CSC Flash!

Last Thursday, John Sutherland of Control Data Corporation presented a talk at the last CSC meeting of the term. Using slides, he discussed vector arithmetic in general and the vector methods the CDC Cyber 205 computer uses in particular. When one imagines a vector computer, one often thinks of a large number of processors operating in parallel, eating large vectors in single bites. But when one tries to imagine how memory locations should be accessed to provide all the processing units with their operands <u>at the same time</u>, one realizes the problems with this approach. So, the Cyber 205 arranges to us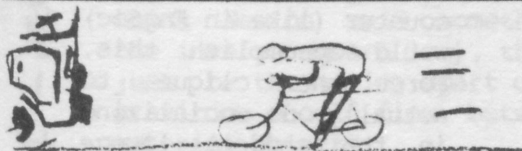e its formidable memory bandwidth to feed four arithmetic pipeleines, each capable of producing one floating point result every twenty nanoseconds. The net result is an ability to perform 800 million floating point operations per second while in vector mode, faster than any other commercially available computer.

Some interesting tidbits surfaced during the meeting: currently, the biggest customers for such large scale computing power are the oil companies, which run simulations of oil fields. If the simulations point out just one well that proves fruitful, they will have paid for the computer. Also, CDC developed a new LSI technology to implement the 205. That technology, which Fairchild uses to produce chips for CDC, is now being used by Carnegie-Mellon University to develop very fast microprocessors. Finally, one should note that the Cyber 205 is designed and manufactured in CDC's Mississauga plant.

So ends another term of CSC meetings. We're working on getting speakers from farther afield for coming terms, but there's nothing definite arranged yet. (If anyone knows of a pipe organ within thirty miles of the university, <u>please</u> let us know. It may help us get a speaker.) In closing, Callum (our absent mascot) wishes you Merry Exams, Merry Christmas|Hannukah, Happy New Year, and a Challenging work term.

peter rowley

Friday, November 28, 1980
Volume 24, Number 11

EULOGY FOR PH$_O$OTON

Friends,we are gathered together today to say farewell to our dear friend Ph$_o$oton. She passed on this fateful eve,the last issue of Math-NEWS (for 1980).[A] sad and tragic end of a young,fruitful machine who was destined to give many more years of selfless and obediant service. An untimely demise,defiled by an engineer(yuk),yet even now,the powers that be (MFCF) are working feverishly to reincarnate Ph$_o$oton.So,at least we can hope for next term.

D.J.

MATHSOC KILLING ITSELF

Well, well. It seems it's time for another round in the ``What-does-MathSoc-do-for-us?''/``What-do-you-do-for-MathSoc?'' fight. As a former participant in this argument and an ex-MathSocist, I thought I'd put in my two bits.

In my first summer term on campus, I finally plucked up enough courage to enter the always busy, always noisy, MathSoc to ask if they needed any help at pubs. Within five minutes I was made the social director! Since then I have held executive posts in all my terms on campus – until this one. I'm just too fed up with the society to continue.

It has always been apparent that MathSoc has not been doing what it should. There are only a few MathSoc functions that actually satisfy the Math student population: the C&D stand, mathNEWS (some terms have been exceptions), and the availability of stapler/hole punch, etc. People feel this is not enough.

During my time as a MathSocist, I became more and more disgusted with the organization I had joined. Out of curiosity, I asked fellow classmates how they felt – they too were disappointed and agreed to help on a clean-up of MathSoc (two of these became councillors and one went on to be social director this past summer). We drew up ideas (including the idea of a counter in MathSoc) and brought them to council. A **straw** vote was held on

the proposals and the results were unanimous in favour.

So why hasn't MathSoc improved any? None of those councillors or executive members was actually willing to put time into a reconstruction of the society. And this, I think, is why:

(1) MathSoc is a clique; ``joining'' MathSoc as a councillor or an executive does not mean you are willing to do the job, it means you have an excuse to join the clique – very few actually help the society.

(2) the MathSoc office is a built in lounge for the clique; now many times have you walked into MathSoc and seen people <u>working</u>? (<u>I guess you've never walked in on a Tuesday night</u>, <u>uh</u>, <u>Sarah</u>? -co-ed)

(3) the average Math student has come to expect nothing of MathSoc and so asks nothing of it.

(4) MathSoc gets no response from the students and so continues to act in its usual manner.

The remedy to these ills must unfortunately come from MathSoc itself. They, as the student government, must fight inertia and try to raise some spirit for Math. We are the largest faculty on the campus! Some suggestions:

(1) get rid of the clunker constitution once and for all. Tailor the size of council so that the jobs are more demanding. Most councillors do very little work, there is no need for them.

(2) Clear out the office! Who wants to go in to an office that could very well have a ``For Clique Members Only'' sign on the door. A non-MathSocist has to walk into an office filled with 10 to 20 MathSocists talking and sitting on desk, chairs, sofas, tables, and terminals, stands in the midst of this confusion until someone notices a non-clique member and finally says ``may I help you?''. The best way to clean this up would be to make the room less lounge-like, more business-like – a counter (like in EngSoc) would accomplish this. Force the clique to actually do socializing in the student lounge (and maybe get to know real students)!

(3) Find out what events the students would like and when (Thursday is usually the day before the due date of a lot of assignments). Advertise well – hire some artistic-minded student to do the graphics for each event poster at about $10 per event. And have the posters up early.

(4) Pull out the natural <u>log</u> <u>and</u> the pink tie (the <u>log</u> isn't our official symbol yet) every now and then – publish a

So Much for Anti-Gravity

One thing that would be nice to have is anti-gravity in commercial quantities. Billions of dollars would be a reasonable price to pay for a device that would allow you to accelerate at 1 G away from the earth instead of toward it. Not only would this give a normal gravity on a spaceship (although ``upside-down''), but it would allow a ship to get close to the speed of light without experiencing any more stress than a blade of grass. Unfortunately no-one has invented an anti-gravity device. Or has someone?

Einstein spent the last years of his life searching for a unified field theory. For the last half-century physicists have been looking for a mathematical proof for an intuitive feeling: that anything can be converted to anything else. Matter has been observed turning into energy, heat into light, light into electricity; there is no reason to suppose that any raw energy cannot be made useful. The problem is, no one equation could even take care of all those possibilities. But it is not quite as hard as all that: every normal phenomenon can be explained by only four types of energy: strong and weak nuclear force, electromagnetic radiation, and gravity.

But what is gravity? It is supposed to be the effect of a whole bunch of gravitons flying around, but the easiest way to think of gravitation is as being the moving together, the gravitation as it were, of two objects. If this is gravity, and I think Newton said something like that (involving the inverse square law), then anti-gravity should just be the moving apart of two objects, and anti-gravitons should flow between any two diverging material objects.

Take the example of flipping a page of this rag (Quality Literary Marvel! -jsg). Let's see - first, the nuclear energy in some hydrogen becomes light energy, which then bounces around for a hundred years or more before reaching some plant, here it becomes chemical energy. The plant is then eaten by zero or more animals before the energy gets to the muscle cells necessary for the action and becoming mechanical energy. What is mechanical energy? Kinetic energy. What is kinetic energy? Uh... It seems logical to me that kinetic energy is gravity - anti-gravity. When you are flipping the page with your hand, your hand ``gravitates'' to the left, to the right, to the earth, to you, and ``anti-gravitates'' away from you and away from the earth. In fact, I can't think of any physical phenomena involving motion that cannot be explained by either an increased gravitation or an increased anti-gravitation between a set of objects. (When you throw a ball, a whole bunch of muscles gravitate together and contract, and then anti-gravity is felt between your arm and your body, and the ball moves away.)

NOW'S YOUR CHANCE

Working Next Term?

Will you miss mathNEWS?

If you answered YES to both, either or neither of the above questions and you want us to send mathNEWS to you while you are away next term, then just fill in this form and bring a couple of dollars (to cover postage) to MathSoc right now.

Name ....
Address ....
City ....Prov. ..
Costal Pode ....
I want mathNEWS for Winter 1980 mailed to me.

_____

signature

C&D POSITIONS OPEN

The positions of manager and assistant manager for the winter and spring terms. Applications are being accepted by Drew Post, c/o MathSoc, MC 3038 or C+D, MC 3039. The final date for applications is December 8, 1980.

MONOlogue — with Brad Templeton

In the past two weeks, two replies have appeared to my column on abortion. I had originally planned to let barking dogs lie, but I have been begged to make a reply by a friend.

With Ray Butterworth, I have very little quarrel. His points were mostly valid, and though we differ in opinion on the danger of my viewpoint, there is nothing wrong with that. Mr. Bonnici, on the other hand, wrote an article attempting to claim that most pro-lifers (himself included) do not base their stand on religious grounds. Mr. Bonnici appears to be referring to organized religion, which is in fact only a small part of religion itself.

Although anti-abortionists (no, I'm still not talking about that ``sculpture'') may not necessarily be against abortion because the Pope says so, they still appear to work mainly from the concept that human life is sacred. This is essentially a religious viewpoint, for it argues that there is something intangibly special about a human being. Since one can not argue conclusively about the intangible, I will leave this point as it is, simply noting that I don't agree. There have been several cases of human societies which have not considered human life as sacred, as well as ones that consider all life to be sacred. This appears to indicate that this issue is far from absolute.

Mr. Bonnici does try to use some absolute references to back up his stand against abortion. I would like to make some quick comments on these. First, he states that ``No one in our system of justice has ever before had the right to kill another human being without being answerable to law.'' Unless Mr. Bonnici is using some funny meaning of ``answerable'', this statement is preposterous. Surely he has heard of war, capital punishment and self defence! He later claims that one can not bring up the issue of war because we are ``not at war with our unborn children.'' He clearly did not understand my point.

He then tries to point out that abortion is illegal. Naturally, as a law-abiding citizen of this society, I believe that laws should be obeyed in general. Unfortunately, I fail to see the relevance of this to the argument on whether abortion <u>should</u> be legal. Mr. Bonnici further goes on to state that children have been known to move and learn by signal techniques. To this I point out that cows are also capable of this, yet McDonalds claims it has sold several billion hamburgers. (legally, no less)

His article concludes that we should follow the example of lower animals who have ``some set of values respecting their kind, and would protect their young at all cost.'' This policy is certainly question- able (the praying mantis bites the head of her mate during sex (``We who are superior in intelligence should certainly do as much''?)) and since many mammals do not allow the runts in a litter to live, it appears to go against Mr. Bonnici's case.

Well, I think that makes enough beating of the abortion issue into the ground with a dead stick, so on to other topics.

At the beginning of the term, my Monologue dealt with the problem of remaining an individual in a world full of conformist pressures. One particular brand of pressure comes from advertising. As time has gone by, it appears that most of the content of television has reduced in intellectual level. The worst problems come from advertising, since one always has the choice of which programs one wishes to watch, including none. Bad advertising, however, interrupts all programs, except the CBC news and PBS shows.

The difficulty with bad advertising is that the public is actually encouraging it by patronizing advertisers who somehow managed to get their names thrust on your screen. Most people see an ad that is insulting to their intelligence, and simply shrug it off as ``just another ad''. If this is all we do, advertisers will never get the impression that they are putting out the

...continued from page 4

wrong kinds of ads. (And they are interested in putting out the best ads they can.)

The solution to this is to deliberately refuse to patronize companies that put out annoying ads. If somebody suggests you ``disco down and buy brand x'' when you loathe disco, tell them so by not purchasing their product or going into the store and telling the manager he/she has lost a customer by putting on that ad.

The time may come when everybody may be able to pay for their TV by pushing a button on their Telidon box to skip over a commercial, but we can't do that now, so perhaps the method above can be used to tell advertisers what we think of their commercials.

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history of them and other little Mathie trivia. And - why not walk through their classes for a change.

As I say, these changes must be initiated by MathSoc. At that point I think you'll find more interest sparked on the average Mathie. As soon as MathSoc accepts the challenge, they will be surprised at the support and help they get. It's time MathSoc generated our respect instead of our scorn.

Sarah Metcalfe
4A Math

DIVULGED SECRETS

Through the cold, cold halls of the high Math Building, the winds are keening, and a sense of uncertainty hangs in the chilling atmosphere.
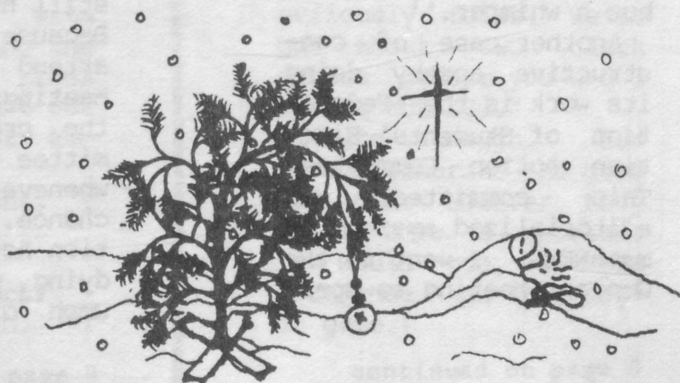
Out of the night, and out of the dark a monster is taking form: a form sprung from the worst fears of the past. It is a form of danger, a form of terror. Long has Math gone without, and now, The Log allowing, it shall go without no longer. You who are out there, you do not see the danger approaching! Snuffling at your spine, bleating in your roses. Math students are safe. Or as safe as is possible. To be safe is to be of it. The terror will not feed on the souls of its own, but will ruthlessly pursue any of the unacceptable.

There. We have named Them: The Unacceptable. They are out there and they are not of Math. Nay not of Math, but of: Engineering! Good honest Math ears waver and fail with the pronouncement of this word but fear not - it shall not be repeated.

In the cracks of society, in the wainscoting of a cruel and bleak existence, a secret **deleted** is being assembled. It shall be a **deleted** dedicated to the Embarrassment of the (gasp) Unacceptable.

Now the shadows lengthen and small children huddle closer to their mother's breast, seeking a warm haven. Around the campfire young campers draw their blankets snug about prickly necks, and cast glances at the dark, surrounding trees. You! Lean closer and hear what I have to say. You look like a dedicated Math student. Do you have what it takes? (This is a rhetorical question: all Math students have what it takes.) Can you handle the strain? The **deleted** needs you. Needs you badly. Would you like to participate in their activities? Think of the fun. Think of the Unprintable Unacceptables. If you have caught on by now and are interested, go talk to someone in the MathSoc office: they may (?) be able to direct you to where it's all happening. If you do not understand, what are you doing in Math? I will probably be shot for divulging this highly sensitive material. But: don't say I didn't warn you. Don't say you didn't have the chance!

In Defence of Apathy

So Andrew Welch has decided to make some points by taking a shot at apathy. Yawn!! Everyone always seems to be knocking apathy. It's rather like beating up on little old ladies, because you know that no one who is truly apathetic will fight back. I think it's time we stopped blaming apathy for all of our problems and recognized that apathy has its good points.

Apathy is the last defense of the individual against bureaucracy. At the head of every organization are those who believe that world peace, the brotherhood of man and Heaven on Earth would all be achieved if their organization grew bigger. There are two ways an individual can try to fight such megalomaniacs: join the group and promote reason (good luck!) or ignore them and hope they will go away. The second approach seems to be working against the Chevron. Issue by issue, the Chevron is fading away - look at the size of recent issues! Through the constructive use of apathy, the students of UW are ending the Chevron, ``not with a bang, but a whimper.''

Another case of constructive apathy doing its work is the Federation of Students' Election Action Committee. This committee was editorialized against in mathNEWS. I went to the General Meeting to speak against it. I may not have been particularly eloquent, but even if I had possessed the quiet dignity of Mohandas Gandhi, the hypnotic appeal of Adolf Hitler, and the confidence-when-fighting-for-a-lost-cause of the Committee to Support the Fee Hike Strike, the motion would still have passed. Why? Because the keeners who attend such General Meetings will support the creation of a committee (any committee) whenever they get a chance. Yet, the Election Action Committee is dying, not due to a triumph of reason, or a great speech or editorial, but due to that old scapegoat - apathy. It seems that no one cares enough to come to any of its meetings.

Everywhere I turn, I hear people condemning apathy. ``Down With Apathy'', they shout as they plan their Election Action Committees, Great Proletarian Cultural Revolutions and Seven Cent Nickels. I say, ``up apathy.'' When reason fails, apathy is our only defense against campus empire builders.

Steve Hutton
Engineering

Gravity is thought of as being passive, but someone had to put it there. When a block slides down a ramp, nobody has to do anything to it to make it continue, but somebody had to have actively expended energy to get it up there. That person increased the gravitic potential energy between the block by lifting it; and the lifting was accomplished by expending anti-gravitic energy transmitted to the earth through the feet. Conversely, if you want a ball to move away from you, all you have to do is gravitate your muscles, and the energy will become anti-gravity between your arm and the ball.

It all seems just a matter of Point of View as to whether anti-gravity exists or not. You could replace the acceleration term in a ballistics program with an anti-gravity term, but it makes no difference; they both mean the same thing. But one thing is for sure: the picture I painted of the anti-gravitic spaceship is impractical; both anti-gravity and gravity fall off too fast from their origin, and both are too weak. Both forces radiate from a point, and therefore a lot of energy is wasted in directions where there is little or no matter to pull toward or push away from. What you want is a last type (anti-)gravity beam so little or no energy is lost through fruitless radiation. Also, both forces are weaker than any other primary force of the universe, and thus do not hold much energy.

No neato spaceships. Oh well, that's the price you pay for some order in the world.

Sean Richardson

Sorry, but my mind is burned out tonight.

YOUNG FRANK EINSTEIN

Hail comrades! Maybe even a little sleet. It's winter again, not unusual considering that we had a fairly groovy summer this year, with no sweatbox hot spells or alien attacks. Not many mathNEWS either... The perfect summer, right? Now it's time to gear up for another season of slush and gunk.

Everything about winter is messy and unpredictable. A weatherman I once talked to said that snow squalls are even harder to predict (read `guess at') than are rain storms. Moreover, the frequency and insistence of snowfall seems to fluctuate wildly. A histogram (if you care to construct it) showing the frequency of various amounts of snowfall over the years illustrates a curve which is more a lump curve than a bell curve. Agreed, there aren't many sample points, and so the statistical credibility of such a histogram is dubitable, but don't our winters always <u>seem</u> to be extreme (in one direction or the other)? Last year's was a picnic, with the ground barely covered all winter. In 1970/71 there was a tremendous snowfall over much of Eastern Canada, with up to 200 inches in some places; more fell in Northern New York, as always.

So where does all the snow go, and where does it all come from? It seems reasonable that the amount of water suspended in the earth's atmosphere be considered roughly constant, given the standard established patterns of temperature cycles, sea currents, and winds. The wind is the least predictable of these, and sometimes it is observed that a funny wind pattern persists for the duration of a stretch of unusual weather. Even the percentage of time that the sky is obscured by cloud is not as variable as the total amount of snowfall in a year.

One might argue that big storms can influence the figure. Last year we had none to speak of. Most of what people here call `big storms' are actually small in effect on the total snowfall figure compared to the daily flurries.

I would really like to know if anybody has any ideas, chemical or geographical or probabilistic, about the zany variations in the yearly snowfalls in these parts. Mail to mathnews on the 'bun or drop your load in the grey mathNEWS box in the main 3rd floor corridor.

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About the problem I posed two columns ago, with the Devil and I passing the time of day (and the day of the week). We were comparing the times shown on our respective watches. If you didn't see the problem, here's a reprint of the salient excerpt:

Frank: Right now, it's just before midnight, I think.

Devil: Tuesday?

Frank: No, it says Sunday. How about yours?

Devil: Tuesday, it is. Check yours again. I know it works.

The Adventures of Captain Zilog

(part II)

Faster than the Cyber 205!
More powerful than a lods bit!
Able to leap long disk queues in a single seek!

Lookup()! in the RAM! It's a parity error! It's a write only memory! NO! It's Captain Zilog!

[We continue our story as our heroes, Captain Zilog and his faithful sidekick Robust, we about to be zeroed by the nasty operating system of the computer they were imprisoned in.]

"Holy Auto-Decrementation Captain Zilog! It looks like our arch-enemy, Serge de Power, will finally triumph over us defenders of structure and nice code..." pouted Robust.

"Don't be such a pessimist, Robust. Remember that remedial assembly language course you took?" asked the Captain. "What instruction fixes interrupts?"

"BAS? No, that's a fish. DEC? No, that's a computer. Oh! I remember. CLI! CLear Interrupt..." he swooned.

"Took you long enough, " said the big Z. "One of these days I'm gonna speed up your clock to 4 megahertz."

"Gee...thanks. But seriously folks, we've got about two clock cycles before you and I become NULLs..."

[Sure enough, our heroes generate the good old CLI. However they still have a problem. You would too, if you were knee high to a logic gate.]

ross has troubles...

LOOKING BACK ON EIGHT LONG YEARS

You might say Eight JJLong Years, considering J.J.'s been around about that long, and in association with mathNEWS. What was really meant there was to say that this issue marks the end of eight complete years (24 volumes) of the official Mathematics Newsletter. Over that time, it has progressed from a coffee-stained rag with originality and no substance through stages of elegance and arrogance, feast and famine, and (probably) now back to where it started.

At the very start, editors Steve Treadwell and John Peebles admitted that student response to the fledgling newsletter represented little more than the trappings of novelty. One reader was quoted as saying, ``I don't think that mathNEWS is a worthwhile project but I like it anyway.'' This sums up the ambient (ambivalent?) attitude towards mathNEWS over the years, but it can't come close to describing the self-important wonder of the idea of a student info-rag. There's so much silliness and so many possible ways to describe, regroup and regurgitate that silliness that hard news becomes a real drag. Despite that, mathNEWS has continued to present (with appropriate humour) the news of the day and of the week to cum.

Still, a quick glance at the Friday afternoon scene outside the Math lounge is an odd sight. Seeming hundreds of disaffected faces clog their eyespace with this thing, emitting the occasional giggle or gurgle of delight, but never really appreciating the depth of experience it tries (and, of course, fails) to reflect. A better way is to collect mathNEWS over a period of time, shelve them somewhere away from young children, then reverently paw through them again some snowy day in August when you've nothing better to do than study for midterms. That's when you will realize, we hope, how complex and wacky mathNEWS can be. If you really like this idea, you can head over to the Arts Library and ask to see all their back issues. (If you're on work term in Ottawa, you might find 'em in the National Archives! ISSN 0705-0410. That's class!)

Seems like mathNEWS never really gets a huge following, in the manner of other and sundry campus sheets, and never pulls in more than twenty or so regular contributors. Don't you think that twenty out of several thousand minds is poor representation? Damn right it is. In January we hope to see more people out to help, as usual, but we expect no miracles. In the meantime we continue our daily course, writing articles, lazing about, forgetting all those Great Ideas we had for the masthead, faking journalism in every possible way. All to lead up to Tuesday night, a magical time when mathNEWS

"Well Robust. Another fine mess we haven't gotten out of." sighed Captain Zilog. "How are we going to get back to full size?"

"You're supposed to be the Super-dude! You think of something!" Robust snapped.

"Well..."

"That's a deep thought!"

"Yeah, really...I know! I'll just use our Zilog Z47-474-33D versatile portable alternate program register decrementer and expansion interface module!" he happily warbled.

[And with a tweek of his nose up the bus lines he rose...]

"Ahhh...It sure is good to be full size again, eh Cap'n?"

"Verily. Let's crash this nasty computer before de Power comes back."

Footsteps. Weird, haunting laughter. Then:

"Ha ha ha. Escaped from my little silicon menagerie? I have another little trap up my sleeve..."

"On no! Not again! Please don't hurt us!" begged Robust.

"Really Robust! Shame on you!" despaired Captain Zilog. "Alright de Power! We're tough (terrific)! We can take it! Do your worst!"

[What happened? To find out, tune in next term...]

Pre-froshe

OVERLOOKED
WHITE
SPACE !!!

Frank: Sunday, clear as day. This is insane. This can't be Waterloo:::

Devil: That is correct:::

Assuming (as I did) that we were talking in close conference, and that everything said was truthful (of course!), how do you explain this event? The solution is perhaps a bit tricky, but not impossible. Rather than give it away, I'd like to see some solutions. However, seeing as this is the last issue of the term, perhaps I'd better give a hint; the answer will appear in the first issue of the new year, for those of you in regular, or those who are perspicacious enough to subscribe to mathNEWS!

The hint is: <u>we're floating</u>. Until we meet again, I'd like to bid you & yours a Merry Mathie Christmas, and in the meanwhile, don't forget to bring your student ID card to the exams!

Young Frank Einstein

<u>Final epilogue to the Pfeiffer Pfiasco:</u> As I'd <u>expected, my salads ceased to cry for Pfeiffer the moment the bottle emptied. The very next day, though, they were at it again, and ever since I've tried to console them with mayonnaise and assurances that Zehrs will have Pfeiffer on sale again soon.</u>

FEEDBACK

As a concerned (math) student at this university I would like to make some sort of reply to Andy Welch's article in the November 21 issue of mathNEWS regarding general apathy amongst math students. Mr. Welch quoted a founder of the Committee on dissolving MathSoc as saying ``Who cares...'' about MathSoc. Mr Welch seems to blame general feelings of apathy amongst the populace for this attitude. I would like to suggest that this feeling filters down from higher levels. Case in point, and it is not totally isolated. When the MathSoc president was approached on the subject of sending a representative to the Athletics Advisory Board his reply, and this time I quote, when he was told that if one was not elected then one would be appointed was, ``Who cares?''.

If Mathsoc doesn't care enough to send a representative from math to a committee as important as the AAB then why should outrageous support for a group of Mickey Mouse individuals as the MathSoc exec and what they stand for be any more expected. Turnabout is fair play and if you want support then you have to give support!!

deanorthey

A hero ain't nothing but a sandwich....

Dancing to the Sound
of Rattling Ploughshares

-or-

Brinkmanship in the 1980's

I wonder if Ronald McReagan appreciates the fact that his breezy smile steels more hearts than it soothes. Not very likely, given the landslide victory he saw this month. His garden of roses never ceased to reek of belligerence, and now that belligerence has the power of office to justify itself. Even when Jimmy Carter was slaving for peanuts in his goobernatorial job in Georgia, Reagan was hard set against international conciliation.
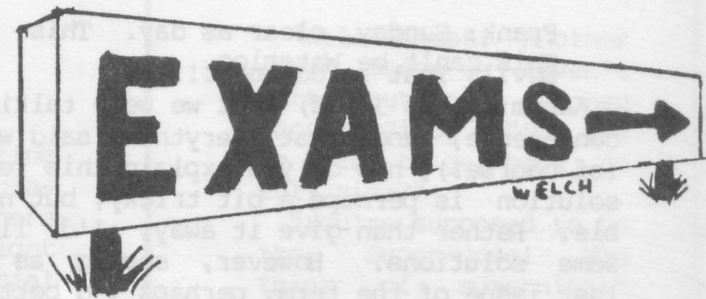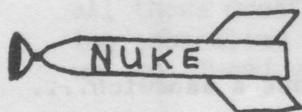
Recently there has been a scare running through the ranks of the underground in the States, notably such organizations as NORML and the NAACP. Now American health authorities are concerned that Ronald's enterprising guile may lead to cereal shortages in the U.S. this winter. This so-called ``Cheerios crisis'' reared its head this past week in Shreveport, Louisiana, where residents reported that the entire city's stock of Cheerios had disappeared overnight. Since that time, police departments in over 30 major urban centres have reported substantial drops in Cheerios inventory.

What is causing this terrible scourge? mathNEWS has learned that it is part of a crafty plot by the new Reagan administration to dupe the Israelis into placing confidence in the United States. It seems that Air Force fighters have been sent on covert missions with their gunwales jam-packed with Cheerios, freshly stolen from supermarkets. When they arrive in Tel Aviv, they are met by secret Israeli mission personnel, who take the bags and deliver them to a central hothouse just south of the city. It is the Israelis' belief that by planting a large number of Cheerios this winter, there will be a bumper crop of bagels this spring.

The only weak link in this explanation is this: how could the Israeli government and its agricultural experts be so stunned? Surely they ... that bagels don't grow from Cheerios! As co... dants of C&D, we all know that bagels are shot down li.e as they fly over campus, collected in big poly bags, and delivered fresh every morning. Columbia Lake is a prime breeding ground for bagels; recently the biology department has initiated hybridization experiments.

How can you support a regime which so shamelessly exploits the innocence of a foreign state? Yes, fellow mathNEWSers, this is our song: REAGAN IN '80, BUSH IN '81!

Ross Brown

NUKE

NEAT SOLUTION

Welcome to this gruelling final
Come on in and take a paper
Grab your pen and tell us what you know

Your mouth is dry
Your hand starts shaking
Suddenly your heart is pounding
Wishing desperately you had studied

Don't be fooled by the trick questions
The wording or the marking scheme
That makes you promises
Of what your grade could be
But that is mostly just a fantasy

So if your head is in Complete Confusion
And your paper is unstained
Just remember that
There's a Neat Solution
Down deep inside your tortured brain

(instrumental)

So if your notes were in Complete Confusion
And you can't do section (a)
Just remember that
There's a Neat Solution
And you might get it if you pray

(instrumental)

Don't forget your one ambition
Keep up with the competition
Search your brain until you want to shout

And afterwards you'll start to ponder
How on earth you made that blunder
You got the grades and still you wonder
What's the course about

(The author of this perversion
does not believe in literary
merit, metre or rhyme)

TIWIAHA

FEEDback

Dear Editor,

   Mr. William P. Hughes is wrong when he says in his Comment on Abortion that people are not free to do what they want with their own bodies. If he chooses to cut off his foot, he is free to do so. He will not be prosecuted by the law for his action. Similarly a woman must be free to have an abortion if she feels this is what must be done. It is her body that is affected by a pregnancy, and no one else can justifiably make such an important decision for her. The Roman Catholic church has a long history of oppressing its women which continues to the present day. It must not be allowed to extend this oppression to other women as well with its opposition to birth control, steril- ization, and abortion.

Anne Dagg
Integrated Studies

(Co-ed note: suicide is still a criminal of- fence, so it's not quite true that one is free to do whatever one likes with one's body. Sui- cide is a bummer anyways. So are matri- cide, patricide, fratri- cide, sororicide, geno- cide, homicide, femi- cide, insecticide, bar- bicide (beard kil- ling)...)

_____

   Anne Dagg is technically correct in her statment that some- one attempting self mu- tilation would not be prosecuted under the criminal code, however,

comes together, not by itself (as we've found out by experiment), but with much elbowgrease and pitn.
   mathNEWS may turn out to be immortal in concept and capacity for ideas, but there's always a need for new blood to build the beast; even the strong- est can fall if they can't stand progress. As an illustration, we reprint here a letter from the Feedback column of Volume 1, Number 5 of mathNEWS, Friday, February 23, 1973.
   Editors:
     I've just got one thing to say to all you beautiful people who have poured into my ear the glory of the Honeywell 6050 and that is, ``GET LOST!''
     Never in all my life have I seen a bigger waste of money than that recycled beer can behind the Honeywell doors. I don't mean to be nasty but everything from the file system to the assembly language, from the word addressa- bility to the loose ``security'' system, from the messed up control language to the ineffec- tive supervisor is a pain in the derrière.
     If I had my way, I'd call back the plumbers to finish what they'd started and then, maybe then, we could get back to using a real honest to God computer, Old Faithful, always ready for us to come to, Ye Olde 360/75.

G. Betowski

Right now, I'm typing in at a terminal on the Honeywell 66/60, and the 360/75 is lying in scrap pieces all over Trudeau's half acre. Here's to progress!

Ross Brown

_____

this person would be confined for treatment under the Mental Health Act. The important point, that society does not accept the blanket statment "It's my body and I can do what I want with it", and takes ac- tion to prevent certain types of actions (eg. suicide, self mutila- tion), remains. Ms. Dagg's statements concerning the Roman Catholic Church are both debatable and ir- relevent, whether or not the Church opresses wom- en has nothing to do with the moral arguements against abor- tion.

William Hughes

THE RETURN OF THE NATURAL LOG !
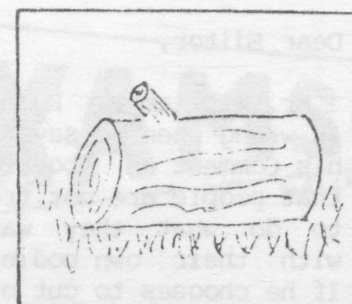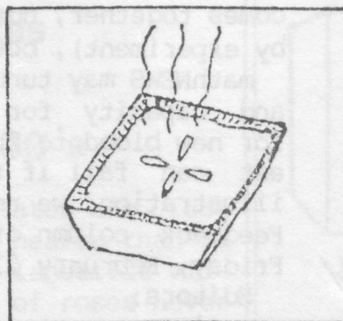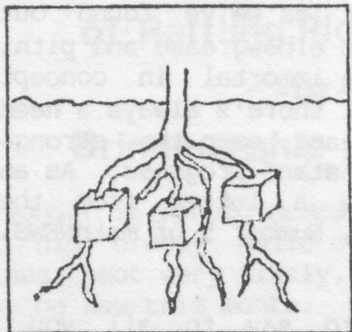**Come to see the greatest mathSCOT of them all !**
MAD
MATH
MISSION
MONDAY at noon
MC 3038 .....
BE THERE !!

Name these common Mathematical objects

Across

1a Is it where Egyptian mothers are put? (2,5)

1i People would stop their praying if they heard these. (5)

3a It had to fold before it even started its journey. (5,8)

5a Little imp! (5)

5g They stay at home. (3,4)

7a It's a small world after all! (6)

7n It reflects on your point of view. (6)

9a Where the holy people walk? (2,5)

9i His work is play. (5)

11a Would these newspapers be collectors' items? (5,8)

13a He's sometimes found backing poker hands. (5)

13g Yet it wouldn't be an eyesore for a pig! (4,3)

Down

a1 Where to put four-and-twenty blackbirds? (2,3)

a7 He'd be a mock audience. (7)

c4 Would it make a great toy for Eskimo children? (3,2,3,5)

e1 He lives on water only. (7)

e9 English teacher. (5)

g1 For stretching your legs a bit. (6)

g8 They help you get higher in school! (6)

i1 Food for the First Lady. (5)

i7 Where you put angry carrots? (2,1,4)

k1 You go to extreme measures to get them. (13)

m1 He certainly doesn't realize the police's limits! (7)

m9 What your nails become when soaked in dishwashing liquid. (5)

GRIDWORD

The last gridword of the term! First, it's bigger. Second, if you answer it all, your mind must be great at double entendre, because that's basically all that's in this gridword. Take everything very, very literally!

BY FRASER SIMPSON

Do You Realize how hard it is to colour these silly little squares!?! —WELCH

.....THERE... THAT'S THE @#$! BLACK SQUARES DONE!

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
29	**30** K-W STATUS OF WOMEN GROUP: "MATH MISSION" FILM FESTIVAL CONESTOGA COLLEGE	**1** MAD MATH MISSION MONDAY! ALL MATHIES! PLEASE COME TO MC 3016 AT NOON! Bring kazoo	**2** END OF TERM PUB WATERLOO MOTOR INN	**3** HANUKKAH LECTURES END B-B GABOR + THE DEMICS WATERLOO MOTOR INN · LAST DETAIL CINEMA GRATIS CC	**4** COMPUTER CAREER PLANNING SEMINAR 2pm MC 2065	**5** EXAMS BEGIN The World Ends!
6 NATIONAL TAP DANCE CO. in THE TIN SOLDIER — Humanities — · FED FLICK: STAR TREK → · GET READY FOR MONDAY!	**7** Day before December 8	**8** There IS no December 8! (RULE #6)	**9** THE NUGGET FAMILY presents A RENAISSANCE CHRISTMAS — Humanities —	**10** Only 363 days left before December 8!	**11** Only 14 days until Christmas (You thought I was going to say Xmas)	**12** The World Ends!
13 This is a math ago.	**14** I look into the future and see... (Eighth eve)	**15** Log table?!?	**16** ...STUDY.....	**17** Fun With Tape	**18** ...oh...that's an '2'...oh...well that means that my exam is at the 8th... THE EIGHTH!!..	**19** NO PEEKING.....
20 EXAMS END!	**21** Holidays!!! yay!	**22**	**23** ...gift horse?	**24**	**25** CHRISTMAS	**26** Can't wait until Next Christmas. (A Partridge in a Pear Tree) (Two Turtle Doves...)

Do You Realize how hard it is to colour these silly little squares?
WELCH
12571125squares!!!

Season Ends In mathSACRE

In the last broomball game of the regular season, Math, through a lack of female (on-ice) support had to play 2 men (people) short, but still perservered to record a 2-0 victory. This brings the team's season record to 3-1-1. Coach Ashok Patel should be congratulated for masterminding this season's improvement, and we hope owner Stosh Pahwolski will retain his services for the upcoming season.

Neil Clarke recorded the first tally, assisted by Brian and the second goal was scored net by Perry Best, set up by Walter Steinemann and Ross Brown. With the considerable manpower disadvantage a big game was expected from goaltender Dave Buckingham who delivered probably his best performance to date to notch the shutout, which brings his goals against for the season to 1.50 with 2 shutouts. Defensively, J. Mikey Robinson and Greg Bezoff helped to preserve the shutout, while remaining active in the offensive flow of the game. A commendable performance by both.

A fight that broke out about ten minutes from the end of the game marred an otherwise well played match but after things cooled off and the contest resumed, neither side mounted much of an attack and the game coasted to the final buzzer.

Thanks to all the people who came out to play for us, and co-op withstanding, we hope to see most of you again next term.

the mad broomballer

The second greatest cause of amnesia is having to write everything you know on paper.

Answers to 'Name these objects'

1. cube roots
2. π^2
3. $\int \frac{1}{x}\,dx$

It's 4 am, and various & diverse people are hovering over me as I type this. Hoverers: John Plaice (god, but humble), Andrew Welch (pseudo-editor #1). Yes, the editors have gone home - those being Joanne (who left at about 11), Ross (left at 2:15 - innumerable articles & stuff), Ashok (also TKO'd at 2:15). Also hovering -- Darrell LaRue (photon, captions, this, that & the other thing), Doug Moen (name these objects). Others: Walter Steinemann (layout); James Puttick (hearts player), Burloaf (broomball), Brad Monologue (templeton); Mike Gore (snoopies or snoopys - whatever); William (TTWIAHA) Hughes (search through files, neat solution, reply to letter); peter rowley (CSC flash!) Sarah Metcalfe (mathsoc commits hara-kiri); Pre-Froshe Jan Gray (zilog); Tracy Tims (secrets...shhhh!); Debbie Adair (calendar - before people wrote on it (and everywhere else)). Which brings us to the matter of.....this is JAP..This si the last mathNEWS of the year'. Thanks go to all the contributors of the year...ha, I'm taking over again!. John has gone to great lengths to try to write this - I thought I'd better placate him a little - now GO AWAY! JAP:How dare you ...APWelch here..WHAT POWER WE HAVE (and we deserve it.) I'm back again... Happy Birthday Andrew! Despite the photon's decease and scotch-tape troubles, we managed to survive - what a mess this room is in - there are still people playing cards here! They're from WATSFIC - ugh...and finally, yours truly, David Till, (pseudo-editor #2). Exams are coming...ugh again...don't forget to get your subscriptions to this rag if you're going away.. What else do they want me to mention? Don't forget the mathACTION on Monday...I will not buy this tobacconist, it is scratched! Wow - this is fun! I've still got space...this issue is dedicated to ourselves - the tireless & dedicated layoutists who slave over this paper and never get any thanks - (until NOW! ha ha) is anyone still reading this? It's 4;15 now - I'm gonna be half-dead tomorrow...is it worth it? Of course not! I thought writing these things was easy...mN really needs your help next term, so come on out and help - you might have fun! Yes Ross - I did remember the ISSN number...I'm getting desperate...som where was the party? They've all gone on a mission of sorts, so now I have the typer to myself... What to do with the last couple of lines? Gross self-praise...nah..I don't deserve it... Well, I've reached the end at last...not too articulate, am I? oh well...a layoutist crashes..

almost forgot Sean Richardson (gravity) - sorry! Fraser Simpson (grr!)
Steve Hutton (apathy)