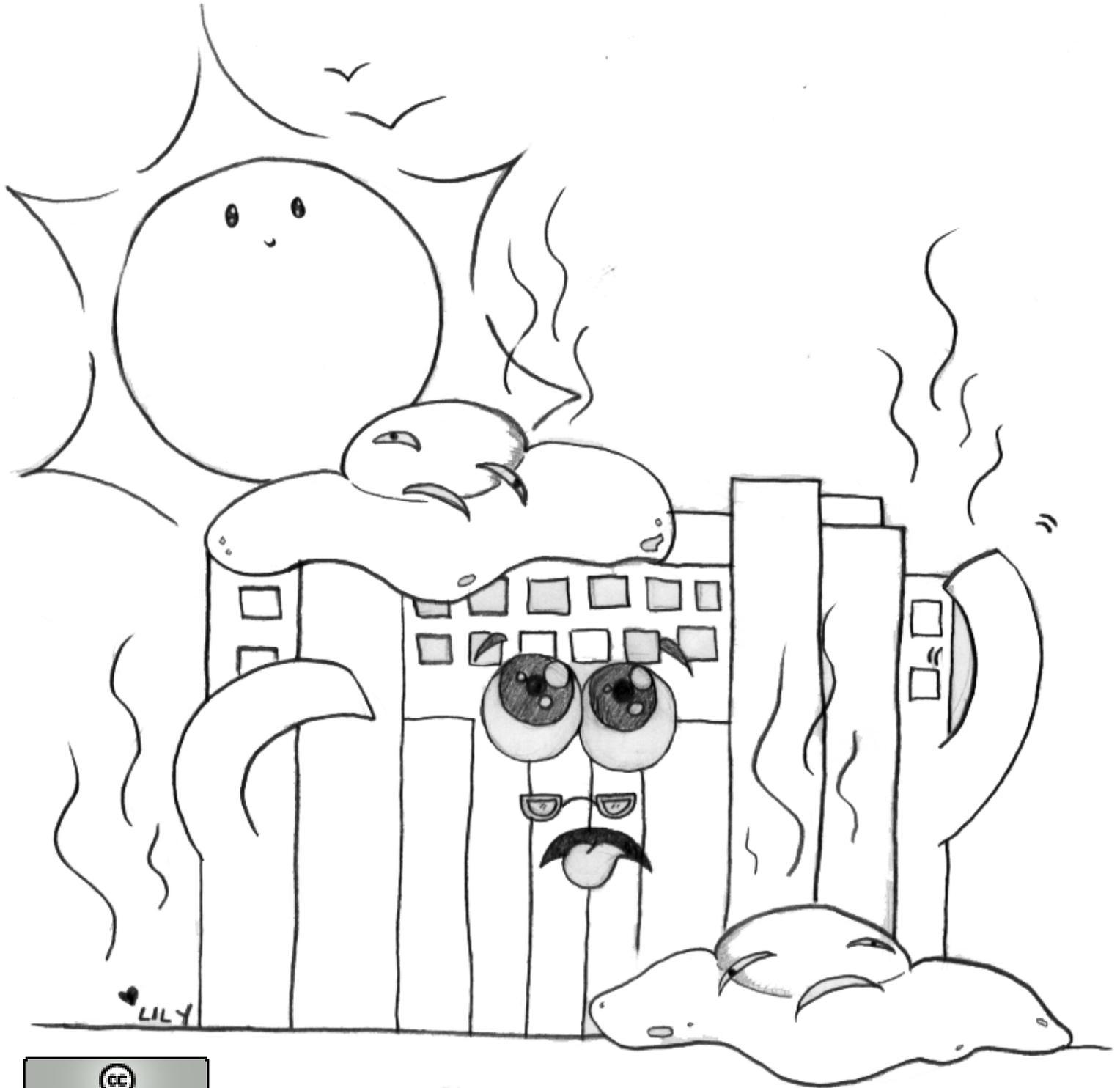


# *math* NEWS

Volume 119, Issue 2

Friday, June 1<sup>st</sup>, 2012



$$\frac{\partial u}{\partial t} - \alpha \left( \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} + \frac{\partial^2 u}{\partial z^2} \right) = 0!!!$$

## lookAHEAD

### mathNEWS

June 1	Issue 2 does something funny
June 11	Production Night might be funny
June 15	Issue 3 isn't a funny issue at all

### CECA

June 1-14	Employer Interviews (main group)
June 15	Rankings Open
June 19-23	Job Postings
June 25+	Employer Interviews (continuous)

### University

June 19	Deadline for 50% Tuition Refund
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### Misc

June 5	World Environment Day
June 9	Donald Duck Day
June 10	Canadian Rivers Day
June 10	Ball Point Pen Day
June 12	Hivebent Day
June 17	Father's Day
July 1	Canada Day
July 6	Take Your Webmaster to Lunch Day

## Upgrading Antennas in MC

*Good News Everyone!*

As of Monday, June 4th, the Anti-Reception Antennas (ARAs) in the Math and Computing building will be upgraded! For those of you who don't know, the ARAs were installed back in September to cancel out all of those pesky wireless signals inside of the building. They were set up as a student research project and, due to academic freedom policies at the University of Waterloo, can not be removed until the project has completed.

Have fun with even less wireless signal!  
Optimized Sleep

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The editors: Sephiroth (Will Morrison) and Cloud Strife (Murphy Berzish)

## mastHEAD

*Your screwdriver won't help you now*

Turns out a lack of keys can thwart ill-prepared editors trying to get into locked **BLACKBOX**es. This week's *mastHEAD* question is "What is your strategy for key management?"

moment ("Lock each key away in a locked box recursively until a cycle is reached") Shay Blair ("Keep hundreds of keys in a box with 5 real keys") OptimizedSleep ("Public key system, give EVERYONE ALL the keys") waldo@<3.LE-GASP.ca ("Get Woof to find lost keys, though it's very likely that someone who's trying to find me found the keys I'm looking for while trying to find me. I guess I'd find them and ask") ScruffyED ("Find the ASIC Team, as this is a hardware problem") theSmurf ("Hire a CEO, a board of directors, regional managers, and individual managers") (define this(not cool)) ("Keep a bunch of no-install applications on mine, so I can have a full computing suite on the go") snippet ("NOT whatever Andriod SDK provides. I WISH. Non-standard Java keystores \*shudder\*") theDreamer ("Communication is \*recurse\*") Soviet Canadian ("rush and expansion, take control of the skies, from there I can bomb those keys into oblivion, then I need to manage these cell phones") Zethar ("Not bitch about the five sharps in *Phantom Ensemble*") IceNine ("Obtain skeleton key, recut, distribute to all. GNU keys")

Concealed ("Hide them in obscure locations and miscommunicate when anyone asks where they are")

## Stuff to do With a Block Cipher

*Because you haven't wasted enough time yet*

Block ciphers can be thought of as a pair of functions. The encryption operation takes a plaintext block and a key, and outputting a ciphertext block of the same length as the plaintext block. The decryption function takes the ciphertext block and the key, and outputs the plaintext block. It should be computationally infeasible to perform these transformations without knowledge of the key. Here the word "block" is used to mean a fixed length vector of bits.

1. Repeatedly apply the block cipher to blocks of plaintext using some fixed key. This is known as Electronic Codebook (ECB) and is the simplest method of encryption.
2. Feed the ciphertext back into the function as plaintext, and use each successive block as the next portion of a stream cipher's keystream. This is known as Output Feedback Mode.
3. Create a hash algorithm by using ciphertext as the key input for the next plaintext block's encryption. The last ciphertext block is your hash value. Pad your plaintext with  $(1)(0^*)$  up to the next block length. To guarantee consistent hashing, use a standard IV as the first key.
4. Use the hash algorithm and the encryption capability to create an all-or-nothing transform. Encrypt your plaintext under a random key, then encrypt the random key under a key derived from the hash value of the ciphertext, and append it to the ciphertext.
5. Create a keyed hash using the hash algorithm from 2. and concatenating a secret key with the message before hashing, or using it as the IV.

Concealed

## Somewhat Belated CUMC Advertisement!

By now, you should've received an e-mail regarding the Canadian Undergraduate Mathematics Conference, being held on July 10-15, 2012 (or thereabouts, including our travelling days), in Kelowna, British Columbia. If you haven't considered attending, you should — it's a marvelous opportunity to be in a mathematics-rich environment, around other people who love math just as much as you do.

Thanks to MEF, MathSoc, and the Dean's Office, we have the funding to offset the majority of travel and housing costs that attendees will incur. That said, our funding is limited; we are funding at most 44 students (and hopefully exactly 44 students, so as to make maximum use of our funding). Spaces will likely fill up fast!

Check your e-mail for more details; if you have any questions or you wish to sign up to attend the conference, please stop by the booth that hopefully will be set up in the 3rd floor of MC in the middle of the day, or e-mail [cumc2012@mathsoc.uwaterloo.ca](mailto:cumc2012@mathsoc.uwaterloo.ca).

Hope to have you come along!

CUMC 2012 UW Trip Planning Committee

## Re: Foundation of the MOSS

The Mathematically Ordered Secret Society warns of the double agent Software Engineers. As one of those supposed "double agents," I would like to state that we have no interest in joining either MOSS or EGGS (Engineers Gathering Great Secrets). After all, we have our own group, the Software Engineering Coalition for Refining Expertise in Technology, founded in 2001.

Contrary to our name [What our name implies? The name isn't a secret group so this doesn't make sense.], we are not a secret group. We simply have no need to advertise, as every softie is a member of SECRET, every member of SECRET is a softie, and we all know each other. So it's perfectly understandable why we were left out of that list of "illustrious groups."

Furthermore, we have no care for meeting in cafeteria corners. After all, we have private rooms such as the SE(CRET) Lounge, and two SE(CRET) Labs. If you attempt an infiltration, be warned: at the very least, you will need to break through the coded locks, and disguise yourself as a softie.

0×21 0×62 0×6f 0×62 0×00

## Nobody Sez

The *mathNEWS* editors have noticed a distinct lack of anybody sending us small informational articles, club updates, and other content suitable for sticking in the front of an issue. If you have some propaganda you wish to spread to the student body, send it in to [mathnews@gmail.com](mailto:mathnews@gmail.com) and we'll probably print it.

## The *mathNEWS* Sports Report! #2

Hey all, welcome to another edition of the *mathNEWS* Sports Report! Where you'll learn just enough to not be completely and utterly lost the next time someone's talking sports around you (or when I make a sports reference around you, you poor soul).

We begin with hockey. The Stanley Cup Finals began on Wednesday, with the Los Angeles Kings facing off against the Devils in New Jersey. Put your hand up if you picked this matchup in your playoff pool. You're lying. That said, this series looks to feature outstanding goaltending from Jonathan Quick and Martin Brodeur, star power from Anže Kopitar and Ilya Kovalchuk, and grit/dirty playing from Dustin Brown and, um, Steve Bernier? Shrug. Each pair listed is a King, then a Devil. Unfortunately, no one particularly cares about this, because Marty's already won three Cups, and the Kings are led by Brown, who, while a physical player, is allowed to cross the line at will without penalty (check out his knee on Michal Rozsival). It's hard to appreciate the talent when the dirt is more obvious.

We now turn our attention to baseball, where after a somewhat promising start to the season, the Blue Jays lost five straight to Tampa Bay and Texas last week, but beat the – still AL East-leading (?!?) – Orioles on Monday. Bautista's starting to come out of his funk, Encarnacion is going berserk, and Adam Lind is at Triple A! Of course, there are indeed other problems with the club; it's a work-in-progress, but we all knew that. Right? Meanwhile, sad news out of Philadelphia, where we hear that the Good Doctor, Roy "Doc" Halladay, is having shoulder problems. We once thought he was a robot; it's now being clinically shown that he's at most a cyborg. How depressing.

Basketball playoffs are still going, apparently. Whoops. CFL training camp starts soon, with pre-season games roughly two weeks away. In international hockey, Canada lost to Slovakia in the quarter-finals of the World Hockey Championship; Slovakia went on to lose to the Russians 6-2 in the finals. The Czechs beat the Finns to win bronze. Finally, Ryder Hesjedal, who thrilled us all (or should've) two years ago when he finished sixth in the Tour de France, won the Giro d'Italia, becoming the first Canadian to win a Grand Tour event, ever. What a guy. He's from Victoria! (/shameless BC plug)

TTFN; ta-ta for now!  
Scythe Marshall

## Words in Rhyme

*Haiku Edition*

There was to be a sonnet here  
But instead I cowered in fear  
A haiku's forthwith  
For article fifth  
Of this third of the year

My rhymes are there; you can't compare  
RedMetal

## Coding is Like...

...Baking. To write code, you find the right recipe (usually online or from a book) and follow it. You can use GET commands to find the necessary ingredients and PUT commands to combine ingredients for visual results. It is possible to optimize the process, but you must run the script a few times to learn how. If you don't follow the recipe, results are unpredictable.

...Chess. Your opponent is your user, and is someone you may or may not be familiar with. You will have various opponents with varying degrees of knowledge and intelligence, because while intelligence helps a lot with chess, it is not a mandatory prerequisite. Also, if your opponent completely disregards the rules, you must know how to deal with it and explain the problem rather than throw the chessboard in the air and storm off.

...Crazy Eights. Everyone has different rules for this game and different styles of playing. A 2 in one person's game may have a completely different meaning in another's. The cards you can see that you can use in your hand are only a small fraction of all cards. When playing, the cards must follow a certain order or the game won't work.

..Darts. In a large total area, the success area is very small. No matter how hard you try, you likely won't hit the bulls-eye without cheating. As you run the "throw" function over and over, you will gain a better understanding of the parameters and commands and will get more accurate with your predictions. If you get a new dart, much of your work is destroyed but some carries over.

..Making love to a beautiful woman. Nine times out of ten, it fails.

..Banging your head against a wall. Repeatedly.

(thanks to Daniele and Janelle for helping with this article)

Yours in similarity,  
Shannon.

## 30 Minutes Ago I Deleted My Assignment. I'm an Idiot.

Stupid things I did to delete my assignment that I spent a week (on and off) of work on:

```
> g++ -o file.cpp other_file.cpp
```

SHIT, I JUST COMPILED OVER MY SOURCE. It's okay, I still have vim open.

```
:q
```

WHY DIDN'T I DO :wq? WTF, BRAIN. Now I gotta rewrite the whole thing.

```
vim file.cpp
```

```
[write a few lines]
```

```
:w
```

Wait... shouldn't I have a .swp file?

```
...
```

```
&!#@%&!
```

## Poptails

*Beat the heat with a stick*

Spring term is here and while this week may not have been a scorcher, you never know what's just around the corner. So for that inevitable heatwave, you know, the one when the AC breaks at the most opportune moment \*sarcasm sign\*, take notes. We're going to beat the summer heat with a stick; a popsicle stick. A drunken popsicle stick. A pop-tail, if you will.

**Dirty Pirates:** 2.5 cups of Coke, 1/3 cups of Kahlua and Spiced Rum. How? Place all ingredients in a large glass and stir to combine. (for better results, use flat Coke)

**Cantaloupe and Kiwi Daquiris:** 1.5 cups of pureed cantaloupe, 1/2 cups of pureed kiwi and light rum, 3/4 cups of limeade, 4 tbsps. simple syrup. How? Blend

**White Sangria:** 12 oz. white nectarine, 6 oz. grapes, 12 oz. Pinot Grigio, 4 oz. Triple Sec. How? Blend.

Pour mixtures into popsicle forms and freeze for about 2 hours or until mixture starts to solidify enough to hold a popsicle stick upright. Insert popsicle sticks and finish freezing overnight. To release popsicles, run hot water on the outside of popsicle moulds for 2-3 seconds. And Voila!

Cheers,  
prime19+

俳句

ここに実勢の俳句があります。

カナダ  
学園が  
怖が  
ない  
雁が  
侵す

-- 3/27

## The Pop Tales

*Heated Beats and Disco Sticks*

Formed in 1968 in Switzerland, The Pop Tales were composed of Polo Hofer (drums, vocals), Francis “Zweifinger-Fräne” Ludi (guitar), René Balsiger (guitar), Robi Muller (keyboards), and Johnny Werren (bass). This formation was short-lived with the group releasing only one album featuring such songs as “Good Day Sunshine” and “Stormy Monday” and disbanding in 1969.

Shoobidoobop  
prime1968

## Diablo 3’s “Login Stack” Fails Miserably, Players Outraged

In one of my previous incoherent rambles, I reported that Blizzard planned to use a login stack instead of a queue for Diablo III. To the surprise of absolutely nobody, the D3 launch took off, stuttered, tripped on a TCP packet, and fell face first into an error 3007.

What happened with the login stack? How did everything go so wrong? Well, here’s an explanation of why the stack failed so miserably.

1. Robb tries to log in, added to stack[0].
2. Jon tries to log in, added to stack[1].
3. Ned tries to log in, added to stack[2].
4. Authentication process pops Ned off the stack and begins to process Ned.
5. Bran tries to log in, added to stack[2].
6. Robb’s connection times out with a timeout error. He tries to log in again, at stack[3].
7. Jon’s connection times out with a timeout error. He tries to log in again, at stack[4].
8. Rickon tries to log in, added to stack[5].
9. Bran’s connection times out with a timeout error. He tries to log in again, at stack[6].
10. etc.

As you can see, most of the players do not get popped off the stack by the authentication process before another player tries to log in, so their connection times out and they have to try to log in again. In addition, their previous login attempts are still a part of the stack and cannot be removed.

With millions of players trying to log in, we have hundreds, if not thousands, of login attempts timing out each second and being added back to the top of the stack. The login server eventually runs out of memory, which causes the entire system to crash.

Blizzard refused to comment on the issue, and quietly switched back to a queue to process user logins.

Nerfed to the ground,  
theMONK

## theDreamer Plays Bad Games

This time, true Nintendo classics. Don’t let nostalgia goggles misguide you, these games are genuinely bad.

### Star Fox 64

FUCK YOU SLIPPY! FIGHT YOUR OWN GODDAMN BATTLES.

### Earthbound

This game was just so fucking hard. There were thousands of enemies throughout the entire game, and the battle entrance music was just so annoying. No way to skip it. I must have seen it a million times. And then, after hundreds of hours of grinding through battle after battle, I finally got to the final boss fight when the game fucking crashed, and all my saves were deleted. That’s what I get for trying to get the game cartridge legitimately instead of just emulating it on my laptop.

I hate the SNES,  
theDreamer

## You Know You’re Old When...

- Your first cell phone did not have a touchscreen
- There was a time when you frequently used floppy disks
- You know exactly why Windows starts labeling your hard drive as C:, and what the A: and B: drives were for
- There were no more than 150 151 Pokémon
- You were around to witness the WaterPew logo fiasco
- The B2 Green actually existed
- You have actually used the old mathNEWS production system, in all of its Perl 4 hackery glory
- You have heard stories about said production system, and are aware that it existed
- You’re actually older than the production system

!bob

## The World’s Most Interesting Algorithm

Because

```
qsrt [] = []
qsrt (p:l) = qsrt [x
  | x<-1, x<p] ++ [p] ++ qsrt [x | x<-1, x>=p]
is so boring...
```

-- Haskell

```
bubblesort xs
  | xs == xs'   = xs'
  | otherwise  = bubblesort xs'
where xs' = bubblesortIterate xs
      bubblesortIterate [x] = [x]
      bubblesortIterate (x:y:xs)
        | x <= y      = x:bubblesortIterate (y:xs)
        | otherwise  = y:x:xs
```

## What I've Learned So Far on Co-op

1. Never leave your computer open and leave the room. Your coworkers will change your homepage to barney.com. [Surprisingly, not a shock site. But it does contain purple dinosaurs and may not be appropriate for some audiences. --EDs]
2. Going out to lunch even though you brought a lunch is a far too common occurrence.
3. To learn anything you need for your code, just Google it.
4. Give every bit of code you write thorough testing, or you'll look like an idiot.
5. You can do more than you think you can, and you know more than you realize.
6. Up the creek is a fine place to be, so long as your coworkers know how to paddle.
7. Never worry about error messages. Somewhere on Google there'll be an answer.
8. Going out to lunch with coworkers is a great way to get to know them.
9. To have a workplace where most coworkers are coops? Awesome.
10. Let go of trying to finagle with the code: Google it.
11. You should never be afraid of asking coworkers for help.
12. Down 'cause code won't work? Seriously, you should know by now. Google it.

What's the last thing I learned on co-op? Read the first words to find out.

Yours in education,  
Shay Blair.

## Ambiguous Video Game Quiz

We are idiots and forgot to tell you what the Ambiguous Video Game Quiz izzzzzz. Thanks to our most grievous error, no one knew to submit answers to the **BLACKBOX**. QED, there were no winners last week. Yay. So, description, get: We supply you with ambiguous video game descriptions, and you provide us with witty video game names that fit those descriptions. We score entries based on creativity, originality, obscurity and accuracy (the game also has to exist). The game you give us should make us go, "Oh yeah, that fits. We didn't think of that."

Here are the ambiguous descriptions for this week's edition:

- They go together like Milk and Cookies
- More time spent in inventory than in the actual game
- Digital building blocks
- The sequel is actually better
- Human but also Dragon

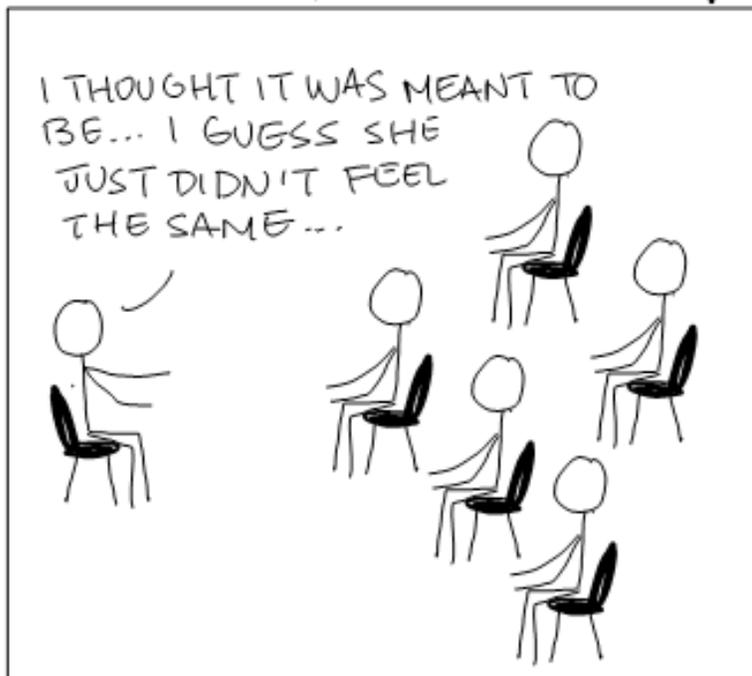
theDreamer & Optimized Sleep

## Fun Things to do with Nerf Guns

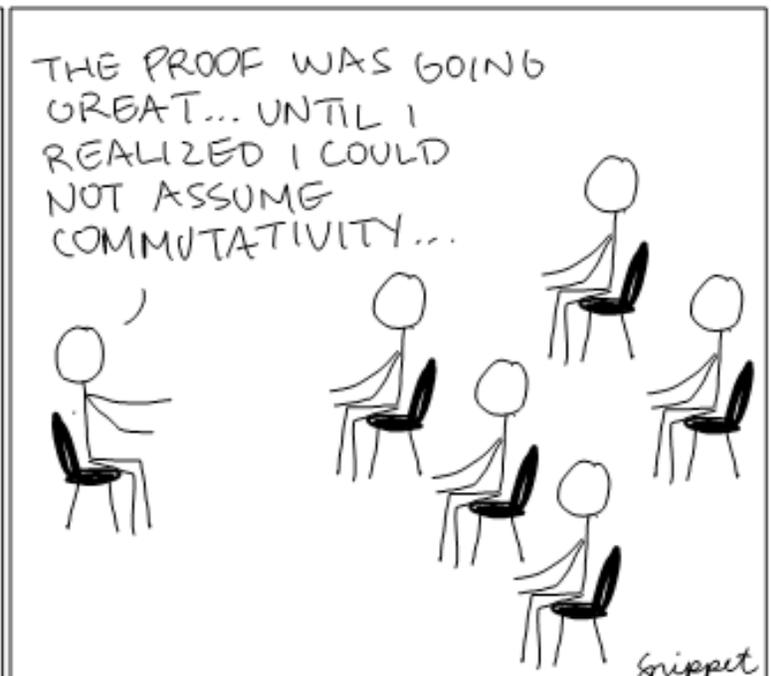
- Humans vs. Zombies
- Target practice in the office
- Buildin' a sentry
- "Persuading" writers to finish articles
- Baseball (Alpha Trooper pitches, Warlock axe bats)
- "Does this look jammed to you?"

ScruffyED and Concealed

## SMALL DIFFERENCES?



GROUP THERAPY



GROUPS THERAPY

## Horrorscopes

**ActSci:** You forgot to take intense heat into account for your calculations, and have been undercharging for insurance.  
*Your unlucky number is:* Three terms of tuition in lost profits.

**AHS:** It's summer. Time to apply everything you've learned so far and play frisbee. You probably should have looked for a job instead, because a frisbee isn't good protection against the sun.  
*Your unlucky number is:* SPF 90 to prevent epic sunburns.

**AMATH:** It's summer. Time to apply everything you've learned so far and model the flight of frisbees.  
*Your unlucky number is:* Three frisbees to the head before you get it right.

**ARCH:** You use your summer to look at the beautiful architecture on campus. You get more aroused by the smokestack in GSC than by the guys on campus.  
*Your unlucky number is:* Seven missed dates.

**ARTS:** Why are you still here? You're spending more time at Congress than in class!  
*Your unlucky number is:* Three hours of Margaret Atwood.

**C&O:** Pre-enrollment has begun, but you've spent so much time on your enumeration assignment that you only have five minutes left to enroll. There aren't really that many options left...  
*Your unlucky number is:* Only 600-level courses remaining.

**CS:** You write an algorithm to optimize your time in the sun. Unfortunately it runs as  $O(n^2)$ , and it will be winter before it completes.  
*Your unlucky number is:* One wasted summer.

**CM:** You joined this program thinking you would use your computer and math skills to model complex real world problems. Now that summer is here, you've realized the truth. You're forced to put on a swimsuit and embarrass yourself in front of judges.  
*Your unlucky number is:* 19\$ in tips.

**Double Degree:** You hear everyone talking about the Double Ds coming out. You think they're referring to the appearance of all the Double Degree students that usually study at Laurier.  
*Your unlucky number is:* 50% less material used in shirts.

**ENG:** Being inside air-conditioned buildings all day has lowered your core body temperature. Unlike computers, this doesn't make you think faster.  
*Your unlucky number is:* 98.2

**ENV:** You go on a crusade to stop all forest fires, because trees are good and fire is bad. Global warming is no longer an issue.  
*Your unlucky number is:* Five years until the Ents take over.

**Grad:** Your supervisor is out of town for the week on vacation, so you don't have anyone watching over you and your thesis. Goofing off, you accidentally knock over your laptop and wipe out all of your work.  
*Your unlucky number is:* 73 hours to recover all your work.

**KI:** Your Museum course leads you to the Museo Nacional de Antropología in Mexico. With so few people in your program, all the funding leads to some pretty exciting field trips! Too bad that they didn't cover insurance.  
*Your unlucky number is:* 350 years of Montezuma's Revenge.

**Math Bus:** Ms. Frizzle leads you on an exciting adventure to show you the building blocks of all numbers. She promises to show you the largest prime. She lied.  
*Your unlucky number is:* 0 chances to make an Optimus Prime pun.

**Math Phys:** You attempt to maximize the fizziness of your beer per volume. It gets too fizzy, though, but you have an idea and line up for the Canadian Idol auditions.  
*Your unlucky number is:* Three days of non stop burping.

**PMATH:** Working on your Geometry homework, you forget to leave your desk and take care of your basic human needs. You submit your homework with a grunt, and your name is an illegible squiggle.  
*Your unlucky number is:* 8-word vocabulary.

**SCI:** Your experiments on the campus goose population have been wildly successful, as the population has reached record lows. This causes their main rival to have a population explosion.  
*Your unlucky number is:* A murder of crows flocking the MC.

**Soft Eng:** Taking OO is harder than you thought that it was going to be. The CS people are learning Bash and you're learning GTK. On the plus side, you'll be more employable next term!  
*Your unlucky number is:* 50 interviews in the first round.

**Stats:** You just had your first 231 midterm, and it was a cakewalk. Fill in the blanks and multiple choice? You've had Arts courses that were more difficult! You ask your prof to make the next one more challenging.  
*Your unlucky number is:* 37% average in July.

**Teaching Option:** The deadline for the final round of University acceptances is coming up, and this is your last chance to get more people interested in your program. You go to a high school to convince the grade 12s to choose UW, but they're all cutting class and coasting until June. You convince the teacher, though.  
*Your unlucky number is:* 35 year old froshie.

**Undeclared:** You can't decide whether to stay inside and study, or to go outside and play. You compromise and play football indoors.  
*Your unlucky number is:* 2 destroyed couches and an unfinished assignment.

**Submit your *prof*QUOTES to the BLACK BOX (by the Comfy Lounge) or email them to us at [mathnews@gmail.com](mailto:mathnews@gmail.com)!**

## gridWORD Clues

### Across

1. \*Big boss man
7. Trick
9. Candid
11. \*Round and collarless
13. \*Friend who will listen to your troubles
18. \*Symphonic
21. Copy
23. Residue
24. \*Criminal society
27. \*Leap before having a look
33. \*Reflex
35. Trinket
37. Up to the present
38. \*You're alert; you're \_\_\_\_\_

### Down

2. Period
3. First building built on campus
4. Post-Sep, Pre-Nov
5. If Leonidas was Roman, the movie would have been \_\_\_\_\_
6. "Oh, like you're \_\_\_\_\_ talk" (two words)
7. Corpse
8. Lizard
10. Luna's opposite
12. Contact
14. If she used her original name, she would have run 'Hapro Productions'?
15. Pitch
16. Birth
17. Succeeding
19. Possess
20. Stand
21. Dirt
22. Advance
25. They call it Dancing Stage in Europe/Oceania
26. Access
28. Sweet
29. Obvious
30. The Godfather's second son
31. Tint
32. How lemons make Cave Johnson
34. Pivotal
35. Stallman's favourite animal?
36. Slushy

**Submit your completed grid to the BLACK BOX (by the Comfy Lounge) and don't forget to answer the *grid*QUESTION!**

## Slitherlink Puzzle

Each number indicates exactly how many lines should be drawn around it. Cells which do not have numbers inside can be surrounded by any number of lines. There are no crossings or loose ends; there is only one line which is continuous.



Puzzle courtesy of [puzzle-loop.com](http://puzzle-loop.com)

## This Reminds Me of a Puzzle

Five Mario Party attendees have obtained 100 gold coins and have to divide up the winnings. The players are all extremely intelligent, treacherous and selfish (especially Wario).

Wario, who earned the most stars, gets the first chance to propose a distribution of the coins. All players vote on the proposal, and if half the partygoers or more vote "Yes", the coins are divided as proposed.

If Wario fails to obtain support of at least half the party (which includes himself), he will exclaim, "Doh, I missed!" and run off. The partygoers will then try again, allowing the player with the second-most stars to propose a distribution. If he fails, he leaves and they try again with the third-place player, etc.

What is the maximum number of coins Wario can keep?

98 coins, by bringing the third-place and fifth-place players with

one coin each.

You are the President of MathSoc and you are about to celebrate MOT. You've got 1000 bottles of root beer you were planning to open, but you find out that exactly one of them is poisoned.

The poison exhibits no symptoms until death and is completely undetectable, but even a trace amount is guaranteed to be fatal. However, it takes between ten and twenty hours to take effect.

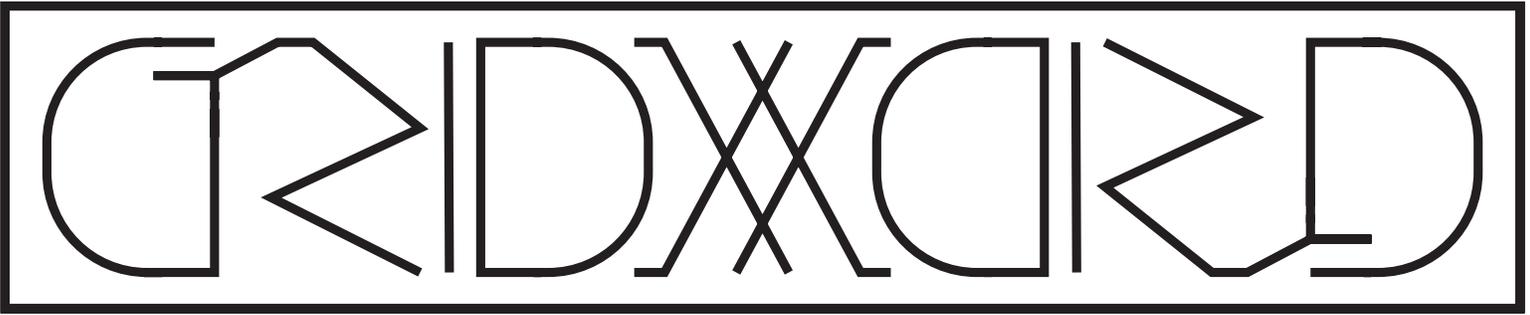
You have an unlimited supply of grad students at your disposal and just under 24 hours to determine which single bottle is poisoned.

What is the smallest number of graduate students you must have to drink from the bottles to be absolutely sure to find the poisoned bottle within 24 hours?

10 graduate students must taste the root beer.

## profQUOTES

- Fortunately, most terrorists do not take macroeconomics.  
Smith, ECON 102
- If my numbers aren't safe, I'll get a piece of paper.  
Smith, ECON 102
- This is information for the elite of the planet. Yes, I have to look at you and pretend I'm looking at the elite of the planet.  
Smith, ECON 102
- There is some debate. The other guys are wrong. I'm just drawing the debate to your attention.  
Smith, ECON 102
- [Talking about co-op students living term to term]* This is the 22nd of March, so basically you've run out of money.  
Smith, ECON 102
- Mathies, I know you're offended by a constant that isn't quite constant. This offends the purity of your mind. Get over it.  
Smith, ECON 102
- We're also going to do some [mathematical] jiggery-pokery. Artsies, please watch carefully.  
Smith, ECON 102
- [Divides by a variable to move it from one side of an equation to the other]* The artiesies think we're doing algebra.  
Smith, ECON 102
- This, of course, causes a Keynesian to have severe mental indigestion.  
Smith, ECON 102
- You must cope with the fact that I might stop breathing. That won't cause me to stop talking, of course, I'll just fall down.  
Smith, ECON 102
- And he says "I have read on Slashdot---" Any time you hear someone say those words, you get nervous.  
Smith, ECON 102
- And that is how William Jefferson Clinton entered the Oral Office in the White House. *[a few quiet laughs]* I had to say it! An angel told me not to say it but I had to say it!  
Smith, ECON 102
- If anything was going to put me off sex it would be a conversation with the friggin' Chancellor of Germany!  
Smith, ECON 102
- It says Keynes did not have all the answers. I find that psychologically difficult to say to you.  
Smith, ECON 102
- You're confused. Please come at the end of the class to talk about that.  
Nica, MATH 247
- [Dan Wolczuk's loud voice drifts in from down the hall.]*  
Nica: That must be my colleague Wolczuk. He could sing at the opera if he wanted, but for some reason he decided to be a math instructor.  
*[Nica leaves the classroom]*  
*[mumbling]*  
Wolczuk *[from other classroom, not yelling]*: Sorry about that.  
Nica & Wolczuk, MATH 247
- [At 11:10 on Friday]*  
Now I am done lecture 1. This is where I was supposed to be on Wednesday. *[awkward pause]* No, no, I am kidding.  
Nica, MATH 247
- Sometimes my mouth keeps going without me when I'm preparing the next thing to say.  
Nica, MATH 247
- We can prove this is the limit. Anyone know how to do that? Because I don't.  
Katz, URA Seminar
- Go outside and have a conversation with a goose.  
Katz, MATH 239
- Steve gets fired from bartending, so he becomes a C&O prof.  
Katz, MATH 239
- Document your code, or die.  
Vasiga, CS 241
- Notepad++ implies fail++.  
Vasiga, CS 241
- I know engineers exist because I can smell them.  
Vasiga, CS 241
- This mic catches my breathing, I think that's kind of scary.  
Pei, MATH 239
- For those of you who don't know me, shame on you!  
Pei, MATH 239
- You're software engineers. If you guys don't know what binary strings are, I might kill myself.  
Pei, MATH 239
- I'm sorry about putting material on the midterm I said you didn't need to study. I learned I should tell you you don't need to study something. Therefore everything I have ever said to you in class or in the hall is fair game for the final.  
Charbonneau
- Prof: You guys know auto-tune? Like how Justin Bieber sounds like a man? We'll be doing that in this course.  
Student: So by taking this course, Justin Bieber wins?  
Prof: Nope. Justin Bieber always loses. That's the way it is.  
Wang, MATH 213



## gridCOMMENTS

*Welcome to UWaterloo Congress Week, where everything's made up and the room numbers don't matter!*

Those who have attempted the **gridWORD** before may have noticed that I forgot to write a **gridQUESTION** last issue. Well, I'm going to have to face the music for that, since there were a lot of submissions.

Because I didn't have a tiebreaker, the prize goes to Venus Lo, for having far, FAR neater handwriting than the other submission (and by coin flip). Astoundingly neat. You deserve your \$5 certificate to the C&D, Venus. It's not worth an arm and a leg, but it's nothing to look down your nose at either.

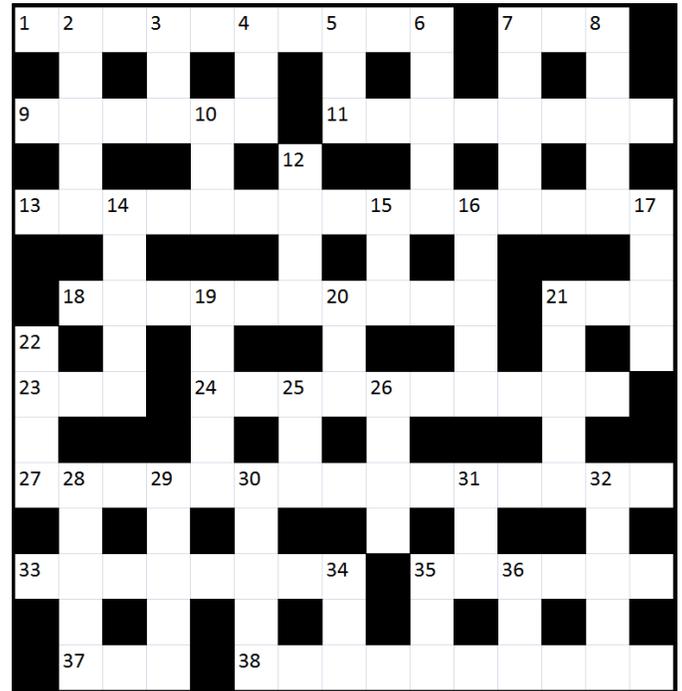
This issue's **gridQUESTION**, to be used as a tiebreaker in the case of multiple winners, is, "What would you do with the world at your feet?" I expect your responses to tickle my funny bone, **gridWORD** hopefuls; answers that make me laugh my lungs out will be more likely to be chosen! Submissions must be in the **BLACK BOX** (on the wall outside the Comfy Lounge) by 6:30pm, June 11, 2012 (the next Production Night).

These theme hints are getting out of hand...

moment

**Hey, look!  
More filler!  
Next Production Night is  
June 11, 2012  
Meet outside MathSoc at 6:30 pm  
Pizza, cookies, milk, etc.  
if you write an article and  
make the filler stop forever!**

## This Week's Grid



## Last Issue's Solutions

