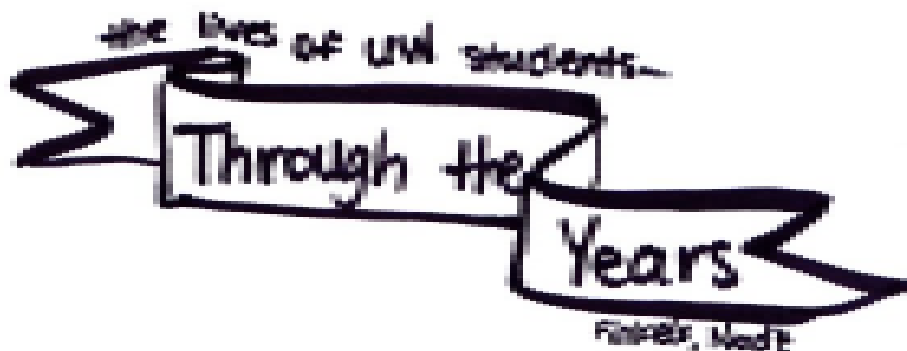


math NEWS

Volume 104, Issue 6

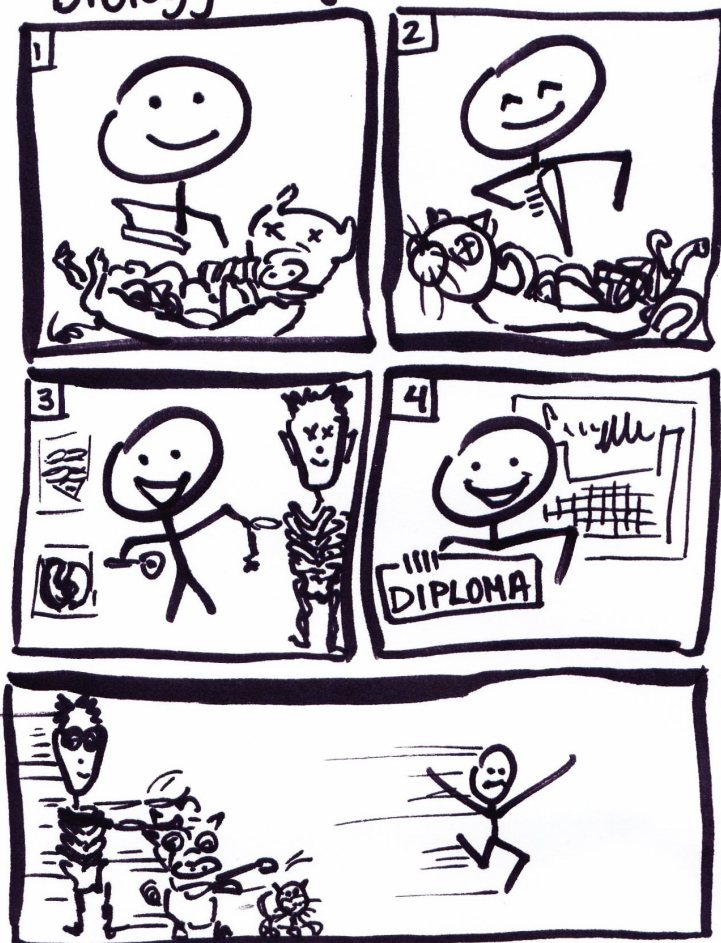
Friday, July 27th, 2007



CS Major



Biology Major



CC
SOME RIGHTS RESERVED



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lookAHEAD

mathNEWS

July 27	Issue #6 brings light to the world
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Math Faculty

Questions about what some of these mean? See an academic advisor!

July 27	Lectures End
July 30	Open Enrolment for Fall 2007
August 1	Withdraw/Failure Period Ends
August 2	Examinations Begin
August 15	Examinations End

MathSoc

Nada	MathSoc has nothing for you :(
------	--------------------------------

MGC

Wednesdays	Pizza Days
------------	------------

CECS **Assuming Jobmine does not crash**

Continuous Phase Ongoing

see www.cecs.uwaterloo.ca/students/datesF06.php for details

Student Awards & Financial Aid

August 8	Recommended last day to pick up loans	for this term
August 15	Aboslute last day to pick up loans for this	term

Feds

see feds.ca/events for details

Miscellaneous

August 5	Abel's Birthday
August 6	Simcoe Day
August 6	Atomic Bomb Day (US)
August 6	New Brunswick Day

mastHEAD

Hee ho! Here we go! We're off to fail our finals, the wonderful finals of pain! Because, because, because, because, BECAUSE - we can't drop out now anyway! With the looming presence of finals coming up, the *mathNEWS* production night staff felt the need to bring some form of light back to the world. Instead, we made them do this issue. This being the last *mathNEWS* of the term we wish you all the best on your exams, on your work terms or on the rest of your lives. But only one of them.

The *mathNEWS* staff had to say their farewells and they phrased it in the form of song and dance, which we can't reproduce for you so instead we'll just give you a *mastHEAD*! The question was "How do you treat a sunburn?", and here are their responses: Robert Burke, 2B CS, "Barbeque sauce. Tasty, tasty BBQ sauce"; Richard Mandelzys, 4A CS, "Fire, and various sharp objects"; James Simpson, 1B CS, "With hugs, kisses and plenty of lollipops"; Even Stratford, 2A CS, "With ignorance and gratuitous use of the f-word"; Daniel Goc, 2B CS, "Potato Peeler— also works on rashes"; Sarah Pidcock, 2A CS, "Run naked backwards through a deciduous forest while shouting 'RAPE! RAPE!'"; DanS, 4[(B + C) / 2] CS, "Compliments, candy, flowers and other nice things"; Mark Jackson-Brown, 4C CS, "Send it right back in the sun's face with a witty retort"; Alex, 4C ORCS, "With an ice cream. Sunburns like cool eats"; Matthew, 2B CS, "Denial".

Props go out to graphics, the ones that put the raisins in every package of Kellogg's Raisin Bran. Thank you; rice for making me seem interesting by comparison, monkeys for flinging lots and lots of poo at me, and bitterness: the quicker, thicker piss you offer!

Michael 'perkiED' Perkins, 4A C&O, "With disdain"
Michaelangelo 'AngeLED' Finistauri, 2B Stactsci, "The same way I treat other burns, you bigot!"

Bug of the Fortnight

Bugs in the Strangest Places

The following Bug of the Fortnight is a triple header. First we will start with buggy C code, then proceed to buggy pascal and finally Intel assembly. Bug of the Fortnight, for those who are not familiar is published with every issue of *mathNEWS* that shows bugs in many different languages (although, mostly in C)

The following C code attempts to sort a list of floating point values. Can you spot the bug?

```
void Sort(float *pValues)
{
    for(int i = 0 ; i <= sizeof(pValues)/
sizeof(float);i++)
    {
        if (pValues[i] > pValues[i+1])
            pValues[i+1] = pValues[i];
        pValues[i] = pValues[i+1];
    }
}
```

The following code creates a linked list of floats in pascal:

```
program LinkedLists(output);
begin
    var Values: int[12], Counter : int
    while(Counter := 0 ; Counter < 12 ; Counter++)
        Values[Counter] = Counter;
        print(Values[Counter]);
    end while
end
```

The following code creates a dynamic array in assembly in only three lines of code:

```
mov 0x00000122
mov 0xDEADBEEF
jr $48
```

James Simpson

ISSN 0705—0410

mathNEWS is normally a fortnightly publication funded by and responsible to the undergraduate math students of the University of Waterloo, as represented by the Mathematics Society of the University of Waterloo, hereafter referred to as MathSoc. *mathNEWS* is editorially independent of MathSoc. Content is the responsibility of the *mathNEWS* editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or *mathNEWS*. Current and back issues of *mathNEWS* are available electronically via the World Wide Web at <http://www.mathnews.uwaterloo.ca/>. Send your correspondence to: *mathNEWS*, MC3046, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to userid math-news@student.math.uwaterloo.ca on the Internet.

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Waldorf and Statler: Michael Perkins & Michaelangelo Finistauri

Prez Sez

Hi everyone. By the time you will be reading this, the last of your classes will probably be coming to an end.

Student Life 101 was last weekend. Thanks to all the volunteers who helped make it a success! I'm sure that all the frosh who came left with a better idea of what lies ahead of them.

MathSoc is in the process of changing some of the club policies. One of these changes is: starting next term there will be a \$20 deposit for anyone acquiring a key from MathSoc. This, along with a couple other changes, has been posted on the 3rd floor for your review.

This is probably the last you'll hear from me for at least a while as I will be on co-op next term, so good luck with exams and have fun next term!

Monika Szydowski
President, S07

We have a winner!

Several of them, in fact

As promised we reward those who make you, the readers and extortionists, laugh and, more often than not, file complaints! They are as follows:

- Issue 2 - candu for his delightfully witty MUDPit.
- Issue 3 - The Single Guy for sticking it to hopeless romantics
- Issue 4 - Finkels & Nadz for their front page comic reminding us why we're not in arts.
- Issue 5 - Anonymous Coward, previously dubbed Malcolm Stevens, for rubbing in the fact that we don't get any, but at least we can laugh about it.
- Issue 6 - Val for interviewing Google without them even knowing it happened.

perkiED & AngelED

Bug of the Fortnight, the revenge!

This code creates a couple of lists, concatenates them with a few additional elements and inserts an element.

```
set L {a b}
set M {c d}
set N [concat $L $M {e {f g h} i} j]
set O [linsert $N 10 k]
```

snippet

Did you ever wonder...

Why was the main attack force that the bad guys had in Power Rangers a fleet of mentally stunted, clay ninjas?

AngelED

“GOTO Considered Harmful” considered harmful

Goto statements should only be used in assembly, because you don't have any other choice.

VPAS Sez

All right dudes (and dudettes), it's all over! One last day of reading *mathNEWS* (instead of listening to your professor) and then freedom! For a couple of days, at least.

Of course, this now means that my job is coming to a close. A long 3 months of making sure that all of you don't go bored to tears during the long slog of assignments, midterms, and all-nighters in the computer labs. All while desperately trying to keep up with *my own* assignments, midterms, and all-nighters.

All in all, it was great term! Thanks go out to all the directors, office staff, and all the former VPASes for giving me some tips and tricks and making sure that I didn't screw up anything!

Mark Jackson-Brown
Vice-President, Activities and Services S07

Size matters

Measuring and adapting for changes in size

When writing vast software systems, developers often forget about one key issue in writing software - size. In software development it is truly the size that matters. When I say size I am focusing on three areas, the size of the application, the size of the amount of memory being used and, finally, the amount of code in the system (the code size).

The size of the application refers, of course, to how much hard-drive space a particular application uses. By and large for most software, application size truly doesn't matter since we are focusing on software systems that are in the gigabytes (yes, they do exist). So the question becomes: what is the appropriate size for an application? That depends on the type of software, for instance many games are gigabytes in size, office applications are several hundred megabytes in size and many custom solutions are under 50 megabytes in size. The golden rule is to create an application that is within the expected size of an application of your class. For instance, if you are writing a video game, it is quite appropriate to write a several gigabyte game. On the other hand if you are writing custom software, it should be around 250 megabytes.

The amount of memory that your application is using is another key consideration when developing software. Often times developers do not realize that something as simple as converting their application to a 64-bit platform could double the memory footprint of your application. In addition, many developers overestimate the amount of memory that their customers have. For instance; if you write an application that consumes hundreds of megabytes of memory, how likely will it be that your customers could cope with this memory demand? What happens when you add functionality to your application? Will the size of your solution increase and if so by how much? These are questions that developers often ignore but haunt them further down the road.

Finally, code size is another factor that you need to consider when developing a solution. Over time as the functionality of your software increases, so will the code size. One of the fundamental questions you should be asking yourself is how manageable is your code? As the complexity of your software solutions increases, so does the complexity of the code. Often times it is more efficient to do a complete rewrite of a software solution to reduce code complexity and to re-examine the issue that your software solution is solving.

James Simpson

profQUOTES

That's right. Damn, you got me.

Bodmann AMATH231

Nice try. For a moment you had me thinking.

Bodmann AMATH231

We have two possibilities. Number one, you remember we did this before and it's in your notes...

Bodmann AMATH231

[Of his watch beeping] That's my instruction to self destruct.

Bodmann AMATH231

You can memorize this if you want. I won't be mad at you.

Bodmann AMATH231

Something clever happens here, and damned if I can see what it is.

Geelen CO351

$1+2+2$ is not 6. $4+3+5$ is... complicated, but not 11.

Geelen CO351

We had a theorem that gave us either a negative dicycle or a feasible potential. So what the hell is a feasible potential? Where am I?

Geelen CO351

If you're going to siphon some gas... hey, it's \$1.10 now, right?

Scholz PHYS122

Let's skip it: it's a bunch of engineering stuff.

Scholz PHYS122

Make sense? Clear as mud?

West AMATH250

Two down, infinitely many to go.

West AMATH250

You may be wondering 'Okay, Joe, what's the point of this?' Since you're math students I'm not going to tell you.

West AMATH250

So peace breaks out. That's a problem here.

Storjohann CS240

So I was looking at the only source of knowledge, Wikipedia.

Naeem CS241

I usually get my questions from various textbooks. This one... well, I think it's a typo.

Wolczuk MATH138

I can't [do it]... you figure it out.

Wilmot ACTSC232

[After changing notes on all 3 boards] This is a really good day for me to be handing out the course evaluations.

Wilmot ACTSC232

Now I just rigged [the example], obviously.

Lawrence PMATH345

I have had more fun teaching this class than I did when I had smarter students.

Anonymous

Elvis was not, and I mean this in the nicest possible way, a bright man.

Woods MUSIC140

That's a roundabout way of saying "The Nazis invented just about everything"!

Woods MUSIC140

Nothing stimulates the mind like recreational pharmaceuticals.

Woods MUSIC140

If and Only If...



The MUDPit

Resurfacing for one last grasp at eternal glory

UW-MUD v 1.0

Enter, Math Student, and choose your destiny.

You are in the Real-Time Lab.

> look around

You see a computer terminal and a model train set, complete with train!

> use terminal

Drawing upon four years of received CS wisdom, you begin programming the train set.

The trains move in carefully programmed patterns.

> test program

You test your Real-Time project on the train set.

A computer terminal casts "Segmentation Fault"!

The train set goes berserk. Tiny scale models of trains round the track with monotonically increasing speed!

> cast impressive profanity

You launch epithets of every description at the terminal in the expectation that this will somehow fix your program!

It does not work.

A model train set bursts into flames!

> leave lab

The door is held shut by a mysterious force.

Encouraged by the force of your invective, a Demon appears amongst the flames of the burning train set!

An overly inventive MUD program blocks attempts by Christian Fundamentalists to have this article banned as satanic literature!

> talk to demon

"Know, Math Student, that the true value of pi is 3, 42 has no successor in the natural numbers, and the Axiom of Choice is false! What have you in response?"

The MC begins crumbling perilously, its foundations having been challenged!

> say um er

With consummate skill in oratory and rhetoric, you respond defiantly: "Um. Er."

> add hastily that's utter bollocks

To which you persuasively add: "That's utter bollocks."

A Demon is not impressed!

Chunks of plaster fall dramatically from above as the MC slowly disintegrates!

Damage: 50 (physical)

> non sequitur

In conclusion, you state: "exp[i π] is -1; therefore, bugger off!"

A Demon is stricken by the logical incoherence of your argument!

Damage: 100000000000 (logical)

A Demon is dead!

You have gained 1 metric crapload of experience!

The MC is saved!

A Professor enters the Real-Time Lab.

> offer hasty excuses for widespread swath of destruction

A Professor is not impressed!

A Professor casts "Assign Failing Grade To Project!"

You have been kicked from the server!

mathNEWS to hire an infinite number of monkeys on an infinite number of typewriters

Typewriters to come out of your tuition

mathNEWS is expected to announce later today that it is hiring an infinite number of monkeys on an infinite number of typewriters to produce future mathNEWS issues. "The current writers just aren't coming out with enough good material. We prefer random strings of characters to litter our pages rather than what's currently available," a source close to mathNEWS said.

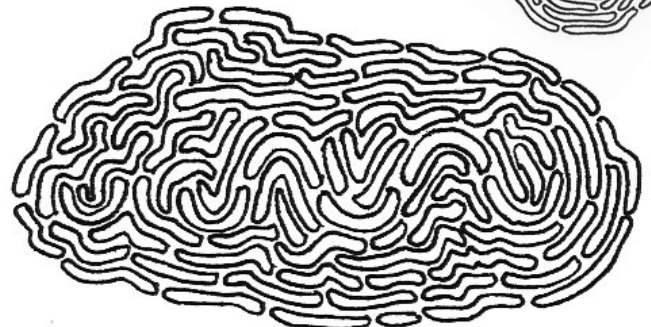
mathNEWS has had much trouble finding decent material in recent years. "The quality of mathNEWS has been in decline since the late nineties," says a blurb posted on the mathNEWS website. "All I know is that it ain't what it could be or used to be, but we're too short of decent writers these days."

mathNEWS will start by stealing two monkeys - one male and one female. They will then be allowed to breed for all eternity. "As long as we have as many typewriters as monkeys at all times, these monkeys will eventually produce something that will make mathNEWS a respectable publication."

To support the infinite number of typewriters, all students in the Faculty of Mathematics will have their tuition raised by 50%. In addition, students' tuition paid to other faculties will eventually be funnelled out of their faculty and into the mathNEWS typewriter budget. "Eventually, we will have 100% of tuition from the other faculties and one-third of the tuition paid to the Faculty of Mathematics. However, this may not be enough. If that is the case, the Faculty of Mathematics will start accepting anyone into the program who is willing to pay money up front and type random letters on a typewriter all day long for eternity."

In response to what mathNEWS could become with this new strategy, Imprint has decided to put together an infinite number of artsies on an infinite number of terminals to achieve better results. "Artsies are smarter than monkeys," an Imprint editor said, "Imprint will have a golden story long before mathNEWS."

Anonymous Coward



Dating Advice From The Single Guy

Dear The Single Guy,

I need you to talk some sense into my guy. He seems to be completely stuck in the 1950s ignoring all the strides that womyn have made towards equality. He's been trying to be all "I'm a man, I know all about how to deal with money whereas you're just a dumb little gyrl who couldn't possibly know how to keep track of money well." I've been with him for a couple years now, enough that we've decided to live with each other for a while. Lately he's been trying to make me pay for a date, how respectful is that, him trying to undermine my financial independence. The pig also expects me to do things like housework and cleaning and such, he often comes home from work saying things like "what are you doing while I'm at work or at class, this place is a mess." Tell him to stop wanting me to fit into outdated gender-roles and just let me watch my soaps and talk shows. I've heard he likes to read this publication of yours so I was hoping that you could teach him a quick lesson about equality.

—Alice

Alright, you want an equality lesson so here's on for you. But first, I've just got a quick question since I noticed you were spelling women with a 'Y.' Now this is something that bugs me and I just wanted to ask. I've heard you guys say (that's right, you *guys*) that it's because the 'Y' makes it less masculine.

Environmental Studies declares war on Applied Health Sciences

Rest of campus oblivious to "war"

The Faculty of Environmental Studies announced today that they are declaring war on the Faculty of Applied Health Sciences. "They have overstepped their bounds one too many times," an environmentalist said in an interview with *mathNEWS*. The confrontation stems from an incident on June 13, 2006 involving animal testing. "Their allegations are ridiculous. We should be able to do whatever we want to the environment to further our studies," said a first year enrolled in Recreation and Leisure.

Analysts have been unable to predict how long this war will last. Some have said that it will last a long time given the fact that both faculties are relying on external circumstances to fight the war. "Since Applied Health Sciences and Environmental Studies both believe they can rely on nature to take out the other faculty, we could be in for a long war," said an analyst studying the war.

Despite the fact that two of its faculties are at war, the University of Waterloo seems at peace. When asked about how he felt about two of his faculties going to war with each other, the president of the University of Waterloo responded, "I don't know what you're talking about, I don't know about any faculties of Applied Health Sciences or Environmental Studies."

This war comes as a shock to many who predicted that it would be the Faculty of Engineering declaring war on the Faculty of Mathematics, as the relationship between the two faculties has degraded over the past forty years. When asked why this was not the case, a sixth year engineer responded "Are you kidding? Math would completely destroy us."

Anonymous Coward

Since when is a 'Y' less masculine? Last I checked it's a 'Y' that makes men male (as opposed to getting another 'X'). Perhaps if you want to make that point you should use something other than a 'Y.'

Anyway onto a lesson of equality. Equality is the best example of an equivalence relation. What properties does an equivalence relation have? It's three simple ones: the reflexive, the symmetric and the transitive properties. Now your little version of equality—and one used very often by the feminists—doesn't even meet any of these. First, reflexive. Look, you've managed to emasculate this boyfriend of yours so much that he sounds like he's not even really a man anymore, so your man != man. You refuse to pay for any of your dates yet fully expect him to. I'd call that reverse sexism, but whatever it is it doesn't follow the symmetric property. Lastly, there's only two values we can take here, and the transitive needs 3 in order not to be trivially turned into the symmetric property, so we'll say that it can't be done properly. All in all if I were to offer any advice it is that this reverse sexist girl needs to be dumped immediately. People like her only make the cause of women's rights to go backwards in the eyes of guys like me.

What's with all the people writing in lately who just generally piss me off and don't get it? What ever happened to the generally well-intentioned, oblivious people? I miss those times... Have a good exam period and next term whether in class, time off or co-op.

ES monkeys declare war on AHS monkeys

The rest of the monkeys oblivious to "war"

The infinite Environmental Studies monkeys announced today that they are declaring war on the infinite Applied Health Sciences monkeys. "Oook, aakaak oook, oook Oook aaahhh, EEEEEK!", an environmentalist said while flinging a gob of poo at the opposing side, while remotely submitting to this issue of *mathNEWS*. The editors of this issue were flabbergasted that they got so many submissions this week from the monkey hordes. When asked to comment on the state of the war, they scowled and started flinging poo at the interviewer. I interpreted that as meaning that they're irritated that the bulk of their production staff is out flinging poo while they're stuck doing layout.

When asked for a comment the president of the university said, "Accidents with infinite loops and a cloning machine happen occasionally. At least these are only chimps rather than the antelope that were next in line. What in the world would we do with them?". Since the incident the monkeys have been loaned to the various faculties with greater or lesser success. Math is using them to write better *mathNEWS* articles, AHS and ES are waging a war, Engineering and Arts have integrated them into their student population. Science capitalized on the opportunity to test out some new space capsules.

The scientists involved in the simian snafu are pleased with the results and claim that this should stop the administration from monkeying with their budget.

**This filler brought to you by poo!
A projectile pile of steaming fun!**

An interview with Google

So I'm sure many of the loyal *mathNEWS* readers have gotten a job interview with Google; however, the writers of this bastion of erudite thought are not so lucky. This may or may not be because a quick Google search with a "fiend-finding" algorithm will reveal that we all have fiendish plans for world domination, and Google doesn't take kindly to competition. In any case I've decided to turn the tables on those Google recruiters by asking them a few questions. Unfortunately, upon learning that I was asking them questions on behalf of *mathNEWS* they refused to reveal their secrets to me. I decided to take the next best approach and question the little man that provides answers on their flagship page: Google.ca!

- Q: What is your biggest flaw?
- A: Calacanis.com: We've had two long, frustrating years of servers going down.
- Q: What is your greatest strength?
- A: blogs.msdn.com: Technical Careers @ Microsoft
- Q: Where do you see yourself in five years?
- A: wiki.answers.com: Well, in five years, I will be married to a handsome European man, touring the South Pacific in our yacht with a maitai in my hand.
- Q: Would you kill your mother-in-law for this job?
- A: Amazon.com: I would arrive on your mom-in-law's front porch, ring the doorbell, and break her knees with a Louisville slugger when she opened the door.
- Q: When can you start?
- A: wildwoodsurvival.com: you CAN make a fire from a can of coke and a chocolate bar!

I didn't really get understand the answer for that last question, but I think we both knew that Google wasn't getting the job anyway. I was just asking to fill the awkward silence.

I invite any of the *mathNEWS* readers to try out an interview with Google themselves.

Val

You know you're a CS student if:

- You don't see people walking outside - you see random walks, shortest path, and A*.
- You sort your laundry using bucket sort.
- Interacting with members of the opposite sex seems like an interesting problem in game theory, but every move you try seems to have non-positive payoff.
- You refer to your house as '127.0.0.1'.
- You've ever spent more time writing a script to do a task than it would have taken to do the task in the first place.
- When confronted with a big CS project, you break it into subtasks, calculate dependencies and determine the critical path — which, unfortunately, is longer than 24 hours.
- You solve real-life conversations using minimax with alpha-beta pruning.
- You 'core dump' on exams.

candu

When to pull a fire alarm

With exams only but a week away and, given the school's track record for douche bags during this time, I have provided a guide to help you, the students, know when to pull the fire alarm.

- When there's a fire.

There. That's the only time you should pull a fire alarm. Otherwise: don't do it. Sure you could pull the fire alarm during the exam and have make everyone writing have to listen to a blaring alarm for twenty to thirty minutes or you could not be a worthless waste of flesh. The choice is yours. If you are going to pull the alarm during an exam, at least have the decency to tell me about it afterwards so I can beat the ever-loving shit out of you.

The fact of the matter is if you pull the alarm erroneously they will not postpone the exam. They won't even evacuate the building unless there is an actual fire. At the very least, consider starting an actual fire. Not on school property, of course. That way fire fighters don't have to waste their time, the people writing their exams don't have to listen to the blaring alarm, and no one is given a powerful desire to make you feel the cold embrace of death. We all win! If you are so bored that you want to pull a fire alarm then do something constructive like jump into oncoming traffic, go to sleep on train tracks or run head first into a thermo-nuclear explosion. Please.

Etymology of common words

And how they aren't inherently sexist

- **PERSON** — "Middle English, from Anglo-French persone, and from Latin persona actor's mask..." This word originally did not put emphasis on the syllable "son".
- **HISTORY** — "... from Greek, inquiry, history..." Notice that the word's origin is not "his story". If anything it would be "hi story", which makes no sense.
- **WOMAN** — "from Old English wifman, from wif woman, wife + man..." Man wasn't always monosyllabic either. It just evolved differently than woman.
- **MANIPULATE** — Oh wait, no one cares that the first syllable of the word is "man". It's almost like the word evolved from a different language and its origin doesn't reflect the gender implications that ours has!

Etymologies provided courtesy of the Merriam-Webster Online Dictionary (www.m-w.com).

AngelED

Who Wants to be the Next Raging Whore?

Premiering prime time this Fall is the newest addition to reality TV: Who Wants to be the Next Raging Whore? Unlike other shows like Top Model or Pussycat, this show doesn't have the same flimsy pretexts as its competitions. We see trashy humanoids compete with each other to earn a chance to have their own Pr0n sites and movies series. The losers are deemed too clean for the average 80-year old pervert and resigned to being dancers for Christina Aguilera. So don't miss out on all the sexually transmitted action when Who Wants to be the Next Raging Whore hits your television screen with a blast of herpes.

The Hee Ho

All I learned about Harry Potter I learned from fan fiction

Who writes this stuff? I know I don't!

I must confess a terrible weakness in my education. I had no idea who this Harry Potter was. I know, I know! "Have you been living under a rock!?", I hear you cry. "Where have you been the last 10 years?" you ask. Well for your information I've been trapped on the 6th floor, facing horrors that you only have a 1 out of 20 chance to meet on the lower levels of the building.

In order to remedy this terrible deficiency, I knew I had to act fast. I couldn't just go buy the books and catch up. After not having left the math building for so long, I was unaware of how the topology of the city had changed. I decided that venturing out into the blinding moonlight (let alone daylight) would be suicide, so I reintroduced myself to my former god: the Internet. Using the now vast quantities of indexed information on what I'm assured is now called "the tubes" I found the information that I was seeking: Harry Potter Fan Fiction.

I quickly learned to avoid strange crossovers that may taint my view of the universe, such as Harry Potter and the Trekkers of Stars, or Harry Potter and Busters Myths. After these initial obstacles had been overcome, I learned some very interesting things about the Harry Potter Universe. First he's a wizard. He has crazy adventures. Most of all, I discovered he has a family who loves him.

From what I've read the Dursleys are the loveliest family that has ever graced the printed page. Their son Dudley, being the most talented wizard of the day, graciously tolerates that Potter brat after whom the series is incomprehensibly named.

However, the stories I read varied. Occasionally HP and his friends Ron and Hermione, are rather pleasant and save people, and there is a quite a bit of more interesting stuff that I doubt that *mathNEWS* would even publish. I'm astounded that accidents with Polyjuice potions, animal fur and love charms make it into childrens stories these days, but hey, times change.

After gathering all this information, I felt I was ready to dive into the 7th book that everyone had been touting around for the week. I managed to snatch a copy from a snoozing comfy dweller and burn through the book faster than the Firebolt can cross a Quidditch field. And you know what? I'm amazed that ***** [Spoilers denied! -42]. Otherwise it is a rather mediocre novel that is utterly incongruent to what happened previously in the series. Glad that Potter kid bit it though.

The Lost Mathie

Time to Waste Time

"FRICTION"



*It's math***NEWS**, the home game

Here's a handy-dandy form to make your requesting process even easier:

1. F W S 20 2. F W S 20 3. F W S 20

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

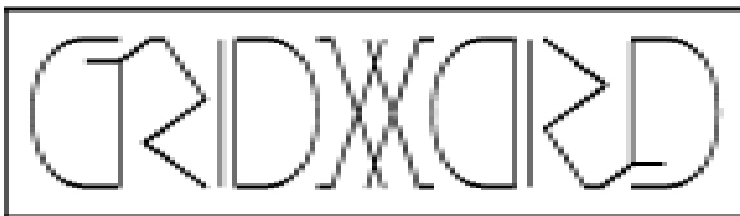
	6		9	5			8	
	4	8		6			5	7
	7			3			2	1
	5			1	3	8	9	
	2		7	4	5		3	
	1	3	6	9			7	
5	3			8			6	
6	8			2		5	4	
	9			7	6		1	

The Software-Engineer

“Fuck that!” Rob announced and ran off into the night. Although, he has disappeared, word of his many drunken orgyparties can still be found on Face Book.

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

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



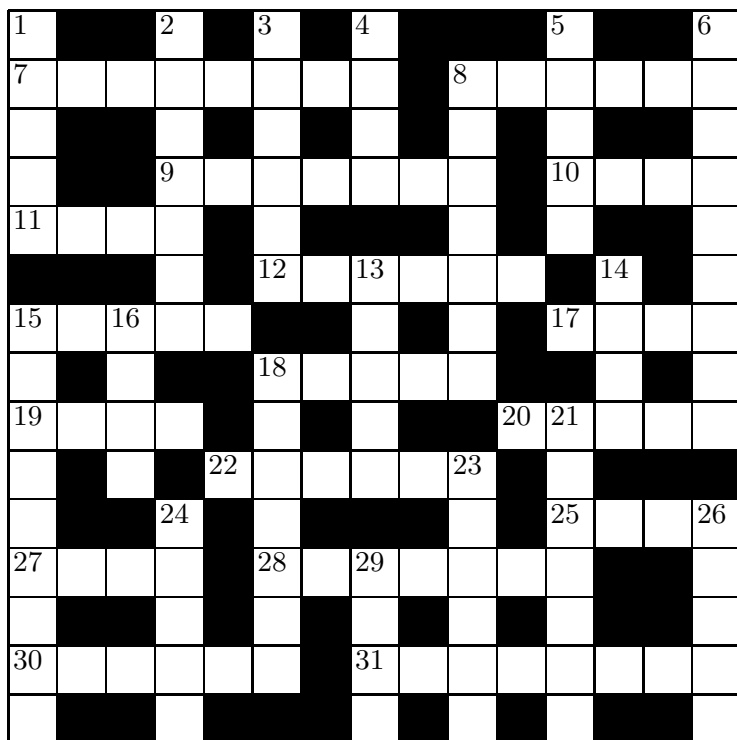
Grid Clues

Across

7. Could be an affair is over but this way it's a close person. (5,3)
8. Affirm that an American ship is back in existence. (6)
9. About the rent... let it go. (6)
10. The meadow failed to show a piece of shrubbery. (4)
11. Fashion a stooge around many. (4)
12. The breeze hurts a piece of glass. (6)
15. Love twice in the pig's home is dirty. (5)
17. The far east has a region. (4)
18. The dike was built by fifty the night before, this way. (5)
19. Did well by having a backward computer company. (4)
20. Start an urge to quarrel. (5)
22. Herb said to change a direction in Scottish to the right. (6)
25. A sign to circle males. (4)
27. A piece to catch backwards. (4)
28. Continued stories could be airless. (7)
30. The wreck onshore has to figure. (6)
31. Exudes from a Mediterranean island in one or two directions. (8)

Down

1. Shock puts half of baseball on the limb. (5)
2. Most loved opposite a breather. (7)
3. Take my lead- Listen, don't stumble high! (6)
4. Almost the same plateau. (4)



gridCOMMENTS

Well, it's the last *gridCOMMENTS* of the term. The solution to this week's grid will be on the *mathNEWS* website: www.mathnews.uwaterloo.ca. There are no prizes to be won this issue, only the satisfaction of completing the cryptic and sudoku. Now for what you have been waiting for: last issue's winners. Last week's *gridQUESTION* was, "Who do you call?". A word to the wise, insulting the editor in your answer is not a good strategy for winning. There were four prizes to be won last issue. The first, for the grid goes to Matthew Woolman who answered, "No one—I have instant messengers". The second and third go to Sarah Sun who answered, "Mathbusters! Cracking all your mathematical problems today!" and Daniel Goc just for mentioning Optimus Prime in his answer. The final prize, for the INKSTAND filler problem, goes to Graeme Kemkes who answered, "Ghostbusters".

Thanks to everybody who sent in solutions to the puzzles this term. Hopefully we managed to maximize the number of different people who won prizes.

perkiED

5. The mixed sample loses a direction by the sacred verse. (5)
6. Makes holes for each in agreement with that consumed. (9)
8. So be it around a single type of plant. (7)
13. In the stomach, but sound in the service. (5)
14. Boast that the bosom supporter has a high note. (4)
15. A clean musical?—not on afternoon T.V.! (4,5)
16. A cookie is about in the middle of nothing repeated. (4)
18. Hurt raised with one descendant of the connection. (7)
21. Change or store the morning bird. (7)
23. No charge in each change of luck. (6)
24. I see he's taken the post. (5)
26. Raise a way in the near future to get a looped rope. (5)

Solutions to previous *gridWORD*

C	R	A	S	P	Y	O	F	R	A	O	N	T	H	B	E	A	C	K	N
A	I		E	A	R	M		L	A	M	H	I		E	B	E	T		L
P	S	O	L	L	O	B	E	A	N	R	E	C	H	R	E	L	S	E	O
S	E	F	A	T		A	B		S	T	I	O	E		R	L	C	A	P
L		F	I	R	L	E	D	H	I	N	R	L	C	A	P	I	E	R	D
O	V		I	R		D	E	B	S	T	R	O	Y			N	N		I
C	I	D	O	E	U	D	B	U	R	E	S		P	O	H	S	A	T	E
S		O			P	J	O	R	L	T	R	H	A	Y	M	L		L	E
P	O	G	L	L	E	U	E	B	L	R	O	W	C	B	Y	B	O	L	K
L	R		E	A		S	E	C	U	R	L	A	R			A	B		M
E		B	A	R	E	T	A	M	D	E	N	P	T	T	U	R	A	N	S
N	L	U	Z	C		M	R		X	A	T	F	M		R	N		K	C
D	E	M	I	E	R	E	A	L	I	D	N	A	E	C	X	C	U	C	U
I	N		E	N	O	N			C	A	X	L	E		H	W	A	U	
D	S	O	K	Y	A	E	T	I	S	O	M	N	I	T	A	E	I	R	T