## Summertime Thirst Quenchers

Toronto pub nights will continue this summer on alternate Wednesday evenings. Mathsoc and Engsoc are going to be working together on these pubs from now on. We are looking for two co-ordinators for Toronto, one Mathie and one Engineer. The co-ordinators are responsible for calling the pubs to check on entertainment, choosing one for each pub night, and preparing the recording. Help will be given in the form of advice to get you started and there will be at least one former co-ordinator in Toronto.

The first pub is on Wednesday, May 4th, at the NICKELODEON. The 'NICK' is located on the east side of Yonge, south of Dundas. There is a 24 hour service to find out pub information. The current phone number is 787-7980. That number will change on or about May 1 st. The operator will give you a referral if you dial the old number. Or, you can phone information and ask the number of "Hugh Hexad". You'll hear a 60 second tape containing all sorts of info. Come out to the pubs for good times. We almost always get a reduction or elimination of a cover charge (if there should happen to be one.) Regular students home for the summer, and all alumni are welcome, of course.

Last fall pubs were tried in Ottawa. Some success was achieved and some lessons were learned. This summer it is planned that about five or six pub nights
will be held. They will be held on Fridays. The first is on Friday, May 6th, at THE BLIND PIG. THE BLIND PIG is located in the Holiday Inn downtown. At that time, the second pub will be announced, and by that time, all others should be planned. Hopefully, printed handouts will be available at the second pub, giving all the details. Watch the newspapers (JOURNAL or CITIZEN) also in case we get them printed there. There is no telephone-tape-recorder system in Ottawa, but one may be installed at a later date if it is felt this summer's participation warrants it.

We have an Engineer co-ordinator (one of their V.P.'s) for Ottawa to work with Steve Risto, who is the Math co-ordinator. Both are from Ottawa and are familiar with the city. Again, regular students home for the summer, and alumni, are welcome. These pub nights provide a valuable service to over 700 students in Toronto and to over 200 in Ottawa (that's co-op, Math and Engineering). There are about the same number from each faculty in each city. All students are welcome, but since these are the two major groups, Mathsoc and Engsoc are working together to put on these pubs. The societies provide services for their students and this is just another service. Co-op students lose out in some ways on their Federation fees, so in the near future the societies may approach the Federation for funds. So let's support your society, and have a good time in the process by going out to the Waterloo pub nights.
mathNEWS would like to honour two persons who are graduating from Math this spring.

They both joined mathNEWS in their first year and have been a major factor in mathNEWS's success as a paper.

Randall S. McDougall has been with mathNEWS since its founding 13 terms ago. He first started his career by writing for mathNEWS under the guise of the Phantom.

He eventually stopped his writing and ended up as Editor of mathNEWS. He has served in this capacity off and on since the fall of 1974.

His talent for drawing has also been put to use in brightening up various issues of mathNEWS. We wish Randall success when he opens up his "comic store".

Peter Raynham has been with mathNEWS since 1973. His first article was written on the topic of "Life". The article he wrote was kept for several weeks before mathNEWS finally got desperate for filler and used it. After that there was no holding him back and he became a regular columnist. Burloaf has long held the lead as mathNEWS's most popular column.

As well as being a writer for mathNEWS Peter has also been mathNEWS's subscription editor since the fall of 1974. mathNEWS wishes him the best of luck in his future.

## Nednesday, March 30, 1977.

## Volume XIII, Number 8.

## ERRATA

mathNEWS wishes to apologize for the fact that there were several errors on last week's front page.

In the article Election and Question Results all occurrences of "blank" should be replaced by "other".

If you wondered what happened to mathNEWS issue number 7, it's because we typed an 8 instead of a 7 .

Finally R.A.G. White tells us that he is not the "prime mover" behind the recall petition. He implied that Geoff Hains is the "prime mover". So we will rephrase it: "R.A.G.White is one of the forces behind the petition." (typist's note: is it really possible to move primes?)

## Curriculum Mail

The following two letters were received by mathNEWS addressed to Kim Wilkins, Curriculum Committee Rep. This was in response to the article on the front page of mathNEWS, Monday March 21, 1977.

Since they are of interest to math students in general they have been published here. The letters have since been passed on to Kim Wilkins.

At present, nothing is being done to bring in a General Math degree with majors in any subject i.e. a student doing honours will receive a B.Math. with major in one subject, while a General guy will only receive a B.Math. degree.

Talking to Arnie Dyck once, he told me that the reason for doing this is that the University receives more money from the government for an honours student and therefore, if the Math Faculty included major subjects on the B.Math. degree of a General student, then most students (it is claimed) will do General rather than Honours and the University will lose financially.

As far as I'm concerned, as a student, I think it very unfair for a General student to be a victim of the financial woes of the University. Even though a student will have all the necessary courses for a CS degree, he will not get it, since he did General rather than Honours.

If the University is sincere in its financial worries, then it should be consistent and should not, according to me, offer General degrees in the CA option and the Business Administration option.

I hope the Curriculum Committee will reconsider this proposal of General Students.

Practice and feedback are essential for learning. This is elementary.

There is absolutely no feedback whatsoever in any of the math courses. For many computer science courses there aren't even any exercises to do so that one can reinforce and sharpen the concepts learned (e.g. theory of computation courses) before one is tested on the concepts. Assignments should be used as vehicles of feedback (what else is there?). If one is tested on the first question he attempts, then obviously he is being tested on how well he can listen. It should be clear to everyone that the present system generates a disincentive for the markers to do their work well and give feedback (q.v.time constraint, uniform monetary reward).

Clearly, if the administration and faculty do not realize the importance of these two principles, then they do not understand learning even though they are in charge of it.

There should be no assignments due during the exam period and a few days before since this is when everyone must study for their exams. The Math Faculty tries to push the students to work harder by raising the minimum cumulative average for the honours programme yet they do not give the students a chance to do better by overloading the students with assignments that could have been done before this time (obviously, if the students are to get something out of doing the assignments then it must be handed in by before the exam). It should be very clear that such a procedure is very unfair. Nobody likes to be treated unfairly. This only leads to frustration.

This is undoubtedly an incompetent institution.

## Make the Pay Rich

It seems that even in hard times, when cash is short, inflation rampant, prices are cash is short, infand companies are crying about poor business and increased expenses, there is always someone who manages to make a profit.

Consider the Capital Telephone Company, Ltd., just a little company not far from Ottawa that was formerly owned by the subscribers. Presently it serves a small exchange in Maberly, operating 121 telephones. Since 1969, telephone rates in Maberly have remained the same. In 1974, however, the Capital Telephone Company managed to eke out a profit of $\$ 3$ million.

By now you must realize that there is more here than meets the ear. In a House of Commons debate March 10, 1977, it was revealed that the Capital Telephone Company happens to own outright the Tele-Direct company which prints all of Bell Canada's phone books. Indeed, the Tele-Direct Company in turn controls Place Bell Canada, Bell's showcase in Ottawa. Capital Telephone also owns a fleet of fishing trawlers. As well, it owns Bell executive jets, renting them at great cost to Bell.

Now for the 3 million dollar question: Who owns Capital Telephone? Answer: $100 \%$ of the shares are owned by none other than your favourite profit-maker and mine, Bell Canada.

The telephone subscribers in Maberly will never have to worry about increasing telephone rates. In order to increase the rates, Capital would have to go before the CRTC, and give a reason for the increase. It would probably also raise messy publicity concerning Capital's dealings. Even if Bell subscribers' rates elsewhere in Canada climb to $\$ 50$ a month, rates in Maberly will remain at the 1969 level.

Anybody want to move to Maberly?


For the last official Federaction column of the term, our hack of the week is rsmcdougall. Randall is an undergrad in Computer Science and will be leaving UW after this term. Though, not a hack in the conventional sense, and inactive over the past year, rsm has worked extensively on most of the Computer systems on Campus, such as the Honeywell, Unix, and such IBM notables as Debug, Wits, Wylbur, APL, and VM. A former part-time employee of the University he has been helpful with the computer inovations he has added to mathNEWS. He is also a former mathNEWS editor, a member of the original Group of Eight, and a member of the Syndic8.

For about five years, grad students have not paid Federation fees, yet have enjoyed many rights in the Federation, including voting rights and holding of elective office. Last week Fed council voted to take away voting rights for non-fee-paying members. Grads, however, are still allowed to pay fees if they wish. Despite protestations from some grads, not a single grad, including grad reps Devillaer and Carter, has paid a fee to the Federation. Apparently some grads want to retain their rights without paying the appropriate fees. However to drink in the Grad Club and only get some of the Grad Club priviledges, an undergrad must pay the full Grad Club fees. So it seems the recent Federation action will make it fairer for all those concerned.

At his request the FED hack of the week is John Lee (Hooker). John is a former Grad rep on Fed council (he was a strong advocate of Grads leaving the Federation) and presently edits the sometimes funny scandal sheet known as SciSoc News. He also edits similar material that occasionally appears on campus. Proud to be known as one of the biggest reactionaries on campus, John harbours no great love for the chevron. A sometime contributor to mathNEWS, Lee is often seen in the Mathsoc office playing spacewar, thinking that the AIA is piloting the enemy ships. Congradulations John, you asked for it, you got it.

Since this is the last column of the term, barring a free mathnews, I'd like to wish that loaf of a columnist Peter Raynham good luck as he retires from mathNEWS and joins Hipfner enterprises, I mean the Financial Post. To paraphrase Al Stewart, will this be "The Year of the Weasel" or will he not last the summer? Tune in and find out.

# Rightist Leftist, or Leftist Rightist, Can't Make Up Mind 

To start off this week I'm going to explain why this column has had certain titles in the past few weeks. i.e. Last time it was titled "COMMIE", and a few weeks before "FASCIST". Well, there's a logical explanation for this. Originally I put "FASCIST" for a title since people (slightly demented people), have been referring to me as one. Heck, some people even suggested that I was so far right that I was close to (heaven forbid) that rightist's rightist, John Tromp. Now, nothing could be further from the truth, so I thought that it would be appropriate to amuse them. However, much to my surprise, after that article appeared people actually took it seriously. People seriously used the term "fascist pig" when I passed them in the halls. Suddenly I thought to myself, "if people think that I'm a fascist just because I titled my column that way, maybe they'll think that I'm communist if I titled my column appropriately. Maybe the Anglicans In Action will take me in as a comrade and let me in on all their diabolical plans. Maybe I'll learn what the free chevron is going to do even before they do." Well thus far I haven't been able to determine if it's been successful. A lot of people, Hipfner et al, have been calling me "commie pig" since then. Also, I've noticed that the free chevrics have suddenly been a lot nicer to me lately. However, I think that this might just be temporary.

This section of the article shall be devoted to viscious attacks on those who have been visciously attacking me as of late, and who will probably continue to do so in the future. I hope that what follows doesn't make it seem that I'm adamantly mad, because I'm not, I just disagree with a few people.

Firstly, two issues ago I voiced my support for a particular candidate for the mathSoc vice-presidency. When I did this outgoing president Gary Prudence wrote a quite unkind rebuttal. Then last week, Ken Lynch the new vice-president defended himself in a similar manner. Well, I'm quite surprised at the sensitivity of the nerve that I've touched. I'd like to say that I believe that my comments were quite in order. An election is supposed to present an open discussion of the qualifications of the candidates. In this election nobody said anything. This is wrong. Discussion should be stimulated. I perfectly appreciate Gary's and Ken's right to reply. In fact they should do so. However, I was surprised in that they seemed to think that they had to respond by degrading me. I think that they should have limited their responses to a rebuttal of my comments regarding Ken's qualifications.

Regarding these I would now like to
comment, and perhaps clarify what I have said before. It is a fact that Ken did not get the job done as education director. Gary says that he knew that Ken wasn't doing it and accepted that as Kevin Willis was doing most of the job anyway. But I, and many others, must ask, what has Ken done? Gary says he looked after the curling club. Oh wow. Maybe Ken is a good worker. All I'm saying is that I don't know if he is since I'm unaware of anything that he has done. Ken says that he couldn't make it to any mathSoc council meetings as he has always had other commitments. He goes on to say that as education director he isn't required to attend anyway, and says that I would know that fact if I knew anything about the position. Well Ken, having been both Education and Internal Affairs directors in the past, I do know something of the position. It is the duty of the education director to keep council informed as to what is happening on committees. All representatives are to report to him, and he is to co-ordinate mathSoc's representation on committees. To do so he must attend some council meetings. Furthermore, I would think that someone who is running for the vice-presidency should have some knowledge of what's happening on council. I submit that if you have been unable to attend any MathSoc meetings all term because of other commitments, then you should consider whether you have any time for the vicepresidency. It would be nice to have the vice-president show up every now and then. Anyways, congratulations on your victory Ken.

Now onto other comments. Nick Redding in his letter to mathNEWS last week says, "Why is Risto, in a full page, unable to do anything except crack sneering jokes about the Chevron affair?". I try to keep the situation in perspective. Most of the time my comments are intended to be serious, however, although I do make fun of the situation, I'm not trying to be sneering. As I've said before, most people in this dispute take it too seriously, let's have some fun.

Finally for our latest feature. And that is of course the always popular, introduced for the first time this week, the FASCIST_OF_THE_WEEK. This
week's FASCIST_OF_THE_WEEK is that good old right wing Thompson thug and goon, J.J. Long. J.J. was the winner of a random competition between those outstanding fascists: Ron Hipfner, Doug Thompson, and John Tromp. A coin was tossed several times to determine who God thought was the biggest fascist on campus. Now we know. Here's to you J.J., this is your week. Sieg Heil!

Upcoming
FASCISTS_OF_THE_WEEK will include such notables as: Mad Dog Dillon, John Tromp, Dougy baby Thompson, R.B Burton, S.L.R., Bruce Leavens, Benito Mussolini, Doug Thompson, Herman Goering, RAG White, Martin Bormann, Doug Thompson, Albert Speer, Pattijoy Armoogam, Mark Wills, Joseph

Goebbels, Trob, Rudolph Hess, Dennis Mullin, Bruce Mills, Doug Thompson, Adoph Hitler, and Ron Hipfner. Also to be featured as a special guest honorary FASCIST_OF_THE_WEEK will be our good friend Salah Bachir. That's all for this week folks, see you next term. (if I live...)
*** STOP THE PRESSES ***
Some late breaking news. Another victory for the people over the forces of fascism. Tonight I clobbered Hipfner at pinball!


1009

## OSCARS LEE

SEVEN BEAUTIES: A heroic Mathie who strives for the top, takes seven core courses and gets it in the ear in April.

ALL THE CHAIRMAN'S MEN: Chairman Dug Thom Son's wheeling and dealing in the top position in the People's federation of Students and the results thereof. A flawed but accurate exposé showing that life does imitate art. Yes, there is suspense, as the incredible Son has developed a silencer for his knife. From there he goes and plunges the naked blade into the backs of friends, supporters, associates and into the fronts of the supporters of his opponents on a chic pseudoradical tabloid. (To ask that rhetorical question, "Can someone who is two-faced be stabbed in the back?").

ROCKY, THE
FLYING SQUIRREL: In the mismatch of the century, Rocky with Bullwinkle J. Moose as his manager are pitted against the CIA and Cassius Clay for the World Heavyweight boxing Championship. In the end Rocky is mistaken for a baby seal, is bashed over the head and skinned alive after winning the championship. Be sure to bring plenty of Kleenex.

FACE TO FACE: An award losing effort if there ever was one. This Roman Catholic sex education film isn't worth the price of popcorn. Dull, unimaginative, no zest, and besides, who wants to see an animation of two Ken and Barbie dolls going at it?

TWO MINUTE WARNING: A brave psychologist fights against premature ejaculation.

MARATHON MAN: The sequel to Two Minute Warning, the adventures of the first successfully treated patient.

THE $10 \%$ SOLUTION: A great people's documentary commemorating the developer of the Bell Curve, who has allowed the passage through academic circles of so many mediocre students.

BLANK SCREEN: Another funny and frolicking time with Mellow Brooks, whose last movie was shot without sound. This time he has outdone himself and has shot a movie without film.

SMALL CHANGE: Pennies, nickels and dimes.

THE PINK PANTHER STRIKES AGAIN: a gay rapist stalks the darkened alleyways of Boys' Town.

BUGSY MALONE: Gang wars in modern Detroit, as young toughs battle it out for fame and gore.

HOGAN'S RUNS: Spectacular in the speed it was shot at. A can-man's efforts to cure his chronic diarrhea.

KING DONG: An accidental meltdown of Brazil's first nuclear reactor produces a pulsing, penetrating mutant on a nearby rubber plantation.

MISSOURI BREAKS: Flatulence in the OLD WEST.

A STAR IS BORN: The heart warming story of the birth of a star and its accompanying planetary system.

## BE AMAZED!

This curious construct which you see found, check your hat. Beware of vultures before you is a maze which was inspired by a recent playpen article. The rules are the same, you can go down at an x and up on an 0 . If the two are superimposed, you have the choice.
 we can give away a $t$-shirt for this one too (one t-shirt costs about $1 / 4$ of a page).


FIVE



## Federation council

 dumps gradsLast Wednesday night, March 23rd, Federation Council finally changed its Bylaws to restrict full membership to those students who pay Fed fees of $\$ 13.75$ per term.

The real result of this was to remove the graduates as automatic members (although non-paying).

In 1970/71 the grads had a referendum, and voted overwelmingly to ask the University Board of Governors to set up the Graduate Club as an autonomous organization with its own board of directors. The fees that the grads were paying to the Federation were terminated, at their request, and they began supporting their own organization with a non-refundable fee.

The Grad Club promptly asked to be relieved of membership in the Federation since they were now representing graduates in all affairs. The Federation never did get around to rewriting their Bylaws to cede to their request, but nobody really cared.

So from 1971 until now the grads ( 1200 full-time, 800 part-time) enjoyed all the privileges of membership without paying a cent for it. They could vote in elections, sign recall petitions, vote in referendums and general meetings, and serve on Council as one of the two grad reps. These reps have, in the past, been operating independently of the Grad Club, thereby "representing only themselves".

Back in September the chevron affair blew up. Then a by-election in October for a grad seat yielded Larry Hannant, free chevron editor - through the bungling of the CRO and Shane Roberts. The Grad Club was not thrilled with the representation given by their reps John Lee and Hannant. In November the Grad Club Board of Directors asked the Feds again to remove graduates from membership.

Also not thrilled with the filibustering coming from Hannant, the Feds starting moving towards dis-enfranchising the grads.

## CONVOCATION DATES

> Spring convocation for all graduating Math students (including B. Math, M. Math, M.Phil and Ph.D. students) will be
> Friday morning, May 27, 1977 except for those students receiving a B. Math degree in Chartered Accountancy. They will attend the Engineering convocation on
> Saturday afternoon, May 28, 1977.

The past Fed Council election in February found only two people running for the two grad seats, both free chevron members: Mike DeVillaer and Dave Carter. Reasons cited by grads for the acclamations were apathy and the realization that the Feds were getting rid of the seats anyway.

The Fed Annual General Meeting (March 1) was, as usual, a circus attended by fed hacks, Engsoc, and the free chevron. All parties were going for adjournment, knowing that rational decisions cannot be made by a room full of hotheads. Unfortunately one motion was dealt with - dis-enfranchising the grads - which failed 125 to 121 . Some of those who spoke against "kicking the grads out" at the AGM felt that we should wait until the Grad Club Meeting.

Prior to the AGM the Grad Club had called a Special General Meeting to decide on whether grads wished to terminate their representation, to be held March 3rd. That meeting didn't reach quorum (only 63 are needed), lending more flame to the argument that the grads didn't care about Fed representation.

Anyway, last Fed meeting we passed a new Bylaw that says that all full members become full members by paying Fed fees. This means that Carter and DeVillaer's constituency shrank to zero members, and they couldn't vote as Councillers until they'd paid their own fees. Shortly the Federation Board of Directors will meet to redistribute the two grad seats, since it seems unlikely that enough graduates are going to pay Fed fees to warrant any special representation, they will be represented through the existing faculty reps.

Naturally Carter and DeVillaer were upset. They told Council that the Grad Club was planning a referendum this summer on the issue. According to Nick Redding, Grad Club treasurer, 250 votes are required to make the referendum binding - yet the highest turnout in the longest while was 160 votes in the October election of Hannant (John Lee and Hatz, eight months earlier, won with only 15 and 12 votes, respectively.)

Smylie at Council argued that there should be "no representation without taxation". We, the undergrads who pay the bills, should not be held up by the actions of "freeloaders". The grad reps charged that Council wanted to get rid of two of the free chevron supporters. The free chevron's delaying tactics in Council did indeed make Councillors upset, and probably turned the vote against them.

Ron Hipfner, co-op math rep

## 

NAME
KNELLOR PHONE
SWISS BANK ACCOUNT NO. TAXABLE?

fuss

## sigh

a programming language
penalty box; s
a billiard cue
insect
do it or $\qquad$ !
ill-feeling

## manganese

undergrad (abbr)
star of MASH
rural route
-tac-toe
long form of two e15's
she waltzes
football major
cutting tool
Super Powered Vehicle
not this
10a you are
10d not there
10 i subject of writing
100 compass direction
11a kettle
11e WARsaw Atheletic Organization
11n Doubtful Starter
12a angle of inclination
12h light wheels
13a equal measurement
13k short for Albert
14a Grand Touring
14f put down
14j old singer who made a comeback; 1st initial and last name
15c income after deductions
15 i idiot
16a doctrine of final causes
16k card game

In spite of the traditional errors in last week's Gridword, there were 5 correct solutions to it, and 3 incorrect ones.

All the correct solutions came from distinct people, and with a suitable application of a randomizing factor (I shook a 5 sided die) today's winner is...(may I have the envelope please...) drnewell.

From two weeks ago, we bring you the solutions to the nonGridwords GOLF to CLUB and NOUN to VERB. There were 3 solutions to the first, and 4 to the second. The minimal solutions to both puzzles came from Paul H Kristensen whose solutions were, GOLF to GOOF, COOF, COOB, CLOB, CLUB and NOUN to NORN, NORT, VORT, VERT, VERB. Doug McInroy submitted the same solution for GOLF to CLUB, but his other solution was two longer.

Also-rans for the nonGridwords included the (changing VERB to) TROB, and Da holy crow Webster. Also-rans for the Gridword were Peter Forde, Kathy-X, GMHAINS and Doug McInroy, with correct solutions, and Carol Molloy and Tom Weber (who submitted two distinct incorrect solutions, because he couldn't spell saki, and forgot a p in pi).

More from the CSC Tramp who says "from now on all CSC members will do nude swimming ... on the CSC floor."

Today's Gridword is by benowak and he and the winners of the puzzles can come and collect their $t$-shirts at a production meeting.

## ADS

(Near \& Far)

To Sublet: May-Sept a 3-bedroom townhouse at Lincoln and University. Fully furnished, suitable for 4 or 5 people. Fridge, stove, TV, water softener, garage and fully carpeted. Call $885-0595$ or mail JWBMACAULAY or PCKELLY or MRHASSELBACK.

Toronto Accomodation: 2 girls needed to share 2-bedroom apartment at Davisville and Yonge. Phone 884-7240.
Pub Co-ordinator: wanted for Toronto. To be responsible for Math Society's tape recorder machine (for the phone), organize the pubs and sending phone bills to Waterloo. Will work with an Engineering student and report to Mathsoc's Social Director. Apply to Kevin Willis or Gary Prudence at Mathsoc office, mc3038. Deadline is April 4.
To Sublet: a 2-bedroom apt, at 311 Bell St. S., Ottawa (near Bronson and Queensway) from May to Sept. Close to major bus routes. Near Carleton U. Will sublet furnished. Rent $\$ 239$ per month. Contact Janet Selman, 311 Bell St. S., Apt. 1203, Ottawa, Ont. 613-235-5381.

TO SUBLET Furnished 2 Bedroom Apartment in LONDON, Ont; May 1 to Sept 1; \$224 per month; swimming pool and tennis court; fully carpeted; 2 main bus routes at gate; free parking; laundry facilities; walk to shopping. 519-434-1024 or write 605-1178 Adelaide St. N. London.
Waterloo grad has apartment to share in
Mike) Montreal. For info call 884-9458 (Mike)

[^0]

WANTED!!!
Any and all assignments, programs, essays related to Math courses offered by the Faculty.

The Math Society is attempting to start and maintain a library of useful programs and essays in order to aid other students in their work in future years. If you want, drop your contribution off at the MathSoc office, M\&C3038.
NEEDED: one girl to share townhouse with three others May - Sept. term (or longer) Location: Sunnydale Place Rent: $\$ 76$ per month Call marnie at $884-3319$ or mail msrowat on tss.
Needed: a ride to Ottawa Easter weekend. contact marnie at 884-3319 or msrowat on tss.

For Sale: one 6 string guitar; one 12 string guitar; one oil painting on velvet; one mexican chess. Call Gerry at 884-5575 OR send mail to syfan on the Honeywell.
Wanted: tutor for a Grade 10 math student. Phone Mrs Lukasik at 885-5960.
Needed: Young men interested in joining the Folk Dance Group at the Concordia Club. Lots of fun and a good chance to meet people. If interested phone Richard Heuss or contact the Concordia Club office.

For Sale: 1000 mm lens, screw mount. Asking $\$ 300$. Also have a TASCO telescope for sale. Asking $\$ 100$. For more details phone Dennis at 884-7499 or mail djmullin on TSS.

To sublet partly furnished 2 bedroom apartment with balcony in LONDON. End of April to August 31st at $\$ 200$ per month plus hydro. Has outdoor pool, good bus service, laundry facilities and shopping nearby. Phone LIZ in Kitchner at 6327357 for more information.

TORONTO Housing: 5 bedroom renovated townhouse at Carleton and Parliament in at $\$ 535$ per month (includes utilities and parking). Has a cedar sundeck. Available May to September. Call Diane Morgan at 1-416-961-0276.

Sublet May to August a three bedroom apartment in Greenbriar. Rent is \$300 a month with last month free. Call 745-5123.

For Sale: TEAC-350 cassette tape deck. Two years old. Has dual VU meters and Dolby. Asking \$250. Call 576-9394 and ask for Ron.
LOST: Pen \& Pencil set. Silver with gold pocket-clip. Made by Parker. Lost thurs march 17 in mc 2009 . If found please contact Tom at 743-0454

Semi-furnished condominium to rent at summer rates. One double room with private bathroom at $\$ 170$ per month.
Thre single rooms sharing bathroom at $\$ 90$ per month each.
Laundry facilities,
stove, fridge, dishwasher; air-conditioned, tennis court, parking; utilities included. Phone Maureen at 886-0466.

1013

## BURGOAF? ${ }^{\circ}$

Tidbits from the world of the Hackers...

A couple of weeks ago the Computer Science Club brought Dennis Ritchie from Bell Labs in New Jersey to U. of W. to speak on UNIX. Ritchie has played no small part in the development of UNIX, the system that is as close to a Hacker's utopia as anything else to do with computers. After the meeting, a Hacker named Ciaran was questioned by someome: "So, what's it like to meet your hero?" Ciaran replied: "It's God, not hero. God. Get that straight."

If you didn't want to win a contest, you wouldn't enter it, right? Well, a Hacker has different ideas about how the world runs, and recently one of them took an active role in attempting to lose a contest. A local radio station announced that the eleventh caller would win a free record. Our Hack had a sudden burning desire to lose by being one of the first ten callers and rushed a call in to the station, but alas he was the eleventh caller and is now the regretful owner of a record he doesn't want.

A village in South America recently had collected a fund to build a church. However the local people decided to not build the church so that the money could be used to assist the village's poor. Now, everyone knows that this helping your neighbour nonsense goes against the true grain of Christianity. Anyway after the bishop heard of this he performed a mass excommunication on all the members of the village.

This week we feature a comparison of masthead sizes in five papers produced on this campus that are available to math students. This graph shows the percentage of each paper taken up by the masthead. These statistics were taken from issues that were available a week and a half ago. FC and RC are chevronrs, $G$ is the Gazette, E is enginews and mN is mathNEWS. Each $\because$ represents $.2 \%$ of the total area of the paper.


The masthead is the place where the paper's producers get their names in print. Does this mean mathies are more egotistical than other people?

Some claim that movies never accurately reflect real situations. I present the following scene which occurred in a movie I saw two weeks ago:

A girl is making out with another guy at her place of residence when her steady boyfriend discovers them. The two guys get into a fight, and in a rit of fealous jage the steady kills the other. Later at the police station, we see the sister of the killer talking with him. She says: "The police chief says you're lucky that your victim wasn't serious. He was just a young person, a student, really just a burden on society. You will probably get a light sentence."

After all these years of writing stuff for this paper, I have a confession to make. I am only a surrogate Burloaf. Because mathNEWS will be free of me after this term, I feel this is the time to let the world know that I am not the real Burloaf. You will have no more of my Burloaf to gaze at each week, but be warned: the actual Burloaf will be lurking in your midst for many a term to come.

## The following appears in the current issue of "Creative Computing":

## COMP SCI SERENADE

(Sung to the tune of "My Bonny Lies Over the Ocean")

My program lies under the backlog My card deck's all over the floor The plotter is using a crayon And I just can't take any more

## CHORUS:

Bring out, bring out
Oh bring out my printout today, to-
day
Bring out, bring out
The one you ripped off yesterday
The card reader chewed up my job card And someone erased all my files
The system has been down for hours While people collapse in the aisles

## CHORUS:

Flunk out, flunk out
I worked like a dog each and every day
Flunk out, flunk out
Twelve projects were due yesterday
Security holes I've discovered
The records of grades are now mine
What once was a one-point-five average Will soon be a three-point-nine-nine

## CHORUS:

Send out, send out
Oh send out the grades to big companies
Send out, send out
They'll all want a scholar like me!


## POETRY

## Dear mathNEWS,

I have noticed a disturbing lack of artistic merit in recent issues of this paper. Because of this, I feel compelled to submit the following for publication:

## The Ballad of the Gang of Bore by Nuts Too Yoo

There was a professor named Doug
Who behaved quite a lot like a thug $\mathrm{He}^{\prime} \mathrm{d}$ propose revolution As the only solution
But when asked "To what problem?", he'd shrug.
There was a young commie named Neil
With intentions he tried to conceal
He took over the news
To express his own views
In words that were Free- but not Real.
There was an old commie named Bains
Who had Hardially a glimmer of brains
His laudation of Marx
Created few sparks
As was shown by his ballot box gains.
The professor I spoke of before
Had a voice one just couldn't ignore
When his students were jeering
He'd pretend they were cheering
And continue to boor and to bore.
(repeat 50 times)
T J Willock, 2nd Yr. Math

## ONE AD

## Roommate Needed.

One bedroom in a two bedroom apartment, near Parkdale Plaza, is available from May to September (or longer). Apartment is fully furnished including stereo and TV. Rent $\$ 90$ per month. Phone Doug at 884-3728 or drop by: 443 Hazel St., \#8.

## (you pick a title)

This term, the SCIENCE 209 technical description assignment, was to describe a tractor. One female came up with the following in her description:
"At the driver's feet there is a clutch petal and brake. Between his legs there is a two foot shaft with a black rubber knob on the end."

## How the Four-Color

## Theorem was Proved

The four-color problem is the problem of determining whether four colors are sufficient to color any map* drawn on a plane $\dagger$ so that no adjacent $\ddagger$ regions have the same color.

It is easy to construct a map with four regions each of which is adjacent to all the others, and to prove that this is impossible in a map with five regions. While the former result proves that four colors are necessary, the latter does not prove that they are sufficient. The map below does not contain four regions each of which is adjacent to the other three, but nevertheless requires four colors; an analogous map might exist for five colors.


The problem was first proposed by a math student named Francis Guthrie in 1852. The mathematician Arthur Cayley put it to the London Mathematical Society in 1878, and the following year a member named A. B. Kempe attempted a proof.

His method was to show that there could be no smallest map requiring five colors-no minimal five-chromatic map. This obviously implies the theorem.

Suppose region $X$ in a minimal fivechromatic map has neighbors $A, B$, and $C$. Erase the boundary between $X$ and $C$. The resulting map is smaller than the minimal five-chromatic map, and hence is four-colorable. So four-color it. Then reinsert the boundary line. But now $X$ can be colored with whichever of the four colors was not used for $A, B$, or $C$. This argument shows that no region $X$ in a minimal five-chromatic map can have exactly three (or, similarly, less that three) neighbors.

A configuration which, if found in a map requiring five colors, implies that there is a smaller such map-and which, therefore, cannot appear in any minimal five-chromatic map-is called reducible. Thus a region with three or less neighbors is a reducible configuration.

A region $X$ with exactly four neighbors $A, B, C$, and $D$ (in order) is also a reducible configuration. The same proof applies with one addition. After the smaller map is four-colored, regions $A, B$, $C$, and $D$ might require all four colors, leaving none for $X$ after its re-creation.
*a partitioning of the planet into regions by curvilinear boundaries.
tor surface of a sphere.
$\ddagger$ sharing a boundary consisting of more than a finite number of points.

But any path of regions from $A$ to $C$ excluding $X$ must intersect any similar path from $B$ to $D$. Kempe proved that this implies that a group of regions in the fourcolorable map can always be recolored so that one of $A, B, C$, and $D$ gets the color of the opposite one; and the former color can then be used for $X$.

Thus every region in the minimal fivechromatic map must have at least five neighbors. But, as Kempe showed, every map contains a region with five or fewer neighbors. He thought he had also proved that a region with five neighbors was a reducible configuration, which would have established the theorem, but in 1890 P. J. Heawood pointed out an error in this proof.

In the years since 1913, many mathematicians-G. D. Birkhoff was the first-have proved many more complicated configurations to be reducible. But nobody had any reasonable intuition of a set of configurations that was unavoidable (meaning that every planar map would have to contain at least one of its members) and all of whose members might be proved reducible.

Enter the computer.
Heinrich Heesch and his students formalized Kempe's ideas and used computers to show a great many configurations reducible. He developed a method to find an unavoidable set of configurations for maps with certain restrictions.

In the late 1960's, Wolfgang Haken of the University of Illinois improved Heesch's methods, then decided that more time should be spent on finding unavoidable sets of configurations. In 1972 he was joined by Kenneth Appel.

They developed a program that tested different variations of Heesch's procedure. It was very complex and took a couple of years to perfect, but once it was running the team became convinced that they could find an unavoidable set consisting of a few thousand configurations, each likely to be reducible.

But of course every configuration in the set must be reducible. At this point John Koch joined the team, and helped produce the following technique.

A configuration is generated for the potential unavoidable set. It is tested for reducibility. If it has not been proved reducible after $1 / 2$ hour on an IBM 370 model 168 , then the program backtracks, modifying the configuration-generating procedure so that this configuration does not occur again. If the generating procedure ever gets to the end of the unavoidable set, each member will have been proved reducible, and the theorem established.

The attempt was made in June 1976. 10000 configurations were created, over 2000 were tested for reducibility, and after 1000 hours on various computers, the program terminated with under 2000 members in the unavoidable set of reducible configurations.

The four-color problem was solved. $\square$
Condensed from The New Scientist.

## mail to mathNEWS


mathNEWS welcomes your criticisms, comments, suggestions, etc. All letters should be signed, but if requested, a pen name will be used. Put your Feedback articles in our mailbox on the third floor outside the lounge, or mail it to us on TSS to userid mathNEWS, or take it to MC 3038 and have it put in our mail slot, or put it in the mail addressed to mathNEWS, MC 3038.


## Fulltime Tutors Needed

TUTORS: During the fall term '77, the Computer Science Department will require a number of full time tutors in the Introductory courses CS 140 and CS 180. These tutors will be required to spend approximately 18 hours per week in lab contact with students, plus approximately the same amount of time in marking assignments. Both regular and co-op students interested in rearranging their academic terms and working as a ful time tutor during the fall term are requested to discuss their interest in these positions with Arnie Dyck. MC5183 or Jim Smith, MC5093.


## Putting Contest

The Putnam Math competition results are in and from 264 teams participating, the UW team of Doug Stinson, Matthew Smith, and Doug Wright placed eleventh overall and first in Canada. The team Coach was Prof. B. Forte.

First year student Rajiv Gupta was 51 st among 2000 students from all over North America, and was first among UW students.
mathNEWS joins all UW students in congratulating all those involved in this yearly event.

## Cute Box

## $\frac{\text { D BACK) }}{\text { OFEEDIU }}$

Cancel Sublet

## Dear mathNEWS

I was wondering if you would kindly quit printing the ad to sublet my apartment which my level-headed, conscientious and extremely intelligent roommate submitted several weeks ago (she's Cathy Hoyt in case you don't recognize the description). Apparently she doesn't read your paper, and so she did not know the ad was still being published. I don't think she answers the phone replies either.

Thank-you,<br>Colleen Kernohan

## Comment: Which ad?

## Idi Replies

To: my Committee in Waterloo,
Before I start, let me get one thing clear with you. Do not ever call me 'Dear Idi' as you did in your 'mathNEWS' letter. All the people in the world are well aware of my God-given title which appears at the bottom of this unique letter. If you do that again, I shall make sure that God punishes you for it and that punishment will be to work in the corrupt Zionist place in New York which people call United Nations and which I call the place where plans for exploiting such fast developing countries as Uganda, take place.

I would very much like to be the President of your Federation and I promise you that I'll be using my best effective methods to 'get rid' of your problems. Once you get your Prime Minister Trudeau to send a personal invitation to me, I'll be there as fast as God sends His men. I will even show Trudeau how effective it is to 'get rid' of unwanted 'problems'. Let me warn you to send me the invitation before I go to the Commonwealth Conference in June, so that I can show those other Heads of State how well an institution like U of W can operate with my quick powers!!

His Highness Major the Excellency Field-Marshal Doctor
Idi Amin Dada (Big Daddy)
\#10, 25 th January Street,
Kampala, Uganda
Comment: This letter arrived addressed to the CIA (Committee for Idi Amin), but we thought the students should see it before it was passed on to the Committee. One for mathNEWS's investigative reporting.

## Dear mathNEWS,

Hi! I saw this cute little box sitting here and thought "hey, maybe if I write a little letter and stick it in this little box, maybe they'd print it in mathNEWS and I could get my name in the newspaper". I've always wanted to see my name in the newspaper; even as a child I would do all sorts of crazy things such as running away from home or falling out of 5th storey windows in hopes that some newspaper would want to run a story on me. I would even walk around town talking to all sorts of unlikely strangers in hopes of being kidnaped or something and causing a real thrill.

So please mathNEWS, print my letter so that all my friends will see my name in the paper.

Anonymous

## SCRAMBLED EGGS

This is the last in a series of two articles. Last week's was called FILLER QUEEN. I claim sole responsibility for the pun as our Editor suggested I call the article 'Off the Record' before he heard my idea.

Now for the answers to last week's quiz. This was a difficult quiz, as I said, but I thought some people might get the answers to at least two of the questions. Nobody answered, and since there will be no mathNEWS next week I'll give the answers now, along with the questions and some comments.

The first question was:
What is the name of the movie played before David Bowie's Toronto concert Feb. 26, 1976 ?
Answer: Un Chien Andalou, a famous impressionist film of the $1920^{\prime}$ s, containing many bizarre scenes. Also before the concert and after the film, music from RadioActivity by Bowie's favourite group at the time, K raftwerke, was played.

Bowie is now (or was very recently) in Toronto and made an appearance at Seneca College playing keyboards for Iggy Pop(!), another of his favourite performers. Apparently Bowie was the one who discovered Iggy and gave him his name.

An interesting sidelight was that Iggy performed the concert entirely in the nude perhaps to get back some of the limelight from his superstar keyboard player!

The second question was:
What was the name of the group Robert Plant of Led Zeppelin left home to join? Answer: At the age of 15 , Plant left home and joined something called The Crawling Kingsnakes. If you would like to know more about this for some reason, consult $A$ Led Zeppelin Biography by Ritchie Yorke. There should be enough off-beat trivia there to satisfy any Zep freak.

The third question was:
What were the original words to the first three bars of Paul McCartney's Yesterday?
Wrong answer: "Yesterday/all my troubles seemed so/far away..."
Right answer: "Scrambled egg/how I love to eat a/scrambled egg..." This was easy for those of you who have the book on McCartney and Wings. It seems that the melody struck Paul one morning just as he woke up hungry. He just fitted the first words that came to mind. Later on, the more famous words were written...but I wonder how a song called "Scrambled $\mathrm{Egg}^{\prime \prime}$ would have done?

The final(and easiest) question was: In what year was Procol Harum's $A$ Whiter Shade of Pale released?
Answer: I included this question so that no-one would go away from the puzzle empty-handed. The date of release was almost exactly 10 years ago: April, 1967. Time really flies. I still remember that song on the charts, but it certainly doesn't seem that long ago!

Now for a rating on answers: the boldface portions in each answer above constitute correct answers.

If you got zero right, that's not really bad. These are trivia questions, and everybody has a trivial fact which will stump someone else. If you got two right, that's good. Three right is excellent, and four right means you must have seen the answers.

I noticed an article in the free chevron which might be useful to those of you with cars. Don't park your car illegally on campus! It seems that the security department will go to any lengths to remove your car from its place. The free chevron (Mar. 18) article alleges that two students watched a Honda Civic being dragged several feet from its nearly inaccessible position sideways! The driver of the Active Towing Company towtruck apparently didn't answer when asked about this unorthodox method of car removal; and the security officer present said that the driver "knew what he was doing".

Dragging a car sideways can cause damage to the car; this should be obvious to Security. The free chevron goes on to say that a legal battle for the cost of damage would be difficult. It appears odd to me that Security feels it can damage private property in the process of removing it. Sure, it's there illegally, but wouldn't a system of parking tickets be more efficient to run? This could be cheaper than the contract with Active Towing, but then again, the free chevron reports that the Administration keeps details of this contract under wraps.

Repeat: don't park illegally, unless you want the risk of damage to your car!



Hello people! Welcome to playpen6. This will be the last full-sized playpen of the term. If there is a mathNEWS next week, there will be a small playpen which will contain the answers to this week's puzzles.

Speaking of answers, here are some answers to playpen5.

Puzzle I: By moving his eye and three toothpicks, you were required to make the fish swim in the opposite direction. The final solution is shown below.


Puzzle II: Four ants are sitting on the corners of a fifteen inch square mat. Each walks toward the ant on his right at a rate of three inches per second. The problem was to figure out how long it would be before they all met in the centre of the mat.


Some people had trouble with this one. There were a couple guesses of 5.25 and 7 seconds. Somebody said it would take five minutes! As the ants walk toward each other, they form the vertices of a shrinking square, so each ant is always walking perpendicular to the one that is following him. That means, since the ant being followed is neither walking toward nor away from the ant that is following him, the ant doing the following is closing in on him at a rate of three inches per second. They start off fifteen inches apart, so it takes five seconds.

Puzzle III: What's the next term in the sequence: $38,40,44,48,54,62, \ldots$ ? This was difficult. The most common guess was 74. (Did you know that if you take the difference of terms, divide by two, and subtract one, you get the fibonacci sequence?) This wasn't quite the sequence I had in mind. You see the first term is 44 in base 12 , the second is 44 in base 11, the third base 10 , base 9 , etc., making these the remaining terms in the sequence: 112,134 , 230, 1122, 101100.

Puzzle IV: There were a couple minor mistakes in last week's three dimensional maze. Some of the down doors ( $\mathbf{x}$ ) were without corresponding up doors ( $\mathbf{O}$ ), and vice versa. But the maze was possible and several people were able to get through. Note, however, that it is not possible to get through backwards.

LEVEL I


LEVEL 2


Since this is the last full-sized playpen of the term, we will be offering a free $t$-shirt to someone randomly selected from those people who submit correct solutions to this week's puzzles. The probability of anyone winning the $t$-shirt will directly proportional to the number of puzzles they answer correctly.

Puzzle I: An express train is travelling toward a trestle at 45 miles per hour. Scroungy, out for a walk, is walking across this same trestle and is exactly two-thirds of the way across when he sees the train coming toward him. Always the mathematician-regardless of the circumstances-he calculates that if he runs as fast as he can the remaining one third of the way he'll just make it. But he also figures that if he runs back the long way, he'll also just make it.

How fast can Scroungy run?
Puzzle II: What is the largest integer that can be expressed using only the digits $1,2,3,4$ and,,$+- \times, \div$ signs, decimal points and brackets?

Puzzle III: Here we have the detailed calculation of the cube of a 4-digit number, in two separate operations. In the first operation we derive the square of that number; in the second we multiply the 4 digit number by its square. The little $x^{\prime}$ s indicate the positions of the digits. What is the original 4 -digit number?

$$
\begin{aligned}
& \mathrm{xXXX} \\
& \mathrm{XXXX} \\
& \mathrm{XXXX} \\
& \frac{x X X X X}{X X X X} \\
& \frac{\mathrm{XXXXXXX}}{\mathrm{XXXX}} \\
& \mathrm{XXXX} \\
& \mathrm{XXXX} \\
& \mathrm{XXXX}_{\mathrm{X}} \\
& \mathrm{xXXX} \\
& \mathrm{xXXX} \\
& \frac{x \times x X}{} \\
& \mathrm{XXXX} \\
& \mathrm{XXXXX} \\
& \overline{\mathrm{XXXXXXXXXXX}}
\end{aligned}
$$

Puzzle IV: The answer to each of the six clues in this crossnumber puzzle is a 3digit integer with no leading zeros. You
will notice that if any clue is taken alone, it yields more than one answer. However, when the puzzle is taken as a whole, there is a unique solution. This is a reasonably difficult crossnumber, but, as with the puzzle above, a little thought should get you started and eventually finished.

1.
4.

## ACROSS

4. square
5. Number which is the sum of the cubes of its digits.

DOWN

1. Prime number.
2. Perfect cube.
3. Sum of this number's digits $=$ product of its digits.

These should keep you busy for a while. Be sure to send your solutions into mathNEWS to win a t-shirt. Include your name and id number; the deadline is Friday. If there is a mathNEWS next week, the winner will be announced then. Have fun and good luck on your exams.

## RADIO WATERLOO??

Radio Waterloo's budget is up before Federation Council again. This year they are requesting just under $\$ 39,000$ in order to obtain their broadcasting licence and the equipment necessary to broadcast. Since this is a very major expense, we would like to obtain your opinion on the following questions. The results will be given to math's federation representatives.

1) Do you know what Radio Waterloo is? YES NO
2) Have you listened to Radio Waterloo in the past year?

YES NO
3) Do you feel that Radio Waterloo should exist and serve the students as it does now? YES NO
4) Would you support a separate fee for Radio Waterloo?

YES NO
5) If there were a separate fee, should it be refundable?
YES NO
6) Would a fee of $\$ 1.50$ per term (i.e $\$ 3.00$ per year) be acceptable?

YES NO
OTHER(specify
how much)
7) Faculty and program (e.g. Math Co-op)

## The Sporting TROB

Well, for the second consecutive year Waterloo placed second-last in intercollegiate frisbee. Like last year, the only team we beat in overall standings refused to play us, and also like last year we swept the novelty (no points awarded) categories. Unlike last year, we won two games; one by default and one by accident (fluke?).

Upper Canada College finished last, entered only in the free-style event. In this event, teams of two people demonstrate "fancy" catches and throws. A team from UWO (this was also their only event; they were afraid of us too!) won the free-style competition.

Waterloo showed a steady (monotone) improvement and strong second-half play as we were beaten $22-8,32-10$, and $30-12$ in Canadian Ultimate by McMaster, Guelph and Brock respectively. Ultimate Frisbee is a bit like basketball, but points are scored by catching the frisbee in the opposing end-zone. Guelph took the Ultimate event in a close final game against MacMaster.

MacMaster withdrew from Guts competition after being told they would have to play us. Once again, Waterloo wins by default! Guts frisbee is downright dangerous; ever try to catch a $70-100 \mathrm{mph}$. frisbee with one hand? As the Brock University Press described playing opposite one of their players: "It's like looking down the barrel of a gun." Brock's " $\mathrm{B}^{\prime}$ team lost to Waterloo 21-11, our only "honest" win of the tournament. Their " $A$ " team proceeded to avenge the loss; again $21-11$. Guelph, who had beaten us 21-4 on Saturday in the round-robin, defeated us again 21-5 in the semi-finals (that's right folks, bsemi-finalsi) rand went on to take the Guts event.

Thus Guelph, who finished a close second to Brock last year, took the championship this year.

Last year Waterloo demonstrated several novelty points. We were, for instance, the only team with a female member. We also were the only team to play Ultimate in jeans (a mistake!) and the only free-style team to use two frisbees.

This year we consistently won the initial tosses: Owen (Catfish) Liebman called it tails 5 for 5. Eventually the referee flipped half a dozen times just to see if a head was possible (it was). Now you know why they make you take stats.

Some things really didn't have much to do with frisbees. Trevor's truck broke down in Hamilton, so we temporarily lost two people; only to find three unexpected reinforcements waiting for us.

And of course there were the memorable "wet dreams", courtesy of the girls upstairs. Two of our players almost drowned..

The main difficulty Waterloo faces is that our frisbee team exists for about three weeks of the year. For instance, I arrived from the tournament to discover one of our own staffers (You know who you are, Andréi!)r could throw better than most of those who went. Anybody interested in getting co-op students together over the summer, who will be back on campus when next year's tournament comes around??

Anybody who wants to get together in Toronto over the summer to practice (Brock is thinking about an October tournament for outdoor events), please mail dwgillett on tss or leave a message in mathsoc. ** WARNING ** I'm not very good, actually...

In honour of it's new shell (not shel), the Minicomputer Lab's Nova 2 is the COMPUTER_OF_THE_WEEK. The Nova is used to control the slot cars which

The old housing has been retired to the corner, with the teletype and other pieces of obsolescent machinery, where it serves as an emergency in-house outhouse.

The following poem was contributed by Owen Leibman, who unfortunately didn't know who wrote it:

## Programmer's Lament

I really hate this damned machine, I wish that they would sell it. It never does quite what I want, But only what I tell it.

Our honourary ALGORITHM_$O F-T H E-W E E K$ is IEFBR14. Part of OS, this consists of a single instruction, to return to where it was called from. Space allocations are so kludgy that this is ac-
tually useful. tually useful...

While we're on the subject of OS, which in turn suggests HASP and JES2 (son of HASP), here's a tip for those of you suffering through work terms with these systems. If you are working against a deadline, add a JCL (ugh!) error to the end of your runs. If all else works, processing will occur as normally. Then, when the error appears (after execution), the job is flushed. This puts it into the print queue at a higher-than-normal priority and speeds turn-around.

There is a movement afoot to declare Waterloo Ontario champions at something. Suggestions so far include nim, dominoes, and spacewar (,Randall's allnight game of?).

Speaking of RANSWG, rules may appear in some future issue...
...another nite another masthead... this one is being started at $11: 57 \mathrm{pm}$ on sunday 27 th... why so very early...because we're waiting for the photon to finish grunching...and, well, we don't have nutin' better to do... we started this issue at 4 pm on thurs 24 th and sort of wandered on to the present time(12:04)... this issue is duplicated(cloned?) 1200 times at graphic services. mathSoc will be left holding the bills as the all-volunteer staff scurry off to Cuba to avoid right-wing lawsuits...
Our staff over the time period of thurs/fri/sun/mon consumed numerous hot dogs and other goodies... They were RANDALL paintS MCDOugall; JOHN TROMP deleted (rah! rah!) STEVE RISTO (who saved himself in the nick of time); WIL crossed an amazed MACAULAY; "cheech the n'jineer" rode in with an artsie who said she'd prefer to be "the nameless wonder"; (ahh time for another game of dominos); (how about a whizzz game of frisbee 0157 am ) ; (stop throwing those paper darts at me $0326 \mathrm{am} .$. . i'11 get this masthea finished sooner or later) ; DAVE please trob finish writing your sports article, please? GILLETT; we had GREGG ANDREWS in from the pub; BRUCE sorry but we gave you the wrong page to type MILLS; the gamester TOM KEITH just said he was done ( 0423 am ) ; (rah! rah! trob finished his saoift article 0506am) JOHN who we almost blackmailed into being subscription editor LEE; J.J. LONG who we forgot to mention last week \& who showed up this week as well; RON anything to be written HIPFNER; JOHANN was of key importance GEORGE; (we just discovered that we have exactly 11.05 pages 0703am); (saved!....with chunks of old mathNEWS at 0717 am ) ;ANDRE managed to work his way up to assistant-editor level IERASTS on this his 3rd issue of mathNEWS; finally we have the chronicler DENNIS MULLIN.
At this point in time (0733) my handy ruler tells me that $I$ only have another inch to go on this page (trob put that frisbee down)...aside from trob, andre \& myself the office is empty... there is one hot dog left and 5 frisbees... there will probably be a short ( $2-4$ page) issue of mathNEWS next week, it will depend on the state of our budget....should we mention the worst aircraft disaster in history mathNEWS already has 2 summer subscibers (some people are always hopeful); the mathSoc party held on march 18 th cost $\$ 105.75$ to put on... a final comment on the/ The licensee's right to freedom of expression must not supersede the public's chevron. This is taken from HANSARD. It was made by the CRTC ${ }_{\text {, }}$, for the te expression of differing views on matters of public concern.


[^0]:    Wanted: Someone to do a programming job for Prof Godambe (Statistics) under the supervision of J. Gentleman. Only a few hours of work. The job involves minimizing a function of several variables, and will require the use of the appropriate IMSL routine. If interested, mail JFGENTLEMAN.

