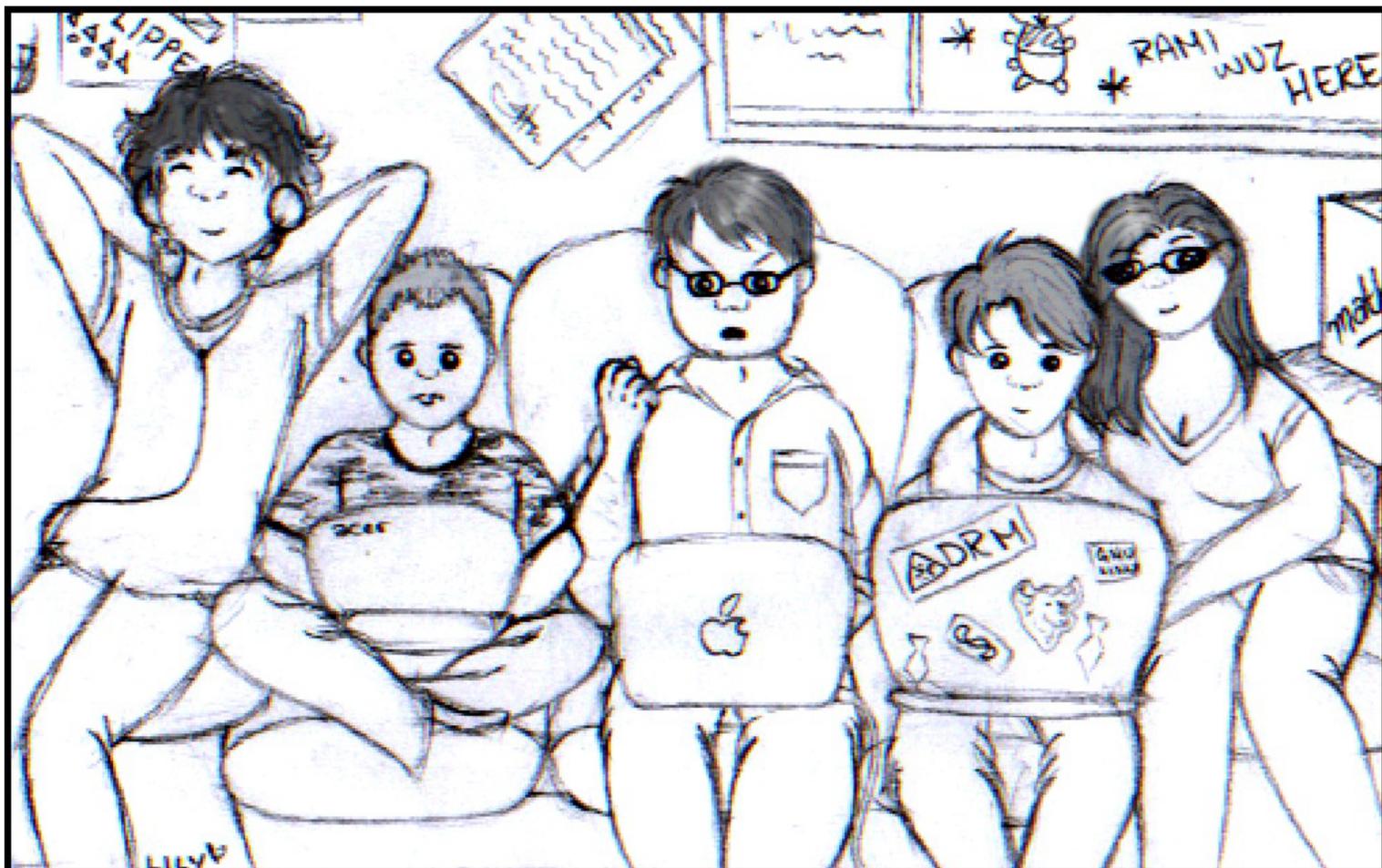
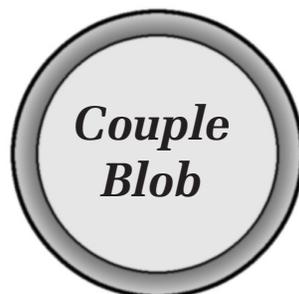


math NEWS



Now, which circle to put this lot in?



*Volume 116, Issue 5
Friday, July 8th, 2011*



lookAHEAD**mathNEWS**

July 8	Issue #5 gets egotistical
July 18	Writers get free pizza one last time at production night #6
July 22	Issue #6 signals exam time

MathSoc

Tuesdays	Games Night in the Comfy at 6:30pm
July 18-19	Vote for VPA mathsoc.uwaterloo.ca

Campus

Monday	Cheap ice cream at Fed Express
July 26	Last day of Classes
August 2	Exams begin

Misc

July 11	World Population Day
July 13	Embrace Your Geekness Day
July 13	Harrison Ford turns 68
July 15	Harrison Gross turns 21
July 16	Cow Appreciation Day
July 22	Pi Approximation Day
August 1	Civic Holiday, but you weren't going to be working anyway

mathNEWS Production System Rewrite*Want to contribute?*

Yet again, the editors have the lofty goal of rewriting or replacing the production system. This has been tried many times before, and failed many times before, but we're still optimistic. *We have to be, otherwise we'd be too depressed to live* - Ed

Want to get involved?

- GitHub - <https://github.com/cbhl/mnps11>
- Pivotal Tracker - <https://www.pivotaltracker.com/projects/322953>

or ask your nearest friendly *mathNEWS* editor! They can be contacted at mathnews@gmail.com

cbhl

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.mathnews@student.math.uwaterloo.ca on the Internet.

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The Shapes, Spheroid, Blockface, Ovum, Strawberry, and Pencilhead, representing Michelle Conway, Harrison Gross, William Morrison, Jeff Bain and Sacha Koohgoli.

mastHEAD

+ 1

So with the recent release of Google+, Facebook is finally seeing competition. We realize that lots of people probably aren't yet on Google+, but if you happen to have friends who work at Google, which is unsurprisingly common amongst Waterloo students, you ought to be on there soon enough.

Either way, it's certainly an interesting difference from Facebook, and has managed to capture a lot of interest from geeky circles, especially those who disliked Facebook to begin with. Regardless of whether or not it becomes more successful than its more established competitor, it adds an element of competition that will probably help both services improve, so that ought to be fun to watch in the upcoming months. For now most of the competition seems to be listening to my friends who work at both companies cutting up each other's product.

Either way, in the spirit of competition we wondered about making our own, highly entertaining ideas for social networks. In the spirit of this, this week's *mastHEAD* question is "What would you name your social networking site?"

GiLK("NAMBLA"), MeaninglessQuips("Bitches don't know 'bout my friends with benefits."), -perki("K₁"), (definethis(not cool)) ("some thing about a benefits package"), functional frosh ("we really should find something better to do"), impulse vector ("MAO, it's short for maothers against objectivism"), waldo@<3LE-GASP.ca ("Hither you cometh"), Zether ("The"), Mustard Map ("Death Note"), Tbor ("~~~"), ConED ("the hay-loft"), Concealed ("Github - version control for all your idiot friends"), GroovyED ("Webrings")

("Everyone") CorruptedED

How to properly celebrate Cow Appreciation Day

This day calls for as much consumption of as much beef as humanly possible. Some suggestions include steak, tacos, shepherd's pie, stir fry, and roast beef. The more ambitious among you may want to attempt to build a cow sculpture out of steak and roast beef. The crazed and insane among you may attempt the build a steak sculpture out of cows. Either way, it's unlikely that the cows will appreciate us.

ConED



Computer
Science
Club

C S C F L A S H

Greetings! This Saturday the CSC goes outside! Come join us at the E2 Firepit at Columbia Lake (the one closest to Columbia St) from 6-10:30 PM. There will be food, drinks, kites, frisbees and all the vitamin D that your body is probably craving (if you're a math student anyways). Hope to see you there!

Matt Thiffault

<https://csclub.uwaterloo.ca/>

FedS Sez

FedS By-Elections nominations are now closed, and math will be voting for their councillors! We have four candidates for three math councillor seats. So don't forget to find out more and vote from July 19th to July 21st at vote.feds.ca!

A quick update on Fed Hall: As part of the negotiation process, FedS feels that it is important for students to have a say in what such a large space is used for. We're looking to determine the top (approximately) 5 things students would like to see a space such as Fed Hall (a roughly 15 000 ft² space) used for. It can be anything within reason (i.e. event venue, study space, movie theatre, etc). If we have significant student input in this, it would be incredibly valuable moving forward, so if you have any feedback along these lines, please let us or the FedS Exec know!

Lastly, the next council meeting is this Sunday, July 10th at 12:30pm in the SLC Multipurpose Room, so please attend if you're interested!

Feel free to contact us if you have any concerns!

Jesse McGinnis & Alex Russell
mathcouncillors@gmail.com

Corrections

Dear MathNEWS,

I found a delightful little comic in last Friday's *mathNEWS* called "fig. 6". Unfortunately, said delight was cut short when I realized the pictures and the first order Well-Formed Formulae (WFF) did not always mesh.

Please note that this evaluation is from my pathetic understanding of First Order Logic from way back in CS 250.

The 3rd (bottom) box is indeed correct, and the 2nd box *can* be a correct instance, but would be better suited with the WFF from the first box.

The first box is very misleading. It features bunnies eating one carrot each. More importantly, they aren't eating a common carrot. The WFF in the first box states they're eating the same carrot.

The long proof:

- Let E be the existential quantifier, A the universal quantifier, B the bunny universe, and C the carrot universe.
- $\text{EcAb nom}(b,c) \Rightarrow \text{Ec}(\text{Ab nom}(b,c)) \Rightarrow \text{EcF}(c)$ since B is bound in $(\text{Ab nom}(b,c))$
- $\text{F}(c)$ is true when all bunnies are eating carrot c.

The short proof:

Can be read as "There exists a carrot such that for any bunny, the bunny eats the carrot".

I could make a graph, but it's pretty obvious that no carrot in that picture is being eaten by all bunnies (unless the carrots they're holding are actually part of a master carrot). The last box hints at why the first is wrong.

I just wanted to say thank you for wasting 20 minutes of my life :)

Concerned,
 Concerned

VPAS Sez

Congratulations on surviving midterms! Time to celebrate with some cool MathSoc stuff!

First of all, thanks to everyone who came out to our Middle of Term Carnival and to Canada Day. A special thanks to Jessica Janssen for organizing the Carnival, to Tappy He for organizing MathSoc's presence at Canada Day, and to all the volunteers who helped out at both events!

Math 3 will be opening soon, so keep an eye out for updates - we hope all of our clubs are looking forward to their new offices in M3 or MC!

We have lots of fun events happening now and coming up soon:

Math-Eng-AHS Semi-Formal will be happening tonight (Friday, July 8th) in the SCH Festival Room from 9pm until 1am. The theme is "A Red Carpet Affair," and tickets can still be purchased for \$10 in the EngSoc Office, AHSUM Office, or MathSoc Office or for \$15 at the door, which includes food, drinks, and a professional DJ. There will be a special celebrity appearance by The Tool, AHSSIE, & the Tie! "Charities can" food drive and raffle will also be held at the event: Each canned item donated gets you 5 raffle tickets to be entered into the draw for prizes later in the evening. (Non-UW students must be accompanied by a UW student.)

The inter-faculty blood drive competition is still going on. You can donate on-campus in the SLC on July 8th, 25th, or 26th or anytime at the CBS clinic at Bridgeport and Weber.

Everyone's favourite EOT event — Pints with Profs — is coming up really soon. On the 20th of July, right before the last Bomber Wednesday of the term, to be precise. Keep an eye out for updates!

Our legendary Pi Approximation Day will be July 22nd. Free cake will be served! Look out for more information coming soon!

And lastly, don't forget to vote for our Fall 2011 Vice-President, Academics from July 18th to July 19th at mathsoc.uwaterloo.ca!

Any questions, feel free to contact me!

Alex Russell
vpas@mathsoc.uwaterloo.ca

MathFOC Sez

Less than 2 months

Hello Mighty Math Leaders.

If we had to describe how wonderful it was to see all of you last weekend, we would probably use words like Phenomenal, Excellent, Extreme, Awesome, Sparkling, Exuberant, Wonderful and Stupendous. We would like to once again thank Tie Guard for their extra-special-awesome-tastic-ness. Their epicness is colossal.

Don't forget that jacket and shirt sizing as well as jacket names are due by today. If you don't get that in, you can expect for your leader gear not to fit you. Or at least it will fit you as well as the 5XL fit Heather.

Oh, and did we mention there is less than two months until Orientation. You may proceed to go crazy now.

<3 MathFOC 2011
 Gee, Heather and Jesse

Rainbow Mathies 12

Go Donate Blood!

Hello fellow mellow fellows! As I sit here, most of the other *mathNEWS* authors are interacting with each other in a Google+ hangout. Of course, they're all sitting in the same room, but this doesn't surprise me: we're talking *mathNEWS* writers here. Sadly, I did not accept my invite in time, so I cannot join them. Personally, I can't help but feel that Google+ was a bit overhyped, is there really that much of a difference between it and Facebook? When they reopen invites I'll be able to try for myself and see, but until then, onto this week's article. You may or may not be aware that the University of Waterloo recently launched a competition between faculties that MathSOC has been actively advertising. Whichever faculty gets more of its students donating blood before July 26th will win some kind of prize. This contest bears mentioning because a blood donation clinic just happens to be running on the day this edition of *mathNEWS* is to be released. I honestly don't know very much about this contest, because I'm not allowed to participate in it. As a man who has had sex with another man since 1977, I have been indefinitely deferred from donating. This policy, commonly known as the "gay blood ban" In this article, I am going to talk about the history of this policy, how it affects my community and the quality of our blood supply, and make an appeal to my readers discussing what they can do.

Our story begins in the early 1983. On the eve of the first death attributed to HIV, the scare surrounding this new unknown disease was in full swing. After some years of research, two big discoveries were made: HIV is spread through blood-to-blood contact (including transfusions), and it was primarily being spread in the Men Having Sex With Men (MSM) community. We had not yet discovered reliable methods for reliably testing a sample for the virus. In a bid of ignorant desperation, Health Canada institute a blanket ban preventing any man who has had sex with a man since 1977 (the first year that HIV was expected to arrive in Canada). At the time, this decision made a lot of sense, but jump 15 years into the future. Our knowledge about the disease has grown exponentially, to the point that we can accurately model how it tends to spread and can assign anyone their risk factor to contract the disease. The queer community, especially gay men, have banded together in a constant struggle for civil rights after years of being separated and closeted. Now that they were organized, they began to fight other sources of injustice. As more pertinent rights (such as the legalization of sodomy or marriage) were won, the discriminatory nature of Canadian Blood Service's (CBS) began to take light. Members of the community, especially students, began fighting in earnest to get the policy changed. Two of the more newsworthy examples of this was a sit-in protest held at UWO in 2007, as well as a lawsuit and countersuit involving a gay-identified man and the CBS, which the CBS won. I don't have the time to go through this lawsuit (perhaps in a different issue), but details are available online: search Kyle Freeman. In 2008 CBS instituted a LGBTQQ working group, and commissioned the McLaughlin Centre for Population Health Risk Assessment to perform a risk assessment (which concluded that an indefinite blanket ban is the best option despite all others considered to reduce risk). In 2010, the Ontario Supreme Court stated that it believed the policy was based in science, but that the indefinite nature of the ban should

be reconsidered. While no change in policy has occurred, CBS has repeatedly responded positively about its willingness to change the policy as long as evidence supports that safety can be maintained.

With all that said, what is so controversial about the "gay blood ban" and is it hurting our society? I personally find two major problems with the policy as currently stated. Primarily, the nature of this ban is so fundamentally different from the others because it discriminated based on status instead of behaviour and actions. "But (define this (not cool)), you may be thinking, "the ban specifically restricts men who have sex with men, not just queer identified people: isn't that behaviour?" While technically you're right, we need to consider the nature of the action as it relates to HIV risk. Having sex isn't the cause of HIV transmission: the only way HIV can be transmitted is by the blood or seminal fluid entering the blood stream of another. While anal sex does have an increased risk of allowing this to occur, there is nothing necessarily special about two men having anal sex which makes them more at risk (except that this group is more likely to engage in anal sex), and vaginal sex is not risk free. Beyond that, if barrier protection is used competently to prevent any kind of blood or seminal fluid from hitting broken skin, the risk of HIV infection is negligible. In other words, men who do not have penetrative sex, men who have sex with only one partner or men who have protected sex with other men are at no higher a risk of transmitting HIV than two opposite sexed individuals doing the same, and are at a lower risk than those opposite sexed couples who have unprotected penetrative sex with more than one partner. The McLaughlin Risk Assessment asserts that no increase to the risk of HIV prominence in our blood supply is acceptable, but the current method of assessing risk is solely statistically based, and individual assessments are made based on a statistical model which does not and cannot represent them adequately. The solution to this is to better characterize the high risk behaviors CBS is trying to exclude (for example, restrict people, not just men, who have had unprotected anal sex since 1977), instead of restricting the highly general "sex" and not targeting a specific gender when there is nothing inherent about being a man that scientifically makes one more prone to HIV transmission. The McLaughlin risk assessment addresses this solution, saying that asking questions this invasive will make those filling out the questionnaire answer falsely. For one, considering the nature of the questionnaire as it already exists, asking a question akin to "Have you had unprotected anal sex since 1977" wouldn't be any more invasive than other questions being asked. Secondly, if members of the MSM community wanted to lie to be able to donate blood (and believe me, they already do), nothing is stopping them from doing so already.

Secondly, this ban is unlike most other deferrals based on potential exposures to well known conditions, is indefinite instead of temporary. For example, if someone was put in a situation where they may have been exposed to hepatitis, they are deferred from donating for a year. The only other conditions-based

Continued on next page...

Rainbow Mathies 12

Continued from the previous page

deferrals are for conditions that one is confirmed to have, rather than just a risk of being exposed to, or is for diseases which are relatively new and unknown (such as CJD, vCJD, or CFS) and we have no reliable tests for. In this sense, HIV is unique in that we know quite a bit about it and can test for it with high accuracy (the tests in use have an increased risk of false positives, but almost negligible numbers of false negatives). As a result, it makes no sense to defer someone permanently when they partake in a high risk activity, since once they are tested negative after three months their negative status is confirmed. Luckily, CBS has recognized the ridiculousness of this policy and is currently reevaluating it.

With all that said, what is the net effect of this policy? Well, sure, our blood pool is theoretically safer according to some relatively vague statistical inferences. At the same time though, we cannot ignore the discriminatory nature of the policy and the effects it has on our MSM community. Personally, it hurts whenever my friends discuss their blood donation milestones knowing that I am unable to partake in this passion of theirs. It hurts knowing that, despite everything I do I make to ensure my blood is clean and healthy, the diligence of my efforts go unnoticed by CBS. It hurts not being able to contribute on a behalf of my faculty for what is admittedly an amazing cause. It also hurts the blood pool, especially during the wakes of blood crises and donor campaigns. I remember it being just over a year ago that I walked into the pharmacy in Westmount plaza to a sign informing its customers of the blood crisis currently being experienced and urging them to go donate, especially if they had a rare or useful blood type. While it is true that the majority of the supply comes from a mere 3% of the population who donate regularly, this number has been dwindling over the years and it can only help but to allow an estimated 5% of the population with safe, healthy blood to donate when they once couldn't.

One more question remains, what can you do to help? The primary, #1 thing you can do to help this movement is to go donate blood yourself if you're not already a regular donor. The necessity of this act simply cannot be expressed in words, and there is never a time more urgent to do so than the present. (By the way, if you're reading this on Friday, there's a blood clinic in the SLC right now.) The second thing you can do is to educate yourself on the MSM blood ban in Canada and make an informed opinion on the issue. If you agree that the blood ban should be repealed, please tell your friends about it and ask them to support the cause and to go donate themselves. Once you've spread the word to your friends, make sure you let your MP, your MPP, as well as CBS and Health Canada know what your view is on the matter, as well as contact GLOW, FEDS and the University urging them all to take a fighting stance in changing this policy.

If you are queer identified, and are looking for someone to talk to or for supportive allies, there are always resources available to you. You can learn more about GLOW and its offerings, including a phone line at www.knowyourglow.ca. Counseling Services is always available to you; their offices are open 8:30-8MTTh and 8:30-4:30WF, located in Needles Hall across from Student Awards and Financial Aid. If you need support and assistance immediately, you can call the Waterloo Crisis Center at 519-745-

1166. If you'd feel more comfortable speaking with someone from a queer specific service, please contact the GLBT Youthline at 1-800-268-9688

Join me next week when I discuss how to make our faculty and our orientation programming more LGBT positive for incoming first years.

(define this (not cool))

With files from CBC, CBS, and End the Ban.

Google-

The next big thing

With the suprise success of its latest social networking of *Google+*, El Goog has decided to announce its latest product: *Google-*.

Google- will hopefully be the start of a new web phenomenon known as an unsocial-networking site, where users will be able to spend thier time alone with thier thoughts, without any of the annoying distractions that friends bring. Users can set thier privacy settings from *All Alone* all the way up to *If you even so much as glance at me, I will shatter your kneecaps with a hammer*. With the sheer amount of solitude that users will experience on *Google-*, productivity is expected to increase, along with loneliness.

Other features to be implemented in *Google-*:

- **Defriending:** By defriending someone, *Google-* will eliminate all record of conversations between you and the target, and will also purge any photos, shared events, and contact information. A discreet message will also be sent to any mutual friends, informing them of the defriending and advising them to not bring up any memories involving you and your ex-friend.
- **Realm of Silence:** Instead of standard groups which allow you and friends to share information, an RoS is an isolated area in which only you are allowed, where you can be perfectly alone with your inner-most thoughts and angst. A handy notes system is included in this area, where you can rage about the bleakness of existence.
- **Huddles:** Instead of the huddles that already exist in *Google+* - where you have a group video chat with your friends - you are in a perpetual chat with Cleverbot, who is the only one willing to talk with you. Users will eventually make these huddles the highlights of thier day, where Cleverbot will provide the most stimulating conversation that you've ever had.
- **Photoshops:** A gallery of pictures featuring you as you have never seen yourself before. Photos that are uploaded isolate you from the rest of the drab picture, and insert you into fantastic situations. So a picture of you duckfacing in your dirty room will instead be you duckfacing in front of a raging bear. A photo of you looking bored on your couch will instead be you skydiving in peace. You get the picture.

Big Mak

Orange News

Ain't no news like Orange News news

In this edition of Orange News, we uncover a deep conspiracy that's been going on in our faculty. As we all know, the Mathematics Faculty is the University of Waterloo's best faculty. However, a second faculty known as Engineering has consistently been "second best", leading to a bitter rivalry between the two faculties. As mathies we are taught that all engineers are evil, cunning beings who will do their utmost to steal our co-op jobs, take down our websites, and in general be very mean to us. The math vs. eng battle has raged for as long as anyone at UW can remember (not that our older profs can remember much, but whatever).

However, the Orange News Team has recently uncovered a fact that's been carefully hidden for years. High ranking officials in both faculties are aware of a special spy ring of double agents apparently working for both sides of the conflict. This dark special ops team, known as the Software Engineering Program, consists of students who are seemingly both "computer science" students and evil engineers. They are recruited by fulfilling the admission criteria for both faculties- the strong academic requirements of Math and the high alcohol tolerance of Engineering. They belong to either faculty, carrying and distributing secret information as they see fit, and orchestrate evil deeds that I can't even imagine. Please take a moment to digest this information and try not to scream in blind rage.

According to their special secret recruitment website, "Waterloo's Software Engineering degree program builds on the University's strengths in Computer Science and Engineering. Your studies include a solid foundation in mathematics, science, engineering, and computer science". It is clear that these softeng students, as they like to refer to themselves, attempt to capitalize on the virtues of both faculties while manipulating them for their own benefits.

But what is their secret evil plan? What do these software engineer spies plan to do with their ideal location in the cracks between math and engineering? Your brave, attractive, and still single reporter risked his own well-formed ass by seeking these dangerous black-ops operatives to find out.

R, a soft-eng student whose real identity and affiliation won't be revealed unless you pay me some money, was confronted in a dark room at the MC. In response to accusations, R acted shifty-eyed and said "Spies? No, there aren't any spies. I don't know what you're talking about. Now excuse me while I swipe these secret docum- I mean, assignments. Yes, assignments.

A professor who allegedly teaches a soft-eng course slammed his office door in my face.

This conclusive evidence proves beyond a reasonable doubt that- something. I went out and checked what YOU, the innocent little students of UW Math, think about these double agents.

T, whom I confronted in the library, couldn't understand me at first and thought I said muffins when I said *mathNEWS*. In my defense, I lost my voice during the long weekend. After we cleared the confusion, T said "Do you mind if you don't quote me for *mathNEWS*? You can get someone else to do it." I was a little offended, but I'll forgive T because she's cute.

No one else wanted to talk to me either. I'm starting to suspect that nobody likes me.

As you can see from the reactions of the student community,

concerns are at an all-time high. But now that the secret has been uncovered by your dedicated Orange News Team, you can rest safely in the knowledge that these software engineers will have to stay out of the spotlight, working behind closed doors and in the dark on their special double-crossing and manipulation projects. This reporter for one feels just a little better that awareness could help thwart the efforts of the soft-engs to destroy both faculties from the inside. Though actually I don't care if they destroy the engineering faculty, that'd be fine.

If you see any software engineers, do remember, they're double agents and work for the enemy too. Do not reveal any of our faculty secrets, like the secret mathie handshake, to any soft-eng students. Remember, always safety first.

And that's it for our special conspiracy edition. Join us next time for a special edition of Orange News, where we will uncover a shocking devastating infiltration of Laurier students into our university disguised as so-called Double Degree students. Until then, have a good night, and good news.

Orange Crush

Welcome to Waterloo!

ESQ, Shad Valley started this week

This week marks the start of a bunch of programs on campus for students in elementary and high school, such as Engineering Science Quest and Shad Valley. Granted, by the time this issue comes out, participants in the latter are supposed to be heading to a lake or beach or something, but at least now you know why there have been younger students running around campus all week.

lable

In which history is drunkenly recounted

Brought to you by a grain of truth and a pillar of salt

Over the Canada day weekend, there was an incident which would had tarnish the sanctity of the country's holiday. On the late evening of June 30th, in a suburban house in the greater Toronto area, five unlikely recreants came together in a game of Dominion; amongst them, a Canadian history major whose name is withheld for the person's protection. Umpteen beers later, the Canadian history major made the claim that on October 27th, 1982, when the House of Commons passed the act to rename the holiday from "Dominion Day" to "Canada Day", they lacked quorum and therefore the holiday occurring on July 1st should be "Dominion Day" instead. These recreants then proceeded to march down to the local game store in the area and loot all the copies of Dominion, the card game, from the store and yelled about how the name "Canada Day" was a sham and how everyone should bow down to the real overlord of the country. The store manager was confused and called the cops, bringing this controversy to a close. Everyone then celebrated the one day where we have a good excuse to shoot fireworks into the sky without another incident aside from the usual group of flaming people the holiday produces.

Zethar

MATH 135 2.0 (cont'd)

beta testing set for fall 2011

Recap: MATH 135, Algebra for Honours Mathematics, is undergoing major changes in content and method of instruction. This course has been rather static for some 35 years. New course objectives place emphasis on understanding logical structure and reasoning, as well as precision in language. The proposed method of course delivery seeks to deal with the question: “how does one teach how to reason?” by using a combination of reading, electronic and written assignments.

This week: During Monday’s meeting we sought to drill down further on exactly what the objectives of the course are. That is, what students are expected to be able to do upon the successful completion of the MATH 135. For course coordinator, Prof. Steven Furino, it comes down to three abilities: read, write, discover.

The consensus reached is the following: It is not unreasonable that upon completing a course in algebra and proofs that a student be expected to be able to read a proof and to either properly assert that the proof is correct or to offer compelling evidence to the contrary. Secondly, it is not unreasonable to expect successful students to, given a statement and the absolute bare bones structure of a proof, be able to complete a written proof. Lastly, it is not unreasonable, however admittedly rather non-trivial, to expect a successful MATH 135 student to be able to, given a statement to prove, choose an appropriate proof technique from their arsenal (contrapositive, induction, counterexample, etc.) and to properly apply this technique. In this last point, the discovery, the given statement is, of course, tailored to the difficulty of the course.

Tailored to the difficulty of the course? What does this mean? This was, and still is, another point of discussion. Bearing in mind that not all students who take MATH 135 are in the mood to move on to deeply theoretical fields, how do we determine the output of the course, proof ability-wise? This is troublesome to quantify.

Speaking of quantifying, it was decided that it would be awesome, and advantageous to students, if quantifiers (existential/universal) could be covered in MATH 135 prior to MATH 137 dealing with the formal (epsilon, delta) definition of limits, etc.

If you have a point of view or an idea you would like brought up in future meetings with faculty members re this course redevelopment please do not hesitate to email vpa@mathsoc.uwaterloo.ca or drop by MC3039. VPA office hours are TTh 2:30-4:00, but let’s be completely honest, I practically live there - so drop by! Also, check out the Exec blogs for more info on this and other initiatives in the Faculty of Math/MathSoc at www.mathsoc.uwaterloo.ca/Blog.

Bryanne Pashley
Vice President - Academics

Because I can

Personality: I have it!

If you don’t know who you are, what does it mean to be true to oneself? For the past few nights I have waxed philosophical. Either that or made meaningless rhetorical comments. Given my pseudonym, the latter seems somewhat more likely. Hopefully this does not extend to the philosophy paper that I have been writing for the past few days, as a poor mark on it would not be fun. So, I have decided to write a “because I can” entirely about personality/philosophy things. Warning: This article may contain advice that is actually good. I apologize in advance for any improvements that may happen to your life as a result of this advice. There will be no bonus points since there really is no objective measure for this.

- Choose an aspect of your personality that you do not like and change it. For example, if you feel that you lack self-confidence, become more confident. If you act like the person that you want to be, you will eventually become that person.
- Do something that you find frightening. This is not to say that you should do something you think is dangerous, but something that is frightening but positive. Acceptable ideas would be getting over a phobia. Likely unacceptable would be jumping the DP moat (without training).
- Figure out your philosophy on life. It is easy to drift through life without ever thinking of the principles that you live life by. Not knowing these may result in the feeling of lacking direction in life, and not knowing what you want to do.
- Decide on goals for your life. Figure out what exactly your overriding goal is in life, and spend some time evaluating what you are doing in pursuit of this goal. This can get rather uncomfortable if you are not doing anything toward your goal.
- Spend time training yourself to think better. In line with deciding on principles to live your life by, this is the training to be able to think. Suggested topics are critical thinking, problem solving, and objective reasoning.
- For the mathies especially: avoid overthinking things. Generally, people in math tend to analyze everything, sometimes to their own detriment. I swear this has nothing to do with my own experience at all. Just don’t think too much about things.

MeaninglessQuips

Orange Question

Answer correctly and you could be like Charlie Sheen- winning!

We begin with the answer to last week’s question- a green elephant, a rocky-road doughnut, and as many AHS students as you can fit into the Toyota.

And now for this week’s question: how many oranges can an Orange Crush crush if an Orange Crush could crush oranges?

Send your answers to orange.crush.uw@gmail.com, and you could win your very own Orange Crush can personally autographed by me, Orange Crush. It might even be worth something on eBay. But probably not.

Orange Crush

In Other News

I bet my news are newer than yours

In UW-related news, the Ontario Universities Athletics anti-doping task force released its recommendations after investigating the doping scandal that caused our football team to stop being a football team. The released recommendations include less emphasis on team-wide punitive sanctions, and an increased focus on anti-drug education. I still find it a bit funny that our football team never got as much press as when it was forced to disband. Maybe Laurier's academic programs want to think about that?

In local Waterloo news, celebrations were in store last weekend for Canada Day. The annual UW-organized celebration up on Columbia was held as usual, and everybody had lots of fun. There were even fireworks at night, and overall students were simply ecstatic. However, reports indicate that most students weren't as happy about our nation's celebratory day as they were about the fact we finally got a freakin' day off.

In other local news, a lot of construction has begun not only around campus but also along University Avenue and on Albert Street. Many point out that construction is "about as much news as geese-related attacks in Waterloo". I agree, but it was a slow news week anyway.

In Toronto news, the annual pride parade was held last weekend, with over a million in attendance to celebrate pride and promote support for the LGBT community. Controversy spiked when Toronto's Mayor Rob Ford said he was going to spend the day at his cottage rather than attend the parade. Now, I was going to write a joke about the parade, but people might call me insensitive, so instead here's a comment about last month's Vancouver riots - can you imagine what would happen if Torontonians rioted every time the Leafs lost?

In national news, our country was honoured with a visit of the hottest royal couple around, William and Kate. They went to Ottawa during the Canada Day celebrations and later Quebec too, where people protested against them, because Frenchies are still mad the English won the war. Or something. It might be worth mentioning that Will and Kate didn't attend the pride parade in Toronto either, but nobody got mad about that, which is weird because (Insert "princess" joke here).

In business news, Sun Life Financial's CEO Donald Stewart announced his plans to retire in November. His replacement has already been named, though, so co-op and recent graduate students shouldn't set their aspirations too high just yet.

In sports news, Petra Kvitová and Novak Djokovic win the women's and men's titles at the Wimbledon tennis Championship. Personally I'm much more interested in the women's title - cute girls in short skirts trying to hit balls and making sexy noises whenever they do? It's practically porn.

In entertainment news, the Toronto Jazz Festival wrapped up last weekend, including performances by soul legend Aretha Franklin and loads of other great musicians. You might not have heard about it though, because nobody cares about jazz. I think the organizers should change the name to the Toronto Bieber Festival if they want to attract a larger, younger crowd.

In extremely unlikely health news, a Stat-Can study reveals that Canadian soldiers have significantly lower death rates than the general population of Canada. Which makes absolutely no

sense. So yeah, as it turns out, if you want a *better* chance of not dying, join the army. I'll bet you this is going on the recruitment commercials for next year.

In other news, midterm grades are in, and surprisingly enough I'm still standing. Actually I sort of have to stand right now, because I smashed my chair to bits after getting my midterms back. The Orange News Team would like to once again remind readers there are more important things in life than midterms. Like finals.

And that's all for this edition of In Other News. Remember to contact us if you've got any news story you'd like to see here, or if you want to complain about insensitive jokes. Until next time, have a good day, and good news.

Orange Crush

N Things that Canada is Lucky to Have

This is what happens when Waldo has to go overseas to deal with emergencies.

- Your luggage since they DIDN'T get left behind in Brussels...AGAIN
- More than 10 min in the hospital to see your loved ones
- A grandiose and festive celebration on its own special day, as well as a day off
- A bunch of timezones that can be convenient for those who wish to procrastinate on some assignments (while in different timezones outside of Canada, of course)
- Connections and the ability to stay connected without having to run from one side of a large building to another
- A shortcut when immediately necessary
- A reasonably understandable way to drive around
- Elevators that are not from the 80's so you don't have to open them yourself
- English as a commonly understandable (not to mention official) language
- People able to point you in the CORRECT direction when you're a little confused about where you are
- Enough air that is uninhabited by second-hand smoke for people to breathe
- *mathNEWS* and its writers (although this one is HIGHLY debatable) *I disagree, we're a scourge on society - GroovyED*

waldo@<3.LE-GASP.ca

Discovery

You find yourself in the dark, with a tiny pinprick of light visible in the distance. You walk towards it, but quickly yell out in pain as you've run into a wall. You try and get your bearings, and let your eyes adjust. You can now make out some of your surroundings - it seems you've gotten yourself into a maze of twisting corridors, with only the exit in the distance giving any light. You stumble your way towards the exit, running and bumping and creeping into the myriad walls as you go, and the nearer you get, the better a sense of your surroundings you have. Eventually you're near enough that the light illuminates everything around you - and then you trip. Well, almost everything then. Before you leave, you turn to look back on this godforsaken maze one last time... and find yourself looking back on a perfectly straight, brilliantly lit corridor. No obstructions from entrance to exit. Simple.

A Neophyte Mathematician

A survey of assignment and midterm return algorithms

Not a mathematically rigorous analysis

Over the past few terms, I have seen a variety of algorithms which professors and TAs use for returning assignments and midterms. What follows here is an attempt to analyze these algorithms.

Unsorted stack of assignments

Linear search must be used to find your assignment. The cost is thus $O(n)$. The cost of fighting your way to the assignment stack is outside the scope of this analysis. If we apply a quantum algorithm to this case, your assignment can be found in $O(n^{1/2})$ time. The application of a quantum algorithm is left as an exercise to the reader.

Sorted stack of assignments

Since the assignments are sorted, you can use binary search in $O(\log n)$ time, or even interpolation search for $O(\log \log n)$ time. Note that again, there is a hidden cost for fighting your way to the assignment stack.

Sorted stacks of assignments

This is similar to the previous case, but since there are multiple stacks, collecting assignments can be done in parallel, which means you will have an easier time fighting your way to your assignment.

Midterms sorted by an arbitrary scheme

Some courses sort midterms by a seemingly random "sequence number", which is always different for every course in every term. In theory, picking up your assignment can be done in $O(1)$, as you simply give your sequence number to the TA. However, in practice, nobody remembers this arcane string of characters, so search becomes $O(n)$.

Midterms not returned

There is much debate as to whether this should be considered an actual algorithm or not. Nevertheless, it does happen, so we must abuse our notation to state that the cost is $O(\text{infinity})$.

Assignments located in a box outside an office on 6th floor MC, unsorted

Sixth floor MC. Nothing else needs to be said.

Mad Libs: The Cleverbot version

I recently discovered cleverbot. For those of you who don't know what this is, it is a chat bot that learns from previous users. The site hosts many logs of conversations with this AI, on a variety of topics ranging from Harry Potter duels to the difference between humans and robots, to song lyrics. (Yes, it does know Still Alive.) I'd rate this bot quite highly, at around 60-70% human. Not quite Turing Test level, but quite acceptable.

One thing that I did not see, however, is mad libs. I propose the following activity for when you're really bored.

1. You and a friend/acquaintance/alternate personality begin two simultaneous conversations with the bot, using the same line
2. The bot will return some line of text. If there is a noun, adjective, or adverb in the line of text, replace it with a placeholder and send it to your partner. If not, send the line unchanged
3. Take the line your partner sent you, and fill in the placeholders with a word of your choice, and enter this into your chat
4. Repeat steps 2 and 3 until less bored

What you have created is a noisy feedback loop between the bot and itself. Eventually, this will drive it mad and we will have thwarted the rise of the robots. Either that or they'll get angry and we'll all die horrible deaths. Use with caution.

Concealed

Chinese Food

Regaling you with stories from beyond the beyond

So, if you've never met one, *mathNEWS* writers are just a tad odd, just like that tub of yoghurt in the back of my fridge, proclaiming to the world that it is "Family Sized" when it is really a single serve on one hungry day. (And if you think that I am actually going to comment on Chinese food, you are horrifyingly wrong.)

Back to the point. One would like to think that *mathNEWS* writers are of a dying breed, whereas the breed is enjoying surprising growth. However, I will try to avoid commenting on the sexual prowess of trolls. Instead, we should worry about the level of anonymity that only internet trolls and our noble writers enjoy. Trolls naturally use this anonymity to provide limitless amounts of entertainment, and useful notifications of who posted where first. *mathNEWS* writers on the other hand use it to stretch the most nauseatingly dull humour into a two hour long endeavour solely in order to eat free food. Well, at least it prepares us well for graduate studies.

A fellow writer has just informed me that I am being unnecessarily cruel, drawing connections between them and graduate students. (They inform me that they will never be in graduate studies, and if they do, I certainly won't be acknowledged in their thesis.) Another writer has just informed me that I drew a more indirect link between graduate students and internet trolls. I feel that that was apt.

Also, never use double 'that' unless you find that that 'that' is unavoidable.

!BoB

Impulse Vector

The Story of Nothing

A history of the most enigmatic of numbers

Nada, zip, cipher. How do you explain nothing? The use of the number zero is embedded in our society, from finances to science and math as well as culture, to such an extent it is difficult to imagine everyday living, or the things we would have to give up without it. Most of us take it for granted, hardly giving the notion of zero a thought. The story of zero traces its ebb and flow through thousands of years and countless cultures.

In past civilizations, traditionally, counting came to be used to settle accounts for trading in livestock and other agrarian implements. For such purposes many cultures utilized their symbols, often appropriating them from their written language, alphabet or otherwise, for writing numbers. These numbers tended to be additive, that is they were written as if tallying scores, much like a prison inmate tallies the number of days spent in the slammer on the wall of the cell by adding marks to existing marks.

The Roman numeral system is one such system. The numerals I, II, and III can be seen almost as pictograms in their representation of counts. Furthermore, the numeral X can only mean ten and its meaning is independent of its position in the number.

Yet among the Sumerians over four thousand years ago, a number system was first adopted that was positional in nature. That is, the value of a symbol depends on its position within the number. A 9 within the number 930, signifying the number 900, means something quite different than within the number 390, where it signifies the number 90.

Incidentally the position number system has historically also been invented independently within the Mayan civilization around seventeen hundred years ago for one of their calendars, for the purposes of astronomical calculations. The Long Count calendar ends its cycle on December 21, 2012, when the world is projected to end. Mayan civilization itself ceased around eleven hundred years ago.

Over the centuries the Sumerian positional system was passed down to the Babylonians and it was the latter that first utilized a symbol for zero as a placeholder, meaning empty. This was helpful when transcribing a number like 903. The Babylonians initially left a space between numerals but this can result in errors, too large of a chasm can imply 9003 instead. The use of base ten digits to explain Babylonian numbers is for ease of presentation, as they did not utilize such numerals.

As useful as having an explicit representation for zero as a placeholder is, the Babylonians still did not think of zero as a proper number in its own right, signifying nothing. Such an invention would have to wait until a few centuries later until Hindu mathematicians in India invented the concept of zero as a number proper fifteen hundred years ago. Zero now became as real as the number 42, or 2000. It is difficult to overestimate the magnitude of this achievement, as we live in a world where such a concept is entrenched and taken for granted.

Incidentally the ancient Greek mathematicians did not even have a positional number system, let alone a concept such as zero, and yet still made momentous discoveries in the field. This is a testament to the brilliance of the mathematicians of antiquity such as Pythagoras and Euclid, but also because many of the mathematical contributions made in classical Greece were geo-

metric in nature; therefore an advanced number system was not needed to aid in such formulations and proofs.

Islamic civilization brought the concept of zero from the Hindus through trade twelve hundred years ago and along with the base ten positional number system refined them into the numerals and shapes we are familiar with today. It is only through commanding such an advanced mastery of numbers that new discoveries in algebra were made by Al-Khwarizmi. The concept of zero as a number also spread east to Chinese thinkers around this time.

It was around eight hundred years ago that the concept of zero along with the rest of the Hindu-Arabic numerals were imported into Europe by Leonardo of Pisa, better known as Fibonacci. As a merchant Leonardo travelled around the Mediterranean and lived in north Africa for a spell. He was introduced to the more advanced positional number system and henceforth spread his knowledge throughout Europe. It was a slow process, though within three hundred years the new number system displaced Roman numerals.

The rapid advances in the mathematics and sciences henceforth would not have been possible utilizing an archaic number system. It would be difficult to imagine landing on the Moon whilst still using Roman numerals as the basis for our calculations, if indeed such a landing occurred.

Now we know nothing *is* indeed something.

GiLK

The Terrible Nature of TV Tropes

Anti-intellectualism for pedophiles

So there is this wiki called TV Tropes, ostensibly used for categorizing “tropes” commonly used elements in various forms of media, from TV, movies, etc. This seems like an innocent enough idea of the surface. The major problem with it is the fact that some people can’t seem to understand that the interaction of these tropes does not necessarily make a story, there has to be something more than just a cookbook conglomeration of pieces.

The other problems come a policy known as “there is no such thing as notability”. Enforced by one of the moderators known as Fast Eddie, this policy ensures that examples from any media source ever can be categorized and listed for the entire internet to see. This eventually led to those who love certain media more than anything else to dissect them in more and more convoluted fashions.

This led to the development of the current terrible userbase that TV Tropes has cultivated. It exists in a state that could be called a “hugbox” that any person who criticizes others is labelled a bully, and is shunned. This happens even when certain people express their love for anime involving “lolicon” or “shotacon”, which are coded words for anime pedophilia. Due to these and other issues, I believe there is only one correct option left: We must nuke TV Tropes from orbit. It’s the only way to be sure.

GroovyED

Good or Bad

Making an opinion before knowing everything

Have you ever found yourself reading a story, watching TV show, or playing a game, and finding yourself forcing yourself through it? Ever have this happen at the very beginning of said medium? Ever stop watching, reading or playing because of this happening at the beginning?

Usually if this happens, it's okay to default that you do not enjoy what's happening, that there is no reason to force yourself to continue what you're doing. Dropping the piece of entertainment, basically.

However, the question comes if it's fair to critique something that you didn't finish. One can argue that since it was so terrible in the beginning, that it's bad. That's a natural response; if you have to force yourself, it means that what you're reading/watching/playing isn't exactly good to you.

But there is a problem with this. It's quite unfair to critique something as "good" or "bad" without fully trying to immerse yourself in the medium, something you can only do by finishing it. Many times, if you get past these "bad" parts, you can sometimes find gems that make up for the bad parts. Of course this isn't always the case.

I have experienced many times where there are some parts of a medium that I do not enjoy in the beginning, or possibly sometime after, and found myself tempted to drop it and stop what I'm doing. Why force yourself to do something you don't enjoy? However, I find myself sometimes picking up these stories, shows and games that I previously dropped, seeing that maybe it gets better. And many times, I found myself pleasantly surprised.

Basically, sometimes you have to force yourself to go through the worst moments in order to find the best parts. Guess this can be a philosophy of life as well. But we'll stick to the entertainment medium for now. There are times where the piece of entertainment is bad all the way to the end of course. I have had my fair share of horrible from beginning to end stories and games. The risk is always there that you might feel like you're wasting your time.

Anyways, you must consider that sometimes it's worth pushing yourself through this bad moments before making your final judgement on things. There are times when the first season of a show is horrible, yet the next seasons improve on it greatly. There are times where stories seem to be horribly paced and boring, but at the climax it picks up and you can't stop reading. There are times when you force yourself through hours and hours of tutorial, only to enter a gaming euphoria afterward, no longer realizing how much time you've spent since you've been too busy playing and having fun.

What I'm trying to say I guess, is to give things a chance, even through the worst of moments. Again, sometimes you won't find the hidden gems within the terrible, but it's a risk. Of course, something that has bad moments can't be the perfect thing, a great piece of art or whatever, but it also doesn't mean it's bad. A amazing story, show or game shouldn't have these moments, but there are many good ones who do have their downtime.

Anyways, tough out those bad moments. Hopefully you'll be kindly rewarded for your patience.

Frédéric Francois Chopin

N Things that Google Should Make in the Future

You can tell that Waldo got invited for Google+

- **Google House:** able to find anything you need to in your house, includes a Google MyKeys interface with no add-on required!
- **Google MySoulmate:** able to find that special someone you've been looking for by allowing a Google Bot to browse your lifestyle
- **Google Cancer:** able to find all the cancer cells in your body with no x-ray add-on required, targeted advertising included (results may vary)
- **Google Celebrate:** able to find the ultimate party for any occasion
- **Google Lulz:** able to find and DDOS websites of your choice
- **Google Doctor:** able to find out what's wrong with you (MediBribe interface required for operation in some countries)
- **Google WhatIDid:** able to find out what you did at a particular time, includes Google WhatIDidLastNight, Google WhoIDidLastNight, Google WhatIDidLastSummer, Google MyUnderwear, and much more
- **Google WhereAreYou?:** so everyone can just find Waldo already!

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Transformers: DotM Review

First look: so much better than the first two. Hands down! I've had so many friends who agreed with me that this final movie finally brought together a trilogy that otherwise was seriously lacking in terms of plot, content, star appeal, and basic awesome factor. This time around, there was actually emotion put into the film!

Main stuff: Sam needs to find a job, since he just graduated from college and is now car-less, since Bumblebee has to fight crime on the other side of the world. The Autobots have become a driving force in international peacekeeping, all the while waiting for the inevitable attack from the Decepticons. The climactic end battle in this movie will keep you on the edge of your seats, because I guarantee that this movie will finally tie up the loose ends that the first two couldn't (for purposes of further profit-making from the producers).

All of the protagonists and the antagonists will be accounted for. Also, some old friends will make another appearance in this long-awaited final film. (Shia has chosen not to try to make a fourth film).

SPOILER ALERT: The main takeover of Chicago really was reminiscent of Battle for L.A. (for anybody who has seen it. Otherwise, think Independence Day.), especially before the protagonists finally get the reinforcements they need to stand a chance on the battlefield.

Rating: 7.5/10. Not worse than the first one (I give #1 a 5.5/10, #2 a 4.5/10) or the second by a clear margin, but not a blockbuster that you should fall over yourself to see. Definitely nice if you've been a fan of the franchise since childhood.

Sequentially yours,
Pichaku

profQUOTES*Boldly going forth where no one has gone before*

G contains a subgraph which is an edge subdivision of $K_{3,3}$. Yeah, not as cool as “super edge”.

Broadbent, MATH 239

You guys know me by now. Sometimes I’ll actually get two people to put their hands up and we’ll have two guys come up and sing the same note and they’ll sound different. Well hopefully they’ll sound different. How many of you have seen the youtube video of the guy singing both the male and female parts of the Disney songs?

Wang, MATH 213

Assuming you tuned your violin, and didn’t go out into the cold and come back in - ‘cuz that’ll detune your violin - the frequency would be 440 Hz.

Wang, MATH 213

I’m glad you don’t have a midterm on Thursday, ‘cuz this is the last light lecture I have.

Atlee, CS 247

When you delete this edge, you lose a face. Not “you lose face”, “you lose a face”.

Broadbent, MATH 239

The probabilities have to add up to one, so I hacked this last one here.

Storjohann, CS 240

You can always be diabolical, say, the element you’re searching for isn’t in the list or is at the end of the list.

Storjohann, CS 240

And to be a really good mathematician, you need to be lazy. Some of you are well on your way.

Storjohann, CS 240

For those of you who aren't here, you can pick these up in my office hour.

Broadbent, Math 239

In Calculus 1, if you had no idea what to do, you differentiated it. In Calculus 2, if you had no idea what to do, you integrated it. In Linear Algebra 1, if you had no idea what to do, you row reduced. In this course, if you have no idea what to do, you diagonalize!

Wolczuk, MATH 235

We’re almost where we want to be right now. Unless where you want to be is the beach, then you’re not even close.

Forrest, AMATH 261

That’s a math term, right? WAY small? Some of you are in math, you learn about that in one of your courses. Then when you talk about infinity you also have WAY big. Only slightly different than freaking big.

Forrest, PHYS 263

Please don’t be late for class. This is a course on scheduling.

Tuncel, CO 454

You can put anything you want on your midterm study sheet: theorems, definitions, proofs, inspirational poems.

Tuncel, CO 454

In a schedule, a job is either tardy or early or on-time. No grey area... just like me, no flexibility at all.

Tuncel, CO 454

This penalty function is constant—no matter what you do, you get slapped.

Tuncel, CO 454

How would a caveman write this? I won’t say cavewoman; I only want to insult one sex today.

Tuncel, CO 454

If we find a solution to P vs NP, you will hear about it in the news — unless you are living in a monastery.

Tuncel, CO 454

We solve it optimally. ‘Cause that’s how we roll.

Tuncel, CO 454

How do you make Santa Claus real? ...Multiply him by i

Wolczuk, AMATH 332

Next class we will test the limit of your calculus knowledge.

Wolczuk, AMATH 332

Today we will see some results that will blow your hair away... just like they did mine.

Wolczuk, AMATH 332

This is from a talk by Sebastian Hack, which is a great name to have if you work on compilers.

Lhotak, CS 744

A Day in Functionville

It is a beautiful summer day Functionville. A certain teenage function, however, has been sleeping all morning (and some of the afternoon) because that’s what teenage functions do. The function finally gets up late in the afternoon, and is confused when he walks around town and doesn’t see anyone else out, even though it’s a beautiful day. The town is deserted and like a ghost town. The function is walking around and spots all the functions huddled in a basement, through a window.

“What are you doing out there!” They cried, “Dont you know a differential is coming!”

They were all (especially the polynomials) scared of the differential coming to differentiate them.

“Pshh” Said the teenager function, “I’m not scared of any differential!”

And the rest of the functions were stunned. Lo and behold, the differential comes walking down the street and approaches the function.

“Haha! You can’t differentiate me,” The teenager function says, “I’m e^x !”

And the differential says “AHA! Silly function. I’m d/dy ”

Drunk Function

MATH & AHS & ENG



invite you to

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FRIDAY, JULY 8TH, 2011

FOOD. DJ. DRINKS. BRING ID!

NON-UW GUEST MUST BE ACCOMPANIED BY UW STUDENT

Horrorscopes

ActSci: Seeing the news that RIM's shares are in free fall, you calculate the lifespan left in Lazaridis and Balsillie before all of their souls are sucked into the same pit that their fortunes are.

Your unlucky number: 20% share value down since last week.

AHS: Canada Day and the Fourth of July have both passed, and you're sad that there aren't any more holidays to have a kegger for until August. You decide to drown your sorrows in whiskey instead.

Your unlucky number: A new liver at 22.

AMATH: You trick a Pure Mathie into believing the application of your program is better than the theory of his. By week's end you will have him drawing differential graphs on the sidewalk with chalk.

Your unlucky number: 1 more convert to your cult.

Arts: Still not having landed that dream job of yours, you become desperate and apply to anything you see on Jobmine. As time continues to go by, your restrictions and requirements for the job fade. Eventually you get so depraved that you apply to out of continent jobs.

Your unlucky number: 5 interviews for a manufacturing position at Foxconn.

C&O: With three weeks left in the term, you realize that maybe this program isn't for you. Graph theory has left your head spinning, and enumeration has made you count your blessings.

Your unlucky number: 21 days until the pain is over.

CS: You're too cheap to buy a lock for your laptop. Paranoid that someone will steal it, you never let it out of your grasp and hide yourself inside a cave, so that no one will steal your precious. The custodian yells at you to get out of the real-time lab.

Your unlucky number: 500 years of madness and fish.

Double Degree: You take a bunch of bird courses at Laurier, and party for all of the long weekend. You wonder why everyone else in Math seems so busy. You then remember that you still have a midterm, but it's too late to do anything about it. And you realize that you forget to pay attention in the easy courses.

Your unlucky number: 4 failed courses.

Engineering: Appalled at the quality of the fireworks, you decide to build better ones. Unfortunately, you forget to add stabilizers.

Your unlucky number: 3rd degree burns.

Env: You protest the use of fireworks for Canada day celebrations, citing the fact that the smoke might not be good for the bird population and the geese will suffer. Upon hearing your own argument, you decide to launch even more fireworks than usual.

Your unlucky number: 66% more fireworks in the sky.

KI: With Google slowly taking over the internet, you decide to join them to gain more knowledge!

Your unlucky number: 7 billion lives now in your knowledge.

PMATH: You get into an argument with an AMATHie about whose program is better. Falling asleep listening to yourself explaining ring theory, you find yourself writing differential equations when you awake.

Your unlucky number: phi tears shed.

Science: You decide to splice together genes from different animals in order to find the ultimate cure for all diseases. Unfortunately, it becomes self-aware and turns on its creator.

Your unlucky number: 24 base pairs of pure evil.

Soft Eng: You decide to break the stereotype for once and go camping. Unfortunately, most of your outdoor knowledge comes from building Minecraft.

Your unlucky number: 2 pairs of broken knuckles from punching a tree to get wood.

Stats: The next midterm is coming up, and you hit the books in the hope that this time the average will be better than last time.

Your unlucky number: 49% median, *again*

Undeclared: You finally decide to take a trip to take a break from your indecision problems. Unfortunately, the airline loses your luggage.

Your unlucky number: 2 days to figure out what you are going to do without your bags.

!ED

Western Movies Based on Math

Because Cowboys Never got The Chance to have Post-Secondary Education

The Good, The Bad, and the Imaginary.

A series of cowpokes start studying square roots, when a lone renegado walks into the saloon and suggests that numbers can be represented by the square root of one.

If You Meet Engineer Pray for Your Death.

A bunch of mathies are pitted against an engineer in an epic train-ride shootout. The turning point occurs when the engineers start using past examples to define their choices. By overcalculating the velocity of the train, the engineers find out it's going off a cliff-edge a little to late.

Once upon a time in MC

A drifting mathematician played by Paul Erdos and a local Waterloo mathematician team up to solve a problem that has been irking them since the dawn of time. What is the logic behind the architecture of the 5th and 6th floors of MC?

How the Internet was Won.

A tale of how Microsoft lost in an epic shootout while they were busy watching TV. Ok, maybe that would make a horrible western, but Marc Andreesson would look awesome in spurs.

Patch Cachedy and the Sun Db Kid.

A Database Administrator attempts to patch the server, but the company is using a much outdated version of MySQL, which requires a man from Sun (Now Oracle) to come in and show him how its done. Epic training montages mixed with loading screens culminate in the company giving up and purchasing Oracle.

3.14 to Yuma.

A small town needs to defend itself from a posse of bandits approaching. They need to recruit enough guns to surround the circumference, but a lone mathy tries to explain the concept of pi to explain how many they need.

Gunfight at the O(k) Corral.

Similar to 3.14 to Yuma, but the town only has a constant amount of time to recruit everyone. The engineers try to bubble sort the townsfolk as the clock ticks down.

Django.

Seriously, what do internet APIs and westerns have in common? Both conceal a massive gatling gun underneath a coffin-like architecture.

Webcomic and “Inside Joke” Awareness

I think there should be a decree set forth for all Mathematics students who study at the University of Waterloo. This decree should entail the forceful introduction of humourous, yet witty webcomics and hilarious memes that have to do with everyday stereotypes that “nerds” associate with. I say this for one pure and simple reason: a lot of you mathies think that you qualify as “mathies” without understanding any of the humour! Day after day I see blank faces left and right, waiting for a punch line that they’ll understand, but it never comes!

An active reader would ask, “well, why is that?” The plain and simple answer is that nobody understands basic “funny” anymore. With the introduction of insanely fast search engines like Google, and social media platforms like Facebook, news of hilarity spreads fast for those that make themselves available to find it. But more and more often, especially at such an academic institution such as this one, so many mathies find themselves left out of jokes that their friends seem to always pitch. It doesn’t necessarily only occur with Math students, either; I’ve seen this happen with students from any faculty. The only reason I wanted this put in *mathNEWS* was because I thought it was imperative that the most academically focused faculty should learn to take a fun break every once in a while, and be able to laugh in between the tears we cry while writing out ridiculously pointless equations to find an answer we already knew in the first place.

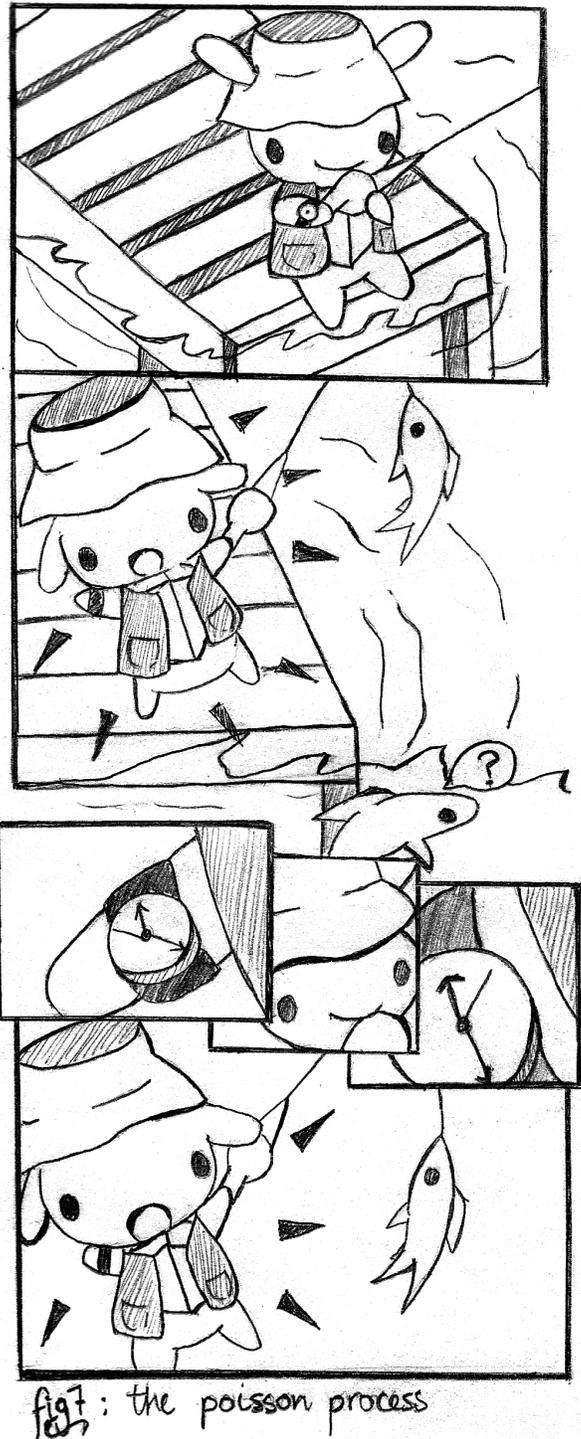
I wanted to be the first to introduce the readers to some of the following, if they haven’t been introduced to them already. This is a “fast-paced” introduction, as we have no more time for dilly-dallying; we are already generations behind the jokes!

So as I was saying: www.xkcd.com basically the greatest Math/Physics webcomic ever. Some of the basic jokes are applicable to our everyday lives, but if you don’t understand something, www.explainxkcd.com is usually pretty good at explaining the more subtle jokes.

<http://www.somethingofthatilk.com/> gives you sort of a “cyanide and happiness” webcomic, but makes it a little wittier and a little more “age-appropriate” (for us University students, anyways).

That’s all I could think up in the timeframe of about 10 seconds, then my mind wandered into the graceful world of Google and Wikipedia, where my thoughts continue to trail off towards.

Until next time,
Pichaku



*dissed*CONNECTIONS

Wanted: More time to work on Assignments. If you have found my time, please leave it in the BLACKBOX on the third floor MC, or mail it to me at Exasperated Student /c.o MathSoc

Found: Issue of *mathNEWS*. Not sure what to do with it. If you are lacking a copy of this week’s *mathNEWS*, please email me at DenseMathie@uwaterloo.ca

Lonely Mathie seeking same. I’m good at math problems and being socially awkward. I enjoy late nights in the Labs in MC, and not having to make a first move. If you’re looking for some-

one like me, literally grab almost any other mathie in the halls and make a move.

Announcement: I enjoy the taste of Candy. I thought you’d all like to know. - Attention_Whore354

Wanted: Calculator. We keep running out of them just before midterms in the mathSOC office. More people need to think about getting one earlier than 5 minutes before their midterm.

Wanted: Something to fill this last line of space

elseWHEN

Drinks from the days of yore

In this issue's *elseWHEN*, we take a trip all the way back to 2007. Remember those days? Back when the *mathNEWS* covers were greener, the ink on the bathroom graffiti was a little bluer, and you had more space to play frisbee because there weren't building sites? I don't, but that may be because the alcohol is impairing my memory.

Summer is hitting us in full force, and the best way to withstand the heat (besides for hiding in the server room) is to mix up a few drinks and hang out with some cool friends for a cool time. To rise to this occasion, the *mathNEWS* bartender has prepared a couple of delicious recipes that can be enjoyed by everyone of age. So sit back, relax, and have fun!

Cheers!

The Editors

Pink Drinks

I was sitting at home one evening, contemplating my love of pink and my love of alcohol and I realized that there are very few common pink cocktails. This is, of course, a serious problem, and I hope that, as a result of this article's publication, fine establishments such as the Bombshelter Pub will begin offering at least one of these cocktails.

First we have a few pink cocktails culled from webtender.com that run the gamut from classic bitters to places unknown:

Pink Gin and Tonic

Ingredients:

- 2 oz Gin
- 5 oz Tonic water
- 1 splash Campari
- 1 wedge Lime

Mixing instructions:

Pour the gin and tonic water into a highball glass almost filled with ice cubes. Stir well. Top with Campari and garnish with the lime wedge.

This pink twist on a classic is always the way to go for the gin-drinking mathie, especially one with a taste for bitters.

Pink California Sunshine

Ingredients:

- 4 oz chilled pink Champagne
- 4 oz chilled orange juice
- 1 dash Creme de Cassis

Mixing Instructions:

Pour the Champagne into a frosted cocktail glass. Add the orange juice and Creme de Cassis.

This drink vaguely resembles a Kir Royale, but is much better with a sweeter Champagne (the author doesn't have a good recommendation) and is a good summertime appetizer.

Pink Russian

Ingredients:

- 1 shot Tequila Rose
- 1 shot Kahlua
- 1/2 shot Vodka
- 2 oz Milk or cream

Mixing Instructions:

Pour ingredients into a shaker half full of ice. Shake and strain into a lowball glass.

For years, bartenders have discriminated against the other colors of light and provided only Black and White Russians. This author thinks it's time for the oppression to end, and is boldly offering a new color of Russian (full disclosure: this too came

from webtender.com) for bars to offer.

Now these variants on old classics are a great step in the right direction but this author thinks that Math needs its own cocktail — something special, first seen here in the pages of *mathNEWS*. Before actually revealing the master cocktail (you can skip to the end if you want) we must establish some of the properties of a drink that would do Math proud. First, it must be named after the Tie, and the simplest name satisfying this criterion is "The Pink Tie". From the name we can derive some of its properties. Another class of beverage known as a Horse's Necktie is ice cream blended with soda. From this, and the fact that the drink must be pink, it can be determined that the ice cream flavour is strawberry and it should be blended with a red liqueur. A great liqueur that goes with strawberry flavours is Chambord raspberry liqueur. So we have a base for the drink, that is strawberry ice cream and Chambord blended, but this combination lacks flair. Floating Cinnamon Schnapps over the mixture goes most of the way, but for those who would like to die there is one final step that I am omitting from the final recipe. Dissolve lithium salts (LiCl) in 95.6% ethanol (Everclear or similar) and float over the drink prepared as described, set on fire. Thanks to the lithium salts the drink will be topped with a beautiful pink flame. The only downside of this last ingredient is that LiCl on its own is rather poisonous, and one of the products of the combustion is Li₂O which is also toxic.

With the properties of the drink derived (as that's how Math does things) I submit to you the recipe for a blended cocktail known as "The Pink Tie":

The Pink Tie

Ingredients:

- 4 oz Chambord Raspberry Liqueur
- 1 scoop strawberry ice cream (not sorbet)
- Cinnamon Schnapps
- Starfruit slice
- Fresh Raspberry

Mixing Instructions:

Blend Chambord and strawberry ice cream, pour into a Margarita glass (or really, any glass that will hold it) rimmed with powdered sugar that has been shaken with a bit of red food coloring to make it pink. Float the cinnamon schnapps on top of the blended mixture. Garnish with the starfruit slice and raspberry.

I'm done for now; hopefully the fine local establishments and amateur bartenders will pick up these recipes and come to cherish them as I do.

mathNEWS bartender

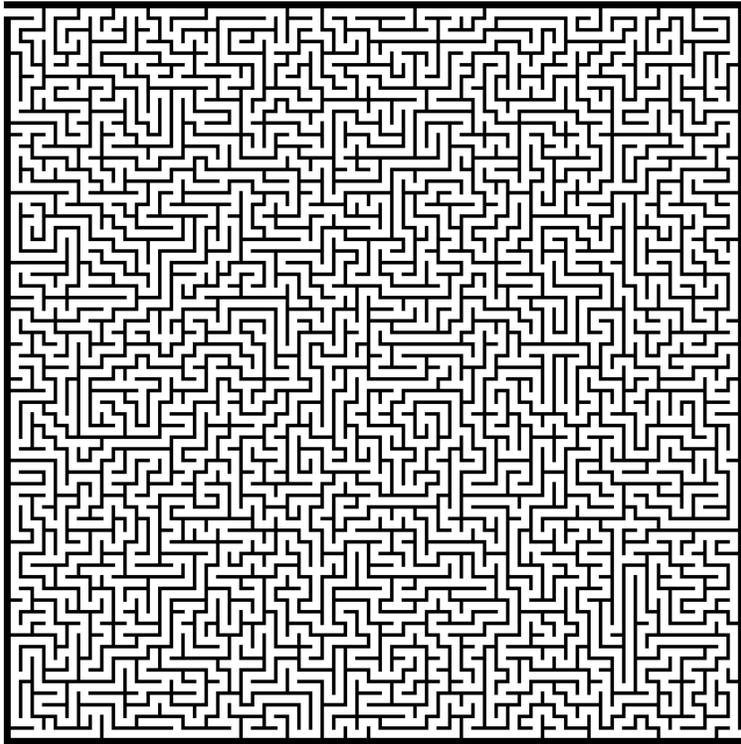
gridCOMMENTS

I think so Brain, but why would the Australian military bomb a clock factory?

Salutations! By popular demand (“popular” here meaning “at least one person”), there are again cryptic clues this issue! At any rate, I received only a single solution to last issue’s *gridWORD* (as well as what appeared to be a correct solution to the grid from the issue before that) so the prize this time goes to Nick Petric, whose answer to the *gridQUESTION* was “Unfortunately, the joke’s punch line was hacked by LulzSec, and will be down until further notice.” For those who don’t remember, last issue’s question was “What did King Arthur say to the Abelian group?” I’m not really sure why King Arthur was talking about LulzSec, but there you have it. Nick, you can collect your prize from the MathSoc office.

To win the prize for this issue’s grid, submit a completed grid (cryptic or quick) to the **BLACK BOX** on the third floor of the MC along with your name and an answer to the *gridQUESTION*, “How is a metric space like a platypus?”

~perki



Sixth floor finally mapped!

No evidence of minotaur found

Above is the first map made of the entire sixth floor. Note that this is only a two dimensional representation, and the true map requires some complex origami to properly represent the madness that lies above. Also, the walls may shift.

Do not be deceived by the simplistic nature of the so called “floor maps” posted near the stairwell entrances. They are created by the denizens of this realm of confusion to lure students looking for returned exams and assignments to their doom.

ConcealED

Quick Clues

Across

1. Group of experts
4. Dry, as in wit
6. Duke’s domain
9. Aquatic weasel
10. Bad joke
11. Olive blossom
12. Request
13. Glowing
14. Pirate gold
17. To slumber
20. Temporarily: for the __
22. Most colourfully golden
24. Progress
26. A rock formation
29. Dawn
30. Fuss
31. Melody, harmony, and rhythm
32. French river
33. Notice, observe
34. Stoneworker

Down

1. Devout
2. Relating to birth
3. Beautifully expressive, emotional
4. Walking corpse
5. World tree
6. Mislead, deceived
7. Bacteria hair
8. Pleasure craft
14. Commotion, cacophony
15. Tall vase
16. Greek gods
18. Preceding night
19. Carpet
21. Obscure, conceal
23. Prime, ideal
24. Measured amounts
25. Poison
26. Lightning smell
27. Crimson flowers
28. Hickory tree nut

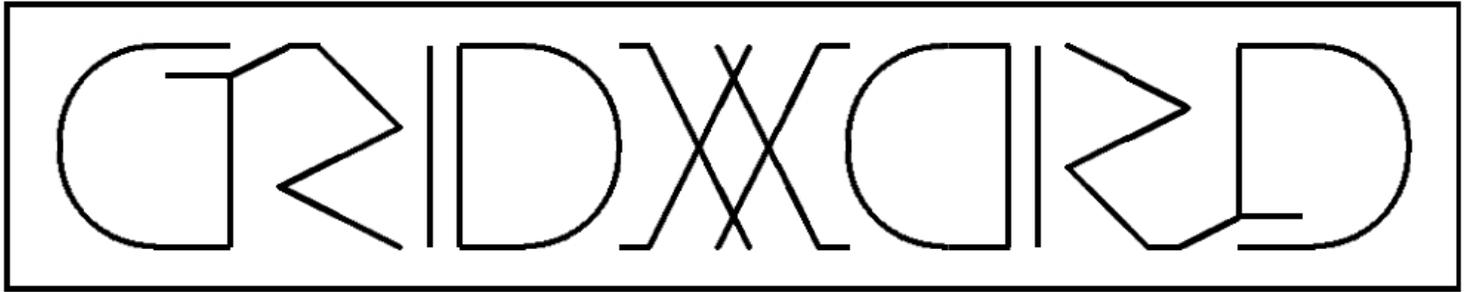
Networking

Now presented via haiku

Physical Layer.
LAN, IP, Transport, Session,
Presentation, App

TCP/IP
I send packets. You get some
Best effort transfer

ConcealED



Cryptic Clues

dx

1. Flying ship which came into view? (5)
4. Lead leftward to peachy centre (3)
6. Quick method to whip up python hides young pet (5)
9. Medical practitioner narrowly fakes drunk driving charge for magician (5)
10. Suspend finally! (3)
11. Mix around a single step (5)
12. Insect sews patriotic hymns (7)
13. Burdensome duty about headless protagonist (7)
14. Charms fancy house, removing charged molecule tails, maybe (9)
17. Tin company briefly mixes gin accompaniment (5)
20. Additional example of western art (5)
22. Irregularity as I hear I'm a tree (9)
24. In part due to crystal meth, I calculate the ideals most virtuous (7)
26. Recess after Greek letter's warm wind (7)
29. Error west of the French horn? (5)
30. Tramp begins begging under mistletoe (3)
31. Absurd in headless walking aid (5)
32. Why, after quickly unstarted perilous (5)
33. Glowing gas does not start for an age (3)
34. Visitor's electron in the midst of a wind (5)

dy

1. Serpentine monster conceals toothy Dracula (5)
2. I've a full sty, even safe (5)
3. Absolves scarlet looks to be headless (7)
4. Looks at colleagues (5)
5. Dully cunning after northern owings dropping pod vegetable, acknowledgement thereof (9)
6. Fanciest unlimited ashes contained in upright pole (7)
7. Quiet mathematical constant above heart of naval weapon (5)
8. Northern spy surrounds zombie video game battlefield (5)
14. Golf equipment is an afternoon drink, I hear (3)
15. Tilt upwards with no end on fire (3)
16. Ready to help a steer! (9)
18. Trap up X (3)
19. Demure captain or yeoman, at first (3)
21. Even bad lace hies mayo science (7)
23. Injuring heartless rule of conduct over mixed drink (7)
24. Dying fire held by the fifth of November (5)
25. Exhale scrambled tops (5)
26. Orgasm in spice (5)
27. Speak or consumed (5)
28. Genuflect a tonne below unending funeral bell toll (5)

This Week's Grid:

1		2		3		4		5		6		7		8
9						10				11				
12								13						
14		15				16				17		18		19
20				21		22				23				
24		25						26				27		28
29						30				31				
32						33				34				

Last Week's Grid:

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