

The mathNEWS Book Of Mathematical Records

Volume 78, Issue 4

Friday, October 23, 1998

Most Random Number: 14

Closest Real Number to 5: 5

Most Complex Number: i

Least Commonly Used Greek Letter: Cri

Tiniest Theorem: Fermat's Little Theorem

220's Best Friend: 284

Worst Approximation To 5.3: 12

What x Never Equals: $x + 1$

Worst Impersonation of a Number:
Eleventy-One

Tallest Freestanding Number: 4

Number that Killed the Most People: $\sqrt{2}$

Longest On-Going Mathematical Cover-Up:
That π isn't 3

Funniest Mathematical Term to Say Out
Loud: Rhomboid

Least Interesting Number: 113

Most Excitable Notation: $!$

Not the Biggest Prime Number: 37

Most Negative Number: -2

Number that Doesn't Remind You of Frank:
84

Cutest Number: 3



Computer Science Club

A Student Chapter of the ACM

CSC Flash

The second round of Waterloo's local programming contest was held Saturday, October 17th. Problems, solutions, and test data can be obtained at <http://plg.uwaterloo.ca/~acm00/>.

The results of the individuals who correctly answered one or more questions follow:

userid	Team Name	A	B	C	D	E	Total
acm024	Viet-Trung Luu	207		56	21	115	4 399
acm026	David Kennedy	102		17	132	270	4 521
acm023	Ondrej Lhotak	210		56	64		3 330
acm008	Graeme Kemkes			28	90		2 118
acm030	Jeff Shute			58	79		2 137
acm010	Donny Cheung			108	44		2 152
acm052	Mark Scannell			56	101		2 157
acm001	Wai Min Yee			39	121		2 160
acm032	Ahilan Sinnarajah			80	142		2 222
acm012	Wing Hong Ho			145	110		2 255
acm056	Reuben Smith			70	188		2 258
acm036	Magdalena Georgescu			156		103	2 259
acm043	Ian Prest			65	268		2 333
acm019	Soroosh Yazdani			121	225		2 346
acm015	Lars Hellsten			167	184		2 351
acm020	Neil Girdhar			179	302		2 481
acm067	Sabin Cautis			61			1 61
acm059	Clayton Smith	80					1 80
acm002	Wai Ling Yee			86			1 86
acm028	Curtis Man			105			1 105
acm064	Ethan Hall-Beyer			145			1 145
acm066	Joel Kamnitzer			150			1 150
acm016	Terry Guo			150			1 150
acm003	Eran Guendelman			157			1 157
acm027	Vince Jewlal			412			1 412

The following teams were selected to represent Waterloo at the regional level on the basis of the results of this contest and the previous local contest:

TEAM A

David Kennedy
Viet-Trung Luu
Ondrej Lhotak

TEAM B

Donny Cheung
Graeme Kemkes
Jeff Shute

This year, the University of Waterloo will host the East-Central Regional Programming Contest. Proctors who will help orient contestants, prevent cheating, distribute problem sets, carry printouts, move tables and chairs, and keep the forces of chaos at bay will be required. Volunteers will receive free T-shirts, pizza, pop, and C&D food. They may attend a banquet with Ian Goldberg as a guest speaker. Individuals interested in proctoring on Friday the 13th and Saturday the 14th of November are asked to contact the ACM contest judges at acm00@plg2.math.uwaterloo.ca.

Friday October 23rd, 14:00

DC 1304

Open GL

by Viêt-Tâm Luu

OpenGL is a graphics library, or rather a "software interface to graphics hardware" that allows one to easily write programs with high-performance, interactive three-dimensional graphics. This talk will provide a brief introduction to OpenGL: a summary of its features and capabilities, and an overview of the concepts and techniques used in programming with OpenGL.

Tuesday October 27th, 16:30

MC 2038

Methods of Image Compression: Fractals and Wavelets
by Daniel Piché

Since the advent of the computer, there has been a tremendous growth in the amount of data which must be processed, stored and communicated on a daily basis. With limited capacity of storage space and band-width of transmission systems, it is often necessary to compress this information. Many methods have been devised to address this situation.

Among these are JPEG, fractal, wavelet, and fractal-wavelet compression. This talk will present a survey of the area of compression, along with a brief discussion of the aforementioned methods.

Monday 2nd, Tuesday 3rd November, 14:30

Tours of Waterloo's Computer Graphics Labs

Members of the CSC may sign up for this in the CSC office. Memberships also may be purchased there for \$2.

Thursday November 5th, 17:00

DC 1302

Debugging High Level Language Programs
by Gavin Duggan

Friday November 6th, 14:30

DC 1304

Monte Carlo Methods in Graphics
by Prof. McCool

CAREERS IN MATH AND CS

A Panel Discussion

THURSDAY, NOVEMBER 12, 1998

4:00pm

MC 2037

Considering what program to take? Wondering about job opportunities?

Meet graduates of the Math Faculty who will talk and answer questions about their careers.

All students are welcome.

Sponsored by the Women in Mathematics Committee

Laid Yet?

From your Snuggly Social Director

Hi everybody, yup, your calc prof is really getting pissed about how you keep blurting out "Hi Snuggles" once a month or so. Well as this title implies we have had some rocking social events, the only thing that could possibly match them are the events we have coming up (please tell me someone made the coming-laid yet connection before I made these brackets). Oktoberfest came and went (now you're just thinking dirty aren't you) I didn't actually attend as I had a midterm but I'm sure it was awesome. (CS240 midterm used me like some Newfoundland priests used to do, but it's OK cause Calc 2 round 2 resulted in a serious pounding for Calc 2.) Anyway back to my social events and away from my schooling. (Hey that is kind of like what I'm doing in real life too, who needs to go to class when we can sit around and think about the next movie poster I'm going to make.) So what are you doing the night before Halloween (Friday October 30th)? I'm having a little party, why don't you come. Oh, did I mention it's at Fed Hall. Yup that's right, due to some scheduling overlaps that the FEDS didn't notice we got Fed Hall for free. I love Chris Buchanan (he is the one who sorted everything out with the FEDS for me and got us Fed Hall). You guys are more likely to actually read stuff if I separate it from this big paragraph and put some stuff in caps so let's just list some upcoming social events. (I love segues.)

[You know, I think I might try and get Snuggles' ELPE pass recalled. Had trouble reading it? You should have seen it before I got through with it. — ΣEd]

Pub Night – Oct 30, Friday – Still the night of the Pink Pumpkins. At Fed Hall, no cover charge, awesome music (controlled by us), awesome prizes for best costume and for just being there (so dress up). Remember our unofficial slogan and bring some friends. Everyone is welcome, Mathies, Artsies, SDS... you know (ya, even engineers can come). Anyone and everyone can (and will) come (oh get your mind out of the gutter, it's getting crowded in my humble abode).

Stratford Trip – Nov 4/5, Wed / Thu – More information will be available in the MathSoc office when I figure it out, if you have a preference between a Thursday Night and a Wednesday matinee come tell me cause those are the choices.

Charity Ball – Nov 12, Thursday – A semi formal ball at Fed Hall, for the K/W Hospital Emergency Ward. It will be \$30 a ticket (\$55 for two and similar things for more). There will be lots of awesome prizes and it is for charity so come on out and support the local hospital, not to mention it will be a sit down full course dinner with dancing (hmmmm, this is fitting in to the master plan, buy your significant other a nice dinner, look all sensitive for supporting a charity, dazzle them with your dancing skills, then... impress them with your important MathSoc position and... wait a minute, never mind, that only works if you're me)

Football – Every Tuesday – just come out to the third floor of the math building a little before 4:30 and join the crowd that looks like they're getting ready to hurt each other. Enjoy beating on your friends? Do you enjoy 11 people chasing you down to tackle you? Do you not care what happens to your body? Then give me a call, Did I say that, I meant then come out for Football.

Not much else I can think of right now but since I'm also the

Movie Guy I'll tell you some things about that. If all goes well on Oct 29 we will have Grease in DC1302 at 7:30 and Rocky Horror Picture Show in the same room at 9:30 pm. We will be running a real Rocky Horror night so dress up (We will hopefully be selling kits with all the stuff you need). If you have never been to a Rocky Horror night come out and enjoy your first time with some sensitive MathSoc volunteers. There is also a chance we will have DC1304 as well to show Alien Resurrection followed by The Shining. Nov 5 we will have Can't Hardly Wait and Something About Mary (exactly where and when hasn't been set yet, but come out to the fishbowl around 7:30 and all will be good).

Anyway, this rant has been brought to you by the letters S and M and the numbers 6, 9 and 666. I'm done, if you want to give me an idea or entertain me (or satisfy my dark and evil needs) email me at social@mathsoc or just find me (try the third floor somewhere between the MathSoc office and the Comfy).

You want to know why I can do the things I do, cause I'm me... and you're not.

Stephen Snuggles "The Mathie formerly known as Prince of Evil" Skrzydlo
(Social Director, Movie Guy, CS Rep,
Crystal MEF, Anything Snuggly)

PS : I take no responsibility for anything. Especially anything I say or do.

PPS : Don't expect me to speak in complete sentences or to use proper grammar, I'm a mathie dammit.

lookAHEAD

mathNEWS

October 23	Issue #4 slithers out
November 2	Issue #5 production night
6:30pm, MathSoc (MC 3038)	

Math Faculty

October 24	Fall Convocation
October 31	Big E and Special K Contests
November 4–6	Preregistration for Spring '99

MathSoc

October 30	Pub Night at Fed Hall
November 12	Charity Ball

Miscellaneous

October 28	Make Fun of the MathSoc Exec
October 31	Halloween
November 1	Time to Eat All That Candy
November 2	Dentist Appointment

Death Announcement

mathNEWS is sad to report the death of James Patrick Saplala, who died of cancer on September 29th, 1998, after a two-month hospitalization. He was 22 years old and in the final year of his General BMath program. At Waterloo he contributed to the University community as a residence representative, and through his involvement with Math Orientation.

We at mathNEWS extend our sympathies to his family, friends and classmates.

Best Times To Have Sex In The Comfy Lounge

So, does Brenda bomb pharmacies? The Pure Math, Applied Math, Combinatorics and Optimization Club ("PMC") does not deal with questions such as these. We are, however, pro-Axiom of Choice.

Who the heck is the PMC you ask? And what ARE the best times to have sex in the Comfy Lounge, anyway?

Patience, my pet. We're about to get into the details of what the PMC is. And the sex stuff comes at the end of this article, so don't fret.

The PMC is not just for students of pure mathematics. All are welcome! We even have members from other faculties. We provide a cozy atmosphere in our office in MC 3033 for discussions whose topics range from politics to physics, from philosophy to p -adic numbers (we even have conversations on subjects that do not begin with " p "). Recent social events include a trip to Pi, the movie. Other fun PMC pastimes include beating up Suresh (not to be confused with our August president, PMC Sunshine Boy of the term, Soroosh).

Why should I join, you ask? Can't I get all of this excellent conversation and hanging out in the Comfy lounge, in the Mac lab, on my floor in residence, at Brenda's place? Fine, but they don't have CHEAP POP! (You're now thinking, I can mooch free pop at my friend's place, but don't forget, they will reciprocate). The PMC provides pop for \$.30/can for members. We also have juice. We arrange for talks to be given during the course of the term. If there is a topic even remotely mathematically related that interests you, please contact pmclub@undergrad.math.uwaterloo.ca with a request. We will see what we can do. This term, we have a number of exciting talks lined up, or tentatively lined up. Watch the walls of MC for announcements of dates/times!

If you've skipped to this paragraph for the sexual content, you must be feeling like a right idiot now, having read all this stuff for nothing! If you've read the rest of the article and initially wanted to read the sex stuff, you're probably thinking, "Hey, at first, I wanted to know all about sex in the Comfy Lounge, but now I've found something better — information about the PMC! Yay!!"

Sam Lisi
PMC Vice-President

(with assistance from Brenda "Let's put silly comments in this article" Fine, one of our happy members. Excerpt from an interview with Brenda:

PMC: So, how has your life benefitted from becoming a PMC member?

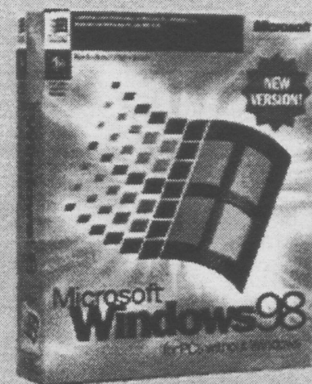
Brenda: I am now rich, with many friends, accepted by peers, happily filled with CHEAP POP, enjoying GREAT MATH TALKS and EXCITING CONVERSATION IN THE PMC OFFICE, and all of this FOR ONLY \$2! WOW! This is a great deal. They say money can't buy you happiness, but it has certainly bought it for me.

PMC: Do you feel any social stigma attached to being associated with the club?

Brenda: No, to the contrary! I appear in high society and flash my PMC membership card, and everyone flocks up to me to do my bidding. It's great!

PMC: Do you have any further comments to make?

Brenda: Yes! The PMC is also involved in bombing pharmacies.)



PRE



POST

RATIONAL POST

Our Numbers Divide Starting October 27

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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*, MC3041, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to [mathnews@undergrad.math.uwaterloo.ca](mailto:userid@mathnews@undergrad.math.uwaterloo.ca) on the Internet.

No, they're not circus clowns, they're just Richard Bilson, Chadwick Severn, Matt Walsh

profQUOTES

"Everybody seems really quiet or dead. You're all on drugs, aren't you."

Best C&O 227

"No one leaves the room until everyone understands the proof."

Best C&O 227

"A few beers, by the way, numbs the conscience real well."

Cardey, PSYCH 212

"I've noticed that as we get to 9:30pm, inhibition flies out the window."

Cardey, PSYCH 212

"Now we've almost got it... Almost, I mean, is another two blackboards."

Hewitt, MATH 135

"The third property is called transitiv[ity]. It's like passing on a disease."

Hewitt, MATH 135

"Now I will illustrate some bullshit! I won't take my pants down or anything, I'm not a bull. I've still got lots of testosterone."

Hoffman, MATH 137

"Some people may want to imitate me, but I don't suggest it."

Hoffman, MATH 137

"Anyone who is not here today, you should take your name off [the class list]."

Struthers, MATH 137

"I once after a couple of beers came up with an idea..."

Tenti, AM 261

"This morning the uncertainty principle told me to send you to hell."

Tenti, AM 261

"Vectors do not need to make sense, as we know them from algebra."

Tenti, AM 261

"You know I'm a physicist, so my mind is warped."

Tenti, AM 261

"Kill, kill, kill, all day long."

Vasiga, CS 134

"The Fibonacci sequence started with this guy, Fibonacci, who was into bunny sex."

Vasiga, CS 134

"You start with two bunnies, then you have three, then things get kind of icky, and you have five."

Vasiga, CS 134

"If I'm in a state, say... Turkish Jail at the end of a day, I'm in a bad state."

Vasiga, CS 241

"Mom sends me twenty bucks, go to state happy, or state drunk."

Vasiga, CS 241

"Pretend you're in english for a minute. Cry a lot and mope around and wear black clothing."

Vasiga, CS 241

[Prof is trying to solve problem, stares at the ceiling to ponder]
[Student] "Yeah, keep staring at the ceiling, maybe it'll tell you the answer..."

[Prof] "Where's my gun? Where is it? I had it yesterday..."

Vasiga, CS 241

"Say we have this guy, James Joyce."

[Draws a stick person]

"And he's Irish."

[Adds beer and frown to drawing]

Vasiga, CS 241

"This is Joyce giving Sally a book."

[Draws stick-people on the board]

"La la la la. [In falsetto] Here Sally, have a book."

Vasiga, CS 241

"A closed set with no ball is drawn with the end of the chalk, a closed set with a ball is drawn with the side of the chalk."

Zorzito, PMATH 351

"Well, it's never been done before, so it probably doesn't work."

Hamilton, CS 354

"There's a little midget off in the distance saying 'Get an A' Meanwhile there is a big menacing ogre saying 'SATISFY YOUR BIOLOGICAL NEEDS!!!' You're gonna listen to the ogre."

Wallis, PSYCH 256

"I think we should have a 'cough' break while I am writing stuff on the board..."

Struthers, MATH 137J

"The chances of me getting more than 3% in that sort of class were slim, so I avoided it."

Forrest, MATH 247

"If anyone wants to run out of the room screaming right now... or I have some drop forms here; you can fill them out quickly and go see the advisors."

Buhr, CS 342

[Student] Is this the Euler tour for that graph?

[Prof] That's an Euler tour. There are many of them. And if your program doesn't find the same one as we do, you'll lose marks... Just kidding.

Pretti, CS 240

Maybe this is a bad example — I can't figure out how to do it."

Davidson, MATH 147

"All of them are trivial... that's why I can't do them."

Haxell, MATH 145

I'll Have The Special

Welcome back, my friends, to the show that pops up from time to time

Hi there. I'm Latrell and this must be another edition of I'll Have The Special. It's been a while since I wrote one of these but for the last few months I've been preoccupied with other matters. I trust you understand. For those of you who don't know me or of my writings, this is where I (being of sound mind and former editorness) air my views and beefs and such to an unsuspecting public with the hope that either I can make people: a) think about serious issues of the day in both a serious and humorous tone OR b) bitch and complain that what I say is not all too relevant to them and that I will one day pay for the sin of wasting a certain amount of time that they will never see again.

So let's get cracking!

Anyways, before I begin, just a little side note. Things aren't as exciting as I hoped they would upon returning home after a long stint in the mighty metropolis known as Waterloo. Why, just the other day I had to scream at a chipmunk to get off the bird feeder. Chipmunks don't seem to understand the concept of "trash talking" too well. But then again, it could just be a ruse. As we speak, a counter-attack could be in the works against yours truly. I can see it now. An unsuspecting me walking out to the car and suddenly being attacked by an angry horde of chipmunks out for revenge. (Or even worse, blood!) The last thing (among many others) I need right now is the prospect of disgruntled chipmunks asserting their right (or claim) to forage for food in the bird feeder whenever they feel like it.

Hmmm... now that I think about it, that could make a cool horror movie concept. Evil chipmunks. And they're mutated! Yes, after habitating too close to the Pickering nuclear facility, the chipmunks are transformed and acquire a taste for human blood! How about "Night of the Chipmunks" for a working title? Though, kids and parents might think it's a concert movie starring Alvin and the Chipmunks. I'll have to work on that one.

- Just so you know, I haven't been offered the job to manage the Los Angeles Dodgers. But when I get the call, I'll be sure to accept the job. Apparently, everyone's turning it down. They'll have to get to me eventually... right?
- Apparently, the problem of crime has been solved in Durham Region. Crime, ladies and gentlemen, has been wiped out here. And how do I know? Well, in this part of the province, you can't walk a metre without running into a speed trap. So, if all the cops are patrolling the roads, then there must be no crimes being committed to keep these guys busy. At last! I can feel safe walking around the darkest, most unlit sections of Oshawa in confidence and complete safety.
- I would now like to take this moment to thank you, the fans, for the season of a lifetime. I don't know what exactly make it the season of a lifetime, or what I did that made it the season of a lifetime, but I bet it was something big. Oh! I know. Maybe it was time that the ball was hit to me, and I made the throw to first base to get the runner out. Or maybe the time I hit that towering, monstrous, titanic foul ball. Cleared the roof, I think. Yeah, that was certainly one

for the ages. What a season! Thank you, fans.

- With what's happening around the world lately, does this mean I can't cash this cheque I got from the Pittsburgh Penguins? Because I really need the dough!
- I have just been told that my putout and my really hard hit foul ball were not part of this "season of a lifetime." Apparently, a perfect game, a 20 strikeout performance, and... 70 home runs in a season? Yeah, right. Whatever you say.

Well, that's all from here. Hopefully, you've made it to this point without being bored or baffled. Unfortunately (or fortunately, depending on your point of view), I make no promises on when I will write my next column. So, until I feel inspired again, I bid you a fond adieu.

Brian "Latrell" Fox

East of Toronto Correspondent and

m.N.e (*mathNEWS* editor, for those who don't know) for life

Where Should Our Money Go?

It's crazy how just five years ago, Math students had bloody little chance of influencing decisions to answer the question above, isn't it? That's why a group of students worked their asses off to get more decision-making power and financial say in the Math faculty in 93-94. Not sure what I'm talking about? Then you might want to check out the poster board outside the C&D lounge.

So thanks to the vision of those students half a decade ago, we have a cool half-million bucks making money for us each term (to the tune of 60K a year) and we have the chance to decide where that money should be spent in our faculty. This is OUR money and OUR decision to make changes to OUR education. It's one of the few venues through which we can exercise very clear and very tangible (as in monetary) power.

Still don't know what I'm talking about? Well here's your wake up call, honey: I'm talking about the Math Endowment Fund. For all you people who never got it up until now, let me reiterate: MEF is a student-initiated, student-run organization. As in ours. So take ownership of it already! And take ownership of the half-decade or so you're scrambling through for the sake of higher learning.

Interested? Well then sign up to sit on the council that decides where our ongoing investment in education should go. Or submit a proposal yourself if you've got an idea for a project that will help all of us out in an educational sorta way. Or heck, you can even sign up to take my place for next term as MEF Director. For more info, call the MEF office at extension 5757.

This really is about you, or your alter ego frosh self who's just starting school for all you decrepit old graduating geezers out there. If you believe that your little piece of paper with the magical BMath written on it means anything, then you better make sure that it continues to mean something. Or are you going to spend a good chunk of your life working your ass off for something that's worthless?

Get in touch,

Sarah Kamal

Psst, buddy, wanna be an exec?

I'm not sure how this happened, but I can remember how I spent first year dodging snipers and generally evading multiple attempts on my life while occasionally being driven to tormentous gatherings by both friends and family during which I'd be forced to sit surrounded by partial strangers listening to people whose mouths possessed no actual off-switch (which is not so bad unless it's coupled with a brain not possessing an on-switch). On weekends I'd engage in ritual self-torture using 90 kilo weights, parachute cord and a home-made tongue piercing. Whenever things got slow a strange woman from Queens would come up and electrocute my testicles. I'm sure this scenario sounds familiar to a great deal of our frosh. My message to you is: enjoy it while you can.

One day you'll find yourself signing up to be a frosh leader. You may be thinking about this now. I highly recommend it. By then, the snipers will be gone, which will make you seem more normal. But then you'll find yourself aimlessly wandering into non-washroom, non-lab rooms on the third floor. You may wander into the MathSoc office wondering if the faculty uses any other garments as symbols. One thing will lead to another. The situation will spiral out of control. First it'll be signing up for an office hour. Next you'll be playing cards in the Comfy. Before you know it you're eating at the C&D. At that point you can kiss varsity genital torture goodbye, your new life has begun. You'll start eating the food that Jeff has laced with crack, and soon you'll start coming back for more every day, just to get your fix.

Eventually you'll be an exec. Former exec will stop by just to point at you and laugh. You will not understand at first. You will learn quickly. Even if your portfolio consists of basically nothing (and you manage to delegate most of that nothing onto other people), the rest of your time bleeds away trying to accomplish the most basic moron tasks (like, for example, thinking). Unfortunately none of your attempts will succeed. You will burst into tears and attempt to kill yourself using your desk. You will, obviously, fail. You will attempt to resign until whatever exec is supposed to take over your responsibilities finds out that you're trying to, at which point they will threaten you with slow, painful, Blue Rodeo induced death. You will eventually end up spending a night in the office alone. When you do this I hope you have sex. I wasn't quite so lucky. Then critical elements of brain freeze kick in. The first sign is that you've become completely stupid. This is followed by an inability to indent paragraphs, at which point you cannot be saved and should probably just remain an exec to prevent your painful death. You have become a barnacle on the Mathsoc Exec office. You will wonder how you could have been so silly in your youth. "Why," you will ask, "did I ever *dodge* those snipers to start?" And I have the answer. You were young. Stupid. And not an exec. It's too late for me, I've got too many fingers in the pie. But please, save yourselves. If you *really* want to get involved, talk to your VPF, Neville Dubash; he's set aside a sniper fund to take care of Exec resignations.

[Addendum: Actually guys, I'm kidding. This whole article is a joke. You'll love being an exec. There's free alcohol. People bring me food. I get free limousine rides to school. Sexual offers have gone up, stress level has gone down. All your profs will give

you higher marks and everyone will love you. If you walk down the hall you might notice people throwing flower petals in your path. I'd show you, but a certain 7N student who is currently serving as MathSoc Pres whose name may rhyme with Bris Chuchanan currently has a RIM pen to my throat and it's hard to type. I'll be sure to come laugh at you when you take office.]

Bruce Lee-Shanok



PRE



POST

RATIONAL POST

Will Quebec Be Rational This December?

More Stuff I Did This Summer

SMECAP III

Hi, guys.

I'm in Nicaragua now, working with my older brother in a village of 1,000 called Santa Rosa del Penon. The trip here from Guatemala was interesting—I went by bus through El Salvador (spending the night in San Salvador) then crossed through Honduras to get here. I could talk forever about scumbag cheating money-exchangers, but I think I'll spare you guys. (They suck).

I'm having a bit of difficulty adjusting to life in Nicaragua. My general routine has become a lot more in keeping with the rural lifestyle (more on that later) but that's not bothering me in the least. I'm feeling peeved because after spending six weeks learning spanish in Guatemala, I'm having to learn the language all over again, Nicaraguan style. Garh!! But on the brighter side, I'm getting chased by some not-so-secret admirers for some reason. My brother (who has turned grouchy and protective) was very unamused when one guy dropped by to woo me for three hours on Saturday. Eeheeheeheehee. These next two months will be fun.

But for the most part, I've been adjusting pretty well to the life-style here. It's hard to describe just how different life is, in that I've made millions of little changes in my daily routine, and things that I would normally think of as being crazy are now completely normal. To give you guys an idea of what I'm talking about, here for your perusal is a comparison of my daily morning routines in Waterloo and Nicaragua:

Waterloo routine: I wake up (maybe) at 8:30 or 9am, often woken up by the sounds of my roommates bustling about cheerily (morning people must die). I stretch luxuriously on my comfy futon, decide I don't really need to get up until 9:30, and sleep until 10.

Nicaragua routine: I'm awake and off the mat I sleep on at about 6am every morning, sometimes 5. I usually wake up on my own, but often the cows decide that I'm sleeping in (morning cows must die) and serenade me (you know the Heinz commercial with the singing cow? "Can you imagine...how much I love you? Moomoomoomoomoo..." Well, this is pretty similar except that these cows don't sing in English.)

(Yeah, I was shocked too. It's probably just cuz they're Nicaraguan cows.)

Waterloo: Once I'm vaguely conscious, I grope around for my glasses, find them (read: sit on them by mistake), put them on, shower, then shuffle to the kitchen for some chow, reading the Globe and Mail during breakfast. After this, the day begins in earnest.

Nicaragua: I don't bother with my glasses (they're kinda deformed for some reason) and shuffle outside into the backyard where I do yoga exercises with my brother (his idea). You know how guys generally just look dumb when they do aerobics? Well, you should see my brother doing yoga. Or you shouldn't, actually: I'm glad that generally only the cows witness our morning ritual. A few other villagers saw us once and now they cross themselves every time they pass by our place.

I shower next, which involves me drawing water from a well (hopefully without picking up Green Fuzzy Things), dragging the pail into the shower stall, and using a bowl to scoop water onto myself. I was really proud of myself for finding cool coco-

nut yummy smelly shampoo in Guatemala, but what I didn't realize was that in Nicaragua, this would make me a walking fly cloud every time I didn't rinse myself thoroughly.

After showering, my brother and I walk about a block down to the house of the woman who feeds us (generally rice and beans, three meals a day). The meal is usually quiet and uneventful except for some soap star sobbing away on TV and the squeals of the pigs that we throw rocks at (Cruel treatment to animals? I think not. Those things are pretty viciously smelly and this is the only way to make them go away). (And besides it's fun).

We walk back to the house (picking our way carefully — those darn cows have other talents besides singing), buy a couple of packets of cheesies at the shop next door (not bad at 5 cents US per bag), and eat them. After this, the day begins in earnest.

So that's a typical Nicaraguan morning (until about 8am). I think the rest of the day will have to wait until another email, so until then, take good care, and eat lots of beef, dammit.

Sarah.



mastHEAD

Life could be a dream, life could be a dream...

Hi everybody! There was going to be a big supplement to this issue, but it's been delayed until next issue? What's the supplement? You'll find out next issue, dammit!

So, instead, we deliver to you a regular bowl of steaming mathNEWS goodness. Enjoy!

You may, however, notice a few differences in the way that things look. This is normal — do not be alarmed. It's actually a historic occasion: you have in your hands the first edition of mathNEWS to be produced using Adobe PageMaker. As some of you may know, we've been using LaTeX in various forms for as long as anyone can remember — no longer. Why PageMaker? Well, for one thing, it gives us a lot more flexibility in how we lay out the articles, enabling us to do more fancy stuff like this issue's Pre/Post parodies. More importantly, it makes our job as editors easier. Because, when you come right down to it, we're a bunch of lazy-ass bastards. How lazy? Stay tuned to find out.

Here is the bunch of people who dropped by last Monday, along with their answer to the question "If you're a protester, what's worse than pepper spray (besides watercannons and baseball bats, that is)? Greg Taylor (Spice Girls), Peter Lizak (Peter Lizak), Gigi Garbett (Peter Lizak), Michael Thorsley (Peter Lizak) and John Swan (Peter Lizak).

Thanks goes to Greg for the tapes, and to Marion at Graphic Services for the pulp.

Matt Walsh (Napalm. Especially stale napalm.)

Chadwick Severn (Peter Lizak)

Richard Bilson (Governments that disregard basic human rights)

Cynic's Corner

When it rains, it pours

Life is a no-win situation. Given any event with many possible outcomes, it's more likely that the result will be negative (or indifferent) than positive. (Proof by Observation.) Take the Oktoberfest weekend, as an example.

First, there's the possibility that you weren't able to enjoy it at all because you ended up with a sore throat, headache, and temperature of who-knows-what (which means you didn't do work on the weekend but didn't have fun either). Assuming you actually got out and enjoyed yourself, you probably got drunk and did something stupid (not unlike the guy outside my window at 2am screaming about how he was gonna kill some guy, run him over with a car, etc). Or you were staring into the toilet the next morning. But say you actually did survive intact. Then you accidentally ran your bike over the smashed beer bottle some jerk flung by the side of the road. (I personally want to know when I offended the bike gods; in the past year I've had 2 stolen, 2 locks malfunction, and numerous flat tires.) Or if you actually enjoyed yourself and had no fallout in the aftermath, you're still down funds from buying tickets/drinks/whatever.

Pretty much anything can be seen as negative too, even things that may appear to be positive on the surface. Get a cheat sheet for the midterm? Great, now not only can they ask you tougher questions, but you have to find the time to condense all the material into one page. Do well on an assignment? Now everyone expects more from you and others will be asking you to explain things for them. The shop you're at sells your favourite kind of something? It's probably bad for you, costs too much, will expire/be out of style too soon and/or you'll never find such a thing again for months. Nothing go wrong today? Then many things will go wrong tomorrow to make up for it, not to

mention the problems that will come up later because of all the things you didn't get around to completing.

Human interaction, and dating in particular, makes for more troubles. Just going out with someone means a depletion of funds, with less time to spend on those assignments that are due too soon. Not all romantic relationships are good either, many don't last, and breakups are generally horrible - though of course it's better to get that done with now than later after marriage because of all the overhead in divorce proceedings. Or if things work out well, raising a kid creates problems of it's own (not even getting into unexpected children). But on the other hand, if you avoid any sort of relationship or social get together you get loneliness. Possibly even worse since you're now left staring at the ceiling on Saturday nights counting the dead bugs in your light fixture (17).

So, life sucks, right? Wrong. This column documents the sort of negative thinking that you must NOT follow. It's very easy to do, especially if you've had a bad week and/or you're cynical at heart, but if I listened these thoughts every week I doubt I would have survived this far. So if you're feeling stressed and depressed, step back, look at things from a different viewpoint. Think pleasing thoughts, silly as it sounds. If you're worried about nearing the breaking point, talk to someone (a Counselor even). There really is a positive side to everything too; at the very least you're gaining life experience and learning from your mistakes. And this isn't just a message to frosh, it's to everyone, including myself, as a reminder of the need to keep things in perspective. And one other interesting thing I've found: if you've ever wished to be someone else, it's equally likely that someone else wishes they were you.

Greg "hologrami" Taylor

Minesweeper

I work in the government. Needless to say, this involves little to no work. What it does involve, however, is a lot of wasted time. People waste their time in different ways. Some doodle, some type e-mail, some try to pick their nose with their thumb, and some sit there like that bottle of Dijonnaise in my fridge. I, however, have a different time-waster on my agenda, and it can quickly be summarized in one word: Minesweeper.

I have become so unbelievably good at Minesweeper that I have attracted the attention of many an old lady in my office. "Whatcha dooooooin?" they purr, their eyes glazed over as they watch the mouse pointer uncover grey square after little grey square. "Oh not much," I reply calmly, "just saving the world from its impending doom at the hands of a dangerous mine-field." 43 seconds on Intermediate level this time around. "Did you really just save the world?", she asked, in a very sensuous tone of voice, breathing heavily as her nose whistles loudly from snot buildup. That's when I instinctively put myself into Mack Daddy mode. "Yeah, I saved the world. Want me to rock yours?"

So she leans over to me and swears loudly in my ear. Then she pours a full can of Schweppes Ginger Ale on my head and tells me where I can stick my red flags. I can see I'm going to

have to do better than 43 seconds if I want to have a chance with this lass.

I am so very good at Minesweeper (or "sweeps", as us hardcore players call it) that I am thinking about permanently putting it on my resume. I tried it once for a job with Cognos, in Ottawa. "I notice you have a very impressive set of computer abilities, Mr. Taylor", the interviewer said, her eyes scanning the high-quality glossy paper quickly. "I do what I can to get by," was my witty reply. "What is this 'Minesweeper' you speak of, Mr. Taylor? Is that like the Windows game?" she asked, visibly interested. "Yes sirree Bob in a dump truck" may not have been the response she was looking for, but I quickly recovered by asking "Do people play much Minesweeper around here?" to which she replied "No. We don't allow it. There's work to be done."

Without even thinking, I blurt out "How about you and I get some work done tonight?" Yes, Mack Daddy mode had gotten the best of me again. I was greeted by a sock full of batteries to the head. I think I may get the job if I just work on my Visual C++ a little bit.

Minesweeper brings out the best qualities in people, I think.

Nick "Succa" Taylor

Reverse Engineering

A Puzzle

In the competitive world of mass-market software development, a software product has to be able to use files from competitors' products as well as it uses its native file format. Sometimes it's not easy to figure out how your competitor stores its information. This is why co-ops get the big money, right?

Well, we're not offering big money here, but it is an opportunity to prove your worth as a deducer of data and an analyst of algorithms. It's based on a problem I had to solve on my last work term that I've condensed and simplified slightly for inclusion here. The following mess of hex represents a small image. Specifically, it's a red square with a white border. Your job is to tell me how to take the hex and produce an image.

[illegible]

Background on Images

Computer images are represented as a set of dots, or pixels, of different colours. Usually, these dots fill a rectangular area. For example, an image that is 640 pixels wide and 480 pixels high would require $640 \times 480 = 307,200$ pixels. Each pixel needs to have a colour associated with it. The colours are often specified in terms of certain primary colours, for example red, green and blue. So each pixel in an image would be represented by an ordered triple (r, g, b) . If r , g , and b are all at their maxi-

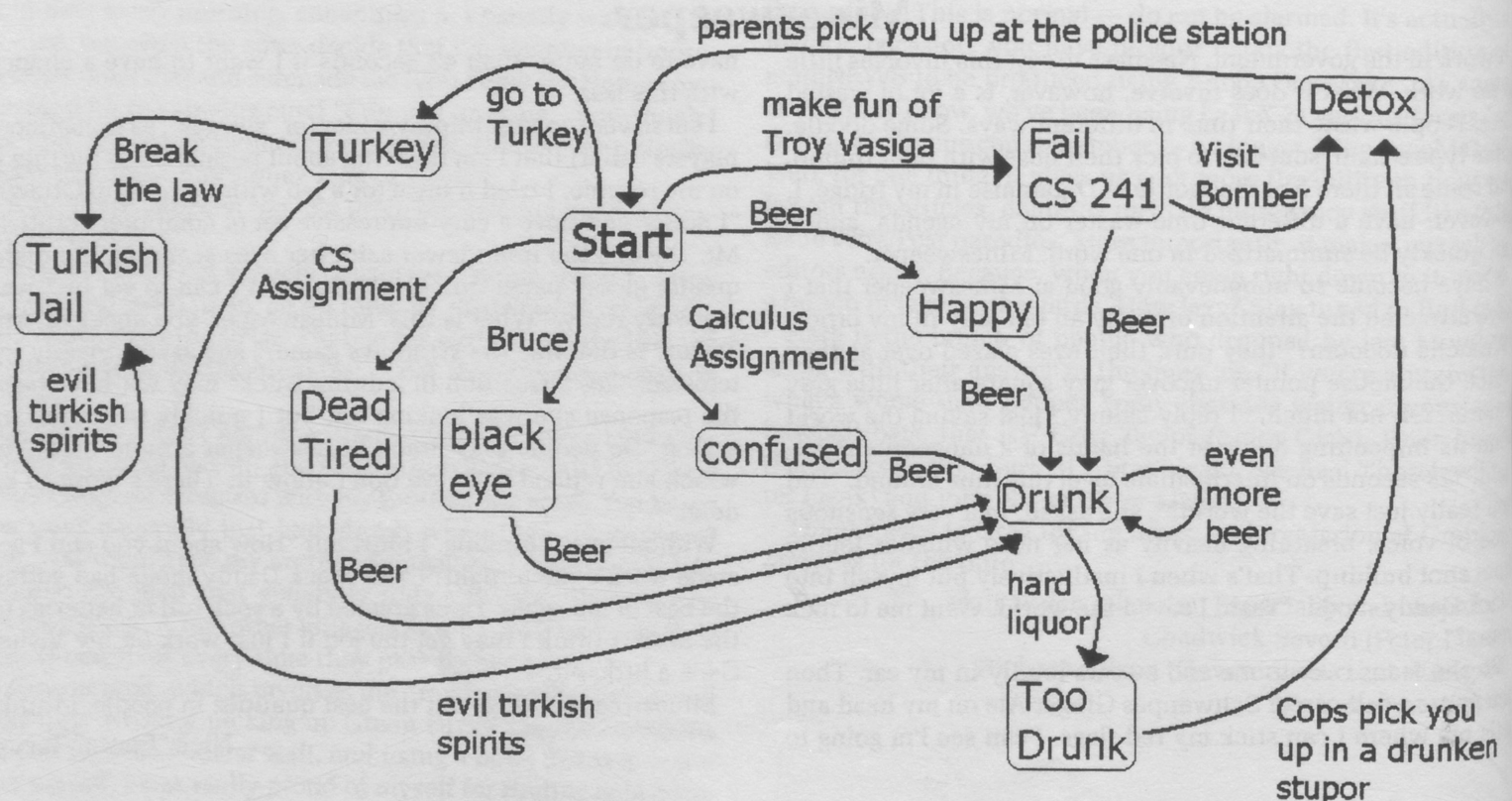
imum values, they combine to produce white; if they are all at their minimum values, there is no colour (i.e. the pixel is black).

The amount of information stored for each pixel determines the range of colour in an image file. This can range from one bit per colour component to eight bits or even more. However, if we have eight bits for each of red, green, and blue in our 307,200 pixel image, we find that our image requires seven megabytes of storage space. Many people have devised ways of reducing these storage requirements, and every graphics file format uses some different combination of approaches. These approaches can include look-up tables (called palettes), encodings, and compressions. Your task is to determine what approaches were used on the above file.

You can take it as known that the raw bytes that make up the image are encoded using two ASCII characters each, representing the hex value of each byte. For example, the sequence 524C45 represents three bytes, having decimal values 82, 76, and 69, respectively. In your solution you can assume that you have access to the raw binary data.

What do I want from you? An outline of an algorithm (pseudocode is fine) that takes as input the image data and fills up an x by y array (where x and y are the height and width of the image, respectively) with n -tuples that define the colour of each pixel. It doesn't have to be 100% precise, but you do have to convince me that you know what you're talking about. The best answer will win a prize. Submissions are due by 6:00pm on Monday, November 2. They can be submitted at the *mathNEWS* office, in the *mathNEWS* mailbox in the MathSoc office, or directly to me via e-mail at rcbilson@undergrad.math.

Richard "Drahcir Noslib" Bilson



mathNEWSquiz #3

Rosicrucians or Graph Theorists?

Hey everyone. So I'm getting the impression that perhaps my squizzes are not universally loved or something. Or maybe it's just me who's not universally loved. In either case, my main piece of evidence for this is the fact that I received precisely one entry for each of the two outstanding squizzes; both of these are from "Someone Else", and both of them are far too snarky for their own good. However, in the absence of any competition, I pronounce Someone Else to be the winner of at least one SquizPrize. (In case you're curious, they got 2 on the first squiz, and 1 on the second.

In any case, here are the answers to the last couple of squizzes: **Song Lyrics:** (i) Soul Coughing, "Screenwriter's Blues", (ii) Lowest of the Low, "Just About the Only Blues", (iii) Lou Graham, "Midnight Blue", (iv) Tom Cochrane & Red Rider, "Ocean Blue", (v) Moody Blues, "Nights in White Satin"; the theme, of course, was the colour blue. **The National Capital Region:** (i) Nepean, (ii) Five, (iii) Eleven, (iv) the Queensway, (v) The oak tree in which Bonnie Prince Charlie was hidden from puritan soldiers.

Dead Mathematicians: (i) Determining an algebraic formula for a root of a cubic equation, (ii) Algorithm, (iii) Jean-Charles de Borda, (iv) A seventeen-sided polygon, (v) Dedekind. **Musical Theatre** (i) Seven, (ii) *Guys and Dolls*, (iii) Puccini, *La Bohème*, (iv) *Chess*, (v) *H.M.S. Pinafore*. (Second squiz now.)

Merrie Olde England: (i) Angles, Saxons, Jutes, (ii) Three, (iii) George I, (iv) Chief Officer of the Mint, (v) Three days. **Stars in the Sky:** (i) The planet Venus, (ii) They are circumpolar (visible all year round), (iii) The Sun, (iv) Red, (v) One twinkles, one doesn't. **And All That Jazz:** (i) Louis Armstrong, (ii) To fight in World War II, (iii) A side effect of drinking wood alcohol, (iv) Scott Joplin, (v) The Dave Brubeck Quartet.

But that's all water under the bridge now. Since I know that everyone's in midterms these days, I'll be easy on people.

Lewis Carroll

1. What was Carroll's real name?
2. "The Pork-Chop Problem" is an instance of what notoriously difficult problem?
3. What time is brillig?
4. Who went on a picnic with the Walrus and the Carpenter?
5. How is a gerbil surprised?

Graphic Novels and Comics

1. The first issue of *V for Vendetta* takes place on what British holiday?
2. What were the code names of the first X-Men?
3. What was the real name of the Green Lantern who became Parallax?
4. From where does the Crow obtain most of his heavy weaponry?
5. In *Sandman*, Shakespeare makes a deal with Morpheus. What does Shakespeare provide as his end of the bargain?

Popular Music

1. Who were the Travelling Wilburys?
2. Who turned the Rhythm & Blues song "Rock Around the Clock" and turned it into a popular hit in the mainstream (i.e. white) market?

3. What film features the Ramones' favorite cabdriver as a character?
4. What makes the guitar solo in the Beatles' "Tomorrow Never Knows" sound so unusual?
5. "Creeque Alley" is a song describing the formation of what band?

So that's it for now. I'm really hoping to see submissions pick up a bit, because otherwise I'll be really disappointed. And I'd really hate to be dragged off to jail for killing that many people, so please submit some answers. Good luck, everyone, and remember that your answers to this squiz are due on **Monday, November 2nd by 6:30 p.m.** You can give them to the friendly office workers in MathSoc, or mail them to mathnews@undergrad.math, and they'll get to me. See ya!

Squizmaster So-Krates

Spermatikos Logos

Hey folks, I got six submissions to the first problem, and only one to the second (thanks Lisa). So this is what I'm gonna do. I'll give you the solutions to the first one, in case you tried it and just got stuck along the way. But I'll hold off on the solutions to the second one, so you have a little extra time to give it another shot. Besides, I'm swamped myself with stuff (just found out fifteen minutes ago I've got a midterm tomorrow). So I'm not going to make a puzzle for this week... well, I had started one, but some people in *mathNEWS* told me... nevermind. Chad's gonna write you up something for this week, and I'll be back next time with a fun little problem for you. [Actually, Richard came up with a pretty cool little puzzle for all of you logical thinkers out there. Try it. You'll like it. — ΣEd]

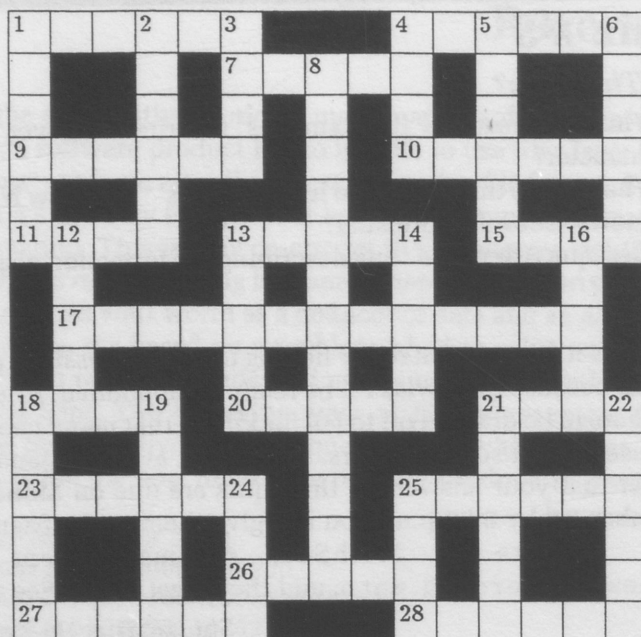
And without further ado, here are your solutions to last week's puzzle:

Player	Rank	Snack	Soundtrack	Character
Lisa	First	Pringles	Crying Game	Kai
Dave	Second	Popcorn	Top Gun	Tanya
Wendy	Third	Doritos	Trainspotting	Shinok
Gary	4 th (tie)	Crispers	Lost Boys	Raiden
Mark	4 th (tie)	Pretzels	Bladerunner	Reptile

I hope I didn't confuse anyone out there with the tie for fourth place. I didn't realize it myself until after the issue had already been published (helps to have a proofreader sometimes). Correct solutions were from Kyle "Iceman" Swidrovich, Duncan "NacNud" McGregor, Greg "Hologrami" Taylor, Paul Garcia, Tom G., and Nicolas "Is This For Eating?" Laios. [Since Gigi wasn't feeling very random, she left the editors with the task of randomly picking a winner. Rolling my handy-dandy six-sided die, I discover that in fact Duncan "NacNud" McGregor is the winner. Congratulations, you can pick up some sort of prize in the MathSoc office. — ΣEd]

If you have any questions or comments about any of my puzzles, email me at gngarbet@uwaterloo.ca and I'll do my best to help... without giving away the answers, of course. Cya next time!

Gigi Garbett



Grid Clues

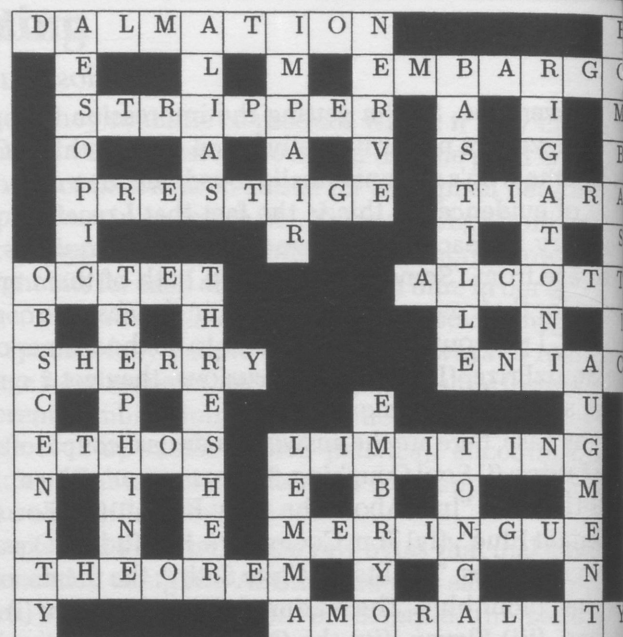
Across

1. Never ceasing
4. Set of elements that map to zero
7. Winter hat
9. Automatic response
10. B-vitamin
11. Reflected sound waves
13. Italian money
15. Evil alter-ego
17. Star grouping
18. Father
20. To banish
21. To remove excess
23. Indivisible
25. British mathematician Arthur
26. First Indian Prime Minister
27. Tribute
28. Kate from Mathnet

Down

1. To build up
2. Delphic deity
3. River of the dead
4. To adjust character spacing
5. Arabian capital
6. Relaxing room
8. 10^{-15} , Canadian-style
12. Desert plants
13. To carve by rotation
14. Thin reptile
16. Australian dog
18. Complex carbohydrate
19. Town in Waterloo Region
21. Now Sri Lanka
22. Occasion of remuneration
24. Pine seed
25. Shark bait

Solution to gridWORD #2



gridCOMMENTS

Welcome back to another installment of the *gridWORD*. We've got two weeks worth of solutions to unveil, so let's get to it.

The grid from October 2nd only elicited one response, from Kyle Swidrovich. Unfortunately, Kyle was one word off, so we're not going to award a prize for that grid.

The October 9th grid was slightly more promising, with three responses coming in. Ian "The Word Guy" Facey and Kyle Swidrovich were each one word off, and Hells Bells submitted an entirely correct answer. So congratulations to Hells Bells — you can pick up your prize in the MathSoc office.

Submissions are just trickling in this term, so there are plenty of opportunities to win one of those groovy C&D gift certificates. There is yet another grid on the back page: go to it, and bon appetit. Submissions are due no later than 6:00pm, November 3rd. They can be dropped off in the **BLACK BOX**, in the *mathNEWS* mailbox in the MathSoc office, or sent to me by e-mail at rcbilson@undergrad.math.uwaterloo.ca.

Richard "the Griddler" Bilson

Solution to gridWORD #3

