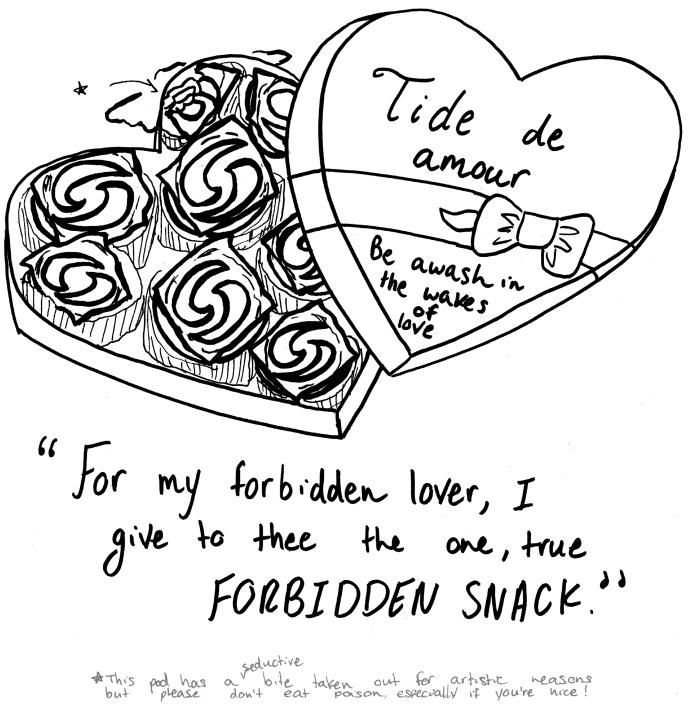
# mathNEWS







### mastHEAD

### "WHAT NEW UNIVERSIY FACULTY WOULD YOU FOUND?"

HEY, IT'S BETTER THAN LAST WEEK'S "CARBONE" QUESTION ...

I'm tired of this fucking planet. I really am. Don't get me wrong, it has a lot of potential! But then someone mentions "eating micro Tide Pods® to develop an immunity to them," and I very suddenly regret my genetic heritage as a member of homo sapiens.

But anyways, one comment led to another at Production Night, and now we have a chocolate box filled with Tide Pods® on the cover. And for the record, the only reason I'm bothering to put the registered trademark sign in at all is to avoid any possible lawsuits from Proctor & Gamble. ®.

Directing our attention away from the internet's most recent exposé on the depths of human idiocy for a moment, it was Valentine's Day this week! Hooray! Said nobody, because if you're single, you have to walk around all day while the entire world chastises you for it, and if you're not, then you have to walk around all day while the singles judge you out of envy.

And then, of course, there's my good friend itorED, who's in a happy, polyamorous, three-person relationship, which means she's with two people, while I'm with no one. How the hell is *that* fair?

Anyways, back to **mathNEWS**. We have a great (if short) issue for you this week, featuring the usual selection of Math student writings, as well as a *very* convincing argument for STAT 231 from none other than Prof. Cyntha Struthers, the course co-ordinator for the last few years, as well as her answers to some of our readers' most provided questions!

And if that weren't enough, Zethar's been kind enough to personally seal death warrants for us editors go *all out* on the gridWORD this week, with an extra long, extra hard puzzle for you to take on over Reading Week. Hope you guys can read Sumarian Cuneiform.

Anyways, that's it from me for this issue. I'm gonna go back to crying about the fact that. Have a great Reading Week everybody, and to those (hopefully few) out there who need a reminder, *stop eating <u>fucking laundry detergent</u> you <u>lunatics</u>.* 

> George Lambrou Editor, math**NEWS**

10.11	Faculty of Pulling Off a Turtleneck.
	, ,
ε-unit	Faculty of Movies and Hanging Out.
NEED_TO_PEE	(Using faculty as a synonym for facility:) I would make every bathroom in MC unisex because I want to shorten the walking distance of my mid-lecture pee breaks without making weird eye contact with my calc TA.
	weird eye contact with my calc TA. [Editor's Note: We need a Faculty of Properly Interpreting mastHEAD Questions.]
	The Faculty of No Escape.
THE DEPRESSIMIST	Though to be fair, that already seems fitting for the entire university.
waldo@<3.LE-GASP.ca	The important Faculty of Time Management.
Zethar	I am tempted to found the Faculty of Ætheric Studies, but I might be excommunicated for even talking about it.
Theodore Bear	I would make the University of Waterloo Department of Mysteries into the University of Waterloo Faculty of Mysteries.
Soviet Canadian	The Wargaming Faculty, covering simple tactical wargames up to the massive, multi-day, multi-national simulations that take dozens of players.
	The Faculty of High-Octane Drifting, and Car-to-Car & Hand-to-Hand Combat.
ITORED	The Faculty of Coolness, on account of how cool I am.
QUIZED	Faculty of Falicitating Faculty Falicities.
SWINDLED	Faculty of Faculty Creation.
George Lambrou	Faculty of <b>mathNEWS</b> , so I can finally get school credit for this.

### **ARTICLE OF THE ISSUE**

Hah, I lied! I still have to write *this* thing. Okay, let's see... the name of the article that <u>I pulled out of this old mug on my</u>desk we editors carefully selected for this issue is:

Physical Game-Piece Designs Should Help More, by Soviet Canadian!

Stop by MC 3030 to collect your prize, a 25\$ Conestoga Mall gift card!

George Lambrou Editor, math**NEWS** 

### To any single, off-planet ladies reading this: if you want a taste of true Earthican romance, beam call me up.

GEORGE LAMBROU, math **NEWS** EDITOR FOR WINTER 2018 ALONG WITH ANGELA LE, ANUJ OPAL, AND ZISHEN QU

### mathASKS 136.3 FEATURING PROF. CYNTHA STRUTHERS

#### VICE MITT: R OR MATLAB?

I am more comfortable in MatLab but only because I have used it for many more years and it's difficult to teach an old dog new tricks.

We use the R software system in STAT 231 since it has the lowest cost (free!) and the greatest functionality. It is an open source package that has extensive statistical capabilities and very good graphics procedures. R is the most common programming language among data scientists according to the 2016 O'Reilly Data Science Salary Survey (www.oreilly.com/ ideas).

"MELISSA": WHY SHOULD ALL MATH STUDENTS TAKE STAT 231?

Please see my profTHOUGHTS article.

### WALDO@<3.LE-GASP.CA: WHAT'S YOUR FAVOURITE WAY TO GET STUDENTS TO LEARN?

My favourite way in STAT 231 is to present concepts using simple (and hopefully fun) empirical studies in class. The one example that students seem to enjoy (I think because Math students are inherently competitive) is a paired experiment in which students try to move as many beans as they can from one dixie cup to another in 15 seconds using their dominant hand and their non-dominant hand. I have never seen students concentrate and work so hard as when they are trying to move as many beans as they can!

The other example which seems to capture student interest is a data set of STAT 231 and STAT 230 final grades for a set of students. We use this data set to predict the student's STAT 231 final grade based on their STAT 230 final grade.

### DROWNING IN COCOA: ARE YOU STAYING WARM ENOUGH IN M3? I HEAR THAT THE BIG LECTURE HALL IS A FRIDGE.

I dislike that classroom a great deal. I have nicked named the room "the football field". I told the scheduling officer in my department that I cannot be an effective instructor in that classroom. Fortunately I have not had to teach in that room. I am very cozy in my M3 office!

#### A MEDIOCRE KITTY: DO YOU FEEL AS THOUGH STATS AND ACTSCI HAVE GROWN AS FIELDS IN THE PAST N YEARS? WHAT DO YOU FEEL HAS CHANGED SINCE YOU STARTED LEARNING?

OMG yes! When I did a double honours undergraduate degree in statistics and computer science at the University of Waterloo my courses were all very mathematical and not very statistical. If I saw a real data set it usually was very small. I even took a course called Statistical Inference in Small Samples. The biggest difference has been in computing power and the increase in readily available software to analyse very large data sets. Many more courses in statistics in my department are motivated by looking at techniques for analysing real data.

### THEODORE BEAR: DO YOU PREFER TO USE BUTTER OR OIL TO FRY UP YOUR POISSON DISTRIBUTIONS?

Extra Virgin Olive Oil, every time.

#### ZETHAR: WHAT IS YOUR OPINION ON THE (PERCEIVED) REPUTATION OF STAT 231, AND WHAT, IF ANYTHING, SHOULD BE DONE TO IMPROVE THE COURSE?

Again, please see my **profTHOUGHTS**. I believe part of the perceived reputation is due to students not understanding the importance of statistics in their university education.

#### ANZIEL: WHAT IS YOUR FAVOURITE STATISTICAL TECHNIQUE?

I love any statistical technique which helps you to understand data which have been collected to answer important questions.

#### A CURIOUS ENGLISHMAN: EVER BEEN TO LONDON?

I have been to London several times, but not to visit the Queen.

#### THE EUROBEAT-'EM-UP: HOW HAS THE RECENT RISE IN THE PROMINENCE OF MACHINE LEARNING AFFECTED THE FIELD OF STATISTICS?

From the American Statistical Association Statement on the Role of Statistics in Data Science:

"For statisticians to help meet the considerable challenges faced by data scientists requires a sustained and substantial collaborative effort with researchers with expertise in data organization and in the flow and distribution of computation. Statisticians must engage them, learn from them, teach them, and work with them. Engagement must occur at all levels: with individuals, groups of researchers, academic departments, and the profession as a whole. New problem-solving strategies are needed to develop "soup to nuts" pipelines that start with managing raw data and end with user-friendly efficient implementations of principled statistical methods and the communication of substantive results. Statistical education and training must continue to evolve—the next generation of statistical professionals needs a broader skill set and must be more able to engage with database and distributed systems experts."

## GEORGE LAMBROU: STATISTICALLY, WHAT ARE THE ODDS THAT I'LL GET SCHOOL CREDIT FOR math NEWS? WHICH VARIABLES SHOULD I CHANGE TO INCREASE THOSE ODDS?

I think your odds are about as good as winning the big prize in Lotto 6/49. [George's Note: So you're saying there's a chance!]

### WHY STATISTICS IS IMPORTANT profTHOUGHTS 136.3

Students in the Faculty of Mathematics at the University of Waterloo are required to take a statistics course (STAT 221/231/241) as part of their degree requirement regardless of their program. While students do not usually question why they are required to take a probability course (STAT 220/230/240) as part of their degree requirement, I sometimes hear students ask why they have to take statistics. Fortunately, since the explosion of interest in data science, fewer computer science students ask this question. I believe the question does not arise in regards to probability because the probability course looks more like other math courses. Typically in a probability course, you are asked to find a probability or calculate an expectation. You apply the formulas for doing this and you get an answer that is either right or wrong. We all feel more comfortable working in situations which seem more familiar.

Second year statistics is quite different. It does require students to use the ideas of probability, but it also requires students to be able to think critically. Critical thinking as defined by the Foundation for Critical Thinking is "the process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion". While math students have a great deal of practice at problem solving, they don't have as much exposure to critical thinking.

As well, second year statistics requires students to communicate statistical ideas. The University of Waterloo believes that its students should have good communication skills; this is one reason why math students are required to satisfy a communication requirement as part of their degree program. STAT 221/231/241 is a course in which the communication of statistical ideas plays a very important role. The communication of statistical ideas is not as straightforward as counting the number of permutations of the letters of the word "STATISTICS".

Most students do not realize how important statistics is in our everyday life. We are surrounded by examples. Here is a wonderful example given by John Sall, co-founder and Executive VP of the statistical software SAS, on the occasion of the International Year of Statistics in 2013:

"You brush your teeth. The fluoride in the toothpaste was studied by scientists using statistical methods to carefully assure the safety and effectiveness of the ingredient and the proper concentration. The toothpaste was formulated through a series of designed experiments that determined the optimal formulation through statistical modeling. The toothpaste production was monitored by statistical process control to ensure quality and consistency, and to reduce variability.

The attributes of the product were studied in consumer trials using statistical methods. The pricing, packaging and marketing were determined through studies that used statistical methods to determine the best marketing decisions. Even the location of the toothpaste on the supermarket shelf was the result of statistically based studies. The advertising was monitored using statistical methods. Your purchase transaction became data that was analyzed statistically. The credit card used for the purchase was scrutinized by a statistical model to make sure that it wasn't fraudulent.

So statistics is important to the whole process of not just toothpaste, but every product we consume, every service we use, every activity we choose. Yet we don't need to be aware of it, since it is just an embedded part of the process. Statistics is useful everywhere you look."

The field of statistics is the science of learning from data which are subject to variability. A basic knowledge of statistics gives us essential insight into determining which data and conclusions are trustworthy. In second year statistics we discuss the importance of empirical studies to answer questions of interest. We learn that to produce useful conclusions from data that empirical studies must be carefully designed, the data must be modeled appropriately, model assumptions must be checked, and the conclusions that can be drawn from a data set must be done carefully.

We also learn that empirical studies are subject to pitfalls. Here are some of them:

- **Non-random samples:** A non-random sample can result in bias. For example, if a study uses volunteers, the volunteers collectively may be different than non-volunteers in a way that affects the results.
- **Overgeneralization:** The results from one population may not apply to another population. A study that involves one gender or age group, may not apply to other groups. It is always important of point out the limitations of a given study.
- Model Assumptions: Most statistical analyses have assumptions. These assumptions are often requirements about the type of sample, the type of data, and how the data are distributed. If you perform an analysis without checking the assumptions, you cannot trust the results even if you've taken all the measures necessary to collect the data properly.
- Association and Causation: How do you know when X causes a change in Y? Statisticians require tight criteria in order to assume causality. However, people in general accept causality more easily. If A precedes B, and A is correlated with B, and you know several people who say that A affects B, most people would assume, incorrectly, that data show a causal connection.
- **Multiple Testing:** If a large number of hypothesis tests are performed on the same data set, a few will be significant just by chance.

STAT 221/231/241 provides students with life skills. As defined by the World Health Organization, life skills are "abilities

for adaptive and positive behaviour that enable humans to deal effectively with the demands and challenges of life." A good understanding of the basics of statistics helps people to make decisions about where to live, how to use their time and money, and how to evaluate the information around them. Statistical analysis is useful in every single academic discipline, and virtually every job a person will have (if not to their tasks specifically, it will to their organization). No student should graduate from university without a basic understanding of statistics; math students with a background in probability will have a better appreciation for the reasoning behind statistical methods.

One thing we can count on having in the future is more and more access to information. In today's era of big data, where the computer and network are everywhere, and everything can be measured. You need statistics to make that data useful. People who can use and interpret that information properly will have a strong advantage in our modern world. They'll also have more choices and flexibility in many aspects of their lives.

So why are math students required to take statistics? Because doing so will improve their lives.

Prof. Cyntha Struthers

### PHYSICAL GAME-PIECE DESIGNS SHOULD HELP MORE

#### MAKING GAMES LOOK AND/OR PLAY BETTER

Games are fun, but as university students we tend to prefer games with a bit more complexity than Monopoly or Risk. Looking at the selection of games in the MathSoc office, there are a plethora of board, card, board & card, and even some miniatures and hex & chit games. Some of these games are expected to take 3–5 or more hours because of the amount of thinking that the average UW student takes for their turn. There are games in that office (and some I own) that can take 12+ hours to complete. I don't know about you, but I would like games to be completed as quickly as possible while still containing all the thinking that makes it interesting. Reducing the time taken to complete a game can be achieved through good game design, but can also be achieved with good game-piece designs.

Most game pieces, tokens, counters, chits, and what-haveyou are simply pieces of plastic or cardboard/cardstock with a small design and usually a single uniform colour. This can be sufficient for most games where the amount of information related to that game pieces is minimal (i.e. a gold coin, which is used to pay gold costs for something), but some game pieces have many pieces of information attached to them, and unlike a card cannot simply have in writing all of its effects. For some games the amount of information is small enough that they can print most if not all of the relevant information onto the piece in shorthand if they resort to using cardboard/stock game pieces (i.e. OGRE has little military vehicles on chits with their movement speed, armour, weapon strength and range all printed in the corners of piece along with a picture of the vehicle in the center). For some games though a small flat game piece is not acceptable, or the amount of information is too much to print onto the piece.

For some games you need a large playing piece and/or that piece will have a lot of information attached to it (like in an RPG where a single character has two+ sheets of data). You would think there is no way to put information onto the game-piece itself, but some things have been done. Heroclix is an old game that you might have seen an ad for when you were a kid (or young adult for faculty) which has rotating bases for its miniatures, where as you rotate the base a slot on top shows relevant stats printed onto the bottom (i.e. as you take damage you rotate the base one way and the ability-scores shown will drop). This ability to not only show the most relevant information on the piece, but a range of information that changes as the game goes on is simply amazing to me. Other games would probably have a card for each game-piece with relevant stats printed on the card, and tokens of various sorts would track the change in abilities, which requires a lot more pieces and mental-calculation than simply looking at the game-piece.

Another example that I have seen that helps keep track of information for game-pieces, and which also looks good is in Dropzone Commander, a sci-fi miniatures wargame. In a game where everything is carried into battle by dropships, you will have a lot of dropships and need to remember what is on-board each one. The game makes this easy though, because the game-pieces are made to be physically carried by the dropships. Whether it is a magnet at the top of the ground unit connecting to a magnet on a docking clamp, or the armoured skirts on the side of tanks sitting snugly on little shelves in the dropship, the game pieces fit together to show what is where and looks good doing so. This again is simply amazing to me. With some good game-piece designs they made the game easier to play and made it look better at the same time.

Now, I realize that not every game needs something like this, most games can get away with simple game-pieces because the game pieces themselves have simple mechanics and little thinking required, but I feel we should be seeing more imagination in game-piece designs that assist the players in actually playing the game, and maybe make the game look better in the process. Maybe take some time and look what games you play, and think if there is anyway to help speed up the game by having different game-pieces.

TL;DR: Good game-piece designs that help make a game play faster and look better should be more common than it is.

### THOUGHTS FROM OVERSEAS

Hey everyone! My name is Vivian Vo and I currently in my 3<sup>rd</sup> year studying Global Business and Digital Arts at the University of Waterloo. I am in Singapore at the moment for an exchange program and I'm not usually the type of person that would go half way across the world by themselves so I'm still surprised I'm here right now ahaha. Fortunately, I am having the time of my life and this trip has been really eye opening. I've had the opportunity to reflect with myself and really throw myself into the real world.

I've met a bunch of new people that I adore but also people I don't quite get along with but that's okay because you learn to adapt and practice your patience. Being in your comfort zone doesn't help you grow, if you're uncomfortable it means you're challenging yourself. I just have to learn to be independent and adapt. One of major things I've realized is all the personalities that exist in the world. When you're in a small program like I am, you get used to all the people and your familiar surrounding. There's nothing to fear because it's your safe space. Over here I am starting fresh with people I don't know.

I think of this exchange as repeating first year but because I have had the experience I can do it better this time. I've been more open in class, answering questions and really paying attention. (Hopefully that keeps up and I don't hide back in my shell lol). But also when you're in such a small setting like Waterloo you don't see all the opportunities and things you can do in life. Right now I'm in the process of applying to Waterloo Works and the majority of the jobs available are UX/ UI jobs. Most people think that's all you can do in GBDA but that's not the case. The courses I'm taking in Singapore are completely random but they also fit with my field of study. I'm taking an exhibition design course and we're learning about how to use logic and space to construct a narrative for visitors.

We don't have to just stick with one mindset there are so many other opportunities that can help you grow. Digital designers are just as useful in museums or magazines or any form of art. Hobbies like photography or drawing can be mixed in, this is such a multidisciplinary (woah big word) program so just do anything your heart desires. POSSIBILITIES ARE ENDLESS (cliché but so true).

Vivian Vo (medium.com/@ianvo)

## BOXES

A box containing another empty box

Is not empty

But the one inside is

And emptiness does echo

Much louder than mathematics or logic

So even though the box contains a box

It contains an empty box

And holding nothing of significance

Is not holding anything

If I hold us and we are nothing

I am holding nothing

Even if I am holding us

@eve.nyandwi on Instagram (follow me for more poems based on Python 2.7 data types)

### **MAJOR CONFLICTED**

to switch to math or not to switch?

don't know if i should pull the trigger,

physics is cool, but the work is a bitch.

i long for something with more rigour,

and dream of proving conjectures.

might be falling out of love with my major,

as i sit in my lecture,

and my professor writes,  $\sin \theta = \theta$ .

a conflicted science student

### I wrote for $\mathrm{math}\mathsf{NEWS} ightarrow \mathsf{I}$ get free pizza

A mathNEWS EDITOR WITH SOMETHING TO PROVE

### HOW MANY TIDE PODS® DID YOU EAT LAST MONTH?

ALSO I'M SETTING MY FRIENDS UP ON BLIND DATES SO SOMETIMES I ASK THEM DATING RELATED QUESTIONS OUT OF THE BLUE...

Lil JJ: Greater than or equal to zero

G-Unit: [-50,50]

West\_Side\_Luigi : 12

South\_Side\_Wario:  $\pi$ 

North\_Side\_Waluigi: -2.000000

Yoshi: none

Kare Bear: zero

Rad\_Rose: none...

Inclusive\_Ian: Roughly 4

Bitch\_Factory: not enough/ I'm still here/ :-( / hbu? / question tho, did ppl ACTUALLY eat them or was it a joke/ i'm too old to understand

need\_to\_pee: as many as the cool kids ate [Editor's Note: this means "none".]

hip\_hip\_hipster: I've been micro-dosing on generic laundry pods. It's way cheaper than Adderall and gets you way more fucked up than LSD.

Civil\_eng\_cutie: 0

hipper\_hipper\_hipster: I've been micro-dosing on TidePods as a vegan alternative to the toxic whey protein shakes I usually binge on during midterms.

My\_roommate\_marco: \*confused\* "I don't own Tide Pods®..." \*strums guitar to the tune of Blackbird\*

Peter\_Piper: like 2 a day

Thicc\_ass\_boi\_bryan: I'm on a diet, I can't

Dannnnnny\_boi: Too many to count, to be honest.

Ash\_SLAY: The whole container girl/ I'm still recovering

Break\_dancing\_bad\_boy: all of them

AFM\_cutie: Oh too many/ I just got home an hour LOL

cynthias\_boyfriend: My mom only lets me eat 1 before bed

glitter\_MUA: Too many

punk\_rock\_cutie: about 50

my\_old\_don: ? / why would you eat that

2A\_GBDA: Last month as in January? or Feb? Is this related to the blind dates ting?\*\* Does licking count? What if they were like Gain pods or smth? / haha, in any case the answer is none

cool\_dancer\_gurl: LMAO Zero Unfortunately

CS\_cutie: Somehow I managed to just barely avoid eating any. :P

My\_roommate\_erin: six

need\_to\_pee

All names have been changed instead of asking participants to sign consent release forms.

### **APPRECIATION**

You know when you have a lot of expectations for a person and when they let you down you feel hurt? Why do we even set ourselves up for that, and how do we overcome it? Sometimes you can't help but want more from the people you love, but when they don't fully know what you want, they can't satisfy you.

The more optimistic a person is, the more they could get hurt because they want the best in everything and every situation. I know that people don't mean to disappoint you but it's just because you set the bar so high and you expect it to go a certain way. I know I set myself up like this all the time and then I end up crying and blaming them for the entire problem. But I think its just at that time when you're angry where you start to gather all the negative thoughts. I think I am also at fault because I'm not fully appreciating what they have done for me and just hate on the things they haven't. When you're angry you can't think straight so just give yourself a moment and think about all the great things that they have done. You know they do care and they're trying their best but the way they display it could be shown in different ways. Not everyone acts the same.

Sometimes, I start to panic I always feel like giving up on writing because sometimes it's so hard to even listen to my own advice. Also most of the time I don't even believe that I ever had the energy to think like that because having that mindset is so difficult. But everything is in the heat of the moment.

Vivian Vo (medium.com/@ianvo)

### prof**QUOTES 136.3**

#### CLAS 325: DAVID PORRECA

- **66** You can't order good health like pizza.
- **66** Classical Studies is just one long commentary about Homer.
- I'll be bringing things next week if I can get my balls together... more appropriately my ducks in a row.

#### CS 115: WASIF KHAN

I don't respect the academic community as much now that I'm actually in it.

#### CS 200: BARBARA DALY

- **66** Take your vitamin C. Grapefruit juice is great, but it does *not* count if you put vodka in it... I have to remind myself of that sometimes.
- I have 4 daughters. My eldest is in third year, and my youngest is 9. I have beer pong at one end and learning about beer pong at the other.
- **66** It's ironic that we're in a school of Optometry but the clock is difficult to see.
- **66** I'm very different on Twitter... I'm hilarious!
- **66** 'Sexy' is my database word. You're going to be hearing it a lot.
- **66** I'm thinking about writing the midterm while I'm at the beach.
- I have a degree in English Literature. That's basically a degree in bullshit, so I can tell when you do it.
- Prof: I'm going to have candy for everyone for the midterm.
   Student: Everyone?
   Prof: EVERYONE. Especially you!

#### CS 450: ANDREW MORTON

**66** Oops, I didn't want to do that. Oh well, I did it.

#### CS 488: GLADIMIR BARANOSKI

**66** Everybody is talking about big data. Big data. In graphics we've been working with big data for a long time. We just call it data.

#### ENGL 208A: EVE DESHANE

If I can summarize the 80s: I have no epidermis and I must smoke.

#### HIST 216: IAN MILLIGAN

- **66** I spent part of my childhood communicating exclusively in Morse code. I was a special kid.
- **66** Not gonna lie, don't look for "Fiddler Dick" on Google.
- We historians have arcane knowledge about the 1810s, 1940s—[students try to enter the room]—how to keep your classroom from becoming a study hall.
- Hagey Hall becomes a bit of a party place at night sometimes.
- **66** This will not be on the exam. This is just my tortured explanation.
- [There are people shouting and playing outside.] It's okay. We're having more fun than they are. They should come in and learn about spinning disk televisions.

#### MATH 146: MATTHEW KENNEDY.

- **66** It's amazing how many things in life are linear.
- [after showing the linearity of integrals and derivatives] so we have shown that calculus is just a special case of linear algebra, so you guys can all skip your calculus lectures now... [pause] don't tell your calculus professor that I said that.Put it in simple terms. How would you explain this result to... my brother, who only has a physics degree?
- 66 One of my brothers did accounting. I tell him that, his degree is in Excel. [pause] But he's a pretty smart guy.
- 66 Do you remember we centralized for Donald Trump.

#### MATH 235: DAN WOLCZUK

**66 profQUOTES**? Joe [West] and I used to dominate **profQUOTES**. I guess I just stopped being funny.

#### PHIL 207J: BRUNO TREMBLAY

I cannot create a world in which skinning little children and eating them on a toothpick is a good thing

#### PMATH 365: DOUG PARK

**66** Do you remember the quotient rule?

#### PMATH 450: LAURENT MARCOUX

- **66** I studied seven years to be able to do this.
- **66** Wow! This is an easy course!
- **66** Life is good. Well, this part of life.
- 66 How many of you had a good course in linear algebra?

- **66** If you see this, you'll doubt your own sanity. If you see the proof, you'll think, maybe there is justice in the world. Of course you're wrong about this.
- **4** You're presented with something that's ridiculous, and the proof is first-year calculus.
- I know this is a norm, but technically it's just "the double bar sub q".
- **66** We're in good shape! Mathematically, not so much physically.

#### STAT 241: MU ZHU

- 44 You polynomialize it. I'm not sure if I'm like Trump now, just making up words.
- **66** I guess we bullshitted a little bit.
- **66** Why are you laughing at the Cauchy-Schwartz inequality?
- **66** You're probably hackers and stuff.

#### STAT 341: REZA RAMEZAN

- 66 For the first time in Human history, I drank some water AND go to the bathroom before class.
- 44 Alex is a weird guy in your data... Wait is anyone named Alex here... Ok good, Alex is a weird guy
- **66** \*drawing a graph on the board\* Wow I am a good artist.

#### STV 210: SCOTT CAMPBELL

In the 1960s, some group who called themselves computer scientists got together and said, "We need an award. Let's name it after Turing. He's kind of important." It was almost that stupid.

#### WATERLOO UNIVERSITY CHOIR: GERARD YUN

**66** I'm assuming you have no friends.

### mathNEWS isn't a cult. We just lure people in with free pizza and trap them in our office. Come by to get a taste!

A mathNEWS CULT LEADER EDITOR

### **ARTS INSECURITIES**

Today's topic is gonna be on insecurities. Sometimes life really sucks because you're like damn that person is so good and I'll never be able to do that. And the reason I'm writing this post is because I feel it. I feel it so much right now. I have this running problem of not believing in myself and looking for reassurance from other people (sorry Dennis) but other people see so much potential that you don't see in yourself and I can't stress that enough. I say all this positive stuff all the time but that doesn't mean I feel it all the time.

In this photography class we had to work in groups and I know my sh\*t, I've learned it before but my fellow classmates kept trying to tell me things I already knew (but of course also things I didn't know). So I felt like I was the weakest link. But so what. So what if you're the weakest. It might be condescending sometimes but some people are just like that. Sometimes they don't even mean it, they're just looking out for you. Most people are just trying to help you out and are not even trying to be condescending intentionally. Lets say your parents keep pushing you to work hard and try your best, it may seem like nagging but they just want what's best for you (it could get annoying but deep down you know what they really mean. This can be related to friends, family and even strangers (some strangers)).

Don't feel threatened by other people who seem like they have more experience than you. You don't just start off as the best, you learn and you're going to remember it. Its a chain, you learn and you teach someone else. Brandon and Maisie have taught me about using RAW instead of JPEG and Erin taught me Lightroom. Its not like I knew that sh\*t before but now I know and I explain to others. There's always room for improvement even if it may be embarrassing in the start.

I'm a design major and I had people in chemistry and business help me with photography. Its okay. Arts is probably where you need the most confidence because its so hard to love your work. Every time I design I feel like I suck but after tweaking for a bit it gets better, not perfect, but better. Take a look back at some of your work. At the time you might not like it but I've seen most of my friend's work and its friggen good. Same with people who are not in design. Science, Kin, Planning. Your field is so competitive because it's based on knowledge. You might think you don't have the same knowledge as other classmates and that they're better but you probably know just as much. I mean you made it to where you are and it can't be from completely bullsh\*tting. It's from hard work and effort.

I'm not speaking for people because they might not feel this way but I'm just trying to relate. You might not think you have all the knowledge for jobs but whatever we're still young, we're 20 LOL what do we know. The reason I can come up with posts like this is because its a problem so just know if you guys ever feel like this its okay we're probably all go through this. If you don't then keep living you you're doing great, keep ur head up.

7

### INVESTIGATIVE JOURNALISM: IS THE CS DEPARTMENT CONSPIRING TO MAKE MY WEEK A LIVING HELL?

Hello fellow seekers of the truth, it's me, once again, Theodore Bear, back safe on the Waterloo campus. A little while after my run-in with EngSoc earlier in the semester, I ended up being kidnapped by a psychotic amateur theatre group and forced to repeatedly star as Vladimir in their production of Waiting for Godot. Before I start this article, I would like to thank fellow investigative journalist Vice Mitt for venturing into the dark jungle, braving machine gun fire and deadly traps in order to rescue me from their clutches. We investigative journalists have to stick up for each other.

Now, onto the investigative journalism. I believe that the entire Computer Science department is involved in a conspiracy to turn my week into an absolute hell. What other explanation is there for this kind of workload? When this article is released, it will be Friday. On Wednesday, February 14<sup>th</sup>, a Concurrency (CS 343) assignment worth 6% of the final mark was due. There is a 12% Artificial Intelligence (CS 486) assignment that was originally due on Friday, February 16<sup>th</sup>, but was then moved to the following Tuesday. Of course, even though it's due during Reading Week, all office hours for that assignment are before the break, so you gotta get it done before then, or you're SOL if you run into a problem. Before that, on Tuesday, February 13<sup>th</sup>, there was an assignment for Computer Networks (CS 456) due worth 10%. However, I was able to get that one done before the due date, which most definitely threw a wrench into the plans of the shadowy heads of the CS Department. Still, as I am now taking all of those courses, my week will have been pretty busy.

The other courses I'm taking are no better, and definitely give the impression that there is a dark conspiracy against me. For example, Kernal 4 for Real Time/Trains (CS 452) is due Friday the 16<sup>th</sup> as well. That will definitely take me a while to complete. Even crazier, Assignment 1 of Compilers (CS 444) has to be handed in that same day. For crying out loud, how much time do these evil puppermasters think I have in a week? And you know, they have to plan this shit. There isn't any other reason that makes sense for there to be so many assignments due in the same week. I also have a Computer Graphics (CS 488) assignment due on Thursday the 15<sup>th</sup> as well. How on earth do they plan for students, taking a normal course load including all these courses, to complete all these assignments?

That has led me to an horrifying truth. You see, there is only one explanation for why all the Heads of the CS Department could possibly believe that students can complete all these assignments at once: they do not understand humans. No, they aren't nameless Lovecraftian Horrors; those can understand humans, they just don't care. Besides, I've dealt with enough Lovecraftian Horrors during my time at **mathNEWS**. Instead, they are something that truly cannot understand humanity. And there is only one thing that truly cannot understand humanity, and our feelings of hatred, selfishness, complex mathematical algorithms, proofs of correctness, and real-time programming.

That's right! All the Heads of the Computer Science Department are actually puppies. You must have thought my use of the word "puppermaster" earlier was a typo, but actually, I meant to use that word all along. You see, sometime recently, the professors working in the Computer Science Department got fed up with scheduling their assignments, so they elected a bunch of puppies as Heads to do the job instead. At the start of every semester, they put a bunch of toys with dates written on each of them in the puppies' play pen. The puppies are then sent to play, each of them labeled with a course and assignment number. Whichever toy they pick up first has the date that assignment for that course will be due on. Of course, since puppies usually like to play with the toys they see other puppies playing with, that's why so many assignments end up due on the same couple of dates.

This method is designed to make my life miserable for this week. And the CS Department knows that, which is why they continue to use it. To make my week hell. That is the only reason why I would be so busy taking a normal course load of 6 CS courses.

Of course, by the time you're reading this, I will be done almost all of those assignments. I will taking next week, Reading Week, off from investigative journalism, even though investigative journalism never truly sleeps. Still, after my kidnapping and a truly hellish week, I will spend the break relaxing.

Theodore Bear

You could be playing Sonic 3 & Knuckles right now, but instead, you're reading math**NEWS**.

### That's the best compliment I've gotten all week.

A math**NEWS** EDITOR WHO REALLY LIKES SONIC 3 & KNUCKLES

### USING PERSONALITY COMPATIBILITY TO PREDICT THE PROBABILITY OF SUCCESSFUL ROMANTIC PAIRINGS

Let's start with I, the author, am currently in a self-imposed "Eat.Pray.Love." phase of my life, inspired by the 2010 film starring Julia Roberts based on the 2006 memoir written by Elizabeth Gilbert. This lack of romantic drama in my life had manifested itself in the urge to set up all of my single friends with each other. What started out as a meme, for lack of a better word, turned into a serious side-project in which I my roommates and I mined through our friend groups to bring about love in a time of midterms and freezing rain.

On Februray 2<sup>nd</sup>, 2018 at 19:30, six of our friends met up at the World's Largest East Side Mario's (the King/Columbia location unofficially, officially holds this title). Over pasta, steamy garlic loaves, and unlimited soup or salad, the three (chronically heterosexual) pairings got to know each other. I had called ahead the night before to make a reservation for six under the name "West Side Luigi" and also asked the restaurant to make name cards so that the couples would be stat across form each other in the event that they didn't all arrive at the same time. The name cards ended up being a conversation starter which reduced date confusion.

My roommates and I agreed that a triple-blind date was the perfect amount of couples to minimize awkwardness and maximize fun times. Assembling the pairings was tricky because if the people know each other too well, the dynamic turns into a friend hangout and if the people don't know each other enough, it turns into a weird 80s speed-dating service. We had 3 pairings for the blind date:

Pairing A had a 98% compatibility score going into the date.

Pairing B had a 60% compatibility score going into the date.

Pairing C had a 40% compatibility score going into the date, mostly because the second half of pairing C was chosen last-minute to balance out the introvert-extrovert balance.

In conclusion, The couple A did not have a second date and decided to "be friends".

Couple B had a second coffee date in uptown Waterloo and were spotted at a mutual friend's birthday party playing beer pong, laughing in a flirty way, and standing close together in a flirty way. Couple C extended the date into the late evening and had a study date later in the week. They are now just "acquaintances that don't really talk".

In summary, too little compatibility and overcompatibility yield the lowest results and that "mostly-good-isa" is the blind-date sweet spot.

Eat.Pray.Love

### TAKING CHANCES AND SUBMITTING TO mathNEWS FOR THE FIRST TIME

English is not my strong suit

I have this blog (medium.com/@ianvo) and I write all these words but when I have to write formally or "intelligently" I'm not able to do it. Everything I'm writing right now is casual and raw. Its just thoughts that I have and I need to share it so I can remember and look back when I'm feeling stressed. English has been one of my biggest weaknesses since the start of time but recently I've been recording and documenting everything via writing.

The thing I'm most insecure about is English. I feel like my English is so bad so I have to work at it but I'm really throwing myself out there because I'm trying to communicate my thoughts. I would always panic when the teacher in class told us we had to do any type of writing. Like I'm not even kidding I would do anything to avoid writing a small paragraph. The only reason I'm writing so much here is because if you know me I have a really outgoing personality and I love to talk. I love to talk but I don't like to write. I would say my grammar isn't the best and my vocabulary isn't strong but if i want to improve I just have to keep practicing.

I got this advice from one of my former roommates, Eve (the sweetest girl ever OMG). She told me in order to get better I just have to keep writing. We did a small activity at home where I had to write a small paragraph and she would edit after. During the time it was harder to write because I felt like she would judge what I write and in general everyone would judge what I write but it's just self doubt. I am passionate about the topics I chose to write in my blog and I think that's one of the reasons I enjoying doing this so much. When no structure or rules are involved and I can write creatively.

Vivian Vo (medium.com/@ianvo)

### **MY WESTERN NAME AND I**

Hello my name is

I was once told a story of an expecting father spending days at the library looking for the perfect name for his baby girl. The only issue was that he already had a boy name picked out and ready, but the doctor had made a mistake, and just weeks before the birth date he found out he was having a baby girl. The father wanted a unique and special name for his child similar to the boy name he had picked out. Finally, after days of research he found the perfect name for his child in an old poetry book:

Razan آن (ra-za-in) (n.) 1. Sensibility and Respect; 2. One who is calm; 3. Admired human; 4. Balanced; 5. Wisdom; 6. A wise old man; 7. Quiet.

Origin: Persian, means "vineyard", a large area of land that produces grapes.

That baby girl was me, and when my father picked out my name, he never expected to leave our home country for Canada. When we came to Canada from the Middle East I was 4 and back then I adored my name. Little did he know that I would later change it for my western friends. Every year, one of my teachers would read my name, and pronounce it 'raisin'. That became my horrible nickname throughout elementary school. I got tired of spending time trying to teach people how to enunciate my name correctly. My name is hard on the English tongue. I decided to give myself my own western nickname of Roseanne, or Rose for short.

Years have passed and the nickname I gave myself stuck. The majority of the people around me don't even realize it's a nickname and others don't even know that I have a nickname, because they can say my name right. However, some harass me and accuse me of giving in to the western culture, in turn, giving up my own culture. They feel that their name is the root to their identity. But what they fail to realize, is that I am a beautiful mix of multiple cultures. So I can do whatever I like with my name, even if that means having two names. One from my roots, and one to reflect the reality I live in.

Razan Qaoud (medium.com/@roozaa.q)

### REGRET AND THE POSSIBILITY OF TIME MACHINE USAGE

IF YOU COULD USE A TIME MACHINE TO GO BACK IN TIME AND LIVE IN A MOMENT AGAIN WOULD YOU?

I wouldn't.

People might think of course! I could have changed this, this and that about this one time and then I could have a better life. However there's no guarantee of that. Maybe the thing you regretted could have change your life for the better but it could have also made it worst. You never know because everything happens for a reason. There might have been some times where I reacted with an "oh dang I should not have done that, that was a big mistake" but I don't regret it. I wouldn't want to go back and change anything because it'll affect the life I have right now.

I wouldn't have been through all of my experiences or met the people that I've met if I changed the course of my life halfway through. You might face disappointment and think why does this always happen to me. But the truth is that life is suffering and we have to do what we can to overcome it and seek happiness. Looking at the big picture instead of the one time you regretted something makes you realize how minor some of your "big problems" were. The stress you feel in the present or at the moment will eventually die down and there will be other things to worry about.

The law of attraction, everything you think about will be attracted to you though the universe whether it's bad or good. Your thoughts attract the energy and thus positive thinking leads to positive changes. There's no point in dwelling in what has passed, its time to get up and move on. So stop living life in regret you can't change what already happened but you can change what's going to happen. Mistakes happen its only human nature, its also human nature to freak out and start worrying.

If you want to go back in time to say something, because you missed the opportunity. Just think from now moving forward tell yourself this is your only chance. The time is now and there's nothing to lose. Just say what you want because you really have nothing to lose in your life (okay but like think logically and realistically before you speak). All of this is cliche, live your life, do whatever you want. But instead of just hearing it and saying it, apply it. Do something about it. There's no reason for you to not speak your mind. See the situation first, don't say EVERYTHING you want. Know when to hold back and when it's appropriate but don't fear. If you like someone tell them, if someone is bother you tell them. Isn't it better to know then to live wondering?

Vivian Vo (medium.com/@ianvo)

### FROM TINDER TO LOVE PART 1

About a year ago, I decided to go back to the days of Tindering for a bit, during this time of year things can get lonely especially with all the festivities and what not. Now, I'm the type of girl who messages guys first on Tinder usually. I remember seeing this one guy on Tinder who had nothing on his bio except for WLU Compsci and two pictures of him one that looked really serious and another of him hopping into his car. However I noticed that he happened to follow the same meme page as me called "Being Noticed By Senpai" It was a fairly good meme page. So I swiped right.

Lo and behold it was a match! I messaged him first asking him if he watched Madoka Magica. Because this meme page was about anime so it couldn't have hurt to ask. He said yes (but it turns out he said that to get into my pants) we got the conversation rolling. We talked about where we're from, what we like to do, our favourite food, birthday's (his happened to be Pi Day) then shortly after that we said that we should hangout, he suggested we go get phở but I was like "I only like eating my mom's phở" and he asked for suggestions so I suggested Kinkaku, I mean hey free sushi dinner isn't so bad.

So we met up he picked me up from MC with his car, and I directed him to Kinkaku. When I hopped into his car and he started driving it took me a good like 15 mins to realized he drove manual, also I couldn't see his face cause of his sunglasses. We arrive at the restaurant and I mostly led the ordering. We talked a bit more, the restaurant was really loud, I think you asked about my eczema. Then we got the end of our dinner being really stuffed with fried food and sushi. I ordered dessert like 3 Crème Brûlées and 2 deep fried Mars Bars, I did this thing where I took my Mars Bars and crushed it into my Crème Brûlée. I told my date that I this was a specific me thing I did and he didn't have to do it but he insisted but I was like "nonononon." After that he kindly offered to pay for dinner, even-though I was okay with splitting the bill.

We left the restaurant and drove back to UW for Board Games Night at the C&D. I promised my friends I would come back to play with them so I thought for some reason it would be a good idea to bring my tinder date lmao. I introduced my friends to my date and we played a few rounds of Love Letter and SushiGo which went pretty well.

It was getting pretty late so he asked if I wanted to go back to his place to anime and chill (wow I'm such a dork), in this case we actually watched anime and chilled. I showed him Gekkan Shoujo Nozaki-Kun which I thought was a cute first date anime to watch so why not right? At this point I didn't realize how fast time went by it was like already maybe 1 or 2 am? He offered to drive me home because I told him if I don't get home my mom will get mad at me. He did so and we continued talking after.

In the next couple of weeks we spent more time together, we went to A Capella EOT, dragged him to **mathNEWS**, and

visited Costco. I took me like a week to start catching feels. Now we've been dating for a bit less than a year and I've never been happier, thanks for taking me to the dermatologist, and driving me to places, thanks for cleaning up after me, and taking such good care of me. I know I have a bad memory and can easily forget things but one thing I will never forget is you.

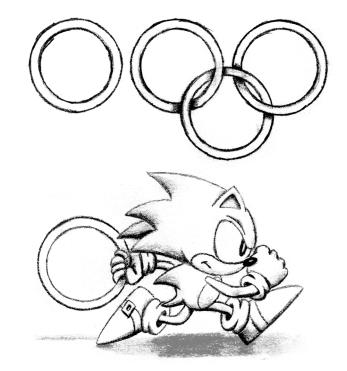
A Cute Angle

### SIGNS YOUR PROF LIKES YOUR HOMEWORK MORE THAN YOU

Are you concerned about your relationship with your professors? Does your prof always seem to bring up assignments every time you guys meet, like you owe them money? Do they only make time to hang out during scheduled intervals and with other people around? Are they constantly lecturing you? If this is the case, they may not really be your friend.

Profs are notorious for making cheap and quick connections with many students at a time. They are the real players of postsecondary life, but have no fear, you can easily avoid falling into their trap. You can make them jealous by seeing your TAs behind their back or talking to their other side-pieces in the class. Show you don't care what they think by handing in half done assignments, barely passing the course, or sitting at the back of the class and avoid eye-contact when they ask a question. In no time you'll be out of their cold, loveless grasp and free to make real connections outside of MC.

ε-UNIT



# KATE SPADE AND SELF

DISCLAIMER: THIS ARTICLE IS NOT SENDING LOVE OR HATE TO KATE SPADE.



I was born on November 11, 1995 and if you do the math I turned 22 this year. As a gift to myself I bought a Kate Spade purse. It was a little expensive, \$160 on sale, but the original price was \$530 so it seemed like a great deal.

Even on sale this purse was way out of my budget, but it made me feel like Jessica Pearson from Suits. Strong, powerful, beautiful, and independent. I would normally never spend that much on a brand name purse, or anything brand name for the matter. I usually go to Winners or Aldo, and grab a \$40 purse.

But this time was different, I had a horrible summer and was having a horrible time in my last year of university. Trying to balance family, 2 part time jobs, volunteer work and school, plus a lot of unwanted drama. I was struggling with myself and facing anxiety and depression, so I said "Fuck it! Treat yourself!" I saw the action as self care, gifting myself a beautiful purse that made me feel strong, but when I got home and looked at my banking information I felt horrible, irresponsible and irrational. "This was not self care, this was stupid" I told myself.

What I learned from this experience, was that self care is far more than just making yourself feel like Jessica Pearson, it is about taking the harder course of action. This realization led me to creating an action list for myself so that I can actually indulge in true "self-care". I have accomplished some of the goals listed, while others I am still working on:

### 1. STOP INVESTING LOVE TOWARDS PEOPLE WHO DON'T INVEST LOVE TO YOU.

This is easier said than done because sometimes I find it hard to see who actually cares that I have had 7 breakdowns in the past 2 months and who is just trying to be nice and leave before shit gets serious. But I had a list of people and groups in mind and I just cut myself from them cold turkey. These are the people that would make me super anxious and I would feel like shit after hanging out with them. They would push me down so they could feel taller. I feel great knowing that they are no longer part of life.



#### 2. START FACING THE SHIT.

Stop feeding your immediate desires and avoiding your problems. If you don't tend to them, they will grow and wrap their vines around you so tight you just might pop. Take a deep breath and look at your failures like you would look at a loved one, memorize and understand every detail so you can learn, grow and move on in life.



#### 3. LEARN TO SET REALISTIC/PERSONAL GOALS.

I always set goals for myself that were same as other people's goals and never manage to reach them because they are unrealistic for me. This always causes me to get discouraged and feel like I can't do anything. So I have to learn how to set my own goals that are specific for me and my life. This may sound cheesy but S.M.A.RT goals are the way to go. Learn set goals that are Specific, Measurable, Achievable, Relevant, and Timely. Just because your friends are going to gym 4 times a week does not mean you can also pull that off right away.



#### 4. UNDERSTAND YOUR ANXIETIES.

I can tell you what makes me anxious, but it is difficult to explain why. I need to learn how to address anxiety when it comes and know that all the assumptions I just made about a situation was the anxiety talking not me. One of the best things to do is write it down every time your anxieties take over and make sure to take note of what triggered it in the first place. Once that is done you will be aware of your triggers and be able to face the problems at their core.



#### 5. LET GO. LET GO. LET GO.

This action is hard for me to act on. I invest so much of myself into things and people. So much so that they become a part of me and I can't see the difference between what's really me and what's them. It makes me feel like I can't move on without that part of myself. But I have learned that I have to let go because these things have just been holding me down.



#### 6. FORGIVE YOURSELF.

You will mess things up, life is not perfect nor should you be. Be honest with yourself explain why/how you messed up and the discipline yourself based on the decisions you made. After that you need to forgive yourself so you can move on with your life.



#### IN CONCLUSION ...

Now some of these might be a given, but sometimes we forget about the given rules of life and get lost because unlike Suits we don't have a script to follow. Needless to say I plan on returning the purse, maybe once I have a full time job like Jessica Pearson, I can treat myself with it. For know I need to complete this 'to do list' and take care of myself without breaking my bank account.

Razan Qaoud (medium.com/@roozaa.q)

#### ISSN 0705-0410 UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

mathNEWS is a normally fortnightly publication, funded by and responsible to the undergraduate math students of the University of Waterloo, as represented by the Mathematics Society of the University of Waterloo, hereafter referred to as MathSoc. mathNEWS is editorially independent of MathSoc. Content is the responsibility of the mathNEWS editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or mathNEWS. Current and back issues of mathNEWS are available electronically via the World Wide Web at http://mathnews. uwaterloo.ca/. Send your correspondence to: mathNEWS, MC3030, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to userid mathnews@gmail.com on the Internet.

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### INCLUDED: JUMBO READING WEEK GRID gridCOMMENT 136.3 • Ronald Yu and Matthe

Given that on the Monday after the previous issue came out, I was informed by an Editor that a grid submission was received, I presume that people were motivated that only a token effort was required to win the previous issue's prize or I made the grid too easy. I will optimistically presume that it is the prior, although to guard for the latter I made the grid this issue harder (by the measure that it's bigger and thus gives people more chances to make mistakes). After all, it's reading week, and it's got to be some twisted tradition that profs assign extra work to do over the break or something. Why not join in on the fun?

I was a little disappointed that of the six submissions that I received, only two, maybe three people answered the issue's **gridQUESTION** as opposed to answering a similar question that they had thought they read. Last issue's **gridQUESTION** was "Quick, I fucked up something big; how should I avoid getting in trouble?" and here are our responses:

- Adrian submitted a correct grid and answered "your penance: give food money. to me, preferably." It would be reasonable, except if one needs to do penance they probably didn't manage to avoid trouble.
- DX submitted a correct grid and answered "Fess up to your accusers, do a little dance, dab away, then hope for the best of the best!", which assumes there are accusers to a question that doesn't have such an implication (and if one successfully avoids trouble, there wouldn't be anything to accuse you of).
- IZSY answered "To avoid getting in trouble, just open a rift in spacetime that takes you to a world where you never fucked up. (yes, I just finished bioshock infinite last night...)", which would be a great idea, but unfortunately made two errors in the grid and thus cannot be chosen over those who submitted correct grids.
- J.K.C.X. submitted a correct grid and answered "Expect jives, and quickly and humbly apologize for your flaws." which has a similar reasoning flaw to DX's answer.
- PMC Dream Team w/o Simon Y. Huang submitted a correct grid and answered "You log off." which at least is feasibly a solution to the problem.

• Ronald Yu and Matthew Walinga submitted a correct grid but did not answer the gridQUESTION, and as a personal policy to have the most game-theoretical sense, I assign no answer to the gridQUESTION the lowest ranking in tiebreaker because that incentivizes people to answer the question.

Thus, the least objectionable **gridQUESTION** answer for last issue is the PMC Dream Team w/o Simon Y. Huang (to Simon: How does it feel that the team you are "a part of" decides to single you out as not in the team?), which honestly, is a result I am not very happy with. [||]. Go see an editor, I guess. For those of you who are not yet veterans of the **gridWORD**, take the above as some feedback on how to gear up your answers. With that knowledge in hand, I present to you this issue's **gridQUESTION**, "What is so special about the year of the hound?"

Submissions to this issue's **gridWORD** are to be made before the deadline of 1800 hrs on February 26<sup>th</sup>, 2018, a task which can be accomplished either by submitting a physical completed copy to the **BLACK BOX** found in the MC 3<sup>rd</sup> floor hallway outside the Math C&D, or electronically to <u>mathnews@</u> <u>gmail.com</u>. Submissions are eligible for a prize, which is based on the most correct submission; in the event of a tie, my favourite answer to this issue's **gridQUESTION** shall serve as tie-breaker. Submissions should at the very least contain a name to be credited with, and perhaps also some way to be identified in case you win and the Editor who is on staff decides to check your identity to guard against identity theft.

> 恭喜發財 萬事如意 大展鴻圖 福壽雙全 Zethar





Drop your grid**WORD** solutions off at MC 3030. And yes, we do award points for creativity.



#### ACROSS

- I. Steeps
- 5. Another way to write *d* in astronomy
- 8. Herb in Scarborough Fair
- 12. Dashboard abbr.
- 15. Alignment axis label
- 16. Civil war era ship
- 18. Form of "to be" 19. Describes a lipid bilayer, for
- example 21. Long-snouted fish
- 22. Minotaur's home
- 23. Seconds
- 24. Nothing, to 32A
- 26. Stumbles
- 27. Also known as OTAN
- 30. A constructed language designed with the intent to replace Esperanto
- 32. Claudius' successor
- 33. Author of Pêcheur d'Islande
- 35. Soft drink dispenser
- **38**. Baby buggy
- 39. Deputy
- 40. Crystalline rocks
- 41. Entice
- 43. Ace





- 44. Recognition response
- 45. Type of sensor which responds
- to pressure
- 50. Thrice
- 51. Sharer's word
- 52. Condition
- 55. Take
- 59. Razor sharpener
- 61. Holy painting
- 62. The doctrine that there exists an immaterial reality which cannot be perceived sensually
- 64. Parachute part
- 65. Beat
- 66. Pirate exclamation
- 67. Furtive summons
- 69. Comprised of 60D and their staff
- 70. Fire
- 72. Banned Hindu custom
- 74. Theater employee
- 76. The lowest rank, briefly
- 77. League of Nations successor
- 81. Something to lend or bend
- 82. Kitchen flooring
- 83. "Before" before a word
- 84. Dash widths

3

4

34

45

57

58

5

16

28

35

39

46

66

78

43

63

72

20

27

42

50

71

77

82

85

85. Atlas abbr.

2

15

19

22

26

33

38

41

55

62

65

70

76

81

84

56

- 86. 273.15 K and 100 kPa
- 87. Trading letters

#### DOWN

- 1. Shape again
- 2. Continually a song?
- 3. E.g. Unix time
- 4. Opening
- 5. It may be loaded
- 6. Misjudge
- 7. Navy equivalent of Brigadier General
- 8. Castigate
- 9. Measure of effectiveness 10. Lass
- 11. Some say it came from the
- 12. Middle eastern slur
- 13. One might find a little house
- here 14. Castle wall battlements
- 17. Modern prefix?
- 20. Compose
- 25. A fan of
- 28. Egyptian snake
- 29. Lethargy
- 31. Had better
- 34. Zulu regiment

- 36. Aquatic salamander
- 37. Approaches
- 42. Georgian money
- 44. Down's opposite
- **46**. 10<sup>21</sup>-
- 47. Electra author
- 48. Inflamed suffix
- 49. Din
- 53. Upsets
- 54. Note beneficiary
- 55. One that got away
- 56. Austere
- 57. Embers
- 58. It comes in black and white
- 59. Russian oblast
- 60. Gorffwysfa residents, for short
- 63. Bearish
- 68. Egyptian boy king
- 71. Make parallel lines
- 73. A mound comprised of historic refuse which several near-Eastern cities are named after
- 75. Welsh equivalent of "Jane" 78. The empty list in Lisp

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- 79. Protein source
- 80. Rock blaster



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C	)
C	)

There is no otherNEWS this week.

Please address all complaints to everyone but us. After all, we got our paper out; it's other people who didn't give us any dates to put in the lookAHEAD, or any actual news for otherNEWS. And to Everyone But Us, here's your first: you made me write filler. I don't like writing filler.

(That's because I love writing filler.)

<u>I'm still gonna complain about it, though.</u>