- Experience with node.js django on mongo rails.
- 200 years of experience with Agile development methodologies.
- Previous work with with Big, Medium and Small Data, both in and out of my Butt.
- Ability to perform front, back and side flips.
- No SQL experience^[1].
- Proficiency with Katana, Shuriken, Nunchuck, Bo Staff and Sai.
- Experience with one of: lead or rhythm guitar, bass, drums, or tambourine.
- Mobile design and development is a plus.

We pay competitive salary and equity.

Please send your resume to [redacted] [at] gmail.com!

theSMURF

^[1]We don't hire anyone that will even think of using relational databases. They're just not webscale.

A Fistful of FASS

What happens when you put several dozen amateur actors, some weekend musicians, a few wanna be painters, builders, and those who didn't get enough of craft time in kindergarten? Combined with sleep deprivation, parties, booze, and, well, you get a better-than-average FASS. This is strange, given that the recipe is the same every year. Between cardboard sets and mic issues, a fairly entertaining and fast-paced play occurred. In a flood of stuffed animals on stage, the intermission was a surprise. And the pace was kept up after the intermission. No overall plot was attempted, which kept the play snappy and coherent. Including a preview of the new LRT train, a field full of geese, and annoying roommates, the play took you through a UW undergrad career. While it's over now, the DVD and show-book are still available, and FASS will return next January. Don't forget to join or watch next time. For those looking for something sooner the UW Drama department is putting on a rendition of Ionesco's play *Rhinoceros*. Other UW events can be found here: <https://uwaterloo.ca/theatre-centre/events>.

World Debate: Remove Ukraine's Occupation Force?

After Russia forced itself into Ukraine, a new territory, the Donetsk People's Republic, is now growing inside of Ukraine. After writing multiple angrily worded letters of condemnation to Russia, the world is now in debate on what to do with the new territory, and whether it should be treated as a legitimate nation.

The world is split into two camps: pro-nation and pro-choice.

The pro-nation camp argues that all territories are full-fledged nations, and should be treated as such. They believe that the act of creating new nations is sacred, and even defended Russia's actions. They have gone as far as stating that, "Based on how Ukraine was situated, it was practically asking for it" and "If it's a legitimate invasion, the country has ways to try to shut that whole thing down." The pro-nation camp calls for Ukraine to keep the new territory, and even lend support to help it grow.

On the other hand, the pro-choice camp believes that Ukraine's borders should be respected. They argue that Donetsk is not a true nation yet, and Ukraine should have the choice of keeping or abolish the new territory.

Currently, the situation in Ukraine is not looking too great. Tensions are escalating as both sides become more and more entwined in the debate, with neither side backing down and no solution in sight.

theSMURF

Webcomic of the Month

Hello caffeine-dependent students! I have not graduated yet, and have not died (though many a times it has felt like I did). Being bribed back to *mathNEWS* with the promise of good company and laughter dragged me from the depths of my energy drink and ramen haven to write you all an article. An article that will share a web comic I am madly in love with (it is even more hilarious if you are of the female gender).

The webcomic? *Satan and Me*. You can find it on taptastic or tumblr. The artist's account names are: Orangeplum (taptastic) and thisiskindagross (Tumblr). I do not want to ruin anything for you in regards to this comic. I suggest you read on taptastic to get chronological order of the comic and go to the Tumblr for mini images and such. It is a fantastic web comic with superb art, and if you remember me, I did draw some covers for *mathNEWS*, I'd like to think I'm decent. Please go read this comic! It is hilarious and fun.

P.S. I grew up in a Christian home so if you are worried this is some Satan worshipping thing, it isn't! It's pure awesome! If you also grew up in a religious home or know a lot about the Bible you'll be able to follow the story with ease.

WolverinePanda

Meme Reviews: Just fuck me up

"Just fuck me up" originates from Twitter and quickly gained popularity through a screen capture of the Twitter post shown below, widely distributed, and eventually adapted into a meme, throughout Tumblr.

Accessibility: Of course, you would need to know that "just fuck me up" means "do whatever" in the context of this meme. However, iterations of the meme are still amusing without knowledge of its origins.

Reproducibility: The "just fuck me up" meme is very versatile in its reproducibility. "Just fuck me up" is not only confined to fucking up haircuts, but anything that can be interpreted as badly designed or badly made. Furthermore, the dialogue need not only consist of animate beings. Here are my own examples:

[At door in DC, near the DC-MC bridge.]

Plant Ops: What kind of handle should I

Door: Just fuck me up

Professor: How should I structure

STAT 231 Curriculum: Just fuck me up

Offensiveness: "Just fuck me up" can be somewhat offensive; not only does it contain profanity, but it implies that a person requesting a service must not have cared for the quality of the service because the quality is so low, or that whatever job was performed was done very poorly.

Rating: 7.5/10. Not a bad meme, but it's got bad swears and stuff.

bunniED



Barber: What kind of cut you

Him: Just fuck me up



RETWEETS 649 FAVORITES 734

1:28 AM - 11 Dec 2014

University Extreme Weather Policy

mathNEWS has acquired a number of canned press releases available in the event of severe weather conditions:

- **Orbital space bombardment:** While the ongoing orbital bombardment has destroyed most buildings in the city, campus remains open. The university roadways and pathways remain passable if cratered and the DC is far improved by multiple impacts.
- **Zombie plague:** While students who are ill should stay home for the safety of their classmates, all healthy students are expected to come to class, as most students have been preparing for this for years.
- **Literal end of the world:** While some students may question the use of spending their last day on Earth in school. While useless in the afterlife, there is no better use of one's last days than in the pursuit of higher learning.
- **In the event of the rapture:** Students are expected to be in classes today, but can make choices they feel necessary to protect their immortal soul. We understand most students won't be saved anyway.
- **Heat death of the universe:** The administration wishes to express that the heat death of the universe is reasonable grounds for closing the campus.

N Things I Saw at IRS

- theSMURF in a pizza suit
- Speedos everywhere
- A room full of tape
- A large wrench
- Pedobears hugging
- Neon trons
- Large purple things
- A large iron wrench

fword

How to Pick Up Chicks

We recommend approaching the chick with some caution. You don't want to make any sudden movements to scare them away. Remember that chicks are delicate fragile creatures. You also probably don't want to try and pick them up when their parents are around, they are not likely to appreciate it. To pick one up, you should gently extend your hand towards the chick and slowly guide it into your hand. Be careful when picking it; they can easily suffocate if grasped around the ribs. Once you are done holding your chick please set it back down on ground gently. Now you know how to pick up chicks.

If you are interested on how to pick up females (or males) please read my other article.

Beyond Meta

Breakout Star at Superbowl, Not Enough for Seahawks

Despite a breakout performance from Seattle Seahawks receiver *mathNEWS* it was not enough for Seattle to claim back-to-back Superbowl championships.



mathNEWS makes a leaping catch over New England Patriot defender, Kyle Arrington.

mathNEWS, who had not yet had a single catch in its NFL career, provided some fantastic catches for a 109 yards receiving and a touchdown. Some said had Seattle won, that *mathNEWS*-would have possibly been given the MVP trophy: a first for a bastion of erudite thought.

Due to *mathNEWS*' fantastic performance, the University of Waterloo football team has sent out an invitation for this fine publication to return to campus and play for the University team. *mathNEWS* has not yet replied to head coach Chris Bertioia's offer.

Reporting from Arizona,
Pete Love

dissedCONNECTION

With Valentine's approaching, I decided to do something shocking and romantic. I guess running at you with a chainsaw and hockey mask was a bad idea. I also should checked the calendar and realised that Friday the 13th is not actually Valentine's Day.

Clueless Lover



Participants Wanted for Research Study

Recently, I came across some nonsensical jokes about mathematicians on desert islands. I was intrigued by all the ridiculous things that the authors of these jokes suggested that a mathematician would do. Unfortunately, to the best of my knowledge, there has not been a reality TV series (or social science experiment) that dropped mathematicians on desert islands to observe their behaviour.

Hence, I propose the purpose of my next research project: to investigate the oft-mentioned but rarely-cited curious behaviour of mathematicians on desert islands as found in jokes. I will do this by dropping mathematicians onto desert islands and observe their behaviour over the course of a co-op term.

As research ethics currently prohibit the conscription subjects into experiments, in order to make this study more appealing to mathematicians, I have decided to place subjects in some highly

exclusive and highly desirable private south-pacific islands. The islands, of course, will be deserted and mostly desert. Although the study will be unpaid, each subject will have access to the island's facilities over the entire term. Each island comes with an abundant amount of sunlight (which you can harvest into electricity), ocean water, and food sources in the water. We may also provide an assortment of basic materials for you to use construct a shelter on the island. Rent, of course, will be free.

You may bring whatever you can fit into the size of one standard carry-on luggage, at our discretion. Electronic devices will not be allowed and will be confiscated prior to departure. You may use the time on the island to do whatever you wish, and you may leave at any time if you are able and willing. The study has not yet been approved by an independent ethics committee.

arabesque

You've Lost Me

I'll admit, I'm pretty garbage at directions. Give me a map, and I'll still find a way to get lost. Give me a GPS, and I'm a little better off, but that's not always an option. Really, can you blame me? Take a look at Waterloo: we've got Karen Place, which intersects Karen Walk, which itself is kind of a weird L shape with a little loop at the top. This street turns into Keats Walk when it crosses Keats Way. Seriously, city planners, what the hell?

If I were in charge of laying out the streets of a city, I would be a bit more sensible. First, I'd pick an origin. Either the centroid of the city, or just whatever part I decide is most important. At this origin point would be the intersection of Zeroth Street at Zeroth Avenue. As we continue north, the avenues will increase, (First Avenue, Second Avenue, etc) until you've left this sanely laid out city. Similarly, heading west will increase the magnitude of the streets. Heading east or south will start into the negatives. Suddenly, instead of trying to follow a maze of twisting promenades, all alike, you just need to compare your starting address to the destination, and BOOM! You know which way to go. As an added bonus, you'll have a rough estimate of how long it would take to get there.

Now, there might end up being a need for new streets to be built after we've already laid out our logical paradise. Luckily, we have the power of decimals on our side! (Screw fractions, nobody likes those.) Some people might prefer fancy names of old dead people like Shakespeare Drive to practical names like "17.3529th Avenue," but that's the sort of irrational blockhead I'd prefer not to associate with. Call me crazy, but I'd rather live at 100 23rd Street.^[1]

Yours,

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

Monday Morning: A Rope of Sand

As I wake up to the blinding light of the early afternoon sun pouring in through the window, a number of questions flood to mind. Where am I? How many ninjas did I fight to cause this pain? Why is this room full of long stale chocolate chip waffles? Whose pants are these? I can only assume that the answers to these questions in no particular order are: Space Wizards, at least eight, one particularly sassy aardvark-human hybrid, and I have no idea.

After discovering the bathroom and a linen closet, I finally find the correct door to freedom. I look out over the barren science fields and decide to wrangle the next electrobat I come across for transportation. It takes me forty minutes and an entire package of Twizzlers, but I am heading east at last. As I look down upon the passing landscape, I see land-squids fighting turf wars with spaghetti-giants, hordes of rogue combat squirrels ransacking entire villages, and gorillas rummaging through the wreckage of the great pillow fight of '46, seraching for discarded truncheons and lightbulbs. Off in the distance I can see the sun setting over the bloodponds, now only half actual blood, ever since the Mountain Dew munitions plants exploded and started leaking into the wetlands. I jump from the E-bat and land into the marsh-mallow pit on the roof of my condo. Walking down the hallway, I notice that my door is ajar. Sneaking into my apartment, I see a cloaked figure sitting at my computer-box-machine. I raise my ferret-cannon, the floor creaks and the figure spins around, revealing their face. I freeze. The monstrosity sitting in my living room is an eight-foot-tall stuffed bear with clown facepaint on. Before I can shoot, its terrifying voice-box crackles to life.

"The turtle can't help you now."

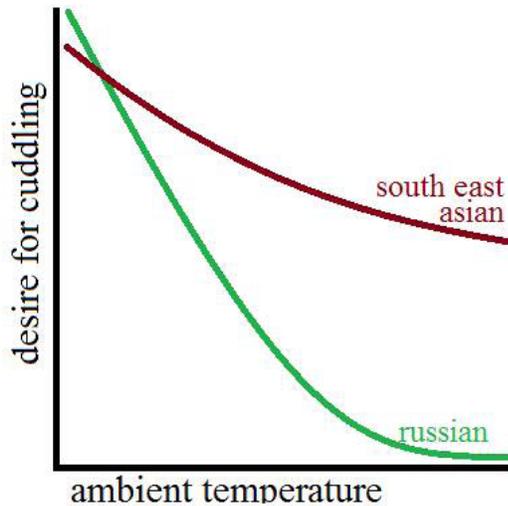
And then it explodes.

^[1] Not to be confused with 120 3rd Street.

N Unexpected Problems with my Interracial Relationship

The University of Waterloo embraces diversity in all walks of life, including love. Turns out interracial relationships come with their own special set of misadventures. As a Southeast Asian dating a Russian, here are N unexpected problems with interracial relationships:

- **Showering shenanigans:** In a shared shower, either I freeze or the Siberian is seared.
- **Camera exposure dilemma:** I am tanned. My partner is... a shade approximated by an albino snow flake. In photos, either I'm a featureless brown blob or he's a featureless white blob.
- **Summer cuddling crisis:**



- **Laundry stand-off:** did you know that some Asian people sort laundry by indoor-outdoor cloths and some Russians sort laundry by colour? Now you do!
- **Reverse blanket-war:** what does it take to convince Siberians that blankets are necessary for a cold winter night? (Seriously, I need to know or I may die from hypothermia)

Willow



How to Go on a Date

The most difficult part about going on a date is first acquiring a date. To do this, I recommend going to the grocery store. There, in the produce section, you should be able to find a date. You probably want to purchase your date before you go on it. Once this has been done, remove the packaging and place the date on the floor. Make sure it is properly standing. Once you do this, you need only step on the date in order to go on a date.

If you actually want to read a serious article, please refer my other article on how to ask someone on a date.

Beyond Meta

February 2nd

AKA *The Avalanche*

On February 2nd, a white blanket of darkness descended upon the land, affecting the peasants and their various forms of transportation. No one was spared in the behemoth of a storm. The last time the university closed was on February 23rd, 2015. All other elementary, secondary, and post-secondary schools in the region were closed. Laurier was closed, but is that much of a surprise?

Brave souls entered the fabled University of Waterloo to attend the classes that were still open. The fate of the students was left to the Dean, and he spoke thus: "I do notice that the weather warning has been lifted by Environment Canada and... We look forward to a glorious day here."

And a glorious day it was, filled with unshoveled sidewalks and slushy pathways. How would the students traverse the lands to reach their class? It seemed that the University of Waterloo Twitter said that "faculty, staff and students are reminded that they are responsible for determining when weather conditions make travel unsafe." What a way to shift the responsibility for missed classes upon students. What drifted alongside the falling snow was the social media backlash from students on the Internet.

Many ask what the storm was made of. It was not the snow falling through the air; it was complaint after complaint from students. That was the true avalanche: the giant cloud of negativity towards the university staying open. We all love snow days, but I guess we need to be adults and go to classes during the day. I personally blame Plant Ops, since they clearly didn't clear pathways. It was highly probable the university was staying open, and even more obvious that there was a large amount of snow coming.

Bottom line: Yes, there was snow, but not *that* much. All I ask is for the workers to clear the pathways in time for my 8:30 class.

jat109



How to Ask Someone Out on a Date

Everyone has their own advice to give on this particular topic. In my opinion, I believe that, if you want to go on a date with someone, you should simply ask them if they want to go a date. This way the situation is unambiguous the person being asked out doesn't have to wonder if it's a date; they know. It is not a bad idea to start a relationship with clear communication.

There are many people who advocate for the ambiguous scenario, as it increases the chances that the other person will say "yes". But really, what's the point of going on a date if the other person isn't aware it is one, and wouldn't be interested if they were? You are just wasting time for the both of you.

Now that you have decided to ask them out directly, you just need to find an opportunity to do it in person while no else is around. If there is one thing asking out on a date doesn't need, it is bystanders, especially gossipy matchmakey bystanders. The hardest part is just finding an opportunity where they are alone. Your best bet would probably be at the end of an event when they are about to leave.

If you are worried about rejection and things being awkward, know that things are only awkward if you make them awkward. At the end of the day, regardless of what answer you get, know that you at least had the courage to ask someone out, and that's something to be admired.

Beyond Meta



The Math of FASS Strike Breakfast

So, unless you've been living under a rock for the past month, FASS, a theatre production run by the Faculty, Alumni, Staff, and Students of Waterloo recently wrapped up its yearly run of shows. At the end of the last show, the company destroyed/removed all the props and costumes, as well as put backdrops into storage. This end of run event is called Strike. Afterwards, we all went to a party with speeches, dinner, and the like. This party went on all night, as per tradition. Also as per tradition, we went to breakfast at Benny's the next morning.

I had gotten some sleep, which is much more than can be said of some of my fellow FASSies. And as such, my brain started to wander to the math of the massive breakfast that was being consumed. How many eggs did we all eat? What was the caloric intake en mass? These ones were less important than the big one: the staff were not pleased by how much we underestimated our party size and wished they had called another employee in. 54 peop is 80% more than 30. Nevertheless, we got our food incredibly quickly. Math was soon pushed to the back of my mind as threats of bodily harm were suggested when I attempted to become a vector for the obviously contagious memeplague.

An Odd Piece of Advice

Do you like making things? It doesn't really matter what. It could be news articles, poetry, meals or paintings. The skills used in making things are a lot like other skills. If you want to get good at them, there is the usual list of tips: practice makes perfect, don't be afraid to ask for help, accept criticism, and have fun. These are all good pieces of advice, but I have one more I would like to add.

Make terrible things.

As counter-intuitive as it may sound, make terrible things. If you start making something and you know it will not turn out well, make it anyway. If you have an idea that will probably fail spectacularly, give it a shot anyway. As long as no one actually gets hurt, there's no harm done. Maybe it will not be the disaster you thought it would be. Maybe it is every bit of a disaster and more, but you might learn something anyway.

You miss 100% of the shots you never take, and nothing you make will ever be as bad as not making anything at all*. And as you get better and can make good things, continue to make terrible ones as well. Experiment, reach out, try new things and laugh at yourself every once in a while. It may be an odd piece of advice, and it can be hard to follow, but it has yet to lead me astray. Hopefully it will be just as useful to you.

Glec

* Exception: If you are trying to create some super-soldier/resurrection serum/virus/chemical, please stop before another zombie apocalypse breaks out.

It obviously was not enough because I am not immune to its effects. Obviously.

The real puzzle came out at the end of the meal. 54 people, many of whom will not see each other for months. The company felt like family, and the only acceptable farewell for the majority were hugs. A simple calculation suggests that the number of unique hug pairings is the triangular number 1431. There would thus need to be 53 sets of hugs of 27 pairs to optimize the hug system. Assuming about 20 seconds to hug and to find the next partner, this suggests that it could be done in less than 20 minutes. This was less than half of the time it took. Aggravating factors such as sleepiness slowed it down, plus multiple hugs, as well as non-optimized transfer protocols. Brownian motion is not fast.

Of course, this also fails to account for the preferences of certain people to not hug. Further study is required to get a good working model and better estimates of the actual number of hugs as such large group events. Perhaps a dragon I know may help.

IceNine

How to Melee

Overdramatized and based on a true story

He had arrived to UW Smash Club, the premier place to play Smash Bros. Melee is the only competitively viable and high action paced game within the series. Each game has 4 stocks or lives where you win when your opponent loses all of their stocks. If you can't wavedash, you might as well not even play in the club. Five weeks had occurred ever since the first regular appearance at the club. Five long weeks of continually losing games and being stomped on. Another week of discouragement because of consistent losing.

Don't mistake coming to the club and starting to play Melee as the same thing. Originally, he played on his own. Then he decided to run a small tournament with his friends. Of course he would win, he was practicing the game, unlike his friends. 1st prize \$20, 2nd prize \$10, and 3rd prize \$5. He didn't even have enough to pay for 1st place, that was already won by him.

He invited his friends, and in hindsight what may seem like just a tournament to show off to them. Each match occurred and he flew through the brackets of the tournament. No one could match his skill, until he met a competent competitor. His high tier Falco got destroyed by the low tier Young Link. The salt was real. The Falco got four-stocked, which symbolizes one of the most disrespectful wins over someone. So painful that he switched from Falco to Marth. He ended in 3rd place. Not even 2nd. He lost to someone else's Doctor Mario.

After tons of grinding tech skill and practicing he arrives at the UW Smash Club. Fifth week. Seeing all the pros play. He

enters the tournament to try to win a single game. He plays his first set and gets destroyed as usual. He is knocked into the loser's bracket. Once you lose there, you get knocked out of the tournament.

It was a Fox vs. Peach. Game 1 is Dreamland. After self-destructing twice, the Fox is once again embarrassingly four-stocked. Taking a deep breath, he knows that this is his last shot. If you want to win a game, this is the last chance. The opponent banned Final Destination, so he takes it to his favourite stage, Battlefield.

The Battlefield lay open with the flat land with three platforms. Still Fox and still Peach. He didn't know exactly what happened but the peach self-destructed. Then he started to pick up momentum. The fox amassed a crowd that spoke of prophesying a reverse four stock from game 1. He has four stocks still, and the peach has one left. His palms were sweaty. His knees were getting weak. He lost a stock. And he lost another stock. And he lost another stock. But he ended the game with a two stock in his favour.

He had finally won a game in a tournament set. Then for game three he got two stocked on fountain of dreams. Therefore, getting last place in the tournament once again, but winning one game. All he had wanted was to win one game, and he had done that.

Make sure to follow your dreams, people.

jat109

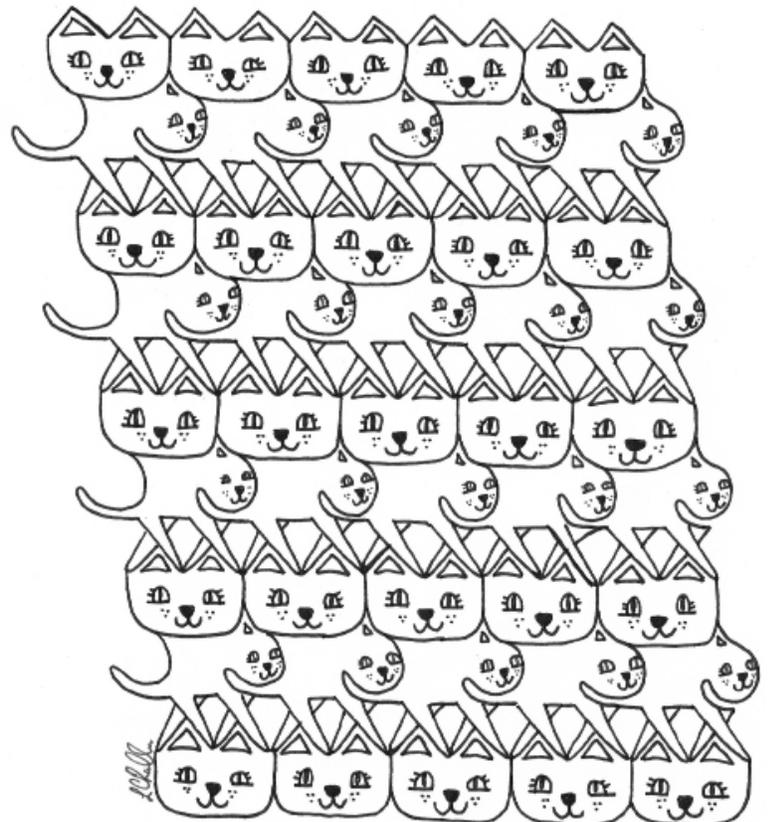
How to Buy Loyalty Using Kit Kat Bars

How many Kit Kat bars does it take to buy someone's loyalty to the point they'll hide a body? Well, according to a reliable source, it costs about \$20,000 to hire someone to hide a body. Obviously, this figure does not take into consideration size, difficulty, method of disposal, and how much it induces a moral dilemma (e.g. a child). However, we will derive a general equation then make the calculations using this ballpark figure.

We shall consider the monetary equivalent of Kit Kat bars. Let us assume x is the number of Kit Kats given in payment, and p is the monetary value. If one has a sufficient number of Kit Kat bars and is getting them without expending money, one could easily sell them for about 50¢. So we need $x/2 = p$. Thus, $x = 2p$. We have now derived a general formula.

Now let us examine the situation where $p \approx 20,000$. Therefore, $x \approx 40,000$, so to account for variance, 50,000 Kit Kats are necessary to buy their loyalty.

Yours in buying friends,
Shay Blair



profQUOTES

“In the past few years, the midterm average has been around 50, 51. I expect you guys to do much better. Maybe 52.”

Baranoski, CS 488

“If I have 1 element to sort, I don’t need to sort. If I have 0 elements to sort, I still don’t need to sort. If I have -1 elements to sort, I have even less reason to sort.”

Biedl, CS 240

“If you violate my precondition, I can do whatever crap I want.”

Biedl, CS 240

“Assignment 3 has a due date that is so far away that you won’t even think about it. No, you’ll be good students and look at it right away.”

Biedl, CS 240

“Maybe you should go to a bank with more bits.”

Brecht, CS 350

“Woo overflow, woohoo. Go for it.”

Brecht, CS 350

“Imagine you are studying for an exam and someone knocks on your door every 10 milliseconds.”

Brecht, CS 350

“Friends don’t let friends write self-modifying code.”

Brecht, CS 350

“I didn’t say that. If I’m quoted in *mathNEWS*, I still didn’t say it.”

Buss, CS 245

“Use bubble sort. I don’t care.”

Chan, CS 341

“University is not about the best you can do, it is about the best you can do under impossible circumstances.”

Deman, ENGL 108F

“I like to fish and make sashimi because I’m a fisherman.”

Illman, EARTH 122

“I like to think about savings because I don’t want to rely on the government in old age, because the government is going to run out of money.”

Illman, EARTH 122

“I’m not your dad, so I’m not going to tell you to sock away \$100 to buy an iPhone or whatever.”

Illman, EARTH 122

“You know when I say baby Bush I don’t mean the older one—he was kind of statesman-like, I mean the younger one... [Chuckles to himself.] You know, the one who was kind of an embarrassment.”

Illman, EARTH 122

“Do you understand it now? I will promptly give you another example so that you don’t understand it, because that’s what we do in mathematics.”

Jao, MATH 239

Student: “Is the converse true?”

Prof: “Good question... I’m fairly sure it’s not; I’d bet my right arm on it... but I’m left-handed.”

Karigiannis, MATH 247

“It’s a piece of cake, pie, lemon meringue pie, whatever it is... piece of cake.”

Labahn, CS 370

“I’m going to assume that most of you won’t write an attribute grammar and send it to a spreadsheet.”

Lushman, CS 444

“Can you imagine how horrible it would be if you wrote a 1000-line program and asked the compiler to compile it, and the compiler just said ‘no?’”

Lushman, CS 444

“The first step of compiling has been very well studied that it has become a science. No, more than a science: it’s a math.”

Lushman, CS 241

“If we can answer an unanswered question like that, then your tuition needs to be higher.”

Lushman, CS 241

[*Software used for demo glitches.*] “This must be a new quantum effect!”

Lutkenhaus, PHYS 234

“This is the hardest contract you will have to do. In class. [*Evil laugh, then sips coffee.*] By the way, it is usually a bad sign if your professor laughs evilly after saying something.”

Petrick, CS 135

“I’m not here to tell you everything I know.”

Purbhoo, MATH 235

“You write a proof, and you’re not sure it’s correct, and I look at it and I’m not sure, so I hand it to some poor grad student to look at it.”

Ragde, CS 442

“You can add an extra bar here if, visually, the blank space offends you.”

Ragde, CS 442

Student: “My throat is really sore.”

Prof: “So is mine, so you should suffer too.”

Shallit, CS 462

“Did anyone do it? [*Class is silent.*] Too much Netflix, huh.”

Shallit, CS 462



gridCOMMENTS

Your little claws

Happy Friday the Thirteenth, Valentine's Day, Family Day, and Reading Week!

This issue saw infinitely as many submissions as last time; out of seven, five were perfect. The *gridQUESTION* asked what the bear said to the other bear, abetting an influx of bear puns (except for Michael, who reported "nice meme" (?) and was the only one who didn't draw a bear). Shumiao Wang's too-long-to-publish answer was sixty percent bears. Sarah Liu's "This theme is paw-sibly panda-monium, and it's bear-ly the beginning" was very cute. BunniED put it perfectly: "Plz no moar bear puns". But Isabel's "Hey grrrrl, what's ursine?" was decidedly the best, fitting also this issue's theme and foreshadowing 69A! So congratulations, Isabel! 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, February 23rd. Include your name and your answer to this issue's *gridQUESTION*—the shortest, most unique one decides the winner (of a \$5 C&D gift card) in the event of a tie: "What?"

Cheers,
unit

P.S. Thank you, Double D, for answering my question about two issues ago's crossword.

This Week's Grid:

1	2	3	4	5	6	7	8	9	10	11	12	13
14				15					16			
17				18					19			
20			21					22				
23			24				25					
			26				27			28	29	30
31	32	33			34	35			36			
37			38	39				40		41		
42			43	44				45	46			
47			48				49	50				
			51			52				53	54	55
56	57	58			59					60		
61				62					63			
64				65					66			
67				68					69			

gridCLUES

Across:

1. Muslim chief?
5. Dove rival
10. Unlove
14. Take on cargo
15. Weather in Québec
16. Has to pay
17. Process no. 1
18. Expression of humorous contempt
19. Covers with hydrocarbons
20. Area of effect
21. Stared, open-mouthed
22. Not all poetry has to
23. Worse than April?
25. Hart's dear?
26. Back part
27. A tropane alkaloid
31. Renaissance pigment
34. Quack colour?
36. Picked out of a deck
37. The A in IPA
38. Eeyore's favourite food
41. Rink requirement
42. Fallings-out
44. Crawl (on hands and knees, maybe)
45. Sunset after sunset after sunset
47. Fainting in a hospital?
49. Big birds
51. Possesses
52. Easygoing
56. Something to kiss
59. Tony the Tiger's adjective
60. Fishing stick
61. German honorific
62. Rides and prizes
63. Rank-crossover
64. Spanning the alphabet
65. Keel-parallel
66. Date tree
67. ___ buco (veal)
68. Sweetheart in Sicily
69. Starry teddy

Down:

1. Pelvic, sort of?
2. Big house
3. Au revoir
4. Rendezvoused
5. African antelope
6. Active at dusk
7. Loved object
8. Do to a palm or mind
9. An exclamation
10. One quick to anger
11. The wrong direction?
12. a.k.a. semester
13. ___ est percipi
21. Gonorrhreal discharge
22. Link's feather's owner
24. Not be perfect
25. Pretty toy
27. Active whenever
28. Blue in her eyes
29. Something to kiss
30. Sheep-wives
31. 42A?
32. Sicken with sweetness
33. Cleft
35. Key
39. Shakira's don't lie
40. Thing drawn forth
43. Musical joke
46. Can.'s neighbour
48. Trysting-tree?
50. Night air?
52. The Tempest spirit
53. Erica arborea wood
54. Languidly lounges
55. Dropsy
56. "Ciao" in Spain
57. Straight folks
58. Limb-loosener
59. Valve man
62. Rad
63. Math coprocessor

Article of the Issue

This week's article of the issue is *University Extreme Weather Policy*. The scary part is in some alternate universe these could actually be the policy. We might be in that alternate universe. You can pick up your prize from the *mathNEWS* office, MC 3038!

The Editors