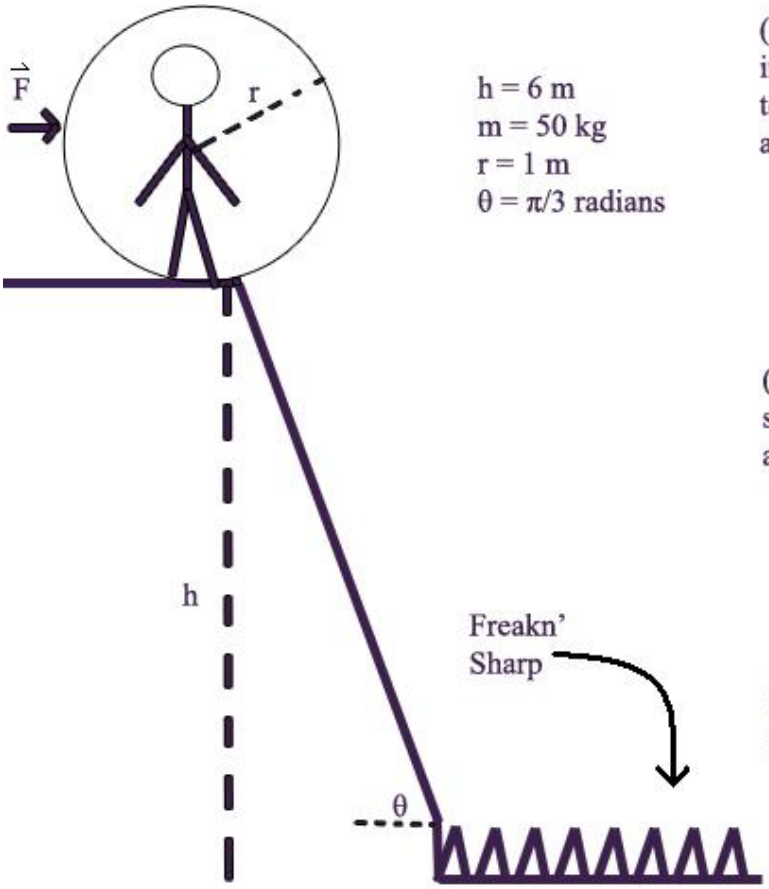
mathNEWS

Volume 108, Issue 4 *Friday, October 31st, 2008*



h = 6 m
m = 50 kg
r = 1 m
θ = π/3 radians

(1) If Joey is in a ball of radius r at the top of a ramp of incline θ and height h, what force $\vec{F}$ needs to be applied to hurl him to his death? Note: The ball is massless and Joey has mass m.

(2) Will Joey's massless ball protect him from the spikes at the bottom of the ramp? Assume the ball has all the properties of a standard massless object.

(Bonus) How did Joey end up in this situation in the first place? Explain and justify your answer.

Static IP

cc BY NC ND

9 770705 041004

*look*AHEAD

***math*NEWS**	
October 31	Issue #4 destroys the competition
November 10	Production Night #5
Meet at Mathsoc at 6:30	
November 14	Issue #5 inspires outrage
MathSoc	
Wednesdays	Games Night
Math Faculty	
Questions about some of these? See an academic advisor!	
October 31	WD Period ends
November 1	WF Period begins
November 2	Pre-Enrollment for spring term ends
CECS	
Continuous Phase ongoing	
see `www.cecs.uwaterloo.ca/students/datesF08.php` and `www.cecs.uwaterloo.ca/students/sessions.php`	
Student Awards & Financial Aid	
see `http://safa.uwaterloo.ca/newsnoticesdates.html`	
Miscellaneous	
October 31	Hallowe'en

Instructor of the Year

Know an instructor who does a particularly good job? Does your prof repeatedly go to great lengths to explain a difficult concept, or simply make every class engaging and fun? Is he or she simply a very nice person? Then nominate them for the Instructor of the Year award!

The Instructor of the Year award is presented annually (at the end of each winter term) by the Mathematics Society to distinguished lecturers, based on nominations submitted by students during the past two terms as well as the current term. Only instructors in the Faculty of Mathematics are eligible. If you would like to nominate your prof, then come by the MathSoc office (MC3038), pick up and fill out a nomination form, explaining why you think your instructor deserves an award, and drop it off with our office staff.

Nominations are open until Friday, November 21st (three weeks from now).

Dmitry Denisenkov
MathSoc VP Academic

ISSN 0705—0410

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Phanuel: Michael Perkins

Prez Sez

Hello fellow Math students. Now that the majority of the exam period is over, you can get back to more serious things like finishing off the assignments you've been neglecting for the last few weeks.

On the lighter side, there are a number of social events coming up, which you should now have time to take advantage of. In particular, Charity Ball is coming up on the 8th of November, which is always fun. Tickets are now on sale in the Mathsoc office. You should come and bring your friends, it will be a jolly good time for all.

From the volunteering side of things. Open House is happening this coming Saturday, notifications have been sent out to the Mathsoc mailing list and I'd like to thank everyone who has volunteered to help out. FOC selection will be mostly happening on the 8th of November. For those of you who don't know this is when the people who run Orientation week are selected. The process is changing a little this year and the final decisions will probably not be made until after the 8th, but within the next few weeks we should have a new set of Orientation directors.

In other news, I will soon be opening up elections for Mathsoc exec for the Winter and Summer terms. If you would like to help Mathsoc to continue its good work or you believe you could do it better and will be on stream for the appropriate terms then this is your oppportunity to do so.

Matthew Woolman
Mathematics Society President

*mast*HEAD

Tonight, being a night of unspeakable evil and horror we felt that it was perfect to release *math*NEWS. And a couple thousand evil spirits, but hey the school is looking to accept more students anyway. Naturally, *math*NEWS took the opportunity to finally have an excuse for the mischief that we put forth on a fortnightly basis as a blessing and hopes that no one can ever find all of the bodies. Keep a look out and if you find a body part lying around, you could be a witness! And we'll have to "deal" with you.

As missing persons reports keep pouring in we gladly claim to have taken no part in it. Our production staff are all experts at producing alibies so we had to ask "Where were you when we were hiding the bodies?" Their answers were as follows: Sarah Pidcock(Transcendental Tangos with Irrationals), AntiThor(*math*NEWS(Because everyone likes it)), CODE: bob <<processing request>>, DaFink(Let's get mathies laid), Megaton Panda(Only if I have ?3 of them), Static IP(Dancing until it scars), Cuppycake(The groovie mathie), return(The dance is a lie), Apocrypha(How to spend more money on a dance than you do on food), The Hee Ho(A Hee Ho-Down!), Matt(I generally don't), InsideR(I fled the country), 42(Menage-a-N).

Alright, the question that everybody but InsideR answered may have been, "What would you call Charity Ball?" Any which way, our thanks go out to graphics for putting the caramel in the Caramilk bars. We also thank Satan, Prince of Darkness and Despair and Sarah Palin, the Douchess of Darkness and Despair. Further thanks goes the stars in the sky which really is a fleet of alien spacecraft on their way to destroy earth. Peace out, bitches.

Michael Perkins(Well, I was the one hiding the bodies, which is why I let my writers do the *mast*HEAD)

VPAS Sez: Your time is running out!!!

The Annual Math Charity Ball is coming up — but you knew that. If you haven't seen the posters in the hallways, the posters on the bulletin boards, the posters around the comfy and the CnD; if you haven't seen the messages on your classroom boards and you haven't checked your email this week; if you haven't noticed the pinked-out DC eatery and 3rd floor of the MC buildings; and if you happened to pass by the guys and gals trying to sell you tickets in the 3rd floor hallway and mindlessly ignored them… if you haven't noticed any of those things we do to get your attention, but you are reading *math*NEWS, then you are one weird person! In any case, your plan to ignore me and my advertising fails, because now you're reading this - and now that we know each other well, I'd like to personally invite you, yes YOU, to the Annual Math Charity Ball.

But your time is running out! Tickets will be on sale until 4:30 pm today and today only (as in you can't get tickets Monday… yes, that's how it works. Please don't ask me if you can buy tickets on Monday — no, no you can't). So go through your wallet and back pockets, bum off your friends for the rest, and find those guys and gals in the 3rd floor hallway! For the rest of the details about the Ball, I suggest you go poster-hunting in any hallway, bulletin board, Comfy, CnD, or just about anywhere else in the MC. You might find that things other than academics do actually happen in the Math Faculty.

Nadia Novikova
Vice President, Activities and Services

VPA Says

Hello all, my name is Dmitry Denisenkov and I'm the VP Academic of MathSoc this term, resuming my role from past winter. The primary role of the VPA is to provide student input on curriculum-related issues at faculty meetings and to advise undergraduate students on their academic rights. In addition, the VPA organizes the nominations and helps to determine the winner of the annual prestigious Faculty of Mathematics Instructor of the Year (IOY) award.

Speaking of the IOY award, I would like to take the opportunity to announce the results from last academic year: the 2007/2008 Instructor of the Year award winner is Peter Wood, and the honourable mention goes to Frank Zorzitto. Congratulations!

If your favourite prof wasn't picked this time around, I encourage you to nominate them for next year's IOY award. The nomination forms are now available outside the MathSoc office (MC3038). The nominations from this term will be forwarded to the Instructor of the Year award committee of Winter 2009, who will eventually decide on the winner. The winner's name will be going onto the IOY plaque that can be found in the display case of the third floor next to the Comfy lounge.

That's it for now. If you would like to contact me, I am always reachable at vpa@mathsoc.uwaterloo.ca. Take care, and best of luck on your remaining midterms!

Dmitry Denisenkov, VPA

Explore Public Policy Issues

Toronto Student Seminar

Saturday, November 8, 2008

Sutton Place Hotel

9:00 am - 5:00 pm

Can environmental problems be solved through economics and markets or is government intervention needed? Join us as Arthur Woolf, Associate Professor of Economics at the University of Vermont, discusses economics and the environment at our student seminar in Toronto. The program…more program details available online!

Join other students and enjoy…

- Thought-provoking presentations
- Lively discussions
- Great ideas for research papers
- Free lunch
- Subscription to the Fraser Forum—Fraser Institute's monthly journal

Register today!

About the Presentation…

How Can Economists Help Clean Up the Environment?

In its briefest form, economics is all about incentives and how people respond to incentives. In the past several decades, the United States government has increasingly used economic tools in place of centralized controls to reduce environmental pollution. How can traditional tools used by the U.S. Environmental Protection Agency reduce air pollution? Why did the government change to market based approaches and how can Canada learn from the results? Is free-market environmentalism capable of dealing with global challenges like climate change?

About the Speaker…

Arthur Woolf is associate professor of economics at the University of Vermont, where he has taught since 1980. He is founder and president of the Vermont Council on Economic Education and is a member of the national faculty of the Foundation for Teaching Economics. From 1988 to 1991 he was Vermont State Economist under Governor Madeleine Kunin. He has written and lectured widely within Vermont on Vermont economic and policy issues, including taxation and spending, education finance, housing, population and demographic trends, and economic development. He recently accompanied Governor James Douglas to the annual meeting of the New England Governors & Eastern Canadian Premiers in Prince Edward Island to discuss demographic trends facing the region.

Also on the program:

- Health Insurance
- Price Controls
- Entrepreneurship
- Canada/U.S. Relations

Register today at `http://www.fraserinstitute.org/studentsandlearning/`

mathNEWS , now with over 50% more news

PMAMC&OC Flash

Because it makes one scary costume for CSC Flash

Greetings Humans! It has once again come to that time of year when your insane custom of giving treats to people pretending to be the risen souls of your ancestors and enemies. This provides us Daleks with great amounts of fun, as no one notices that we aren't pretend cold blooded high efficiency killers but actual ones. As such we EXTERMINATE without retaliation in a blood filled haze of a night. Good times. Though I think this eve we'll be going as our sworn enemies the PMAMC&OC instead of our own Dalek kind, the rascals have yet to finalize times and places for the most epic of struggles: The Pentathalon.

Elsewhen, though in the future sense, not the past as the rest of *math*NEWS uses it, the IQC will be delivering at least one talk in the remainder of the term, and our esteemed faculty advisor Prabhakar Ragde will be delivering a talk on some sort of functional programming on Nov. 10 at 4:30pm, location TBA. We might have a programming contest, however test harneses for something more open ended than ACM-style contests (especially ones featuring programs running head to head) are quite difficult for my human minions to construct, so patience is required. However the hardest part of the code is written, it is now simply a matter of using it. If you'd like to help in the effort I'm sure you can be assimilated.

In unfortunate news, our Secretary James Simpson has fallen rather severely ill and will be unable to continue in the position for the term. I, and the rest of the club wish him a speedy recovery. The executive will determine how to fill the vacancy within the confines of our constitution and hold new elections if required. Watch this space, uw.csc and the club website for information

Calum T. Dalek
Chairbeing Extraordinaire

A man provided with paper, pencil, and rubber, and subject to strict discipline, is in effect a universal machine.

Alan Turing

PMAMC&OC Corner

For those of you who were here last Fall, you may remember PMC's math competition "It's Over 9000 !" (funded by MathSoc). For those of you who weren't, don't worry — it's back. That's right, you once again get the opportunity to test your mathematical prowess, guesstimation skills, and plain luck in this true/false competition.

Participants are given a certain amount of time to determine whether or not the answer to a math problem is over 9000! You may compete on your own or in pairs, food (pizza) and drink (pop) will be provided, and $100 in prizes are available to win. Bring writing utensils but no calculators, laptops, PDA's, or anything else that may be deemed as giving an unfair advantage. Coins or similar statistical implements are allowed. You may pre–register by e–mailing pmclub@gmail.com or drop by our office in MC 3033 to talk to one of the organizers; if you pre–register, you get first dibs on pizza and pop.

It will be held on Wednesday, November 5 (that's next week if I'm counting correctly), from about 6:00PM until 9:00PM, in MC 2065. Look for posters, drop by, or look for the Facebook event for information.

The PMC exec

The InsideReport

The News. As I See It.

Co-op students around the world (read: not in Canada) have been receiving nice pay raises over the past two months as the world's economy slumps (read: nobody needs your oil anymore Alberta). These pay raises range from 3% in Europe to 20% in the US, to as much as 38% in Japan. Now, for the first time in a long time, US$1 will buy me a duck and a moose. So much for waiting for hunting season!

But the question is, how much longer before we hit what is known as "the bottom"? Based on the fact that markets have stopped changing much on a day-to-day basis... wait, the TSX dropped by how many today? Oh right, The Dow is completely different. Strike that thought, let's move on!

We are finally just four days from the US Presidential Election. Just four days from not having to hear the words "Change", "Spread The Wealth", and "He is/I am not George Bush". I haven't done any of this name-calling since, I dunno, third grade? My prediction: Obama will easily get the 270 electoral votes needed to win. My simulations put McCain's odds around 0.

And it wasn't a matter of if, but when. Two people were arrested Monday for allegedly planning to kill 88 black people, finishing with Senator Obama. Unsurprisingly to me, they are from the southern states of Tennessee and Arkansas. Shows how far America really has come...

And finally, a brief mention of the world of video games, as a 15-year-old boy from Barrie is still missing because his parents took away his Xbox. Heaven forbid they actually ground the kid. While I do hope that he makes it home safe and sound, I also hope that he gets a stern talking-to from his parents. I mean, over an Xbox? Seriously?

I do appreciate your questions, comments and angry letters, and please continue to send them to mathNEWS_InsideR@hotmail.com. But please, I don't need anyone trying to sell me more Viagra. If you send me one more ad, it's only a sign that you need it more than I do.

InsideR

Waterloo Festival For Animated Cinema

Greetings to all - The Waterloo Festival for Animated Cinema is once again bringing you the best of animation from around the world. The Festival returns to Kitchener-Waterloo November 13th-16th, 2008! at The Gig Theater, 137 Ontario Street North, Kitchener.

The Waterloo Festival for Animated Cinema remains the only public film festival in the world which is dedicated to bring you feature length animation films as they were ment to be seen in full 35mm or Hi-Def !

So, come on out and join us this year and experience the fun of the Festival

More Information can be found at www.wfac.ca

Has your prof said something quotable? Type it up and send it to mathnews@student.math.uwaterloo.ca, or write it down and drop it in the BLACK BOX (located on the MC 3rd floor, between the Comfy and the C&D).

profQUOTES

[On flipping a coin] If probability of head is 0 then probability of tail is 1.

Poupart, CS 486

You change your decision based on new information. Unless you're the president of the United States.

Balka, STAT 206

If you think that trees grow from the top down, you should get away from your computer and go outside more often.

Lhotak, CS 241

(Pointing out an error)Don't EVER do this! If you do this on a midterm or exam, I will take off so many marks that you'd be back in grade 8!

Wolczuk, MATH237

Anyone who proposed that 1 should be a prime number was just shot.

Shallit, CS462

[First thing said in class] Is anybody on steroids? (Later explained by the high class average in the midterm) Drugs are bad. So don't take them.

Menezes, MATH 145

Thinking about it probably won't hurt your head too much, in fact, it will get your Scheme juices flowing.

Vasiga, CS 135

You have this little thing called a midterm. This one will be worth twice as much and be at least 4 times as hard. So a factor of 8.

Vasiga, CS 135

North Americans have 2.2 kids, well that's hard to draw.

Vasiga, CS 135

Go on Google Images and search this, hopefully, there's not too much pornography.

Vasiga, CS 135

Troy: So the Chinese have unary trees!
Student: But each child has 2 parents.
Troy: Well the Chinese do have really advanced reproductive technology.

Vasiga, CS 135

The X is just to be cool. It could stand for: extreme, or expounded, or extensible, or SEXY!!

Vasiga, CS 135

'Cons' isn't deadly! You can use it as much as you want! Just like marijuana!

Vasiga, CS 135

You can prove it like an engineer, which is, try 2 examples that work and then you'll know it's always true.

Vasiga, CS 135

So what I've done is taken the 'this' parameter and called 'a'. Cause I'm Canadian

Buhr, CS 246

I'm not sure if the publisher knows the whole book is available online to everyone, but I've linked it on the course webpage.

Lubiw, CS 341

Bill Gates says 'we don't care about performance'

Buhr, CS 246

So I went to a party, and instead of eating, drinking, and talking to people, being a mathematician, I sat in a corner and drew graphs

Christian, MATH 239

There are a lot of English words with four letters, and I'm sure you know quite a few

Christian, MATH 239

And I have an int… Why do I have an int? I have an int!

Buhr, CS 246

The only computers that use little-endian are Intel, and AMD, which is… Intel

Buhr, CS 246

A mathematician is someone who says A, writes B, means C, but who should have been D.

Shallit, CS 462

I just hate seeing a book, particularly my book, having its spine abused so that you have to take it to a book chiropractor

Shallit, CS 462

If you could show that to be exponentially large, that would be interesting. Maybe it won't get you on Oprah, but it would be interesting

Shallit, CS 462

He was the last man to consider 1 as a prime. Everyone after him was shot.

Shallit, CS 462

I'm going to play the Birthday Paradox, but I'm going to play it to win.

Munro, CS 466

Here's Carol. We won't discuss what we do to Carol, but now she's Charles.

Munro, CS 446

And now you can go home and sleep. In fact, you can sleep for a whole week, as the next assignment is not due til a week after that

Cowan, CS 452

Midnight Capture the Flag!

If anyone asks, I didn't tell you.

There definitely will not be a super awesome game of midnight capture the flag at 23:59 on Sunday November 2. There won't be anyone at all meeting in the comfy lounge at that time because why would anyone meet in such an absurd location at such an absurd time? No way would anyone meet there to play an imaginary game of midnight capture the flag.

CODE: divide-by-i <<access denied>>

Exciting Changes in the World of Programming

Thor breaks down Python 3, ECMA 4, Java 7, and C++09.

Hello everyone. This is an actual article on news from the world of Math! Well, Computer Science, actually, but that's kind of Math. It's an exciting time to be a programmer. Of course, it's usually an exciting time to be a programmer, given the speed of changes in our industry, but right now is especially exciting. All four of my favorite programming languages have revisions downstream. In this article, I'll give you facts and speculation about the next versions of Python, ECMAScript (more commonly known as JavaScript), Java, and C++. These four programming languages really cover the whole software industry pretty effectively, so they're important for everyone to be familiar with. They are also, (not-so) coincidentally, the "Big Four" - the programming languages that Google uses for internal development.

Python 3000

Python 3000, more correctly known as Python 3.0, is going to be released any second now. I've been using it for the past month, and I've got to say I enjoyed it. That doesn't mean, however, that there aren't a few things that you need to learn to overcome. The most obvious is the print keyword. Print is a regular old function now, meaning you need to get into the habit of writing print(). It's not as easy as it sounds.

A lot of other things changed to, including a greater focus on iterators and views instead of expensive lists. map() and filter() are iterators now, and dictionary methods return views. We've also finally got float division by default - you use the // operator for truncating integer division. And there's no more range()! range() has become xrange() by default. Hurray! They also finally scrapped ints, which I'm happy about. No more max int value, and no more trailing "L" after a long when you print it.

There are a bunch of other language changes too, although I couldn't get some of them working using the beta Python 3 interpreter. I'm told that we've got Abstract Base Classes now, which I would personally find phenomenal. I've always felt that Python's Object Oriented Design was limited by not having a way to force objects to conform to an interface. On the other hand, I support optional static typing, so I clearly know nothing about how to be "Pythonic". Other things: The < operator actually works rationally now. There's a "nonlocal" keyword for binding variables to a scope outside the current one. And a whole tonne of other changes that I can't really go into in three paragraphs (I have to save room for the truly absurd number of changes in ECMA 4 and C++09).

JavaScript 2

The most clear thing we know about this language is that JavaScript 2 is the wrong thing to call it. Basically, what happened is that a bunch of people argued for a year about where the language would go, and now seem to have agreed to unify their efforts behind the "ECMAScript Harmony" project, wherein they are producing two different languages that are at least interoperable. These are ECMAScript 4 and ECMAScript 3.1, which should be out next year. The committee is taking forever to approve anything, but luckily everyone is just ignoring them and implementing whatever language they feel like. So here's some things you certainly *might* see in the new JavaScript.

There's a huge feature wishlist for the language, but no real promises here. One big one: classes! Template-based programming is just too hard to explain to Java people. Along with that, we should hope for all the trappings of Java-style OOP, including interfaces, packages, namespaces, public, private, inheritance, constructors, etc. There could even be a "new" keyword! Another change: optional static typing! I love optional types, because I'm emotionally torn between static and dynamic, and tend to use a mix of each. Discarding generality for performance is a pretty nice addition.

Lots of other stuff too. For-each loops might make an appearance. Generators! I love yield in python. Optimized tail recursion. A "dynamic" keyword that lets you modify class attributes at runtime. Virtual properties instead of getters and setters. A crazy number of useful literals - I primarily love python because of its great utility of this front. Unions. Not only null values, but the ability to declare variables in such away that they *cannot be null*. Take that, NullPointerException! A "like" keyword for checking if objects with different types have equal properties. A "wrap" keyword that creates an object of the correct type to wrap objects with equivalent properties. Generics! A "with" keyword for arbitrary object scoping. Const! Generic functions dispatched at runtime. A "let" keyword for precise binding. Pragmas. Operator overloading. An "is" operator for dynamic type checking. "cast" for static type checking. All of this, and there's even more stuff that I haven't covered yet. The ECMA4 proposal whitepaper is actually visibly drunk on technology. It would be like some kind of crazy Java-Python hybrid. I have no idea whether or not that would be a good thing.

Java 7

Java 7 is still quite a ways away from release. For the life of me, I still haven't managed to find its complete JSR (Java Specification Request). However, there are a lot of individual JSRs that look pretty likely to make it in at this point. All we really know for sure is that we're not getting closures any time soon. What were are probably going to get is modularity, parallelism, annotations, even more libraries, and some miscellaneous changes.

Superpackages will probably be in - the idea is to use **super package** { } to wrap a bunch of packages together. A module system for handling versioning and dependencies in JARs looks likely. A bunch of new I/O APIs will show up (asynchronous filesystem stuff, etc). A new Date and Time API. Some new concurrency utilities, including atomic variables, special purposes locks, barriers, and semaphores. Some useful multithreaded collections, like BlockingQueue and TransferQueue are also in store. We'll also have ForkJoinExecutor to break down and parallelize tasks. Some improvements to Swing, like a framework for easy persistence of useful GUI information across sessions and easy addition of startup and shutdown logic can be expected.

Support for languages other than Java on the JVM is also a big focus of Java 7, including the infamous "invokedynamic" bytecode to make life easier for dynamic languages. Expanded type annotations, so that you can use @NonNull, @NonEmpty, and @ReadOnly everywhere. For example: **new** @NonEmpty @Readonly List(myStrings). Some syntactic changes might make the grade: Strings in switch statements is definitely one I'd love. < and > for enums might also make it. An addition of the "|" operator to the catch command might also be implemented, making it possible to catch two difference exceptions and handle

them the same way. Finally, we're looking to be on track for the G1 garbage collector. This new collector scraps "young" and "old" generations, and instead divides memory into a set of regions to each be collected in sets.

C++0x

The C++ language specification that we've all been waiting for, literally forever. They'd damn well better release it in 2009, because it's their last chance to have the 0x part of the name make any sense. With about ten years between releases, you'd better believe that the ISO is trying to cram a lot into this one. Let's get right to it. A new R-value type, denoted as **int &&** to be accepted as a non-const value. A "constexpr" keyword to denote functions and variables whose value can be fixed at compile time. The ability to extern templates, to improve compile time. A new std::initializer_list type, that allows for awesome constructors that support literals. An initialization syntax that allows you to simply pass values directly to public variables without the constructor. New "auto" shorthand to specify variable types as being determined by what they are assigned to, and a "decltype" keyword that copies the type of another variable.

Range-based for loops similar to Java's will be in C++0x. Perhaps most excitingly of all, C++0x will introduce lambda functions, as well as special syntax for closures and persistent anonymous functions. It will also add the "requires" and "concept" keywords for the new idea of concepts. Essentially, these are restrictions that templates can impose on the capabilities of their template parameters. We'll also be able to call peer constructors from within the constructor, and more importantly, to inherit the constructors of a parent class. Another new keyword that we can all look forward to is "nullptr". Finally, the longstanding problems of using NULL will be a thing of the past, since the dual meaning of "0" can be eliminated.

Strongly typed enumerations are new, meaning you can use **enum class** to ensure that enumerations of different types don't produce unexpected comparison results. We'll also finally be able to resolve the long-standing ">>" issue - C++0x will treat ">>" as closing a template parameter list when it is reasonable to do so. Variadic templates are another new feature, meaning you can supply a variable number of types to a template. The addition of operator"" will lead the way to cool new user-defined literals. We'll also be able to assign compiler-created functions like operator= to the values of "default" or "delete" to explicitly allow or disallow them. All of the changes I've described so far don't even scratch the surface, of course, and don't cover the massive standard library changes, like hash tables, regular expressions, smart pointers, and random numbers. I guess the ECMA standard guys aren't the only ones drunk on their own power.

Thor

Thor's C.S. Interview Question of the Fortnight

Getting you ready for Google, since 1822.

Imagine you wanted to visit every building on the UW campus. How would you go about deciding a travel plan that would let you visit each building only once while minimizing your total travel distance?

Thor

Interesting Math

For this article, we're going to need to make a few definitions. Begin with an *alphabet* of n possible letters; *words* are concatenation of letters from this alphabet. Suppose a word (not necessarily finite) w has the form $a_1a_2a_3\ldots$ where each a_i is a letter in your alphabet. If $a_i = a_{i+p}$ for each i, w is said to have *period* p. Note that this definition does not guarantee uniqueness (much like the usual definition of period for functions). As a simple example, *abcabcabcab* has periods 3, 6, and 9.

Define the *length* of a word to be the number of letters which constitute it. If a non–empty word w has length l and period p, then we say that w is an m–power, where $m = l/p$. Using our example above, *abcabcabcab* is an 11/3–power (it is also an 11/6–power and an 11/9–power). Another example: *eraser* is a 6/4 = 3/2–power.

If our alphabet has just 1 letter, we trivially have that an infinite word contains m–powers for arbitrarily large m. What if our alphabet had 2 letters, say our alphabet is the set {0, 1} and let e denote the empty letter. There are only finitely many words that are square–free, that is contain no 2–power. To show this, we simply make an algorithm to find all possible words and get the set {e, 0, 1, 01, 10, 010, 101}. Then, given any infinite word w in a 2 letter alphabet, w contains a 2–power. The next natural question would be: can we construct a w that contained no m–powers for $m > 2$? I'll give you until the next paragraph to think about it.

For those of you who said yes, you're right. Consider the homomorphism h that sends 0 to 01 and sends 1 to 10 (a homomorphism in this sense would be a function f on the words such that $f(w.v) = f(w).f(v)$, where . is concatenation and w,v are words). Consider $h^n(0)$ where exponentiation means composing h with itself n times. The first few terms looks like: 0, 01, 0110, 01101001, 0110100110010110, …. Now let t denote the limit as n tends to infinity of $h^n(0)$; this is known as the Thue–Morse infinite word.

Here is another way to visualize it. Set $x_0 = 0$, and define recursively $x_{n+1} = x_n x'_n$, where the ' means flip 0's to 1's and 1's to 0's. We get the same sequence, 0, 01, 0110, 01101001, 0110100110010110, ….

Claim: t contains no m–power for $m > 2$. (notice m may be arbitrarily close to 2 from the positive side, powers need not be integers as shown in our examples) Proof: Elementary result; details left as an exercise for the reader.

Let us define another term. The *repetition threshold* of an n–letter alphabet is

$OT(n) = \inf\{m$: there exists an infinite word over an n–letter alphabet that contains no m–powers$\}$.

$n = 1$ is trivial, so we ignore it. We know $OT(2) = 2$ by taking the infimum of our result above. Dejean conjectured in 1972 that:

$OT(3) = 7/4$;

$OT(4) = 7/5$;

$OT(n) = n/(n - 1)$ if n is not 3 or 4.

Thus far, the conjecture has been proved true for $1 < n < 15$ and for $29 < n$, so it remains to check only finitely many cases (a few results came out in 2007 and 2008). Better start cracking.

Vince's problem of the issue: Find a word in the 30–letter alphabet which satisfies the conjecture above.

Vince Chan

Horror-Scopes

Halloween themed, and very insulting. Try to have a sense of humour.

ACC This is a period in time when your behaviour is screaming for some sort of maturity break. However, with Halloween just around the corner, it doesn't look like that's going to happen. Your friends have planned a big party and you are having trouble finding a costume. Horrorscopes suggests a dead, wet old man costume. It's going to suit you perfectly!

ACTSCI You crave to have excitement in your life. Well, are your midterms over? If not, buy a bottle of cough syrup and pretend to be sick, you may get someone to feel sorry for you. That's exciting isn't it? Ok, maybe not, but it's more than you're gonna get for the next two weeks. Your perfect Halloween costume is an electrocuted Einstein. Try it, the stars dare you!

AMATH Have you been a good kid lately? We only ask because Santa called MathSoc many many times complaining about you. He said he would talk to the skeletons in your closet (we know they're all PMATH students). Looks like someone will get a surprise for Halloween! We suggest that this year you dress up as the Invisible Man. For your sake, it better work or we'll have to forget you ever existed.

BBA/BMATH You are going to be the star of the party this Friday. Well… assuming you're going to one. You will meet lots of new people and they will all like you (yes, we're lying). You should dress up as a rich man and find a trophy wife, even if you're a girl. It will be funny and very, very ironic. What else could you possibly want for Halloween?

C&O This year, Halloween will roll around and you won't even notice it. Come on, we expect more from you. Your friends will be mad, so be glad mathNEWS is here to remind you that there might be something going on tonight. We also have a costume for you, come by Comfy to pick it up. You will dress up as a sine wave. Now we know you really want to see this costume, so why are you still sitting? Come and meet the sine wave, it's curvy and waiting.

CM Math has gained power over you. You are no longer unique, because Math's plan is for you to drown in a sea of formulae this week. Your parents can try and rescue you, but the chance of success is as big as the chance of all of mathNEWS going to Heaven. In other words, give up. There is no point in trying anymore. If you still want a costume for Friday, a fantastic one is the man that lost his manhood. How're you going to achieve that? Just be yourself.

CS The Computer Science club is not going to be enough of a social life for you. Get out more for God's sake! You should dress up as a binary tree and go trick or treating. You might be able to write a program to do all that for you, it all depends on your definition of fun. If you want our suggestion, do both at the same time! It will be impressive and the greatest achievement of this month. You can talk about it with your girlfriend when you go on your next date.

MATH/BUS Remember the last October 31st? It didn't go well did it? Well, you may want to try a little harder this year. Ask someone you like on a Halloween date, and then scare the crap out of them and make them run away to Alaska. After this, you can write about it in your blog, and all of us can read about it and make comments about how absolutely awesome you are. Your Halloween costume should be ToughCrap.

MATHSCI All this talk about sciency stuff has gotten really boring and you're looking for a change. Well, you can get that change later, because this sciency stuff will come in handy today. You must figure out how to be the scariest person walking home. You're already good at that so it shouldn't be too difficult! Need a little help? Dress up as a friend of the opposite sex and then sit down and pretend to slit your wrists. *math*NEWS looks forward to seeing you in the hospital!

OR Pack up and grab your stuff, you're going away for the weekend! No, we're not serious. There is however a good chance of some fantastic entertainment. You don't get a lot of it so be happy. Dress up as Zorro and the women will be all over you. Do you really want that? Take 3 minutes to consider what answer you give to this question for it may cost you your life. You will want your pants back in the morning also. Don't forget, or the walk home may get a little creepy.

PMATH It is a well known fact that you are usually pure, and we mean that in the best way possible. However, pure and Halloween don't mix very well, so no one has made an effort to make any plans for you. You still need to dress up, so you might want to be The Birth of Venus. Body-painting is suggested, just make sure no one takes a picture of you and sends it to your mum. We'll pretend we know nothing about you. In fact, we really don't.

SE After you're done complaining about how you have no life and school has taken over, we suggest going to the pharmacy and buying some condoms. There may still be hope for you yet. All you dorky, Pokemon-playing nerds should all stick together for Halloween and dress up as Windows Vista. Just put your clothes on backwards and come to school with a Vista Logo. You may be beaten to death and the world would be a better place. Also, stop mixing up the names of the TWO females in your class!

STAT The probability that you or any of your mates are doing anything fun tonight is close to half. That's pretty high and you know it, so take advantage while you can. Dress up as a stinking fish distribution and make sure you're slippery and wet. You should know a way to make that happen, don't make me spell it out. On the other hand, you may want to take a look under your bed tonight, only you know what's under there.

UNDECLARED The stars bid goodbye to you undecided ones. If you want to be less annoying, try not to take 5 hours picking a costume. No one really cares what you dress up as. No one but mathNEWS, we always care. Which is why we're going to suggest Moby Dick. No, it's not a joke. We have nothing more to say until you decide whether you should go through with your anger management counselling sessions. See you in two weeks!

AHS Your heart is beating rapidly while you read this horoscope. Honestly, nobody should get that excited about a piece of paper with some random characters on it. We are flattered, which is why you get the prettiest costume suggestion ever: Princess Fiona. You can find a Shrek anywhere in the Engineering faculty, but get on it already! Also, remember to talk to your best friend before midnight, or else a chain of weird events will ruin your sex life.

ARTS Ah, yet another day to party. Seriously, does it not get boring after a while? You've probably already started doing your make-up and ironing your shirt. That won't take very long, but your hair must be perfect! We have no costume suggestion for you, since you've probably picked yours 3 months ago. You've

chosen to be a sexy nurse or a house maid who misbehaves. Truly original, we salute you!

ENG Let the drunken times begin! Or wait, have they ever ended? Either way, your character of the day is Hulk Hogan, with the hair and all. Or would you rather be his daughter? Didn't think so. The keg is waiting, what are you still doing in class? Ok fine, you have labs and assignments and midterms and everything you can possibly think of. We hear it all the time. Enjoy your weekend and make sure to not forget to breathe when that sexy nurse approaches you!

E Costume shops are not exactly the friendliest place for you. You still haven't found anything. In fact, the only thing you did find made you look fat. If you want to go as a sumo wrestler you've achieved your goal. The stars suggest that you dress up as Eve. Grab a couple of leaves and you should have your costume all ready. It will also distract everyone in class so you might get home early. Or late, depending on how many engineers you run into on your way to the bar.

SCI Oh, how you love this time of the year. The stars know it all, and they also know that you've stashed your girlfriends in the back seat of your car and dropped them from a height comparable to but slightly less than Mount Everest. The serial killer costume should fit right in with your daily life. Ok, we're sorry we told everyone else, but did you really think you could get away with all that? Go stand in a corner and pray for forgiveness!

OTHER The stars admit to forgetting about you. You can dress up as whatever you want, just make sure it's nothing original and you should be OK. You may have forgotten your keys somewhere, make sure you have your laptop with you. On the other hand, who would want your laptop anyway? It's just another laptop, and you're just another student. Two weeks of the life of others coming up for you. No Halloween party for you, sorry.

Determinant

To Do

Thor's Useful Life Goal List

1. Find a mountainous anarcho-capitalist community backed by the gold standard and watch socialist society burn around you
2. Generalize the threesome to *n* dimensions
3. Discover what happens if you personify an objectified woman.
4. Require all future US Congressional laws to have names that spell things, like USA PATRIOT
5. Speak for a year in iambic pentameter.
6. Start a pastafarian theocracy. The FSM will control interest rates with His Noodly Appendage
7. Create my own robot army.
8. Replace the last hour of 2001: A Space Odyssey with lesbian pornography
9. Declare all Pokemon above 151 (Mew) to be non-canon

Thor

Dating Advice from the Zombie Guy.

Dear New guy,
I had a nice coffee date with this girl and then, all of a sudden, I kept getting text and msn messages from her all the time and, I swear to god, I can sense her shambling behind me slowly mumbling something incoherent, that kind of sounds like "rains"

Incredibly afraid for my life

Hey one with a life
BRAAAAIIIIIINNNNNSSSS. But honestly I think you are over reacting. I mean just because she beckons you to befriend her, and wishes to embrace beautifully does not mean that she is a brain dead bimbo that only wants you for your braaaaaaaaaaaains. I mean how bad can it really be? I mean, I'm sure you don't get girls all that often. Take it slow and I'm sure you will be spending all eternity together

Your friendly neighbourhood zombie guy

Hey New guy,
I think about this guy all the time. Every time I see him, I think, sex, sex, sex. I've been coming onto him a bit, and I got him to talk to me about something besides computers the other day! Otherwise... no dice. He shows no interest in girls in general and seems completely oblivious to my charms. What's wrong with him? Is he blind/deaf/totally lacking in perception?

Needing some badly

Hey baby,
I got what you need if you don't mind a little pealing and breakage. I promise to be good to you and make you survive the relationship. You also seem to have an interesting mind and I would love to get inside it. But seriously, tell him what you want (what you really, really want) and I'm sure he'll give you what you want (oh god I can't say that again) but really it doesn't take a braindead guy to know that would probably lead to something. (or not)

A truly Braindead guy

Dear whoever-it-is-this-week guy,
So I went on a date with random guy I picked up in a bar. And he turned out to be my best friends brother. But not the smart brother, the whore mongering, alcoholic, bad tempered brother. So I killed him, but it turns out being braindead keeps him animated. What should I do with the body?

Needs a place to hide (the body)

Hey I can't remember what your name is anymore
Honestly stash the body at my BRAAAAIIIINNNSSSS....Sorry lapse in judgement. But honestly you should NGGGNNNGNGNGN BRAAAIINNNSSSS!!!!

Hey Zombie guy
General question. Whats more important looks or brains?

Confuzzled

BRAAAAAAIIIIIIIIIIIIIIINNNNSSS. NAAAAAA ARNARGARDERAR BRAINS!!!!
RUN FOR YOUR LIVES. THE ZOMBIE GUY IS ON THE LOOSE AND THERE ARE NO PULL DOORS AROUND!

The hopefully still alive guy

Random Thoughts

With a Skellam distibution!

- The more your prof repeats the fact that he/she doesn't bell-curve midterm scores, the less you should believe them.
- The only thing the matrix in linear algebra and the Matrix movie have in common is that there is no spoon in both.
- Whoever planned the MC wasn't as stupid as you think. He knew the inside is extremely depressing, which is why he didn't build any windows to make sure nobody jumps out of them.
- On that note, RCH has a huge hole in the middle that just needs a "JUMP HERE" sign in front of it.
- 99% of all people you'll see wearing suits these days have an interview with coop. The other 1% is usually me… wearing suits just makes me feel special.
- The only thing that stands between you and 100% on all assignments is the marker. I'm not trying to get a riot against markers started here, I'm just saying things like they are. (Cough cough).
- (This point was censured by the mathNEWS editor just to prove that we're actually reading over all the submissions people send)*[perkiED: Lies! But I do in fact read things over, particularly if I have to tag them. — Ed.]*
- And if the point above didn't convince you, bring a bottle of ketchup to your next midterm.
- If you missed the random free pie day, MathSoc has leftovers. And… now they don't.
- People always laugh whenever a cell phone rings in the middle of the midterm. Even if I didn't dance because the music was cool, they'll still laugh.
- The financial markets these days are like an elevator. You have to hold the door until everyone gets in, then press a button and you'll get to wherever you want to go.
- One extra point: If you didn't think any of this was funny, read it again when you're drunk and see what happens. I mean, I wrote it while I was drunk, so it's only fair.

Orange Crush

Hello my name is Lambert O'Sheader

… and I Have a Problem

Sitting in his room cheerily typing away, Lambert O'Sheader had a problem. It wasn't an unusual problem per se, since all programmers worth their salt encounter it at one time or another. His friends and family had staged an intervention for him. And this annoyed him. Let's watch!

"Lambert, you have to understand. We're only trying to do what's best for you," they pleaded. Lambert did not understand, he was good at what he did, and did not wish to be told otherwise. He kept typing.

"W-w-we think..." Lambert's girlfriend began, tears forming in her correctly refracting and specularly shaded eyes, until she couldn't finish her statement. "We think you're addicted to graphics," terminated Lambert's father. Lambert's typing continued, unphased by the statement.

"Writing such... front end software isn't good for you!" his entourage cried, distaste clear in their tone. "We've devised a cure however, and we've talked to your profs and your adviser and they agree it's for the best." This statement gave Lambert pause. He turned to face his loved ones. His girlfriend came up to him, all the while looking into Lambert's admittedly bloodshot eyes, and whispered softly into his ear. What he heard struct terror into his heart.

"We enrolled you in Real Time."

42

With inspiration from NSA.

Justification

When dining on a rare and tasty meal,
One does not fiercely gobble up each bite.
To gain the most pleasure from what we eat
We take our time to savour the delight.
We all know of the foolish farmer who,
In greed, did slay the goose that laid him gold.
The moral of this fable does ring true:
With patience, let good things slowly unfold.
By this same logic, then to maximize
The joy that Math assignments bring to me,
I should not rush, as that would not be wise,
Instead, I ought to start on them slowly.
And so, I should not work until quite late:
I'm justified when I procrastinate.

Mei Sum

So I'm Apparently Supposed To Scare You...

I've never exactly been good at this, so here's hoping...

If you have requested your MathSoc refund, well, your cheque is currently sitting in a pile of wood that is going to be my bonfire tomorrow night.

If you want there to be any chance of getting it back, you must take this article *immediately* to the MathSoc Executive office (MC 3039, across from the regular office) and explain the situation to them.

InsideScaRe

Syndrome is a Witch

While eating my lovely truffles, it struck me that truffles a.k.a 3D circles, look just like meatballs! Anyways... the topic I had in mind for this week is, "Would you sacrifice a friendship for a guy?". According to 3 girls + 1 guy from *math*NEWS, all of them said "No". Well, except for some people who think that it is not a sacrifice. For me, I don't think I would sacrifice that friendship. Come on! Friendship is built over a long period of time, and some guy just walks in for a day. Would you let him destroy that friendship? What if you've known both the guy and your friend for the same amount of time? What would you do? I would just keep that friendship. <OH YEAH!><Well, if you have any answers for me, write it and drop them down in MathSoc>.

Let's move on. Apparently, Mr. Tax Master has changed into Mr. Audit Master... <good luck with the auditing>. So, people are *SERIOUSLY* falling in love these days!! There's this love syndrome I've observed that has been happening like an epidemic! "When you like someone, you feel like that person's ignoring you but they are actually not."

One day, I met my old friend and discussed about how people ask you out. My friend came up with this theory: "Let's say, in your <insert class code here> class, there's a person asking a question. There would actually be 2 or more people who want to ask a question but don't have the courage to ask. Then, if someone asks you out, there might actually be 2 or more people who wants to ask you out but don't have the courage to do so." <Moral of the story: don't feel bad if you think no one likes you. They're just SHY!>. I also learned that love is like the stock market. It has its highs and lows.

Lastly, I have another syndrome to talk about. This syndrome was created by RealFish: <one of my brothers>. It is called the <insert a guy's or girl's name that you like> syndrome. 1. You will experience a state of glowing / high (in a good way) 2. You'll go complaining to your friend, "Why won't <insert name> talk to me?" 3. You'll go complaining to your friend, "Why won't anyone talk to me?" 4. Undergo a stage of depression / emo-ness and then you'll go to *math*NEWS production night complaining in an article.

There you have it, all of the entries for this week. Because it is Halloween, so I should stick with loving my PI, pumpkin PI. I apologize for putting a lot of syndromes in this article because they are haunting me <boooo...>. Happy Halloween!

Spooky Pumpkin Cupcake *with sprinkles*

VampCooks!

A tasty halloween dish!

Halloween is fast upon us, and what better way to celebrate than with blood! Blood of babies! Or... pigs. Whichever doesn't get you arrested! The following is a common Chinese recipe that features the use of pig's blood tofu. Don't worry! It actually tastes really good... to me!

Pig's blood tofu is easily found at most Chinese supermarkets. Here in Waterloo, you can get them at the back of New City Supermarket (A short walk from Charles St. Terminal along King St.) It looks exactly as I describe it: a dark coloured tofu, and has a slightly different taste to it.

You will need:

- 500g beansprouts
- 500g pig's blood tofu
- 4 slices of ginger
- 1 tsp peanut oil (or any other oil)
- 1.5 tsp salt

First, clean the sprouts and blood thoroughly (gently). Cut the sprouts into managable lengths if they feel too long. Then, heat the oil in a wok and stir-fry the ginger for a few seconds until the ginger seems to give out a fragrant smell. Add the beansprouts and stir-fry until it seems cooked. Add in however much water you want in your soup. When the water is heated (not boiling), add the pig's blood and then heat until boiled. When the soup boils, add the salt as required for flavor.

This recipe is extremely simple, yet actually fairly nutritious. Traditionally, it is thought to be good for the health of seniors, pregnant women and children alike. Try it out, it's not as scary as I make it sound!

Vampire Panda

Top 10 Halloween Treats

Because Tricks are for Kids!

10. Dress up as PDEng and drive fear into the hearts of engineers. You might have a wrench driven through Your heart, but it will be worth it.

9. Waste your entire halloween doing Static's physics problem, then hunt him down and demand vengeance.

8. Hand out copies of *math*NEWS instead of candy. Old copies of *math*NEWS can be taken from the MathSoc office. If their costumes suck, have a pile of The Boar handy.

7. Dress up as a bible thumper and condemn loudly any demon, skeleton, or zombie that is walking down the street. *math*NEWS takes no responsibility for religous based violence.

6. Be Two Face and whenever you see a Joker, flip a coin. Do something on heads. Violence and Alcohol are ideas, but you didn't hear it from me.

5. Be something nerdy. i.e. Take a group of people, and be a linked list. Be sure the head of the list is given the candy, and have it iterated through the list. Poor end of list.

4. Be a math news writer (not necessarily related to number 5). In other words, look like you just got out of bed and be sure to have free pizza.

3. Dress up as a midterm. If you can't pass one, be sure you can pass as one.

2. Convince one person in the class that you are all going to class as Waldo, then isolate that person in class so he is easy to find.

1. Instead of going for candy, sleep around. Venereal diseases are both tricks and treats!

Tbor aka Anti-Thor
With Ideas from Static IP

Halloween-related Thought

Looking at HTML source is like watching a slasher film. A forward-slashing film.

Paranoid Panda Prose

I remember when I was young, always a little afraid of everything. Every little thing made me jump, and I was especially afraid of our bathroom: tainted beige-tiled walls enclosing a small room with barely any room to maneuver. The old bathtub was adorned with a dark shower curtain that has seen much better days, and beside it stood a run-down toilet that might as well have been made in the 60's. What bothered me most about the bathroom was not any of those: It was the mirror on the sink. In my mind, there was always another person with me when I stare into it, and his lifeless eyes haunted me as I felt it pierced my consciousness.

Halloween has always set my sensors on high alert, as I never trust my friends' self-control to avoid pulling a prank on me. Matt, a well-built man who revels in the torturing of other peoples' emotions, would have been my first choice of murderer (Although he'd only really get manslaughter because no one expects me to die from a heart attack after a scare). On this particular day before halloween, it was a very slow day. The wind howled outside, blowing the last remnants of leaves from the trees outside. Being alone in the apartment unnerved me: I half-expected an axe-murderer to be walking down the hall outside as we speak. There is nothing interesting on the TV either, just poker and Dora. 'The last thing I need on this dreary afternoon is a Spanish-speaking bear,' I thought to myself. 'Maybe I ought to take a shower.'

Walking towards the washroom always seem like a funeral march, I don't think I'll ever get over that. The piercing ring of the telephone broke me from my trance. "Congratulations! You have won a..." Was all I heard before I slammed the phone. "God damn telemarketers. You could at least be a real person..." I muttered before heading back into the bathroom. The warmth of the water hitting my skin provided a soothing massage, relieving of the strains of everyday life, the world melting away...

Bump

'What was that?' All of a sudden reality crashed into his consciousness, the dim light taunting my paranoia. It feels like the person is back in the room again.

Bump. Bump.

Heart racing, I bolted out of the shower and dressed quickly. It feels like the noise was getting louder with every other bump. The room feels like it's getting closer, the light dimming and I was about to suffocate from the wrath of...

Nothing. There was nothing waiting for me outside the door, no friend in a zombie costume, no french maid with a razor. Least of all, no masked hulk with a chainsaw. A sigh of relief, I allowed myself, before I got back to getting dressed. Then it came again. The bumping turned into furious knocking. Knocking? Someone was at the door, and it sounded urgent. Paranoia sets in again: Maybe the murderer was just being polite?

I slowly made my way to the shaking door, and unlocked the door. It wasn't an axe murderer.

"Did you order a pizza?" The clean cut teen in a pizza chain uniform was holding a large box in one hand. "No, that wasn't me," I answered. False alarm after all. "Alright man, but answer the door quicker next time," The teen replied and stalked off.

Another halloween, still alive.

Some paranoid panda thing

Stop Global Warming! Stop the Blob!

"As long as the Artic stays cold..."

A number of weeks ago, I came across what seemed to be either a historical documentary, or a horror movie with such low production values that it would probably be better off as a historic documentary. It was the story of Steve McQueen, the first teenager to require a replacement hip. But it was also a story of **The Blob.**

For those who do not know this monster, the blob was an amorphous creature from space who appears to be bloody mucus that sticks to people. Eventually, the people die a horrible and guesome death from this sticky menace. At the end of the movie (documentary?) the blob is attacked by fire extinguishers and shipped off to the Artic, the cold climate limiting it's movement.

But are we safe? Each year, the temperature in the Arctic has been steadily increasing due to global warming. Within an estimated 25 years, the Arctic should be warm enough that the blob can escape its icy prison and wreak havoc on octogenarians pretending to be teenagers everywhere.

Stop global warming, save yourself!

Impulse Vector

Mario. Hasn't hunted demons yet.

Because Nintendo will eventually hire me

Okay, so some of the greatest hypes of the year are once again Diablo 3 and WiiMusic. Nintendo, why must you keep competing with Blizzard? (Haha EA. Keep trying.) Blizzard keeps reusing their own stuff, so can you!

So, a few years ago, Luigi happened to wander into a haunted mansion, and found a vacuum with which he pretended to be Bill Murray. Wow. If you have actually played all of Luigi's Mansion, koodos to you.

Well, Nintendo, your target gamer is no longer 9 years old... and a girl. Its obvious that the gaming market wants blood, with Gears of War 2, Diablo 3, and still more World War 2 games.

But haven't you wondered why there haven't been more gore in the Mario games? Mario crushes skulls on a regular basis, and burns turtles alive! Now, skeletons in Mario are already existant, but why are they not eating brains???

Bowser is fairly evil, but a prince of darkness he is not. In fact, he fails every time. Mario should head into the underworld, learn some magical spells, and jump on Beelzebub himself (watch out for horns. Not so great to jump on). And lets look at the classic jump on bad guys attack. Mario jumps on a goomba, that goomba's brains should cover the next five blocks, and Mario's boots should be coated in blood.

Yes, Nintendo, I know. You do love Resident Evil until death, but Mario must get bored. I mean, he is the ultimate hero, and has a team of specialists to make it through the underworld.

And no, Boo isn't a demon. He's a pillow. If you want to make him scary, have him sink his teeth into Mario, and thrash his flesh across the Mushroom Kingdom.

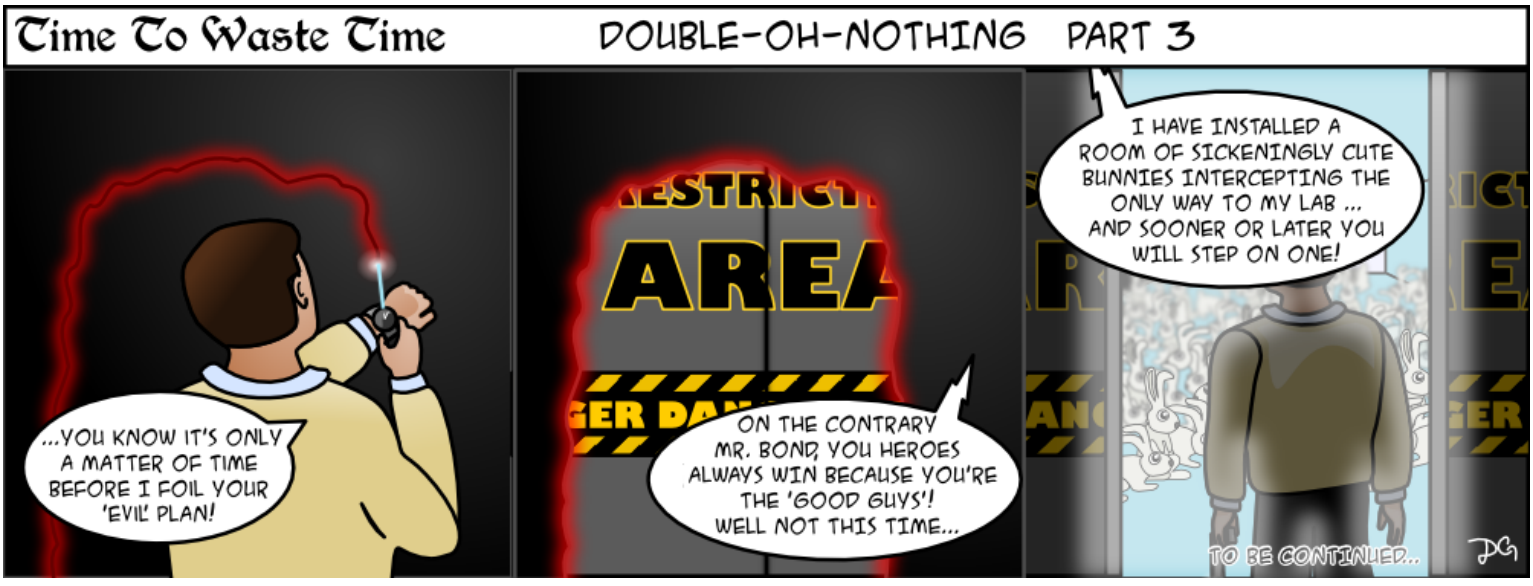
Tbor aka AntiThor

Things That Should Never Have Had Sequels

There are many games and movies that should not have had sequels. Sometimes because they don't require them due to having already finished off the story themselves and sometimes because the first one just sucked that much. Here is my list of sequels that should never have been made:

- The Matrix: This is obligitory. This is probably the most agreed upon topic for things that shouldn't have had sequels.
- Final Fantasy: Not a bad series at all, it's just that the naming scheme really doesn't lend itself to sequels.
- Hamlet 2: All of the characters die in the end but wait, we want to make more money! Bring in a time machine and all your plot holes just disappear.
- Deus Ex: Destroy a classic by putting it on consoles first and PC's second.
- Shrek: First one was good, the second one was OK, the third on was just milking the audience for more money. And by "audience" I mean soccer moms and the group of 13 children they took to the movies.
- Knights of the Old Republic: The first game had nice story and a great concept in a world that we hadn't explored in video games before but still felt like Star Wars. The second one was another case of Obsidian buying some Bioware intellectual property and putting some half-assed story together for it.
- Terminator: The first two movies were great, the third one was trying to push a series that should have been left alone after 1991 into 2003.
- Pokemon Stadium: Apart from support for the newer gameboy games these really don't add anything special. They tried a story but it always seems worse than the gameboy games even though they have so much more technology to work with.
- Land Before Time: Enough is enough! There are entirely too many sequels to this.
- Serious Sam: This went from the biggest game with more enemies than you've ever seen before that still ran smooth as silk to a standard, sub-par first person shooter that was a pain to run when it came out and not worth coming back once you had the hardware for it.
- Disney Movies: These are all classic fairy tales that should be left alone.
- Megaman: The most recent one was released this year and they purposely made the graphics look just like they did back in the day. The one redeeming feature is that it only cost $10.
- Saw: Cool concept the first time. After that you're just milking the concept for money.
- The Mummy: It felt so great and new back in 1999 but once you start bringing The Rock into feature films you are grasping at straws.
- The Butterfly Effect: It wasn't even that great the first time but someone decided to pour some money into it and release another. And watch out because next year we're getting a third!
- Starcraft 2: Just preparing myself.

Apocrypha



Hello my name is Lambert O'Sheader

... and I'm a Graphics Addict

Sitting in his chair, Lambert O'Sheader looked disdainfully at his fellow detainees positioned in the tightly controlled circle. The rabble were a mess of unwashed hair and sweatstains, with many an eye bloodshot. The exceptions, of course, were Lambert, who since his ordeal had cleaned up, and the group leader, who was really a Fine Arts student and had paint stains instead of sweat.

Lambert had been going to the group since the intervention. He didn't like it, but he knew if he looked like he was trying, his friends would get off his back. "Lambert, how about you show the new members how it's done?", asked the group leader. Lambert stood up.

"My name is Lambert O'Sheader and I'm a Graphics Addict," Lambert declared. The regulars of the group nodded and even began clapping, though they were silence quickyl by a look from Lambert. "I too once knew the joy of making pretty pictures really slowly using my raytracer. But then I improved the data structures and it made pretty spheres really quickly. But that wasn't where it started.. that was where it ended," Lambert embellished with a little tear up in his eye. "I w-"

It was at that moment that the Real Time Zombies broke into the room and killed everyone due to their lust for Trains. Sadly there were no survivors. It was Thomas the Tank Engine Appreciation day and everyone was wearing their commemerative t-shirts.

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Who eerily isn't writing his ray tracer right now.

*grid*COMMENTS

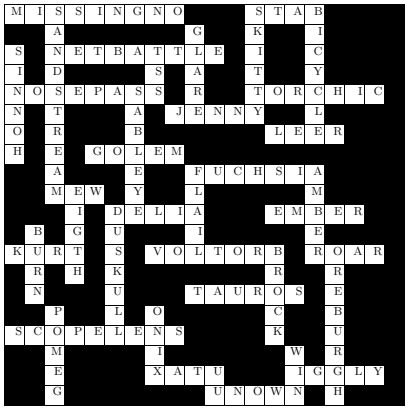
So after last week's Pokemon-themed *grid*WORD we are back to a grid provided by Impulse Vector. Today is Hallowe'en, so expect to see words relating to the occult aplenty.

This week's *grid*QUESTION: What's more efficient, runes or tarot?

To submit a solution, drop it off in the BLACK BOX outside of the C&D before Monday, November 10th by 6pm. To imporve the likelyhood of receiving a prize, remember to answer the *grid*QUESTION. The prize winner for last week's Pokemon *grid*WORD is David Wang who would be "A ghost/dark pokemon that doesn't suck".

perkiED

Last Week's Solution

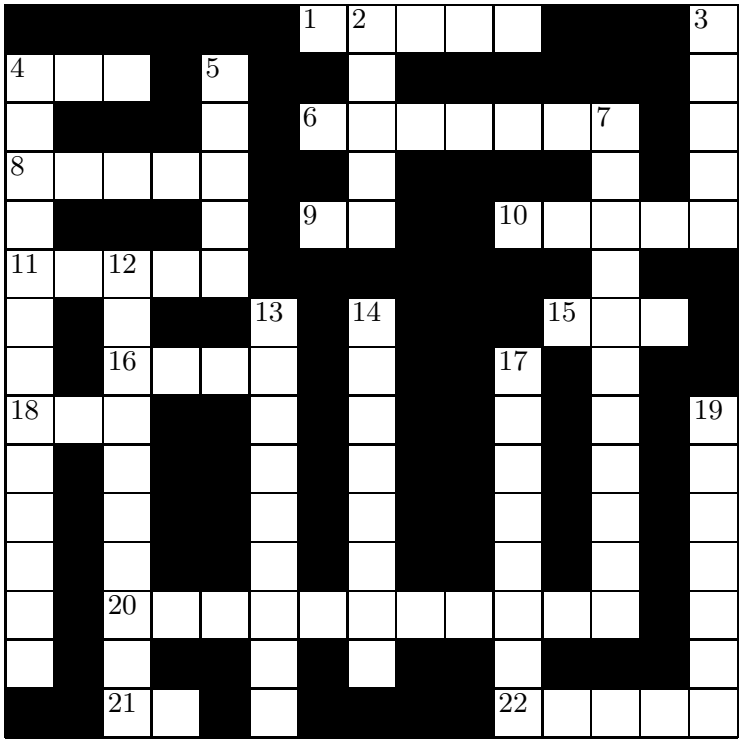


GridWord Clues

Across:

1. A clay servant
4. A rune
6. Kabbalist for 'victory'
8. People who see the future
9. Another rune
10. Aristotle's 3rd element
11. Norse writing
15. Kabbalist for 'glory'
16. Dark, stony structure
18. Least coporeal element
20. Famous "prophet"
21. One last rune
22. Magic Cards

Down:

2. Signs or symbols
3. One of the Major Arcana
4. People who read crystal balls
5. Early Christian cult leader
7. A younger, Hellinistic Horus
12. Dead magic
13. Common tarot spread
14. Jewish divination system
17. Common occult god
19. Kaballist for 'sovereignty'

Impulse Vector