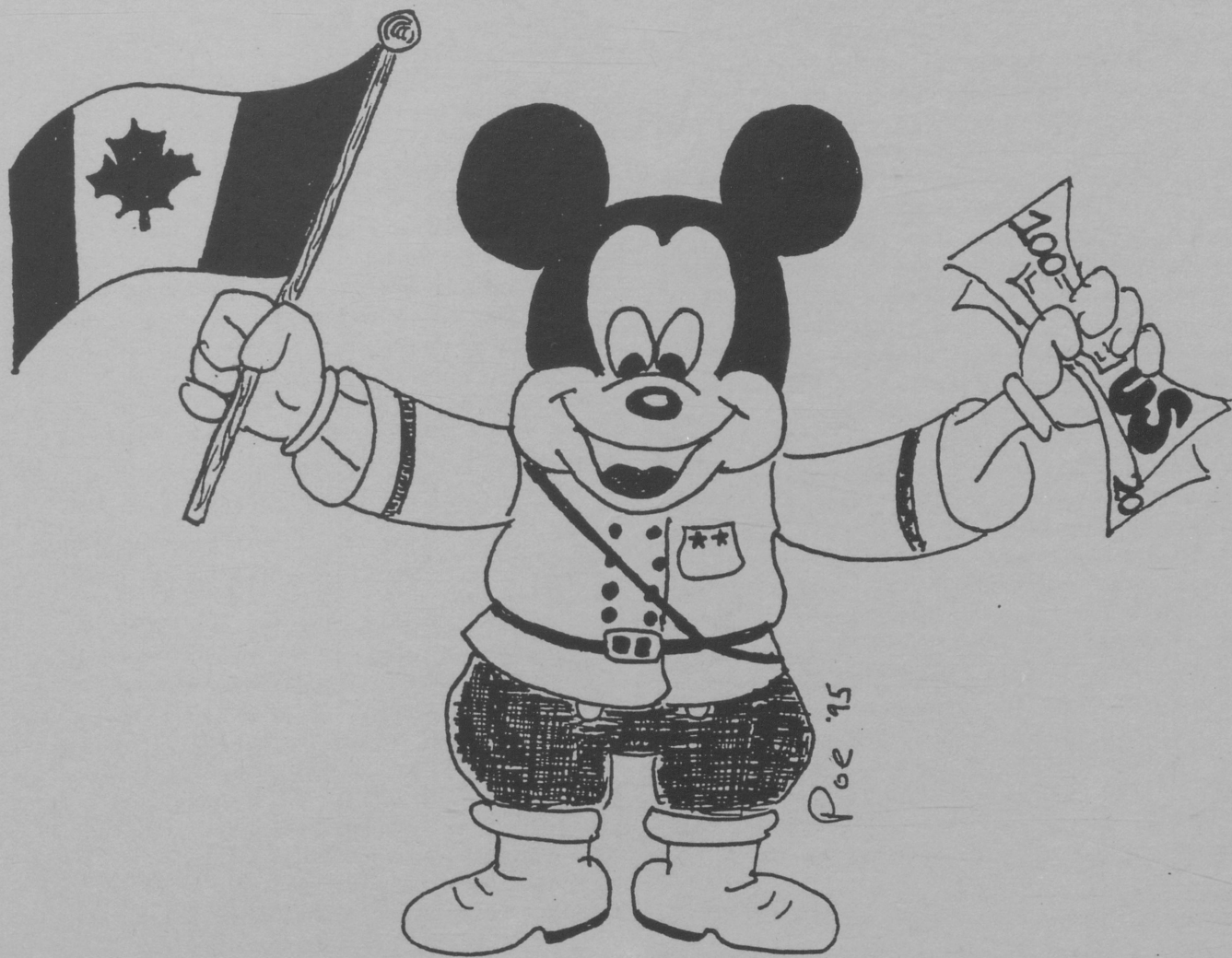


# *math* NEWS

Volume 68, Issue 5

Friday, July 14, 1995



**MIC - KEY -**

**MO UN TIE**

## mastHEAD

We're in the home stretch now, with just a few more weeks before exams begin. Make sure you have a look at the "How to Study" article for a few tips on studying.

This will be the third issue where we have *mathNEWS* up and running on the World Wide Web. Since setting up our home page, 4% of WWW traffic on *undergrad.math* is used by *mathNEWS*. This would indicate that the service is a great success, since there are 559 users with home pages on *undergrad.math* as of July 10<sup>th</sup>. We've had people reading *mathNEWS* from as far away as Japan, from MIT in Massachusetts, students on work terms from all over Ontario, and (surprise, surprise) many accesses from the undergrad computers. If you haven't checked our home page out yet, make sure you do. We are maintaining archives of old issues (well, three issues so far), and have a "Best of *mathNEWS*" page which contains some of the best articles and *profQUOTES* we've come across. As time goes by, we'll be adding more articles from previous issues and terms.

Another Monday night, another *mathNEWS* production night. We've got an enthusiastic crowd out here tonight, working hard for your reading pleasure. Our slaves tonight, and what they think we should change the MathSoc mascot to are: May Szeto (Sarah Kamal because she is my idol ... and the best damn Social Director (this damn term)), Drew Hamilton (Come on-everybody knows ... Belle from "Beauty and the Beast"), Matt "So-Krates" Walsh (STU!!), Sarah "The Lemonhead" Kamal (A big, shining, pure, undefiled, beautiful, stunning, pulchritudinous LEMON!!!!), Timmy Haynes (A Dec Alpha), Curtis Desjardins (The Pink Power Ranger (WOO HOO!)), Poesy Chen (Re: The Pink Power Ranger (Isn't that me? I know for a fact that I am not the Yellow Ranger!)), Darren Morby (Jon Cressman), Allyson Graham (The Tool) [Yikes! — Ed.], Arsenyk Utaris (Bessel's Equation!!!), Stu Pollock (The Immortal VT), Michal Ostrowski (A calculator, Maple or anything that does brainless calculations), Stephen "Pepper" Johnston (Burned remains of 1A Algebra notes), and Viêt Tâm Luu (A big lemon-shaped football).

Thanks as always to Marion at Graphic Services, and to Mega Pizza for the 'zza which keeps us going on Monday nights.

Stephen "Pepper" Johnston  
Stuart "Jean-Guy" Pollock

## Clue Corner

A Gift from Me to You

1. briefcase
2. crystal vase
3. lace camisole
4. bronze etchings
5. stationery
6. ivory and wood carving
7. sapphire ring

What should you bring to the Game?

## PreZ SeZ

*PoeZy NeedZ Zleep*

Let's talk about MathSoc stuff first.

As this summer term comes to an end, so does this batch of executives. Nominations for Winter 1996 executives will be open as of July 17. Please note that there will not be another nomination period at the beginning of Winter. If you are interested in holding an executive position, please make sure you submit your nomination form before this term is over. BTW, the forms are available in the MathSoc office.

Second, the "Let's make a deal sale" as promised in the last issue of *mathNEWS* has been moved to Wed. July 19. Don't forget to check out our T-shirts and other Novelties at bargain basement prices!

Last, but certainly not the least, activities organised by our Social Committee. This Friday afternoon, MathSoc is hosting its first annual Water Fight! Watch for posters for the location and time for the Battle of Waterloo. Also, for those who think they are lucky, come on out to our casino night at Fed Hall on the 20<sup>th</sup> of July. Gamble your summer vacation money (because you are not going anywhere anyway!) and win lots o' prizes. (Just kidding about losing your shirt!)

What do I have to say for myself? Not a heck of a lot. Last time I checked, someone still loves me and someone still cares. (If you are that some one, please let me know...;-) ) OK. That is it for now. (p.s. Happy Birthday to SGA on TAP!)

Poesy "Pink Ranger" Chen

## Wade's Word

*A word from your VPAS*

So what's new and exciting? Well, classes are just about over for the semester, but don't be thinking that that means all the fun and excitement is over. Far from it! This semester may be rapidly coming to an end, but its sure going out with a bang! If you've passed through the MC building lately with your eyes even partly open, you could not have missed the multitude of signs and posters announcing upcoming events, speakers, and activities. There are plenty of things to do, so come out and enjoy yourselves before buckling down for exam time.

Speaking of exam time, I am compelled once again to bring up the matter of the Study Rooms. Little progress has been made towards resolving this issue and **without your input they will not be available during this semester at all!**

That's it from me this week.

Wade Kulenkamp

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Your Wonderful Editors: Stephen Johnston & Stuart Pollock

## CSC Flash

Greetings once again, inferior beings! In the best Spring term on record, 344 of you have been assimilated into my CSC (at the time of writing).

Calum is scheduled for downtime this Saturday starting at about 8:00 pm. We will be re-organising the file system and upgrading the OS.

### Events

On July 6 at 4:30, Professor Ebergen gave a talk on "Computing Without Clocks." The talk on asynchronous busses and multi-threaded processing was attended by about 30 people.

On July 18, Dale Wick, a 4th year Computer Science student will be giving a talk. Watch the newsgroup to find out more!

The CTRL-D dinner is coming up fast! Come to the CSC and vote on your favourite restaurants (+1, 0, or -1 on each restaurant).

### Programming Contests

Just another reminder, the ACM Style Programming Contest was rescheduled for July 15. The Waterloo team tryouts will be held in the Fall. Two teams will be chosen to represent the University at the Regional level of the ACM Programming Contest. (re-)Sign up in the CSC today to practice for the team!

Have you been having ideas about Artificial Intelligence for years and have never been able to express them? Do you absolutely detest Tetris? Wouldn't you like to make a computer play it for you? Well, here's the contest you've been looking for: the First-Ever Tetris Programming Contest! The contest will be held on July 29. Details can be found in the newsgroup, or at <http://csclub.uwaterloo.ca/u/jjgignac/tetris/manual.html>. You may be able to win, since I refuse to play against the likes of humans.

### Other things

Is there anything you'd like to say about the MC3018 renovations before MC3022 is finished? Mail comments to [nborisov@calum.csclub.uwaterloo.ca](mailto:nborisov@calum.csclub.uwaterloo.ca). Please send all comments by early next week as we will be drafting the letter to MFCF soon.

There is still time for you to buy the latest CSC fashion for \$14. Drop by the CSC to see the design of our t-shirts or visit our webpage. Also, if you're fed up with clicking on food and drink signs, come purchase a "It doesn't have to make sense; it's University policy." button.

As usual, read the newsgroup [uw.csc](mailto:uw.csc) for the latest news from my club, and try out their homepage at <http://csclub.uwaterloo.ca/>.

Net.tip of the week: Try not to stay logged in to the net for more than 24 hours at a time. Sleep people!

Calum T. Dalek  
Chairbeing

## Math Faculty Outraged Over New Watergun Registration Policy

MATH AND COMPUTERS BUILDING—University of Waterloo

The University of Waterloo Rifle-o'-water Association is incensed over the new policy that will be implemented by the Math Society this week. This legislation will force students to register their aquatic weaponry outside the math C&D between the hours of 2:30 and 4:00 today. This measure has been taken because of the alarming increase in the number of waterguns sprouting about MC in preparation for the Math-Residence Waterfight that will also be held today.

"I'm very disturbed that MathSoc has made this decision. I am absolutely disgusted over this flagrant violation of my rights as a watergun-bearer," said Billy Bob Buchanan.

"Ah deserve th'opportunity tah protect mahself from all the psychos out there. I mean, waterguns don't soak people, people soak people!" ranted Big Ella May Sue McBob.

Sarah Kamal, the MathSoc Social Director who lobbied for the policy, was unavailable for comment. The rumours that death-threats have been sent to her by disgruntled rednecks are entirely unfounded. Campus Security has not been contacted. She and her private stash of lemons have not been relocated out of the city for their protection.

Despite the outcry, the Math Society will not be backing down. There will be a sale of legitimate arms at the registration table and the Gun Registry will proceed as planned.

Sarah "Here's REAL journalism for ya!" Kamal

**MEGA 747-2900**

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**2 Medium Pizzas With 3 Items  
And 4 Coke — Delivered!!**

**\$12.99** plus tax

## Social Comment-airy

Um, like, hi there! (Giggle) You're favourite dark-dark-dark-dark-Blonde here. . .

Time's a flyin', guys and gals, and the summer is almost over. Which means that we gotta have the most fun possible in the next month before exams in August (dum de dum dum DUM!!!).

Our trial run at a Music Jam on the Canada Day weekend was pretty darn successful. A good dozen people came out to the Comfy Lounge to make music, and baby, you shoulda heard the talent we oozed. It was GREAT! We're gonna try and have them on all the remaining Fridays of this month. So c'mon out at 3:30 to Comfy today for a jamfest on Fridays!!

Also today, there's going to be a STUPENDOUS!! waterfight (registration 2:30-4:00 outside the C&D) against the V1 residences. Bring your own paraphernalia or partake of MathSoc's stash (which will be available at the registration desk) and go out and get SOAKED!!

(This event was supposed to be held against another faculty, but none of them were courageous enough to brave what they knew to be our soop-ee-ree-or super-cunning delta-epsilon-deducing minds and devious water-gunning skills.) (...Wimps!)

(But that's okay, 'cos this way we can go and DRENCH a bunch o' unprepared suckers while they walk around, weaponless and helpless...woohoo!!)

(Uh oh. You didn't actually read that here.)

Um, guys, don't go out and soak any blasted engineers, or anything. That would be taking advantage of an unfair situation, or something. And we wouldn't want to do that, now, would we? (heehee)

Oh, and by the way, next week will be time for the Casino Night!! Casino Night!! Casino Night!! This fab night, the one night of the term that I KNOW you've just been waiting for, is gonna take place next Thursday (July 20th) at Fed Hall. Tickets are now available from the 'Soc office, \$2 in advance for mathies, \$3 for non-mathies, and they'll be \$1 more expensive at the door. So get dressed up swank, come on out, partake of the food that'll be circulating and gamble to your little cheatin' heart's content for the PRIZES PRIZES PRIZES we're gonna be givin' away.

If you're interested in being a Casino Night Dealer, please contact me at [skamal@undergrad](mailto:skamal@undergrad) ASAP. We're going to have a dealer training session Monday night starting at 6:00pm in the Comfy Lounge, so make sure you make it out to that!

So come on out to the MUSIC JAM! MUSIC JAM! MUSIC JAM! and WATERFIGHT! WATERFIGHT! WATERFIGHT! and CASINO NIGHT! CASINO NIGHT! CASINO NIGHT!!!!  
WOOHOO!

Sarah "LOSING IT! LOSING IT! LOSING IT!" Kamal

## The New Lab in MC 3018

Well, the days of Miserable Orchid are gone (and you thought Descartes had a really high load.) When I was in CS 241 way back in the winter of 92, the Orchid lab was in MC3006. Now I sound like my Dad. Anyways, it was a Sun 360 (I think) and had a screamin Motorola 68020 to power about 150 kids running the Ada compiler. It was the only room we could use.

Yup, well, three days before the Assembler compiler was due, the system load was about 90. Yes, 90. It took two hours to compile; I and a bunch of friends used to go to the Bombshelter for beer in the meantime.

We couldn't use the brand-spankin' new Descartes lab because it didn't have the Ada compiler on it, at the time. Kudos to MFCF for bringing the Undergrad Network to what it is today. I don't think that there is a more powerful network at any other university in the province. We've got Oracle, CASE tools, ADA, Nettek, full internet access, nettek, Netscape, NetNews, NeT-TrEk and tons of other nice toys that universities like Queen's and Carleton could only dream of. Just talk to Shahid, he'll tell you.

Well, we've just got a new lab, and I am glad that I came back for a 4C term just so that I can see my money well spent. Yes, my money, and anyone else's who has paid their tuition and/or contributed to the Pink Tie Pledge. I chaired this year's PTP because I knew lack of funding was going to be a growing problem in the future. I and the rest of the graduating class of 1995 (We

Done Yet?) contributed \$38,249 to you. Yes you. All the Pink Tie Pledge money from this year goes to the Math Endowment Fund and Descartes Scholarship Endowment. What does this mean? This means that Pink Tie Pledge Funds in general is paying for the new lab and other worthwhile projects. \$38,249? Not only was this a record for a graduating class gift program for Math, but it was also more money than all the other faculties and colleges raised, combined.

The chairs in the lab, yes, they have 8 million levers on them, but they don't have a quarter coin slot to get a back massage. Don't get too excited. Hey, if your friend starts to get on your nerves, pull on the gas lift lever and send him or her to the moon. Treat the equipment nicely and don't steal any or Haitham BouZeineddine, the godfather will come after you. When he's mad, it's not pretty, and you will be without honour.

All the labs in the building will soon look "aesthetically pleasing" according to Gary Embro. Kudos to Gary Embro, Arthur Hills, the rest of MFCF, and to everyone else who has generously funded this project.

Sandeep Gupta  
MGC 1995, The Second Batch  
We Done Yet?

## gradNEWS

### Get Your Yearbook

Orders are now being taken for the 1996 Faculty of Mathematics Yearbook. The cost is \$30 and only those who prepay their purchase now will be guaranteed a yearbook. Orders can be placed in the MGC office. The yearbook provides a permanent, quality keepsake, so don't regret not having purchased one; order yours today.

### Get Yourself in Your Yearbook

In addition to selling the yearbook, the MGC is also responsible for producing the yearbook. As a result, ANY photo of grads in any stage of their university career will be considered for the 1996 yearbook. This is a great way to get your picture in the yearbook and an even better way to embarrass your friends. Please submit your pictures to the MGC office. Be sure to include your name and permanent address on the back of each photo as all submissions will be returned.

Also, please get your Grad Blurbs into the MGC office as soon as possible. If you do not submit your blurb form, your picture will appear in the yearbook with blank space next to it and everyone will laugh and call you names. No one wants to see this happen, so get your blurb in as soon as possible.

### Get Busy

The following are dates of (social?) importance. Some of the events listed are tentative, so further information will be forthcoming.

#### Friday, July 14

- Yearbook Grad Blurbs are due. Please get your blurbs into the MGC office as soon as possible (slide them under the door if necessary) and remind your friends to do the same.
- BBQ TONIGHT at 324 Batavia. (Wade deserves an award for volunteering his home.) Food will be provided. Bring your own beverages and friends are welcome. Directions are posted on the MGC bulletin board. A post-BBQ Bombshelter visit is in the cards.

#### Sunday, July 16

- Laser Quest. The cost will run about \$10/person and we will be departing for the MGC office at 3:30. Drivers are requested.

#### Thursday, July 20

- Joint TSA/MGC Yuk-Yuks outing. Cost will be \$5; tickets are on sale in the TSA office (MC 3031) and the MGC office (MC 3029).

#### Friday, July 21

- Winery Tour. The MGC will be renting transportation (i.e. Coach bus or vans) to visit three wineries in the Niagara region. The cost will run about \$20/person including transportation and the cost of the tours. Please contact the MGC if you are interested in attending.

Wednesday, July 26

- End-of-term celebration. Wine and cheese or maybe dinner followed by a visit to the Bombshelter.

Hope to see you out at some of the events and good luck on your exams.

Mike Vanderkaden  
MGC Chair

## lookAHEAD

<b>mathNEWS</b>	
July 21	mathNEWS EOT Party
July 24	Issue #6 production night 6:30pm, MathSoc (MC 3038)
July 28	Issue #6 hits the stands
<b>MathSoc</b>	
July 14	Waterfight! Gun registry @ 2:30 in front of the C&D.
July 14,21,28	Music Jam 3:30pm in the Comfy Lounge. Bring an instrument.
July 17-30	MathSoc Exec Nominations for Winter '96. Pick up forms in the MathSoc office
July 19	Let's Make A Deal!! MathSoc's inventory reduction sale on the 3rd floor of MC.
July 20	Casino Night at Fed Hall
<b>Math Grad Committee</b>	
July 14	Yearbook blurbs due in by 4pm
July 14	MGC Barbeque 324 Batavia Place @ 5pm
July 20	Joint TSA / MGC Yuk-Yuks outing - \$5
July 21	Winery Tour to Niagra Region—roughly \$20
July 26	End of Term party—visit the MGC office for more information.
<b>Math Faculty</b>	
July 14-16	Frosh Leader Retreat Weekend
July 15	ACM Programming Contest—sign up in the CSC for the practice team
July 17	Women in Math BBQ 4:30-7pm Waterloo Park
July 17	Business Club—Eagles Flight Training 6:30-10pm in the Comfy Lounge
July 22	The Game
July 31- August 2	Examination period. Study hard, Write well, but most of all—pass
<b>Womyn's Centre</b>	
July 22 & 23	Womens Festival 12-8pm at Waterloo Park (Bandshell). Contact Womyn's Centre x3547 in Campus Centre.
<b>WPIRG</b>	
July 18	"Voices From the Shadows" 12 noon DC 1302 A movie about Welfare
July 25	"Forbidden Love"—A portrait of lesbian sexuality.

# How To Study For Final Exams

## A Masochist's Guide

Your final exams probably count for 60% or 70% of your final grades. Those kinds of marks are worth putting some effort into getting! Especially if you've been slacking off all term. I have had more than a few people claim that my methods of studying for final exams were pretty torturous. I usually knock myself out pretty good when I study for finals, mainly because I'm an idiot and have no mathematical ability. But, my techniques have thus far been fruitful. With those nasty finals looming large once more, I thought that some fellow Mathies would benefit from some of my tips on how to study.

I have thus far (I'm in 3A) found that there is a direct correlation between how many hours I spend studying for a particular course's final exam, and my mark in that course. The more hours I put in, the higher the mark (generally). So, my techniques focus on how to squeeze more study hours out of the available time. I think most frosh or second year students would probably benefit from this type of approach (geniuses excluded, of course), but upper year students would probably find some other approach more helpful. Perhaps a more functional approach that focuses on the topics of the course and studying areas of particular conceptual weakness. My techniques go for the "shot-gun blast" mass-knowledge approach, but can be adapted to suit other purposes. Now then, onto the method.

There should be two phases to the studying. The first phase has the student summarizing their notes, getting copies of old midterms and finals, and getting copies of the solution sets to the term's assignments. The second phase is the actual studying. The first phase can and *should* be done while lectures are still happening. If you wait until the examination period to do this, then you'll be doing it when you could be more effectively studying for a nearby final. The idea here is that the closer to an exam you get, the more time you should be spending actively studying. This "passive" studying is pretty worthless to your immediate understanding, but is a vital supporting structure for the active studying. So, you can steal time here and there between classes to do the photocopying, and you can probably steal a few hours here and there over the weekends and week nights to summarize your notes. I usually save my summarizing for weekends, and get photocopies between classes.

The second phase is the actual studying. Now, as I have mentioned in other articles, the learning curve is logarithmic in the amount learned with respect to time spent studying. (Geniuses excluded, once again.) That is, it takes incrementally more time to learn incrementally less stuff. So, you may want to do what I do and allocate more studying time for harder courses, or for more important courses. I used to do stuff like, allocate 35 hours to Calculus and Algebra, 30 to CS, and 20 to my Bus—Econ—Acc. courses. 140 hours altogether. 140 sounds like a lot, but you can actually do it. You may want to allocate your time differently for different courses. But, I feel that this is a good guide. I usually have 2 or 3 "big study time" courses, and a couple of "small study time" courses. If you've slacked off all term and not done the assignments, you'll need to study longer.

Before I talk about how to spread your study time out over the exam period, I'll give you a rough guide for how much time you can be spending in study. This is the study guide that I

use, and have used since 1A when I made it up. It allows for 12 hours of study per day, with 5 hours of "break time" for meals and rests, and 7 hours of sleep (rows marked with an asterix indicate "study periods"):

7:00-8:00	Wake up	(1 hour: shower, eat, psych up, etc...)
8:00-9:30	Study	(1.5 hours) *
9:30-10:00	BREAK	(0.5 hours)
10:00-Noon	Study	(2 hours) *
Noon-12:30	BREAK	(0.5 hours)
12:30-2:30	Study	(2 hours) *
2:30-3:00	BREAK	(0.5 hours)
3:00-5:00	Study	(2 hours) *
5:00-6:00	DINNER & BREAK	(1 hour)
6:00-7:30	Study	(1.5 hours) *
7:30-8:00	BREAK	(0.5 hours)
8:00-9:30	Study	(1.5 hours) *
9:30-10:00	BREAK	(0.5 hours)
10:00-11:30	Study	(1.5 hours) *
11:30-12:00	BREAK	(0.5 hours)
12:00	Go to bed.	

(I use the 11:30 to 12:00AM time slot for personal reflection. You may want to use it for sleep. That gives you 7.5 hours of sleep instead of 7.)

So, you can see that this suggested schedule gives you at most 2 hours of study time at a stretch, an hour for breakfast, a half hour for lunch, and an hour for dinner. I have arranged the times to flow easily around meal times and the times of the day when I am most "out of it" (note the weaker Evening schedule - digesting your dinner takes more energy than other meals, usually, and I personally tend to be less concentrative at that time). You may want to re-arrange it to fit your own personal life schedule. I know some people like to study for 50 minutes and then take a 10 minute break, instead of doing big 1.5 or 2 hour stretches. Play around with it. But, you see just how much study time you can get out of the day, without more than the usual strain. It takes just over 11 days to make 140 hours.

### How to Arrange This Around Your Exam Schedule

The first thing to note is that you can still use this schedule on a day which you have one or two exams. I find that if I have an exam, I can wipe out 5 or 6 hours from the schedule. If I have two exams, I can wipe out 8 or 9. Going to the Bomber to get wasted or something after you write an exam isn't too bright, unless it's your last exam. Hold off on the partying until after you're done and can get properly hammered with no guilt. Now, the second thing to note is that you need to carefully arrange your days so that you get the allocated amount of study time in before each exam. Don't just blindly distribute 20% of every day to one course, 20% to another, etc. Depending on your schedule, you may want to put off studying for a given course until you've written other exams. Just make sure you've given yourself enough days to prepare for each course adequately. Keep

continued on page 7

continued from page 6

a tally of the hours that you've spent studying for each course. This will help you make sure you've spent enough time on each course, and will prevent you from making the idiotic mistake of over-studying. Plus, it's a good motivator to see the hours piling up. And get enough sleep the night before an exam. Try for that 7 hours. 8 if you can make it.

To actually study, what I usually do is this:

1. read my study notes over a bunch of times. A pass or two to get the overview. Another few to try to get ideas down.
2. do all of the old assignments over. Refer to the model solutions when checking your work.
3. now that you know what it is that you don't know, re-read your study notes and commit as much of the stuff to memory as possible. Flesh out your ideas and understanding. Memorize what you can't understand.
4. do old midterms/exams. These are a last check to see what you still don't know.
5. work on filling in the last few details that you still don't know (based on the results for step 4).
6. make a few more passes of the study notes before the exam. This time, try to predict what is in the next paragraph/page.

You may find that some other way works better for you.

Now, say you've followed an exam study schedule and find yourself still with not enough time to adequately prepare. You have to cram, basically. There are cramming techniques that are actually effective! Staying up all night is not one of them. If you have to cram for a final, try this ... Decide which topics are important and focus on them. Go for the pass, not the 70%. Focus on the BIG ideas, and skip over the minor details. You probably won't have enough time to commit to memory all of the stuff that you need to, so instead make constructive use of the 7 registers that are your short term memory. Make a little list of things you wish you could remember and bring it to the exam with you. Stand outside the exam door and keep reading it over to keep it in those 7 registers. Then, when they open the doors, throw the list away and quickly find the nearest seat. Close your eyes and repeat the list to yourself. As soon as you get any kind of paper (exam, scrap, your-name-here cards) write the list down on it. You can even write it on the desk. It's not cheating, because you didn't bring any aids across the door, except for your short term memory! This works. But, it's really only for cramming. Get some sleep the night before, too. 6.5 or 6 hours, if that's all you can get. A nice solid hit of caffeine a few hours before always helps increase alertness. They'll let you get up to go to the washroom, so don't worry about having to relieve yourself soon afterward. (If your proctor gives you a hassle, claim that it's a right to use the washroom. It probably is, but I don't know for sure. And they won't either.)

Reward yourself for diligently studying. Take an hour or two off after each exam, or let everyone know what a masochist you are by keeping your tally of study-hours on your residence door. (this motivated me pretty well in 1B!) If you want, treat yourself to some ice-cream! What's it going to matter in 100 years?

### The Most Important Item

Where to study. Get the heck away from other people. Socializing can kill you here. If you live in residence, your room is a good choice choice of location. If you live at home and don't share a room, then that's a good choice too. If you happen to share accommodations with someone else, try to find another place to study. I honestly don't know of any good places besides the libraries. There's a study-carrel room on the fourth floor of MC that might be open late, but I don't know for certain. In any case, do whatever you can to seclude yourself and to prepare a good study environment. To minimise distractions, I used to cover my windows with thick blankets so that outside sounds were muffled, and so I wasn't tempted by nice days. I study to music, but often switch to classical tunes for the exam period so I don't have stupid lyrics running through my head during the exam, distracting me. Do whatever you can to minimise distractions. Give your roommate your computer keyboard, your current book, tempting-but-annoying-during-exams music, whatever.

All of these sacrifices are only for two weeks or even less. (140 hours can be covered in about 11 days, should you decide to go with my informal "140" rule.) You can do it. Stand strong, lay your willpower into it. Pray to your deity of choice. (I find that YAHWEH works really well!) Your fatigued body will return to normal after a while, but a failure is relatively permanent (and expensive! \$300 expensive!).

I'm going to go out on a limb here ... If you think you're in trouble for an exam and honestly want some input on how you might want to go about studying, or how many hours you should devote to a given course, drop me a line at tshaynes@uwaterloo.ca. If I have any insight into your particular situation, I'll give you a suggestion. I make no promises about my ability to respond, though. Your mileage may vary.

Best of luck, folks. Don't let U(W) break you.

Timmy "Timbley 2n-Toes" Haynes

### prof QUOTES

"It's a dumb thing to do, but let's do it anyway; I do a lot of dumb things in my life."

Baker, AM 332

"I don't know what I was smoking at the time."

Baker, AM 332

"What on earth was I talking about?"

Cormack, CS 442

"... and it's not in the book so it might behoove you to wake up."

Cormack, CS 442

"You get all this input from biological sensors which were installed when you were born."

Cormack, CS 442

## Under the Light of the Street-Lamp

Fiction by S. Kamal

The flowing ocean of bodies streamed endlessly in different directions, heads bobbing up and down with the cadence of varying strides and parting to adroitly side-step oncoming obstacles. The roar of voices, screams of tires braking, and hoarse ululations of crying children all contributed to the massive tidal-wave of noise that hung in the air like a malevolent cloud, suffocating and smothering and all-encompassing. In the confusing tide of stampeding bodies, torrents of uptight businessmen and wealthy managers intermingled with surges of tired housewives and hungry, hollow-eyed beggars. A man was motionless among these swirling motes of humanity, seated alone beneath a lamp-post, staring dully at the ground before him.

Still and rigid, the man's shoulders were hunched as though to protect himself from an unseen foe. Nothing intruded upon his silent contemplation of the pavement beneath his feet: neither babies' demanding wails nor men's irate shouts. Finally, a scuffle nearby caused him to raise bleary eyes to the harsh light. A fight had broken out five meters away. A large, muscular man, having yanked a young girl from the interior of a photo booth, was beating up on the teenage boy who had been inside with her. The boy was crouched on the ground, trying to protect his head from the rain of blows. The girl, sobbing, tried to separate the two, but received a resounding slap on the face and vicious vituperation from the man for her pains. When he was finally satisfied that he had made his point, the man grabbed the young girl and dragged her off, shaking and castigating her all the way. The momentarily disrupted crowd of passers-by resumed their earlier seamless flow of motion, continuing on their journey, leaving the boy bleeding and unconscious on the ground.

Tiredly, the man under the lamp-post reached inside his shirt pocket and withdrew a pack of cigarettes. Pulling one out, he lit it and inhaled deeply, bowing his head as plumes of smoke spiraled upward.

The light of the setting sun coloured the city sky a hazy, dusty rose, softening the harshness of the hard metal and asphalt world. The choking, enveloping cloud of smog that hovered around the city blushed a pleasing, pretty pink, and seemed to open its dainty misty arms in welcome to all.

The throng of travelling people seemed more relaxed, more alive than their earlier counterparts. Their faces were animated, less tired, gay and happy to be on the way home. The man, immersed in his own thoughts, did not see this. Extinguishing his cigarette, he let it fall on the heap of butts on the ground, and buried his face in his hands. His slumped body straightened, however, stiffening as he heard gleeful cries and the laughter of young voices. He lifted an eye to the activity at the photo booth beside him. Two young girls were horsing around inside the kiosk, making silly faces at the camera. While they waited for the pictures to develop, they flirted outrageously with a hapless, enchanted boy nearby, sending him coy, fluttering glances. They giggled hysterically at their pictures once they arrived, bending their heads together to examine them closely. Finally, as it was growing dark, they turned in the direction of their homes.

The man, a faint smile playing about his lips, stood up and stretched, loosening his stiff joints and smoothing out his wrinkled clothing. Glancing at the already dark sky, he tapped a

final cigarette out of its ripped package and lighted it, leaning his torso against the lamp-post as he watched the few late stragglers on their way home. One woman seemed in a particular hurry; she was almost running down the sidewalk. Reaching the photo booth, she raised its curtain and stepped inside. After a moment, a man in a black leather jacket appeared, strolling down the pavement to the kiosk. Lifting the curtain, he, too, entered the photo booth.

The man in the black leather jacket later emerged from the photo booth whistling, and, catching sight of the other man, gave him a thumbs up sign and grin before he left. The man leaning against the lamp-post finished and extinguished his cigarette, dropping it into the pile of butts at his feet. Glancing at the booth, he noticed that the man had forgotten to pick up his photos. He crossed the empty street towards the booth. A stray newspaper was blown by a gust of wind across the road, making a strangely loud crackling noise as it dragged across the asphalt in the suddenly quiet night. He reached the booth and picked up the pictures that had slipped into the small slot, his eyes widening in shock as their images burned into his memory. Lifting the curtain of the photo booth with a trembling hand, he looked in and gasped.

The flowing ocean of bodies streamed endlessly in different directions, heads bobbing up and down with the cadence of varying strides and parting to adroitly side-step oncoming obstacles. The roar of voices, screams of tires braking, and hoarse ululations of crying children all contributed to the massive tidal-wave of noise that hung in the air like a malevolent cloud, suffocating and smothering and all-encompassing. In the confusing tide of stampeding bodies, torrents of uptight businessmen and wealthy managers intermingled with surges of tired housewives and hungry, hollow-eyed beggars. A haunted man was motionless among these swirling motes of humanity, seated alone beneath a lamp-post, staring dully at the ground before him.

### vapidFIRE

As you've probably guessed from our cover, the Royal Canadian Mounted Police have put an end to unauthorised, cheap-looking, offensive Mountie paraphernalia by making the Walt Disney company its licensor. Does this give new meaning to "Mickey Mouse outfit?"

The U.S. and Japan have just concluded a new auto trade agreement, and just in time, because now they're fighting over film. You'd think they were married...

Yet another sports strike, this time at basketball. Oh, well, at least we won't have any more dumb puns (the baseball players went on *strike* and *walked out*.) as the NBA players wrangle in court. (Long pause) Augh!

Finally, photo radar is gone. If you listen carefully, you'll hear the sound of happy motorists speeding along the 401.

Darren "Ren" Morby



## profQUOTES

"... a castrating ice-goddess ..."

Fleras, SOC 246

Prof (stopping suddenly): "Are you in my class?"

Student: "No."

Prof: "Are you a spy from the other class?"

Kannappan, MATH 136

(asked about the final exam) "Same time, same place, same fun atmosphere."

Fleras, SOC 246

"All the men in the choir are screaming at the top of their lungs, and our CD player cuts out on us. Life is not just."

Martin, MUSIC 100

"This reduces to the triangle inequality—if you have a sufficiently warped mind."

Baker, AM 332

"My lips are definitely exceeding my brain output today."

Cormack, CS 442

"... so not is not really not, and the reason not is not not ..."

Cormack, CS 442

"Remind me to wear a jock strap next time."

Farrell, STAT 231

"I think sobriety is really important ..."

Farrell, STAT 231

"It's like counting sheep. If I took 100 derivatives right now, you'd fall asleep."

Yen, MATH 138

## Some Life-Saving Theorems

As exams near, we should take time from doing everything-but-studying and consider some useful mathematics which may save us from the stressful times ahead. The following are several theorems that are not covered in any course, yet are of great use to any math student. Let us first consider the Axiom of Solvability (IMO):

**The Axiom of Solvability (IMO):** Every International Math Olympiad problem (i.e. any difficult math problem to which a solution is expected—"Calvin's Conjecture") has a solution.

Although this will probably be never used in its pure form by most students, this axiom lays down the fundamental theoretical groundwork for more useful results: the more general Theorem of Solvability.

**Theorem of Solvability:** Every problem on an assignment or exam is solvable.

**Proof:** If a problem has no solution, it is a stupid problem. Since the objective of all profs is to pose brutally hard, er...challenging, questions on exams and assignments, all such problems are difficult. Now the Axiom of Solvability (IMO) kicks in and the result follows.

For those unfortunate circumstances when you are required to prove something, there is a useful corollary:

**Corollary:** For all problems that require proofs, a proof exists.

Although it has been discussed in previous issues of *mathNEWS*, no round-up of theorems would be complete without mention of the Divine Intervention Theorem:

**The Divine Intervention Theorem:** If you cannot find a solution, then a miracle occurs and anything is correct.

**Proof:** How can you argue with gods?

The Theorem of Solvability and the Divine Intervention Theorem yield us the same result, however one must keep in mind several characteristics unique to the Theorem of Solvability: a) atheists should have no qualms about using it, b) solutions using it are more likely to be considered valid since rejecting it would imply the stupidity of the given problem.

Another useful result worth noting is a spin-off of one of our most beloved Theorems, the one which allows us to madly erase pages of notes while keeping up with lectures—the Change of Question Theorem and its Corollaries (a.k.a.: Change of Theorem Theorem, Change of Assignment Theorem). If there is any justice in the world, then of course we have: The Student's Change of Question Theorem.

**Student's Change of Question Theorem:** You are given a problem for which you have determined something which looks close to the correct solution. If your attempted solution:

- looks close enough to the result outlined in the problem so that with creative handwriting the markers will not be able to tell the two apart,
- is for an assignment which was written out by hand by the prof, or
- is for a problem in a CS course,

then the question may be considered... inaccurate and your solution can be considered correct provided a creative re-interpretation exists.

## Clue Corner

Game Day is almost here. We start at noon on July 22<sup>nd</sup>. The pre-clues will be about campus beginning today so keep your eyes open. FYI, we're treating the "Verbochronology" puzzle from the May 19<sup>th</sup> mathNEWS as a valid pre-clue (it's the only one appearing before today).

As a reminder, there is a brief captain's meeting tomorrow, July 15<sup>th</sup>, at noon on the Village Green. The starting location of the Game will be given out at the Captain's meeting. If you'd still like to sign up a team but haven't, then please join us there. Teams must be registered by this time if they want to participate (we need to know the working budget and need time to make up clues).

"Hue and Cry?" was a hard puzzle involving both specific knowledge and a couple of levels of hiding. For space reasons, I don't want to get into all of the details; they can be found off of our web page. Basically, when taken in groups of four, the colours become the banding found on resistors (here, a person with an electrical course is useful). After translating the colours to tolerances, the numbers (taken mod 26) yield the following message: "BEHIND HWY 8 MARKER SIGN 3 KM N OF CAMBRIDGE<sub>x</sub>".

Enjoy this week's puzzle. [Clues are on Page 2 — Ed.]

James Hodge

[http://ccnga.uwaterloo.ca/~jrhodge/The\\_Game/](http://ccnga.uwaterloo.ca/~jrhodge/The_Game/)

continued from page 9

Note: b) does not apply to C&O 437 (Cryptography), where deciphering the prof's handwriting could be the original problem as bad handwriting is by far the best form of cryptography ever devised.

Last but not least, a theorem which you may actually use:

**Generic Theorem Theorem:** Given that you have slept through several lectures, have determined a solution to a problem and cannot justify your result, then there exists a 'theorem proved in class' that justifies the result.

**Proof:** By the previous theorems we know that our solution is correct (either by the Theorem of Solvability or by applying the Student's Change of Question Theorem). Since the Theorem of Solvability can be used in these circumstances, we know that the problem is not a stupid problem and therefore there is a point to it. All assignment and exam problems are designed to use material from the course. Since you have probably shoveled b.s. or hand-waved your way so far through the problem, only by actually referring to some course material can you actually get the markers to have some pity on you and give you part marks. QED.

Michal "I need my calculator" Ostrowski

## profQUOTES

"Everybody laughed at it last time. I keep doing it, and eventually you stop laughing"

Shallit, CS 340

"Its almost as if they've been levitated by some unseen force ... I've been watching too much X-Files."

Shallit, CS 340

"I don't know how Canadians celebrate Canada Day; maybe they all do linear programming."

J. "Texan" Read, C&O 350

"Would anyone like me to review anything before the midterm?" (Prof receives several suggestions) "Well, why don't I just teach the entire section again? Would anyone like to know how to choose good multiple-choice answers?"

Lau, ECON 102

"Have I yelled loud enough to intimidate everybody into believing this?"

Baker, AM 332

"I'm trying to make it as simple as possible. Simple enough so I can understand it."

Baker, AM 332

"... and here you get 56. The last time I checked, 56 wasn't a good approximation of 12000."

LeBlanc, AM 351

VIDEO VENDOR, WAGNER'S ARMS, PIZZA HUT, LONG JOHN SILVER.

On Thursday, July 20<sup>th</sup>, 8 PM.

PRINCESS THEATRE

THE UNIVERSITY OF WATERLOO  
MATH SOCIETY PRESENTS

Casino  
Night

AT  
FED  
HALL

TICKETS: \$3 (\$2 IN ADVANCE) MATH STUDENTS  
\$4 (\$3 IN ADVANCE) ALL OTHERS

SPECIAL THANKS TO: EAST SIDE HARPS, A BIT BETTER COMPUTERS,

CONTACT MATHSoc @888-4779 FOR MORE DETAILS

## Luu's Second Theorem

### On the Disappearance of Socks

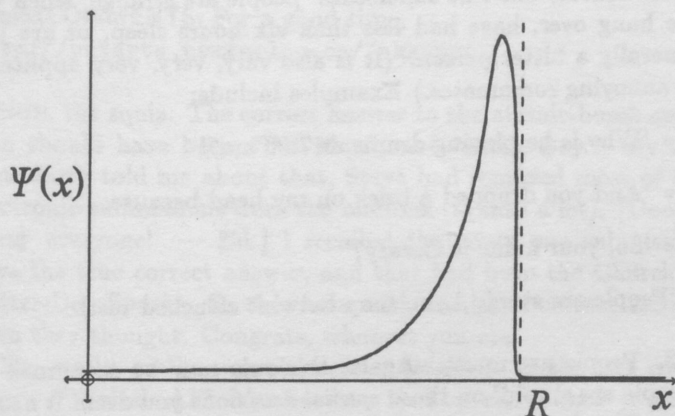
It's a well known fact that socks disappear in dryers. Until now there has been no suitable theory to explain the mechanism by which they disappear. Since the mass of the stuff left on the lint screen is not enough to account for the missing sock, one can only conclude that this disappearance is not a simple physical phenomenon.

It was proposed that a sock would be completely annihilated on collision with an antisock, i.e. a corresponding sock composed of antimatter. However, how the antisock actually got there could not be explained, and furthermore the energy released, according to Einstein's mass-energy equivalence relation, would destroy not only the dryer, but also everything else within a 10 Km radius.

Although it is possible for a sock to disappear from a spinning dryer through tunnelling (a quantum phenomenon in which a particle on one side of a barrier will reappear somewhere on the other side), the probability of this occurring are infinitesimally small and thus unlikely to account for these frequent disappearances.

It can be shown, however, that there is a fairly high probability that a supermassive object, in other words a black hole, will appear within a spinning dryer.

Below is the probability density plot for the position of a sock within a dryer. The x-axis represents the distance from the center of the dryer;  $R$  is the location of the dryer wall. Note that this is a one-dimensional model; two and three-dimensional models follow quite intuitively.



$\Psi(x)$  is the probability density function, where

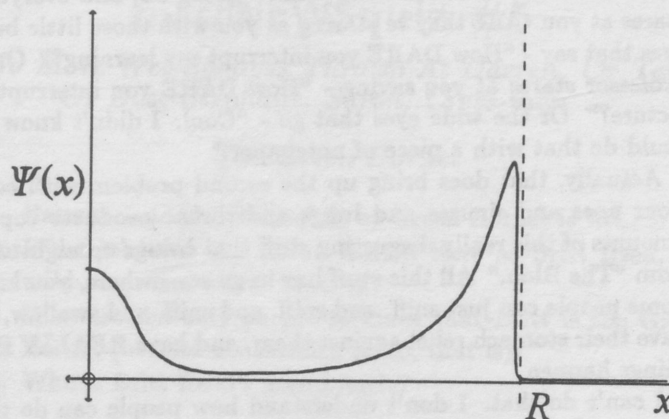
$$\int_{-\infty}^{\infty} \Psi(x) dx = 1$$

This means that one can always find the sock *somewhere*. By integrating the function between two points, one will obtain the probability of finding the sock between those two points at a given time. The above curve reflects the higher probability of finding the sock near the wall of a spinning dryer.

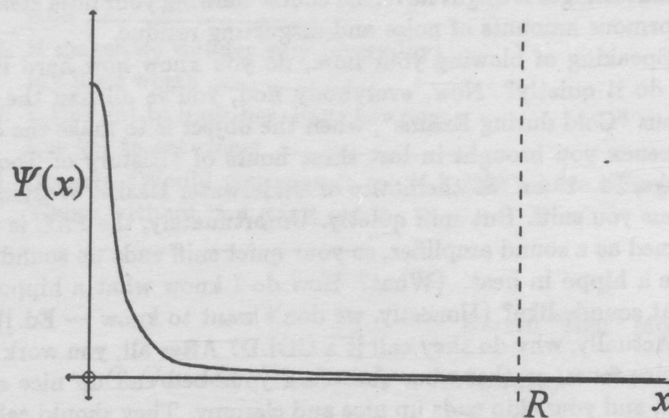
Now for a more massive object, say, a pair of pants, the probability density function is generally something like that shown in the next figure.

The more massive an object, the more likely it is to be found in the center of the dryer. This extends to objects *outside* the dryer. This means that such objects could for an instant appear

within the dryer. However, this is unlikely to occur with ordinary objects such as rocks, trucks, etc., since their masses and velocities (and consequent kinetic energy) are too low to make tunneling through all the intervening matter between them and the middle of the dryer likely.



However, for an extremely massive and dense object, moving at a high velocity with respect to the dryer (such as a black hole; the Sun, luckily, is not nearly dense enough), there is a fairly high chance of spontaneous appearance inside the dryer:



Such is the case with "primordial" black holes, which are small black holes created during the Big Bang or in supernovae. Their appearance within the dryer lasts only on the order of magnitude of a billionth of a nanosecond, just enough time to suck in a sock and promptly disappear again.

There remains one last question of why other things such as pants and shirts don't also disappear. In fact, they do, but less often because their greater size and mass make them less likely to fall into the black hole in the instant of time that it is present. Also, it is much easier to notice that a sock has disappeared, since socks come in pairs (most of us being biped creatures).

It *may* be possible to observe a sock "disappearing" but because of its microscopic size it may not be possible to actually localize the black hole. So, the next time you should lose a sock, remember: that sock is no longer in this universe, so *don't bother looking for it*.

Việt-Tâm "God plays dice, and steals my socks" Luu

## Grumpy Old Man Discusses the HOT

*I Hate Colds*

Why? Let me tell you why. It's a curse. You're in lectures, and the professor is talking, and you're blowing your nose so that you can get oxygen into your brain, so that you might have some chance of understanding what's going on, and everybody stares at you. And they're staring at you with those little beady eyes that say - "How DARE you interrupt my learning?" Or the professor stares at you saying - "How DARE you interrupt my lecture?" Or the wide eyes that go - "Cool. I didn't know you could do that with a piece of notepaper."

Actually, that does bring up the second problem with colds. Your nose and sinuses and lungs and throat produces copious amounts of this really disgusting stuff that brings up nightmares from "The Blob." All this stuff has to go somewhere, you know. Some people can just sniff, and sniff, and sniff, and swallow, and have their stomach rebel against them, and have REALLY BAD things happen.

I can't do that. I don't understand how people can do that. If it's collecting in my nose, containing all the dead viruses, and bacteria and who knows what else, I want it OUT of my system. Not IN. OUT. Thus I require large amounts of Kleenex and Toilet Paper. Toilet Paper has the advantage that it's cheaper than Kleenex, which since I'm a student, outweighs whatever disadvantages it might have. Of course blowing your nose creates enormous amounts of noise and disgusting residue.

Speaking of blowing your nose, do you know how hard it is to do it quietly? Now, everybody nod, you've all had the famous "Cold during Exams", when the object is to make the one Kleenex you brought in last three hours of "History of Toothpicks, Pt. 1" or "Mathematics of Underwater Basket Weaving." Thus you sniff. But sniff quietly. Unfortunately, the PAC is designed as a sound amplifier, so your quiet sniff ends up sounding like a hippo in heat. (What? How do I know what a hippo in heat sounds like? [Honestly, we don't want to know — Ed.]

Actually, why do they call it a COLD? After all, you work up a nice fever, so that your sheets on your bed end up nice and wet, and your skin ends up nice and clammy. They should call it a HOT. After all, a battle for the possession of your soul should be HOT, not COLD.

I leave you with this finally expression - think of all the Kleenex we would save if the Common HOT were vanquished? And if we didn't need as much Kleenex, we could cut down less trees, and save the paper! Thus, defeating the Common HOT should be a critical priority of the PC government. After all, considering some of the promises they made, I'm sure we can convince them of this fairy tale as well!

Jerry "I disclaim everything" Han

### profQUOTES

"If you're interested you can read it. I see a lot of heads shaking — why does that not surprise me?"

Read, C&O 350

## Post-Teen Angst: Part III - The Rules for Life

*An exhaustive (-ing?) guide to lead you through an otherwise inexplicable existence*

Yes, ladies and gents, your troubles are over! Three, count 'em, three simple rules that explain *everything* about human nature. Rely on these rules, and you can quickly and clearly figure out just why the hell people do the things they do.

1. People are strange. This rule covers all of those things that the Average Reader sits back, watches, and goes, '...Hey?????' These are not damaging actions: the person performing said action will not be permanently disfigured, nor will the person being acted upon be maimed in any way. No environmental cataclysms: it's merely something that means nothing to anyone. Examples of life's questions that this rule will answer for you:

- 'Why do beautiful young women date jerks?'
- 'Why did he get that skull piercing?'
- 'Why are all those people bouncing through the halls, going "Doink! baa... Doink! baa... Doink! baa..."?'

'People are strange,' is your response.

2. People are stupid. This somewhat harsher rule covers those things that are very possibly explicable, yet are mindbogglingly inane, or inexplicable things that just rub you the wrong way. Furthermore, this rule supersedes 'people are strange' when you are hung over, have had less than six hours sleep, or are just generally a bitter person. (It is also very, very, very applicable to annoying roommates.) Examples include:

- 'Why is he playing drums at 7:00 am?'
- 'And you dropped a brick on my head because...'
- 'So, your name is Cezary?'

'People are stupid,' you snap betwixt clenched teeth.

3. People are messy. Again, this rule may be consumed by 'people are stupid' on those *special* occasions you deem it necessary. The domain of this rule is not only voluntary actions, but also many biological actions as well. It covers those acts that aren't necessarily strange or stupid, but are just a bitch to clean up afterwards. Some examples:

- 'Why is the bathroom wall orange, and the ceiling black?'
- 'Uh, hon, why are you dripping?'
- 'Why can't I see the stove any more?'

'People are messy,' sez you with a grin.

So, there you have it, dear Reader. You can now boldly strike forth into the world and feel superior in your new, intimate knowledge of human nature.

Ian "son of God complex" Milligan

## grid- and squizCOMMENTS

*A Lotta Errata!*

Oh, I am such an EEDIOT! I can't believe that I messed up with both the squiz and the grid last issue. But I did, so I guess things have to be set straight.

First, the grid, which was designed and provided with cryptic clues by John Wetmiller, not Eric "Live From Indonesia" Sutherland as I had written. I also mistyped one of the clues. So, I apologize to John and those people who were confused by the blasted clue (17 across).

John's cryptic was correctly solved by Bob the Great and Powerful ("Glass? What glass?"); Clark Kent & Phil Collins ("After tuition, books, rent, food and everything else, our glasses our (sic) totally empty!"); C+D: Cheryl & Dan; Ian "The Word Guy" Facey ("Both halves are empty! I drank both of them!"); Grid Runner ("Neither: The glass is only half raytraced and the water model isn't working!!"); Pokey ("The glass is fluidly challenged"); Sox & Inkling; and Wino and Sober Guy. The cryptic gridprize will now go randomly to Sox & Inkling. Our thanks to the other contenders and near-perfect submitters Live from Mississauga...HAMMER! ("BURP Neither! Now it's empty!") and Sexy Sue Mroz for participating.

Arsenyk's conventional garnered these perfect submitters: The Anti-Tall-Skinny-Chicken-Boy Club; Pokey; RGBA and friends ("The glass is half full"); and Sox & Inkling. Also submitting were C+D Mark and Curtis. Thanks to everyone, but the prize will be the property of The Anti-Tall-Skinny-Chicken-Boy Club. Congratulations, S.K., your prize and Sox and Inkling's are in the MathSoc office.

gridCOMMENTS: For a good time,  
<http://watarts.uwaterloo.ca/~akkapur>.

Now, the squiz. The correct answer to the atomic-bomb question should have been "Fat Man", not "Little Boy." By the time Jerry told me about that, Steve had removed most of the electronic submissions from the mailbox (thanks a lot). [Oops. Sorry everyone! — Ed.] I recalled that only one submission gave the true correct answer, and that had been the Church of Latter-Day Sporks. So they won with one more correct answer than they thought. Congrats, whoever you are.

The really, really correct answers (really!) to the last squiz were: "Weird AI" Yankovic: 1) You can't send it back ("Eat It"); 2) I gotta take their word ("Fat"); 3) Yank out the knob ("U.H.F."); 4) It's the thrill of the bite ("The Rye or the Kaiser"). Canadian Comedy: 1) 1994 Swift Kick in the Year End; 2) On the 14th floor of Mountie headquarters; 3) Rick Green (not "Commander Rick"); 4) Super Dave Osborne. TV Game Shows: 1) True (as a substitute); 2) *The Next Line*; 3) *Twenty-One*; 4) *Sale of the Century*; 5) *The Price is Right*.

The cool submitters were: Pokey (4); Chewbacca (7); David Ludberg (8); Live from Mississauga...HAMMER! (9); The Church of Latter-Day Sporks (11); and Bob the Great and Powerful (11). Yet another random drawing (I hate doing this for the squiz, ya know) gives the prize to... The Church of Latter-Day Sporks again! We have a returning champion—returning to the MathSoc office for the squizprize.

Okay. Here before you are the grid and squiz #5, with, we hope, no further errors. The conventional clues come this week from sucker—errr—new gridmaster Drew Hamilton. I think I

did the cryptic, but you can never tell with me. Submit to either or both (Yeah, do both!) by Monday, July 24, 1995 at 6:30 PM. Good luck.

Darren "Grumpy Twenty-four-years-and-one-week-old Student" Morby

*mathNEWSquiz #5*

*No More Wet Sponges Thrown At Darren. Or Tam. Or Dax, Stephane, Sarah, Cress-man...*

*The Green Hornet*

1. Batman is to the Batmobile as Green Hornet is to \_\_\_\_ .
2. What job does the Green Hornet have as Britt Reed, his mild-mannered secret identity?
3. Who are the only people to know that Britt is the Green Hornet (besides his sidekick Kato, that is)?
4. Who is Britt Reed's grand-uncle?

Curtis "Chewbacca" Desjardins

*Phil Collins: The Next Line*

1. But "I love you" wasn't one of those things  
And \_\_\_\_ \_
2. It makes we wonder why (everyday)  
My life's worth \_\_\_\_ \_
3. I, I've got to have her, have her now  
I've got to get closer \_\_\_\_ \_
4. He says "Would you respect me if I didn't have this gun?  
'Cause without it, I don't get it,  
\_\_\_\_ \_"

Darren "Ren" Morby

*O Canada (Yeah, it's a little late)*

1. What was the name of the British proclamation that formed the Dominion of Canada?
2. What Nobel Prize did Lester B. Pearson win?
3. What's the largest fresh-water lake in the world?
4. What valuable resource was recently discovered in the North West Territories?
5. What year did Pierre Trudeau repatriate the Canadian Constitution?

*Gimme Another Quarter, Please...*

1. In "Donkey Kong", what happened when you grabbed a hammer?
2. What was the object of "Robotron:2084"?
3. In the game "Defender", what did the Smart Bomb do?
4. In the game "Asteroids", how many points was a Small UFO worth?
5. In the game "Gyruss", what was your eventual destination?



## Cryptic Grid Clues

### Across

1. Nicer? Pious? Out of order? Deadly! (10)
7. The starts of independent thought is thoroughly covered (7)
8. Go you forth, said he, and this is past the third (6)
9. Why did you swap the tray, dear? (6)
10. Found in the rig rotated, Gert set it off (7)
12. Blab re: a star. Keep me informed (7)
15. Listen, at least I will date Minnie, Mum (7)
17. Let him in, Stan! Take a moment (7)
20. The card game will pique Tom's interest (6)
21. Ned approached and inserted his ear (6)
22. Mikey is number one! (7)
23. 'K, Pa! Bill, he tee off here, 'cause he can. (10)

### Down

1. Will Poe dye a tree to study feet? (8)
2. In that direction is Saturn. Confused? It's what we are (7)
3. Did you conclude he was inferior. Not I or anyone (5)
4. This twig was without direction in spring (5)
5. On this track? Shins hurt! Can't concentrate! (12)
6. There, Mom, eat hers! It's hot (12)
11. The confused French think this metal is *noir* (4)
13. Paul can; Kael find the musician (4)
14. One imp unit. You sure we won't be reprimanded? (8)
16. By missing a letter, the Imperial Fleet got us in danger (7)
18. A crisp arc holds a microprocessor (5)
19. Miss Comaneci and I? A mix-up, surely (5)

## Conventional Grid Clues

### Across

1. In this poem, he came "riding up to the old inn door" (10)
7. Argument (7)
8. Lender of money (6)
9. An opening through which fluid enters an enclosure (6)
10. Having to do with a mid-eastern country (7)
12. eg. Intestines, liver, spleen (7)
15. An advance showing or performance (7)
17. Theft, usually by means of violence (7)
20. Adultery (6)
21. The ability do do something well (6)
22. Handel's most celebrated work (7)
23. The practice of encoding messages (10)

### Down

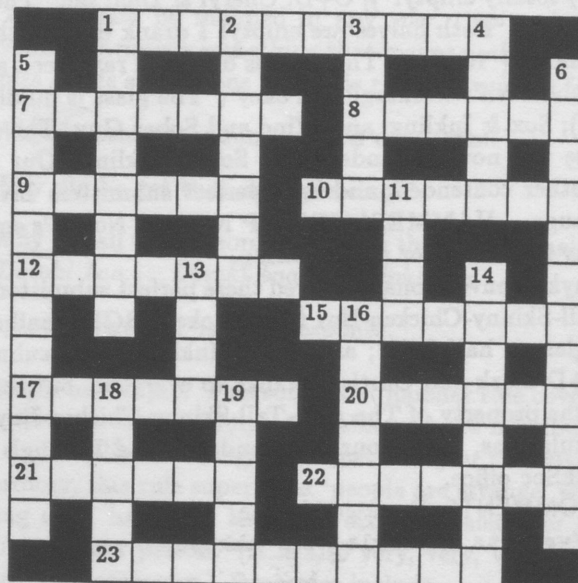
1. Unsure, waiting (8)
2. A fiery, impetuous person (7)
3. Property of the second person (5)
4. Scandanavian language (5)
5. To manage or supervise (12)
6. Well done, worthy of special attention (12)

11. Italian city (4)
13. Finnish or Old Norse poem (4)
14. Summons to appear in court (8)
16. A substance used for its chemical properties (7)
18. French Disney heroine (5)
19. The part of a motor which revolves (5)

Your name: \_\_\_\_\_

Your gridCOMMENTS: \_\_\_\_\_

What'll we do now?: \_\_\_\_\_



## Grid 4 Solutions

