2011

2013

2012

2014

Ian Goulden:
Our #distractinglysexy Dean
since 2010

We'll Miss You!

*look*AHEAD

VPA Sez

Waddup mathies,

We spoke with Professor Furino about the calculator policy. It's still the hope that we will be switching to only one (or very few) calculators, but it is up to you, the students, to let us know which you would prefer. Stay tuned for another survey for this later this semester.

The Co-operative Education Council met to discuss how to provide more flexibility to students, and to question why students are leaving co-op. Comments and suggestions can be sent to Stéphane Hamade (`stephane.hamade@uwaterloo.ca`) or myself (`ktu@uwaterloo.ca`).

Talk of the Fall reading break is still ongoing, since there are many logistics to work out, and it is likely to not see implementation until Fall 2017. Talks about how to adjust the CAV/MAV for Math Studies are also ongoing. If you would like details or have comments, concerns, or suggestions, please contact me.

Katherine Tu
Vice President, Academic 2015

Thomas Baxter (Bust of Elvis), Amy Li (Minnie Mouse ribbon), Elizabeth Liu (Pirate hat), Julie Sturgeon (Sceptre), Katherine Tu (Suit and sandals)

*mast*HEAD

Over the past several weeks, you may have seen the hashtag #distractinglysexy in your Twitter feed, with an endless array of pictures of laboratory-ruiningly attractive scientists in their hottest workwear. We here at math**NEWS** understand how hard it can be for some people to work with a coworker who is wearing a particularly revealing Hazmat suit, and we have chosen to bring attention to the cause with this issue.

We also wanted to dedicate this issue to Ian Goulden, who will no longer be our Dean of Mathematics, come July 1st. He has faithfully served our Faculty as Dean for five years, and as a popular professor for many more.

Clearly, the stars aligned. There could not be a better farewell tribute than to reflect on our favourite #distractinglysexydean moments over the years. While our Dean rarely donned the provocative protective wear in the #distractinglysexy tag, he brought his own mature style to the workplace.

We asked our authors, "How are you #distractinglysexy?":

Marzipan ("Jestem głodny zawsze."); Soviet Canadian ("by simply occupying the local space of another human"); GingerbrED ("mouth-breathing in 8 AM lecture"); TotallyLegitDeveloper ("The bucket on the head does WONDERS."); xoxo ("It's a state of being."); //QED ("I am not."); G-UNIT ("When I'm writing a proof, I'm playing 'hard to get' with my TA."); ∈thu ("Sleep deprivation is super hot."); RT_STUDENT ("No showers and I play with trains all day."); Zethar ("That's usually a job left to our infernal contacts..."); Shay Blair ("Hanging out with Mr. Math #besties #blessed"); Beyond Meta ("by making witty jokes"); Theodore Bear ("Stupid sexy Flanders"); Pockets ("constant slow motion"); Mr. Math ("being a spread in math**NEWS**"); waldo@<3.LE-GASP.ca ("*meeple eyes*"); \& ("I don't cry when I'm being criticized"); Scythe Marshall ("Braided blond hair, giving a tutorial in front of a chalkboard."); MeaninglessQuips ("How am I not?")

ConvolutED ("It's too hard to answer this question and so am I.");

Math: Notoriously and unabashedly `#distractinglysexy`

Reprinted from v127i3
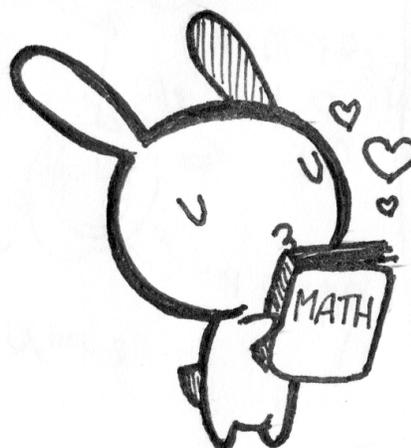
CRO Sez

Hi everyone,

If you are interested in representing the students in your program, you can be a council member of MathSoc student council. The nomination forms are located outside the MathSoc Office (MC3038). You can submit your completed form at MathSoc during office hour or email `cro@mathsoc.uwaterloo.ca` and `elections@mathsoc.uwaterloo.ca`.

IMPORTANT NOTICE:
The Bi-Election nomination period will be extended. The deadline is next Thursday, July 2nd at 11:59 PM.

Cheers,

Jazbel
Chief-Returning Officer, MathSoc Spring 2015

MGC Sez

Hey y'all,

Math Grad Committee 2016 needs your help!

If you are interested in yearbook designing, planning events, or anything Math Grad-related, you can sign-up to be a volunteer at `http://tiny.cc/MGC2016`.

Thank you so much,
Jazbel Wang and Jenny Li
Co-Chairs, Mathematics Graduation Committee 2016

CSC Flash

Hey, people in CSC. Also hey, people not in CSC (we're very accepting here).

If you're reading this on Friday, good news: CSC and WiCS are both hosting a grand ol' time at the Laurel Creek firepit (next to Velocity and EV3). We're bringing frozen yoghurt and s'mores. We're also bringing fire. There will be vegan marshmallows and sorbet frozen yoghurt, so vegan, halal, gluten-free, lactose-free, and goblin-free options are available.

If you're not reading this on Friday, you're either a *math*NEWS editor or had more important things to do than read *math*NEWS as soon as possible. I don't know what those things could be. *math*NEWS is pretty good. The critics rave about it, I've heard. The critics are locked in the *math*NEWS office until they rave about it, I've heard.

Come to the CSC office, we don't bite. (Can't say the same about the office goblin).

jj $2, (baile).

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 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 by June 30th.

The Mathematics Endowment Fund is also currently accepting funding proposals for the Spring 2015 term. Proposal forms can be found at the above URL and are due June 26th.

Thank you very much,

Jo-Anne Li
Director, Mathematics Endowment Fund, Spring 2015
`mefcom@uwaterloo.ca`

HvZ Sign Ups

The zombie apocalypse nears. The exciting game of nerf gun and sock tag will be happening the week of July 6th.

Sign up are happening next week Monday to Wednesday in the SLC, and all week in MC.

More information can be found at the sign-up booths.

Joining the zombie apocalypse is a real no-brainer.

Beyond Meta

Undergraduate Research Opportunities Conference
October 2nd – 4th, UW Davis Centre

Are you curious about Computer Science research, but not sure where to start? Experience the life of a graduate student in 3 days by participating in research workshops with other top undergraduate students in Canada.

UROC is open to all undergraduate students in Canada, and is fully funded (i.e., we pay for travel, lodging and meals). To be eligible, you must be in the third or fourth year of your program, and open to the possibility of pursuing graduate studies in Computer Science.

Apply now! Complete an online application at `uroc2015.ca` by Friday, July 31st, 2015.

Questions? Contact Heather Steinmetz at `h2steinm@uwaterloo.ca`.

Heather Steinmetz

Tales from UW:
Mythical Compilers Students
The legend is real!

Last issue contained an article entitled "Mythical Students." It spoke of the oft-repeated tales of Real-Time Students, and also the hidden inner sanctum of the Graphics Students. But there is almost no information about the third group of students. Just a single word: "Compilers."

My name is notbob, I was a compilers student (and, in some sense, still am), and this is my story.

It started a few years ago when I, too, started hearing stories of Mythical Students. I wanted to know, "Why? Why are Compilers Students so hidden?"

It turns out the answer was quite simple: they do not have a lair in which to hide. Real-Time Students and Graphics Students have their respective labs to live in. But there is no such thing as the Compilers Lab. Thus, Compilers Students may be hiding in plain sight.

Information is also scarce, because Compilers Students write code that does not produce any tangible artifact. Real-Time Students write software for trains. Graphics Students write raytracers to produce visually interesting results. But Compilers Students write code that produces code, which is not very interesting for outsiders to observe.

Armed with this information, I concluded that the only way to get answers was to go undercover. I had to become a Compilers Student. I had to modify my memory: I started reading articles and books about compilers and programming languages. I spent a co-op term working on a compiler. Finally, I enrolled in CS 444.

The first class was intimidating. We heard stories of previous offerings, where a different instructor left the project so open-ended that many students stopped sleeping. We gasped in awe as we heard the legend of the group that finished the entire project within the first week. And then the myths: students who wrote their compiler in unusual languages, including JavaScript, Haskell, bash, and even Brainf*ck. But the most impressive group was the one that could compile their compiler with their compiler. In Compilerspeak, this is known as "self-hosting."

But this was only the prelude to my journey. I had to form a group of three and work on the project. In hindsight, I was extremely lucky that my group was functional, as I witnessed many groups that nearly or completely fell apart, a phenomenon not limited to Compilers. There were death threats, slackers who did zero work, code accidentally overwritten by an ill-timed git push --force, code intentionally overwritten by spiteful members, and more. Miraculously, my group avoided all of that (except for an errant git push --force).

We worked long and hard for Assignment 1, which consisted of lexing, parsing, weeding, and AST building. We struggled with inefficient design decisions, with the first version of our compiler taking 11 seconds to tokenize a Hello World program. We cried as we tried to untangle the exponential-time NFA-to-DFA conversion function, which was written at 3AM and incomprehensible the next day. And then we had to face our final foe: Marmoset. Our first five submissions did not compile. Our next five failed all 320 tests. But eventually, with barely minutes to spare, we prevailed and passed all tests.

The next two assignments were an exercise in patience. We had to rip out chunks of code and start again for Assignment 2, name resolution, as we painted ourselves into a corner. For Assignment 3, typechecking, subtle edge cases with Java's protected keyword caused us to despair. But we regrouped, and a very careful reading of the Java Language Specification enlightened us.

I have no recollection of Assignment 4, static analysis, except that in a superhuman feat of coding ability (perhaps caused by reaching the Ballmer Peak?), we somehow managed to complete it in a single sitting.

And then we reached the final hurdle, Assignment 5, code generation. We were lulled into a false sense of security, and this was where we nearly failed. We spent an entire week coding furiously, all to get the infrastructure in place before we could even start passing a single Marmoset test. And then, catastrophe. One member got into an accident and had an entire arm encased in a cast, meaning he could only code with one hand. Another member, in desperation, nearly resorted to sniffing markers. But through sheer willpower, the three of us managed to complete the assignment. We were done.

Or not. We had fallen prey to Stockholm Syndrome, and couldn't stop working on our compiler. We implemented clang-style warnings, complete with colour and underlining. We implemented compiler optimizations that reduced the code size by 14%.

But I was the most tragic victim. In going undercover, I had cast aside my old identity. I had convinced myself that I actually loved compilers, and wasn't just pretending.

Yes, I became a Graduate Student, doing research in the area of programming languages, compilers, and static analysis. To this day, I am still working on compilers.

I hope that this tale will satisfy those curious about Compilers Legends, and prevent others from suffering my fate.

notbob

Portions of this article were completely fabricated. Others were not.

I Was In A Pie-Off

And I'm not exactly sure why...

Last Thanksgiving, I made an apple pie and brought it to a potluck dinner for fellow math grads and partners. Another attendee, one of my friends from the department (a UW alumna!) also brought an apple pie. The two of us somehow got ourselves thinking that it had become a pie-off, probably because we were sitting next to each other, and thus had ample opportunity to bullshit about such things. My pie had been eaten completely, and hers had not been. I don't think I won; I think mine just came out of the oven first (where the pies were keeping warm).

This article is not the story of that "pie-off". Rather, it is about how, eight months later, this same friend and I found ourselves planning to have an actual, adjudicated, pie-off, and the bumbling calamities that accompanied my attempt to make a simple baked dessert.

It started, as it always seems to do, with Tuesday Tea; nigh on two hours after Tea had started, we and one of the faculty members were the only ones left, chatting about various things, when the subject of pies came up again. We agreed that we might as well have the pie-off; partly for fun, partly so that we have Tea goodies for the week, and partly for the all-important bragging rights. We are both somewhat competitive, which might be a conservative description. Perhaps I lied when I said I didn't know exactly why we were doing this.

Due to other department stuff going on, we decided to hold the event on June 23rd: $2\pi - 0.05$ Day. This was Tuesday. I was away at a track meet until the Sunday night beforehand; I picked up the supplies I needed Monday morning, and was ready to make the pie in the afternoon and evening.

I was ready to go, at least, emotionally. Mentally, I was apparently still asleep. I had decided to make a chocolate mousse pie, composed of a graham cracker crumb crust, a mousse filling, and a coconut whipped cream on top, then garnished with some white and dark chocolate.

First step was making the crust. I don't own a food processor, so I crushed the Honey Maid crackers in a plastic bag with a rolling pin. I then added a couple of teaspoons of cocoa powder, to give a slight cocoa taste to the crust. Following the recipe on the cracker box, I added an amount of butter that was definitely not enough to allow me to press the crumbs into my pie plate. After convincing myself that I could add more butter, I finally, after far too much time, had a crumb crust pressed into my pie plate (using my other pie plate! Which didn't really fit, but oh well), and baked it for ten minutes at 325°F, and then let it cool, and chill. So far, so good, I guess, but stressful because it turns out that I've never made such a crust. Good job, me.

Second step was the mousse. Being the lazy person I am, I had bought a couple packages of a mousse mix, and simply mixed it with milk according to the instructions. Thankfully, this went smoothly.

Third step was the coconut whipped cream. The way I had once made this, in Waterloo, was to make whipped cream while also adding in a few tablespoons of coconut milk powder. I thought, "Oh, I could try using coconut milk instead!" ignoring the fact that adding coconut milk lowers the thickness/fat content of the mixture. I ended up, after bumbling around trying to get a good balance between fat content and coconut flavour, with a mixture that would've been better off for ice cream.

After I left the mixture in the freezer, I went to Thrifty's to pick up coconut milk powder. I couldn't find the powder, so I am off to another grocery store in the morning. The thing to note here is this article is being written on Monday, before I'm even finished making the pie since that will be done hopefully on Tuesday morning. You're reading this after the pie-off is over; watch for a future issue to contain a results announcement.

Ah, who am I kidding? My cobbled-together recipe can't beat a homemade pumpkin pie recipe. Might as well give her the victory now, but I guess we don't run competitions on paper, do we?

May the best pie win!

Scythe Marshall

How to Get High Marks on Midterms

As we are currently nearing the end of midterms, now is probably the perfect time to talk about how to get high marks in midterms. Here are a few easy ways to get the marks you desire in all your classes:

1. **Human Sacrifice**: The sacrifice of human beings to some dark god is always a viable solution. Make sure to sacrifice a virgin in order to get the best results. Since you're a part of the Math Faculty, this shouldn't be too hard.
2. **High Tech Heist**: If you're having trouble getting good marks, get a group of friends together and break into the University heist-movie style. Hack into mainframes and databases, cut holes in windows, disable alarms, and do all sorts of movie heist stunts in order to steal the midterms right from under the university's nose.
3. **Pre-planning**: Before your midterm, head into your class with a Sharpie. Get a ladder, climb up it, and make a mark on the wall, high up.
4. **Friends**: Make friends with a few people named Mark, and get them to walk around on stilts.
5. ~~**Studying**:~~ This isn't easy. Disregard.

Anonymouse

On the Length of Points

Long thought to be infinitesimally small, a new geometric demonstration reveals that points must, in fact, have a very small (but still finite) length. As immediate corollaries, we get that the Axiom of Choice is false and that every function is a polynomial.

Using an ingenious geometric construction, a successful squaring of the circle has been achieved. Recently, in [1], Rodriguez communicated to the author a truly marvelous proof of this, which this column is too narrow to contain. However, the value of Pi which is computed using this squaring is approximately 0.000001 smaller than the conventionally accepted value of Pi. Given the purely geometric nature of the argument, the previously accepted value of Pi must be incorrect. The previous value of Pi was determined using an algorithmic method, iterating approximations of the value of Pi based on many-sided polygons. This iteration is taken to the limit, giving the value of Pi. Given the conclusive nature of the demonstration in [1], we get that there must be some flaw in the algorithm.

A detailed analysis of the algorithm in question by Rodriguez quickly reveals the error. When considering the perimeter of a polygon, the points which are on two sides are counted twice. These points provide extra length to the perimeter, leading to an incorrect limit. Using the discrepancy between the correct value of Pi and the algorithmic value of Pi, it is a simple exercise to compute the length of a point. We now present some immediate corollaries of this computation.

Corollary 1: The Axiom of Choice is false.

Proof: A simple application of the Axiom of Choice yields the so-called Vitali sets, which do not have a defined length. However, these sets are all contained in the interval [0,1]. Since points do not overlap, we know that there can be only finitely many points in this interval. Thus, any subset of [0,1] must have a defined length, by simply counting the number of points and multiplying by the length of one point. Contradiction. Thus, the Axiom of Choice is false. QED.

Remark: This proof also demonstrates that the axiom of choice is not, as previously believed, independent of the standard ZF axioms. Thus, we also obtain that set theory must be fundamentally flawed.

Corollary 2: All functions on finite intervals are polynomials.

Proof: Similar to the previous corollary, a finite interval contains only a finite number of points. Combining this with the standard interpolation polynomials, for an arbitrary function on the interval, we can devise a polynomial which agrees with the function at every point. Thus, the function must be itself a polynomial. QED.

Remark: Readers are encouraged to research Rodriguez's discoveries for themselves, and find more new discoveries based on his work. We have only begun to scratch the surface of the implications of his research, and there is much low-hanging fruit available for the interested (and open minded) researcher.

Between this fantastic new discovery, and the revelations set forth in the TIME CUBE ([2]), it seems that modern mathematics is due for a shakeup, if not a massive quantum shift in our understanding.

MeaninglessQuips

[1] "The correct Pi number", preprint. F.M. Rodriguez. Malaga, Spain. 2015. Received by email, June 22, 2015.
[2] "TIME CUBE", Time Cube. G. Ray. United States. 1997.

How to Get a Scar

Scars are one of the quintessential signs of bad-assery. If you want to be a true bad-ass, then scars are a must.

The question is: how do you get a scar? Most people get their scars entirely by accident while going about their lives. And unless you live a truly exciting life of motorcycling, knife-fighting and bear wrestling, you will probably get a scar from something really mundane.

For example, if you somehow manage to get four stitches from a couch, we recommend you lie and add a bat to your story. No one will be impressed with furniture-inflicted injury. It's not exciting.

Instead, to get your scar, you should start a dangerous hobby! This way, you have this hobby to prove that you are a true bad-ass. And considering you just started it will take no time for you to get a scar; just make sure to not die and you will be a true bad-ass.

Beyond Meta
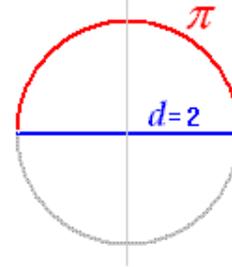
SOLVED: The Triscuit Mystery

They exist! Perhaps not at any Sobey's-owned grocery stores yet, though.

Scythe Marshall

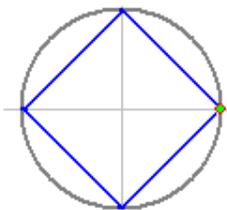# The Correct Pi Number

Correct π *number* — *In function of the unit circumference diametre (2)*

Número π *correcto* — *En funcion del diámetro de la circunferencia*

Squaring π cuadrante $= \sqrt[2^5+2]{2^3 \times (2^3+2)^{(2^4)}}$

ferman

$$\pi = (2\char`^3 \times ((2\char`^3+2)\char`^(2\char`^4)))\char`^(1/(2\char`^5+2)) = 3,141591444141992652182488412553 1 \ldots\ldots$$

The current Pi number is incorrect due to in its algorithmic attainment we sum two times each point of the circumference when belonging to two poligon sides 2 at the same time

El número Pi actual es erróneo pues para su obtención sumamos cada punto de la circunferencia dos veces, por pertenecer cada punto a dos lados del poligono inscrito llegando a sobrepasar la suma algoritmica de lados a la longitud de la circunferencia real

Squaring $\pi \to$

Algorithmic solution for π *ferman*

Polygon sides

1000 2000 3000 4000
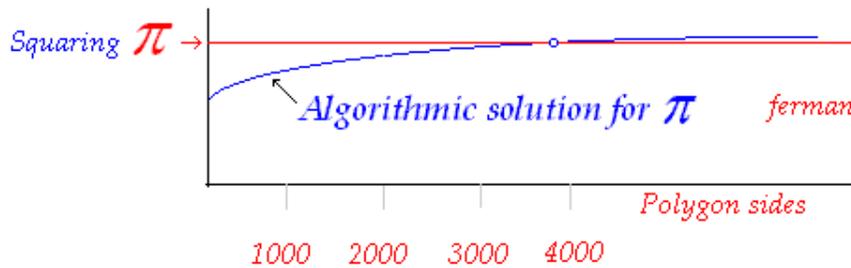
Fernando Mancebo Rodriguez
Malaga Spain.

Last Issue's Grid:
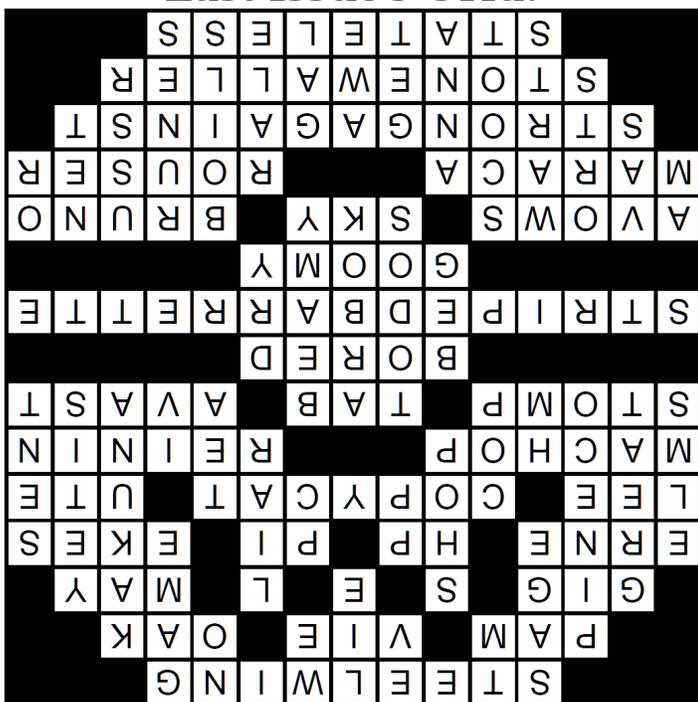
Math Courses for Non-Mathies

- **MATH 135**: Dog = Animal, Cat = Animal, therefore Dog = Cat?
- **Linear Algebra**: Lines, lines in multiple dimensions, sexy lines.
- **Calculus**: Gurl, can I take your derivative cuz I wanna lie tangent to your curves.
- **Combinatorics**: Counting the number of shits I give.
- **Graph Theory:** Connecting the dots.
- **Statistics**: The probability of me passing this course should be high but is not.
- **Optimization**: Maximizing and minimizing the amount of sleep I can get.
- **Computer Science**: Yes, I know how to hack your accounts. Don't piss me off.
- **Courses Relevant to the Real World**: Just kidding, they don't exist.
- **All other math courses**: Yell out the Greek alphabet to them and hope they walk away.

G-UNIT

A Trip to France

Bonne journée, collègues nerds mathématiques et Mark. Once again, the Pastry Genie is here to help you with all your baking needs. As I am sure you can tell from my greeting I have just returned from a trip to France. Ah, Paris. The sights, the smells, the people, and the food. When you think of France you think wine and food. Crêpes, baguettes, cheese, pinot noir, tarte tatin, and you mustn't forget éclairs.

I spent a decade about two centuries ago in a little region called Alsace. I met a man there named Antoine Nicolas Lamar. He was the head baker at a bakery called 'Produits De Boulangerie Frais', and the man who made me fall in love with French foods. That man could really bake.

Today I'm going to teach you about éclairs. An éclair is an oblong soft pastry that is traditionally stuffed with vanilla pastry cream (crème pâtissière à la vanille) and topped with a chocolate icing (glaçage au chocolat). Essentially it is a fancy French doughnut made of pâte à choux.

I've explained the flavours of traditional éclairs. But I think that you, as university students, use all the caffeine you can get. So let us make a coffee cream filled éclair with a caramel glaze on top. It isn't anything too crazy and out there, but something a little different from your classic vanilla.

Pâte à Choux

INGREDIENTS
- ¼ cup cold water
- ½ cup cold milk
- ½ cup butter, cut into small pieces
- 2 tablespoons sugar
- Pinch salt
- 1 cup all-purpose flour; spoon into measuring cup and level to rim
- 4 large eggs, must be close to room temperature; if you forgot to pull out the eggs early, then place them in a bowl of warm water for 5 minutes
- Egg wash
- 1 large egg
- 1 teaspoon cold water

DIRECTIONS
Preheat the oven to 425 degrees F. Position two racks in the oven. One in the top third, the second in the bottom third. Line two baking trays with parchment paper. Do not use non-stick spray or it will cause the éclairs to flatten when baking.

In a heavy bottomed sauce pan, combine the water, milk, butter, sugar, and salt. Place over medium heat and stir with a wooden spoon until all the butter is melted. Bring to a boil.

Once boiling, remove the pan from the heat. Sift all the flour into the butter/milk mixture. If you don't have a sifter, then give the flour a good mix with a whisk to remove any clumps. Stir with the spoon until combined.

Return to medium heat and stir rapidly. Cook the dough for 3-5 minutes until it pulls away clean from the sides of the pan and forms a uniform ball. A slight film will form on the bottom of the pan. Do not try to scrap it up. Just let it be and keep beating the dough. Flatten and turn the dough against the sides of the pan, drying the dough as much as possible.

Transfer the dough to a large metal bowl or the bowl of a stand mixer. Using your stand mixer with the paddle attachment or hand mixer or wooden spoon beat the dough for about 2 minutes to cool it. We don't want the eggs to cook from the heat when we start to add them.

Slowly add one egg at a time and beat until incorporated. It will start out looking slippery but will become sticky and smooth once the egg is fully mixed. Continue until all the eggs have been added.

After all the eggs are incorporated, stop the mixer, and the dough should hold its shape and be stiff enough to hold a peak when a spoon is lifted out of it. It will also still be somewhat sticky from the eggs. Pinch off a small bit of dough with your thumb and index finger, and pull it apart. If it stretches between your thumb and finger, it is at a good consistency. If it breaks apart right away, add another egg and beat to incorporate. If the dough is too soft, and not holding its shape, add a teaspoon of flour at a time to the mixture and beat on low to stiffen.

Fit a piping bag with a large round tip. Fill it about half full with the dough. If you do not have a piping bag or tip you can use a large zip top bag. Just cut off one corner once the bag is filled.

Pipe out the dough into approximately 4-inch long strips, trying to keep them of even thickness along the length. Keep them about 1-inch apart.

Brush the tops lightly with an egg wash made of an egg beaten with water. The end of the éclairs will have a little "tail", brushing on the egg wash against the tail, will help pat down it down, making a more uniform éclair. Take a fork and lightly draw lines down each éclair. This will help them expand evenly in the oven.

Place the baking trays into the preheated oven. Bake for 10 minutes until the éclairs start to puff up and take on colour. Lower the oven temp to 350 degrees. Quickly, but gently rotate your trays. Use the handle of your wooden spoon to prop the oven door open slightly. Continue baking for about 15 minutes or until the éclairs have taken on a golden brown colour. To check, a wooden skewer inserted into the center from its bottom should come out dry.

A properly baked éclair retains its puffy shape, with a hollow interior with a crispy, fairly dry, golden exterior. When broken apart, it should have a slightly moist crumb on the inside. However, if they are removed from the oven too soon, the éclairs will not have solidified, and will collapse. When you think they are done, take one out of the oven and check it by breaking open and checking the interior walls. If wet, return to the oven as necessary. Remove when done and cool on a wire rack.

IMPORTANT: After removing the pastries from the oven, immediately puncture them on the bottom with the tip of a wooden skewer or sharp knife to allow steam to escape. It will prevent them from going soggy. Let it cool completely before filling.

Coffee Pastry Cream

INGREDIENTS
- 2 cup milk
- ¼ cup sugar
- 2 egg yolks
- 1 whole egg
- ¼ cup cornstarch
- ⅓ cup sugar
- 2 tablespoons butter
- 1 teaspoon vanilla extract
- 2 tablespoons instant coffee

DIRECTIONS

In a heavy bottomed sauce pan, bring the milk and ¼ cup sugar to a boil over medium heat. Meanwhile, whisk the egg whites and yolks together. Whisk the cornstarch and remaining sugar together. Whisk the sugar/cornstarch into the eggs until smooth.

When the milk comes to a boil, drizzle it into the egg mixture in a thin stream while mixing constantly so that you do not cook the eggs. Return the mixture to the saucepan, and slowly bring to a boil, stirring constantly so the eggs don't curdle or scorch on the bottom.

When the mixture comes to a boil and thickens, continue cooking for one minute. Remove from the heat. Stir in the butter, vanilla and instant coffee, mixing until everything is completely blended in. Pour into a heat-proof container and place a piece of plastic wrap directly on the surface to prevent a skin from forming. Refrigerate until chilled before using.

Caramel Glaze

INGREDIENTS
- ½ cup sugar
- ¼ cup water
- ⅓ cup 35% cream
- 1 teaspoon butter
- 2 cups powdered sugar

DIRECTIONS

In a saucepan combine the sugar and the water. Bring to a boil. Stir only until the sugar is dissolved. Boil until sugar turns a golden amber colour. Remove from heat.

Slowly and very carefully whisk in the cream. It will steam and bubble up. Be very careful, because that steam is hot. Add in the butter. Whisk until smooth. Let it cool 15 minutes.

Pour the caramel into a metal bowl. Whisk in the powdered sugar until dissolved and you've achieved a smooth consistency. Your glaze is ready to use. If you prefer a thicker glaze, stir in more powdered sugar. If you prefer a thinner glaze, stir in some milk.

Assembling Éclairs

There are two main ways to assemble an éclair. You can either poke a hole in the end or bottom of the shell and pipe the filling inside, or you can slice the éclair in half lengthwise and spoon the filling into the bottom half. If you don't have a pastry bag with a piping tip, piping the filling can be difficult.

PIPED FILLING

Using a knife, poke a hole in the end of the éclair. If your éclair is particularly large, you can poke two or three holes in the bottom. Fill a piping bag fitted with a small round tip with the coffee pastry cream. Insert the tip into the hole and gently squeeze the bag. You should be able to feel the cream go into the éclair. Once the éclair feels heavy and full set it aside. Once all the éclairs are filled dip them one at a time upside down into the glaze. Set on a cooling rack until the glaze is set.

SPOONED FILLING

Using a knife, slice the éclairs in half lengthwise. Take the top half and dip into the glaze. Set on a cooling rack to allow the glaze to set. Use a spoon to scope the pastry cream onto the bottom half of the éclairs. Once the glaze is set gently place the top half onto the bottom cream filled half. Enjoy.

These éclairs can be stored in the fridge for up to two days, but I doubt they'll last that long once you take the first bite.

With a little bit of practice you can all be pros at making éclairs. Nowhere near as good as Chef Antoine Nicolas Lamar, but I doubt I'll ever again find someone who could bake like him again. Even if you can't master making éclairs, it will be okay. If your pastries fall apart, just toss them all together into a bowl and call it a trifle.

Happy Baking,
Your Friendly Neighbourhood Pastry Genie

N Swears that Should be More Commonplace

Being French Canadian, I am weirded out by monosyllabic English swears. I am used to being able to string my swears into a rosary. So to fix that, here are some suggestions for new swears we should add to the English language.

6) Furniture

It's always in your way. The cause of endless injuries, ranging from stub toes to, if you are truly clumsy, four stitches.

5) Advertisements

They shape society, convince people that need to buy things they don't really need because otherwise they won't conform. Screw you successful advertisement campaign, I am not shaving my legs. They are also preventing you from watching that funny cat video.

4) Antiquated Traditions

It might have made sense to do this a hundred years ago but the fact that we continue to do these things because we used to do it is dumb. Tipping is a shitty way to pay people. Daylight savings is confusing and the loss of an hour in the spring causes an increase in accidents the next day due to sleep deprivation.

3) Deadlines

The things that you need to do right now and haven't started. The cause of most of the stress in your life. You can't escape deadlines and the only way to get rid of them is by working hard.

2) Bureaucracy

You want to get something done? Please fill out this really tedious and long form. I am sorry you made a mistake. Please start over. Why isn't there a simpler way to do things? Well that would require redoing years of work and you would first have to go through the bureaucracy. Good luck!

1) Bloody Vagina

About half the population for half of their life have a quarter chance of this being immediately relevant to them. That's at least 6.25%. The percentage is even higher when you consider that bloody vagina can also be inconvenient for the people they are dating. Let's not forget the stomach cramps and waking in the morning to find out you need to clean your bed sheets. Bloody Vagina, indeed.

Beyond Meta

Are bloody vaginas #distractinglysexy? Send your vote to mathnews@gmail.com or the BLACK BOX near the MC Comfy Lounge!

Breaking News: Books Believed to be Black Holes

Recent observations of these text based narrative entities have led me to believe these stories emit a gravitational field that is impossible to escape. It is difficult to pinpoint the exact location of the event horizon. Usually mere contact is insufficient. The location varies from book to book but it is often found within the first few sentences.

Once someone has past the event horizon, there is no saving them. They have entered another dimension and will only exit once the black hole evaporates. In rare circumstances, someone will escape the black hole if they encounter bad writing insulting enough that the force of their disgust is enough to escape the gravitational field. This is not something one should count on.

The effect of the black hole depends on the book. We would personally caution avoiding *Battle Royale*, *Daemon*, *Way of Shadows* and *The Way of the Kings*.

Beyond Meta

I Finally Figured Out How to Launch the Camera from the BB10 Lock Screen

It took me six months but I finally figured it out! You tap and hold the camera icon. I might just be stupid, but what part of that little square suggests "tap and hold"? I suggest you Google the lock screen and take a look for yourself. In iOS you swipe up. In Android you swipe to the side. Everything else in this interface involves swiping. BlackBerry advertises how swipe-y their interface is. Why isn't this a swipe action?

This one thing isn't advertised when you get it wrong either. If you fail to swipe up to unlock your device, your BlackBerry helpfully reminds you how to do it; they don't even have a "I see you're trying to launch the camera. Did you try tapping and holding?"

The worst part is that I didn't figure it out on my own. I saw it demonstrated in a YouTube video. The satisfaction of figuring it out all by myself has been forever robbed. It is a shame I will carry to my grave.

I mean, what part of the BlackBerry 10 UI uses a TAP and HOLD gestures? Okay sure the home screen, to rearrange or delete apps, but anyone who has used Android or iOS knows that... and you can tap and hold items in apps to get more options for that item... and you press and hold the power button to shut it down... and you can press and hold the volume buttons to change songs... and for copy-paste...

I gave it as a challenge to my friend. They figured it out in 9.24 seconds. I guess I'm just incompetent.

TotallyLegitDeveloper

*trains*QUOTES

*Because sometimes the prof isn't delivering *cough*.*

"We could overflow an int with the number of 'fuck's in this room every term."

"That fucking thing sends to that fucking thing; which sends to this fucking thing; which sends to th—fuck! It's a fucking loop!" "Literally."

"Eventually someone will make a kernel that doesn't YOLO."

"How do we find what's wrong?" "Just put some debug prints in that ilse-ef"

"Just check their wrists."

"Where did this sofa come from?" "Who cares?" [*Lies down.*]

"Why is everyone watching porn?" "OMG ITS JUST A KOREAN VIDEOGAME! THERE ARE NO NIPPLES!"

"FUCK!" "What?" "Everything works and nothing is wrong!"

"If you were racist, this wouldn't be a problem."

"I keep having fucking webscale interviews where I say: 'I like being a full stack guru in this MongoDB world' and get the offer."

"Wait!? There's an article about funny shit I say in *math*NEWS!?"

"[*Mutters.*] Hi." "THAT'S NOT AN AGILE GOOD MORNING!"

"Fucking computer won't fucking unfreeze!" "[*Death glare.*] You are the third person to restart mine today." "Fuck. Sorry."

"Life isn't as complex when you take real time."

"I knew it was in your fucking code!" "`git blame...`" "Yeah, you." "Look at the timestamp of the commit." "So?" "You were on my computer." "Fuck, really?" "EVERYTHING IS ALWAYS REAL!"

"I think it's good enough to hand in." "You got it working?" "No, but when it crashes it doesn't show that it's crashed."

"Multi-track driffffttttttttttt!!!!!!!"

"Camel case or underscores?" "I dunno, do you want your kernel to hump you to death while you are debugging it?"

"'Fuck you, that's my clock tick!' said the other clock notifier."

"And Moses took half of the items on the stack." —`kingjames-programming.tumblr.com`

"Fuck."

Trains Lab & Friends

*prof*QUOTES

"If somebody comes to your house and beats you up for your password, that's not a brute force attack."

Attaulah, CS 330

"The researcher was like, I can walk over there with no problem, what's wrong with my robot. The robot was like, well you didn't program me well."

Poupart, CS 486

"If you cheat, I will discuss a suitable punishment with you, like having you saw off your leg. But since I'm the associate dean, I can't make a deal with you myself so we have to go to the dean, and he will ask you to saw off something else."

Furino, CO 480

"In 20 years, I will stop you on the street and ask you the definition of a group. Worse, I will stop your child and ask him."

Furino, CO 480

"If no one answers me, I will go back and take away all your MATH 135 credits."

Furino, CO 480

"In ancient Greece, the solution to most problems is sacrifice. Like sacrificing the entire CO 480 class. Lucky for you, they chose to solve the Delian problem instead."

Furino, CO 480

"Gauss proved the Fundamental Theorem of Algebra at 21. What have you done?"

Furino, CO 480

"There were cheating allegations for the last assignment. I'm figuring out who to assassinate."

Furino, CO 480

"If you come up with a proof, meet me in a dark alley and I'll bring my baseball bat to knock you out [and steal your solution]."

Furino, CO 480

"I didn't talk to [Archimedes], you know, but I'm old enough."

Furino, CO 480

"If you're an elephant, when was the last time you climbed a mountain in the winter?"

Furino, CO 480

"It's just matrix multiplication from junior high, kindergarten, or whenever you learned it."

Tunçel, CO 250

Submit your articles, *prof*QUOTES, threats, demands, and warm fuzzies to `mathnews@gmail.com` or the BLACK BOX near the MC Comfy Lounge.

Code of Conduct for Life

Written in C

```
//let this blank page be the world without life,
we want to give the world life
```

```
//first we will give the lifeform knowledge,
how to decipher the difference between and, or,
not, implies; and how to decipher the differ-
ence between true and false, without returning
anything new to the world. What distinguishes a
lifeform from a material object is the ability
to never forget to run this main function:
```

```c
void main(int void){
  return learn(lifeform);
}
```

```c
#include <stdio.h> //and, or, not, and implies
#include <bool.h> //true and false
```

```
//Now, we shall define a lifeform. A lifeform
is an unique form born with a nature that is ei-
ther true or false. If the life form has a true
nature, its number of current successes is count-
able, and that individual lifeform is constantly
changing and growing. Else, the lifeform has a
false nature and it stops growing and dies.
```

```c
  typedef lifeform (bool nature);
```

```c
  int success; //alternatively defined as a
lifeform's ability to feel content (to feel the
sixth sense)
```

```c
  lifeform you = true;
```
```
  //we have a new lifeform in the world! It's a
baby called you. This baby's nature is true; you
have yet to grow.
```

```
//Now, this new lifeform has one function, that
is to try and constantly execute the main func-
tion. That requires knowing how to learn. Knowing
how to learn requires knowing how to return to
the world what the lifeform has learned such that
the world remains in its neutral, void state.
We will know break down the main function into
two essential functions: the Learn function, and
the Help function, so that you can execute these
two functions.
```



```c
  void Learn(lifeform you);
  void Help (lifeform you);
```

```c
  void Learn(lifeform you){
    while(you){ //while your nature is true
      ++success; //you increase the global smile-
count
      return Help(you); //and help yourself smile
as a result
    }
  }
```

```c
  void Help(lifeform you){
    while(you){ //while your nature is true
        ++success; //by learning you make your
teacher smile
        return Learn(you); //your teacher learns
that you understand and moves on
    }
  }
```

```
//This is the program all lifeforms run to live.
```

```
//Written by Srishti, in C, inspired by all the
lifeforms I interact with and have interacted
with in the past. This program is what gets me
up early every morning, and keeps me up at night,
because I constantly seek to Learn and Help ev-
ery lifeform I interact with by asking them to
Help me by helping me Learn, or by giving Help
to another lifeform I cannot help, just like you
do everyday at work. Thank you for being a life-
form and for keeping me, and the other lifeforms
around you alive. Love is logically equal to Suc-
cess which is logically equal to the feeling of
being alone and with some other lifeform at the
same time, or any other feeling of contentment.
That's why eggs need shelter while the lifeform
inside them grows. If you smiled even once read-
ing this then that counts as proof, according
to the execution of this program and what I've
learned from you so far.
```

```
                                    //QED
```

```
//p.s: yeah, this is cute, life is cute, that's
why nature controls population and stocks and
math. That's your 6th sense right there, I hope
you're feeling this. (Please let's turn this
into a rap, become kids again, and blend help
and learn into 'live' for everyone everywhere –
run main please.)
```

```
//Yay! now you can read C! You're smart.
```
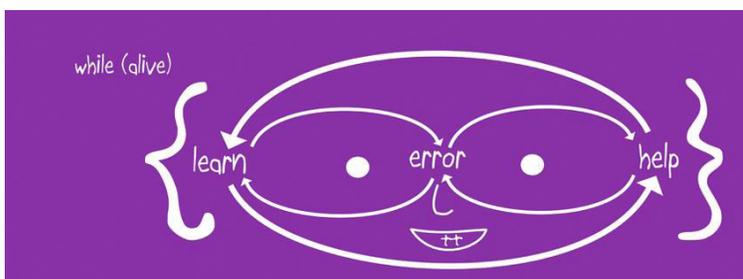
This is Not a Jobmine Article

Do you know what the worst part of Jobmine season is? It is not the drudgery of applying to dozens of jobs, or the anxiety of waiting for interviews, or the torture of waiting for rankings. No, the worst part is having to run from interviews to classes and back again. Our campus isn't sprawling or overgrown, but it certainly feels like it is when you're trying to run across campus with your backpack and a entire change of clothing, shoes included, tucked into a Waterloo Bookstore bag. Seriously, whose idea was it to put the Tatham Centre so far away from the math buildings?

The university definitely needs to make it easier for students to get around campus, and not just because I'm a math student who is stubbornly opposed to any kind of unpleasant physical exertion. Let me suggest just a few ways to make that happen (note that Segways are nowhere on this list, because Segways are never a solution):

1. **Golf carts.** Lots of golf carts. I see UW Parking Services gallivanting across campus in them all the time, and I'm sure the rest of the UW population would like to enjoy the same privileges. Besides, I'm sure that any havoc thousands of golf carts could wreak on campus is limited and reversible.
2. **Bumper cars.** Think golf carts, but with more oomph. And more fun!
3. **Giant conveyer belts between buildings.** This would have the added bonus of making sure the geese can't exclusively terrorize one corner of campus. I actually had a dream about this, but it involved escalators climbing into the sky and a rather grotesque zoo. How viable my subconscious manifestations are as Studio Ghibli movies is beside the point though.
4. **Teleportation devices.** Seriously though, there are so many engineers here, at least one of them has to be working on this.
5. **Hot air balloons.** Maybe not the best idea, considering the unstable weather conditions over campus.
6. **Catapults.** Of course, in the name of safety, we would place trampolines at the target locations; we're not complete monsters. Whether or not the catapult is calibrated to have a margin of error far larger than the proposed trampolines is, of course, another matter altogether.
7. **Trains.** Many, many trains that snake around and across campus. They wouldn't stop, of course; if you want to get on, you'd better run, jump, hold on, and pray.
8. **Giant hamster balls.** Who said we weren't a fun university?
9. **Ziplines.** Adventure! Excitement! Potential chaos!
10. **Geese.** We could be using the resources available to us to their fullest extent. Disclaimer: *math***NEWS** is in no way responsible for any injury or loss of limbs that arise in the pursuit of this strategy. There's a reason this is the last item on the list.

xoxo

Dear Diary...

Dear Diary,
First day of applications:
I'm feeling confident. Just got off my first work term and ready to apply for some relevant, high paying, cool jobs. I think I'll be a little pickier about my applications this term. I got this!

Dear Diary,
Applications close in one hour:
So many people applied for all these jobs… I'm not better than 103 other people. Time to apply for 17 back ups. Junior positions, I don't care about pay, where the hell is Chalk River? I can do this!

Dear Diary,
Interviews started yesterday:
Everyone's walking around in suits. 10 rejections. It's ok, I'm still in the game.

Dear Diary,
Second week of interviews:
Why am I getting interviews to all these crappy jobs?! Just got rejected from my customized applications. Time to convince them I'm a socially well-adjusted, mentally stable individual. Looking like a well-dressed zombie.

Dear Diary,
CHECK THE GLITCH!!! WHAT IS THE GLITCH???

Dear Diary,
Rankings are out:
It's ok, I have a shot. I'll just rank everything 1.

Dear Diary,
Rankings close in an hour:
Wait a minute… Do I really want to live in Chalk River? Which one do I want more? What is everyone else thinking? If they don't want it, why would I want it? Should I mass email them? What is the algorithm anyway? Let's go through all the different scenarios. WHY DON'T THEY SHOW US NUMBERS?! You know what, continuous round will be fine. May the odds be ever in your favour.

Dear Diary,
These are the longest two hours of my life.

G-UNIT

#distractinglysexy kitten

New Music Roundup

Pretty good two weeks for new music. The highlights are definitely Overflow and Re.Up, but Rumble in the Park and Daye Jack have enough intrigue to warrant a listen, and it's hard to be unhappy with anything RAC does.

***Back of the Car* – RAC**: Back of the Car is RAC's new single, and it's probably about average on the spectrum of RAC songs. It's alright, but the reason it makes this list is because I love RAC and I saw them perform this song at SXSW before it was released. In other words, I'm biased.

***Rumble in the Park* – Catey Shaw**: I hadn't heard of Catey Shaw, and I'm not sure if Rumble in the Park is a **good** song, but it's certainly an **interesting** song. The intro brings traces of The Chemical Brothers with a rap beat, and the vocals have a sass that has nothing to do with either. The lyrics use the word fisticuffs, and set up a scene reminiscent of the fight scene in Anchorman. This song has a lot going on and I'm still trying to figure it out.

***Save My Soul* - Daye Jack**: Daye Jack is definitely still figuring out his sound, which right now seems to vary pretty heavily between rap and glitchey synthey pop. Save My Soul is the standout, and manages to merge those genres palatably, despite being rough around the edges.

***Overflow* – Ghost Loft**: Overflow takes a departure from what we've come to expect of Ghost Loft. Instead of dark and moody, Overflow brings bright synths and horns to contrast with faded lyrics, tending towards the realm of indie pop. If you have the pleasure of heading to the beach, this is definitely a song to keep by your side.

***Re.Up* – Rationale**: Re.Up is the downtempo compliment of Overflow. Both have the same great faded summer vibe, but instead of bright synths and horns Re.Up has atmospheric synths and bass. When the chorus hits, you can feel your body want to rise off the ground.

[flustered]

*These tracks and others from past issues can be found on the Spotify playlist titled *math*NEWS.

fig4: Sexy bunny!

Reprinted from v120i4.

How to Fake Recognition

Has this ever happened to you? You're strolling along, minding your own business, when someone comes up to you and talks to you. But oh no! You don't know who they are and they seem to know you. What can you do? With these simple instructions, you can pretend that you recognize everyone who talks to you! In just n easy steps, you can go from awkward, forgetful duckling to seemingly suave, knowledgeable dinosaur.

Step 1: Panic. This person knows you and you don't know them. You are therefore a terrible person.

Step 2: Smile in a reassuring way. Otherwise, they can sense your panic.

Step 3: Say "Sooooo, what have you been up to?" This will hopefully give clues on how you know them. Drag out the "Sooooo" as much as possible, this will assert your dominance.

Step 4: Allow the conversation to be led by them. Hopefully this will give you further clues on how you know them.

Step 5: Steer the conversation in a flirtatious direction. Start hitting on them as aggressively and obviously as socially acceptable.

Step 6: Ask for their phone number. Get them to type it into your phone along with their name. If they ask why say it's because you don't want to spell it wrong.

Step 7a: If they say you already have their phone number, leave. Run away. Change your identity and move to a country you've never been to. You have now solved your problem.

Step 7b: If they refuse because you have crossed the line of creepiness, save face by never speaking to them again. You have now solved your problem.

Step 7c: If they give you their number, congratulations! You know their name and have a date! Go stalk them on Facebook. You have now solved your problem.

Yours in improvisation,
Shay Blair.

`#distractinglysexy` Contest
Seriously!

Do you have what it takes to be the next *math*NEWS cover model? Send in your best #distractinglysexy photo for a chance to win a prize*!

\&

* DISCLAIMER: The prize has yet to be determined, but it probably won't kill you. What have you got to lose?

N Reasons to Attend Toronto Pride This Weekend

Let's get the party started!

- 4 AM last call!
- Booty shorts. That is all.
- Awesome swag during the parade on Sunday.
- Parties throughout the city. Whatever sort of scene you're into, I guarantee that there is a get-together that suits your needs. (including raves on boats)
- Toronto Ribfest. Get your sauce on!
- The mayor is actually going to show up this year!
- Rainbows! Rainbows everywhere! All the pretty colours!
- Boobs. They are EVERYWHERE during Pride.
- Getting out of your comfort zone a little. Chances are, you'll be exposed to a lot more overtly queer things than you're used to.

GingerbrED

Things to Remember Before the Next Family Reunion

I went to a family reunion Father's Day weekend. Overall, it was pretty great but I felt like I was walking on glass several times. Now for some advice:

- "Nice to meet you" is never safe to use, even if you are 90% sure you have never seen them before. I used it as an automated reply and spent the next hour feeling stupid about it and trying to sort out if I did actually know them or not.
- Basketballs (or other heavy/ fast projectiles) should not be passed back to young cousins, even if they are playing with it/shooting, they may not notice it and get knocked over.
- Let other people do the greetings first and pay attention so you can make sure you know names when your turn happens.
- "Nice to see you again" can be dangerous. If I remember this for next time I am stopping all greetings at "Hello".
- Lastly, try not to have families where reunions easily involve over 100 people and the frequency of awkward moments will decrease.

Pockets
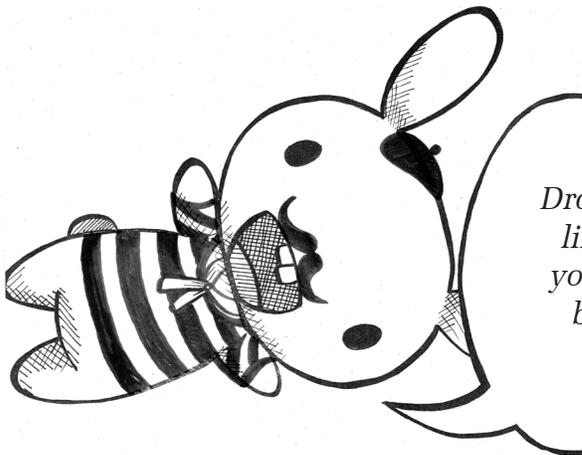
Draw me like like one of your French bunnies!

N Reasons I Am Not Attending Toronto Pride This Weekend

From a Certified Gay™

- I have a big assignment due the Monday following.
- I am introverted to a fault, so even the idea of being around lots of people and noise exhausts me. On that note, I wish there were Pride Tea Parties where you could just sit and quietly sip tea and eat cookies with other queer people.
- Traveling to Toronto takes time, which I don't have.
- Traveling to Toronto also costs money, which I also don't have.
- I have heard that Pride has a history of not treating people of different gender identities as well as people of different sexual orientations, which is kind of sad considering trans women were the ones who spearheaded the LGBT civil rights movement in North America.

your gal pal

Be Kind Online

A "short" PSA

After the recent steam sales, many new players are flowing into most online games, and I am finding some common reactions from the various communities surrounding these games. What I'm talking about is variants of noob-shaming. No matter where you go, you will find experienced players harassing and insulting new players for not being familiar and proficient in the various mechanics and terms of a game. This is not particularly new - it is a problem that has existed to different extents for as long as online games have existed, but with the steam sales, the flow of new players is much larger than normal. Older players who would at worst be indifferent are now agitated by the (in some cases) overwhelming amount of new players that have made some games almost unplayable (in the sense that 3/4 of the teams are new players who have no idea what to do, resulting in slow and unenjoyable matches). We must all do our part in curtailing this behaviour, and instead teach and befriend new players. There is no better way to remove annoying new players than sharing the knowledge that experienced players take for granted, and you can make great friends in doing so.

SovietCanadian

Article of the Issue

Congratulations to notbob for the "Tales from UW: Mythical Compilers Students" article. The article was well-written and encapsulated the assignment cycle of most CS students. Come to the *math***NEWS** office, MC 3030, to pick up your prize.

We have to tell you though, it was difficult choosing an Article of the Issue this time around. Some articles had so much provocative content that our attention was diverted. And, as you know, all of the writers just cry all the time, so we didn't want to disappoint any of them.

The Editors

RE: "Soccer: Watching a Train Wreck"

Watching the organization that has been destroying the beautiful game crumble over the last few weeks has been great. Seep Blatter (an actual "human being" and, surprisingly, not a chronic UTI) quitting days after "winning" his re-election was a relief, though I won't get excited or expect any changes until he finally leaves at the end of the year.

In the meantime, we have to live with the decisions made during his corrupt rule. UEFA is threatening to boycott the 2018 World Cup in Russia. A World Cup without the European giants (Germany, Spain, Netherlands, and even England, Italy and France) would not be worth watching, or even worth attending, as it's expected that South American teams would not attend if there is no real competition. No one wants to win a World Cup like that.

And of course, the human rights atrocities occurring in Qatar are inexcusable. Thousands of foreign workers are, for all intents and purposes, prisoners in Qatar, as their employers/slavers will not return their passports to them, meaning they can't leave the country. In addition, the fact that a country with no football history was awarded this honour is just sad. Qatar is also homophobic, anti-women, and daytime temperatures there are so high that players and fans will be at risk. Because of that last point, the 2022 World Cup will be held in November and December (instead of the summer), wreaking havoc on football leagues' schedules all over the world. There are few pros on this list of pros and cons (the only one I can think of are the absolutely stunning stadiums being planned for the event).

Qatar "won" the right to host the tournament because it's the richest country in the world, per capita. As a matter of fact, the leader of Qatar, Emir Tamim bin Hamad Al Thani (thanks Wikipedia!) has promised the Qatar National Football Team players their weight in gold if they win the competition. The image of the players stuffing their faces with Big Macs and McNuggets in their changing room before the final game makes me chuckle.

SoccerFan

And Now For Something Completely ~~Absent~~ Sexy

Source: `http://montypythonfan.tumblr.com/post/102813899735/and-now-for-something-completely-different`

This week, I sadly did not have time to write a new Monty Python in Python like I promised last issue, or a new knitting pattern like I said I would start doing (OS is scary and hard guys...). But honestly, I wonder if anyone will even notice? Does anyone read the stuff I do biweekly? Does anyone even care?

Well, if you do, sorry for the inconvenience.

Yours in existential crisis,
TubesJr.

*[P.S. Don't worry, the editors made sure math**NEWS** readers got your biweekly dose of Python. You're welcome.*

GingerbrED]
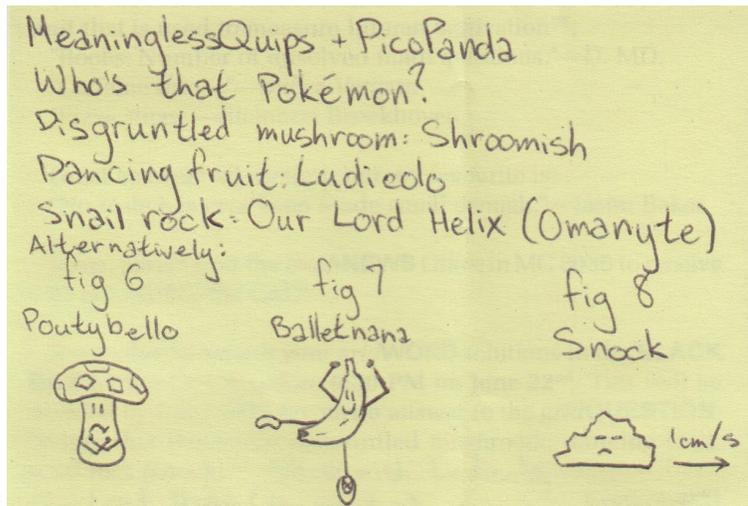
Left. Submission to v128i3's grid**QUESTION**

Other possible solutions were:

- **Disgruntled Mushroom:** Shroomish, Amoonguss.
- **Dancing Fruit:** Ludicolo. Maybe Cherrim.
- **Snail Rock:** Omanyte, Omastar, Magcargo, Shuckle.

Congratulations, MeaninglessQuips and PicoPanda for your correct Pokémon and creative Fakémon! That is one `#distractinglysexy` snock (snail rock).

bunniED

GRIDWARD
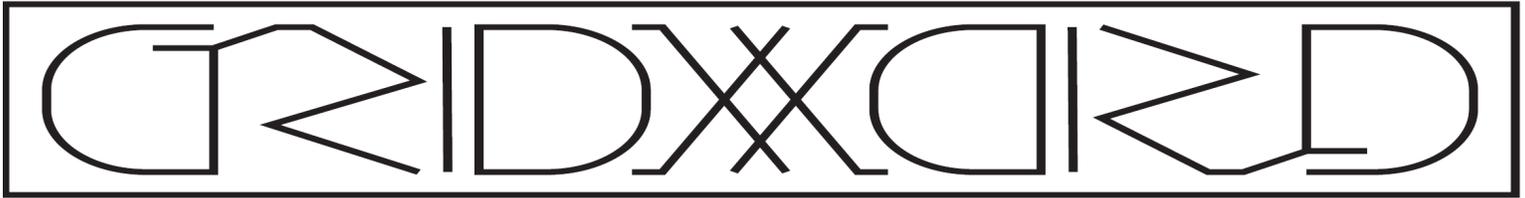
gridCOMMENTS

SCH—

—LONG time, no see, everyone! Last issue, bunniED wanted to create a *grid***WORD** with a Pokémon theme and I'd be a PUTZ to turn down the chance to do less work. There were some excellent submissions, included one who had folded their paper like a ROCKET ship. The *grid***QUESTION** was "Who's that Pokémon: disgruntled mushroom, dancing fruit, snail rock (snock)?" and the winners were MeaninglessQuips + PicoPanda, with the drawing on page 16.

I also received an unfortunately late submission to the *grid***WORD** from two issues ago. (It was entirely correct, though!) At least it gives me an opportunity to remind you: you guyS HAFTa submit your solutions by 6:30 PM on the next-next Monday for them to be checked and considered.

Recently, I've felt my *grid***WORD** enthusiasm PETERing out a bit. I really needed a theme to PRICK me back into action, and I think I found it.

Remember to submit your *grid***WORD** solutions in the **BLACK BOX** by the Comfy before **6:30 PM on July 6th**. This issue's *grid***QUESTION** is, "What TOOL do you use most often?"

ConvolutED

This Issue's Grid:

gridCLUES

Across

1. Could go either way, as letters or numbers
5. [sigh]
9. Insecticide
12. Proclamation
14. Impact site
15. Someone with flaming trousers
16. *Bucket's benefactor
18. Peak
19. Peanuts pup
20. Makes capitals
22. Peltry
24. Traps
25. Reinforcement
29. Scrape
30. Yoko ___
31. Lower digits
33. Follow as a result
36. Open, like a toothpaste tube
39. Nobel legacy
40. Parisian river
41. Selfish sort
42. Contract
44. Feel awful
45. Diva's solo
47. Turpentine and acetone, for example
50. Sports facilities
52. Jetty
53. Fancy garden
55. Demises
59. Buffalo, Cleveland, and Port Stanley lake
60. *Enrollment
62. Scrota, e.g.
63. Needle case
64. Function
65. Article in this issue
66. Roost
67. Lamented

Down

1. Stitches
2. All-Father or Alföðr
3. Granary
4. Follows 12, for noon
5. Bother
6. Contact, e.g.
7. Signs of life
8. Sullies
9. *Reminiscent of Victorian writing
10. Titled ladies
11. Ace, Deuce, ____
13. Editors' catches
15. Throne
17. 'Parks and Recreation' auditor
21. Shams
23. Precedes fairy and decay
25. Fight
26. Palindromic girl
27. *Its looks CAN kill
28. *#distractinglysexy *grid***WORD** theme
32. Sharpening belt (for razors)
34. Invertible ring element
35. Sushi supplies
37. Makes bubbly
38. "The possession of fools" — Herodotus
43. Say "y'all," say
46. People in RCAF
48. Takes a turn
49. Rubber
50. First name of Buffy actress
51. French 18 Across
53. Annoyance
54. Victors in the Emu War
56. Drive-___
57. Queen's home
58. Zipped
61. 0 or 1

Send your *prof*QUOTES, articles, fallacies, woodpeckers, and solutions `mathnews@gmail.com` **or to the BLACK BOX on the 3rd floor of the MC**

Getting #distractinglysexy at *math*NEWS Production Night!