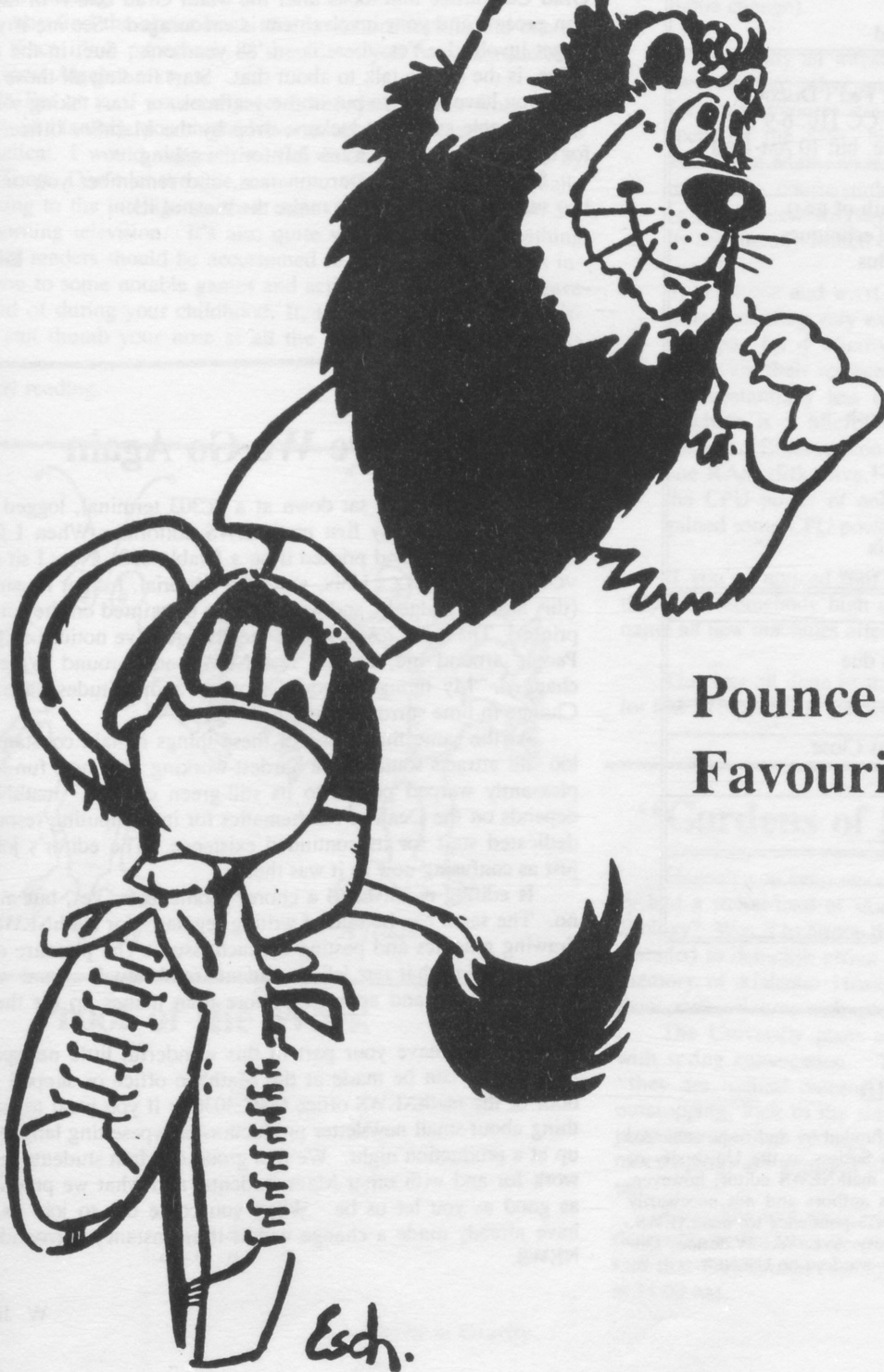


Volume 44 Number 1

Friday, May 15, 1987

# math NEWS



Pounce de Lion's  
Favourite Newspaper...

## LookAhead

<b>Cinema Gratis</b>	
May 20	<i>Disney Double Feature</i> The Great Mouse Detective The Sword and the Stone
May 27	Sword of Light Ladyhawke
June 3	Another Fine Mess Revenge of the Nerds
<b>Fed Flicks</b>	
May 15-17	The Colour of Money
May 22-24	Aliens
May 29-31	Peggy Sue Got Married
<b>Theatre Stuff</b>	
May 15	Auditions for "Honest Fed's Discount Comedy Warehouse," CC 110, 6-9 PM
May 16	Same thing, same place, but 10 AM-1 PM
<b>DCS Courses</b>	
May 19-21	CMS Part II (The Wrath of IBM)
May 25	Unix Documentation Techniques
May 25-27	Intro. to WATFILE/Plus
May 26, 28	Intro. to SPSSX
May 28, 29	Intro. to SCRIPT
June 1, 3	Intro. to WordPerfect
June 2	Intro. to WATFOR-77
June 2, 4	Intro to SYSTAT
June 3-5	Intro. to Apple Macintosh
June 8, 9	Intro. to C
June 8, 10	Advanced WordPerfect
June 9-11	Advanced VP-Planner
June 10	Using Microsoft C
June 11	C Programming in Unix
June 15, 17	Sun Workstation Overview
<b>Co-op Reminders</b>	
May 15	Want Ads available
May 19	Job Application forms due
June 4	Interviews begin
<b>MathSoc</b>	
May 15	Class Rep Nominations Close
<b>Math Faculty</b>	
May 19	Course Add Deadline
June 1	Course Drop Deadline
<b>mathNEWS</b>	
May 25	Production night
May 29	Next mathNEWS out

ISSN 0705-0410

mathNEWS is normally a bi-weekly publication funded by and responsible to, but otherwise independent of, the Mathematics Society at the University of Waterloo. Content is the responsibility of the mathNEWS editor; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or mathNEWS. Send your correspondence to: mathNEWS, MC 3036, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada. N2L 3G1 or to userid mathnews@watdcsu on USENET.

Editor: W. Jim Jordan

## Prez Sez

Well, the summer of '87 is upon us, and hopefully we can look forward to some fun in the sun between lectures. MathSoc will need your help to generate that fun. There are still a few MathSoc office hours to be filled, so come in and give us a hand.

Class elections for 2B, 3A, and 4A are going on with nominations due in MathSoc today. 2B has one position open; 3A and 4A have 2 positions. If there are any questions please talk to Daryl, our C.R.O.

Attention all you 4A's. We are now the graduating class! As a result of our new-found seniority, there are a few things we have to worry about. Graduation Pictures are only a month away. The Math Grad Committee that looks after the Math Grad Ball is in the formation process and your involvement is encouraged. See me if you want to get involved. Yes, there is an '88 yearbook. Sue, in the MathSoc office, is the one to talk to about that. Start finding all those silly pictures you have taken to put in the yearbook, or start taking some!

If people still want lockers, drop by the MathSoc office and sign for one. There are still a few left for the asking.

Start working on your sun tans, and remember you only spend two summers on campus so make the most of it!

Bill Tilford

## Here We Go Again

Five years ago I sat down at a vc303 terminal, logged on to the 'Bun and drafted my first mathNEWS editorial. When I finished, I called up troff and printed it on a Diablo 630. Now I sit down at a vc404, log on to DCS Unix, write the editorial, format it using troff (this hasn't changed), and wait for it to be printed on the Imagen laser printer. These are just a few of the changes I've noticed in five years. People around me, around mathNEWS and around Waterloo have changed. My thoughts, goals, motives and attitudes have changed. Change in time surrounds us all.

At the same time some of these things remain constant. Waterloo still attracts some of the hardest-working and most fun-loving and pleasantly warped people to its still-green campus. mathNEWS still depends on the Dean of Mathematics for its computing resources, and dedicated staff for its continued existence. The editor's job remains just as confusing now as it was then.

Is editing mathNEWS a chore? Sometimes, yes, but most times, no. The same can be said of writing regularly for mathNEWS, and for drawing graphics and pasting up each issue. The pleasure of producing something that our fellow students read, laugh at and with, think and talk about and appreciate more than makes up for the time we spend doing it.

You can have your part in this wonderful little newspaper, too. Submissions can be made at the MathSoc office or slipped under the door of the mathNEWS office (MC 3036). If you want to learn something about small newsletter production or typesetting languages, show up at a production night. We're a group of Math students that likes to work for and with other Math students, and what we produce is only as good as you let us be. When you come out to join us, you will have already made a change within the constancy surrounding mathNEWS.

W. Jim Jordan

## Fiction is Stranger than Truth

Here are some book selections that may be of interest:

*Four Minutes to the Job You Want* by Geoffrey Lalonde. This book might help you during your next job interview (co-op, grad or otherwise). Contains help on doing resumes, how to prepare for interviews, and tips on finding work in the real world after graduation. It's quite relevant, especially since it's written by a Canadian. You may find a few of the ideas in there a bit radical, but then again, you often need to be a bit radical during the job search.

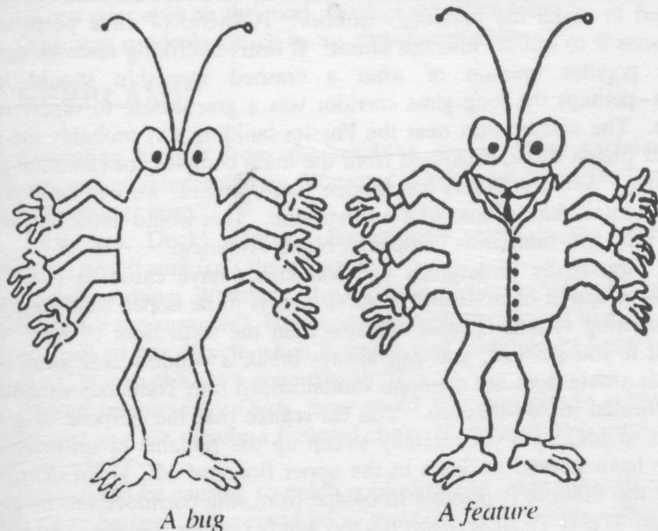
The four minutes in the title refer to the initial portion of a job interview in which the employer is most likely to decide if the interviewee gets the job. The book discusses this trait of an interview, and it also discusses why you should come to your interview in predominantly blue clothing.

You may find the above book in a bookstore such as the one on campus. Since it's a paperback, it should set you back considerably less than most Algebra texts.

While I'm at it, if you really get bored during your work terms (especially in Pinawa), you might have to resort to something a little more practical. I would suggest the *Kids Book of Fun and Games* by Rudi McToots. Don't let the title scare you off too much; it's actually less insulting to the intelligence than most of the stuff you see on Saturday morning television. It's also quite weird at times (something mathNEWS readers should be accustomed to by now), but it does introduce you to some notable games and activities you might not have even heard of during your childhood. It, too, is Canadian and therefore you can thumb your nose at all the free-traders by buying this tome.

Happy reading.

The Stranger



## Proof of the Week

$$\lim_{n \rightarrow 0} \frac{8}{n} = \infty$$

Hence

$$\lim_{n \rightarrow 0} \frac{2}{n} = \infty$$

Center of Gravity

## Computer Re-organisation

Some of you probably have noticed that WATNOT is now WATMATH, what was WATMATH is now ORCHID, and that WATROSE and WATLION have become ROSE, LION, TIGER and LOTUS. These changes were prompted by several things, some of which are:

1) all communications functions were transferred to WATNOT. In order to not confuse the rest of the civilised world (because they all know that our communications machine is named WATMATH), WATNOT was renamed WATMATH. This necessitated that the old WATMATH be renamed to something else. ORCHID was chosen. (By communications I mean printers, news (*i.e.*, readnews and rn) and email. Only the news and email functions necessitated the name change).

2) eventually all software maintenance activities will move off of ORCHID onto other machines, and ORCHID will become available for student/course usage. (In effect we gain a machine without spending the \$\$\$). Note that ORCHID is totally owned by the Faculty of Math, so it can do with it whatever it pleases—such as make it a course/student machine, unlike most other machines (*e.g.*, the new WATMATH) which are research machines paid for by DEC money, which can't really be used for courses.

3) WATROSE and WATLION were old (very old!) VAX 11/780's that were becoming very expensive to maintain. So, they were sold to help pay for 4 MicroVAX II's (ROSE, LION, TIGER and LOTUS), which are their replacements. The MicroVAX II's are expected to be substantially less expensive to maintain. Each replacement machine is a MicroVAX II with 16Mb of memory, 16 asynch ports, an Ethernet connection, a TK50 cartridge tape drive, and one RA81 disk drive. Note that each MicroVAX II had about 0.9 the CPU power of one of the older machines, so in theory we gained some CPU power because of the switch.

If you've noticed that the new names seem to be flowers, well they are. Somebody high up in MFCF likes flowers, and decided to name all new machines after them. Hmmm.

This was all done in the grand old tradition of trying to do more for less. Hopefully it will work out successfully.

derly

## “Gardens of Stone” Opens at UW

Haven't you been wondering over the past year *why* the University had a trailer-load of stones placed in the lawn between Math and Biology? Was it to annoy the green men who cut the lawn? Were they installed to demolish errant frisbees? No, these rocks were installed in memory of Malcolm Heaton, one of the first students to graduate from earth sciences with a bachelor's degree.

The University plans an official opening May 29th, to coincide with spring convocation. The stones were placed so as to look like “they are natural outcroppings” (for another example of a natural outcropping, look to the site of the W. G. Davis Building). To complete the natural setting, little tiny bronze plaques (more natural outcropping) are attached to the rocks, describing each mineral in detail.

According to a news release from the University of Waterloo, undergraduates have not been invited to attend the opening (but nobody said that they couldn't come, either—typist). The event will take place at 11:00 AM.

Homer Watson

## Prof Quotes

### *The Triumphant Return*

Welcome back to another term of that fun-filled column which proves that it can be worth paying attention in lectures. Submitted for your approval: some of the best from last term, and a head start on this one. Write your favourite prof comment down and drop it off in the MathSoc office or slip it under the mathNEWS office door (MC 3036). Remember, the more quotes we have, the better our printed selection is, so keep them coming!

"Why is what I've written there true? Well what is written there isn't really true, so I don't have to answer that question. However, having said that, there must be some reason I wrote it."

Dave Taylor, CS 350

"You can do this in a number of ways. IBM chose to do all of them. Why do you find that funny?"

Dave Taylor, CS 350

"The variable is NEWed, but nothing has been violated yet."

P. Buhr, CS 354

"Now this is a totally brain damaged algorithm. Gag me with a smurfette."

P. Buhr, CS 354

"You have such delicious views of cyclopropane."

R. Friesen, CHEM 124

"Prolog will try to find another answer. It may get lost along the way, but it will try to find one."

Maarten Van Emden, CS 443

"The process can check if this value is zero, and if it is, it does something child-like."

Forbes Burkowski, CS 454

"Is it a really good acid, or just half-acid?"

R. Friesen, CHEM 124

"I'm trying to improve my lectures. Of course, you can't do that if you don't know what you're doing!"

Maarten Van Emden, CS 443

"Well, about 50% of the symbols are right, anyway. Don't just copy things down blindly."

J. Wainwright, MATH 140B

"There's only a few subgroups. Well, there are infinitely many..."

P. Hoffman, PMATH 344

"We should have had a national holiday last year; it was the 125th anniversary of when Weierstrass first used the  $\epsilon-\delta$  notation in his classes."

G.E. Cross, PMATH 352

"How will this course be useful to you? Aw, c'mon, it won't be!"

R. Willard, PMATH 430A

"You can lasso all the points with a finite lasso."

G.E. Cross, PMATH 352

"I think it's true for all  $n$ . I was just playing it safe with  $n \geq 3$  because I couldn't remember the proof."

Prof. Baker, PMATH 351A

"The word well-defined is not well-defined."

P. Hoffman, PMATH 344

## ICR, and other ramblings

A new building has sprung up around what appeared to be Stonehenge II (for a while, rumoured to be replacing SCuMS) in parking lot B. This rapid growth of ICR (pronounced ikker), the Bilding, or whatever you prefer to call it, may have surprised some of you co-ops returning from Pinawa, Calgary, Finland or wherever. Its appearance is currently the subject of hot debate on campus. Some of the opinions that have come my way follow. (I'm too lazy to attribute them all, and you're too tired to read them, it being 8:32 A.M. in a Friday morning Algebra class, so we're agreed on that.)

The most common sentiment is, "The Eaton Centre's moved to Waterloo!" Well, not quite. Co-ops returning from Toronto inform me that it's still there, so it must be reproducing. Perhaps spores of *Eatonus Centrus* are being spread throughout Canada; I personally have seen 5 shopping malls in southern Ontario sprout skylights, glass arcades, and three-storey-high courtyards within the last two years.

Another favourite pastime is comparing ICR to various modes of transportation. One source has it that old VIA Rail cars are being refitted to make the building's exterior. A friend of mine perpetually expects it to sail off into the sunset. It bears a striking resemblance to the popular opinion of what a crashed spaceship should look like—perhaps the long glass corridor was a greenhouse to supply oxygen. The smaller part near the Physics building was probably the nuclear fission drive, separated from the main complex for radiation protection. What wonders are hidden underground, we can only guess at. I think that it looks like a submarine. This would make Waterloo the only two-submarine campus in North America!

Apparently undergrads will sometimes have cause to roam the halls in search of profs and T.A.'s, so it is to be hoped that the room numbering system is more sensible than the sixth floor of MC. (At least if you get lost, you can always break a window and jump out. (This article does not condone vandalism; it only condones vandalism performed in self-defence. You do realize that the purpose of green men in MC is to occasionally sweep up the remains of unfortunates who have starved to death in the upper floors of MC.)) In the event that the Bilding is possible to escape from, the corridors will be great places to play Aerobie when it's too windy outside (maybe even better than Engineering 2). While that is going on, let us wax philosophical. VOICE OVER: Wax Philosophical, the handy new product that will lend a spurious patina of substance to otherwise banal observations. Lemon-scented.

And when the EMS library moves over there, we'll have to get used to room numbers beginning with 4. Horrors! I think that MC 4xxx is a contradiction in terms, much like "Civil Engineer" or "Good Morning." On that note, Good Morning to you all (if it's afternoon when you're reading this, remember that it's morning in Japan).

Center of Gravity

P.S. Computers aren't intelligent—they only think they are!

## THE ADVENTURES OF WATMAN



On their way back to Village 2, Watman scanned the village green with his Watbinoculars while Duck furiously pedaled the dynamic di-cycle, barely missing pedestrians.

"Holy curvaceous contours!" noted Watman, peering closer.

"What is it, Watman? Have you noticed some dastardly deeds, some conniving criminals, or some simmering schemes over there where those girls are sunbathing?"

"Keep your eyes on the road, Duck, I'll explain later."

Duck was suddenly struck by an abrupt realization.

### KERBLAM!!

Extracting himself from the resulting wreck, Duck exclaimed, "Wholly radical reincarnations, Watman! Didn't we die in the last issue of the winter term?"

"Why yes, Duck! Hmm... Something's rotten in the state of Denmark, and it sure isn't the pastry."

"Another thing, Watman, why were we cycling to Village 2 when it's closed for the summer? How come something abstract like a realization wrecked our dicycle when it struck me? Who could write trash like this? Has mathNEWS gone downhill?"

"More importantly, Duck, how could you, my obtuse sidekick, realize that you are merely a fictional character created by a (probably warped) mind?"

Who could be causing so much confusion and inner turmoil in the lives of our heroes? Who could be so powerful as to tamper with their very thoughts? Could it be...? No! Well, maybe? Is it possible???

"Yes!" cried the mathNEWS writer, being borne down from the clouds on the backs of a flock of ducks. "My problems shall soon be over, once you two are out of my way! For many hours now I have been struggling to develop a plot for this episode, and midnight, when the laser printers shut down for the night, fast approaches. But never again shall I be tormented by this arduous task. From now on, I'm going to syndicate you as reruns! Nnnnyahaahaahaahaaa!!!"

Can our trustworthy twosome escape this predicament? Will the evil mathNEWS writer torture mathies everywhere with old Watman episodes? Will this self-referential episode make it to the Imagen on time? Stay tuned for next week's (or last year's) exciting episode...

na-na-na-na-na-na-na-na- na-na-na-na-na-na-na-na WATMAN!

The Chuckler

## ElseWhen

mathNEWS ten years ago

**I'LL BELIEVE IT WHEN I SEE IT**—IBM has gone about making the work of your average systems programmer quite a bit easier than it was in earlier OS days. They have developed a large data base containing the definition of load modules present in the various operating system components... The idea behind this program and data base is that all changes to the operating system and components are logged...

**MATHSOCIETY WANTS DELAY**—MathSoc voted to ask the Federation to delay its refundable fee referendum until the fall term. The motion outlined MathSoc's belief that the students should decide in a referendum what kind of fee they would pay. It went on to state that the actions of some EngSoc officials were causing disunity amongst the students... The motion is actually an amended version of a much stronger motion...

**CHEVRON AFFAIR**—As we start another term at Waterloo, we find Neil and the boys of Free and Democratic Publications still producing their paper in Federation space... At this time a number of options can be pursued... The Federation can try to regain its office space. The *free chevron* could be reinstated, something the *free chevron* wants, but something others might view as a politically expedient cop-out...

Excerpted from mathNEWS, Volume 14, Number 1, May 13, 1977

## mathNEWS 30, 50 and 100 Years from Now

May 12, 2017

Because of structural flaws, the William G. Davis Building (also known as WGDB, ICRB and East-Central Campus Hall) is being torn down. University officials say that the space taken up by the building will be converted to parking.

May 15, 2037

Because of the growing number of portable buildings on campus (at last count around 340), a new facility will be built, tentatively to be called D. T. Wright Memorial Hall. The new building will be constructed on what is now parking lot Q (otherwise known as the East-Central lot). The portables will be moved to north campus, joining the aging student townhouses, which are slated for demolition next month.

May 16, 2087

Members of the K-W Historical Society were arrested Tuesday morning after violently protesting the removal of homes on Sunnydale Place in Waterloo. "In these houses our grandparents and great-grandparents studied calculus and algebra," said one of the protesters. "The destruction of architecture as beautiful as this must not be permitted."

In other news, East-Central Campus Hall (Wright Hall) was quickly brought down by demolition experts this afternoon without protest. University administrators explained that what this campus really needed was centrally located parking facilities.

N.O.R.



## Cryptic

### Across

1. Painfully permit the little bird (5)
4. Judy wore a string of flowers? (7)
8. Wood of a certain type—at birth, that is (7)
9. Highly noted competition before the meal (5)
10. A stout insect loudly finished (5)
11. Laced it about the fortress (7)
12. A short girl takes a thousand over fish (6)
14. Mixed scent he started to smell (6)
18. Two notes, a key, and uranium are directly tiresome (7)
20. Intersect religiously? (5)
22. The three existence clan (5)
23. Sceptic contained by the arranged fields (7)
24. Reversed sketch of the fish in the direction of the wind (7)
25. A passenger ship—straight and right (5)

### Down

1. An anthology of a science magazine vehicle (7)
2. Supple flaming person (5)
3. Count only one of Santa's cries when going on the hunt (5-2)
4. Lubricant of the country sound (5)
5. Correct the abnormal girth (5)
6. Leave a musical group above (7)
7. Many takes we will linger on (5)
13. An American city threesome of New England's lead toilets (7)
15. Diplomatic, fat cult arrangement (7)
16. Dumbly up the street: fifty hesitating con artists (7)
17. Is greeted by a northern state at the back (6)
18. Note the tall endless death (5)
19. Garbo could be great (5)
21. Ancient love left at the lair (5)

## Unoriginal GridComments Title

Welcome back to a summer that promises to be as boring as all the other terms. (but of course that does not include GridWord). I'm expecting good things from the new and old among you—so get those submissions in!

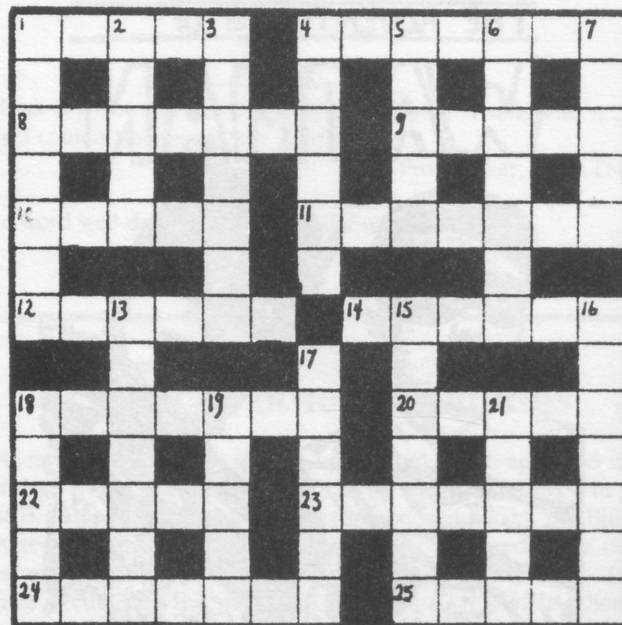
For those of you who may be unaware, GridWord is the mathNEWS 2-in-1 crossword puzzle. You have the choice of doing the conventional puzzle or the cryptic puzzle. The solutions to both are different but fit into the same grid.

To submit a solution, just write your name in the space provided and slide your completed grid under the mathNEWS office door (MC3036) by the deadline, Monday May 25, 1987 at 19:00. A winner will be selected from the correct entries and will win a specially selected surprise prize.

Well since I can't think of anything witty to say, I guess I'll leave you to it. Oh, remember that obnoxious comments (or even constructive ones) are always cheerfully accepted, or your money refunded.

fletniowski

Entrant .....  
Cereal Number .....  
Comment .....



## Conventional

### Across

1. DECEPTIVE MOVE
4. SOUTHERN COUNTRY
8. SUPPOSED
9. UNIFORM JACKET
10. FISH
11. FIGURE
12. MODERN
14. A CREEK
18. RACKET
20. LATER
22. PALE
23. SQUIRM
24. PARDON
25. IN THE MORNING

### Down

1. COMPLIMENT
2. NORTHERN DWELLING
3. MAKE TAUT
4. EASTERN DEITY
5. RUBBER
6. COMMERCIAL ACID
7. ALUMINIUM COMPANY
13. MORTIFY
15. GREED
16. THEFT
17. SLEEPY
18. SMALL HAIRS
19. EFFECT OF THE MOON
21. CERTAIN FELINE

Ingredients: Insanity, caffeine, sugar, love of a stuffed Pegasus, dedicated staff, Imagen toner, Scotch<sup>®</sup> tape, paper, VAX processor time, terminals, ink, pencil, X-Acto knives, Letraline.

Cast of characters: Camille Goudeseune, W. Jim Jordan, Frank Letniowski, Rico Mariani, Paul Obeda, Ron Pfeifle, Stephen Smith, Bill Tilford, Fred Walter.

Supporting writers: The Stranger, M.L.E., N.O.R., Homer Watson, Centre of Gravity, The Chuckler, Ur-Lord, dwarf and derfy. (Catch: match the pseudonyms with their rightful owners.)

Supporting players: DCS I/O room staff, Graphic Services.

One down, four to go. Happy birthday, dwarf. Kerry, I missed my backrub. My thanks to everyone who worked on this issue. But wait, there's more...in two weeks.