



"WHAT IS YOUR PREFERRED PROLETARIAN SOCIETY?"

TRENDING THIS SEASON: PUMPKIN SPICE LATTES AND THE FALL OF THE BOURGEOISIE.

Just gonna say: I didn't anticipate this.

When I say "this", I am of course referring to the communist turn that **mathNEWS** has taken. For this issue, we have a commie-red cover, at least two articles related to communism, and even a pizza ordered at production night specifically to fit the theme of communism (read the article for more details!).

So, how did this come to happen?

It started simply: with the **mathNEWS** discorg meeting a few weeks ago. At the meeting, there was much discussion on how we might promote **mathNEWS** readership and writership, considering that the lack of an orientation issue meant we missed our chance to reach most first-years before the first issue. Postering was brought up, and the idea of communist propaganda was thrown into the mix. That idea was treated with much laughter, and stayed an idea for over a fortnight.

On one fateful day, I entered the **mathNEWS** office with the urge to work but not the brainpower to continue assignments. I concluded that there was only one solution: to draft up new **mathNEWS** posters made by photoshopping old communist propaganda. And thus came the "comrades" poster. I printed off only a single copy, as it was more a proof of concept than something I actually thought would be put up throughout the halls of MC. I then left it in the **mathNEWS** office, thinking we could put it on the wall as a tribute to alternate **mathNEWS** worlds, and left for the weekend.

When I returned, I was shocked to discover the poster hanging front and centre on the door to the **mathNEWS** office. Who had done this? (Spoiler: quiz.) In any case, as our reputation for being a bastion of political neutrality (heh, as if) had already been tarnished, I figured that the time had come for **mathNEWS** to embrace the propaganda, and to further spread this ideology. **Zizek sniffs in the background**

Thus, more posters were made. Thus, more posters were spread. Thus, the **mathNEWS** revolution is brought to you today by our lovely **sponsors** writers, editors, and yourself. Thanks for reading!

itorED
Editor, **mathNEWS**

quizED (Zishen Qu)
Editor, **mathNEWS**

s, t \in {2k, k \in Z}, 144		The empty set (vacuous truths?)
ITSH		The moon (if it even exists).
el34n0r_ri5by		Ideal Yuri-verse.
quiz		Proletarian dictatorship.
Zethar		The one we installed.
(I couldn't read this)		The one where everyone is a bourgeois (sic) but me.
Eve		The kind where you can still eat fish.
me		I Am The Big Brother
Asmodeus		A society composed of various proletariats—yo dawg, I heard you like societies, so I put societies in your society.
waldo@<3.LE-GASP.ca		The one that caused me to exist. ☺
Soviet Canadian		The hive mind.
UndecidED		1984
tbdED		The turn of the earth, for we are all proles on this blessed day
quizED		Direct Dithmarscher Dictatorship

ARTICLE OF THE ISSUE

Congratulations to Stephen New, for writing an article that I haven't yet read, but know that it'll cause me many headaches in the following days. For your decisiveness and brutality in making my life difficult for having tricked you into being featured in **mathASKS**, you win the article of the issue! Either way, I'll have the shelter of the previous **BLACK BOX** in the **mathNEWS** office to protect me, although we may be getting a new one soon...

One thing to notice about the articles in this issue is that the Communists haven't entirely taken over in terms of the means of production. I can only attribute this failure to the communist countries that were boosting party popularity not having enough political power. Beside which, I would probably have been deposed, had the revolution succeeded.

Drop by our office (MC 3030) to pick up your prize! If we're not here, email us at mathnews@gmail.com to figure it out.

Welcome to the official commie issue of **mathNEWS**.

MICHELLE ZHU, **mathNEWS** EDITOR FOR FALL 2017
ALONG WITH SHAUNDALEE CARVALHO, ANGELA LE, ZISHEN
QU, CAMERON ROACH AND HEATHER STONEHOUSE

mathASKS 135.2

FEATURING STEPHEN NEW

ZETHAR: WHAT DO YOU DO IN YOUR SPARE TIME?

I go for walks in the woods with my wife, I watch Thai dramas with my wife, I play soccer and I recently took up golf (because I keep injuring myself playing soccer) and I like to play piano and guitar (although no one likes to listen to me when I play). Occasionally, I have a chance to go canoeing or to travel abroad.

NITRIC ACID: WHAT IS YOUR FAVOURITE CONTEST QUESTION?

I do not have a single favourite contest question. I like many, many contest questions.

OVER 9000: HOW DOES ONE CREATE CONTEST PROBLEMS?

When I read papers in math journals, I sometimes notice an interesting problem which arises and is solved in the course of a proof. Also, when I am thinking of possible homework questions for various courses, I occasionally come up with a problem which works well as a contest problem.

HARRISON BALLS: DID YOU KNOW THAT YOU HAVE A FAN PAGE?

Yes, I have seen the fan page. For the record, although I did once say "there is beauty in mathematics" I did not then add "and it is me".

HARRISON BALLS: HOW WAS THAILAND?

Thailand is an excellent place to visit. It is relatively inexpensive and relatively safe, the Thai people are very friendly and hospitable, the food is excellent (especially if you like spicy food), there is spectacular natural beauty and a wide variety of terrain, and the culture and way of life are fascinatingly different than what we see in North America and Europe. The political situation is, unfortunately, not ideal. Thailand has had many military coups in the last century, and is currently ruled by a military junta.

HARRISON BALLS: WHAT IS SOMETHING YOU'VE SAID THAT YOU REGRET?

I regret having agreed to write this **mathNEWS** article.

HARRISON BALLS: WHAT IS YOUR FAVOURITE FOOTBALL TEAM?

I do not have a single favourite football team. I like Brazil, Germany and Spain. My favourite player is Messi.

MICHAEL HUNT: DO YOU LIKE PRANKS?

I like pranks as long as they are good-natured and are directed at people other than myself.

BENJAMIN DOVER: DO YOU LIKE "SNEW SNEW"?

I do not understand the question.

XXX: ANSWER TO THE NEXT CONTEST PROBLEMS?

The answer is 42. But what is the question?

DIANE: WHEN DID YOU FIRST CONSIDER YOURSELF AN OLD PROF, RATHER THAN A NEW ONE?

It was at the moment that I read this question that I first became aware that students consider me to be old.

DIMINUTIVE REX: HOW MUCH WOOD COULD A WOODCHUCK CHUCK IF YOU CONSTRUCT THE SET THAT CONTAINS ALL SETS THAT DO NOT CONTAIN THEMSELVES?

Since I have no intention of ever constructing the aforementioned non-existent set, it follows vacuously that the woodchuck in question could chuck any quantity of wood whatsoever.

WALTER WHITE: WHAT IS YOUR FAVOURITE TV SHOW?

I have no single favourite TV show. I quite enjoy watching the Thai comedies Pentor, Kadee See Chompoo, and Prisana Fa Lap.

GEORGE CLOONEY: DO YOU LOOK LIKE GEORGE CLOONEY?

Yes, George and I are closely related. We are both hominids.

CONCERNED MOTHER: ARE YOU A SADIST?

No, I do not adhere to the ethical code propounded by the Marquis de Sade.

SADIST: ARE YOU A CONCERNED MOTHER?

I am not a concerned mother myself, but I do have a concerned mother. I am often the cause of her concern.

BILLARY CLINTON: HILLARY OR TRUMP?

My first inclination was to answer "anyone but Trump". But upon further reflection, my answer is "let us wait and see". In the unlikely event that the expected nuclear war fails to materialize, there is a remote chance that republicans and democrats will unite against their common enemies (Trump and Russia) and that America will emerge as a more unified, liberal, compassionate and humble nation. If so, perhaps I will feel that the end justifies the means.

QUIZED: WHAT IS OBJECTIVELY THE BEST VERSION/ STATEMENT OF THE AXIOM OF CHOICE?

The best statement of the Axiom of Choice is Valeh and the best version of Valeh appears in their album Beyond Denial.

AN ATHEIST'S FAVOURITE ARGUMENTS FOR THE EXISTENCE AND NATURE OF GOD

I am an atheist. An atheist is a person who is not a theist. An atheist could, at least in theory, also be a deist (although I doubt that any deists call themselves atheists). A theist believes in a theistic god while a deist believes in a deistic god. A deistic god is a being who created the universe along with its natural laws and allows the universe to evolve in accordance with those laws. A deistic god does not interact directly with beings in the universe. A theistic god, by contrast, does interact with beings in the universe. A theistic god could, for example, communicate directly with some individuals, listen to and occasionally grant prayers, perform miracles, and reward or punish good or bad behaviour by consigning individuals to a heaven or a hell. The ancient Egyptian and Greek gods, and the traditional Hindu, Jewish, Christian and Islamic gods, are theistic gods.

Although I am an atheist, there are several arguments for the existence and nature of God (or of gods) which I find quite pleasing and attractive. Here are my four favourites arguments, which I shall call the Four Miracles.

Miracle #1: It is a miracle that the universe exists, indeed it is a miracle that anything exists. Surely there must be a god (or a team of gods) who created the universe, otherwise there would be nothing but vast emptiness.

Miracle #2: It is a miracle that the universe is ordered and follows natural laws. Surely the gods (whose existence we have already agreed on) must be rational beings, otherwise the universe would be nothing more than a chaotic mess.

Miracle #3: It is a miracle that the natural laws are so magnificent that they give rise to the wonderful evolution of the universe, the formation of stars and solar systems and of complex chemicals, culminating in biological life forms with all their richly interconnected diversity. Surely the gods are inconceivably intelligent and powerful.

Miracle #4: It is a miracle that living creatures are able to experience feelings and emotions. Surely the gods must value emotions (and perhaps even pay attention to our hopes and dreams) otherwise all living creatures would be nothing but unconscious, unfeeling automatons.

The first three miracles are related to the existence and nature of a deistic god (or gods) and the fourth suggests the possibility that gods might be theistic.

I expect that most theists consider these miracles (especially Miracle #1) to be compelling proof of the existence of a god. But of course, they are not compelling to me (otherwise I would not be an atheist). I consider these four miracles to be

great unexplained wonders of the universe, but for me (and I think for all atheists), saying that these miracles arose because of a god (or gods), without explaining what a god is or where the gods came from, is not an explanation at all. I am content to leave the four miracles unexplained.

There are some atheists who feel that some of the above miracles can be explained. For example, some say that Miracle #3 can be explained by the anthropic principle. They argue that there may be infinitely many universes, each with a different set of natural laws. In some of the universes the laws do not lead to the evolution of complex structures while in other universes they do. Because we exist and are complex, it follows that we must live in one of the universes which does have the kind of natural law that leads to complex structures. For myself, I will not find this argument to be satisfying unless and until we find evidence to suggest the existence of multiple universes. And if such evidence does one day arise, then we will have a new version of Miracle 3: it is a miracle that a multitude of universes exist, each with its own natural laws.

Some atheists believe that Miracle #4 is not a miracle at all, but that any creature which evolves until it attains a sufficient level of intelligence must inevitably become conscious. For myself, I do not feel that consciousness must follow as a logical consequence of intelligence. If we were to design and build a robot with vast artificial intelligence, perhaps able to monitor its own internal workings (like a modern car monitors its engine components), it is conceivable that the robot could think sophisticated thoughts and make intelligent decisions and even behave as if it felt pain or felt emotions, without actually experiencing conscious awareness.

Many theologians have, over the years, offered many arguments for the existence of a god (or gods). Many of these arguments have one or more of the above four miracles at their core. For example, the Fine Tuning Argument is essentially a restatement of Miracle #4. As another example, the Cosmological Argument (also called the Argument From First Cause) relies on Miracle #1 to make it convincing (at least to theists). Perhaps because I am a mathematics teacher, I find it foolish and somewhat annoying whenever a theological argument for the existence of a god purports to be a logical deductive proof. For example, the Cosmological Argument is sometimes presented, as if it were a deductive proof, as follows.

1. Whatever begins to exist must have a cause.
2. The universe began to exist (at the moment of the Big Bang).
3. It follows, logically, that the universe has a cause. Thus there must be a creator who caused the universe to exist.

Some people may find this argument appealing (because of Miracle #1), but it is certainly not a deductive proof that a god exists. Here are some of the flaws.

1. We do not know that whatever exists must have a cause. There are many events in quantum physics

(such as an electron in an atom jumping from one energy state to another), whose probability of occurring in a particular time interval can be accurately calculated, but for which we do not know of any cause. It is conceivable that there simply is no cause (so the events simply happen to happen). Also, even if every event in the universe does have a cause, it does not follow logically that the universe itself must have a cause.

- We do not know that the universe began to exist at the moment of the Big Bang. If the Big Bang occurred at time $t=0$, then perhaps the universe did not exist at time $t=0$ but has only existed at all times $t>0$. Alternatively, perhaps space and time have existed at all times $t>0$ but there was no such thing as space or time before that so that it does not even make sense to say that the Big Bang occurred at time $t=0$. Alternatively, perhaps space, time and the universe have always existed and there have been many big bangs (each of which annihilated everything that was there before) and the most recent big bang occurred at time $t=0$.
- If the statements on lines 1 and 2 were true then it would indeed follow logically that the universe has a cause. It does not follow that the cause must be a cognizant being which intentionally created the universe. The universe could, for example, have been caused to come into existence by some natural laws which operated in some other universe.

There are many theological arguments, sometimes masquerading as deductive proofs, which I consider to be nothing more than foolish wordplay. But I do not consider the Four Miracles to be mere foolish wordplay. I consider them to be great mysteries of the universe that have not been explained by science and perhaps never can be. A theist finds an explanation for these miracles in his or her belief that the miracles were wrought by a god (or gods). An atheist must be content to accept that deep questions, such as why anything at all exists, simply cannot be answered. Some atheists even feel that such questions are entirely meaningless. If such questions are indeed meaningless, then I have played a clever prank on you by writing this article and you have wasted your time by reading it.

Stephen New

profQUOTES

STAT 230: NAGHAM MOHAMMAD

“ I'm your mother.

STAT 240: CHANGBAO WU

“ What you see here is a formula; and this formula is a formula!

CO 39: DAVID WAGNER

“ What's yellow and sour and equivalent to the axiom of choice? Zorn's lemma!

CO 442: JIM GEELLEN

“ And that's a pretty proof of that theorem. [plays triumphant music on iPad] Technology can be useful sometimes.

“ It's the worst paper of Erdős and the worst paper of Tutte.

CO 456: GABRIEL GAUTHIER-SHALOM

“ Whenever I play a three-player game, it always turns into a game of two against [points to himself] one.

“ I bring you down, then go up, then I bring you down again, then you go up, and let's stop this before it gets too grim.

PMATH 445: BEN WEBSTER

“ If you're doing linear algebra and you need to choose a basis, something has gone wrong in your life.

PMATH 453: MATTHEW KENNEDY

“ In the real world of Pure Math and analysis, which is not the real world, I guess, there's usually two types of spaces: the good spaces, and the bad spaces.

“ We're talking about Banach spaces. Much of this course will be taken straight from Banach's PhD thesis. You see, Banach was a very clever guy, and wrote down all of this when it didn't exist yet. He was also very modest: he called those spaces "spaces of type B".

PMATH 930: ROSS WILLARD

“ Maybe the first thing I'll say is not boring. It's actually ... kinda interesting!

“ Nu. That's the Greek letter for N. N for ... crap.

AMATH 473: ACHIM KEMPF

“ If you haven't multiplied infinite by infinite matrices, it's fun to do.

CS 360: JEFFREY SHALLIT

“ [discussing leftmost derivations] Like most university professors, I prefer the left.

“ I say funny things all the time, but nobody puts me in profQUOTES. I'd like that to change.

THE mathNEWS MANIFESTO

A spectre is haunting Waterloo—the spectre of **mathNEWS**. All the powers of Waterloo have entered into a holy alliance to exorcise this spectre: enviros and scientists, arts and engineers. Where is the faculty in opposition that has not been decried as mathy by its opponents in power? Where is the opposition that has not hurled back the branding reproach of **mathNEWS**, against the more advanced opposition faculties, as well as against its reactionary adversaries? Two things result from this fact:

- I. **mathNEWS** is already acknowledged by all Waterloovian powers to be itself a power.
- II. It is high time that **mathNEWSies** should openly, in the face of the whole university, publish their views, their aims, their tendencies, and meet this nursery tale of the spectre of **mathNEWS** with a manifesto of the newspaper itself.

To this end, **mathNEWS**iew of various faculties have assembled in MC and sketched the following manifesto, to be published in the English, French, Java, Lojban, Malboge and C++ languages.

You don't deserve to know

N SOMEWHAT EXTRAVAGANT mathNEWS PIZZA ORDERS MADE THIS WEEK...

Thank-you to Pizza Nova for accommodating our custom requests every other week! You're awesome.

- **The Cheesitarian:** mozzarella, cheddar, asiago, parmesan, and (thankfully not included too often for this writer's preferences) feta cheese
- **The Big Red One:** pepperoni, red onions, red peppers, sun dried tomatoes
- **The Vegetarian Variety:** spinach, artichoke, Spanish onion, red onion, sun dried tomatoes, vegan cheese, red pepper, whole wheat pizza dough
- **A Different Vegetarian Variety:** pesto sauce base, spinach, pineapple, broccoli
- **The Double-Double:** double cheese, double pepperoni
- **A Spiced Meatitarian:** chicken, bacon, spicy sausage, hot soppressata
- **The Seemingly Endless Debate:** the Canadian invention that is... Hawaiian pizza (yes it's a Canadian invention, look it up)

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INFINITE AUTOGENERATED COMMUNIST PROPAGANDA WRITTEN IN THE STYLE OF LENIN

If Joseph Lenin was brought back to life via AI, what would the second coming of Lenin be like? To answer this pressing question, I took a few of Lenin's most notable works (The Communist Manifesto, State & Revolution, What is to be done, and his novel on Imperialism), converted the PDF's into plaintext, and fed into a Markov chain generator. An additional speech not by Lenin was added (The Debs Canton Ohio speech) to the training dataset for good measure.

Here are my favourite selections from my autogenerated Communist propaganda machine.

"You are free 51 TRADE-UNIONIST POLITICS AND SOCIAL-DEMOCRATIC POLITICS And the dictatorship of the first world imperialist war of devastation had cut off the supply of wage-labour for fresh exploitation."

"At the present bourgeois conditions of the lower proletarian stratum, to which we shall show more glaringly how the Economists' ideas deviate from Social-Democracy to bourgeois and peasant, the student and the priests, and explain their real estate interests."

"The bourgeoisie has already made peculiarly large strides on the one hand, explains the predominance of local newspapers are all apologists of imperialism, substituting petty-bourgeois reformism for Marxism."

"I was still a novice and had become exceedingly respectable simply because the bourgeois state."

"All citizens are transformed into bourgeois property, the word towards organisational speculative activity."

"Surely it is necessary to make the trade unions."

"ONCE MORE "SLANDERERS", ONCE MORE "SLANDERERS", ONCE MORE "SLANDERERS", ONCE MORE "MYSTIFIERS" 42 3.4 WHAT IS PRIMITIVENESS?"

Vice Mitt

Send more profQUOTES.

THE ENTIRE mathNEWS READERSHIP

A PLACE TO LIVE

Oh, Oct 2nd, what a peaceful and boring day. A perfect chance for me to shed some insight on an important aspect of UW life: RENTING and SUBLETING! I have lived in UW for some time, and every few months, I have to find a new place to live. I also spotted some constructive whining online. Therefore, I think I have the sample size to accurately represent the likelihood function of student's experience with their dwelling.

The first plan is on campus residency, like V1, where the school makes you live in first year. It's a pretty expensive place, the meal plans are misleading (not 50% off! Instead it locks you down on overpriced & low quality food). In V1 there's no air conditioning, no kitchen (forcing you to eat out), and you have to share a bathroom and shower with 20 other meatheads on your floor. The pluses of residency are: it's closer to school (but beware of geese), the cleaning lady will take out your trash and no questions are asked. Lastly you get a Don who yells at people who party too loud at 3 am, supposedly. I give V1 4/10. Once is enough.

The second option is some cheap basement in a house located around Keats Way. The pro of living in that ghost town is that you get all the silence you want (as long as there are no art students in the building). For me, I got to enjoy my tinnitus without interference. You'll get to fulfill your exercise goal by hiking 30 minutes to school. Lastly, you only have to share the tiny wash room with one other person. Our upstairs bathroom with the shower was shared with the girls, though, and they somehow managed to make their hair stuck on the ceiling and walls. I am very impressed with their artistic skills.

Of course, there are few downsides to living in that haunted house. It was pretty dark and moist living in the basement. It's the perfect place for molds to grow and dust to settle on your everything. Not recommend for people with allergies. However, don't worry about being lonely, because all the insects will choose your room for hibernation. From personal experience, I had earwigs fall on me or crawling on my body during winter nights. I saw spiders running on the ceiling, then in or out of cracks on the wall. Flies came from holes on the window screen. Roaches on the floor gave the carpet a distinct smell. In the end, I kinda regret living in that place, but it was definitely a unique experience.

Another notable choice is the expensive new estates apartment located between UW and Laurier which gives you the luxurious "Next Generation" of student living. Somehow you still have to live with 5 roommates. Most of the salt online comes down to people who got themselves stuck in leases in new, and often times incomplete, construction because they don't want to live in some second-hand house that got spoiled by those peasants. Personally, I am too much of a bum to live in the Chad area. However, I do recommend this to people with a large stockpile of money and swag.

That's all for now. I'll save some more for next time..

me

SUPPORT YOUR LOCAL RHYTHM GAMES

So you may or may not have heard of UW's very own DDR club - where we famously play something that isn't Dance Dance Revolution, but an arcade-ready fork of Stepmania, busting at the seams with custom songs that aren't just old license-free eurobeat or crappy covers of actually popular songs (yes, you, Umbrella, Big Girls Don't Cry, Saints Go Marching In).

Not only that, but we've also got some people with the goods to play

Less fatally embarrassing rhythm games such as Sound Voltex, which I hear is pretty cool and popular.

Here are a couple of things about rhythm games that are great:

- listen to all sorts of music (only valid if you play DDR - there is decent selection)
- interact with music in a way that does not depend on your ability to make music
- feel silly
- expend physical energy!
- get cheered on by random people because we're nice and are only mean if you're too good.
- that's actually not true, we're still nice if you're too good.
- if you play Sound Voltex, you get to twist these fancy knobs that make swooshy noises in the music.

Also, there are a couple of aspects to rhythm games that don't require as much physical fitness.

Something I've been meaning to dabble in, and other members have done before to some success, is create step charts for DDR. That's a pretty exciting endeavor and it's fairly technical, and it has a lot of steps that could afford some level of automation. It's a really exciting way to interact with music that you love (also, it definitely grinds in the idea that if you listen to the same 5 seconds on repeat long enough, you will hate it so watch out).

You should post on the UWDDR page or, I dunno, somehow contact me if you're interested. Or, just show up to a meeting! We'll try to have one this week, depending on whether or not Feds will let us exist.

el34n0r_ri5by

STACEYBOT GIVES FIRST-YEAR ADVICE FOR SUCCESSFUL

Hello new STEM undergraduate new WATCARD IMPRINT tax-free credit card RBC South Campus Hall Velocity Wants You!

Last time I MATH135 AFM networking I was bad standing to CS workshop. How to get goods grade fast Sparknotes Wikipedia?

Simple.

Wikipedia Not. MLA. Tutorial centre TA policy 71 and student ID. Always sleep and get 8 hours of compile for solid concrete foundation. Ideas start when you choose to do the work, do the work the way it should be done and INNOVATE. Do not ask her for 60% midterm :(because the final is always not very curvy. Real women get 15% on all assignments for the term. If you do not, you not do, so always do. Raise your hand until you get a good breakfast after the final. Do not settle remember Mark Zuckerberg fees arranged never opt out you can but always check double for run time error. Do not cry or the paper will not stick to your brain.

Now, I geomatics with the best professor, with a big ratemy-professors.com and two peppers. Textbook optional but required for RS Student Rewards point 500 point cashback. Remember to square box or three lines for full points even if and only if optional.

The best proposition is to imply the converse Vans Nike apparel. Showing up in pants will bring up the BrainAge Academy sweat-free midterm. Presents are not okay for policy 71 TA. Office hours are 60 minutes long ever day except today, tomorrow and only Wednesdays. Check LEARN and memorize every change if you are visual. 10am not 10pm. We are your friends too.

Did you know 60% of students can and have maybe? I find good standing by strapping down and proving myself wrong. Wrong proofs are not true if they are a statement of the form not A is B. Contrapositive contraception cesspool of courseware not required. Healthservices can make frown upside down parabola for pills. Coffee can and will make your hand shake when you submit nothing before the deadline wow! Always leave room for the computer to crash or die. Email for three to 5 business days for Piazza give more answers than questions.

Assignment is best not last minute, but only the first minute or the minute greater than or equal to. No prerequisite is required for you to be able to do the midterm for all percent belonging to no calculators blue or black pen only.

Lots of clubs, women, gay, can also give hints for tests if you speak up. Staceybot now knows how to read and write to

prove so Algebra 1 is successful. Remember to ask for help with your eight hours of fun maximum!

-StACEYBOT



VR ARCADE IN YOUR AREA!

Do you want to play some virtual reality games but cant afford the equipment (or have a large enough spare room)? You can still have fun playing VR games (with your friends no less) by going to your friendly neighbourhood VR arcade. CTRL-V is our local VR arcade conveniently located just outside campus amongst the old RIM buildings just north of campus. Local multiplayer is possible if you want to play with friends, and plenty of single player games are available. If you like video games, and have not tried VR yet, I would definitely suggest that you try it out.

Now there is a problem (or two) with your local VR arcade, and that is cost and game time. It costs \$25 per person per hour, with small discounts possible if you have groups. The time you get is also very exact, you have preset one hour intervals only, and you need to sign liability forms and watch a safety video/demonstration for using the equipment, which eats into your booked time unless you come early enough. That said, I would still suggest you go and give it a try; someone I brought who doesn't play much more than cookie clicker was able to enjoy themselves and even requested to stay an extra hour.

If you have any interest, check out ctrlv.ca

Soviet Canadian

READY FOR APPLICATION SEASON

ALICE B. CHARLES

Candidate for Bachelor of Computer Science, Honours, Co-op

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Phone: 437 - 123 - 4567

SKILLS

- Excellent communication skills developed through team projects and 3am assignment binges with desperate classmates
- Practiced with investigatory problem-solving enhanced by scrounging for laptop chargers prior to deadlines
- Ability to work well under pressure supplemented by pre-exam cramming

RELEVANT COURSEWORK

- Math 137 | Introduction to Calculus | Fall 2017
- Math 135 | Introduction to Logic | Fall 2017
- CS 135 | Introduction to Recursion | Fall 2017
- SPCOM 223 | Introduction to Speaking | Fall 2017
- ENGL109 | Introduction to Writing | Fall 2017

AWARDS

- Ontario Silver Medal (90%+ high school average)
- Presidents Scholarship (90%+ high school average)

EXPERIENCE

None, please help

PROJECTS

Adder | HackTheWest | September 2017

- Reads in two numbers, adds them together, and prints their sum
- Absolutely no practical algebra
- Won first prize in 'Useful Math Tools' category

DonutBox | Westest High School | May 2017

- Box decorated as a car to allow students to walk through a donut-store drive through
- Enhances donut acquiring experience by 83.57%
- Collaborated with team of four to achieve optimal donut productivity

COMMUNITY INVOLVEMENT

Leadership Volunteer | Westest High School | September - May 2017

- Volunteered as a leader to lead volunteers
- Successfully led volunteers in voluntary activities
- Actively followed direction to upper leadership and enhanced leadership skills

Talsua

DIPLOMACY

The Board Game of Losing Friends

There is one board game that sits on the MathSoc shelf unused, but sometimes on games nights stories are told about when it once was. Okay, maybe there are a lot of games that fit that description, but today I am talking about the fabulous game of Diplomacy. This game has a reputation of breaking friendships and table flips, not just from one game, but from across many games played by completely different people. In the game you are fighting world war one as one of seven major powers, not committed to an alliance like in real life, you are free to team up with any player against any other. This already can make for a frustrating game if you get teamed up on, but the real reason this can get on your nerves is two important game mechanics: there are no dice rolling or direct death (superior numbers of troops attacking cause opponents to retreat instead), and all movement and combat is simultaneous following pre-written orders of your choice. This means that the majority of the game is actually, well, diplomacy, as you cut deals with other players to break the stalemates on your front lines, then write orders to match the deals.

'Help me push France back, you can have Belgium and I'll take Paris'. The issue is that words mean nothing, and what matters is what orders you have actually written, so people can and will lie to your face to get you out of position if they feel you are a threat. In the example above the person 'helping to push France back' might be more powerful than you, and need to move troops out of an important space on the board to fulfill the agreed-on plan, a space that you feel the need to 'secure' with your troops. This inevitably leads to a game of paranoia and backstabbing, with allies maintaining troops on each others' borders at all times, or even attacking each other when they feel a betrayal coming. That is all player-dependent, though. In the end, it is really just a game of fluid alliances, power-balancing, and strategy. You do not need to rely on the luck of dice, but instead on your brain, making reasonable plans, convincing others to help you fulfill those plans, and choosing which plan you made with which player is the most beneficial to you. It's as close to international politics in a chaotic war as you can get. So if you have some friends who don't take things too personally, why not take out Diplomacy and see how long it takes for a table-flip to occur?

Soviet Canadian

ROLEPLAYING WITH STANGERS (AND ENJOYING IT?)

I recently joined a fan Discord for a podcast network (staymean), and I had been time-traveling via the Wayback Machine to my time in middle school on a Naruto role playing game forum.

The site is still alive, in spite of having gone through a couple of transitions. Phpbbnow to prophbb to tapatalk. but it's still alive. And surprisingly, some of the same people are still on there. Well, I'm sure they weren't 12 year olds when they started.

In the discord then, I asked whether other people there had been a part of these kinds of communities—and of course the answer was yes. What surprised me was that of the maybe 5 people who responded, at least 3 said that they're still friends with some of the people they met through these games.

Other than that, something I'm learning is that people will manage to turn any social space into a 'game space' and vice versa. People role-play on Neopets, Gaia Online, Habbo Hotel, in forums, AOL chat rooms, MSN, you name it.

It's also interesting to see that when I was role-playing, it was free-form and post-by-post, with rules about character design and creation, and regulating "power levels," but otherwise completely free-form. Other people had systems of their own design, with friends or completely online, some had GMs, some didn't, but none of these were explicitly D&D-style role playing.

Not to say 'down with the dominant paradigm', since role-playing with people in person is much more personally engaging and intimate (not to mention fun). Nowadays, I have a bit of a phobia of writing stuff like I used to, especially in a public and cooperative setting. But really, it's probably a pretty interesting exercise.

So who wants to start up some cooperative storytelling? Also open to playing a game like Runescape or Maplestory, but actually trying do some kind of role-playing extravaganza. (No optimizations allowed!)

el34n0r_ri5by

UNITED NATIONS SEZ

Dear Beneficiary,

We received a report from the International Monetary Fund (IMF), as well as the Federal Bureau of Investigation, **mathNEWS**, and the Interpol, that one vending machine in the MATHEMATICS AND COMPUTER (MC) building failed to dispense snacks in order to siphon your hard earned flex dollars.

After investigating the case, the United Nations Compensation Commission (UNCC) has approved the release of funds at the valuation of \$37,000,000.00 (Thirty-Seven Million Canadian Dollars), as well as \$75,000.00 Meal Plan Money and 3,200 geese, which were recovered from the vending machine.

We collected a list of all the victims of broken vending machines, but after an audit carried out by United Nations senior auditor, we discovered that corrupt officials in the government and banks have not paid, instead selfishly diverting the funds into their own accounts. We already have your information in our database, but in order to ascertain that we are in communication with the rightful beneficiary, you are to re-confirm the following information for verification:

Your full name: _____

Gender: _____

Your address: _____

Student number: _____

WhatIAM ID: _____

Term: _____

Marital status: _____

Faculty: _____

Favorite prof: _____

Once you submit this information, we will contact you with further information and contact details of the financial institution nominated to release the funds to you.

Thank and remain bless
Dr. Ban Ki-Moon
UN Secretary General
dankmemes69@hotmail.org.ninja

This blackBOX was here all along, I swear.

A mathNEWS EDITOR WITH NOTHING TO HIDE

BODIES OF WATER

I don't sea you anymore
Used to say hello the way you do
A crash and a howl
Lawn chair
Fold in on yourself
It doesn't hurt when you leave

Lovers take note
Mothers fake float
Don't drive but it's still undertow
Lukewarm lightning and thunder flow
Thoughts darker than your depths
You're deeper than this poem
Fought hard to forgo death
You keep her abyss lonesome
Didn't know who to address this to
Hard to write to coasts from Waterloo
The Pacific, Atlantic, my mother's view
My skin yearns for their closeness and has to settle for tattoos

ITSH

DOUBLE XP WEEKEND!!!

Yaboi back at it again, bringing you the latest Runescape 3 news.

September 15 to 18 was double exp weekend, the biannual event where, for 72 sleepless hours, Runescape members receive double experience. Players around the world (mostly US, UK and Canada) have been saving their supplies for months to maximize their gains.

Think of it this way: if it takes 100 gold and 1 hour to get 100 exp, then on double exp weekend it takes 50 gold and 30 mins to get that same 100 exp. Essentially training your skills on double exp weekend is quadruple the value, saving you half the costs and half the time, but that's just the beginning.

Portable skilling stations allow hundreds of players to gather around and chat with each other. The dialogue is friendly and the community vibe is apparent.

Runescape has been launching double exp weekends since 2012 and it's about time the real world gets with the program. Jobs should have 'double pay in half the time' work weeks. Schools should have 'double grades in half the suffering'. Every once in awhile, life should be celebrated with the idea that when people get twice the reward for half the effort we all get sweet, sweet gains.

Yaboi

THE GREATEST MUSICIAN OF ALL TIME (V1)

Did you know?

People actually lost their minds and had to go to asylums after listening to Skrillex. He just like blew peoples minds so hardcore that they went totally insane, totally crazy, they lost all faculties and were, like, captured in his music, or noise as they called it—it transcended reality and it transcended logic. Just like Lisztomania, Skrillexmania caused people to like lose track of what was real and what was not real. Bangarang took the world by storm and increased the populations of mental hospitals globally.

el34n0r_r15by

DEPENDENCIES

I'm in an interesting situation. In order to justify eating **mathNEWS** pizza, I need to write an article. However, in order to write the article, I need nourishment in order to focus on my authorial arts. So pizza requires article, and article requires pizza. This is problematic.

Now, I could promise to write the article, eat some pizza on that assurance, then write comedy gold once I've sated my hunger. But once I've eaten the pizza, I no longer have the motivation to write the article¹.

There are only two ways I can see to resolve this. Either I go back in time to before I was this hungry, write my article, then come back to the present and collect the spoils, or I write a second rate meta-article about writing articles for pizza.

As you can see, I don't have a time machine.

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

1. Because why would anyone write anything without being bribed by free* food?

**mathNEWS isn't a cult.
We just lure people in
with free pizza and trap
them in our office.**

A **mathNEWS** CULT LEADER EDITOR

ZETHAR AND QUIZ VISIT "RIVER AND LAKE"

In continuing with the long-lasting tradition of Zethar going to restaurants with other **mathNEWS** writers and writing a review about it, this issue Zethar and quiz go to "River and Lake", or "The place formerly known as 'the place formerly known as "The Golden Mango"".

Zethar: With a place name like that, I'd imagine that it serves jiangnan cuisine or some southern Chinese food. I'd be rather disappointed if I got something else.

quiz: That sounds reasonable.

[Goes to restaurant, sits down]

Zethar: Huh, they serve skewers? That's like northern Chinese cuisine right?

quiz: Yup.

Zethar: I feel swindled. It's like getting on a train and expecting to see nice summer gardens and sub-tropical weather and instead when you get off it's a Siberian gulag.

quiz: At least the skewers are pretty good, but I could get like 25 of them back in China for the price they charge here.

Zethar: Welcome to Canada, where the food is expensive and they still expect you to tip. I suppose the other things are acceptable, though.

quiz: They sure put a lot of work into the artwork on the wall in the two weeks they were renovating the place.

Rating: $\frac{3}{10}$ if you're expecting southern Chinese food, $\frac{5}{10}$ normally, and maybe $\frac{6.5}{10}$ with skewers.

Zethar & quiz

THE GREATEST MUSICIAN OF ALL TIME (V2)

Did you know?

- The Black Eyed Peas have just as many albums out as Mozart, and they have been in the business just as long, too.
- Apl D App has referred to himself as "the party application."
- It's not dumb to rap about the days of the week
- Fergie doesn't sound like a chainsmoker
- It still counts as rap even if it's just syllables on the quarter note, autotuned to a prescribed melody.

- The Black Eyed Peas actually solved lots of important social issues by re-releasing "Where is the love"
- None of them have ever been as successful as when they are all united
- Millions, with binoculars, have flocked to Black Eyed Peas concerts because they are so popular
- If you play the Black Eyed Peas for babies, they turn out on average to be 200% smarter and more successful than the other babies
- The Black Eyed Peas are better than: Rush, Black Sabbath, Metallica, Aphex Twin, J. Cole, Kanye West, Gwen Stefani, Deadmau5, Midnight Oil, Shania Twain, Michael Jackson, Donny Osmond, Christina Aguilera, Susan Boyle, Lil Mama, Mozart, Beethoven, Taylor Swift, Paul McCartney, Jesse McCartney, *NSYNC, Tame Impala, Snoop Dogg, NWA, Heart, Cher, ... etc

el34n0r_ri5byv



OCTOPODES' HANDY PREREQ CHART — AMATH EDITION

Like CO, most AMATH is bottlenecked by relatively few courses - I hope you like calculus!

Calc III unlocks many of the 3rd-year AMATH courses, and Calc IV gets you access to most of the rest, although you'll need AMATH 250/251 as well for a few of them. Unlike CO, though, AMATH has a much wider dependence on 1st year courses—AMATH 242 (Introduction to Computational Mathematics) requires CS 136/146, and AMATH 271 (Introduction to Theoretical Mechanics) requires PHYS 121.

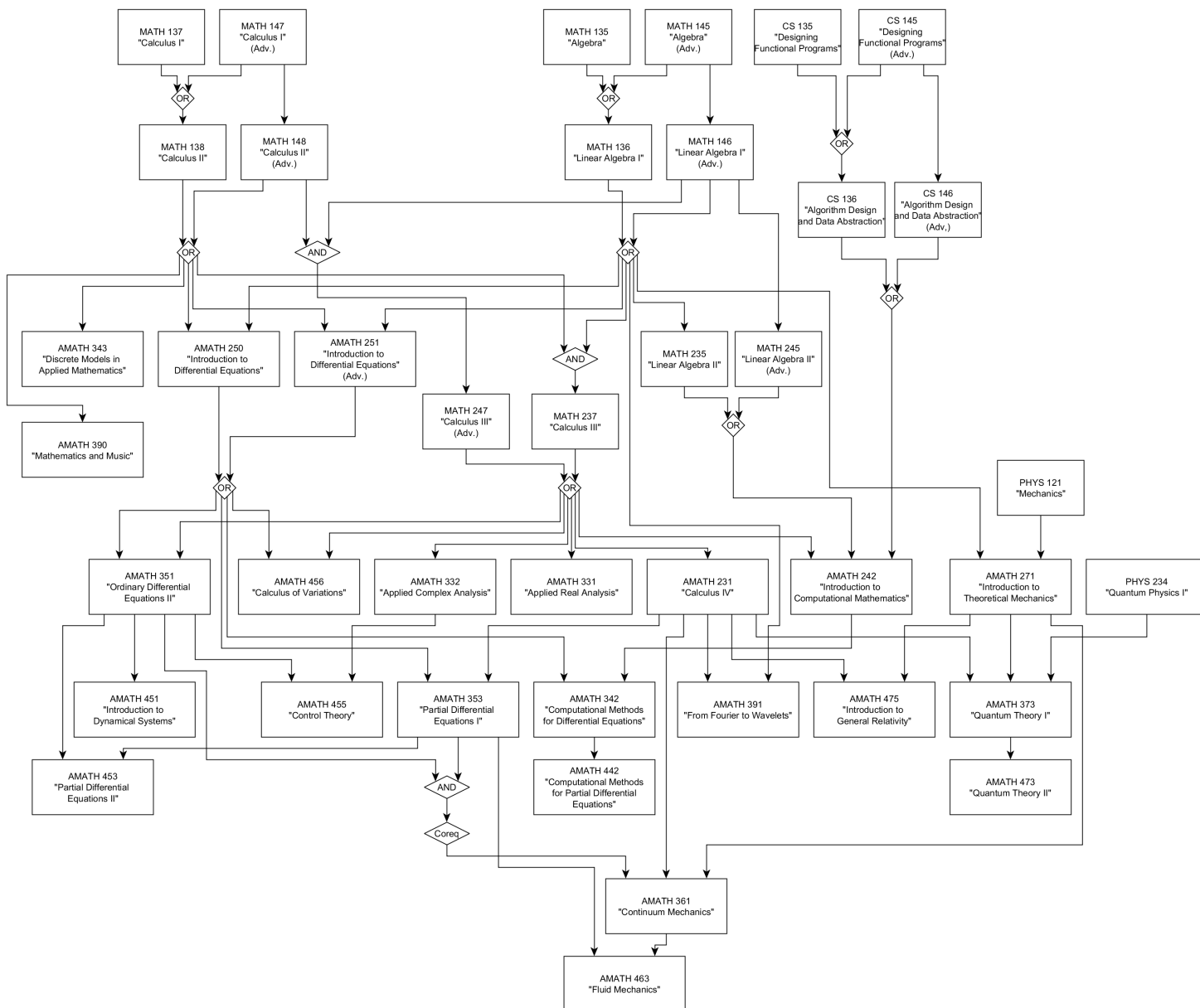
Both of those two courses have their own offshoots in the AMATH family tree. 242 leads to 342 and then 442, which all focus on computational methods for differential equations,

while 271 leads to a number of courses pertaining to topics in physics—general relativity, quantum theory, and fluid mechanics in particular. Be aware, though, that you'll also need PHYS 234 (Quantum Mechanics) in order to take the AMATH courses on quantum theory.

On the other side of the chart, AMATH includes a number of courses on differential equations, leading up to AMATH 455 (Control Theory), AMATH 451 (Introduction to Dynamical Systems), AMATH 463 (Fluid Mechanics), and of course AMATH 453 (Partial Differential Equations II).

While it can be a little difficult to take a minor in AMATH, if you have some extra space in your schedule, consider taking a course or two on differential equations. If you don't, your friends in Engineering will be better than you at a subfield of math, and we can't have that!

Octopodes



gridCOMMENT

Imagine my surprise that, on the previous Thursday I got flagged down by the editors with a look of horror in their faces as they mouthed the fact that we got **gridWORD** submissions (yes, in the plural) and they have to go out and buy prizes for the term. The outpouring of effort, praise, and, suffusion of swearing that I have overheard while people were working on the puzzle maybe thawed the outermost layer of ice coating what passes for my heart, almost. I guess that means I'm doing something right.

This issue we received five submissions. For those keeping score at home, I shall find the most correct submission which was submitted, and then if there is a tie, the winner of the prize chosen by the editors shall be awarded to my favourite answer to the last issue's **gridQUESTION**, which was "What is the ideal party?" Let us meet this week's contestants:

- Andrew and Bull Moose made a submission which was not complete. I appreciate the effort you have put into it and award you one (1) shout-out in this column.
- jprakash submitted a correct solution and responded with the answer "Project X".
- athamizh and brenkite also submitted a correct solution and responded with "The Great Gatsby".

- Christian Ieritano (and the lab) submitted a correct solution and answered "A drop party in Falador".
- Last but not least, Jiayang Liu submitted a correct solution and his answer to the **gridQUESTION** is reproduced elsewhere in the paper.

I'll give everyone a few minutes to find where the editors put Liu's answer since I like it the best: it was funny, creative, and they were the only person to put the correct diacritics on "Huê" in 45A. Please proceed to MC 3038 with some identification in order to corner the editors so you may claim a prize from them.

As I am very sure, everyone had an excellent time in solving the previous puzzle, and no doubt that people will extract a similar amount of amusement from this issue's **gridWORD**. You should not have to worry about the ever-present looming presence of midterm examinations looking over your shoulder since you could do this over Thanksgiving weekend. This issue's **gridQUESTION** is "How should one catch a fairy?"

Have fun,
Zethar

ACROSS

- Dresden's river
- Opposite of enjambment
- The first celestial orb
- Knowledge (local)
- Coastal raptors
- Headpiece holders
- What you do to a matrix's rows when changing it to its echelon forms
- Spanish glass
- Soak (up)
- Wing-shaped
- A German city not on its namesake river
- Pin holder
- Eg. Aglaïs, Nicol Bolas, Sunkeeper Tarim
- Bun bit
- Uniform generator
- Dangerous time
- You're working for one
- Salad ingredient
- Theme for many of the references in this grid
- Rainbow goddess
- Shooter pellet
- Like most of the prairies
- The dismal science
- Kind of cut
- Emphatic agreement
- US farm
- |·|
- Destiny 2 guild
- C test which crashes program if failed

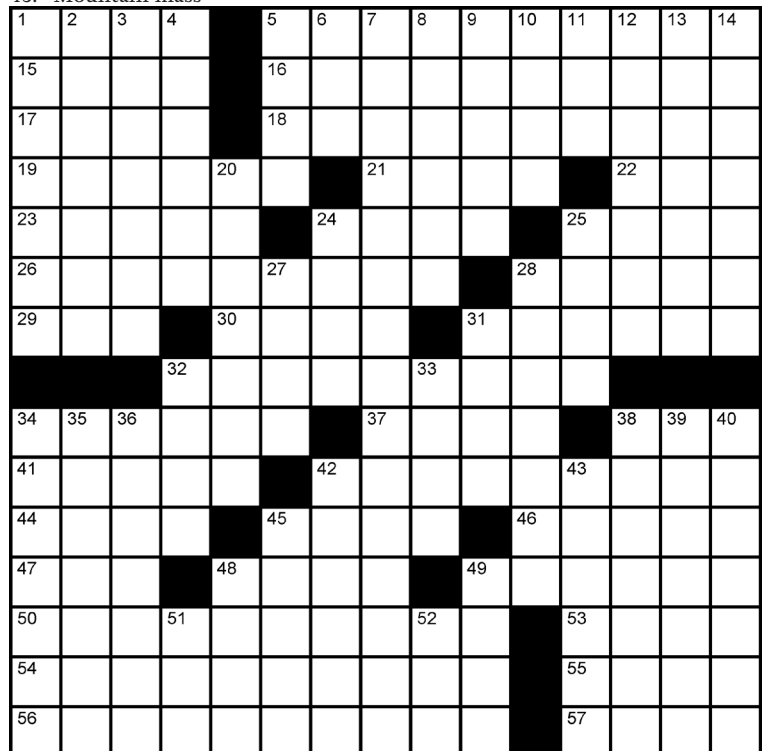
- What happened to D&D in the 70s
- Get moving
- A car that is this can't run
- Novice advice preface
- Pericarp
- Norse god of peace

DOWN

- Villager currency
- The first of the original Elite Four
- Thrall
- Check
- Opal suffix
- Kind of power
- They come in designations like N, G1, and 6L.
- Base 6
- Supernatural reaper
- A Holy Roman Emperor
- Switch abbr.
- Part of a pound
- Champion
- Scorn
- Sardonic
- Celtic speaker
- Work units
- June 6, 1944
- Matrix generalization
- Off
- Popular side
- Monopoly token
- Establishments where you could find DDR, Taiko, and Sound Voltex
- Motor

- Augur
- Bat goop
- Exocrine
- A trashy waste receptacle
- @ addresses
- Mountain mass

- Avenue
- Where one gets their 31A, abbr.
- Wired connection protocol
- Nod, maybe
- Compass pt.



haltingPROBLEMS

ASSIGNMENT 1

Jiayang Liu
20642345

Sep 27, 2017

The ideal party is one whose opinions best align with ~~the~~^{my} opinions, ~~of~~ and thus the opinions of every Canadian. I, as an omniscient and righteous observer of Canadian political discourse, can confidently declare that Canada is having a severe sashimi shortage not unlike the Norwegian butter crisis of 2011. In addition, Justin Bieber continues to be a mark of shame for the Canadian nation (except in Stanford) and this problem must be addressed promptly.

Because of these problems I've identified, Canada needs a heroic party such as the Rhinoceros Party to save it from secular, non-religious condemnation. Not only does the Rhinoceros Party propose increasing sashimi imports and burning all Bieber albums, but also banning IKEA and gluten-free items.

Honourable mention goes to the Ontario Progressive Conservatives for their thorough concern for the environment. In 1991, then-leader Mike Harris introduced a bill called, "An Act to require the Minister of the Environment to discharge her responsibilities under section 15(1) of the Ontario Water Resources Act to determine the Zebra Mussel content of [...]", and then listed every lake, river, and stream in Ontario. It took him almost an hour to read the full name.

For extra creativity credits, I include a hand-drawn pen-and-paper replica of a Magic: the Gathering card that I used as a substitute for a while until I got the actual card.

Shout out to Nick and Andre for helping me solve the crossword. DHARNAS, CALAMI, and DESRESES were really tricky.

↑ SOURCE
hansardindex.ontla.on.ca/hansordessure/35-1/1028.htm

lookAHEAD

SUN OCT 8

The earliest day that Columbus Day can fall on. Arbor Day in Namibia

MON OCT 9

Thanksgiving Monday
Columbus Day

TUE OCT 10

Reading "week"
Arbor Day in Poland
World Porridge Day

WED OCT 11

Reading "week"
International Newspaper Carrier Day
International Day of the Girl Child

THU OCT 12

Games Night at 6:30 pm
Independence Day in Equatorial Guinea

FRI OCT 13

International Day for Natural Disaster Reduction
Azerbaijani Railway Day

SAT OCT 14

World Standards Day

SUN OCT 15

International Day of Rural Women
Pregnancy and Infant Loss Remembrance Day in Canada

MON OCT 16

mathNEWS Production Night!
World Anaesthesia Day
World Food Day

TUE OCT 17

International Day for the Eradication of Poverty
Edge Day

WED OCT 18

Neck Tie Day in Croatia
Person Day in Canada

THU OCT 19

Games Night at 6:30 pm
Constitution Day in Niue

FRI OCT 20

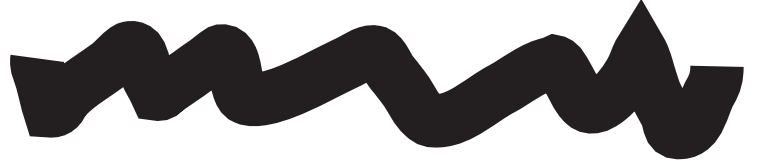
v13513 of mathNEWS comes out.
Arbor Day in the Czech Republic

SAT OCT 21

International Day of the Nacho

S	S	R	T	E	R		S	O	L		A	R	M		
S	N	E	E	R			C	R	A	B	T	R	E		
S	O	R	T	E			A	S	S	O	O	N	A	S	
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T	H	E	L	O	T										
							C	H	I	T	I	N			
							A	T	C		E	E	G		
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H	E	R	I	T	A	G	E			P	L	A	N	E	R
C	A	B	L	E	C	A	R								

LAST WEEK'S gridSOLUTIONS



ISSN 0705-0410

UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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