

## lookAHEAD

| mathNEWS |  |
| :--- | :--- |
| July 22 | Issue \#6 production night <br> 6:00pm, mathNEWS office (MC 3041) <br> The final issue of the term makes <br> its appearance on the stands |
| July 26 |  |
| MGC |  |
| July 19 | Deadline for yearbook blurbs! |
| Miscellaneous |  |
| July 12 | Mala begins "hit-list" of people <br> who should have contributed to the <br> FFosh '96 Issue and didn't <br> Muala completes list and creates master <br> plan for execution <br> Mala decides that a criminal record is not <br> a good thing and halts plans |

## Actsci Happenings!

## Greetings From the Land of Actsci!

Here we are, a bunch of happy students. Midterms are behind us and the weather is finally more like summer.
So what will you crazy kids do with all this free time? Come to a talk, or a barbeque, or pick up a copy of our newsletter "The WAVE".
If you missed Mo Chambers last week (or Neville Henderson this week) you have one last chance to redeem yourself - you slacking talk-goer you. Next week (Prof.) Mike Bennett will be speaking to us about the history of the Actsci program here at U(W).

On Friday, July $19^{\text {th }}$ Chantal and I are hosting a barbeque to celebrate exam results (due out today) and to close up the term before finals start. All are welcome and please sign up on the club door (MC3030) to let us know you are planning to come.

Prof. (Mike) Bennett is retiring (from teaching) at the end of this term and we thought it would be nice to take him out to lunch on Monday July $22^{n d}$. . . maybe this will help our final marks...See the club door for more details.
That's all for now folks and good luck with your exam results.
Publicity Director
Shawna Stephens

## WatPub Coordinators Wanted !!

SAC is still looking for people to coordinate the London and Calgary WatPubs. If you want to know more about this, are interested in doing this, or want to know about the WatPubs in Toronto and Ottawa, contact Amy Green via: e-mail akgreen@undergrad.math.uwaterloo.ca, or message in the Soc office (MC 3038) for the office/resource manager.

Amy Green<br>SAC WatPub person

## At SAC, We ACT!

So, now that you've accepted the fact that you didn't get a job in first rounds, there are a few things that not all students know, that should be noted about the continuous phase.

The biggest difference between first rounds and the continuous phase is the quick turnover for job matehes. This means that you have to know whether or not you want to be considered for the job, right after your interview. If not, then you need to get the job signed off. Unlike first rounds where you get two "freebies" to sign off with no questions asked, continuous phase requires that you justify your reasons during a 'short' interview with a placement advisor. Ultimately, if the form is not signed off by Co-op, then you will still be considered for the job match.
Another thing to remember is that relying entirely on AC CESS is not a good idea. Checking the postings in person is your best bet, especially when it comes to last minute interviews. Also, remember to report to Co-op reception and make sure you get noticed if the receptionist(s) happens to be away from the desk. Finally, don't forget the last date to hand in twenty resumes and the green Skills and Interests Form is July $26^{\text {th }}$. After that date, if you still don't have a job and you don't hand in the form and resumes, you will be considered on your own and Co-op will no longer assist you in finding a job.

Stay on your toes and watch out for yourself. Make sure you have all the bases covered when it comes to job sign offs and postings. Stay focused and good luck!

Comments or questions can be posted to uw.coop.sac or sent to sac@undergrad.math. uwaterloo.ca. Don't forget our next meeting is on Tuesday, July $16^{\text {th }}$ at $5: 30$ p.m. in NH 1029.

## A Kinder, Gentler PMAC ${ }^{\text {Amanda Woo }}$

With interviews and midterms pretty much finished, the last two weeks have been relatively quiet. The PMC has just been running smoothly, without too much excitement, so there isn't a whole lot to report.
The PMC soccer team is in the playoffs now, and we may even have played our first game by the time this issue is out. We finished off the season with a 2-1 win on a couple of goals by yours truly, to end with a respectable 2-2-1 record.
Well, that's it from the PMC for now. See ya later.

## Warren "The Milkman" Hagey aka PMC Pélé

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Mala "Crakko" Krishnan :rotidE sdrawkcaB ehT

## MathSoc Office Manager Finally Speaks

Well, the end is in sight and I have decided to procrastinate about doing my Stats lab and inform the world about the office.
Final exam packages will be available once again, starting somewhere around the $17^{\text {th }}$ or $18^{\text {th }}$. (Check the office for postings on this.)
Also starting next week, the schedule will go up for exam period office hours. Please sign up for an hour or two because if you aren't there, probably no one is and therefore no one can use the Soc facilities. If you've never done it before, that's OK, it only takes 15 minutes to learn.
Finally, both our PCs are now back up and running. Unfortunately at this point, if you want to use them, you will have to sign up ahead of time so that someone can be there to let you in.

Questions? Mail me at akgreen@undergrad.math or leave a message for me in the office.

Amy Green Office Manager

## The Oracle Speaks

. constantly, in a loud grating voice that makes you want to shove a dictionary in his face and say "See! 'Chrysanthemum' IS spelled with a ' $y$ '!"

Young an007 from anon.penet.fi asks: Where do all those half empty milk cartons and pop cans that litter the comfy lounge, tops of lockers and computer labs come from?
The Oracle responds: Unbeknownst to the majority of those frequenting the campus, the categories of Waterloo's denizens are more than just students, Faculty and Staff. There are fourteen other classifications, sub-classes and special interest groups who have their lifestyles affected by the University. In this case, the visible minority in question is the Computer Science Gnomes.
Rarely seen during daylight hours, the CSG often hide in dark reclusive areas of the University, primarily near computer labs. During the early morning hours, they can sometimes be spotted curled up on benches or couches.

The diet of the average CSG consists predominantly of foodlike substances that are incredibly sweet, or that are bright orange. To that end, they have adapted over the eons and they have thrived on nectar, maple syrup and tree bark. Thus they existed in the wild for millenia, until the discovery of the first vending machine back in the early fourteenth century in North America. Granted, the vending machine was a very primitive beast, but the CSG considered it a godsend. Shortly thereafter, all traces of the CSG in Europe and Asia disappeared as an entire culture emigrated to the new world.

By the late seventeenth century, the CSG had domesticated the vending machine to the point that the two species had formed an almost symbiotic relationship. By the 1960 's, there was no turning back.

In the 70 's, the energy crisis had all but wiped the CSG out. So when they learned of the brand new structure in Waterloo, where vending machines were being bred in captivity, a small group of the CSG moved in, and managed to survive ever since.

Oracle

## mastHEAD

Well, we're getting closer and closer to the end! Only one more issue after this to go!! (insert uncontrollable tears)
Anyway, I spent the weekend at a wedding. I spent most of Monday afternoon travelling to Waterloo. It's shortly after the beginning of Production night and I'm tired!

I have nothing more exciting to say, so here are the kind few who've given up their Monday night to help me. Along with their favourite method of solving a proof: Greg Taylor (Sailor Mercury Says [i.e. divine intervention]), Mike Hammond (Given < formula_or_statement > it is immediately clear that $<$ formula_or_statement_to_prove $>$ ), Christopher Calzonetti (Proof of proof by induction: Since the first proof we ever learned was true, assume that proof $n$ is true. Since proof $n-1$ was true, then this proof is true. Therefore, proof by proof by induction is true.), Chadwick Severn (Prof says there is a surprise test next week. It can't be Friday, because if it came to Friday, we'd know it would be that day and it wouldn't be a surprise. It can't be Thursday, because we'd know about it if it came to that day, since it can't be on Friday. Similarly, it can't be on Monday, Tuesday or Wednesday. Therefore, there is no surprise test.), Carolyn MacLeod (Proof by confusion: If the TA can't understand my proof, it's right), Andrew Archibald (It follows that ...) and Will Chartrand (use Theorem 3.1).

Thanks goes to Domino's Pizza for fillng our empty stomachs and to Marion at Graphic Services for printing all 600 issues and to the kind people at Waterloo Hydro for providing some heat in this office ... as little as it is!

Mala "Crakko" Krishnan (Proof by Obvious)


# Beating the Summer Heat 

How entropy can work for you

With the summer term in full swing, most of you are worried about one thing, and one thing only; how do they get that soft creamy caramel inside the Caramilk bar? Without proper speculation, there is little evidence that mathNEWS can use to rival such world class publications such as the Weekly World News. However we can offer you tips on methods of proper environmental control. This week, we present you with procedures that will keep you cool and comfortable.

One of the most basic principles of thermodynamics is that of entropy. The tendency of the universe and, by extension, systems to a state of increased disorder. It is well known that the level of disorder in the universe cannot be decreased, and order can only be imposed on a system locally, while the surrounding disorder is increased. Thus, at best the net change in order of the universe is zero. The long term effect of entropy is what is commonly called "heat death," where the energy of the universe is spread out evenly, allowing no more transfer of heat or energy. Surprisingly, this seemingly harmful entropy can be used in a beneficial manner in the following ways:

Promoting universal heat death: Given that $99 \%$ of the energy of the universe is focused in matter comprising $1 \%$ of the universe's volume, (and in addition, given that $99 \%$ of all matter is empty space,) the average temperature of the universe is extremely close to absolute zero, $-273^{\circ} \mathrm{C}$. Therefore, increasing the universe's disorder as much as possible, by means of non-reversible processes, such as combustion, inelastic deformation, magnetic hysteresis, letting cats out of bags, opening cans of worms, buying gifts without receipts, and so forth, will lower the temperature of the universe sufficiently to allow the rest of the summer to be comfortably cool. In fact, disorder in general will help achieve this goal. Therefore cleaning up your room is a no-no. Air turbulence is a good way to increase disorder. I suggest turning on a fan.
There are several drawbacks to this method, most notably, in order to prevent the universe from becoming uncomfortably cool, all actions and or processes in the future must be reversible. At our present level of technology, this is not possible. Also, things would get pretty damned cold during the winter.
Local heat death: Since universal heat death is not possible, local heat death seems like a logical alternative. This is in fact surprisingly easy to accomplish. All you need is a completely isothermal expandable container. Enter the container and seal it completely, thus fixing the amount of energy it contains, then expand the container until the average temperature suits your needs.
In fact, this is the ideal environment to carry out several physical experiments. If you can equip the inner walls of the container with frictionless surfaces, you can set up the physicist's dream lab. If you are feeling bolder, you can bring into the container a radioactive element, then postulate whether you are alive or dead (or both) after a certain time period.

Raising the room temperature: As in all reactions, there must be an equal and opposite reaction. Therefore raising the temperature of a room must be matched by an equal decrease in energy elsewhere. If you can ensure that everything in the room is increasing their energy levels, (I find that a flamethrower is good insurance, ) that energy must come from you, cooling you off in the process.

Raising your own temperature: On the other side of the coin, if you can warm yourself up, (again, I recommend a flamethrower as very effective,) the energy needed to raise your body temperature will be taken from the room, thus allowing the room to cool, making the environment nice and comfortable.
It should be noted that the above two procedures are local only, and you may wish to help your roommates out by lending them the flamethrower. Be warned, however, that letting the flamethrower travel between rooms is on par to an external heat transfer, and will thus lead to unpredictable results.

With these four tips you should be able to keep yourself cool and in control for the rest of the summer. Next week, I hope to talk about the quantum mechanics of swimming pools and how water acts as both particles and waves.

## Chris "LittleBoy" Calzonetti

## Top 10 Signs that You Are About to Get Fired

10. Your coworkers start to circle around your equipment, suspiciously eyeing your top-of-the-line hi-res monitor.
11. The promotion you've always wanted goes instead to Jacques "Lazy Boy" Dunbar, the current beer-swilling and anchovymunching champ.
12. The conversation turns to "Hey, how about dem Blue Jays?" whenever you enter a room.
13. You see a continuous stream of well-dressed folks in interview suits nervously entering your boss's office. You shudder when you hear your boss scream, "Geez, if I'm going to take a loser like you, I may as well keep the one I already have!!"
14. When the company email was switched to another server, somehow you were never notified.
15. The maintenance people "forget" to water the plants around your office.
16. Your love interest seems awfully confident when you tell her "No, I cannot get into a relationship as long as I am working here."
17. No one replaces that flickering fluorescent light above your desk.
18. Your dog will no longer play fetch with you.
19. You see friends testing out their cars in your parking space, then hurriedly driving away when they see you coming.

## Can I See Your Grad Photos?

Yes, if you had your grad photos taken at Fed Hall with Jostens last month, then you should have received your proofs in the mail. Many of you are probably wondering how you would go about getting them redone. But before we get to that, there is something more urgent...

## Canada's Wonderland? NOW?!?

If you haven't bought your tickets yet, and you happen to be around campus early enough ( $8: 30$ ) to read this, then you still have a chance to run down to the MC loading docks and hop on a bus (if there are still tickets available). So run now and have a blast! Besides, if you don't go, then you'll be stuck in class while the rest of us are out having a great time!

## Think of something deep and meaningful, quick!

How will other people remember you when you're finally gone? By reading your grad blurb in the yearbook, of course! You may remember being handed a form when you went to take your photos and you may remember tossing it aside as it was not an immediate concern. Well, it is now an immediate concern! Due to the overwhelming response, we have extended the deadline for your blurbs...
The deadline for grad blurb submissions is Friday, July $19^{\text {th }}$.
In the past, there have been complaints of spelling mistakes and typos, so this year, we are accepting submissions via email. Just type up your blurb (maximum 360 characters in length) with your name, student ID, and email, and send it to mgc@undergrad.math.
The text will be printed the way you intended (formatting will probably change to fit the text to the space available, but your words will remain the same). Paper submissions are also accepted, but there will be no guarantee of perfect spelling and typing.

## While you're at it, why not embarrass your friends?

Do you have a picture of your roommate walking through the screen door? Or your best friend suffering from the aftermath of last night's party? Or do you have endearing photographs that you want preserved forever? We want to see them! And so do your friends, which is why we'll print them in the yearbook for all to see!
In fact, any poetry and artwork will also be considered. Just come by and drop them off at the MGC office (MC 3029) or leave them in our mailbox in the MathSoc office (MC 3038).
Warning: Last year, someone made a claim that the photos would be returned without being cut or trimmed for layout. Unfortunately, this turned out to be false, so we will not be making the same claim this year, although we will try our best to not make too many cuts and return the photos as intact as possible.
But when you stop to think about it, isn't it worth that one photo to have that moment immortalized? The more submissions we get, the more input we have in the yearbook so the final result is not a book about how the other stream spent their time here.

## Your grad photos can't be as bad as mine!

So you don't like your grad photos? Jostens will be back on campus for retakes in January (or October if you happen to be here in the fall). If you bring and return the proofs that you've received, then you will not be charged for the second sitting. That is quite some time away, so if you would like to get your grad photos done before that time, then you can call Jostens (if you need the number, see us) and arrange to visit their studio.

Please note that only grad photos taken before December 1996 can be used in the yearbook and class composites.

That's all for now. See you on the bus!
André Chang \& Debra Richardson (your MGC '97 chairbeings)

## Now Playing

## Independence Day (ID4)

If you managed to get to some nice Canada Day fireworks then you've already had about the same experience as you'd get from watching Independence Day - a lot of glitz, but not much substance. Touted as the year's biggest movie, it has outstanding special effects, but falls short in almost every other area. When aliens start attacking Earth, the planet must rest its hopes on the shoulders of the president (a dismal performance by Bill Pullman), a 'techie' (Jeff Goldblum), and a fighter pilot (Will Smith). The combat scenes are reminiscent of Star Wars, but the miserable script prevents this one from being anything more than a light show. Sure to be a big hit in the States, Independence Day is only worth watching if you want to see Hollywood's latest in explosions.
$\star \star$
Warren "The Movie Milkman" Hagey

## Call for Yearbook Submissions

Are you graduating in 1997? Do you have any photographs of your friends that are particularly embarrassing or memorable? Have you produced excellent artwork, prose, or poetry that would inspire others to achieve greatness (or maybe just looks kinda nice)?

We want it! We want to take it and preserve it for all history! How, you ask? By printing it in the 1997 yearbook, of course! (Please note the warning about photographs in the MGC column elsewhere in this issue.)

Drop your submissions off at the MGC office (MC 3029) or leave it with a note in our mailbox in the MathSoc office (MC 3038).

Don't let the yearbook become a collection of memories for the other stream! Contribute now!

That's all for now. See you on the bus! [...to Canada's Wonderland, in case you missed the other MGC article]
André Chang \& Debra Richardson (your MGC '97 chairbeings)

## Women In Math

Mary Fairfax Somerville

Mary Fairfax Somerville was one of Britain's most remarkable women scientists. She began her life as a typical girl in Scottish high society, yet she had mathematical interests and talents that distinguished her. Despite her lack of formal training she managed to produce some great mathematical and physical works right until her death at age 98.

She was born to Lt. George Fairfax and Margaret Fairfax in 1780 in Scotland. Her childhood was spent exploring the seaside of her hometown of Burntisland. Her early education consisted of domestic chores and reading of the Bible. By adolescence, this extended to an unpleasant stay at a girls' boarding school where she learned basic reading and writing. This was enough to pique her intellectual interests and so at the age of thirteen she taught herself enough Latin to read Caesar's Commentaries. An algebra problem in a women's fashion magazine introduced her to mathematics. She was curious what the symbols meant. Since it was improper for a lady to ask for a mathematical book in a bookshop, she had to secretly ask her brother's tutor to buy her a copy of Euclid's Elements.

In 1804 she married one of her cousins, Captain Samuel Greig. He frowned upon intellectual women, but did not stop her studies. She had two sons with him before he died in 1807.
The inheritance she gained allowed her to seriously pursue mathematical endeavors. She began to investigate physical astronomy and Newton's Principia. This was much to the dismay of her family, particularly the female members. They were very concerned that she might end up crazy if she continued to engage in mathematical study.
In 1811 she earned a silver medal from a popular mathematical journal, The Mathematical Repository, for her solution to a prize problem. She consulted the editor for a proper course of mathematical study.
The next year she married another cousin, Dr. William Somerville, who was far more encouraging of her studies. He was in the army medical department and in 1815 was stationed in London. Mary accompanied him and was then able to attend lectures at the Royal Institution.

Her scientific reputation grew and she soon found herself in a circle with John F. W. Herschel, Charles Babbage, William Whewell, and George Peacock. She became known for her exceptional expository talent.

One of her early papers was "The Magnetic Properties of The Violet Rays of the Solar Spectrum". It was based on experiments on magnetism she had conducted in her garden from 1825.

In 1927 Lord Brouham, on behalf of the Society for the Diffusion of Useful Knowledge asked her to write two volumes: one on Laplace's Celeste Mechanique, and another on Newton's Principia. this project led to The Mechanism of the Heavens, which she finished in 1831. At Cambridge the book became a required text for higher mathematics students.
In 1848 she published her most successful treatise, Physical Geography. Her final scientific work was completed when she was eighty-eight years old. Molecular and Microscopic Science was an exposition on molecular constitution of matter and the microscopic structure of plants.

These projects helped firmly establish her in intellectual circles. She was elected (1835) to the Royal Astronomical Soci-
ety, and was granted honorary memberships to the Société de Physique et d'Histoire Naturelle de Genève (1834), The Royal Irish Academy (1834), and the Bristol Philosophical and Literary Society (1835). She became the instructor and life long friend to Ada Byron. After her husband's health weakened they moved to Italy, where she continued to be offered various honorary memberships. In 1870 the Royal Geographic society presented her with its Victoria Gold Medal. Sir Edward Barry named a small island in the arctic after her, a women's college in Oxford was so named as well.

Mary Somerville was a great supporter of women's education, women's emancipation and the anti-vivisection movement. John Stuart Mill requested that she be the first to sign his petition for women's suffrage.

Mary Somerville worked hard to bring mathematics to not only to her life but to make it accessible for the general public. She said once that her aim was to make her country woman more aware of the laws by which the physical world is governed. She also helped bring some of the French mathematics which was considered more advanced, to Britain.
Her spirit was lively and resilient. Despite many odds and the influence of her upbringing, she became a widely respected scientist. She remained active until her life came to an end. We are lucky that she did not take the advice of her sister-in-law and "give up her foolish manner of life and make a respectable and useful wife."

Marni Mishna

## References

1. L.S. Crinstein, P.J. Campbell eds., Women of Mathematics: A Bibliographic Sourcebook, Greenwood Press, 1987
2. Osen, L.M. Women in Mathematics, MIT Press, 1974

## Only 3 BBQs Left!

Come and get 'em!

## Very Important Proofs

Proof that the MATH 136/235 textbook sucks

- The MATH $136 / 235$ textbook has few examples to make a point.
- You point to something with an arrow.
- Aero bars are made of nothing.
- If you have nothing you have a vacuum.
- Vacuums suck.

Therefore, the MATH 136/235 textbook sucks.

# Tips from the Pseudo-Expert for a Better Summer 

Part II: Camping

So far, your friendly pseudo-expert has shown you how to create a great barbecue while attracting various insects (most noticeably, the mosquito). However, there are other endeavours that Mathies pursue in the summer. One of these is the ritual known as camping. (Most Mathies, though, may only do so on the weekend. Yes, let's hear it for the regular stream, where you may take one course in the summer term!) It is best, therefore, to first arm yourself with these tips for a good camping experience. Here now, is a list of these tips:

1. Always check the weather.
"This is sort of a recurring theme, isn't it?" you may ask yourself as you read this article. Well, yes, it is a recurring theme, but it is quite important (unless, that is, you do enjoy getting soaked). The ideal weather should be sunny or partly cloudy, 20 to 25 degrees Celsius (or 68 to 76 degrees Fahrenheit for any Americans that may visit this majestic province of ours), with a wind that does not exceed 35 kilometers per hour. Having this weather will mean that there will be a high probability that you will not encounter rain. Before the day of the trip, always contact Environment Canada for detailed analysis of the weather, then expect something different.

## 2. Choose where you want to go.

Remember, when camping, you cannot just go camping anywhere you feel like! It takes a great degree of planning (and price comparisons) to determine where you want to go. Of course, there are many fine campgrounds that are run by such organizations as the Grand River Conservation Authority, Parks and Recreation Canada, et cetera. Of course, I prefer the campgrounds of the G.R.C.A. over the provincial and federal parks for two reasons: there are picnic areas available and the wildest wildlife that you might encounter on the campgrounds are the raccoons that sift through the garbage.
Also, it is advisable to check how much gasoline is (if you are driving to your destination) or if the campground has bike locks (if you are biking).
3. Always bring the proper equipment for you and your guests. After cursing a great deal about how much the G.R.C.A or the park authorities are charging you to enter their pristine grounds and muttering about what they can do with their money, you will probably want to get everything prepared an excellent opportunity to use what you were taught in the Scouts when you were somewhat younger and a lot shorter, if it wasn't too long ago. It is fairly obvious even to an Arts student that you should have access to a tent that will accommodate all your guests. If the trip will have people of the two different genders that are not married, then it is quite advisable to get two tents. Also needed are canteens of water (since the authorities strictly forbid alcohol and last time I camped, I found out what Montezuma's Revenge is) to avoid dehydration and ease heat exhaustion and/or
sunstroke, your standard first aid kit, any food you may wish to bring that these park authorities allow, a Swiss Army $k_{n i f e}{ }^{T M}$, matches (if you wish to start a campfire and the authorities allow it), sleeping bags (unless you really like sleeping on the cold, hard ground) and a knapsack.
4. Always check the conditions of the campground.

Before you actually place set camp, you may want to check the conditions of the area you will be spending your time in. You should generally check the humidity and the condition of the grass if you want a campfire. If the humidity index is high, the grass looks like straw and/or the temperature is above 30 degrees Celsius (or 86 degrees Fahrenheit), having a campfire would be an idea that would rank right up there with waving an American flag in the streets of Tehran. (Do I need to tell you how bad of an idea that really is?) Also check the wind velocity. If the wind is under 10 kilometers per hour, then you may have a campfire. As for foliage, make sure that you have someone that can identify plants with you (unless you can identify the plants or you are a Biology student). If you identify most of the plants as members of the family that begins with the word "Poison" (as in poison oak, poison ivy or poison sumac), two options are available: pass or bring a truck full of calamine lotion. If a lot of the plants are edible, you might want to camp here (it will definitely save you money). Finally, you may want to check out the wildlife that may be encountered. This is important for one reason: you and/or your guests might not enjoy being one on one with a bear.
5. Plan what you and/or your guests will do when they get there.
After finally reaching the campground, you might not know what do to. Well, I have a few suggestions. If it is daylight, you may want to go hiking (there are many trails that are available from the G.R.C.A. and the parks that have campgrounds) or go biking. Just remember that if you are going biking or hiking, always bring a map and a compass (this point cannot be emphasized enough times). If it is night, then you may gather around the campfire (if you are allowed one, see step 4 for details) or with a flashlight or lantern; just talk and leave your worries and anxieties at the university. Either way, you and/or your guests should enjoy nature as it was meant to be enjoyed.

Well, this is about it for the tips about camping I can bring you. Of course, it is always good to consult additional books and guides and the rangers. But these tips should be heeded to have a good camping experience. If they are, all you really need to worry about are the mosquitoes and looking redder than a lobster at a seafood restaurant.

John "The Outdoorsman" Swan

## prof QUOTES

"I urge you to try to forget what you learned in high school."
Willard, MATH 136
"Remember, it's OK for us to talk about integration in Linear Algebra, because calculus is a subset of Linear Algebra."

Dickey, MATH 235
"Do you have something to do after this class, or do you just sit down and drink coffee? Heck, I could keep going for another hour!"

Hoffman, MATH 146
"In the remaining 6 or 7 minutes, let me show you the useful page in your text."

Mavaddat, CS 351
"In theory... or should I say, in practice ..."
Mavaddat, CS 351
(After a particularly messy calculation on the board): "This is, you know, almost an overkill."

Mavaddat, CS 351
Student: "Are we allowed to use vulgar language in our letters?"
Prof: "What the f*** do I care?"
Viminitz, PHIL 215


## Sneak Peek II

V1's Multi-Million Dollar Caf

Last term, the University's executive council approved a Food Services plan to invest over $\$ 3$ million in renovations and reengineering, all part of Mark Murdoch's goal to make his department "the best campus food services in the world." (I'm not making this part up; see the January 12 daily bulletin.) The V1 caf will be closed all next summer while a new eatery is built.

In this mathNEWS exclusive, we look inside Food Services' plans for their new Village One flagship cafeteria.

Of course, every cafeteria needs a name. It's thought that "Brubaker's" was chosen as the name of the marketplace in the new Student Life Centre to remind you of the "brewed" coffee and "baked" foods that it offered. Given the Village One cafeteria's focus on fizzy drinks and greasy fried foods, the new eatery is expected to be called "Fizzgrease." And following the innovative approach of the edible soup bowls at Brubaker's, Fizzgrease will offer edible utensils. At the very least, forks and spoons will be made out of deep-fried potato skins. Unfortunately, the creation of an edible knife has hit a snag in the prototype stage.

Unfazed by the relative failure of "Make Your Own Change" night, Food Services continues to look for new themes for interactive dining experiences. The recent "Cook Your Own Steak" night was a dry run for several events to be held in the new cafeteria, including "Wash Your Own Plate" night, "Bring Your Own Grease" night, and "Catch It In Laurel Creek and We'll Cook It Free" night. Frequent dinnertime activities will include napkin origami and straw tower construction. Better still, Fizzgrease will offer fully working grills built into every table-that way, diners can deal with food that comes out of the servery just a bit undercooked. There will also be themed seating areas, including tables next to a pond and a fountain built entirely of Jell-o. Patrons can also amuse themselves by watching television on a big screen TV, and work off dinner by fighting other residents for the only remote control.

Those fights can be broken up by the bigwigs of Food Services, since their offices are to move from their current location next to the UW Police detachment (in the General Services Complex) to new space in V1. Of course, this means that key food services personnel will no longer have the round-the-clock protection of the security office, but the threat to their personal safety is thought to be minimal. Plus, it's a good incentive for them to keep the quality of the food high.

Matt "If you're this big, they call you mr" Labarge


## mathNEWSquiz \#5

## Submit Now or Forever Hold Your Peace!

Hi everyone, I have to apologize for a couple errors in the song lyrics from last issue...I'll leave them for now, and only say that Greg and I must think of other things while typing. The answers are Song Lyrics 1 - Beautiful Life/Ace of Bass 2 Stay/Shakespear's Sister 3 - Enid/Barenaked Ladies 4 - Rise Again/Rankin Family 5 - God Shuffled His Feet/Crash Test Dummies 6 - Stairway to Heaven/Led Zeppelin 7-November Rain/Guns \& Roses Chess 1 - Rook/King 2 - Bobby Fischer 3 - Deep Thought 4 - Kasparov (How come everything we ask ends up elsewhere in mathNEWS? :)
Well, it seems that entries are not coming in a great flow right now, and the only entry seems to be from "Live from Missisauga...HAMMER" with all the answers (and some scolding about the typos). He wins by default. The prize of a Right Angle Café voucher can be picked up at MathSoc.
Now, this issue we're doing something a bit different, the Squiz is multiple choice and slightly self-referential. The prize this week is a coupon for a free pizza and and C\&D coupon; we've got a bit more impressive prize for the winner(s). All references to previous issues of mathNEWS refer to the current term.

## The Self-Referential mathNEWS quiz

1. How many words were there in question one of squiz 1 ? A) 5 B) 7 C) 30 D) 40 E) None of these
2. What is the next question with answer "A" ?
A) 15 B). 4 C) 6 D) 7 E) None of these
3. What is the first letter of the alphabet?
A) B B) C C) D D) E E) None of these
4. How many clues were there to the first gridWORD? A) 121 B) 61 C) 72 D) 50 E) None of these
5. How many unique MATH 136 profs were quoted in Iss. \#2? A) 1 B) 3 C) 10 D) 9 E) None of these
6. What is the answer to question 2?
A) C B) B C) D D) E E) None of these
7. How many prof QUOTES in Iss. \#1 were not by Willard? A) 2 B) 1 C) 5 D) 0 E) None of these
8. What was the last mathNEWS \# to have a bridge article? A) 1 B) 4 C) 3 D) 2 E) None of these
9. How many questions in this squiz have answer " $B$ " ? A) 0 B) 4 C) 1 D) 5 E) None of these
10. How many " $m$ "s are there in the winning acronym for the second gridWORD?
A) 3 B) 0
C) 5 D) 2 E
E) None of these
11. What is the price of a VeggieBurger and pop at our BBQ? A) 1.75 B) 2.00 C) 1.50 D) 1.25 E) None of these
12. How many times does the word "mathNEWS" appear in the current masthead?
A) 5 B) 1 C) 0 D) 4 E) None of these
13. What question with answer " $D$ " has the lowest number? A) 1 B) 10 C) 2 D) 14 E ) None of these
14. How many questions ago was the last answer "C"? A) 1 B) 2 C) 0 D) 4 E) None of these
15. How many questions have the answer "none of these"? A) $>10$ B) 1 C) 7 D) 4 E) None of these

Good luck and submit the answers to the BLACK BOX outside the Comfy Lounge, or e-mail to chmacleo@undergrad.math or to gbtaylor@undergrad.math by 3 pm on Monday July $22^{\text {nd }}$.

Carolyn \& Greg

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## gridCOMMENTS

The theme for last issue's gridWORD was astronomical terms and Greek letters. With GEOCENTRICMODEL, ANDROMEDA GALAXY, ZETA, and DELTA all converging on one block of the grid, I needed a word that started with O and ended in L and a word that started with E and ended with X. After many attempts, the puzzle ended up with words that solved the clues "Dorothy?" (OZGAL), and "Possible phrase if Spielberg's 1982 film was remade today: "___ home" (ETFAX).
I received five submissions, four of which were correct. The Mystery Acronym was GLFL, even though I could have gone with MIEE as the the MA. I thought that MIEE was more clueable, since it's entirely possible that someone might scream "MIEEEEEEE!!!!" if they fell off a cliff.

The winner for last issue's gridWORD is Colin Schwartz with his acronym of "Grenades Leave Future Lakes". Correct submissions were also received by Greg Morey (Great Leaping Frogs from Lima), "Shaolin Tiger and WuTang Sword" (Goto Lyric For Laughs), and Allen Pengelly (Guelph: Launchpad For Losers). "Order of the Flying Daggers" also submitted an entry with "God Loves Flaming Leprechauns".

The issue's gridWORD is a little challenging (hopefully), with many punny clues and short forms. You can submit your entry by using the BLACK BOX or my Email account at csevern@undergrad.math. Entries must be received by July 22, 1996 at 3pm, and be sure to include your Mystery Acronym.


## Grid Clues

## Across

1. Video game system (2 words)
2. Gorilla
3. Moved fast
4. Verbal pauses
5. Contract that doesn't allow you to talk
6. Computer's main chip
7. Type of plants or snakes
8. Type of atom
9. Potato dishes
10. ST:TNG Q episode
11. Computer workers
12. Archaic variant of "since"
13. Jolly
14. Before U-Haul...?
15. Computer lettering code similar to ASCII
16. Fishing and tennis requirement
17. "Message of the day" (Short form)
18. Video game system (3 words)
19. Continent
20. Mistake
21. You plant this
22. Middle East country
23. Eight-some
24. Los Alamos National Laboratory (Short form)
25. The one with Sonya and Rayden (Short form)
26. Condition of deteriorated mentality
27. Half of a pair of socks? ( 2 words)
28. Famous judge
29. Video game system
30. A type of candy stik?
31. Plural "mine"
32. Anger
33. Internet suffix for American universities
34. "All for $\qquad$ ."
35. Video game system (2 words)

## Down

1. Last bone of the spine
2. Put up a resistance
3. Castrate
4. Warner Bros. character
5. Computers that are hooked up together (Short form)
6. Common word
7. Video game system (2 words)
8. Warm place
9. Anything of value that you own
10. Computer command
11. American smell?
12. Can you think of a good clue for "Nany"?
13. That
14. Angry
15. Irish plants
16. Marked on a page
17. "How did it play in $\qquad$ ?"
18. Video game company (Short form)
19. The Undiscovered Country (Short form)
20. 1996 Summer movie
21. Grab
22. Project (Short form)
23. Nothing
24. Apprentice
25. Ruminant stomach part
26. Mystery Acronym!
27. Movie: " $\qquad$ Man"
28. New William Shatner fan?
29. Geena Davis movie
30. Canadian singer
31. Small ornamental case
32. Deep Space Nine character
33. Scottish "one"
34. Segment (Short form)
35. Drug store
