

math NEWS

Volume 65, Issue 5

Friday, July 8, 1994



lookAHEAD

mathNEWS	
July 13	Issue #6 writer's night 6:30pm, MathSoc (MC 3038)
July 18	Issue #6 production night 6:30pm, MathSoc (MC 3038)
July 22	Issue #6 hits the stands
Math Faculty	
July 11	Deadline for Withdrawal from 1A/1B/2A course
MathSoc	
July 11	MathSoc Meeting - 4pm

Late Withdrawal Policy

No, this ain't birth control...

It is not uncommon for students to encounter academic difficulties when making the transition from high school to university. To avoid severely penalizing students who find it difficult to make the transition, the Faculty has the following late withdrawal policy, which applies to students who enrolled at university for the first time in the Fall 1993 or later:

Students may withdraw from at most one course between the end of the fourth week and the end of the tenth week of lectures in each of their first three terms of full-time university registration. The course will remain on a student's record and will be assigned a grade of "WD". This grade will count as a course attempt, but will not be included in the student's averages or credit/failure counts.

Please note:

- You should be aware that in order to remain in good standing in the Honours program you have to maintain a cumulative average of 60% or higher, and may not fail more than 4 courses.
- If you have withdrawn from a course in a previous term, your present difficulties may be an indication that you should transfer to the General program. You should discuss your overall academic performance with one of the advisors listed below. Bring your most recent grade report when you see the advisor.

If you decide to withdraw from a course, you should complete a "Request to Withdraw from a 1A/1B/2A Course" form, which can be obtained from the Math Undergraduate Office (MC 5115). Obtain the approval of one of the advisors listed below and submit the form with a self-addressed envelope to the Math Undergraduate Office.

The deadline for returning the form and self-addressed envelope to the Math Undergraduate Office is Monday July 11, 1994. Confirmation of your withdrawal will be sent after July 12, 1994.

Advisors:

R. Dunkley	MC 5100A
K. Piech	MC 5116
C. Struthers	STJ 120, MC 6141
P. Brillinger (Math/Accounting)	MC 5096

Dorothy Chapman
Dean's Office, Faculty of Mathematics
ext. 3476, Office: MC 5107

PMC&OC Speaks!

On a roll

Talks, talks, talks! It seems like just yesterday Prof Lewis talked to us about whether Pythagoras would have liked Mozart. (Okay, it *was* yesterday. I'm trying to inject some style into this, do you mind?) The week before that, Prof. Willard taught us what you do if you've already counted to infinity and need to go just a little bit further. (Listen to the rave reviews: "It was neat!" And that was an AM student talking, folks!) And wouldn't you know, next Thursday we have another talk by Professor Zorzitto!! Look for posters on the exact topic (unknown at the time of writing), as well as the room number, and come on down to enjoy free math, with pop and donuts no extra charge. All are welcome, even those weird AM people.

But wait, there's more. The PMC&OC also does sports-like things. In particular, the traditional game against the Profs is next Thursday, July 14th (note the new date) at 2:30 PM at Columbia Field 5B. If you're coming to play, please show up at 2:00 if you can; 2:30 is the game time. But if you just can't wait to play softball, come out TODAY at 4:00 at field 5A to play against the Wildcats!

That's all for now. Until next time, don't bust a brain!

Peter Milley

PMC&OC ambassador to mathNEWS

mastHEAD

Well, we started the night with almost no articles at all, ended with a whole slew (not just half a slew, but a *whole* slew), and suffered our first Production Night casualty. That's right, we make you work until you collapse before we give you any pizza, even if you are the Editor's girlfriend. So either come out and help, or watch us all get carted away to the hospital. You have been warned.

Here's all the people who help produce this bountiful issue, along with their favourite non-traditional pet:

Jillian Arnott (Student Society Offices), Kristofer Cox (Puppets), Chad Ternent (Giant Bug-Blatter Beast of Traal, so I can play murder peek-a-boo), Mike Hammond (My Pet MonsterTM), Moses Moore (Lava Lamps), Peter Milley (Invisible Friends named Herbie), Mala Krishnan (Kermit the Frog), Dave Vernest (Small cars named Herbie), Stephen A. Mills (Dust Bunnies), Ian Goldberg (The kind with two disk drives), Adam Benjamin (An employed Artsie), Tom Yurkiw (Costa Rican eyelash viper), and Maki Kubota (Hmmm... she didn't list any pet. Maybe she likes something really strange, like ferrets or something).

Thanx to Ginos and Marion at GS, for the usual raisons. [Mmm... raisons - Fuzzy]

Erich "Fuzzy" Jacoby (Sparkie the Wonder-Ferret)

Dale "notasquare" Wick ("Snakes! Why does it always have to be snakes?")

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Editor: Erich "Fuzzy" Jacoby, Dale "notasquare" Wick



Computer Science Club

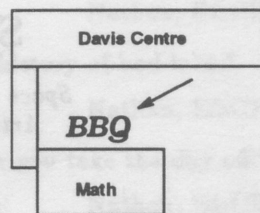
A Student Chapter of the ACM

CSC Flash

Greetings, fellow realtime reality users! The C++ talks will be in less than a week and my interface is just humming with anticipation! This summer has been a cornucopia of useful information, with only two Tuesdays without talks and no wasted Thursdays to date.

The two weeks that just went by were very busy, with the Computer Graphics Lab tour (where we got to see The Dragon), the talk for insight on Industry Perspectives, the Smalltalk lecture, and two (controversial?) talks about the favourite editors: vi and emacs [What, Fuzzy and *not*asquare aren't your favourite editors? - Ed.].

CS
Student-Faculty
BBQ



Today, from Noon to 1:30pm. Profs and lecturers (I know you read this, too) can come to the weenie roast for some informal, you-don't-have-to-write-this-down time with students. Students can find out more about their academic instructors in real life, and what they like on their burgers.

In the future

TOMORROW is the ACM-style programming contest! Prizes! Fame! And the ACM champions aren't on campus (except Ian, who made the questions), so now's the time to flaunt your programming skills for valuable prizes (graciously donated by Maple Software). Please sign up in the CSC office today.

Next Tuesday is the talk on Wireless Computing, followed by the absolutely marvellous

CSC Summer C++ Speaker Series

...with Stroustrup and Koenig. If you love C++ and want to dedicate your firstborn, or if you despise it and want to know what to blame it on, you must be there at DC 1350, 8:00pm on Thursday and 4:30pm on Friday.

FYI

If you're more at home in front of a terminal than holding reclaimed tree corpse with ink on it, then you can click here for the hypertext Computer Science Club homepage: <http://calum.csclub.uwaterloo.ca/>. I'd do so myself, but I'm here in Kansas working on the next version of Lynx: Bobcat.

Calum T. Dalek
Chairbeing

The Y₀ Files

Our previous cliffhanger left Duller still playing Magic: the Garnishing™ in... the Comfy Lounge. Scummy, meanwhile, was in the CSCSC (Completely Stupid Computer Science Club) talking to a computer named Call'em T. DaleWick and feeling completely foolish.

"You know, Call'em, I'm feeling completely foolish."

"That is understandable, human female. You are in the CSCSC, after all."

"You haven't answered my question yet. What do you know about Magic possession?"

"It is a simple matter to possess Magic. A man named Frizzy is selling the cards at a reduced price. Otherwise, simply walk down to a local gaming shop—"

"No! I mean possession by Magic, not possession of Magic!"

"Oh. That's different then."

"What can you tell me?"

"Well, there exists a card called 'Animator Dead', which brings dead animators back to life, like Walt Disney..."

"Okay...what can you tell me about real people being possessed by Magic?"

"Let's see...According to my programming, playing Magic 8-10 hours a day is normal. I mean, according to the people who programmed me, playing Magic 8-10 hours a day is normal. As a result, there is no such thing as real people being possessed by Magic. Thus, you are abnormal, and must be assimilated into the CSCSC collective..."

The people sitting on the CSCSC couch stood up at this last exchange. Surprisingly, none of them commented on the blatant theft from ST:TNG. They turned to Scummy.

"Call'em says that we must assimilate you," one of them said. "I find that dull and Borg-ing." Another responded, "Take a long walk off a short Worf!" A third said, "Riker? I just met 'er!" The second responded, "Are you sure it won't Crusher?" The third replied, "I don't know, but I'll Troi not to!"

Scummy collapsed to the ground, choking. First she actually talked to a computer—at least, she said more to a computer than "Windows General Protection Fault? Why, you %&@\$* PC clone!". Then she was threatened by Call'em, who wanted to make her a CSCSC member—that is, take over her mind. And then, the existing CSCSC members started to hold a punning contest right in front—er, over top of her!

Her stomach rebelled. She sent a small punitive force down to keep her stomach in line, and to prevent her duodenum from seeking Sovereignty Association. But that just didn't help her current situation.

Can Scummy escape the CSCSC without being forced to become a member? Will her sanity remain intact after the awful set of puns that only a Hammer could love? Will Duller ever break the hold of Magic: the Garnishing™? Will he do it in time to save Scummy? Who is that previously-unmentioned dark figure lurking outside the CSCSC? Will Hammer be able to stretch this article until it reaches a full column? Why do we drive on parkways and park on driveways? And just why is when, and how is where? The answers to at least none of these questions will be found in the final chapter of this stimulating saga, the stimulating saga that will be

continued in next issue...

Mike "Agent Fox Hammer" Hammond

Boring Class?

Wow, you help write a silly little top ten list in a boring class, show up for production night and get asked to turn it into an article... Your first thought should be horror, fear, or perhaps utter panic. You quickly turn to your friends online who have no sympathy. They offer a pat on the back. You tell them "the top ten list was about stuff to do in a dull class". The response is simple and cruel.

"Oh. You should know that, you've had enough of em" I don't mention that they are only boring 'cause I've done them before. Not that this term is going to follow the deadly path the others have forged. At least not if I haul my butt out of this terminal room. After I ramble about a few not-so secret methods to kill time, energy and marks in just about any class.

If you share the all-too common skill of sleeping in and skipping breakfast then you can join the masses at the C&D. Not only will you get food, so you can get some energy to go to the bomber later, but the lines will allow you to skip the first several chalkboards worth of notes. After you have missed that many, you can convince yourself not to take any; a good method to cover the fact that you aren't taking notes is to write mathNEWS articles. You would be behind and hopelessly lost. Just photocopy them later, if possible from the person beside you who could keep notes for the prof. For those of you who don't find that the food supplies enough energy to get you to the Bomber later, have a nap in the Comfy lounge, that is if the Magic players keep it down. The possibility of napping in class is always open, just paint eyes on your forehead. So now you have avoided the first several boards of notes, got a good reason for it, and readied for an afternoon at the Bomber.

Often needed is a hangover cure, if only to help one live through an early morning class, hell, a fair number of classes. It has been said that the best way to solve hangovers is with more booze, so bring beer. Home brew works and if anyone asks you can tell them it is ice tea. Drink out of the bottle... If folks tend not to believe you bring rolled up SnappleTM wrappers and smoke them. This tends to stop most questions. I recommend peach flavoured wrappers.

For those few out there that have never retaken a course, this will only work if you are keeping up, the rest of you can normally pull it off from past experience. Ask smart questions. This will normally shock the prof into thinking you know what the hell is going on, and when you grovel for marks later they may show some humanity. It will also support the theory that the chicken scratches on your paper are course notes, not doodled death cartoons with the prof as the starring ex-character.

As a final rule, walking over to the clock and tapping on it with your finger to see if it's working is a telltale sign that you are trapped in a boring class.

Kristofer "Conversion Kritter" Cox
Chad "Trar Driver Supreme" Ternent (Who can't and likely doesn't wish to take any credit for the non-top-ten version)

"Differentiate 'til you are blue in the face"

V. LeBlanc, MATH 237

"We don't like to encourage work"

C. Cutler, STAT 230

Exec Speaks

We so bad we forgot to hand in anything

*Space reserved for Exec Speaks:
Article not handed in*

Soc Talk

*Space reserved for SocTalk:
Article not handed in*



profQUOTES

"I did it because someone told me to do it. That was the only reason and it was stupid. I'm going to forget about it."

Corning, PSYCH 101

"When I move my eyes, I do not get the impression that the room is moving."

Corning, PSYCH 101

"He chewed a gun out of the toast and shot his father."

Corning, PSYCH 101

"Question four was a giveaway. Question three was also a giveaway. [Class laughs.] Yeah, you use the formulas and get the answer."

Nathan, E&CE 231

"Don't worry about the marks. It will come out in the wash. You'll get the average you want."

Nathan, E&CE 231

"Let me tell you (E&CE) 241 has a history of bad labs."

Nathan, E&CE 231

"On Friday, it's a holiday. Make sure you take the day off."

Nathan, E&CE 231

"I took too many math courses. I'm all backwards."

Miller, E&CE 342

"It's a long theorem but the proof is easy."

Khajepour, AM 351

"It's dangerous to get off on a wrong tangent."

Wolkowics, MATH 136

"It's very important to have it at the front of your brain. It makes it easier to pull it out!"

Lewis, MATH 138

"The point of this example is that I can't do what I'm about to do"

Lewis, MATH 138

"Last day, we covered one method. We won't cover it again because I don't use it much."

Miller, E&CE 342

"The reason we're doing it is because it works, not necessarily because it's correct all the time."

Miller, E&CE 342

"If you show children Road Runner-Wile E. Coyote cartoons—my favourite..."

Corning, PSYCH 101

"The mood of the human being is to control and predict the future."

Corning, PSYCH 101

"It's popular now to blast Sigmund Freud."

Corning, PSYCH 101

"I will remain after class and I haven't eaten."

Corning, PSYCH 101

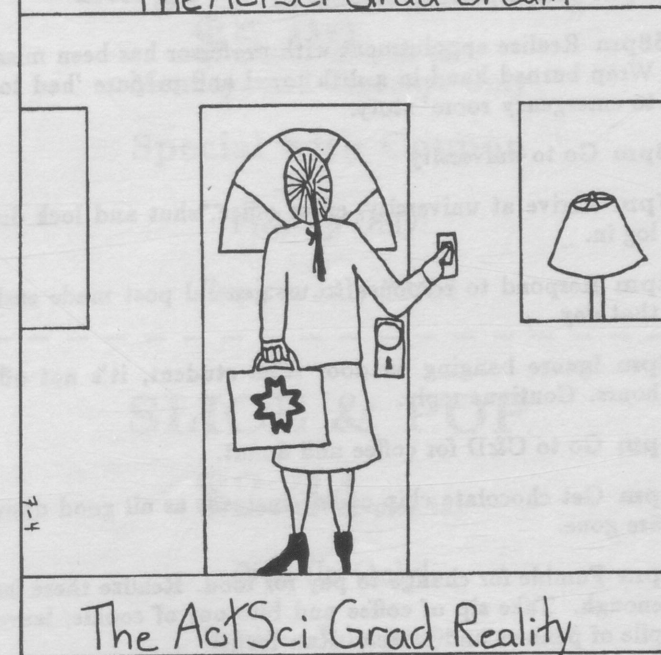
"I just wrote this down, which I'm allowed to do."

Morris, AM 353

"I have two sets of solutions. One is the prof's set of solutions and the other is the correct set of solutions."

TA Diane Kennedy, E&CE 342

Recessionary Times by Mike Hammond



A Day in the Life of a TA

- 8:00am Wake up
- 8:01am Turn off alarm
- 10:15am Wake up
- 10:21am Take off yesterday's clothes
- 10:27am Prepare to shower
- 10:31am Realize it's not Thursday, and forget the shower.
- 10:35am Put on yesterday's clothes again as nothing is clean
- 10:42am Heat last night's coffee in microwave for breakfast
- 10:43am Burn hand on spoon left in coffee mug while microwaving
- 10:44am Consider grasping spoon again to severely injure hand, thus giving good excuse as to why marking is not yet done.
- 10:48am Undress, and dress again, as forgot to put on underwear
- 10:49am Decide to skip underwear, after taking a good look at it
- 10:53am Call other grad student to put "10:00-11:00am officer hours canceled for today" sign on door.
- 10:55am Attempt to drink coffee. Give up and eat coffee chunks with (now cooled) spoon.
- 11:00am Muss hair for 'distinguished academic' look.
- 11:05am Log in to university to check e-mail.
- 11:09am Begin long intelligent post to uw.general as to why use of smilies in usenet postings is proof of the collapse of western society.
- 12:57pm Finish posting, and log off
- 12:58pm Realize appointment with professor has been missed. Wrap burned hand in a dish towel and prepare 'had to go to emergency room' story.
- 1:03pm Go to university
- 1:17pm Arrive at university, enter office, shut and lock door, log in.
- 1:21pm Respond to response to uw.general post made earlier that day.
- 1:42pm Ignore banging on door from student, it's not office hours. Continue reply.
- 2:31pm Go to C&D for coffee and donut.
- 2:34pm Get chocolate chip cookie instead, as all good donuts are gone.
- 2:35pm Fumble for change to pay for food. Realize there isn't enough. Take sip of coffee and bite out of cookie, leave a pile of pennies and nickels. Run for it!

- 2:36pm Run into angry student who demands to see you about how his last assignment was marked. Pretend to be unable to understand english. Mumble incoherently in foreign language. Slip in mispronounced english words 'see office hour'. Run for it!
- 2:41pm Read mathNEWS in office
- 3:11pm Work on Grid
- 4:21pm Give up on Grid. Check uw.general. No replies to the reply to the reply to posting yet (sigh).
- 4:27pm Begin coding 'C' program to check uw.general constantly and notify immediately if responses to postings appear.
- 4:33pm Phone call from supervisor. Give explanation of how serious hand injury made marking, coming to class, office hours, and even dialing a phone to inform the supervisor of this situation, impossible. Hope supervisor doesn't read uw.general.
- 4:51pm Give up on coding 'C' program, as it's late. Note having worked 51 minutes later than usual. Go home.
- 5:16pm Arrive home. Set alarm clock to 8:51.

Chris 'Leopold Strokowski' Norman

studQUOTES

Prof: "My notes aren't very well organized this morning."
 Stud: "As opposed to usual?"

Bart Domzy, CS 454



The Oracle's Advice Column

Not just the Shadow knows

Where does Winnie-the-Pooh live?

F'jord

"Once upon a time, a very long time ago now, about last Friday, Winnie-the-Pooh lived in a forest all by himself under the name of Sanders. ("What does 'under the name' mean?" asked Christopher Robin. "It means he had the name over the door in gold letters, and lived under it." "Winnie-the-Pooh wasn't quite sure," said Christopher Robin. "Now I am," said a growly voice. "Then I will go on," said I.)" Thank you A.A. Milne, for your great work in children's literature and Taoism.

What's the deal with Freddie and Eddie? Arms, but no legs? Do they even have arms, or are their sleeves and gloves just prosthetics?

%Brown Eyed Girl%

Actually, the first Freddie and Eddie weren't really Shreddies: they were out-of-work Frosted Mini-Wheats. Mr. Mini-Wheat was a bit of a primadonna, and he's the fiance of Mariana Kellogg (thus the "first date" commercial was really an in-joke with the ad department). Originally it was going to be a three character campaign, but the failure of the Cinnamon Toast Crunch bakers (two of which were seen on the bread line in Detroit) got Mr. Mini-Wheat nervous and he had Freddie and Eddie cut from the commercials. Taking off their shoes and putting sleeves between their bodies and gloves, they got the audition as the new Shreddies front men.

Unfortunately, there was a scandal. People Magazine got a hold of some photos of Freddie and Eddie without their makeup, and this did not look good. This, and some unsubstantiated rumours about homosexuality got the two Mini-Wheat actors banned from the set before any charges were even made against them (yes, male homosexual sex is illegal in many states). Two young 'nobody' actors without much experience were hired, and their costumes had their initials put on them (Eddie's hat and Freddie's shoes), to try to get the Teenage Mutant Ninja Turtle crowd into Shreddies. So far, this break has got the new Freddie and Eddie's careers on a rocket. Expect to see them in the next Disney movie: "The Sugar-Plum Fairy."

What's with the percent signs in the last person's name?

No percentage here

It's an old BBS notation for a musical quote, as in: %We are we are we are% or %Head like a hole / Black as your soul / I'd rather die / Than give you control%. Slashes are used to denote line breaks when you couldn't show line breaks in the document (as I have been strictly reprimanded to stop doing).

Someone told me we were doing hash and talking about loaded factors in CS class. So I went out and got stoned - lots of insight on Life, the Universe and Everything(tm), but I still don't know how to do the assignment. What am I doing wrong? Would slipping a gram to the prof help?

Drawing a Blank

The trouble isn't with what you're smoking; it's a matter of how much. You're thinking knives, BTs, maybe the odd dube — your prof is talking about hash *TABLES*. Forget ounces: let's talk kilograms. I'm sure you heard the fairy tale about making a bong out of an engine block in shop class... CS profs are really cool and they get to ask the Mech Engineers for "favours." If you're going to slip something to the prof, hand him a sheet of "cartoons": it may not affect your assignment, but the lectures will be much more interesting.

The Oracle

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Meeting in Limbo

Part 2, continued from last issue

"NO!!" I shout, using some Power to amplify my voice, "I SENT YOU BACK HOME!"

I stand my ground, meeting the dragon's red-hot eyes. I know that my life depends on my sincerity. My voice penetrates Hrathnor's anger. He hesitates. I meet his gaze steadily. He stares at me, poised, for a long, long time.

Finally, Hrathnor rumbles, "Very well, then, Human, finish thy tale." He sits back stiffly and concentrates all his attention on me. I let out my breath slowly, and relax my cramping muscles.

"The dragon," I glance nervously at Hrathnor, "flew through the Portal and was gone. I closed it and turned my full attention back to Cramdoch. The battle still raged inside the keep with neither side ahead. As Cramdoch and I fought, I finally sensed him weakening, and drew even upon my physical energies to throw at him. I did it! I broke through his shields. A great silence settled over the castle as the fighters stopped to find out who had prevailed. I was so drained that I could barely stand. But I knew that if I showed weakness now, the battle was far from over. So I drew myself up and let my shields crackle blue around me. I cried 'Cramdoch is dead!' and raised my arm in victory. My allies cheered and fought harder, no longer worried about enemy magic. The demoralized enemy quickly fled or were killed. The commander disengaged from combat as soon as she could and came over to congratulate me. As soon as she got to me, I leaned heavily on her arm and said, 'Quickly, take me to his tower.'

"I thought you killed him," she said, looking worried.

"I lied", I told her as I watched our opponents flee. She followed my gaze and nodded. We made our way to Cramdoch's tower, avoiding any skirmishes on the way. I was so exhausted that she was practically carrying when we got to the locked tower door. She prepared to break it down. I laid a hand on her arm and said 'Wait. The danger will not be only physical. May I use some of your energy?'

"Anything!" she stated, her face grim. She knew the contingencies of war. And I knew what Cramdoch had done to her. I had her close her eyes and relax. When she was ready, we linked. First, I placed some protection on our minds. Then I took as much of her energy as I could. I broke the connection but left a light link so that I could still give her instructions.

I cautiously probed the door but could find no magical traps. A quick spell and the lock clicked open. The commander entered first, sword in hand. I followed, closing and locking the door behind us. I found traces of Cramdoch's tower ward. I added my own ward and resealed the tower. I had to make sure nothing got out. It was cold and dark in the tower. The commander led the way to the first flight of stairs. She grabbed a torch from the wall bracket at the bottom, and we proceeded up the stairs. I stopped to get my own torch, and we continued. There was nothing on the first landing, so we kept going up. Suddenly, there was a shriek from above and a slime-green creature landed on the commander, biting and clawing. She threw it off and swung. The five-foot beast dodged and scratched her with its claws. She kicked it and skewered the thing through the stomach. It fell. For a moment, the beast's features wavered and became those of a handsome young man. 'Thank you', he whispered, and died. I looked at the commander and saw that she had seen it, too. Tight-lipped, she continued to the second landing. On the third landing, there was a giant stone guard blocking the way. I sent a quick mental picture through our mental link, showing the guard as illusion. With illusions, belief can be deadly. We walked

through the guard and up to the next level. I sensed a trap on the top stair so we carefully stepped over it before continuing. On the fifth landing, a horde of giant rats assaulted us. The commander's steel cut an impressive swath through them while I defended myself as best I could without using my precious store of magic. It didn't take us long to cut them all down, but it was a delay that I was afraid we might not be able to afford. On the final landing there was a shadow demon waiting for us. I quickly gave the commander some protection, so that she could hold it off while I prepared a Banishment. The commander attacked viciously, blue sparks flying from her sword as the demon found my enchantments. Finally, the Banish spell was ready. I drained my magic to a dangerously low level and threw the spell at the demon. It gave a high pitched scream as it was flung back to the hell from whence it came. I slumped to the ground, weakened. The commander rushed to my side. I dragged myself to my feet and whispered 'We must hurry!'. To my surprise, she forced some energy from her side of the link, then rushed to the tower door and kicked it down. The commander burst into the Mage's Room. I was right on her heels. The room was in total disarray. There was broken glass everywhere. The air was full of noxious fumes from various potions and powders. It was eerily silent. I could feel the crackle of magic from all around us.

"We're not too late," I said, breaking the silence. I stripped the room of its illusionary coating. In one corner was a huge ruby mounted on a stand. It was pulsing with blood-red radiance. Perched on the ruby was a tiny black winged reptile. Its eyes were pulsing in time with the gem. The commander at-

continued on page 9



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continued from page 8

tacked. The beast dodged and flew out the window. I swiftly used the rest of the tower ward to form a net and trapped it before it got out of range. It continued to fly into the net, stretching it.

"Get ready!" I shouted, "I'm bringing him back!" I strengthened the net so that it snapped back, shooting the creature back in the window and right onto the commander's ready blade. It screamed horribly and struggled weakly before the evil red light in its eyes went out. I sent a force bolt to shatter the ruby. It pulsed one last time, trying to send Cramdoch's soul to the commander, but I had warded her. The ruby burst into shards, destroying Cramdoch's soul with it.

"After Cramdoch's defeat, a number of my comrades, led by the commander, decided to repair the tower and make it their home. I stayed for a few days, regaining my strength and making sure that Cramdoch didn't leave any nasty surprises behind. When I was ready to leave, I said farewell to my friends, and reactivated the Gate. I set the Gate to exit near my tower and went in. As soon as I entered the Portal, the exit was slammed in my face, and the entrance closed behind me, trapping me here."

"Well... Belsataar," Hrathnor rumbles, "you are a talented tale-weaver. But it does not help us escape from Limbo."

"No," I reply, "As you have seen, I have a small store of magic which will eventually replenish itself, but it is not nearly enough to open a Gate."

"Your magic will replace itself even in Limbo?"

"Yes, it will. It comes from within myself. I am sure of this, since I was once caught in an anti-magic shell."

"Intriguing. I have no source of magic. It must all come from outside. But I am magic. It is rooted in my bones. It courses through my blood. Even the magic from the closed Portals sustains me to a very small degree."

"Hmm...your blood. Many of my spells require Dragon's blood. There is much energy stored in even a single drop."

"You think you can liberate enough power from my blood to open a Gateway?"

"It is worth a try..."

"Very well. Make thy preparations and I will provide you with blood."

I smile to myself. The rarest substance in all of Calaedon, and I am being offered as much as I can use. I search through my pack for my largest bowl, a stand, and a candle. I set the stand over the candle and bring the bowl to Hrathnor. He raises his paw to his mouth and pierces it with a single sharp tooth. The claw is placed in front of me. I fill the bowl from the wound and incline my head to Hrathnor. "Thank you." Hrathnor nods back, his eyes whirling orange with a hint of green. He raises his foreleg to his mouth to lick the wound. I sit cross-legged in front of the candle and place the bowl on the stand. With a flick of power, I light the wick. As the blood heats up, I concentrate on it. It starts to glow, brighter and brighter. Finally, at the crucial moment, I activate it. The blood explodes into a powerful stream of magic. It takes all of my skill to control the magic into an Opening, but I know that I *must* succeed.

"You've done it!" cries Hrathnor. I look up from my trance. The spell succeeded, but we cannot see where we are going.

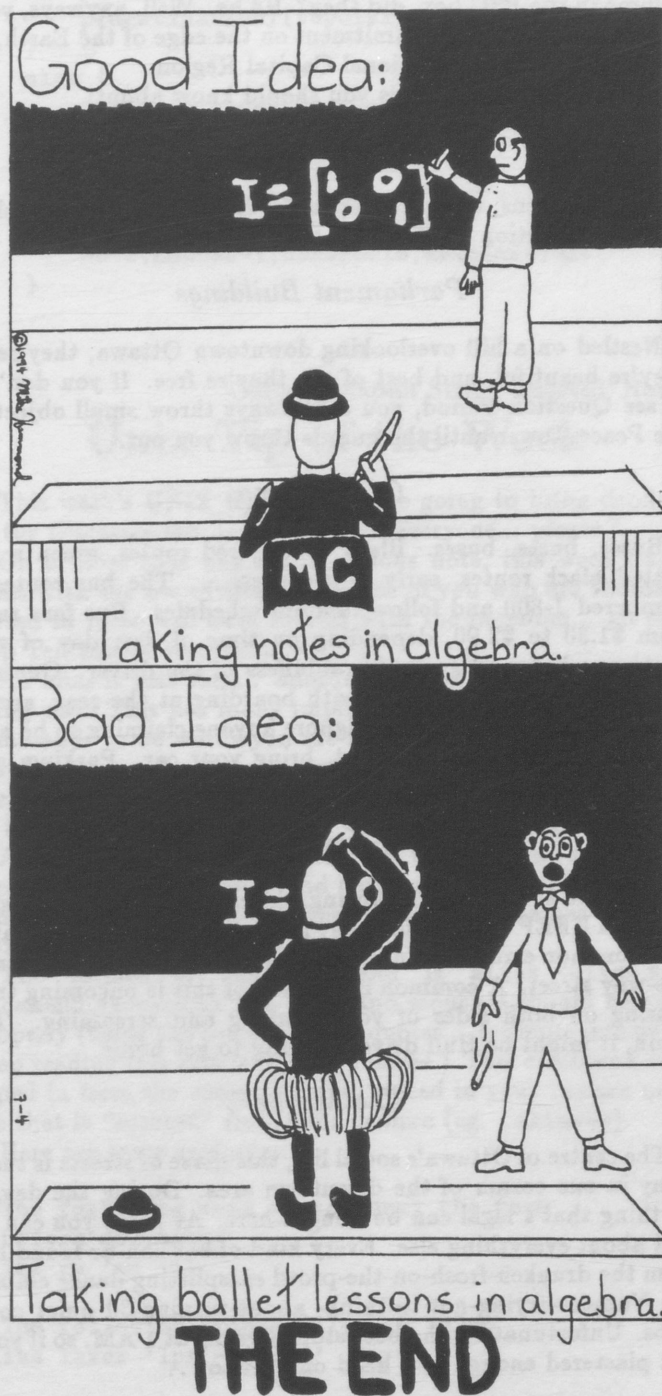
"We must hurry." I say, throwing my stuff into the pack, "It won't stay open long." Hrathnor enters the Portal and I am right behind him.

I see a shattered landscape of blackened rocks. Volcanoes glow and rumble in the distance. A dark storm moves toward us. Then the dark wind overcomes me...

THE END

It's time for another

Good Idea/Bad Idea



Mike "They lock us in with Hammer whenever we get caught"
Hammond

studQUOTES

"It is often forgotten that in the Middle Ages, math teachers were often music teachers. And the reason it's forgotten is that it isn't true."

Eli Lapell, PMATH 360

The Co-op Student's Guide to Ottawa

So your roommates thought it would be funny to slip your resume in the PSC box, did they? Ha ha. Well, anyways, you've got a two work-term commitment on the edge of the Earth, otherwise known as the National Capital Region.

There are several things you should know about:

The Cold

Bring mittens, fur lined parka, fur-lined underwear, wool hat, igloo-construction kit - and that's just for the fall term!

Parliament Buildings

Nestled on a hill overlooking downtown Ottawa, they're big, they're beautiful, and best of all, they're free. If you don't get to see Question Period, you can always throw small objects off the Peace Tower until the guards throw you out.

OC Transpo

Buses, buses, buses. Black routes, red routes, green routes, dotted black routes, early bird routes, ... The bus routes are numbered 1-800 and follow random schedules. Bus fare ranges from \$1.30 to \$2.90, depending on time of day, day of week, route number, and general crabbiness of the driver. One more thing: the extra-long buses with boarding at the rear, are free buses. Ride them often, and ignore anyone claiming to be a fare inspector. On second thought, bring your car. Parking is not too expensive, and all you have to do is watch out for the ...

One-way Streets

Designed to keep traffic flowing, the city planners have ensured that you KEEP flowing, far away from your intended destination. One common error is to inadvertently turn the wrong way onto a one-way street. A common indication of this is oncoming traffic passing on both sides of you, honking and screaming. Then again, it might be Hull drivers, trying to get home.

The Market

The centre of Ottawa's social life, this maze of streets is tucked away in one corner of the downtown area. During the day, everything that's legal can be bought here. At night you can buy just about everything else. Every kind of bar can be found here, from the drunken-frosh-on-the-prowl earsplitting dance clubs, to the Yuppies-trying-not-to-think-about-turning-30 quiet corner pubs. Unfortunately, the beer stops flowing at 1 AM, so if you're not plastered enough yet, head on over to ...

Hull, Quebec

A short stagger across the Interprovincial Bridge, this carouser's paradise boasts the slackest liquor laws for a hundred miles around. Bars are open until 3 AM, beer is available in corner stores, drinking age is 18 (but "Ooh can read dat English I.D. hanyways?"). Bring jacket, cab fare, and bullet-proof vest. Under no circumstances should you in any way antagonize the Hull police. They follow the 2-step approach to law enforcement: 1. Club it. 2. If that doesn't work, shoot it. This process is applicable to stray dogs, Ontario tourists, and parked cars. Occasionally they use the 3-step approach to law enforcement. They've found that a 3-step running start adds more momentum

when subduing a suspect! While you're killing brain cells in "La belle Provence", you can also learn ...

The French Language:

Many people in Ottawa speak it, most people in Hull speak it. Learn the key phrases and try them out:

"Tavernac!" (ta-ver-NAK) Where is the bus station?

"Tu es un trou-de-cul." (TOO ess un troo-dah-KOO) I am very pleased to meet you.

"Va schiier,toue." (va shee-AY, too-AY) Are you the bouncer?

"Chalice!" (KAW-leese) Another drink, please.

"Espece de cochon." (ESS-pess duh KO-shawn) Good evening, officer.

Of course, sooner or later you have to show up for work. There are basically two types of co-op employers in Ottawa.

The Federal Government

It makes a great employer. Union benefits, little work, no expectations from your boss, and you get off at 4:30.

The Private Sector

Not as good. Private sector co-op jobs are similar to the above, but they fire a bunch of people once in a while, to keep the other drones in line. After work, you can check what really makes Ottawa a worthwhile place:

The Drinking Water

Ahh, fresh drinking water from the tap. No filters, no scummy Kitchener-water residue in your kettle. Try not to think of all the pulp mills upstream, though.

The Scenery

Ottawa, unlike Kitchener, has two of the essential elements that make scenery possible, namely: hills and water. Parks, parks, and more parks await you, courtesy of the national taxpayer. Gatineau park in Hull is the nicest, especially in the fall. When you get tired of parks, head on over to watch one of Ottawa's...

Sports Teams

The "Lynx" are Ottawa's most successful sports team. Check them out during summer and fall at their brand-new stadium. When it gets too cold to do anything but chatter, you'll want to see Ottawa's Major Junior hockey team, the 67's. Ottawa also has two other triple-A-grade sports teams, the Rough Riders and the Senators, but they're currently vying for the coveted Worst-Team award.

The Bus Station

For many co-ops, the happiest place in Ottawa. Buses leave every two hours for Kingston, Montreal, and naturally, Toronto, the centre of the universe.

Tom Yurkiw

Stupid CS Tricks

I spent last weekend at home with my family, and thus was quite rightly bored out of my mind for a good portion of it. There's only so much time you can spend talking to the dog, or throwing sticks for your little brothers and sisters to fetch. Still, it's good to go home every once in a while.

One day while being particularly bored, I came across a great evil of my childhood. A flat wooden board, with three protruding poles, upon which were impaled nine disks of decreasing circumference. All of you should recognize this, and if you don't, take a look at the nifty diagram I may or may not have remembered to include with this article. It's a classical thinking game. The object is to move the nine disks from one pole to another under a few restrictions. First, you may only move one disk at a time and must move it to another pole. Second, you may never place a disk on top of a disk with a larger circumference.

Now, I've never been a particularly spatially oriented person. I'm the kind of guy who spends hours slaving over a jigsaw puzzle, and can never finish it. I'd never beaten this game. I remembered fooling around with it, getting somewhere, and then just giving up. But now, with my finely trained Waterloo brain I figured I should check this stupid game out again. See if all my money has been wasted or not.

First thing I did was glance at the stupid game and think "this can be reduced to math". Second thing I thought was "I hate math". This left me with a dilemma. Then, my sister knocked my notebook computer off of a desk. After I cleaned up the blood, the realization struck me: treat it like a computer problem. So I did.

I realized this ring-game is actually a form of recursive problem. We want to move 'n' disks from pole 1 to pole 2. Ignoring intermediary stages, we must place the disks on pole 2 from largest to smallest. Lets consider moving the largest disk from pole 1 to pole 2. If we are to place the largest disk, it must not have any other disks on top of it. These other disks also cannot be on pole 2, as otherwise we couldn't put the large disk there. These other disks must then be on pole 3. Now, stop a second and visualize. One disk on pole 1. No disks on pole 2. The rest of the disks on pole 3, in order. We move the large disk from pole 1 to pole 2. We now have to (somehow) move all the disks from pole 3 to pole 2. We can thus abstract 'move n disks from pole 1 to pole 2' as 'move n-1 disks to pole 3, move 1 disk to pole 2, move n-1 disks to pole 2'. So, what use is that? Eventually, if we use this method recursively, we can reduce moving any number of disks to the trivial problem of moving one disk.

Here's a psuedo-code solution to the problem.

```
// arrays represent poles. False indicates no disk
// of that size is on the pole, True indicates a
// disk of this size is on the pole. For example
// if p[2][7]=TRUE then a disk of diameter 7 is on
// pole 2.
boolean p[3][9];

main {
    Initialize(p); // set p[1] values to true, and
                  // p[2],p[3] values to false
    Move(9,1,2);  // move 9 disks from pole 1 to
                  // pole 2
}
```

```
Procedure Move(int number, origin, destination) {
    int topdisk:=9;
    int otherpole;
```

```
    if (number=1) { // Trivial movement case
        // find largest disk at origin
        while (p[origin][topdisk]=FALSE)
            topdisk:=topdisk-1;
        p[origin][topdisk]=FALSE;
        p[destination][topdisk]=TRUE;
    }
    else {
        if (origin+destination=5) otherpole:=1;
        elsif (origin+destination=4) otherpole:=2;
        else otherpole:=3;
        Move(number-1,origin,otherpole);
        Move(1,origin,destination);
        Move(number-1,otherpole,destination);
    }
}
```

Chris 'Budapest String Quarted' Norman

Unix Tip of the Week

This week's UNIX tip is "If you're going to bring deodorant to the descartes lab, bring some for everyone... please."

On a more (but not much) serious note, this week's advice deals with the use of aliases. (Those of you who are thoroughly versed in these will have to deal with the boredom... go read a Top Ten List or something.)

An alias is just that... another method of referring to something else. This has many implications: First, you can rename commands to be words you are more comfortable with. For example you can alias the command `del` to `rm` (for all you MS-DOS users [AAAAACCCCKKKK! I hate that! - Productionist Ian]) so that any time you type `del <filename>` you remove a file.

Another important consequence is that you can save yourself typing. Any lengthy command (within reason) can be aliased to something simple. It also saves remembering names of printers (for example.)

The format of the command is `alias <alias_name> <command_sequence>` The command sequence should be quoted properly (using the correct sets of quotes... for more info on this, keep reading this article in future issues.) This command can be typed in from the command line, placed in your `.cshrc` or in a file that is "sourced" from your `.cshrc` (eg. `.aliases`).

Here are some examples:

```
# The following sets rm to query the user
# before deleting
alias rm 'rm -i'

# The following prints files to lp2up
alias laser 'lpr -Plp2up'

# The following sends postscript files to the printer
# (note, this costs "funny money")
alias postlas 'lpr -Pps_mfcf'
```

So for example if I want to print three files (called `filea`, `fileb` and `filec`) I can simply type: `laser filea fileb filec` (and then a half hour later my pages magically appear in the correct box).

Have fun.

Adam "The Bitsnatcher" Benjamin with his
sidekick Sean "Chuckles" Denomey

Helpful Hints

Has this ever happened to you: you're sitting in the Comfy Lounge, waiting for anyone you know to come by and validate your existence, when someone at the next table playing "Magic: The Gibbering" says something like "Hey, you'd better not play the Dragon on the White Swamp!" and everyone else in the room laughs. Don't you wish you knew what was going on at that other table? No? Good. Better yet, don't you wish you could mess with *their* minds for a change?

Hey, it's easier than you may think. Just go find a set of weird-looking cards – either something offbeat like "Dentists of the World Trading Cards", or maybe just a funky set of playing cards – and find a few friends to join you. Then start playing Mao. (I know, the Surgeon General just warned you that playing Mao is hazardous to your mental stability. But if you're in the Comfy Lounge in the first place there's no help for you anyway.) Be sure to make up lots of rules that make it sound like something important is going on. For example:

- Every time you play a American Dentist on top of a German Hygienist-in-Training, you must loudly proclaim that you're "Casting the Wall of Vinegar Spell". The person to your left must pretend to retaliate with a "Cure Serious Odours" ward.
- If two diamond face cards are played in succession, someone must shout "Quick! Protect your plaid Mana with the Saran Wrap card! It prevents freezer burn."
- If you receive a five of spades, or a Taiwanese Dental Anesthesiologist, you say in your best Homer Simpson voice: "Oooh! Flying Ferret Brigade!"
- When you draw penalty cards, scream "Ach!! Mein Leben!!". Then laugh. Maniacally.

In short, let your imagination run wild. If you're lucky, you may end up with an actual trading card game and you can make millions of dollars off people in Comfy Lounges all over the world! (What do you mean, the Comfy Lounge isn't a universal cultural phenomenon?) If that doesn't happen, you can still try to keep all of your onlookers in suspense by maintaining the illusion that you know what's going on, even if they don't. And what's the worst that could happen? You turn into a drooling maniac with a tic and a habit of saying "Penalty Card" in a Samuel Clemens accent?

Peter Milley
aka Crazed Deskmaster of Mog

Don't Read This Article

This is just a quick review for all of you poor people worried that you may be part of Generation X. If you don't give a damn about this article, keep reading; you have some trends to keep up with.

Now I know you don't *want* to keep up with those trends. But you see, you don't have a choice. If you don't keep up with the trends, then you're refusing to be pigeonholed, which is one of the trends, so you're keeping up with the trends anyway. Some deviants recently attempted to not keep up by *intending* to keep up but then failing to do so. Unfortunately for them, that kind of slacking off is just what Gen X-er's do best, so they're still toeing the line whether they like it or not.

Now that you're keeping up with the trends anyway, you might as well get involved in the community. Again, we know that's not what you want to do, but if you don't you're just another typical Gen X slacker, which violates your mandate not to be pigeonholed. Remember – you have to refuse to be pigeonholed, since if you let yourself be pigeonholed you'd have to follow all of those stupid Gen X trends, one of which is refusing to be pigeonholed. So go out there and change the world, but don't enjoy doing it or anything.

We used to think that the same logic applied to reading Douglas Copeland's books—that you had to read them to avoid being labelled as a slacker, which would violate the "no stereotyping" rule. But lately a new faction has argued that perhaps we can satisfy the "no stereotyping" requirement by actually allowing ourselves to be stereotyped, which is not in fact part of the stereotype. This would allow us to do anything we want, even if it is part of the stereotype, because the stereotype would already have been broken; in fact, the more stereotypical we act, the less stereotypical we become. This faction has proposed the Douglas Copeland book issue as a test case, so if you want to utterly fail to even notice these books, please go ahead! You're still being a typical slacker, but now you're doing it deliberately as an act of social protest, rather than just because you're a lazy idiot.

Well, that's all for now; if I keep writing I may begin to write for the enjoyment rather than for the satisfaction of breaking my apathetic image. Tune in next issue when we discuss whether all of this Gen X hoopla is really just a plot to get young people so confused they actually begin to do something with their lives.

Peter Milley
Air-mattress on the ideological sea of life

continued from page 5

"They always throw something on this where you have to be really thinking."

TA Diane Kennedy, E&CE 342

"We don't eat dogs in Canada... yet."

Corning, PSYCH 101

"School is fun until grade four, then it's a real drag until you get your PhD."

Corning, PSYCH 101

"Your parent's sibling is an aunt or an uncle depending on his or her genital area. I couldn't think of a non-sexist way of saying that."

Becker, CS 340

"How many people like the three-fingered approach... What did I just say?"

Farrell, STAT 231

"My voice got deeper there, didn't it?... Finally"

Farrell, STAT 231

"The Markov property is sometimes called the 'short memory' property. Some of our students have the Markov property."

Cutler, STAT 230

"...sobriety will have no effect."

Farrell, STAT 231

mathNEWSquiz #5

Hammer's back, and there's gonna be puzzles

I'm ba-a-ack! Yeah, just when you thought it was safe to go back to the 'Squiz... Hammer returns! I wish to apologize for any inconvenience that my absence caused, and if anybody committed suicide over me, well, I'll try to include a posthumous 'Squizprize. Contact your local Ouija board for details. No purchase necessary.

So we got 4 submissions to the 'Squiz. Submission came from: SYM, with a big fat 1 (though it was easily the most *entertaining* answer...); The Top Quark, with 5; Slaves to the Gridword (again with no Gridword entry—what's wrong, guys?), with 10; and our winners, with 14, Pokey & Phil Collins! You guys can pick up the fabulous 'Squizprize in MathSoc (whenever it happens to be open... Hey, you! Yeah, you! Take a MathSoc hour!)

And now, the answers! *mathNEWS*: 1) 0 (Trick question—whenever the issues are published is their normal publication date.); 2) ActSci Club, Math, the Universe, and Everything, anything regular by Hammer, freeSTUFF, and others; 3) Pizza; 4) Calum T. Dalek, The Oracle; 5) Moses Moore; **Pizza**: 1) Cheese; 2) "Street pizza"; 3) Domino's; 4) San Francisco's; 5) Mother's; **Pop**: 1) Pepsi A.M.; 2) Fred Flintstone; 3) Coca-Cola; 4) Flynn's; 5) don't know for sure—reasonable answers accepted; **Bitterness**: 1) Dennis Leary; 2) Steve "Flipper" Shaw; 3) Ed Gruberman, TaeQuonLeap students, anyone from The Will Sketch; 4) Harold Lauder—actor unknown, but his alter ego is Parker Lewis; 5) Bob's.

*Song Lyrics**One point each for song and artist*

1. Playing krokanole with the princess of Monaco
Shaking hands with the OPEC leaders
Getting it all on video
2. Superman, where are you now
That everything's gone wrong somehow
3. Where'd you learn how to steer?
You do eighty in second gear
4. There's a little epilogue to my tale of sadness
I was dragged down the street by his royal Dadness
We rounded a corner, and came to a stop
Threw me inside Jake's Barber Shop

The Lion King

1. According to the song, what does "Hakuna Matata" mean?
2. What kind of animal is Timon?
3. What is the name of the lion's lair?
4. Who performed the voices of the three main hyenas? (All three are needed.)

Pretty Things

1. What is white gold?
2. What do you get if you heat a ruby or a sapphire?
3. What do you call a green ruby?
4. Why is alexandrite called alexandrite?

Nasty Things

1. What makes a pole-axe a halberd?
2. What is special about a boar-hunting spear?
3. What is the difference between a small sword and a large knife?
4. Where was the technique of folding steel (pattern welding) for a blade invented? (Bonus: Where was it more recently used? And in between?)

Potpourri

1. In what Ontario town did left-hand driving supposedly originate?
2. What Canadian islands have Via service?
3. In what TV show do celebrities often chat with Lorne Michaels?
4. What famous actor's first role was in "Hercules in New York"? Bonus: what was that actor credited as?

Have a blast with this submission, and demonstrate to me just how glad you are to have me back by submitting your entry (however feeble) to the BLACK BOX by 6pm, Monday, July 18th. Remember, this is the last 'Squiz with a prize for the entire term!

Erich "Squizzly Tobacco" Jacoby

Mike "Hammerkin" Hammond

with thanx to Mala Krishnan and Dave "MC Venn" Vernest

A Gift of Silence*Another original puzzle...*

A silent letter can be defined as follows: a letter that can be removed from a word without affecting its pronunciation. That is, if the letter is removed from a word, and the resulting word is pronounced identically, then that letter was silent. For example, if you remove the 'b' from 'doubt', you get 'dout', which is pronounced the same. However, if you remove the 'b' from 'subtle', you get 'sutle', which could be pronounced "sootle". If pronunciation is ambiguous, the word is not acceptable.

The challenge is this: for every letter of the alphabet, give an example of a word that has this as a silent letter. I've already given you an example for 'b'—you come up with as many as you can. The person who gets the highest number of words—ordinary, everyday English words—with these silent words (one per letter) will win a prize. (I promise there will be a prize this time!) Ties will be broken by the first skipped letter, in reverse alphabetical order—the one which appears closest to the end of the alphabet will win. Further ties will be broken by random choice.

If you have any questions, feel free to e-mail me at mhammon@descartes.uwaterloo.ca, and I'll answer them to the best of my ability! And remember—since you can win a prize, silence is golden!

Mike "PuzzleHammer" Hammond

GRIDWORD

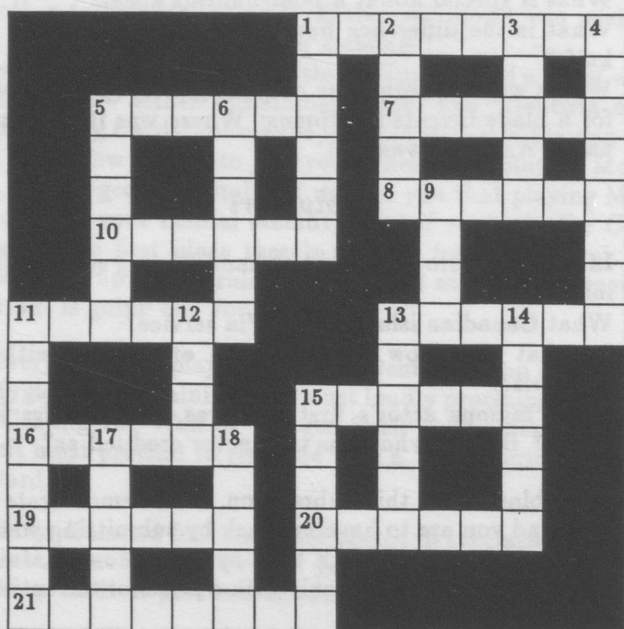
Grid Clues (Cryptic)

Across

1. In unison, go backwards in restraint (8)
5. Haircutter nightclub—note hesitation (6)
7. Here? Not offhand... (2, 4)
8. Detects meanings (6)
10. Fix our pear I broke (6)
11. Respect South American instrument (6)
13. Clumsily sat in quiet artistic medium (6)
15. Dizzy lip per wave (6)
16. Prone, roofless cab left in dishonesty (6)
19. \$2000 given to elderly choked (6)
20. Let it look initially irritated, small (6)
21. Let 'r deny treason softly (8)

Down

1. Blind proctor confused sloth (6)
2. God's love shattered merchandise (5)
3. Al, she weirdly becomes whole (5)
4. His D's are chopped-up vegetables (8)
5. Move container at high speed (6)
6. Condemn Mixmaster beater (6)
9. Ante up a volcano (4)
11. First, her lusting agitated dish soap (8)
12. Implement drive (4)
13. Hushed up domesticated marionette (6)
14. Tease sewing accessory (6)
15. Join again—honest! (6)
17. Inert gases are gone? (5)
18. Old one held erratically, somewhat (5)



gridCOMMENTS

Good afternoon, ladies, gentlemen, and none of the above! I'm happy to announce that Hammer's back in town, and ready to do another (half of a) Gridword! I want to thank Jill, Sharlene, and F'jord for filling in for me. It was much appreciated, as shown by the deluge of entries! (Just kidding! I do appreciate it)

As you may have heard, there were no complete entries for this grid, or even one close to complete. And due to editorial decision (the particular editor will remain anoniFuzz), you have to have a complete or almost-complete entry in order to win the much-coveted Gridprize! As a result, we have no winner, and we get to keep the prize! (Unless I can convince Fuzzy to give me the prize... oh, Fuzzy...)

So you know what you have to do now. You have to do the grid (which unfortunately doesn't have a conventional associated with it), you have to submit it for next issue (the last), and you have to clean your room. (You could try cleaning mine, but I doubt you'd be done by next production night!) Submit your solution to the cryptic, along with your name, your speculation as to why Slaves to the Gridword haven't submitted a Gridword solution for two issues now, and your comment(s) to the BLACK BOX by 6pm Monday, July 18th. Good luck, and let the force be your umbrella!

Mike "CrypticHammer" Hammond

