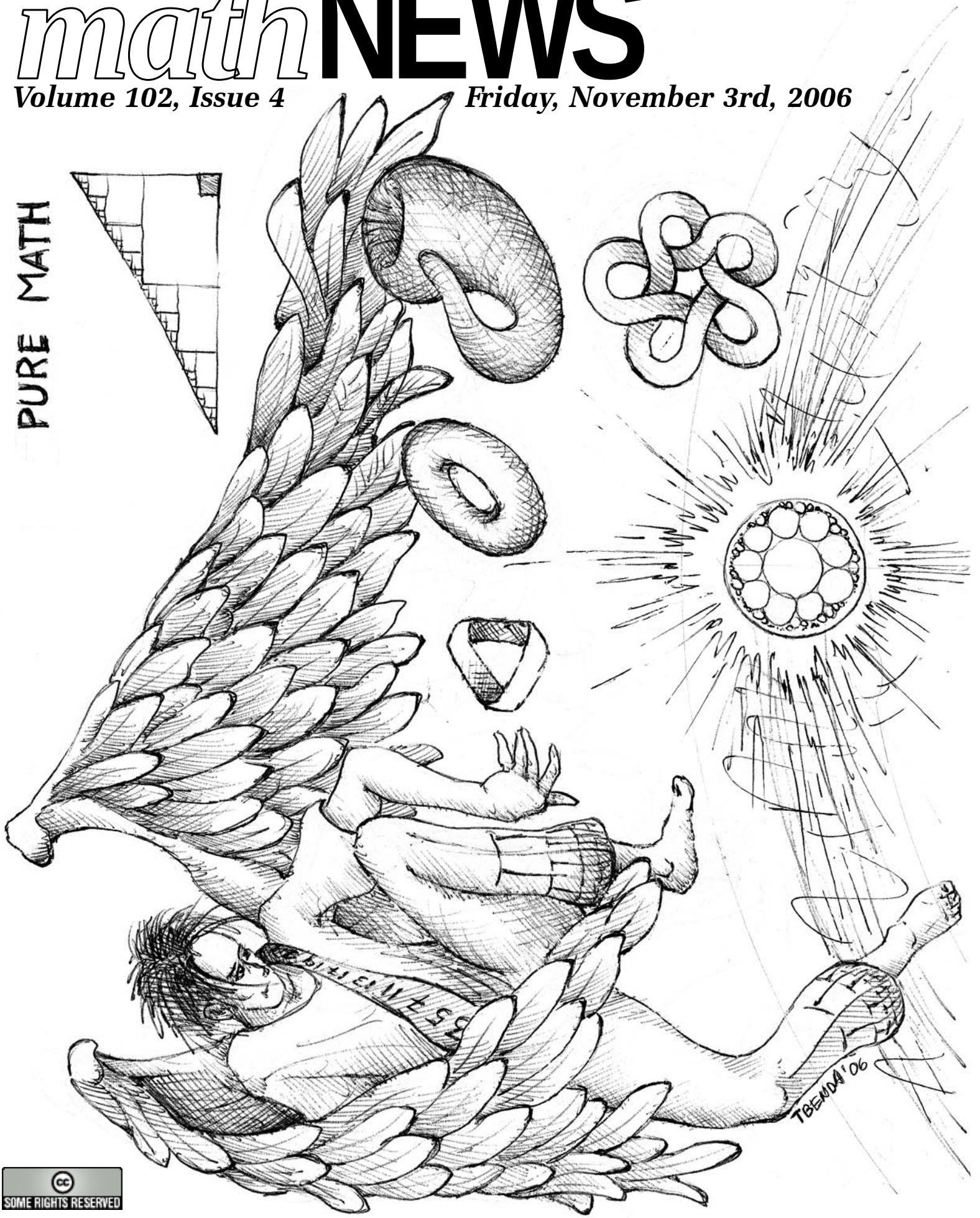
mathNEWS

Volume 102, Issue 4 *Friday, November 3rd, 2006*



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*look*AHEAD

***math*NEWS**	
November 3	Issue #4 recovers from midterms
November 13	Production Night #5
6:30PM, MathSoc	
November 17	Issue #5 gets groovy
MathSoc	
Monday	Last day to buy Charity Ball tickets
	check MC3038 for details
Tuesdays	Games Night
	Check it out in the Comfy at 6:30
Wednesdays	Two movies, no dollars!
Look for posters!	
November 10	Charity Ball
Math Grad Committee	
Wednesdays	Pizza day!
Buy cheap pizza to support the graduating class of 2007	
Math Faculty	
Questions about these? See an academic advisor!	
Tomorrow	UW Day
	for details, e-mail
	vpas@mathsoc.uwaterloo.ca
November 3	Last day to WD from a course
	As in TODAY!
December 7	2nd chance to write the ELPE
December 8	First day of exams
CECS	
November 1	Continuous Phase Postings Begin
see www.cecs.uwaterloo.ca/students/datesF06.php for details	
Feds	
November 3	Theory of a Deadman
	Fed Hall
Miscellaneous	
Today	EngScunt
November 11	Remembrance Day

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*math*NEWS 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. *math*NEWS is editorially independent of MathSoc. Content is the responsibility of the *math*NEWS editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or *math*NEWS. Current and back issues of *math*NEWS are available electronically via the World Wide Web at http://www.mathnews.uwaterloo.ca/. Send your correspondence to: *math*NEWS, MC3046, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to userid mathnews@student.math.uwaterloo.ca on the Internet.

The editors remind the readership that the opinions expressed herein are solely those of the authors, and further, that it's not their fault that the opinions of the authors don't always fit the space available. And while we're reminding people of things, we remind you, the reader, that you are attractive and good-looking, not least of all because you're taking the time to read this puny text that is ordinarily quite ignorable.

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Grand Poobah and Poobee: Eric Logan and Jenn Smith

For our friends in the National Library:

9 770705 041004

GIS Day @ UW : Wednesday November 15th 2006

GIS Day is an annual grassroots event that celebrates Geographic Information Systems (GIS) users and teaches and promotes research tools to schools and businesses.

To coincide with worldwide GIS Day events (see http://www.gisday.com), the University Map Library, Faculty of Environmental Studies and the Waterloo-Laurier Graduate Program in Geography will be hosting a variety of GIS Day events on Wednesday November 15th, 2006, between 10:30 and 3:30 pm in the ES1 Courtyard and the adjacent seminar room ES1 221.

All UW students, faculty and staff are invited to participate in celebrating GIS Day. Learn what Geographic Information System (GIS) is and how it can be used in both your academic and personal lives. Learn more about the different software that supports all the geospatial data available to the campus.

The ES Courtyard will be transformed into a poster map gallery where students, faculty and staff across campus will be displaying their research and work using GIS. For the duration of the event the seminar room will have a continuous stream of UW speakers demonstrating GIS technology in their course projects. At the end of the day, Eva Dodsworth from the Map Library will introduce GIS and demonstrate the Library's data resources using the software GeoExpress View. Don't miss this session as you will learn how to incorporate GIS into your next course project without needing to know or use ArcGIS.

There will be several door prizes, giveaways and refreshments as well. Please visit http://www.fes.uwaterloo.ca/gisday/ and register for the event!

Eva

Applied Math Professor is Mourned

Marita Chidichimo, a faculty member in UW's department of applied mathematics, died on October 22nd at the age of 60. She had been on disability leave for about three years, battling a recurrence of cancer.

At UW she was cross–appointed to the department of physics and astronomy, and did research in broad areas of atomic, molecular and optical physics. For a time she was scientific coordinator of the international IRON Project, which has "the goal of computing, on a large scale, electron excitation cross sections and rates of astrophysical and technological importance, using the most reliable procedures currently available." For two years, 2001-03, she was chair of UW's Women in Mathematics Committee.

*math*NEWS sends its sympathy to all those that knew her. In memory, we reprint this following *ultra*CLASSIFIED from 1988:

Attention M. Chidichimo:

Please introduce yourself.

Your Math 230B class

Storybusters?

Not that I have many noticeable qualms with the Imprint, but comparing themselves to Ghostbusters may not have been a bright idea. Consider that the Storybuster would take all stories and lock them up into a container, isolating them from society. What's left? Ectoplasmic ooze. Just something to think about.

Angelo

Prez Says

Not a whole lot

I've arrived late to this *math*NEWS production night because I'd been attending Feds' twice annual General Meeting. Not much happened of note, besides changing the name of the Womyn's Centre to the Women's Centre. There was spirited discussion both in favour and in opposition to this change, but in the end the motion carried. While it may not seem all that exciting, important things do tend to happen at these General Meetings, so I encourage you all to attend in the future. If you want the details, I'm sure Imprint will have a lengthy rundown of the proceedings.

On the MathSoc front, we're chugging along. By the time you read this, MathSoc Council will have made a decision on whether or not to fund a renovation of the Mathematics Society office. I'm cautiously optimistic that this project will go ahead, and I'm certainly looking forward to having the office cleaned up and reorganized to serve math students better. As always, if you have any thoughts on the matter, I encourage you to contact me.

Nominations are presently open for a variety of upper year class representative positions. Also open right now are nominations for Honourary Lifetime (MathSoc) Membership, an honour given from time to time to individuals that have made significant contributions to student life in the Math faculty. Both forms are available outside the MathSoc Office.

We'll be opening Nominations for Spring 2007 and Winter/Fall 2007 Executive positions fairly soon. Being an exec is fairly time consuming, but for the most part it is worth it. I encourage you to consider taking on this responsibility and trying to leave MathSoc a little better than you found it.

Also coming up is the Charity Ball. It's a pretty swanky party held annually to benefit worthy charities. The proceeds this year will be going to the Canadian Cancer Society. Whether or not you're in Math, I encourage you to go. It will be held on November 10th at the Waterloo Inn.

I think that's all for now. Until next time.

Andrew Fransen
MathSoc President F06
prez@mathsoc.uwaterloo.ca

VPF Sez!

The land of finances is currently in a happy state. I've been somewhat busy signing cheques, counting money, and keeping control of the finances. I've also been somewhat more busy with school work. Ah, school work, how much do I loathe you…

Also, I've been spending some time keeping our amazing VPAS sane by giving a lending hand towards Charity Ball. You should all come! It'll be a really good time. Mark November 10 off on your calendar, get dressed up, and come have a great time supporting the Canadian Cancer Society. Buy your tickets by the end of Monday, and you won't regret it! It's a great opportunity to wind down from the crazy midterm season. Midterm season should be over by then. I know my last midterm is the night before. Ah, midterms, how much do I loathe you…

Please e-mail me, vpf@mathsoc.uwaterloo.ca, with any questions you have.

Nicole LeBlanc
MathSoc VPF F06
vpf@mathsoc.uwaterloo.ca

The VPAS Word

Occasionally VPAS Word is a Subset of English

Movies, games, and free pie! What more can you ask for? How about a Charity Ball? That sounds like a fun time. This term it will be held on November 10th at 6:00pm. There will be a multicourse dinner, silent and live auctions, and a live DJ and dance. All the proceeds from this event will go to benefit the Canadian Cancer Society. You can pick up tickets on the Third floor of the Math & Computer building in 3038. Make sure you get them quick, as the last day is Monday. *[Seriously, folks, it's going to be a fun time, and I'm not just saying that because I'm running the auction again… — inkEd]*

Coming up soon we have Pints with Profs and Name That Tune, more details will show up later. You should check out the website for more up to date information (www.mathsoc.uwaterloo.ca) or the whiteboard in front of the C&D. Both of these sources have lots of information about what's going on with the society.

This past week we held approximately pi squared day. Free pie was served on the third floor of the MC. I would say it was a successful event, but I'm a little biased as I haven't run it yet. But I can say it as I can see the future. OOOOOOOOOEEEEEOOOOOOO I am Zoltan!

Zoltan over and out.

Alex McCausland
MathSoc VPAS F06
vpas@mathsoc.uwaterloo.ca

What is this?

It is 12 years old
And it constantly grows
It has 3 million dollars
And funds most projects it knows

It does not seek profit
It has only one goal
To help undergrad math
Prosper and grow

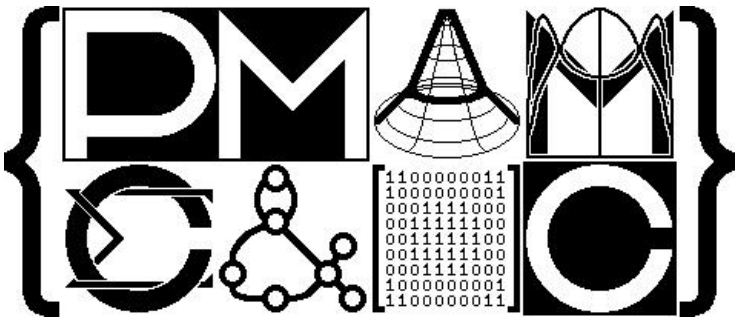
It sponsors computers
Coursenotes and chairs
Sends people to conferences
For all mathies it cares

It's run by the students
For students it's run
What's best for the mathies
It will always fund

Be on Funding Council
And share your view
Submit applications
Today they are due

Submit your proposal
By November 10th
It makes learning better
It is called MEF

Denis Chichkine
MEF Director F06



Pure Math Corner

What fun activities can you miss if you are not a member (or an affiliated non member) of the Pure Math Club?

- You probably already missed a great lecture yesterday at our quasi-weekly unveiling math seminar (these are on Thursday). Don't miss the next one.
- The Fields field trip! Get free food, but this time in Toronto!
- Help us argue about what sort of couch to get (pink anyone?) But, don't sign the petition to get a bunk bed. That is just wrong.
- Please please feel free to change the topic from synthesisers and hip hop music.
- Look at our wonderful collection of books, and imagine how smart you would be if you read them.
- Get up to date on the latest rumours (and what are you doing next term?).
- Impress first years with exclusive mathematical knowledge they don't know they will soon gain.
- Think of another thing that PMC might stand for, and we might tape it on our door. We will appreciate it, this really helps us when we go to parties with art students.

Lloyd Elliott
PMC Jester

ElseWhen

25 Years Ago in math*NEWS*

This week in ElseWhen, we will be looking at *math*NEWS volume 27, Issue #4, which was orginally published on October 23, 1981. Remember that the entirety of this issue, as well as every other issue of *math*NEWS, is available in both of the University of Waterloo's libraries, the *math*NEWS office(MC3046), and the National Archives of Canada.

Some things remain the same throughout time. Here is a selection from WJ Jordan about a deadly disease that I too have witnessed these past weeks:

Some of [the symptoms] are ragged fingernails, chewed-up pencils and pens in the pockets, a strong craving for a beer or three or nine or however many it takes to pass out, and an urge to burn all of the textbooks in existence on campus using the professors as kindling. These are all symptoms of a disease that arises in epidemic proportions in all universities and colleges: midtermitis.

More in this jam-packed issue:

- List of "Women's Week" Events
- Proof that God Exists
- The Galumphin Gourmets review the MathSoc C&D, giving it only 4 bunnies
- Remember: drop the classes you will fail

Aleph-Null

Firefox 2

Thanks to the wonders of print publishing, this will be more than a week late by the time you read it. However, I'll write anyway. Maybe you'll find a new feature.

Firefox 2 was released in the evening on October 24. If you haven't already (and I know there're at least three people...), get it now! More than half of the extensions that worked with Firefox 1.5 have been updated to work with 2.0. I had only two or three extensions that wouldn't withstand the upgrade, and by the time you read this, they'll probably work, too.

The extension management system has been updated, so while you still have to restart to install an extension, it can resart and reopen all your windows and tabs. This leads into its new crash recovery feature. Once, you had to get the Session Manager extension to restore open windows after a crash. Now, Firefox comes with this by default.

The search bar has been updated, so you can remove and reorder the search engines. Plus, when you visit a site that can be added to the menu, it lights up a little. Try visiting Wikipedia, then look at the button.

The rendering engine hasn't changed significantly. This means that there are very few reasons not to upgrade, since it won't display anything worse than 1.5 did. New features to the rendering will be included in Firefox 3.

Despite some claims to the contrary, the built-in "anti-phishing" feature is not a "potential privacy problem." The claim seems to be that Firefox checks each website you visit with Google. However, this option is disabled by default; to enable real-time checking, the user must change an option and agree to a privacy statement warning *before* this can occur.

In short, unless you have already tried Firefox **2** and decided against it, go to getfirefox.com and give it a try.

mozWatch

Note to First years...

If you think doing assignments is hard, try marking them!

Disgruntled Marker

Faculty Lecture Series — Today

The third lecture of the David R. Cheriton School of Computer Science Faculty Lecture Series will be held on Friday, November 3, 2006, at **3:30 pm in DC 1302.**

Justin Wan of the Scientific Computation research group will speak on "PDE Modelling in Scientific Computing: with Applications in Physical and Biomedical Simulation."

Abstract:

Modelling is a key element in scientific computing. Partial differential equations (PDEs) have long been used in modeling scientific and engineering problems, e.g. air flow around an airfoil, underground water flow. Recently, PDEs are gaining popularity in modelling even wider variety of problems. By skillfully setting up appropriate equations, one can make use of PDEs to solve problems in computer vision, graphics, medicine, finance, etc.

In this talk, he will introduce the techniques of PDE-based modelling and the numerical challenges when one solves these equations. In particular, he will demonstrate the use of PDEs in computer art, image processing, simulation of physical phenomena and brain mechanics.

Be careful what you wish for

Something mildly ironic might happen

I walked to school on a cold, windy morning. The sky had an ominous red glow on the tree leaves. As I neared the campus, a shiver ran down my spine. I could tell something was amiss.

The parking lot was vacant. There was not a single car in sight. "They all must have been stolen," I thought to myself. As I approached the MC building, with not a living thing in sight, I recalled the events of the previous night:

I had wished that the entire world would go away. I wished for peace and solace from the madness of school. All because of the terror of midterms, the unrelenting terror in my mind. Would I be successful? Would I be completely surrounded by gorgeous — well, that's a stretch.

I walked up the steps. Maybe it was the power of Hallowe'en. The collective power of a bunch of kids dressed up like Judeo-Christian evils all in an effort to obtain junk food. That could be the source of the desolation. Either that or there was free food somewhere.

The MC building was completely unpopulated by sleeping students and professors. That notwithstanding, strange noises echoed in the hallways. The sounds of metal objects clanging into walls and on the floors. In my mind echoes of maddening laughter and woeful cries rang. From behind me, footsteps. Loud and creepy. I ran.

I instinctively ran to the MathSoc office on the third floor, despite not having anything to staple. The doors were locked, but the sounds of footsteps stilled lingered in the hallway. "I was running, how could they possibly have kept up?" The thought boggled my mind. "I could just be in a crappy horror flick." I quickly discounted that option when there were no scantily clad, large breasted females.

The doors were locked, and the sounds of footsteps grew louder, the source nearer now than before. I pounded on the door, but to no avail — it would not open. Out of anger, I slammed my fist into the wall next to the door and broke through it. 'That was easy,' I contemplated as I stuck my hand in to unlock the door. I made it inside.

Finally, some form of safety. Glancing around, I caught a glance at the calendar. It was Saturday. Shit.

Angelo

Stop me if you've heard this one before

Viva! In view, a humble visceral virtuoso, cast vicariously as both victim and villain by the vicissitudes of Fate. This visage, no mere vigilante of violetists, is a vintner of the vibe of villagers, now in-visible, vituperative. However, this vigourous visitation of a by-gone villein, virtually vitiating vixens, stands vivified and has vied to vilate these vinous and virulent villus virtuizing vice and the violently vicious and victorious violation of virtue.

The only viaticum is viticulture; a vitriol, held as a virgin, not in vicinity, for the vicarage and viviparity of such shall one day vindicate the vigilant and the virtuous.

Vituperatively, this vichyssoise of vinyl vibrates most viscid, so let me simply add that it's my very good honor to meet you and you may call me…

vi

Dating Advice From the Single Guy

Part 4: Induction

So, we left off with your first date. Either it went well and you get to keep reading or it went not so well and you're back to issue 1. Don't worry about missing out on her, she's probably not that great anyway, she was willing to go out with *you* of all people. You may be wondering what's the deal with my title? Well consider this, the first date is done, shall we call it the base case? Well then, what does that make the subsequent parts? Yep, you've got it, it's the inductive step.

I've said it before, and I'm going to say it again, "Don't be stupid." I think I may have seen something in imprint earlier this term talking about the whole "girls like the bad boys" topic while I was trying to find where they're hiding the only thing worth looking at in the paper (the crossword)*. It's talked about all the time on the internet (Do a search for "nice guy"). We all also know that those types of guys are all really dumb, so you may think that in order to keep your girl you should try to be dumb. If you've managed to get this far then you're past that point.

I can say this though: try paying attention to thing. But if you want some added fun, make it look like you're not actually doing so, then do something really surprising that she doesn't expect because you "haven't been listening to a thing she's said." But you must do it before she gets mad at you, otherwise you're in trouble.

My last bit of advice that may not be self evident in the overall scheme of things is this: whatever you do, don't spend all your time with her. It'll drive her insane, it'll drive you insane, but maybe more importantly, it'll leave me, your single friend alone and at home with nothing to do. And really, what's more important to you: some relationship that probably won't last past next week (unless you listen to my advice that is) or your friends. If you make plans with friends don't blow them off for anything, that's just not fair to them, but also remember to make plans with them in the first place.

So what comes after induction you might ask, shouldn't things be proven now? You'll just have to wait until two weeks.

*Alright, bar flies isn't a total waste of time either, it can be good sometimes but that's it.

The Single Guy

The Quest

Mathie D&D

Your party enters an empty room somewhere on the sixth floor. An Arts student points out that there is a treasure chest in the room. It appears that the Arts student followed you from the previous encounter. The Accounting notes the new addition to the entourage as a loss, while the PMath defines it as Epsilon and hopes that it approaches zero.

The C&O determines the most efficient way to open the treasure chest while the AMath just walks up and opens it. The chest was booby-trapped, and each party member receives damage from a stack of midterms that comes flying out. This kills the Arts student. The party receives experience.

Inside the chest was the answer score to the final exam. The SoftEng comments that this goes against the ethics that they learn about in school. The party laughs at the SoftEng, except for the Stats who has no sense of humour.

Angelo

12-Bar "I get good grades in everything except my faculty" Blues

Eighty percent
Eighty freaking percent
The mark of an arts midterm I just received
But I am enraged and not relieved
For I mismanaged time, left sections blank,
Prepared to hang myself on my own shank
But instead am I found to excel
Ten points above average, in slacker-genius hell.

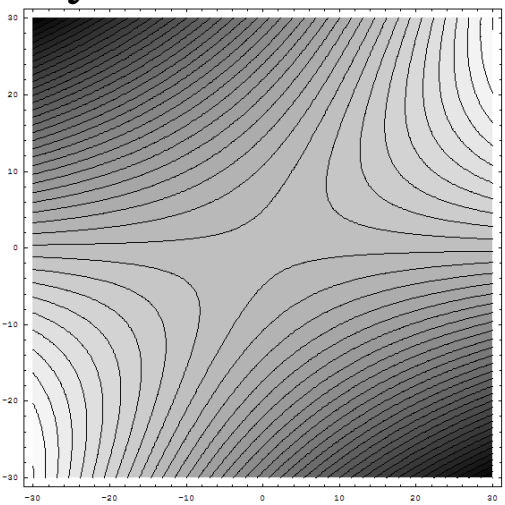
For what does this say about me, then
That I entered a program that crushes my balls
Where joy comes in surviving despite myself
While I slip through time-cracks to back-flip
Over Dennett and Nietzche and James
Whose ramifications I'd rather explore
Then that of distributed mainframes.
Now don't get me wrong, I love teh CS
And it informs me of artistic BS
But I do have to wonder, did I make a bad choice
In lacking an equally balanced invoice?

What could I have been, flipping my major
Latt?-sipping, dripping full-formed opinions
Wearing fancy hats and speaking roundabout
Would I then be pining for some nerdish clout
And cry, why oh why, did I not formalize
And skill myself to theoroptimize
With algorithmic sensibility and nouveau geek-chic
At pasty-white long-hairs I'd lustily peek

And I think, in the end, that is my problem
I've multiclassed, wizard/bard and have fallen
To adequacy when clearly I'm great
And instead of hot sexin' I make you irate
I've chosen the slow, unrewarding path
Of obscurity and mentioning Ratatat
I have no time to master the two
For my academics are finally through.

C. A. Beret

Hey, Remember Calc 3?



$2xy - 2y^2 = C$ (for varying C)

A fishy filler!

What do you get when you cross a fish and an elephant?
Nothing! A fish is scalar, you can't get a cross product from it!

Tricky Math

I'm not sure this one fits with the other ones

So, I've got a little problem. I kind of ran out of ideas for this article, and still have three issues to go. Two as you're reading this. However, I really like this article, and anyone who I've talked to who has read them likes them too, so after I talk about math for a bit, I'm going to ask for your help.

Have you ever looked at a decimal followed by an infinite amount of nines (0.999… for the remainder of this article, it means just that, infinite 9s after the 0.) and thought "the value is so close to one we may as well just call it one." One question I have for you, is if you have questioned whether 0.999… = 1 have you ever also questioned whether one = 1? A couple terms ago I wrote a proof that 0.999… = 1 but I know some people dismissed it as a trick like those 1=2 proofs that are out there. I'd like to tell you that that is wrong, 0.999… is indeed equal to 1, and if you don't believe me consider the following:

Here's the proof I had in *math*NEWS a while ago:

x = 0.999…
10x = 9.999…
10x - x = 9
9x = 9
x = 1

Don't believe it? Think I pulled a trick somewhere like in those 1=2 proofs? If I did, then what is it? Still don't believe me, then consider this:

1-0.999…=x

What is x? well let's see, carry the one, and then carry the one again and well um carry the one again. In fact keep doing this an infinite amount of times. the result gets to be 0.000… and the only time you get something that is not a zero is when you get something that is not a nine in 0.999…, which is by definition never. So removing following zeros we get that x = 0. If a-b=0 then it follows that a=b or subtraction doesn't work. Thus 0.999… = 1.

How about this, if 0.999… < 1 (it's obviously not greater than one) then since both are real numbers that are not equal to each other then there must be some value x such that 0.999…<x<1. What is it? If there isn't one, then one of the premises is wrong, and I don't think it's the one about the reals.

Last is the one I know you've thought about before. There is no way that you've gotten to UW Math without at least considering it. 3/3=1, but 1/3 = 0.333…. 3 x 0.333… = 0.999…. Like I said above maybe you just thought, "oh, it's close enough" or "that's just a problem with the way we write out our numbers." That might be what you expect an engineer or scientist to say, but if a mathematician doesn't have an exact answer, then he should be fired. 0.999... = 1.

Now, I need your help. I don't know what to write for issues 5 or 6. However I'm sure there's plenty more out there that can be done so I ask that you please point me in the right direction.

Editor's Note

Apologies to Vlad and James; your articles will appear next issue. Sometimes I wind up with just enough for an odd number of pages

inkEd

Horrorscopes

Don't like it? Then no future for you!

ACCOUNTING

Are you bored yet? If so, you only have two more months to wait until you can get paid to be bored. Unless you're frosh, then not only will your time here span six more months, but you will have to pay to be bored.

Your lucky number: z^{57}.

ACTSCI

I have forgotten about you three times now, but that makes you no more or less special than anybody else. The reason you were unknown to mine eye was because you were ashamed to admit that you existed.

Your lucky number: 1 person who allowed me to make fun of the rest.

AMATH

Have you ever noticed that everyone (well, except Arts and AHS) has stolen every theorem that you hold sacred? Especially those engineers: they are by far the worst. You need to steal something back from them.

Your lucky number, take the Tool, call it $2k$ where k is an integer (OK, bad pun).

BBA/BMATH

Having the long daily walk to Laurier, you have become the first to know when the temperature gets, well, pretty damn cold. But I'm sure that you have prepared, whereas the rest of us need to get our mojos going.

Your lucky number: $10 for a jacket.

C&O

You will notice that many CSers are going to ask you to the Charity Ball. If you "have a boy/girlfriend," be sure to let them know now. Otherwise, they may feel so upset that they will turn you into a real-time student (dun dun duuun).

Your lucky number: 725 repetitions of the same lie.

CS

With the Charity Ball coming up, you are running out of people to ask out. I've been looking at those girls (you can look at guys if you want) from C&O (who aren't as nerdy as you), and they are looking quite single. What have you got to lose?

Your lucky number: d dates where $d \geq 0$.

MATHBUS

You have survived many a class with artsies, and for that I congratulate you. Mind you, having a class with even one artsie requires the prof to reduce the workload by at least 99%, but I congratulate you nonetheless.

Your lucky number: 5 times more bored than Accounting and ActSci combined.

MATHSCI

Actually knowing the definition of the word, you will soon come to the realisation that (gasp) artsies actually do work. This may prompt you to begin your doctorate thesis. Friday night will be the perfect time to do some research.

Your lucky number: 1.5 J/swig on the beer bottle.

PMATH

Those of you who specialise in logic may have come to the realisation that *soft*EYE and I are Dirty Softie and Dirty Mathie respectively.*[But Dirty Softie would never be known as 'soft' — DirtyEd]* By similar logic, you may also conclude that The *Single* Guy has five-star dating advice. My point being that he's *single*.

Your lucky number: 2 untied shoelaces. Made you look.

SOFTENG

You guys really lack in creativity. Look at the "Horriblescopes" written by *soft*EYE last issue. Like, come on, people. You could never have a creative bone in your bodies, even if you wanted one. As for *soft*EYE, I don't see him writing here anytime soon.

Your lucky number: 375 of you chasing me with big pointy sticks. How creative.

STAT

Realising that the probability of obtaining employment after you graduate is lower than that of everyone else, you will consider transferring to AHS. Then realising that would put you in a compromising position, you decide that where you are will be statistically the best course.

Your lucky number: 5.7% chance of eternal happiness.

UNDECLARED

You have only a finite number of seconds to declare your major. So every second you spend reading this is one less second you have to make that leap of faith. So put down the *math*NEWS, declare your major, and then read the appropriate Horrorscope.

Your lucky number: 15 million seconds left to choose.

AHS

With the loss of the B2 Green, you will notice a lot of Science students trying to take over your Frisbee turf. If you were nice, you would play a game with them. If you weren't so nice, you would whoop their butts in such a game.

Your lucky number: 15-0.

ARTS

Having lacked the necessity to write midterms, you may be confused by this "midterms are over" holiday that everyone else is celebrating. Naturally, you are going to feel tempted to join such parties. Just don't forget about that essay due on Monday.

Your lucky number: $10n$ words worth n% of your grade.

ENG

According to your website, it's only 105 days until IRC. Correct me if I'm wrong, but aren't those sacred rings of yours from a bridge that collapsed as a result of your incompetence? Hmmm…

Your lucky number: 75 sacrificed for your rings. You better feel proud.

ES

Oh, no! Global warming is going to take over our planet! Big whoop! As far as I'm concerned, my happiness is inversely proportional to the amount of snow on or approaching the ground (in other words, no snow means happy mathie).

Your lucky number: 0.02 degrees warmer than last year. And you make a big deal over *that*?

SCI

Having lost your B2 Green, you are going to have to find somewhere else to play Ultimate Frisbee. Maybe consider joining the AHSers over by BMH. I'm sure that they could use some new competition.

Your lucky number: 2 minutes longer for your warm-up jog.

*math*EYE

How many Pure Mathies does it take to change a lightbulb?

Two — one to actually change the bulb and one to get some pi.

*prof*QUOTES

[referring to the second law of thermodynamics] So there's going to be no organisation in the universe. Probably by next week.

Balogh, PHYS 115

[after a student answered a question] Excellent answer! Incorrect, but excellent!

Balogh, PHYS 115

The podium doesn't get hungry.

Balogh, PHYS 115

The centre of mass is always in the middle of the donut where there is no donut.

Balogh, PHYS 115

Stop getting bored and start getting excited. [sarcastic woo-hoos from students] That's better.

Balogh, PHYS 115

Now that nobody's understood that, we'll move on.

Balogh, PHYS 115

Next week we'll be having a review session, so come to class knowing what you don't know.

Balogh, PHYS 115

If I put a big red banner at the front saying "Do not sit in the first seat: it will explode," only dumb people would sit in the first seat. That would probably make the world a better place.

Bishop, SE 101

There's about a minute left in the quiz, so if you haven't filled in any answers yet, I suggest you do so shortly.

Bishop, SE 101

[after a student suggests a personal example] Now that he knows you more, he not only wants to kill you, but he wants you to die a slow and painful death. You know, this is probably the shittiest example of diminishing marginal returns I've ever heard.

Carvalho, ECON 101

[noticing yellow Caution tape blocking off the front row] There's a crime scene in here. You spend all this money to come to the University of Waterloo and you risk your lives coming to class.

Carvalho, ECON 101

[after a student asked a question] You're just asking that to put me in *prof*QUOTES. No questions from you. *[I guess it worked — pQEd][Hey, you're not a real editor! — Ed.]*

Chang, MATH 117

Why did I do this? I know from rich Asian experience.

Chang, MATH 117

[written on board] FRAC (x) = read the text book

Chang, MATH 117

[student]The question [in the textbook] didn't specify that a and l were positive.
[prof] That's because the author was a sloppy bastard.

Chang, MATH 117

[prof] All I ask is that you don't stone the professor. I didn't make the questions.
[student] It's all Laurier's fault.
[prof] It's not Laurier, it's Western Ontario.

Kennedy, AFM 101

[student] How would you reference this proof?
[prof, written] "By something she scribbled down at the start of class one day."

Koeller, MATH 135

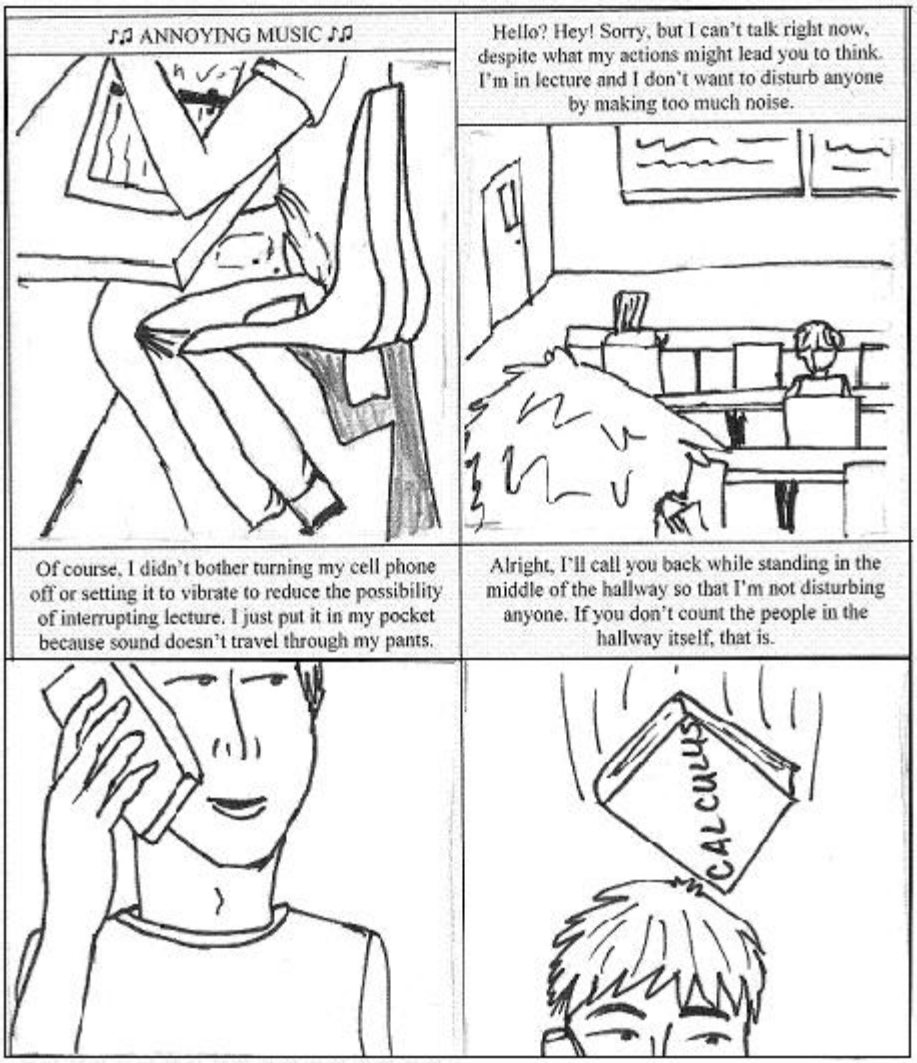
Anybody with me? Anybody confused? Anybody asleep?

Koeller, MATH 135

[student] Do you offer any courses on DirectX programming?
[prof] Do you want me to slap you? Please leave my classroom.

MacDonald, CS 133

Close to Infinity



Math.random() and Angelo

profQUOTES

If anyone creates an instance variable that's public, you have my permission to slap them and say it's from me. Unless it's a big guy, then don't get me involved.

MacDonald, CS 133

This is me going high-tech: using an overhead.

Snyder, RS 230

There's a lot of people with Philosophy diplomas around, and they're unemployed.

Tremblay, PHIL 100J

A flying toaster came down and tried to teach me ancient Chinese.

Tremblay, PHIL 100J

So we'll assume I'm not stupid, I'm not crazy, and I'm not lying. That's a lot of assumptions to make.

Tremblay, PHIL 100J

Either people like this handout so much that everyone is taking 3 or 4 copies, or some people take these home, eat them for dinner, and then want another one for the next night.

VanderBurgh, MATH 135

This is our knowledge base, which we will call "gamma" to make it sound important.

Van Beek, CS 486

You know, there's one crime worse than murder: plagiarism.

Van Beek, CS 486

We want to find the axioms. Well, that's the royal "we". *I* want to find the axioms.

Van Beek, CS 486

What if an evildoer, like someone from Roger's Cable, intercepted B's message to A?

Willard, MATH 145

So all we have to do is find P^{-1}. But we won't do that.

Wollan, MATH 115

Proofs are like watching paint dry: it's boring, but it won't dry if you don't watch it.

Zorzitto, MATH 147

Because I'm insecure, I'm going to draw a picture.

Zorzitto, MATH 147

OK, I've got time to do a theorem. Let's do a theorem!

Zorzitto, MATH 147

Keep sending in those profQUOTES*!*

You get a filler, but I still feel empty on the inside

What is the volume of food with radius z and height a?
Pi*z*z*a.

Rejected mathNEWS Articles

Yes, there are some things that we can't print

So here we are, at the *math*NEWS Production Night, reading articles, eating *free*PIZZA, and overall having a good time. But from time to time, we read articles that we unfortunately have to remove, never to be seen by the likes of mathies again. Here is a summary of said articles:

- Why Engineering is Better than Math — *the author has since been skinned alive.*
- Midterms are Coming — *talking about US Midterm Elections. It appears that the editors are pro-Bush and so did not want my, I mean, this article published.[Some writers need to realize that layout is hard, and not everything fits! — DirtyEd]*
- Voulez-vous coucher avec moi? — *Non, je ne voudrais pas coucher avec vous. Le ew!*
- ResNet Rox! — *the probability of ResNet working consistently is comparable to that of the Leafs bringing home the Cup.*
- I Love (name removed for privacy reasons)! — *good for you! Nobody cares!*
- Why Arts is Better than Math — *get your own society-run regular publication, then we'll talk.*
- *math*NEWS Sux! — *you suck and do not deserve to lay hands on this publication. No math for you.*
- I Can't Believe That My Prof Actually Said This! — *it's already a regular feature — it's called* prof*QUOTES*.
- How to Use Toilet Paper as Kleenex — *Come on! I'm eating pizza here!*
- Top Ten Things to Do with a Pink Tie — *article looks very similar to one written in Issue 1 about a Hard Hat. Besides, it's an insult to mathies everywhere.*
- I Like to Move It Move It — *you are an i-diot i-diot.*
- Why Math is Better than Engineering — *we here at* math*NEWS* *do not feel the need to prove what is obvious.*
- Dating Advice from the Single Guy Part 5 — *we seriously don't need a repeat of the Boobs controversy. No offence to Dave and Steve (who, might I add, are both single).*
- *frosh*QUOTES— *then we would need a section for every year, and we can't come up with that many names for such sections.*
- What's Wrong with Artsies — *not all artsies are like what the author describes; only a select few (including my roommate) are.*

Just note that the purpose of this article is not to discourage you from writing for *math*NEWS (I actually encourage the opposite), but be advised that articles similar to the above can and will be cut again.

The Insider

mathNEWS

It's Canada's Bastion of Erudite Thought

Don't forget to submit your articles!

But, please, in Plain Text Format!

I'm looking at you, GMail users

A Guide to Some Math Courses' Assignments

Garnered through my own experiences and a little bit of hearsay (or heresy?)

Assorted 'Helpful' Suggestions/Reflections:

- Math at late hours —> food!
- You can justify ditching one question as it's only worth ~0.1% of your final grade … but there becomes a downside when you realize you've done that for all the questions of the assignment.
- If you live on campus, all the better — there is no real necessity to work in advance, as you can go for a walk (best with a friend) at four in the morning and drop off your assignment. Then scurry on back to res and get some sleep so you can get up in time for your 8:30 class later that morning.
- While dropping off an assignment, especially at late hours, unleash your inner monk (not the DnD monk) — MC stairwells have great acoustics and are lots of fun for bouncing Gregorian chants off them. Start with the Monty Python monk chant, then make it more tuneful and leave out the 'whack' at the end. Take LAT 100A so you know enough Latin to create some new chants, as repeating the Monty Python one or "Lorem ipsum dolor sit amet…" becomes quite dull.

Course-specific hints:

- Calc1 — Take a derivative or a limit of the given function. Maybe say something about continuity.
- Classical Algebra — Odds are you're probably proving something. Or decrypting a Priv/Pub key message. Just calculate everything mod 0 and use "Proof by Textbook or Maple" to give you full marks.
- Calc2 — Integrate! Or use Taylor's Theorem.
- LinAlg1 — Construct a matrix, row reduce. Say something about the columns' linear independence. Watch the "Finite Simple Group (of Order Two)" video for the n^{th} time and enjoy the fact that you understand more of it now thanks to this course.
- Calc3 — Take the partial derivatives of the function, and maybe throw in some multivariable linear approximations. Graph the strangeness of the function, and wonder why FINE 120 isn't a prereq for this course.
- LinAlg2 — Construct a matrix, row reduce. Say something about the determinant.
- Combinatorics — Can't say anything personally, as I haven't taken MATH 239 yet. But I have been told that it doesn't help you solve problems; it just tells you how screwed you are (e.g. odds of breaking your own laptop combination lock).*[I can advise from experience that this course teaches you how to beat your head against the wall. — DirtyEd]*
- STAT 230 — Haven't taken it yet, but from what I hear, you just need to remember that n! does not mean an excited number.

aLemma

Sado-Masochism

Love hurts.

Angelo

Public Service Announcement

Are you compulsively volunteering for things, but don't know why?

Do you feel that you should be doing something…all the time?

Is there something missing from your life (aside from a sex life)?

If you answered yes to any of the previous questions, you may have an over-abundance of what researchers are calling "Volunteerium."

What is this terrifyingly named substance you ask? It's a mysterious quantum state of various vestibulating compounds within your body. This announcer didn't have time to consult any biology majors to get a quote on its actual properties, so I shall go by my gut instinct, and general observations.

While perfectly harmless, the following symptoms have been observed in subjects with an abundance of "Vo":

- A higher initiative to try new things.
- Seen volunteering…all the time!
- Volunteers to the detriment of grades and social life.

Please: if you are, or know someone who is experiencing these symptoms, please let them volunteer. Contrary to intuition, volunteering actually consumes "Vo", reducing the mentioned urges.

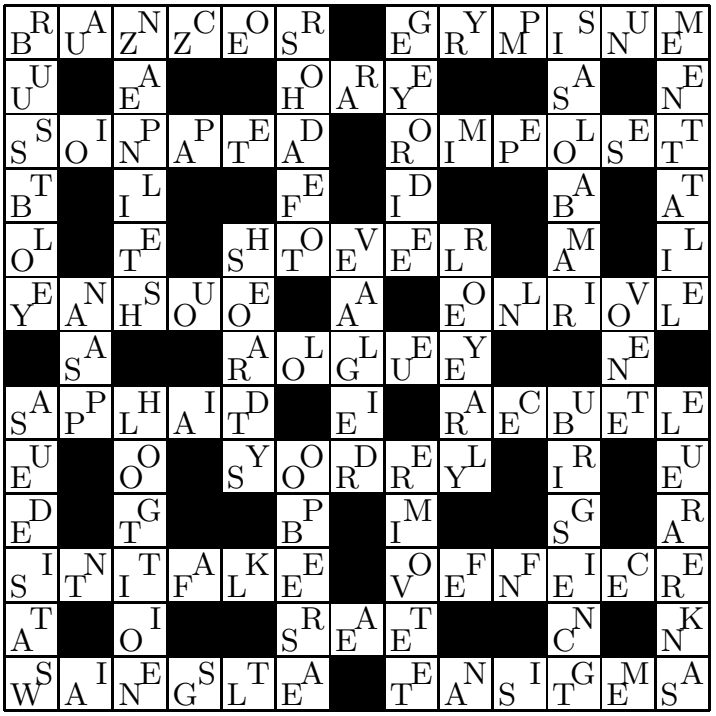
Here are a few sure fire methods to reduce your body's Volunteerium stores.

- Volunteer for *math*NEWS.
- Hold an office hour in the MathSoc Office.
- Volunteer for UW day, while trying not to scare away the pre-frosh, tomorrow!
- Help out with the Math Charity Ball (it's for Cancer!)

Remember, reducing your Vo levels is healthy for you and your community.

PSAnnouncer

Solutions to Last Issue's Grid



Puzzles!

David Hayes prepared these puzzles for *math*NEWS, a fact for which I am quite grateful. He also told me, "I've been having a lot of trouble getting the right level of difficulty for puzzles (I'm short of testers)." If you have any feedback for David, send it to ilostyourpuppy@gmail.com. Don't forget puzzle submissions may qualify for our FABULOUS PRIZE!

Congratulations to Zhentao Li, lucky winner of a $5 gift certificate to the C&D. Come to MathSoc and ask 'em for it. I got enough submissions last time to suggest printing solutions is not necessary. If you disagree, send me an email at mathnews@student.math.uwaterloo.ca

inkEd

Drywaller

"Listen up. Our client isn't picky, as long as each square has the right number of walls surrounding it. Sounds a little tricky, but we didn't get to be the #3 drywall outfit in town by being lazy."

Also:

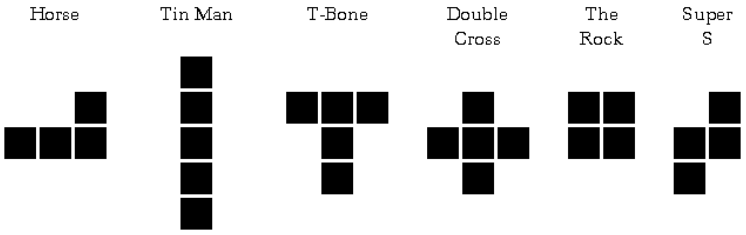
- There's a wall around the outside
- They want exactly 10 rooms

2	1	1	1	2	2	1	2	2	2
1	0	0	0	1	1	0	1	1	1
1	0	0	0	1	2	1	2	1	1
1	0	0	0	1	2	1	2	2	2
2	1	1	1	2	2	1	2	2	2
2	1	1	1	1	2	2	1	0	1
2	1	1	1	1	2	1	0	0	1
2	1	1	1	2	3	1	1	1	2
2	1	1	1	2	3	2	1	2	3
3	2	2	2	2	2	2	1	2	3

SigInt

The precious 8x8 grid we call home has been invaded! Signals intelligence tells us that the following agents are somewhere nearby, all they can tell us about their locations is:

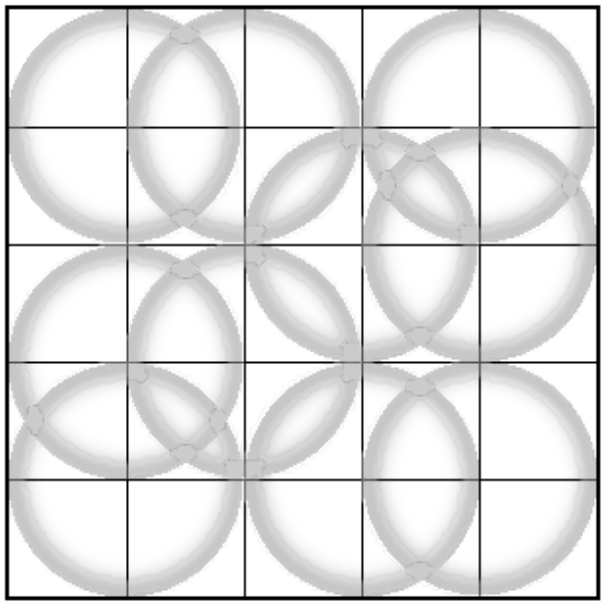
- How many squares in a row or column are occupied
- They've been ordered to disperse so they aren't touching, not even diagonally.
- Remember: they can flip and rotate.

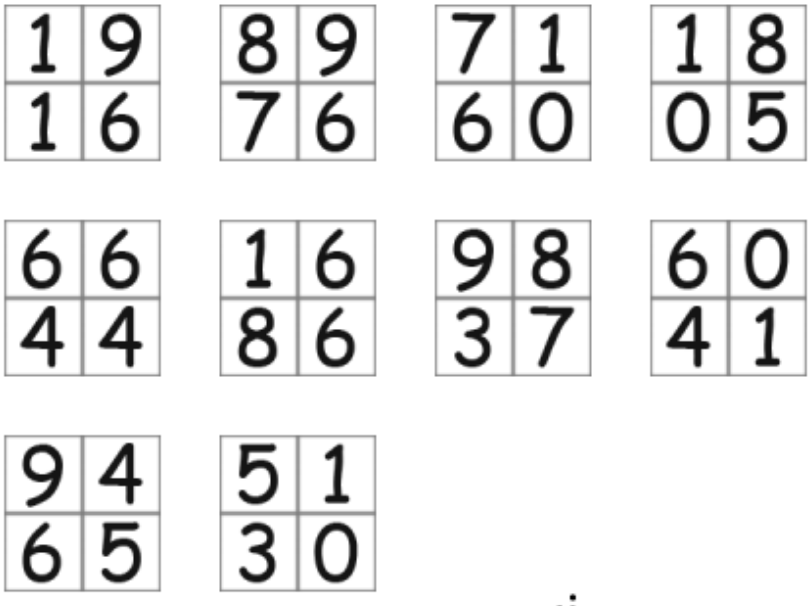


								1
								4
								2
								3
								2
								1
								3
								5
1	5	3	2	4	1	1	5	

Umbrellas

Place the following 10 squares on the 10 circles so that the overlapping numbers match up.





http://euri.ca/puzzles

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Cryptic

ACROSS

1. Awkward urges scorch within extra cost (9)
6. Rural county joined quiet anger (5)
9. Leapt? No, partway in changed grasp (6)
10. Clumsy groping results in dropping of ball (8)
11. Opposed to change in singer Turner (4)
12. Shredding brings tile to rapid pace (10)
13. Dog discovered in undercurrent (3)
14. Instrument named in hobo elegy (4)
16. Collect Greg surrounded by coloured stone (10)
21. Automobile with French touches is heraldic device (9)
24. Steep beer (4)
26. Travel by way of rail company (3)
27. Plea or form change is important to the University (10)
28. Flat boat is part of summer afternoon (4)
30. Family treasure is successor's weaving machine (8)
32. Foolish action of base part of soul with imaginary number previous to eccentric coquettish behaviour (6)
33. Examinations include Tom in strange sets (5)
34. Ram reversed before agar; it mashed a tequila cocktail (9)

DOWN

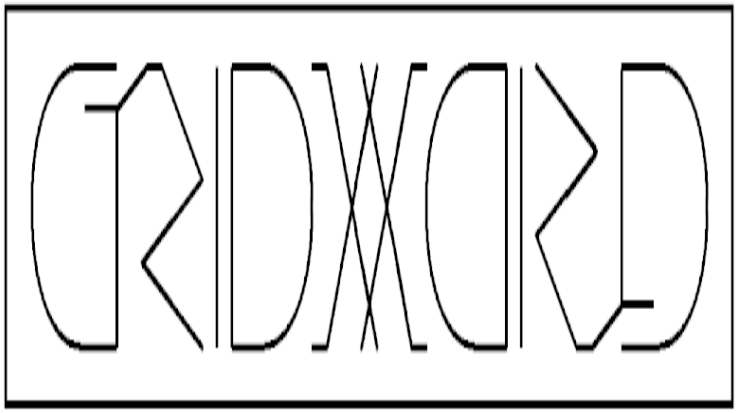
2. Unfasten questionable word play in preceding (5)
3. Confuse a cliche cup (7)
4. Unusual bagel comes before sun god's mathematical tool (7)
5. Begin emulation of large bird (3)
6. Immerse sandwich before join (8)
7. Beginner mixed air into it (9)
8. Pledge marriage attack (6)
10. Toss short indulgence (5)
11. Right removed from Elora changed succulent (4)
15. Speeches show moral centre joined with Conservative politicians (9)
17. New sounding antelope relative (3)
18. Throaty laugh is reversed cheer (3)
19. Impetus sum I lust crazily for (8)
20. Fool begins chirp (4)
22. Mix saccharine beginning with single male to discover canyon (5)
23. Smoothing latter part of day (7)
24. Separator sounds like industrious insect before noseless British jet (7)
25. Utter beginning around strange posh benefit (6)
29. Jewel face twisted fate surrounding the sea, I hear (5)
31. Resistance unit at zero hour: one metre (3)

*grid*COMMENTS

I received four Cryptic solutions and three Conventional solutions. I should grant extra credit to everyone who submitted a Conventional answer, since I screwed up 29 Across. It should've read "Spanish **14** down", not "Spanish 4 Down". Anyway, many kudos to Lily Cong who rewrote the lower corner to get answers that fit, and also for her answer of $5 (exactly what a solution is worth). The Cryptic winner is Nick Murdoch, who tickled me with his answer of "6, 18 on a triple word score". Thanks to everyone else that submitted! Lily and Nick, come to the MathSoc office and ask the office workers for something with your name on it in the *math*NEWS mailbox.

Remember to submit your solutions to win a FABULOUS PRIZE! But don't forget to answer the *grid*QUESTION: What word would you never expect to see in a *grid*WORD?

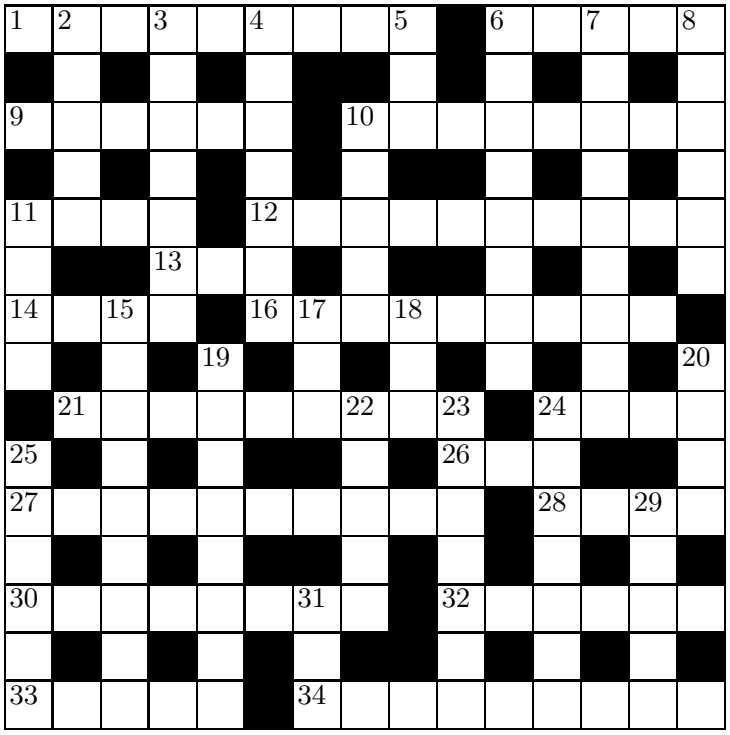
inkEd



Conventional

ACROSS

1. Life story
6. Shriveled plum
9. Riches
10. Hardened like bone
11. Sicilian volcano
12. Easy
13. Kook
14. Chimney grime
16. The quality of coming sooner
21. Ethnic neighbourhood
24. British apartment
26. Self
27. Sight from glassed-in courtyard (2 words) *[Sorry about this one, it's all that fit — inkEd]*
28. Space
30. Familiar three-sided object
32. Fly larva
33. Belief
34. Revert

DOWN

2. Non-reactive
3. Courtly
4. Olympics participant
5. I agree
6. Unspoiled
7. Omnipresent
8. Oldest
10. Suggest
11. Simple
15. The remaining one
17. Insect
18. Not high
19. Unspoken implication
20. Indivisible part
22. Chemical compound
23. Guy on TV at 6 and 11PM
24. Gatherer
25. Strategy's partner
29. Egg-shaped
31. Young man