3D Tic Tac Toe

LETTER TO THE EDITOR

The following is a letter recieved by mathNEWS from a former student here at UniWat, Dave Sheppard. We wouldn't be able to face ourselves if we sent this rag off to Graphic Services, and Dave's appeal was delegated to anything less than the front page. It is seldom that you find Letters To The Editor here, but we think you realize why when you read it.

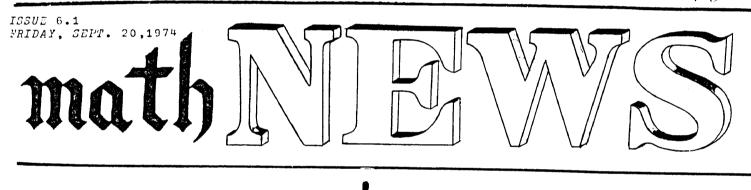
Dear friends at UniWat:

A few years ago I was on top of the world as a doctorial student in math with a part-time teaching assistantship and a passion for playing squash. Then the roof caved in. I started to become tired very quickly and had difficulty in maintaining my balance. The verdict was Multiple Sclorosis, a disease of the nervous system which destroys the insulating myelin sheath.

My wife obtained a job in Toronto, so we packed our bags and moved. I continued the doctoral program on a part-time basis, but abandonded it recently for lack of progress.

Over the past few months I have derived great pleasure from playing solitare at 3D tic-tac-toe. Although a pessimest might say that I always lose, I feel optimistic enough to offer the accompanying challenge.

cont'd on page 2



CAREERS DAY

Thursday Sept. 26th, 1974

On Thursday afternoon beginning a 1:30 pm Math classes will be cancelled so that all Math students will be free to attend the meetings, listed below, outlining the many possible careers available to graduates of Mathematics.

AGENDA

	mc2065	Room Numb mc2066 mc3	oer 6003	mc3005
3:30	Incur	Fed.Gov. Pro C.A. Sta C.A. App.M Prov.Gov. St	τ.	Finance Banking Marketing Comp.Sci.

If any students are interested in introducing these lecturers (very short and the intro will be written up for you) please see Jim Langer in the Math Soc Jffice M+C3038.

This Week - -

What to do when a)your'e out of beer (or wine, or booze, or (yech!) shaving lotion). b) the boob tube is busted.

Fri. Sept 20 : Math Soc pub at food services, mathies 75¢ feds \$1.00 Band - All in one breath

Mon Sept 23 : Campus Centre pub 12 noon to 1 eh emm

Tues Sept 24 : Campus Centre pub 12 noon to 1 eh emm

Wed Sept 25 : John Mills Cockell concert Campus Centre pub 12 noon to 1 eh emm cont'd on page 3 If you think that you are a good 3D Tic-Tac-Toe player try playing someone who thinks he's better. Here are the rules:

THE REAL PROPERTY AND INCOMENTS

1. For a \$3 fee I get first move. If you want first move, the fee is \$5. In either case, if you win, a cheque for \$25 will be sent to you.

2. The moves are described by triples of numbers. Thus (2,1,4) would indicate a move in the first row and fourth column on the second level of the board.

3. I am always X and you are always C. If I go first, my first move is (1,1,1). If you go first, my move will depend on your's.

4. If you decide to play, please display the moves on 4 4x4 square arrays which represent the board in order from left to right. Also, record the moves as ordered triples and write them in 2 columns -- the first for my moves and the second for yourS. We will send this page back and forth, so please write your name and address on it. My address is:

> Dave Sheppard 185 Shaughnessy Blvd. Apt. 1705 Willowdale, Ontario M2J 1K2

5. All aids are permitted (computers, ESP, etc.). I will only use a pencil.

6. No new entries will be accepted after December 1st, 1974. A summary of results will appear in mathNEWS.

7. Net proceeds will be donated to Multiple Sclorosis Society for medical research purposes.

HE Y!!

Next time you're in in M+C, come to room MC3038 and:

a) get your ID card heat-stamped. The purpose of this is to identify you as a Mathie when you come to Mathsoc events, thus enabling you to be admitted at lower prices.

Cost to you: NIL

b) pick up your Anti-calender, which is good for choosing good profs, avoiding bad profs, and getting a good laugh.

Cost to you: NIL

c) pick up a T-shirt. Youit to the campus, and the world, on your chest/bosom, whichever is applicable.

Cost to you: ASK

THE RIBBIT STORY

There is much to be proud of concerning Ribbit in the Computer Science Club, after all it finished third in the world chess championship held this summer in Sweden.

As you probably know by now, Pibbit, the CSC Chess program won the Canadian Chess Championship. Ribbit was originally the product of Ron Hansen, who was doing a project on Artificial Intelligence as part of his Graduate work. After he was done, Jim Parry not the Computer Science Club to take up the project. The program was eventually named Treefrog, because it used a tree structure to search for moves, and because it "frogged" pieces (such as turning a king into a pawn). The term "frog" was invented by the 'Bun boys to describe something that gets modified into something it shouldn't be by unauthorized pelce of software. One example is when you sign on as "jqpublic", but get "frogged" into "lw%g*#bp!>s;" by the system. This means all your files become unaccessible (you can't save anything), but you don't pet your resources updated when you sign off.) Later on, Jim Parry took a liking to the name Ribbit (the sound a frog makes. You probably thought the sound a frog makes was a croak. Don't believe it. Froms ribbit.). No one opposed the name (?) so now it is officially called Ribbit, and is In the Chess Federation of registered Canada as Ribbit. Although Ribbit has had It's problems, such as the way it used to try and force a draw if it thought it was losing, even to the point of avoiding the chance to mate it's opponent, the CSC chess project now has a reasonable, but resource burning, computer chess player.

IMPORTANT!

IMPORTANT DATES FOR CO-OP MATH STUDENTS Oct.7-Last day to submit resumes -(10-15 typed copies,8 1/2x11) -Job application cards are available -Job postings begin OCT.28-NOV.1-Employer interviews NOV.4-All employer and student choices

in by 4:30pm NOV.13-Student sign-ups

NOV.14-15-Unplaced student interviews DEC.26-Work term begins

ALL CO-OP INFO IS POSTED ON THE CO-ORDINATION BULLETIN BOARDS OUTSIDE THE 3RD FLOOR LOUNGE

One item of interest that came up in Tuesday's meeting was that the Math Society is looking for an Administrator. Anyone interested is asked to contact the MathSoc office, M+C 3033, between Monday, September 23rd, and Wednesday, September 25th, for further information.

MATH SOC MEETS

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ie is ie On Tuesday, Sept. 17th, the Math Society held its first (of many) Council meetings. Things got off to a roaring start when the President's welcome back speech had to be cancelled due to the fact that there was no president to give the President's speech. Even though a fair bit of the agenda was cancelled for one reason or another the council managered to pass a number of motions and to present a few reports.

Amoung the reports given were the treasurer's report, (we have about \$2,000.00 left from the previous period, but there is about \$2,000.00 worth of bills outstanding), the Social report, (mainly about the orientation and the upcoming flath pub), and a report from the Committee of External Affairs.

Further along in the meeting, after a short discussion as to whether the position of Speaker of the Math Society Council was an office or position, it was moved that Andrew Haycock, a graduate student of Math, be the Speaker. The motion carried.

It was also decided to hold byelections for two thrid year regular seats and six first year seats, three each to regular and co-op. Calvin Barrett, Robert White, and Debbie Wilson were appointed by council to act as the Elections Committee. Also confirmed in her position was Beverly Stewart, assistant manager, coffee & donuts. cont'd from page 1

Thurs Sept 26 : Campus Centre pub 12 noon to 1 eh emm *******

- Fri Sept 27:
- **Next issue of mathNEWS don't miss it
 (our ed. will cry)

IFF a) and b) (above) are true, and today is Sunday, try this:

- Show that the equation
- $X \star \star N + Y \star \star N = Z \star \star N$

where X,Y,Z,N \notin Intergers+, is impossible (i.e. not true) when N > 2.

Clue: Euler, Dirichlet, Lagrange, Kummer and Riemann tried to prove or disprove the above, in vain.

N.B. to Dr. Tutte: after proving fourcolour theorem, try this.

5th. FLOOR GRAFFITI

Professor Geoffrey Shephard (U. of East Anglia) "How to Turn a Zonotope Inside Out" 15.30 friday september 20th m+c 5158

Professor Gian Carlo Rota (M.I.T.) "Cayley Algebras" 16.30 friday september 20th m+c 5158

At this point our roving reporter got lost (Frosh!), so we suggest you get yourself up to the 5th floor of m+c, and see the graffiti our profs inscribe on the walls/doors/bulletin boards.

MATH SOCIETY - BY-ELECTIONS

for the following seats: 2-3rd year reps-reg 3-1st year reps-reg 3-1st year reps-co-op

ELECTION COMMITTEE nominations-open 23 Sept. 1974 - 9:30a.m. -close 30 Sept. 1974 - 4:30p.m

nomination forms available in M+C 3038

BURLOAF

Welcome to Waterloo.

Frosh: You are (or should be shortly) finding out that U of W is not what all the pamphlets and friendly Campus Day people said it would be. Now that the administration has your money, you will have to fend for yourself.

Returning Regulars: You already know what to expect here.

Returning Co-ops: Aren't you glad you only

have to stay here for four months? Fools like me: Don't you regret planning your life so that you got stuck here twelve months a year?

All you people who were led to believe that the University of Waterloo is a mecca of computing facilities by the various pamphlets and Computer Science Days, should be now finding out the truth. Confusing Centre equipment (all those boxes, some with impressive panels of lights, that you see when you look down into the Red Room (as it is known) from the second floor), may look facinating, but getting to use it will usually be quite another problem. About the only access you will get is through the Debug terminal. Here you get wait in line, run your job, wait some more, and then pick up your output. You are generally limited to about ten pages and five seconds of computer time to run your job, which is good enough for class assignments and not much else. A few years back, access to the Debug was free and easy. You merely took your program, added a few needed control cards, and ran it. A couple of years back, the \$ACC card was invented to help keep track of just who was using the system. This meant you had to have (or steal) a valid student ID number, which the system recognised. You then made up a \$ACC card with this number and the course for which you were running the job. Recently, the policy by which users paid for computing services was changed, and along with this the Debug accounting system. Now, in addition to your student number, you give a HASP number, which is assigned to your class, and a lock, which you can alter. The HASP number has a password which you are not told about. However, the Debug is under control of a peice of software adept at wasting paper, known as the Monitor. It checks your ID number and lock, and if valid, it looks up the HASP lock, and passes off your job to be run. This allows even more security than the previous type of \$ACC cards. This system has some added features such as the one that allows you only to run a certain number of jobs, after which your number becomes unusable.

The Math Faculty's Computing Fallacy, the Honeywell 6050, is run differently. Here, if a professor decides his class needs account numbers, lists from the registrar's office are used to create "user id"s. If you get a user id for a course, you will be given 12 blocks ("llinks") of file space and \$500 worth of resources. The file space is enough to save a pitifully small amount of text (although usually enough for class assignments). Unless you

are a person who spends his time running extra-curricular things, you probably won't burn up the entire \$200. In previous years, to get a number, all you did was punch up a card with your name, ID number, and course, get your professor to sign it, and then hand it in. This system was not without flaws, though. A note to Honeywell users: Much software has been written by U of W programmers, or obtained from sources such as Bell Labratories. It has been noted, that generally, the more you use this software, and stay away from Honeywell supplied stuff, the more work you'll get done.

Another change that has happened in the disappearence of generaluse numbers. Honeywell's USER1 was the first to go, it Ìt was vanished in October last year. replaced by student accounts obtained by submitting a card to your professor. This summer, APL's GENERALUSE numbers vanished. This was timed to assure few people were on campus at the time, so that there would be little fuss made about the disappearance. Now, unfortuante undergrads who cannot get an account number through legitimate channels will probably have to steal one. During the summer, numbers set aside on APL for use by Computer Science Days became quite popular. On the Honeywell, recently the CSD numbers became popular in the same way, as people waited for their legitimate ID's to be entered. However, these numbers becoming exhausted of rapidly are resources, and so soon the unfortunates that remain may be back to rooting through terminal room garbage cans in search of the elusive password.

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This summer saw the rebuilding of the two terminal rooms. Near the beginning of the summer, the Honeywell terminal room layout was altered, allowing more terminals to be crammed into the room. It also facilitated much more cramped conditions for the users of the room. Early this term, the APL room was similarly altered.

This term sees the introduction of a number of new vending machines in the math lounge. Here you can try your luck at matching your wits (and sometimes your brawn) with special gambling machines where you can even win the odd snack. Although these new vending machines took little time to gain a reputation for giving half filled cups of coffee, and no change back from your quarter for overpriced snacks, things aren't that bleak. Lucky winners include the person who inserted the correct amount of money for one cherry pie, and got two, plus change, as well as the person who paid for one bag of Salt and Simulated Vinegar Flavoured Chips, and ended up with about twenty instead.

Last term, we offered subscriptions to all those people who wanted to know what was happening in the Math Faculty while they were away for the summer. The plan was moderately successful, and again the service is being offered this term. date, we have thirteen subscribers. To subscribe, all an individual has to do The supply us with an address and \$1.25. money is used to cover the cost of envelopes and stamps for mailing out the issues of mathNEWS. Anyone who wants one can have a subscription, the offer is not open just to mathies.

One last note...

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To all you frosh: Hi there from SWE.

For all you people who didn't show up at the mathletics meeting on Monday or for those who popped in to say they were there and lef, there is still a chance to play mathletics.

mat

If you signed one of the lists then your team captain will probably phone you to see if you still want to play. If you didn't leave a phone # then your'e out of luck unless you can find your team captain or see a notice on the mathletic's bulletin board (located across from the empty trophy case on the third floor at the front of the building) pertaining to your sport.

In the event that you were too lethargic to even sign your name yet, we have pre-selected at random some of you people and signed you up alreaky. So speak to the captain of the team for which you think you may already be signed up and see if you have already won a spot on the team. In the event you've lost out in our contest for a limited time only we will let you sign up anyway without paying the late fee (remember you had to bribe the university with 10 bucks to let you back in if you paid late) of 2 beers to the captain.

FED REPORT

As federation rep I'd like to welcome the first year students to the federation and welcome back the returning undergrads in the Math faculty.

Since I last wrote this column for mathNEWS in July a great deal has happened in the Federation. At the Aug. 11 meeting (a 5 hour marathon) the salaries and honoraria committee brought down a report that was potentially devastating to President Telegdi. However members of council rallied to Telegdi's support and a watered down version of the report was accepted. On Aug. 28 an emergency meeting was held to find solutions for the severe student housing shortage. H.C.Vinnicombe attended to explain the University's position. After ^{nleas} from Telegdi, John Shirthall (cabinet member responsible for housing), and Terry Harding, council voted to authorize the erection of tent city, as a temporary accomodation for students and as a measure to draw attention to the shortage of decent housing in the K-W area for students.

If in doubt about your status with a team contact the people below for further info. Flag Hockey -- Dave Clark - Tent City

Flag Hockey -- Dave Clark - Tent City Hockey -- Doug Marshman 884-6838 Floor Hockey - Carl Mecdrum 576-4866 Co-ed Volleyball - Bob Pascoe 744-7447

ETICS

All others - Gary Dryden Mathsoc office ext. 2324

Note: Some sports start later in the term so the captain may not be organized enough yet to contact all the team members. Just make sure if you want to play someone knows about it.

FLASH:

Help Wanted: A good kicker and punter for the flag football team. Hours lousy, pay lousy, but a lot of fun. Applicants for the job will leave their name, address and phone number on the blackboard in the Mathsoc office as soon as possible. Job interviews Tuesday Sept 24 at 5:45 on the Village Green Field #2 beside Village I during our game.

As of today tent city is still up with about 10 residents. At one time about 30 would stay per night and a total of 80 have registered. Tent city will close soon having accomplished one of its objectives. The housing shortage has been somewhat alleviated but many still need help.

Upcoming soon will be the Federation by-elections. Une of the other Math reps,Cindy Harris is resigning her seat to run in the Arts faculty. Anyone interested in running must be nominated in the Fed office by Sept 24. The other 3 Math reps,making a total

The other 3 Math reps, making a total of 5, are Janice Shaver, Chris Trothen, and Jerry Lenders and I still hope to arrange a meeting with them where you can come and ask questions.

Hopefully I will be hearing from the Math students soon. I am available through mathNEWS in the Math Society office and my home phone is 884-6347. I hope to see you involved in the Federation.

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RXA IGIGY WLJMNQLM NJYY DOR GFFAL JD RXJO JODIA MIA RQ YGKE QT WLJMNQLM AMJRQL. ZQYIDRAALO NAYKQPA.

NA NJOX RQ WJZA OFAKJGY LAKQWDJRJQD RQ LQWAL PGUOA NXQ TQIDM G MJORJDKR OQYIRJQD RQ RXA YGOR WLJMNQLM.

> Name _____ Telephone ____

In this ungridword each letter represents another letter. The code is consistent throughout the passage.

The winners of the last gridword are: FAITH WHYNE, CARL THOMPSON, NOEL ZELDIN, R.S. ERNST, JUDY BALL, ELIZABETH WILLIAMS, MARTHA KROL, PAUL BUSCH, DOUGLAS HOLMES, and CELIA MCINNIS.

There were nine other correct solutions submitted by: John McDonald, Kevin Schilling, John Chamberlain, John Armstrong, John Walker, Elly Bronk, Dan Shepherdson, Keith Claxton, and RCGER MASSE.

To submit your solution you can: 1. Mail it to mathNEWS, MC3038,

U OF W. 2. Put if in our mailslot in the

mathSoc office (MC3038).

3. Put it in our MAILBOX outside 3rd floor lounge.

A T-shirt will be given to the correct solution picked at random (the writer of the solution will be awarded custody of the T-shirt until the solution reaches 18).

FAIR(?) TRADE

mathNEWS will trade you one T-shirt for any Gridword that you design that we use. Now is that fair?

WE GOT SOME MAL

Received from the Gazette:

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Congratulations on your freshman issue-- it's really good. stanislaus v. gazette FROSH 1SSUE'S

CORRECT SOLUTION 8 3 9 4 8 2 3 14 5 1 9 5 15 ъ 8 9 2

ATTENTION FROSH

The Social Hiererchy at Uniwat -a primer for math freshman

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The Truth about Uniwat

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Now that you have been exhaustively screened and accepted into the Faculty of the carefully maintained Mathematics, facade which surround U of W can be dropped and you can be told the truth about our magnificant institution. This closely guarded secret is told to you only after you have been subjected to the most scrupulous tests and met the Faculty's incredibly high standards. You are doubt-less unaware of the extent to which you have been investigated. Each freshman has passed stringent tests of mental prowess, physical proficiency and spiritual vigor. This year's frosh are the most incisive, all knowledgeable, fertile and penetrating We know group of freshman yet assembled. you will guard the truth carefully and discuss it with no one outside the Faculty.

Eight centuries ago the 81 greatest mathematicians, 27 known as "Masters of the Universe" and 54 as "Commanders of Eternity" resolved to rebuild the world's shattered civilization and founded the Society of Mathematics (S.M.) to promote those ends. (For several centuries previous the world's peoples had been harassed and terrorized by barbarians know as "Jineers". These brutes came in such great numbers that they are often referred to as "n-Jineers".) Under the leadership of the 81 Immortals (as they are known collectively) S.M. has made great progress and now controls 5% of the earth's surface and 37% of the population.

(cont'd on page 7)

(cont'd from page 6)

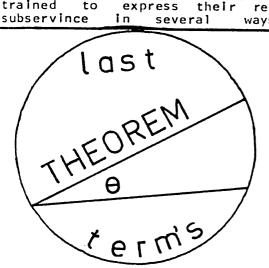
In 1957 S.M. founded the University of Waterloo to act as a front for the North American Control Centre. Two of the 27 (Aczel and Tutte) and six of the 54 (Fischer, Wertheim, Berman, Kerr-Lawson, Sprott and of course our beloved DEAN Forbes) were sent to supervise and coordinate our efforts to rule the continent.

It is clear, then, that Uniwat is not what it appears.

The Faculty of Arts, Environmental Studies, Kinesiology, and Science were set up to provide courses with which we mathies may fill out our degrees and to provide extra buildings to accomodate the overflow math classes. Students were recruited to fill these faculties so as to keep the instructors in form for the day they are blessed with a mathie to teach.

The Caste System

It is important that you realize that you are at the top of a strict caste system. Math >>Sci>arts=Kin=env Stu.>>Eng. Non-mathles (called "underlings") have been trained to express their respect and subservince several ways. For



BEDID: Prove that any two given numbers are enual.

PPRGE: Consider the following equation:

$$q = \frac{mx + nv}{m + n}$$

Now, consider the special case when n = ^:

$$a = \frac{mx + 0}{m + 0} = \frac{mx}{m} = x$$

Consider when m = 0:

$$q = \frac{0 + ny}{0 + n} = \frac{ny}{n} = y$$

Each of these special cases includes the one special case when m = n = 0. From the above two equations, we have:

q = x = v

anybody suspicious of the equation

$$mx = x$$

With m = 0 should see the validity in the following step:

lim <u>mx</u> X ____+0_m

example,when a mathie enters a room full of underlings, all Science students will stand at attention and stare at their feet; Arts students will prostrate themselves and whimper; Engineers will freeze in whatever position they may be in (usually missionary - no imagination wha phrase "The Rigid Fool". imagination whatever!) hence the General Information

1. Mathies have right-of-way in all circumstances (including line-ups)

2. Underlings speak only when spoken to (with the exception of Science grad students who may in extraordinary circumstances initiate a conversation with a mathie provided it begins "By your leave, Noble Sir", or "If it pleases you, Your Grace").

Mathies associate with underlings only for purposes of amusement or sexual gratification

We at mathNEWS are confident that you will adjust rapidly to the new situation and will make an effort to inform you of the subtleties of the Social Hierarchy. If you have any questions at all, just ask us. magoo

RECID: Prove that any two numbers are equal.

numbers, m and n. Take PROOF: two Represent the difference by x.

We can then say:

$$m(x^{2}-(m-n)x) = m(x^{2}-(m-n)x)$$

We can't divide this equation by $x^{2}-(m-n)x$, because this is division by zero. However, we can apply limits to this problem:

$$\lim_{x \to m-n} \frac{x^2 - (m-n)x}{x^2 - (m-n)x}$$

This limit is 9/0. Ve can therefore apply L'Hopital's rule, which states:

$$\lim_{x \neq a} \frac{f(u)}{g(u)} = \frac{f'(a)}{g'(a)}$$

Ve have:

$$f(x) = g(x) = x^{2} - (m-n)x$$

So

f'(x) = g'(x) = 2x - (m-n)

Evaluating at m - n,

 $f^{\dagger}(x) = g^{\dagger}(x) = m - n$

Now, if m-n = 0, there is nothing to prove. If $m \neq n$, then $m-n \neq n$, then

$$\lim_{x \to m-n} \frac{x^2 - (m-n)x}{x^2 - (m-n)x} = \frac{m-n}{m-n} = 1$$

Dividing through the original equation then vields

LONG GONE

For those poor unfortunates who still don't know, yes! we have no lockers. After a three hour ordeal on part of those who wanted lockers and those who issued them all lockers under supervision of the Math Soc were issued. In what can only be described as a very unfortunate incident it was found that there were more lockers than there was locks. This situation did not hold up the methodical issuance of lockers and at this very moment (we hope) great effort is being applied to remedy the situation. So until next January (or May if you are a co-oper) the rush is over.

grapes & milk (fermented)

On Saturday, the 14th of September the Math Society held a wine and cheese orientation party for the first year students. This event (thought by some to be a partial success) is to be repeated again this Saturday. It is hoped that more people will show up, particularily freshmen (freshpeople??). Of the approximately 85 persons who showed up half were second or third year students.

This party is a chance for the freshmen to meet various members of the faculty, Math Soc and other freshmen.

(Note: mathNEWS will print your classified ads FREE OF CHARGE. Just jot them down on a slip of paper, take it to room NC 3038 and have someone there deposit it in the mathNEWS file. Or, drop your ad in the campus mail (a free service) addressed to: mathNEWS. MC 3038.) ADS

ADD OR DROP?

DEADLINE FOR ADDING YEAR/FALL COURSES September 27, 1974

DEADLINE FOR DROPPING FALL COURCES November 4, 1974

1st AND 2nd YEAR STUDENTS

1) Go to Operation Mathstart (5th floor m+c, follow the signs) with your timetable changes.

2) See your Faculty Advisor and get your changes' approved. Advisor will retain the yellow copy.

3) Take the white copy to the Scheduling Centre (it used to be in the PAC, better check this out with your F.A.)

4) Keep the pink copy for your records, as Mr. Computer has a habit of getting rid of conflicts by scheduling new ones.

5) Go back in one or two days (they'll tell you when), and pick up your new conficts.

- 6) Go back to (1).
- Do not pass go.

Do not curse-Das Computenmachine might hear you, and then there's no hope for you at all.

Do not pull Mr. Computer's power plug, no matter how tempted you are. 7) We at mathNEWS wish you good luck,

you'll need it.

MAIBOX

We are pleased mathNEWS has a new mailbox. The box is to announce located for easy access on the third floor outside the math lounge. It will be very easy for you to contact mathNEWS since you longer have to wait until the mathSoc office is open.

mathNEWS-- is a news weekly(every other week in the summer) nublished at the University of Materioo, Waterioo, Untario, Canada. Printed on campus at Granhic Services, mathNEWS is financed through mathematics society fees. The views and opinions expressed herein are the sole responsibility of the mathNEWS staff. We welcome your letters and submissions and we can be contacted at mathNEWS,M&C 3038, Our weekly deadline is %130pm, Tuesdays, with production that evening in M&C 3011. Feel free to dron in. Circulation this issue1500

Well here we are (both of us) wishing we hadn't tried competing with the hockey game at 6:00 AM.... one thing we have certainly proven.... the 'bun draws flies.... tonight we have to thank, for special help.... rghansen (helpful mail and stray out-put), Earl Bowman (coffee & donuts), Philbert (something or other, I think?) and probably someone else too.... maybe....

Tonight we were Mike McGowan, Pete Raynham, Mark Shields (it just wasn't your day was it??), RAG White and Mike (what was your last name?) (who almost made it), and (the survivors!) Jim Mantle and Randall McDougall.... Next mathNEWS is Tuesday sept 24 in MC3011.... don't miss it!!!!