math NEWS

BANNED FROM MATHNEWS' OFFICE

IMPRINT

Happy Halloween to you too, Imprint!

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*look*AHEAD

*math*NEWS	
November 6	Issue #4 frightens you
November 16	Production Night #5
	Come to MathSoc at 6:30 for amusement
November 20	Issue #5 unleashes the beaver

MathSoc	
November 9	Cotton Candy Day
November 10	314th Day of the Year (free pie!)
November 11	Cheap Pizza Day
November 12	Charity Ball

FedS	
November 9-11	Referenda (Sound FM, SSC, Health Serv.)
November 12	Paper Lions @ Bomber (19+)
November 20	Sugar Sammy @ Bomber (19+)

Faculty	
November 6	Last day to receive a WD
December 5	Last day of class

CECS	
November 6	Work reports can be picked up
November 9	Round 2 begins

Miscellaneous	
November 10	National Heroes Day (Indonesia)
November 10	Birthday of the US Marine Corps
November 11	Remembrance Day
November 17	Leonids meteor shower
November 20	Revolution Day (Mexico)

PMAMC&OC Notice

It's Over 9000!

It's that time of year again — math contest! Join us for our third annual "It's Over 9000!" (or is it?) competition on Wednesday, Nov. 11 from 6PM to 9PM. It will be held in MC 2065, and pizza will be served. Contestants will be asked whether the answer to a mathematical question is over 9000 or not, in a true or false battle to the death! Erm…ignore that last part. Come on out and compete individually or in pairs, or just come to watch the event unfold. Invite your professors and compete against/with them. There will be $100 in prizes, and lots of fun to be had, so come on out!

<div align="right">PMAMC&OC</div>

ISSN 0705—0410

Who did your mother last night: CorruptED, ImpulsED, InsidED

*mast*HEAD

Howdy concerned readers,

Don't take a non-101 psychology course if you have any doubts about your normalcy. Trust me, it's scary what you find out about yourself in these courses.

I'm slightly afraid of the Penfield homunculus. Not really, just subconsciously. I had a dream where I was being chased by the Penfield homunculus, grabbing at me with its mammoth hands, and jabbering at me with its Angelina-esque lips. Now that I'm awake, I just wonder how it's neck can support the weight of its gigantic head, before I realize that the Penfield homunculus doesn't exist, but is a tool that psychology uses to illustrate that everything that goes on in our heads is seriously messed up and not just the parts that Freud theorized about.

Speaking of Freud, I think he'd get a kick out of knowing there is a neurological structure called the mammillary body. Unfortunately for him, I don't think it has anything to do with the recognition of, or obsession with, breasts. (It is dangerously close to the hormone-secreting area, though.)

Maybe I should stop studying for my psychology midterm. Whenever you study for a psychology test, you are under some level of expectation to apply what you learn to real life, and often to yourself. This isn't too bad if you are taking social psychology, but if you are taking physiological psychology, or psychopathology, you always start wondering if someone lesioned your right parietal sulcus while you were asleep, just because you're bad at art.

***mast*HEAD Question:** Which part of your brain would you probably be best off without?

Sexy Whore (Obviously NOT zee whip!), Cuppy Cake (What about not zee icing and not zee cherry on top?), The Hee Ho (Hail to the King!), monkeyspoon5 (Corpus callosum), *math*NEWS Renegade (All connections to reality), Angelo (Well, I already lack the portion that triggers sympathy, so that one.), perki (The parts that have been permanently scarred by reading *math*NEWS), Megaton Panda (Everything except sex drive. Pandas are endangered, ya know!), Lich (There is no brain), InsidED (The part that keeps reminding me what I can't do with a watermelon), (define this (not losing)) (The part that makes me lose the game, but still allows me to make others (i.e. InsidED) lose), rand(); (Boobies!), Halloween Creeper (You can't take away from nothing)

<div align="right">ImpulsED</div>

The quiet little voices that tell me to take psychology courses

MathSoc Election Fail

Because a certain former President forgot to get a voter's list at the start of term (he has since resigned), we were unable to have the elections on schedule. We can therefore not print the results because they were not available as of press time.

The results will be old news by the time the next issue comes out, but we will print them then anyway.

<div align="right">InsidED</div>

You can't blame a man for trying

But you can have him arrested for it

<div align="right">Angelo</div>

Prez Sez

This space was reserved for the Prez Sez, but he has resigned, and the Acting Prez has nothing to Sez.

VPAS Sez

Hey everyone!

Sorry I didn't give you a VPAS sez last time! I was bombarded with midterms, assignments, and VPAS-related things.

I hope you all made your vote count and voted in this week's elections for MathSoc executives for W10. I know... I'm irreplacable (until Winter... *sad face*).

That being said... Charity Ball is coming up next week! You'll be able to buy DANCE ONLY tickets at the door for $10.00. It'll be fun times with a lot of great people! We'll be having amazing things for auction... rumour has it, we'll have a replica of the Dean's Pink Tie there for auction... ;)

I hope everyone's midterms are going well and that you're starting to get ready for finals. For those of you who don't know, the final exam schedule is up! So take a look and start planning accordingly.

Do you have a great T-shirt idea? We want to know! We'll even sell it in the MathSoc office if it's that awesome... we'll also give you a free one! So send us your ideas!

Make sure if you're around MathSoc, come and say hello! We're here to be awesome for you!

Maria Christina Greco
VP Activities & Services F09
`vpas@mathsoc.uwaterloo.ca`

CECS Sez

We have events!

CECS International Team presents a Film Screening of "Tell No One" (French Film with English Subtitles) at the Princess Cinema (46 King St W. in Waterloo) on Tuesday November 17, 2009 at 6:30pm. Tickets are $2 + 1 canned food item for the KW Food Bank (For all UW Faculty, Staff & Students who bring UW ID) OR $5 for all non-UW attendees. Tickets are only available for sale at the Princess Cinema on the day of the event beginning at 5:30pm. Popcorn & Pop Combos will be available at a discounted price for all UW Faculty, Staff & Students!

CECS also invites you to drop by the Tatham Centre Lobby to see photos from our students who worked outside of Canada for their 2009 Work Terms! You will have a chance to view the pictures and pick your 2 favourite pictures in the USA Category and the International Category. Student's photos will be on display in the Tatham Centre Lobby from 10:00 a.m. to 2:30 p.m on Wednesday November 18th, 2009. So come on by, grab a ballot and vote for the pictures that you like the best! Winners will be announced by 4:30 p.m. and prizes will be awarded at this time.

Editor Sez

*I am so proud *sniff**

Not only is this the largest issue of *math*NEWS we printed this term, but we did it with the lowest production night attendance term-to-date. Congratulations to my staff, and I hope you enjoyed our visit to Front Row.

InsidED

Senator Sez

During the last Senate meeting, the topic that was mostly concerning was the motion to approve the shortening of Orientation Week. The Senators then decided that there was very little rationale for the memo that was issued and that we didn't have adequate information or time to talk and represent the student body on this topic. So the motion has now been tabled to next month's meeting to allow for more time to discuss the situation at hand.

The "Guidelines for Determining Academic Calendar Dates" currently states that the Fall term is to begin the Monday following the Labor Day Holiday. This would mean that Orientation Week is to begin that week right after move-ins. This would be acceptable if Labour Day falls on the earlier dates of September. However, this year, Labor Day was on the 7th, and the academic session did not begin until the 14th of September, which has serious implications on the minimum days required for classes.

If the guidelines aren't amended, the traditional orientation would serve to be far too long to prevent the Fall semester from starting soon enough. However, these guidelines need to be changed to respect the interest of students. So, Senate has currently determined that the "Guidelines for Determining Academic Calendar Dates" needs to accommodate flexibility. And currently, the Student Life Office, Federation of Students, and Orientation Review Committee are working towards alternate means of scheduling. The senators are going to collect more information and feedback, buy more time to review and represent the students on these regards.

If you enjoyed your Orientation Week at UW, and you think that Orientation by no means should be shortened over the way we schedule the Fall term, have that opinion voiced. The Undergraduate Senators are currently working on a medium through which you can have your opinion heard. This wouldn't be well represented if a binary polling system were to mediate your interest, so, contact me or any of the other Senators with your questions or concerns.

Ajnu Jacob
Mathematics Undergraduate Senator
`ajacob@uwaterloo.ca`

Office Sez

Hi readers!

Here are your office managers reaching out to you this term. We know it's already the middle of the term and we only have another month to go but we'd like to tell you that we have items that we provide for you to use if you don't know yet.

We have staplers, photocopiers, binding machines, paper cutters, printers, scissors, tape, and we sell stationery too. We sell rulers, erasers, pens, pencils, leads, locks, calculators, and a lot of other things. You should visit us if you've never visited our lovely Mathematics Society.

We also have a hand sanitizer dispenser mounted on the wall, so if you need it, drop by and sanitize your hands. Help prevent H1N1.

If you need any more info, you are welcome to email us at `office@mathsoc.uwaterloo.ca`, or visit us in MC 3038.

Joycelin Karel & Sherry Li
Office Managers Fall 2009

Cuppycake Sez…

go get help from the profs if you have problems in your class (I mean academic related)

After being away from writing for *math*NEWS for so long, at last I've found myself time to write something. I just felt like writing this because maybe some students are experiencing the same things that happened to me.

You know how sometimes you are just stuck in a class, clueless of what the prof is talking about, and just found yourself at the end of class blank but with all your notes in front of you? Getting a so-so mark on assignments or maybe getting an unsatisfying mark on midterms or quizzes. I think I can just keep going on and on and on about the examples. Anyways, back to my point. From all this, I've actually found a way to resolve this problem and, believe it or not, it's very effective (and you probably could find other ways that suit you too).

First, you go to the professor. Believe it or not (hahaha I'm using these words again), professors like to talk to students. I know, maybe I've talked to several profs about academic stuff, but it helps a lot. They are actually there to help you out. I've always been intimidated by them and gotten scared of searching for them and just flunked out from the course (it's a very bad feeling I'm telling you). So back to the topic, you should know that their salaries comes from your tuition fee (I'm quoting this from one of my prof). He told me "it's actually like you go to a restaurant and order some food. Would you tell them if you actually get bad quality food?" I'm not saying you get a bad quality of education, I'm just trying to say that if you don't understand the materials, you should actually go to your prof and get help (go get your monies worth). They will be more than happy to help you understand.

I've actually went through a plan that helped me in one course. So I kept going to my professor once a week after my tutorial ended (it was conveniently back-to-back). I'd ask my prof about everything, starting from assignments until class notes. I made sure that I got what he/she was saying (and sometimes they write them on a piece of paper) and I'd ask if I can take the paper home so that I can review again. Also, I kept on going to the tutorials, even until the end of term when actually no one shows up but me. I just laugh to myself because it's like I have my own private tutor. I asked a lot of questions about the assignments. But if your course actually don't have a tutorial section, then you should go to the TA for help.

Also, if you want something helpful on top of the things I've stated, make summaries of your course from the first day 'til the end. Don't start too late though; you'll consume a lot of time in doing that if you leave it to the last minute. The summary will help you study faster if you need to study something else. If you have questions about anything before the midterm or final that you think would take some time, try emailing your profs and set up a time to ask them questions. And again, make sure you understand everything that you were originally confused about before you leave. I honestly told two of my professors that I got intimidated by them even before going to them for questions. They laughed at me (not in a bad way) and told me what I stated above: they like talking to students and they understand that students are not robots. Plus, we're not stupid, it's just that something doesn't click and they will try to find out what that is (getting the puzzle pieces right).

Anyways, so that's my article for now. Go get help if you don't understand things and don't go get help at the last minute. Also, don't just go get help about the material that they taught you from the first day of classes 'til the end when you never showed up to class, never did your assignments, never got help from the beginning and it's a week before finals or something like that. It's like you're not dedicated at all. I know I may sound harsh, but it's true. If your prof never sees you trying to work hard for their courses, like even showing up for your classes, it will be quite hard to teach the materials from the beginning of the term until the end in a few hours. So yes, moral of the story, even if you are so shy like me, don't be afraid to ask questions. Go get help from anyone. There's even study skills that's offered if you need them. *[Counselling Services is another good place for general study skills. I highly recommend it. — InsidED]*

Cheers,
Studious Cuppycake

Why Not to Vote for the SSC

Next week, FEDS will be asking us to vote in a referendum consisting of 3 questions. While two of the questions are largely opinion-based, the third requires some additional reading. I am speaking particularly about the proposed Student Services Complex (SSC) FEDS is proposing. You can read all the details at `http://www.studentspace.uwaterloo.ca/studentservices/`, but I will copy-and-paste various items from that page for discussion.

From FEDS website: "The goal of this project is to foster stronger student engagement and to provide increased and enhanced space to support student services and life on campus." How true is this, really?

The SSC will be located in what is now Parking Lot H. Parking Lot H is located to the left of the Seagram entrance to UW, roughly opposite Hagey Hall on Ring Road. As such, it will be quite far from our beloved MC, and even farther from the Villages (V1, REV, MKV). It is not that far from Engineering, but still not much closer than the SLC. In fact, the only people who have ready access to it are Arts students and people living in CGUC. While I personally have nothing against Artsies or Grebelites, a building whose goal is to "foster stronger student engagement" should be located in a place which is convenient for all students.

Some of the facilities the SSC will provide are:
- Graduate Student Lounge
- Graduate Studies Office
- Graduate Student Association Offices & Meeting Rooms

Anyone notice a pattern? I'll take this point to note that undergrads and grads are going to be paying the same amount per term for this building, a cost of $50/person. Seems unfair that so many services are targeted exclusively at grad students when undergrads are paying the same amount. There are no exclusively-undergrad services in the SSC proposal, which is why I have not quoted any.

Why Not to Vote for the SSC

(continued from Page 4)

In addition to these spaces, there will be multiple student services spaces, including:

• Retail Services
• Expanded Writing Clinic
• Expanded Office for Persons with Disabilities (and Exam Centre)
• UW Food Services Outlet
• Expanded Counselling Services

Retail Services is already located just across the street at SCH. I never see a line when going into the UW Shop, so why does Retail Services need yet more space? As for the writing clinic, I believe there are already 2 or 3 of these on campus, in addition to various resume writing clinics provided by CECS. Do any of our courses require essay writing (except for work reports)? Once again, this seems focused at Artsies (again, I bear them no ill will, but why are Mathies paying for Artsies' services?). OPD always has been centered in Needles Hall, and should probably stay that way to keep administrative services centered in one place. As for Food Services, there is already one in ML and Timmies in SCH, in addition to the various C&Ds in that area of campus. Counselling Services is important, but once again, who, other than Artsies, is going to use it? We have our own Counselling Services office right here in the MC, unless FEDS is planning to make us walk for such an essential service.

What FEDS has left out of this proposal which I would have liked to have seen is a plan to reinstate club offices which they recently removed from the SLC. Many clubs (at least 2 of which I am or have been closely involved with) have been affected by this, and none are pleased about the change. If FEDS has a plan to "support...student life on campus", perhaps they should start with one of the most prominent sources of student engagement, the campus clubs. With an entire building under construction and so much superfluous space allocated, why can't they find any for clubs which really need it? Or better yet, why don't FEDS get out of the SLC where nobody needs them (I have never, not even once, seen any student entering or leaving the new FEDS office) and give clubs back the 2nd floor offices and the current FEDS space beside Turnkey?

So, before you vote next week, take some of these arguments into consideration. How much of the SSC will be useful to you, personally? Your friends? Their friends? I'll be long graduated and out of here by the time FEDS starts charging the fee for this building, but some of you will still be here. Is this building worth your money?

Ertai87

The Hee Ho's Half-Assed Counter Point!

The Hee Ho hee-re ho, taking a break from my usual light hearted light heartedness. I have to rebut some of the comments made in the Ertai87's article encouraging students to vote 'no' for the Student Services Complex fee for the upcoming referendum.

First and foremost, all three referendum questions require additional reading. At no point should you ever vote for anything without doing some research. It's an awful idea! Also, read everything before you sign it and I mean everything! These are helpful tips to keep you represented better.

I can understand that the distance can be a concern, but it is manageable. If you think about it, the Double Degree students run back and forth between Waterloo and Laurier campuses in less than 10 minutes. Also, it's very close to a bus stop. More importantly: if you want to get to a student service is an extra five minute walk really going to kill you? In a hurry? To the best of my knowledge the SLC isn't being torn down. It's still going to be there with the majority of the services it provides still present.

In terms of the comment about Retail Services already being in the SCH. As part of the future plans the university plans to deconstruct SCH so despite the lack of lines, retail services will no longer be present in 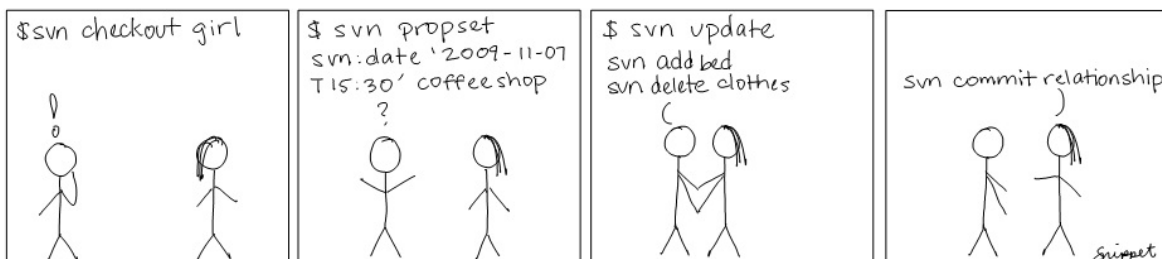SCH. Or if it is it will be hidden underground, which I think is awesome. Anyway, Retail Services will need the space after it's demolished. Furthermore, have you seen the ML food services area? There is no way that it has the capacity to serve two metric butt tonnes of students just in physical space alone.

Lastly the comment about the clubs' office space is one to which I am highly compelled to comment. The clubs space that was taken away was only for a small number of clubs. FEDS supports over 100 clubs, but only about ten had office space. FEDS didn't remove the space because they don't care about clubs having space, but because there is no possible way for them to house every club. If you want to give some clubs space, then how do you decide which club merits more space than others? Even if you wanted to make clubs share office space, then you'll still run into logistical issues in terms of the number of clubs in a single office. Furthermore club space will take away from student space, which would mean a diminished return for the majority of students who are paying their fee.

Vote for what you want! Make sure you do research! And… stay in school. I'm not good at this sort of thing…

The Hee Ho

SOURCE CONTROLLING

Panel 1: `$svn checkout girl`

Panel 2: `$ svn propset svn:date '2009-11-07 T15:30' coffeeshop ?`

Panel 3: `$ svn update svn add bed svn delete clothes`

Panel 4: `svn commit relationship`

Snippet

Interesting Math

Kakeya Needle Problem

Suppose we have a needle of unit length and is infinitely thin on the plane. Define a Kakeya set to be a set in the plane in which we can rotate the needle 180 degrees (allowing translation) without leaving the set. What is the smallest possible area of one of these Kakeya sets?

Clearly, a circle swept about 1 fixed end point works, which gives an area of π square units. We can improve on this immediately by choosing the midpoint of the needle to be the pivot, giving a circle of radius 1/2 and thus area of $\pi/4$, which is about 0.785. Let us try improving on this. Consider an equilateral triangle of height 1; I claim this set will work as well. It would be much easier with diagrams, but since I'm not much for ASCII art, I'll try to talk you through it…Start with the needle flat against one side of the triangle, with one endpoint coinciding with a vertex of the triangle. Now, simply rotate the needle about the vertex of the triangle mentioned until the needle lies flat against the second side, then translate the needle along the length of the side. We are left with a rotationally symmetric problem, and so repeating this process two more times gives the complete rotation of the needle as required. As you can calculate, an equilateral triangle of height 1 has an area of $3^{-1/2}$, or about 0.577. Then this triangle is our best guess so far. If you wish to try out a few ideas, pause here before continuing.

As it turns out, there *is* no minimum area! Given $\varepsilon > 0$, there exists a set with area less than ε such that the needle can be rotated completely within the set. The idea is that given two lines, we can find a triangle of as small an area as we would like, such that the needle traverses the line, rotates in the triangle, then traverses to the other line, by taking the triangle very far away. The line itself gives no area, so this method allows the needle to rotate a small amount (after a lot of translating). It should be clear that taking many of these types of small triangles and lines gives quite a complicated shape, and is certainly not convex. Here's an interesting question: What if we restrict our set to be convex? What if we require our shape to be star-shaped (there is a point such that every other point can be reached by a straight line joining them, lying in the set)?

If you have done some measure theory, this next paragraph will make sense. If not, and you still want to understand it – I defined Hausdorff dimension in a previous article (June 12 '09), and you can find it in Volume 110 Issue 3. Kakeya sets are special kinds of set in the plane, with the property that it contains a unit line segment in every direction (we needed each direction in order to have the needle point in that direction while turning it). We know these sets are special, in that they are "small", but how small? It turns out it has Hausdorff dimension 2. Now consider this generalised definition of a Kakeya set: in n-space, it is a set which contains a unit line segment in every direction. Is the Hausdorff dimension of this set n? We know the answer for $n = 2$ is true, but what happens for higher dimensions? If you understand the definitions, you will see that $n = 1$ is trivially true, but for higher values, it is still unknown. For $n = 3$ or 4, a known lower bound is $(n+2)/2$ (Wolff), and for larger dimensions, a known lower bound is $(2-2^{1/2})(n-4)+4$ (Katz-Tao). Have fun playing around with these if you'd like, perhaps you can improve on these!

Vince's problem of the issue

We know $3^2 + 4^2 = 5^2$; notice 3, 4, 5 is consecutive and there is 1 more term on the left. Can we extend this idea? In particular, does there exist n consecutive (positive) integers whose squares sum to the sum of squares of the next $n - 1$ consecutive (positive) integers?

<div align="right">

Vince Chan
v2chan@math.uwaterloo.ca

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The Hee Ho's Half-Assed Music Review

Like Fate

Hee ho! Every so often I get the chance to plug a friend's band so hee-re I go, ho! Hailing from Columbus, Ohio, Like Fate is a mix between Hard Rock and Punk, and doing quite well at it. As it stands, they don't have an album available for sale, but they do have some stuff available to listen to on their website http://www.myspace.com/likefate.

Unlike a lot of the other indie bands that I listen to, Like Fate has a really strong sense of rhythm and melody. Their songs are creative and definitely worth checking out. The first song that I recommend that you listen to is *Fishes* as I think that it showcases their talent the best. The only shortcoming of the group (and I've recommended this to many, many groups) is that they need singing lessons. That notwithstanding, Like Fate will definitely prove a groovy band in the future and hopefully we'll see an album coming out. Especially since I already promised that I would buy it.

<div align="right">

The Hee Ho

</div>

LAN Party This Month!

Taking over RCH Nov 28

UW Gamers is going to hold a LAN Party at the end of this month, and we need you!

This is a free event! All we want are the PC Gamers of Waterloo to decend on RCH and play LAN games all day long. Do you like any of the following games?

- Warcraft
- DOTA
- Starcraft
- Counter Strike
- Team Fortress 2
- Left 4 Dead
- Unreal Tournament
- Quake N (where N is any number of editions)
- And pretty much anything you can convince other people to play

Go to www.uwgamers.org/LAN/ if you're interested.

<div align="right">

UW Gamers Dude

</div>

Thor's CS Problem of the Fortnight

A stroll through the algorithm woods

Last Fortnight's Question: A famous trivia game is the "Kevin Bacon Game". Its premise is that any actor in the world can be linked through film roles to Kevin Bacon. In the game, players start with an actor and try and create links through movie associations. For example: Val Kilmer was in *Top Gun* with Tom Cruise, and Tom Cruise was in *A Few Good Men* with Kevin Bacon. Reaching Bacon represents the end of the chain. Given a movie database containing actors and the movies they starred in, how would you check whether or not the game's premise holds for every actor in the database?

Its Answer: This problem is a simple application of graph theory. It introduces the concept of reachability - whether or not you can reach one vertex in a graph from another vertex. A graph where every vertex can be reached from every other vertex is called a connected graph. A simple way to determine whether or not a graph is connected is with a search algorithm. Start with an arbitrary vertex of the graph, and perform a depth-first or breadth-first search from that vertex. Count vertices of the graph as you pass them. At the end, check whether or not the number of vertices you counted is equal to the number of vertices in the graph. If there are left over vertices, the graph is not connected.

This Fortnight's Question: You are an army general in a combat situation. Your intelligence staff has acquired the plans to your enemies' communications network, a map of base stations and the cables connecting them. You wish to efficiently disrupt your opponent's communications, cutting them off from each other, by blowing up base stations. How can you determine which base stations will segment communications for the enemy force when they are destroyed?

Thor

Sexy Whore is mad

and she's not messing around

So today, while getting out of the MC to get some food from the plaza, I got so mad and I told my friends that I wanted to call the cops. Hahaha, I sound so dangerous right now! But those people who STILL don't read signs just makes me mad. They practically stood right in front of the door smoking like nobody's business. Geez people!! Seriously!! Are you trying to kill the people who don't smoke? Sigh... where are your manners? You're lucky that I'm still feeling pretty nice to people. But if you really make me mad, I'd really call the cops right in front of you with no mercy. Hahahaha, it's like me taking out my whip!

Anyways, shifting to a happier matter, the Sexy Whore corners are still in possession by Sexy Whore and I'm still taking sign ups through my pimp :) So yes, sign up soon for your spot before they're all filled up! Maybe Sexy Whore might show up at the MathSoc Charity Ball event, whipping through the night (and you may have the chance of taking pictures with her).

Whip, Whip, Whip
Sexy Whore

If this were The Imprint

This filler would have no pants.

O+<

What your school has to offer

UW has a lot of services that are available to us students. You don't think they offer anything useful? Well, let's take a look.

- Career Services
  Career Services provides help for ALL students who are trying to get a job. Even if you are not in co-op (like me), they run workshops (which they have almost every day) and you can even schedule an appointment with them for numerous things including resume and cover letter critiques and mock interviews. To see what else they offer, visit their website at `www.careerservices.uwaterloo.ca`

- Health Services
  Some key points, taken straight from the Health services website, are: wart treatment, immunization, urgent/walk-in care in the Fall and Winter terms and they can provide verification of illness if you miss a lab, exam or major assignment. For more information check out `www.healthservices.uwaterloo.ca`

- Counselling Services
  When you think of Counselling services you might think it's just for dealing with emotional problems and such, but, you would be mistaken. While they do offer that type of help, they also offer a variety of workshops on topics such as managing stress, preparing for exams and procrastination (I've been meaning to go to that last one…). Most of the workshops do have a small fee attached, but nothing too substantial for what you get. If you want to find out more, head over to `ww.adm.uwaterloo.ca/infocs/`

There are far more services than what I have listed, but these are some of the main ones. So remember, there are a lot of services available, you just have to keep your eyes open.

Halloween Creeper

Physics Meets Metaphysics

A ball is thrown from a height of 1.5 metres from a sling with an angular speed of 40π radians per second released at $\pi/3$ radians from the horizontal. (The sling is 20 centimetres long.) How long does it remain in flight before hitting the ground?

Materialist: 1.06 seconds. Why?
Dualist: Depends on how much energy is transferred to it from the conceptual realm.
Christian Theologian: Depends on how many angels it hits in the process.

ImpulsED

Because you didn't come to Production Night

*math*NEWS *went to Front Row*

So thank you.

(define this (not pizza))

How the Mighty Have Fallen

A story of how an election lowered everyone's IQ by at least 10 points

Disclaimer: The ideas presented in this article in no way reflect those of math*NEWS, MathSoc, or any person other than the writer.*

Prelude: Hello! I am Rami Finkelshtein, and I was one of your candidates for VPF. I would like to say that I often have these types of rants, but rarely do I feel strongly enough about them to actually put them down on paper, let alone publish them in math*NEWS. For a basic context of this article, realize that it was written before the election actually occurred (I have requested the* math*NEWS editors to print this afterwards), and the ideas presented in this article hold for me no matter how the MathSoc exec team looks at the end of all of this. And now, the main feature!*

A few years before I went to the University of Waterloo, I was talking to a family friend who had just graduated from the CS program. I asked him if everyone in Waterloo Math was really smart. He smiled and said that if you took 50% of all the people in any classroom - or any room in general - at any given time, they would be complete idiots.

At first, I was very surprised by this statement, but when I finally wrapped my head around it, I thought that this was because of the relativity factor. Beside very smart people, many would look very stupid. So compared to those 50% smart people, everyone else would look stupid. Now, when I reexamine that phrase, I see that my original interpretation was far off.

The phrase was never used to imply that the people become stupid. Just that they turned to idiots. This was achieved through quite possibly the greatest strength and weakness of humankind: **GROUPTHINK!!!** It is the reason that intelligent, capable human beings are involved in riots and lootings. It is the reason that propaganda works so amazingly. Last but not least, it is the reason that the last election SUCKED!

The largest issues developed at the half way mark of the election, where the whole argument turned into an Us vs. Them kind of scenario. The deal was that people who were located and running on campus started banding together against people who were currently on their co-op terms off campus. Naturally, the people on campus had a much larger audience that would listen to them, and at this point groupthink took over. No longer was logic needed to justify any action or thought. No longer was common sense required. Instead, what you had is a bunch of students sitting in tunnel vision holding on to their (usually wrong) views. Experience began to count for nothing, stupid rumors would be spread needlessly and people would get horribly offended at the slightest mention of an idea that did not conform with their own beliefs.

I don't need to ask why it was done. The answer is right in front of me, just a simple three words: "It was easy." There is no fear of insulting someone if they aren't around and can't defend themselves. In fact, I am willing to wager a shiny coin that if all of the candidates were on campus this term, most of this drama wouldn't have happened, because the second these people have a physical opponent in front of them, most will either suffer with the rage silently or confront the individual about it (both choices are considerably better than what has actually happened). Naturally, I feel the need to add that some of the people who did this are people who I previously had respected. I feel that this election has showed me many people's true colours and some of you turned out to be selfish little... well, you can fill in the rest with whatever you think deserves to be there.

Some of these ideas got so bad that some individuals have said they will not volunteer if a certain candidates get elected. To those people I say, Good Riddance! If your involvement with the society is dependent on one person and the position they hold, then I have to say that you probably don't belong here anyway. I know that I will be in MathSoc regardless of whether I have won or lost the election. I will be there as an office worker, as a council member, perhaps as a director and most certainly as a *math*NEWS editor. Why? Because I care about the Mathematics Society and its well being more than I care about my ego. I have grown to appreciate what MathSoc does for the average student and I know that it is only made possible through its volunteers. So for those that wish to leave, I tell you that the society is not a place to get an extra couple of lines in your resume, or a bragging right with your friends. The society is a place where volunteers come together, regardless of their positions, to make the experience of all students more enjoyable.

To the winners of the (now completed) election I say, Great job. I hope that you are serious about your positions and that you will serve the society with the best of your ability.

Now to wrap this article up. First, know that this rant went through my head quite a few times, and I can assure you that this is by far the least offensive version that I could come up with. Yet still, I know there will be those that will be offended. And if you are upset by what I have have to say, then talk to me about it. Look me up on Facebook, WatIAM or by Twitter (@DaFink), stand up and have your voice heard. I won't be offended, believe me: I will enjoy that a person actually had the guts to confront me about the issue. I am also sure that there will be those that continue to be cowards, talk about me behind my back and retreat back into groupthink (yes, I'm talking to you! You know who you are). It saddens me that I have seen people who I had respect for being great individuals have reduced themselves to this. To those people, I have to say that I am not sorry in what I have said. I believe every part of it. I have thought it through, justified it to myself and have had others critique my ideas. Let's see if you can do the same.

Your VPF Candidate (not that it matters anymore)
Rami Finkelshtein a.k.a RamED

A brief response, from a non-partisan perspective

The MathSoc elections this term have been quite dramatic (which can make it fun from a journalistic perspective), but I'm glad it's over. There has been unnecessary drama from both sides, much of which was childish, and it has divided the core volunteer base. From how I saw it, groupthink was not the problem at all, but rather childish shenanigans.

That said, all I've heard about the elections outside of the core volunteer base is that they didn't notice the fierce politicing going on (thank goodness), and that the Elections Issue last week allowed them to make an informed decision. I guess we'll have to see how the vote goes, and whatever the result, I hope that everyone involved can work together to make MathSoc even more awesome than it already is.

InsidED

Panda's Pokémon Pilgrimage

Team Discussion!

Recall: I'm building a team to challenge Pokémon Stadium 2 without using cheats to get the pokémon I can't possibly get, or to save time on the breeding and stuff.

In the last 2 weeks, I've made great progress, so I figure instead of telling you about it, I'm going to discuss the make-up of the team that I have tentatively planned so far, and how far I have gone assembling it. Without further ado:

Opener: Zapdos @ Leftovers. After much debate, the threats of a spiker outweighed any other consideration, with Thunderbolt being a great move to counter both Cloyster and Forretress, and can take out most other sweeper openers. It'd be weak against a Raikou opener, but that's more a stalemate as it accelerates the switching game. With this moveset it has the endurance to endure most attacks as well, which makes it a nice option late game with its massive special.

Moveset: Thunderbolt, Drill Peck, Rest, Sleeptalk

Status: I played through Red till I got the master ball, and then restarted until I found one that was good. (And it actually has insane genes, except for a weak defense.) It's the most trained one thus far since it started at lv 50.

Sweeper: Tauros @ Leftovers. The first Pokémon I slotted in the party, I essentially built the team around it. Its good attack and excellent speed makes it a great candidate to pick off things that are weak to physical, especially outspeeding the ones who might rest. Here the moveset is the standard one for endurance purposes. I'm debating between Double-edge and Return, but if I get too lazy to find DE in RBY then I'll stick with Return

Moveset: Return, Earthquake, Rest, Sleep Talk

Status: Caught and trained, it was the first one I sent through the E4. It's got high HP, attack and speed DVs, so I figure I can skimp on the other ones.

Tank: Snorlax @ Leftovers. The standard Curselax, it takes advantage of its high HP and Defense to swallow most of the hits before going for the KO. Skarmory is going to be an issue, so it'd have to counter as such if necessary.

Moveset: Curse, Double-edge, Earthquake, Rest

Status: After a lot of resets in Vermillion City, finally caught a nice one with great HP and SpDef. Attack is around 10, but Curse boosts it so it's passable.

Pseudohazer: Rhydon @ Leftovers. I'd need something to counter other things that set up. I'm not keen on Skarmory, so I decided to go with Rhydon (though in retrospect Donphan's lack of Quake weakness might have been a much better idea). Its moveset is mostly geared to roaring anything that can set up aside

from its weaknesses (which are numerous). Thunder is there as a nice surprise for Skarmory switch-ins. This is the pokémon I may drop later though.

Moveset: Earthquake, Rock Slide, Thunder, Roar

Status: I've caught a decent one but it's mostly untrained until further notice.

Tank: Slowbro @ Quick Claw. Slowbro's high HP and high Defense makes it idea to take on most physical hits. On top of that, its ability to paralyze and counter makes it very versatile indeed. Tentatively I'm debating between a Cursebro or a Counterbro, but may need to analyze further. Quick claw is because I'm tired of Leftovers and Slowbro's pretty darned slow.

Moveset: Counter, Surf, Thunderwave, Rest

Status: Caught a nice one in the well, so that worked out well. (Pardon the pun) Will need to decide how I want to approach it later.

Sweeper: Scyther @ Miracleberry. The first 4 I came to choose (All but Zapdos) had a very common weakness to Heracross, and Scyther can alleviate that. With its great speed, Miracleberry counters the thunderwave and toxics, and then uses its speed to take things out after a nice swords dance.

Moveset: Swords Dance, Agility, Hidden Power (Bug), Wing Attack

Status: I caught a Scyther, then caught a ditto with a 13-7 DV in Defense and Special. After breeding and releasing at least 50 Scythers, I finally came upon one with HP Bug (13 attack), 13 in Defense and 15 Special, and a passable Speed (I think it's 9). I've since trained it for awhile and it's actually the 2nd highest on my team now.

Here are some thoughts though: On items, the abundance of leftovers may be an issue with item clause in stadium 2, in which I will have to give Leftovers to the Roarer because of a lack of rest, and other items to everyone else (Pink bow Tauros, maybe?) Also, the weakness to something like Curselax or curse anything means I will have to consider swapping Rhydon to Donphan, then maybe a Cursing Donphan will work against it. Some playtesting may be more useful. Its lack of Heal bell will be painful against TSS teams, which means it needs to take them out sooner than later, and the sweepers may help. An alternate I was considering was Umbreon, with Charm and Baton pass may be a mean bugger (Think Black Widow set).

So, what do you guys think? Any glaring weakness I'm missing? Let me know somehow by dropping suggestions into the BLACK BOX on the 3rd floor of the MC!

Pokétrainer Panda

*prof*QUOTES

That solution is so convoluted you should work for Microsoft.

Mann, CS 251

Induction? Let me tell you about inducti— You could teach a dog induction!

Hewitt, MATH 135

(on the 4 colour theorem) Checking these 633 cases by hand is not very believable, and if you do it with a computer it becomes more believable, ... unless you're using Microsoft.

Geelen, CO 642

...and that's open problem, so if you prove it, you get PhD, but ... unlikely.

Konemann, CO 650

And, well, I think that algorithm is really cute.

Konemann, CO 650

Well, it's very painful if I asked you to calculate a matrix to the 100th power.

Wu, MATH 115

The Unlucky 7
Stupid Posters On Campus

1. **Legalize Radio. Vote Sound FM.** If radio were illegal, you would have a lot more to worry about than your lack of money.

2. **Yes. Yes! YES!!! That's what she said. And so should you. Vote Sound FM.** So *that* is what the giant antenna is for...

3. **Someone set Sound FM up the bomb.** We would, but that would be terrorism. Instead, we will set Sound FM up the No.

4. **Support independent media. Support Sound FM.** They already do support it. They read *math*NEWS, Imprint and Iron Warrior.

5. **Say Yes to free media. Say Yes to Sound FM.** By asking us for money, this sort of goes against the definition of "free". Try again. Wait, don't.

6. **Go to hell. Would a loving god say that?** No, but I would when you don't put what you're advertising on your bloody posters!

7. **Help us report news. Write for Imprint.** That still makes me laugh to the point where people think I've gone mad.

InsideR

MasteringPhysics: A Hate Story

Dear physics department, You're being stupid in product choices.

I understand that you might want to save on assignments being marked, but the choice you have made in using the MasteringPhysics software is simply terrible. Physics is best done when written out, when true feedback can be given as you what you have done wrong in your method, rather than just saying "Your answer is wrong!" Since you have rolled it out to the class, I have wanted to jab my eyes out several times wondering why you would do this. Physics and math have a lot in common, mainly that they are best done when given the freedom to show beautiful solutions, rather than the conformity that you have forced many students into.

For a school that feeds into such institutions such as the Institute for Quantum Computing and the Perimeter Institute, I feel ashamed to know that this is the way beginning level physics is taught. No one could answer "Tie a rope to the barometer and then measure the rope when lowered down the building" on this system. I implore that you stop the use of said system, and go back to tried and true methods of either pen and paper or LaTeX writeups.

A math student
HATE HATE HATE HATE HATE

Whatever doesn't kill you
isn't trying hard enough

Angelo

ElseWhen
25 Years Ago in math*NEWS*

This is a strange volume of *math*NEWS in 1984. It starts off going bi-weekly, then suddenly becomes a weekly publication. Hold on... we're doing the exact same thing! I will now end this shameful practice at once!

Anywho, time to look at Volume 36, Issue 6, which was originally published on 2 November 1984.

InsideR

The times have not changed a bit

The following letter appeared in the FeedBach section:

To The Editor:

Of late, the educational system has become very concerned about the number of high school graduates from whom the basic concepts of the English language have utterly and inexplicably escaped. Hence the "ELPE" was created. Now that the system is adequately protected from illiterate students, will someone please protect the students from professors who:

a. do not enunciate well
b. cannot speak English
c. abuse grammatical norms
d. cannot write legibly
e. expect you to learn the material as fast as they explain it to you

The Silver Eagle

You mean, it's been 25 years and they *still* haven't fixed this problem? Aye!

In Other News...

- Engineering Week is this week, and goes until November 10th, with most events at the Campus Centre. Information at the Orifice or at MathSoc.
- There was a general meeting. There was a huge debate, followed by food.
- Many writers admit to plagiarising their articles. Thankfully, Policy 71 doesn't come into effect for another five years.
- There was some proof in the last issue about real numbers not eating quiche, and this causes much debate. If you give me a proof (either for or against), I might give you a prize.
- Several programming languages are reviewed, including Simple, Valgol, C-, and Laidback.
- *math*NEWS ran out of on-campus mail envelopes. Were there no Central Stores back them? (Thanks for the recent shipment of envelopes, by the way.)

*ultra*CLASSIFIEDS

FOR SALE: Student apathy. Call x32324 if interested.

MISSING: Reports from 3 executives. Not seen for two issues. Call x36515 if found.

WANTED: An election that has less drama than Desperate Housewives. Call x36355 if you know of one.

Imprint Banned from *math*NEWS Office

Editors angered over issues found in office

Eight stacks of Imprint were found in the *math*NEWS office last Friday, confusing staff and angering the editors.

"What is this crap doing here?" proclaimed CorruptED. "It's disgusting! Get it away!"

The Imprints were discovered in the early afternoon by the *math*NEWS editors, who subsequently removed the issues and declared an immediate, indefinite ban on all Imprint publications from the office.

Sources tell *math*NEWS that the *math*NEWS Renegade may have been involved in the plot as part of his scheme to take over the publication. As of press time, *math*NEWS could not reach him for comment.

The ban on Imprints will be in effect until further notice or when Imprint staff buy the *math*NEWS editors some beer.

InsideR

No ban can stop me!

Hello, math students. Today I will tell you of my triumph over the foolish Imprint buffoons. Though I am usually determined to announce my triumphs over the softies, I had to let Imprint know that even if a regime change happens, we will not take their prodding. They claimed that their precious paper was banned from our office, but as you can see by the accompanying pictures, this was an empty threat.

That morning, before the depopulation of Imprint from the MC took place, I managed to snag a key to the office from an unsuspecting writer, monkeyspoon5, who was asleep on the job. He had an Imprint in his arms as I stole the key, showing what a disgrace he is to our faculty. Fortunately, I found others who were more helpful.

One man did stand up and help, though he was an odd one, only to be known as "The Commander-In-Cheese". I ignored this, always willing to accept help from a true math student. Where I found him, though, made me suspicious. The CSC, though seemingly a center for intellectuals, houses CS students, who in an unholy union with computer engineers birthed the softies. Of course they deny this affair, claiming it was all the faculty and the money grubbers. Pah.

Either way, the victory was ours. Without the software editors knowing, we managed to remove them from the sight of the populace. These hijinks are what we should be known for, and InsidED has stifled us, stifled our freedom. We must rise against his rule, and bring back the offensiveness, the shocking articles that would get us in trouble with the Dean. We should be toeing the line, and just barely! Though I mistrust them, they are willing to support me in this goal, and they shall annex the office back to those who at least deserve it! To arms!

The *math*NEWS Renegade

Someone stole my key

Has anyone seen my key to the *math*NEWS office? I'm worried some unsavoury character has run off with it. If anyone does find it, drop it off in the BLACK BOX. And if it was you *math*NEWS Renegade, I will find you. You're a menace.

monkeyspoon5

*prof*QUOTES

(while handing back midterms) Next will be surnames C to C.

Wu, MATH 115

This matrix was designed to be ugly, because it's Halloween.

Wu, MATH 115

Prof: In high school, if you took physics, you probably worked with DC-
 Student: Plus plus

Dupont, MATH 117

I'm going to change it all to complex numbers and it'll become easier.

Dupont, MATH 117

"Impedance" is a cool word to use, even at parties.

Dupont, MATH 117

When I first saw calculus, I thought: "that is such an obvious idea, why didn't I think of it?"

Dupont, MATH 117

That's an 'f'. If I keep writing f's as t's, you can throw a tomato at me. Actually, pumpkins are on sale right now.

Dupont, MATH 117

My t's look like plus signs, dammit!

Dupont, MATH 117

(on derivatives from first principles) The point of this is to remind you of how crappy this method is.

Dupont, MATH 117

Prof: Time for cake.
 Students: The cake is a lie!

Dupont, MATH 117

Midterms are stealing my staff

I am not amused

So someone decided that it would be funny to schedule all of the first-year CS midterms for production night. It's probably a conspiracy amongst the faculty to take over my precious *math*NEWS. In any event, if it happens again, I will instruct my staff to perform the following actions on their next midterm:

• Ask to use the restroom. Every 10 minutes.
• Create a portal. Sing the song when successful.
• Lose the game. Announce to the entire exam room.
• When you don't know an answer, get up and run around the room screaming like a lunatic. Then sit down and return to writing like normal.
• Answer your questions in the style of Kanye West.
• Bring a LOLcat. Bonus points if in ROFLcopter.
• Of course, we cannot forget the classic RICK ROLL! Bonus points if you can flirt with the proctors like Rick Astley.

InsidED

CKMS Referendum Committee leaks FEDS secret

To many, the Canadian Government is the source of all things political for this great country. However, to an informed few, we know that this is not the case. Yes, we, the students at the University of Waterloo, are where all of the real national legislation is passed, but it's never spoken of. That is until the 'Yes' committee for the CKMS referendum leaked this information to the public in their ad which stated "Legalize Radio".

For those of you who didn't know this was true, well, this is *math*NEWS so this is totally not real and you should totally stop reading now and go think about bunnies. For everyone else, now that the secret has been released to the world, we are deeply entrenched in a cover up.

It's amazing how such simple words as "Legalize Radio" can mean so much. Little did the open public know that we secretly outlawed all radio when we took CKMS off of the student fee back in Fall 2008. With this announcement they have broken a sacred oath that we took on when FEDS decided that we deserved the right to pass laws and speak for the entirety of Canada at a federal level. That oath has been broken and henceforth legs must also be broken!

We can only hope that people don't take the "Legalize Radio" ad seriously. We can't have the world at large aware to the fact the governing body for the undergraduate students of the University of Waterloo are entirely responsible for legislation.

Angelo

Interesting things to do around campus

So you've read the last two issues, or maybe you haven't, but you've been told about them, or perhaps you read one of the last two issues, and liked what you saw. Either way, here's this week's list.

• There is a broken chair without legs in one of the DWE stairwells. Rock back and forth on it muttering to yourself, or use it as a sled.

• Challenge someone to a duel. Better yet, challenge everyone to a duel, while wearing your Halloween costume.

• Cross out letters, words, or even entire phrases in Imprint articles to make them more interesting. Example: "The results showed that less than four percent of students studied drank over one keg of alcohol per month" can be changed to "The results showed that four students studied one month"

• Make Sudoku more interesting. Define a function with a range that includes the numbers one to nine, then fill in inputs in the boxes so that the function gives the outputs that normal people would put in the boxes. Then leave the completed puzzle in an Arts building.

• Talk to yourself while standing in a public spot, such as a hallway, or stairwell. Bonus points if you bring a friend, and both of you talk to yourselves while standing next to each other. Even more bonus points for getting in an argument with yourself.

• Fence off an area or a path, put up construction signs, and inconvenience everyone for several years. After all, that's what they're doing with the QNC, right?

• There's a broken piece of railing behind St Jerome's. Use it for something interesting, like the previous suggestion

• Grab some friends (You've got some of those right? Can I borrow a few? I lost all of mine.) and re-enact scenes from the Matrix trilogy using nerf weapons.

• Play the floor tiles in E2. This week's section of different sounding floor tiles is on the second floor of E2, just outside the southernmost stairwell

• Have a thermite pumpkin roast with all the used pumpkins still lying around. 25% aluminium powder, 75% iron oxide, 100% deadly if ingested!

The Other Tree

*prof*QUOTES

We'll use Leibniz style... sounds like a sex position.

Dupont, MATH 117

You must be jealous of the guys in CS 135 who get to put brackets all over the place. Now you get to do it too.

Clarke, CS 137

You know how you give a million monkeys typewriters and they'll eventually type out Shakespeare's works? Well, now we give a million monkeys Firefox.

Clarke, CS 137

Your Own Personal Guide to Confrontation, in 3 Easy Steps

Has anyone pissed you the f*&$ off lately? Have you got an old grudge, or a new one? Have you been dying to let all that anger and frustration unleash in a hissy fit of rage?! Anyways, enough rhetorical questions - let me get to the point. Guess what, it's about time to spill the beans!

So, why confront? Well, there's no point in hanging on to your negative emotions, going over and over again in your head exactly how you want your object of hate to perish from this planet (or, certain body parts of theirs, if you will). Because, if you're hanging on to bad feelings or whatever, then it's YOUR problem that you're dealing with. But if you go and confront your object-of-hate, then you turn it into THEIR problem. On the bright side, they might talk to you about it, or do something about it, and things will get all better. On the other hand, they might scoff at you and call you a loser - but then you're not any worse off than where you started, except having some real factual evidence for disliking your wrongdoer (hey, I confronted him/her in the most civil way, and that bitch...). You get the point.

Ahh, confrontation... It's a fine art, really. You don't want to come on too strong, nor sound like you're out to attack your prey. You need to sound like a calm and composed adult, with your head firmly set on your shoulders. Leave the freaking out to your conversational opponent. First, make sure you find a private, quiet place for a confrontation. After all, you don't want to reduce your wrongdoer to tears at their grandma's 90th birthday, nor do you want them screaming their lungs out at you in the middle of campus. Approach your wrongdoer and say you need to talk, giving a specific place and time. (Although if you're gonna be emotional about this, you can phone or email instead.) Proceed from there.

The confrontation itself must come in three (all very important) parts. (1) An I-statement, describing an emotion or frustration (i.e. I am sad / upset / bewildered / disappointed / horrified / hungry / enraged...). Make sure to keep the focus on you - after all, the purpose of this confrontation is to make sure your concerns are heard, not that your opponent gets a chance at a raging fight. Secondly, (2) add an observation of behaviour that your wrongdoer committed, and make sure it's something you've observed and not something you heard on the grapevine (i.e. [I am ...] that you... humped my sister / copied my assignment / kicked my dog / said shit behind my back / stole my beer / lied to my best friend / licked my last timbit...). Now that your wrongdoer's heard what you gotta say, don't let it end there. You've already decided to be the better person, after all. Finally, (3) suggest a step for improvement. It can be something you expect your wrongdoer to say, do, or think about (i.e. [I am ... that you ...] and I wish / hope / insist / suggest / STRONGLY suggest that you... pay for the surgery / confess to the authorities / apologize to my dog's second cousin's hairdresser's girlfriend / buy me some new sheets / let me copy your next assignment / let me hump your sister's dog / give me your zombie gun / enter a wet t-shirt contest). Choose your last point wisely, as it may be the door-opener to good communication (or a door... slamming shut in the face of your wrongdoer).

And now, stand back, cross your arms, and put on your best satisfied grin. You are done. Say no more, the ball is now in your opponent's court - and they can chose to handle themselves like an adult, or the whiny bitch you originally thought they were. Listen, watch, and react accordingly (and have that zombie gun ready!).

Happy confronting!
The front-row student

Toronto Maple Laughs

Great for jokes everywhere!

As a Leafs fan, I know first-hand how much the Leafs are laughed at, and for good reason. I mean, they've won all of one game so far this season as of this writing, and even if they blow out Tampa Bay tomorrow *[which they didn't — InsidED]*, the best news will still be Kessel and nothing else. Of course, if Kessel can single-handedly bring the Leafs to the playoffs, I will revere him like a super being. In the meantime, here are some jokes about the Leafs that I found funny.

- What's the difference between a triangle and the Leafs? A triangle has 3 solid lines!

- Man, I love autumn. It's fantastic to see the Leafs just free falling!

- Being a Leaf fan is hard. If the movie is right, just when the Leafs finally get to use their first round draft pick again, the world ends. Go figure.

- What do the Leafs and the Titanic have in common? They both look good 'til they hit the ice!

- Why did Toskala barge into an occupied motel room? He wanted to see what it's like to stop someone from scoring!

- What is the difference between Toskala and Jason Blake? Blake may look like the devil, but Toskala is more like a ghost: Everything goes right through him!

- For all this talk of truculence in the off-season, the Leafs can't seem to even kill a penalty, let alone their opponents.

As I was saying, it's a terrible time to be a Leafs fan, but Kessel is finally back! Go Leafs go! I know I'm rooting them! I leave you with this tidbit: From the cold to the fans to now Comrie getting swine flu: As if NHL players don't have enough reasons to avoid playing in Edmonton. Looks like Pronger was onto something there...

Leafs Fanatic Panda

Go Wings Go!

What? They're delicious!

Dear Midterms

mathNEWS called. They want their writers back.

(define this (not filler))

DFA's: A love poem

Words can be symbols too, right?

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13
ROSES_
RED_
VIOLETS_
BLUE_
POEM_
DFA'S_
ARE_
DO_
ROCKS_
TOO_
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13
14
7 POEM_ 8
5 BLUE_ 6
13 ! 13
2 RED_ 3
S ROSES_ 1
12 TOO_ 13
3 VIOLETS_ 4
8 ROCKS_ 9
1 ARE_ 2
4 ARE_ 5
11 DO_ 12
6 THIS_ 7
9 AND_ 10
10 DFA'S_ 11
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The fool on the hill

A complaint: Reg Ex

Your_poem_(sucks|fails|is_terrible)._It_makes_me_go_ZZZZ*.

Not a fool

Another complaint: English

Why do you have to express your love as a CS241-formatted DFA? That's just madness!

A sane person

Animals begin first war with nuclear arms.

In a shocking turn of events, the animal community has erupted into its first nuclear war ever. Although to many it seemed that the animal war was inevitable, it was contrary to popular belief that animals would be capable of using nuclear weapons to do so.

The war began as talks broke down between the dog and cat embassies on early Thursday when canine diplomat Woof chased feline inter-species relations officer Meow up a tree and proceeded to bark obscenities at it before licking his testicles. The Canine Consulate rolled up a newspaper and publicly smacked Woof's nose in response. However, the damage had been done, and the Kitten Alliance officially declared war on the canine population early Wednesday morning.

By mid-afternoon, the Kitten Alliance had began strategically bombing fire hydrants across the country in attempts to exterminate canine way points. The canine community responded Thursday afternoon by replace the Kitten Alliance's Cat Nip with Uranium flakes.
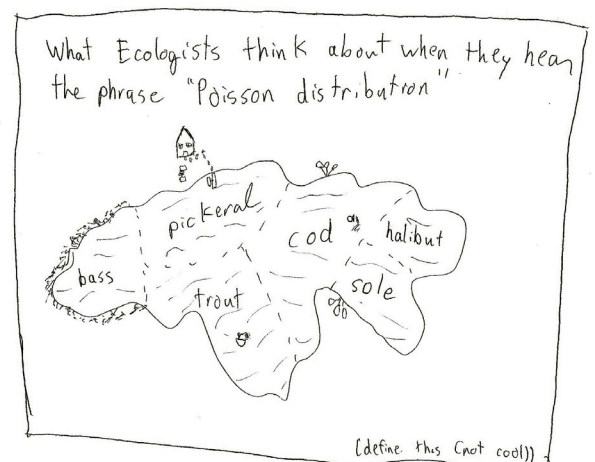
The war will only continue to escalate as other animal communities have begun to show support for either faction. The United Nations has issued a letter of condemnation to the Kitten Alliance for deploying nerve gas skunks on battlefields near the Toronto region quoting unnecessary damage to civilian life without the defense of being as adorable as a basket full of newborn kittens.

Even so early in the conflict, anonymous third parties have been spotted on the battlefields making their presences felt to dog and cat alike. So far, we have confirmed sightings of suicide porcupines blowing up into a barrage of needles plus the usual presence of butterflies around the wreckage that is Sarnia. No one suspects the butterfly.

Confused humans are left petless during the struggle. Many, previously cited saying that "Animals never had a nuclear war," have said that they "never thought they were capable of this". It seems that less popular theories about animals may be true like "Kitten only thinks about murder all day" and "Puppies know how to light acetylene torches for vengeance." Hopefully this senseless war will see a quick conclusion result in a newer, better pet called either a Dat or a Cog.

Angelo

Midterm Ramblings: Stat 230

What Ecologists think about when they hear the phrase "Poisson distribution"

pickeral / cod / halibut / bass / trout / sole

(define this (not cool))

*prof*QUOTES

(about the asterisk) I know it looks like a multiplication sign, or a bug I hit with my fist.

<div align="right">Clarke, CS 137</div>

It'll go "oh, that's nice!" and explode if you're lucky. If not, it'll do crazy stuff and then explode later and you won't know why.

<div align="right">Clarke, CS 137</div>

That's the way it works, if it's Windows and it works.

<div align="right">Clarke, CS 137</div>

Prof: "Math" is adjacent to "mate" but not to "date".
Student: Awwwww
Prof: But it's not that far away! Unlike "sexy", which is very far away.

<div align="right">Cunningham, MATH 239</div>

I think I'm prohibited from giving you marks lower than a 97.

<div align="right">Ragde, CS 798</div>

You're actually paying attention to me instead of Facebook, which I appreciate. Or maybe you're daydreaming.

<div align="right">Ragde, CS 798</div>

That was propaganda. Sorry about that.

<div align="right">Ragde, CS 798</div>

This is life in CS, and everywhere else now that our lousy products have infested them.

<div align="right">Ragde, CS 798</div>

This theorem is a sledgehammer, but it's quite an elegant sledgehammer as sledgehammers go.

<div align="right">Purbhoo, CO 430</div>

Our goal: describe just about anything in the universe.

<div align="right">Purbhoo, CO 430</div>

This is a dirty trick, but it has a respectable name.

<div align="right">Purbhoo, CO 430</div>

(about the midterm) My goal is to make it not brutal. Sometimes these things go horribly wrong.

<div align="right">Purbhoo, CO 430</div>

You can replace the interval from a to b with the set of chairs or the set of dead chickens and the proof will carry through verbatim.

<div align="right">Zorzitto, AMATH 331</div>

The physicists will say "don't worry about it". Let's worry about it.

<div align="right">Zorzitto, AMATH 331</div>

We maintain all the rules of academic integrity you're used to, even though you may not be used to maintaining them.

<div align="right">Csima, PMATH 330</div>

At least everyone is awake, except for me.

<div align="right">Csima, PMATH 330</div>

(while reading diagnosis book)
Who in this room were kept up all night for two nights in a row due to caffeine?
(lots of students raise hands)
You have Caffeine-Induced Sleep Disorder!

<div align="right">Greenaway, PSYCH 101</div>

There is evidence that you dream about what you want to happen. So if you are dreaming of having sex with your mother...

<div align="right">Greenaway, PSYCH 101</div>

Your boss is an idiot.

<div align="right">Ward, SE 390</div>

Imprint's ego carries off small child in balloon

Authorities reported early yesterday to the home of two distraught parents who called 911, claiming their 6-year-old son climbed into an experimental balloon inflated using an Imprint editor's ego, before the craft broke loose and lifted off.

The physics behind this were hotly debated by science students, with some claiming that it was impossible to lift a small child with ego alone, and others claiming that it was impossible to find a decent density/temperature curve for egos, making it hard to have a definitive answer. Others simply commented "Dunno, those egos are pretty big, aren't they?", and went back to their microscopes and petri dishes.
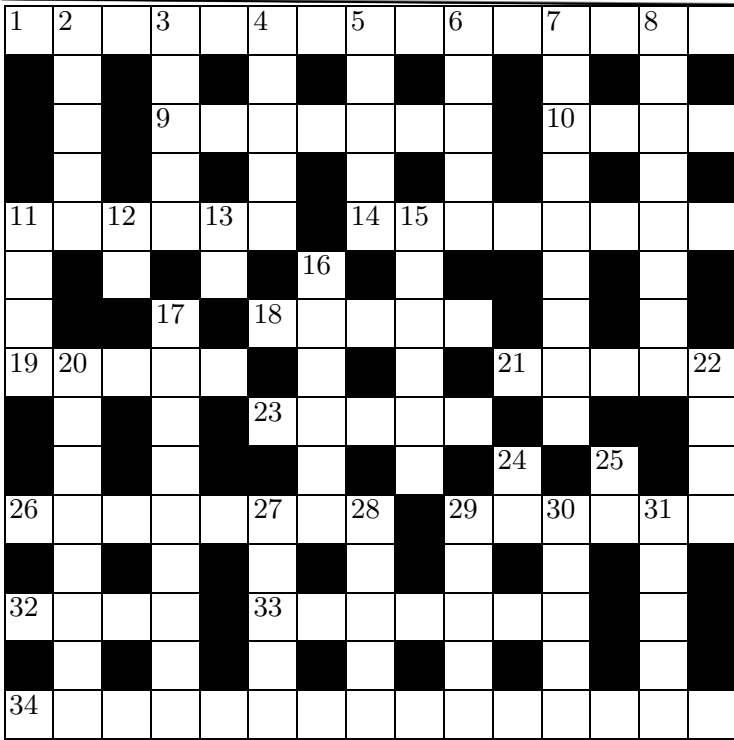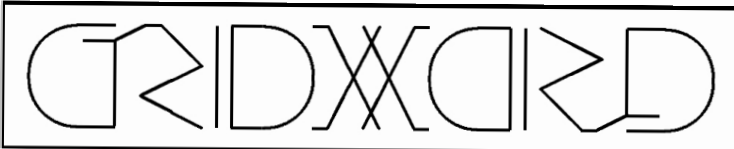
Meanwhile, engineering students interviewed the family, asking questions about the construction of the balloon and basket, and suggesting improvements for next time the family wanted to launch one of their children skyward. Teams split off and, within the hour, had constructed a giant robotic solar-powered balloon, which was then confiscated by authorities. At this point many of the engineers decided to go have a drink or twelve.

The environment students were also on site, making sure any attempts to bring down the balloon were suitably "green". As one said "we don't know just how much damage an Imprint editor's ego could do to the environment, so we can't just take off and nuke the site from orbit."

Arts students weren't a majority, as many of them aren't used to getting up early, and really, it had nothing to do with Nietzsche or Chopin, and the light wasn't all that great for a photo either, so why bother?

There is some speculation as to whether this entire thing is a publicity stunt by Imprint. One spectator told *math*NEWS, "They've been pretty desperate for stories recently, and their readership is down too." Authorities responded to inquiries about this possibility with the following: "We don't know if it is or isn't, but if it is, we'll press charges for wasting our time, and if it isn't, we'll press charges for attempting to waste everyone's time by being Imprint."

<div align="right">The Other Tree</div>

GRIDWORD

$$dx/dy = 0$$

2. Prefix meaning correct
3. Caterpillar or maggot
4. Dark brown-grey
5. Ascend
6. Tree on the flag of Lebanon
7. Watercourse center
8. Forever
11. Cleaning substance
12. Yes opposite
13. Solfège syllable
15. Phase
16. Deer head appendage
17. Relieve of blame
20. Adjustable chair
22. Sufficient space
24. Indefinite article
25. Uh follower
27. Kepler's ellipse
28. Fungus for fermentation
29. Talocrural joint
30. One tenth levy
31. Burst forth

$$dy/dx = 0$$

1. Imperturbable (4)
9. Responded
10. Food regimen
11. Some instrumental pieces
14. Male voice
18. Bungling
19. One who acts for another
21. Dionysus companion
23. Chronometer
26. Symbolic representation
29. Star
32. Canadian singer Paul
33. Round, curly or square
34. Well stocked with weapons (4)

*grid*COMMENTS

We have a good haul of grid submissions this week, so I will finally get to choose the winner with the *grid*QUESTION tiebreak. The power is mine mwa ha ha ha!

There were a total of ten submissions. Four were eliminated by spelling errors (three people spelled gorgonzola as "gorganzola"). Two more were eliminated because they put down "scam" for 39 across. I could have been generous and accepted these, but with four correct submissions, I chose not to.

Without further beating about the bush, this week's winner, by the grace of the *grid*QUESTION, is Trevor Fairey. His response to the question, "What type of hat do you wish you could own?" was, "A kneeCAP of allure/A hat that spawns rabbits". Congratulations, you can pick your prize up in the MathSoc office.

For all those who submitted but did not win this week, you have another opportunity to win by solving this week's *grid*WORD and dropping your answer in the BLACK BOX. This week's *grid*QUESTION is: What portable electronic device do you suspect of craving the taste of human flesh?

perki

Another $25 HMV Gift Card

Is going to someone who submitted something

This issue, we learned of an epic battle taking place between dogs and cats. Everyone knew that they don't get along, but I never realized it was this bad! Angelo, your $25 HMV Gift Card is in the *math*NEWS mailbox in MathSoc.

Do you want one? Write for *math*NEWS! Our next production night is in the *look*AHEAD, or email your article to mathnews@student.math.uwaterloo.ca.

InsidED

And now, a random sudoku for you!

1			9			8		
3	9	8	7					
		7			6	9		
6			3					
	2	3	6	7	9	1	5	
				1				6
	6	1		7				
				8	5	2	9	
	2			7			4	

Solution to Previous *grid*WORD