

Volume 42 Number 4
Friday, October 24, 1986


THE BEST QUOTES FROM PROFS
instant impact
Doctor Heartbreak
sports
WARRIORS BASEMENT-BOUND

## Prezz Sezz

## LookAhead

| Co-Oops Only |
| :--- |
| Nov 4 Rankings available 11:00 |
| Nov 5 Rankings due 4:30 |
| Fed Flicks \$1 Feds, \$3 others |
| Oct 2426 Hannah And Her Sisters |
| Oct 31 - Nov 2 The Hitcher |
| Cinema Gratis 9:30 in the CC-it's free! |
| Oct 29 The Shining \& The Fly |
| UW Arts Centre |
| Call 885-4280 for more info and tickets |
| Oct 24 Judith Marcuse (Repetory Dance Company) |
| Oct 28 Prospects For A.I. (Hagey Lecture) |
| Oct 29 Without Us! (Hagey Lecture) |
| Other Events |
| Oct 25 TheatreSports - Live Improv HH280 8PM |
| Oct 25,26 TheatreSports workshop CC 1PM |
| Nov 1 TheatreSports - Siegfried Hall St Jeromes |
| Nov 15 CSC Othello Tournament |
| mathNEWS |
| Oct 27 Issue \#4 submission deadline. |
| Oct 27 Next production night |
| Oct 31 Next mathNEWS comes out |

## A Note From the Editor

Well, come. Welcome to issue four, our spoof: VAGUE magazine. I hope you all enjoy it.

Thanks to all, including Rob Harnden, Dan Kermode, dan schnabel, Cary Timar, Frank Letniowski, W.Jim Jordan, Tom Ivey, Kevin Rockel, Camille Goudeseune, Wilma van der Veen, Barb Palmer, Brett Martin, Steve Rapaport, the Wizard of Id, the mathNEWSquizmaster, the SVA, John Omielan, Woody Tobias Sr, Lisa Seabrooke, and more.

Best of luck to all on remaining midterms.
Happy Birthday to all as appropriate.
Hand in your mathNEWSquizzes!
I'm tired. Time marches on. My space is full. Remember to get your articles in by Monday for issue five, available a week from today.

Paul D. Obeda

## ISSN 0705-0410

mathNEWS is sometimes a bi-weekly publication funded by, but otherwise independent of, some Student Society at the University of Waterloo. Content may be considered the responsibility of the mathNEWS editor; however, any opinions expressed herein are more than likely 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(awatdcsu on USENET.

Editor: Paul D. Obeda

Computer Fees! Underfunding! Co-op Fees! I'm sure all of you are familiar with these words, most of you sick about of hearing or reading about them. Well, sorry, but I will devote most of my column this week to those issues. I'm sure that many of you don't give a damn, and I'm sorry about that, too. But for you first- and secondyear students, it should concern you, too. UW has a reputation for a superior quality of education. But with the lack of funding from governments, increasing operating costs, etc., that quality is eroding and the students are suffering. I would like to clarify the computer fee case. It was only so labelled by the administration so as to be more acceptable to the university population. The money raised from the fees was to go back into the university fund to cover general operating expenses, covering general expenses such as heating, lighting, support staff, etc. for all of the campus. It was not meant specifically for only computer-related bills in the Math or Engineering Faculty. Who would have accepted a "general operation fee"? My biggest gripe was with the way it was implemented, so quickly and suddenly, with little consultation with the student "politicians", and starting with such a large amount. It could have been handled more delicately, slowly phasing it in. Well, I guess the administartion is learning their lesson. But terminating the computer fee doesn't solve the problem, it only makes the financial situation desperate again-and I mean desperate.

UW policy is to operate at break-even, and not lean towards a deficit. Since the tuition increases and government funding have not matched the pace of inflation, the university budget has been trimmed by about $2 \%$ each year. Now we are at a point where it is impossible to cut back without visible effects upon the education standards. There are a lack of TA's and labs, crowded classrooms, fewer new books in the library, professors leaving to go to the States, and so on.

As if you haven't noticed, things are going to get worse. The next place to cut are the people, but we can't sacrifice them. The excellence funds are finished so right now there is no money to buy books. There is little or no money allotted to operate the ICR building. Some of you may say, "Who cares?" since you think Billy's building is just going to be used for research. I am specifically referring to those of you not in Math or Engineering. But by having this building it frees up much-needed space in the Math building for classrooms, study lounges, etc., for use by all faculties. If you haven't heard, the Fine Arts department is moving to Philip Street somewhere-so again more space for already cramped faculties. But again there will be an increase in operating costs.

The money from the sale of North Campus land to HewlettPackard helps. But City of Waterloo Mayor Marjorie Caroll is crying out to have that money used to build a road on the land for accessibility to attract other companies to build there. It seems the city should pay for this. The funds have to go where they are much more needed and essential, such as running currently-existing buildings.

So what are we the students to do about the underfunding problem? We've got to get more funding from the governments. We've got to voice our concern. The Underfunding Awareness March of last March (Winter '86) was a great success but the protests and lobbying need to continue. It was nice to see some Toronto schools protesting to the government last week. We've got to keep the pressure on. Budgets will soon be coming down determining in part our fate. It's a difficult problem to solve. If the governments don't fund us, we will have to pay. We have already seen the co-op fee rise sharply recently-but that was needed to cover the skyrocketing costs. The university can't afford to run something that can't pay for itself. So they increase the fee to cover more of the expenses.

The Math Society, in conjunction with the Federation of Students will be setting up an underfunding committee to look at the problem. If you are interested and concerned, come in to the MathSoc office (MC3038), and talk to me.

Wilma

## Car Rally

If you see half-crazed students madly running around campus looking for a 1978 UW student card, don't worry. It's just another chapter of the soon-to-be- infamous MathSoc Car Rally. The Fall '86 edition takes place Saturday Nov. 1 around noon.

The rally takes $21 / 2$ hours and pits students' wits against the weird streets of K-W as they follow clues, answer questions and look for any number of objects on their road to stardom.

It requires little skill (France won): just a will to have a good time. Sign-ups and starting times are in MathSoc (MC3038). If you don't have a car and just want to help out, leave a message for me on the Fed board in MathSoc.

Brett Martin

## Feds

Co-ordination and Placement should no longer be charging co-op fees to people who have dropped out of co-op. If you have dropped out of co-op and are being charged a co-op fee, see Carol Goulette in the Fed Office.

The Feds are starting a Director of Watpubs position. If you have been involved with Watpubs and think you may be interested in this position contact Carol Goulette in the Fed Office (CC 235) by next Friday, October 31. For a list of Fed committees currently looking for members, look in today's Imprint (Yecch).

There are a couple of changes to last issue's Fed article. Otis Day \& the Knights has been cancelled and both Brian Mitchell and John Linney should have been listed with Tim Macneil, Steven Furr, Daniel Lyons, and myself as math Fed reps.

The next Fed meeting is Sunday, November 9 at 1:00pm in Needes Hall room 3004 and, like always, it's open to everyone. Minutes of past Fed meetings are available at the Fed office. There's some pretty neat stuff in them, like whether the drinking age will actually go up or not, or how much money Fed Hall made/lost last year, so go take a look.

Fed complaints, questions or ideas can be left on either of the Fed boards both inside or just outside the MathSoc office (MC3038)

Brett Martin

presents a
Hallowe'en Masquerade Pub

Friday, October 31
Bombshelter
Contest, prizes at 12:00


Any proceeds to UNICEF

## Yearbook Update

Thanks to everyone who ordered yearbooks - the count is now up to 264 (including 100 ordered in the summer). Deadline for orders is Oct. 31, since the final count must go in soon. Any yearbooks ordered after this date will cost extra (there will be a few..).

Please bring your pictures into MathSoc before Oct. 31-we are still severely lacking for photos. After that date they will be accepted, but might not get into the yearbook.

If you didn't pick up your write-up form when you signed up for your grad photos, please do so soon, and return them when you get your grad photo taken. By the way, although it costs nothing to get your proofs done for grad photos (and hence your yearbook photo), the composites will cost $\$ 9$ if you want one of your class.

The first deadline is rapidly approaching, so there will be several production meetings in November, as well as one next week, tentatively Thursday (October 30), 4pm, in MathSoc. We need your help!

- BP


## Careers in Math

Not in CS and don't know what kind of jobs are available? Come to MC3008 from 12:30 to 1:30 Thursday October 30 and discover what you can do with a BMath.
-An SVA Service

Are you a Turtle?

## Prof Quotes

Last issue's Prof Quotes introductory paragraph asked if anyone read these introductory paragraphs. We received no replies, so i guess i could put whatever i wanted in this space.
"Since the series is infinite it's a good idea not to write all the terms down."

Chris Springer, ActSci 221
"One problem with murder mysteries is the fact that there is always a motive. In real life, this isn't the case. In California, university students drive around, randomly choose a person, and kill them. It's called 'joykilling' or 'thrill kill'. At Waterloo we don't do that kind of thing because nobody has a car."
N. Randall, Engl 109
"I saw this point in a textbook, but that's irrelevent. The question is, what is the truth?"
F. Goodman, AM 270
"God told Moses on the mountain that quadratic equations have two solutions, never any more."

Harry Davis, Math 234B
"This is basically very simple. It just looks very complicated because I made a big show of it."
K.R. Shah, Stat 333
"It's natural to feel some revulsion towards these complicated formulas."
D. Siegel, AM 481A
"The formula I'm giving you for this example is powerful. It's like cracking a peanut with a sledgehammer."

Chris Springer, ActSci 221
"I'm not tall enough for this formula."
Richard Lockhart, Stat 231
"What do you think of? You think of Donald Duck being scrunched by a steamroller."

Harry Davis, Math 234B
"King Lear should have made a remark about homogeneous systems."

Colin Rogers, AM 381
"Those trousers have gone to his head."
Mike Best, ActSci 335
"You can check that out on your pocket tool."
Wentzell, Math 130A
"You sound good when you sing in the shower because you're in a small contained area and the sound bounces off the walls, but when you get out and sing in the living room, you don't sound as good, but the people will applaud anyway because you forgot to put on your clothes."

Bill Eastman, Sci 205
"Please don't throw things at the wastebasket, you're going to start a war in here and then we'll get people throwing paper airplanes. That's for algebra, everyone knows that."

Don Fraser, Math 110A
"-Theorem, proof, theorem, proof, it will kill you."
J. Wainwright, Math 140A
"Ansatz means guess. But in mathematical papers you're not supposed to say that."

Colin Rogers, AM 381
"I had a beautiful example for the one-dimensional case, but I've forgotten it, so let's put a sad face up here instead."
F. Goodman, AM 270
"The chain rule is like an onion. You just keep on peeling it."
G. Lastman, Math 130A
"It's a real wimp of a function."
J. Wainwright, Math 140A
"This a particularly obnoxious set."
K. Davidson, Math 144A
"That's not a fly speck, that's a transpose."
Mike Best, ActSci 335
"The second part is purely manipulative. You could program a gorilla to do it."

Colin Rogers AM 381
"Ralph doesn't look like a vector. Lets call it plain ol' vanilla flavoured $x$."

Mike Best, Act Sci 335
"The natural $\log$ notation that has forced itself on an unsuspecting world is $\ln (x)$."
G. Lastman, Math 130A
"I am under the impression that there are teams attending this class four people coming and going in fifteen minute shifts.... Okay, no, it was just a feeding pause."
J. Aczel, Math 322A
"I think you'll enjoy my solutions. I'm the up and coming Pierre Berton of Mathematics."
P. Hoffman, Math 134A
"rmmnrphmphrrnmnrphrmmmnrmm..."
R.A. Wentzell, Math 230 B
"It's better not to even mention what it is, then it's clearer."
Ng , PM 451
"We weren't thinking direct, we were thinking indirect I think. Sounds a bit tentative - I was thinking direct."
K. Davidson, PM 344
"A statistician is a different kind of witch doctor that doesn't look good in a grass skirt."
D. MacCleish, Stat 230M
"Even though I'm a Statistician, I still understand math."
Catherine Dazell, Stat 331
"I learned to walk at 19, to talk at 21, but toilet training is another matter. But that's okay cause I fit in fine in this faculty."
D. MacCleish, Stat 230M

[^0]D. MacCleish. Stat 230M

To: Society for the Nullification of Offensive Trends

## Paradise on Earth

## Yet Another Boring Dome Stadium Story

I would like to offer my humble suggestions regarding the proposed Palindome. While the concepts are sound, they lack the wider scope and vision as befits plans of this magnitude.

If a covered stadium would help the football team, certainly a covered campus could benefit everyone. No more rainy days, weeks, months, ... No more umbrellas, raincoats, boots. No more wrapping your assignments in Saran Wrap ${ }^{\text {ºw }}$ before stapling them. Without a doubt, the quality of life here would improve.

Not only would the dome provide covered parking for everyone (including cyclists), but it could also become a tourist attraction. "Visit tropical Waterloo. Observe pink flamingos and Mathies frollicking in their natural habitat. See the Library sink before your very eyes. Watch bizarre rituals as students boat race until they vomit. Bring the whole family out for a day of fun!"

By charging $\$ 3$ per visit, with say 100 million visitors annually, the University could raise enough money to cover the cost of the dome and perhaps even for the Computer Billding! (Gasp!)

Now, of course, there is always an environmental impact with projects of this nature. There would have to be provisions for wild fowl. Duck vents, perhaps.

> Project Consultant 'Moose'

## FeedBack

From the Society for the Nullification of Offensive Trends, In response to "Moose", a few clarifications:

- You will not make any friends in the Society for the N.O.T. by saying we lack wider scope and vision.
- You suggest a covered campus. Since part of our campus is in Peterborough, this would be rather unfeasible (unless you want to boost MathSoc fees to $\$ 17280$ per term, and dome all of South-central Ontario).
- Goodness! No more rainy days in Waterloo? Do you want to destroy the Waterloo identity? It's thinking like that that lead to Veterans, Three Rivers, Busch, and Riverfront Stadiums (Stadia?).
- 100 million visitors? Please use accurate statistics.
- You mentioned environmental impact. Come off it. Environmentalists we are not. Environmentalists are an offensive trend!
- Are you related to Bullwinkle?

We welcome your comments, but try to keep the silliness to a minimum.

The S for the N of OT

## CSC Flash

The Computer Science Club will be hosting our annual Computer Othello Tournament on Saturday, November 15. That gives you three (3) weeks to prepare an Othello program. No, you don't have to be a member of the CSC to enter. For details, come to the CSC office in MC 3037 (across from MathSoc).

Cary Timar, CSC Flasher (not secretary)

## Proof of the Week

$$
\frac{1}{i}=\frac{\sqrt{1}}{\sqrt{-1}}=\sqrt{\frac{1}{-1}}
$$

$$
\begin{gathered}
\text { i.e. } \frac{1}{i}=\mathrm{i} \\
i^{2}=1 \\
i= \pm 1
\end{gathered}
$$

Therefore, the real and imaginary numbers are essentially the same. The moral of this proof (and you thought that morals were only for bedtime stories) is that the world is not as complex as it seems.

The Termal Schizo

## MathSoc General Meeting

I would like to thank those who attended the MathSoc General Meeting on Wednesday, October 15. As usual, the attendance was low, but quorum was met! Bylaws were ratified covering: Executive Restrictions, Clubs \& Organisations, Appointed Executive, and Election Procedures. Copies of the bylaws are kept in the MathSoc office and are available to any student for his or her perusal.

## Co-op Notice

Co-op students in all programs are invited to attend the next meeting of the Co-op Student Advisory Council which will take place on Tuesday, October 28 at 4:30 PM in Needles Hall, Room 1029.

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Every Herohas a Villain....
Maxwell Smart had KAOS Batman had the Joker Now. James Bond $\otimes \otimes 7$ had Spectre
[i? 0$]$ Math Bunny meets the Super meaner geeks



OK class, we are given that $x=3 \ldots$ yes?
Don't you think it would be more appropriate if we let $x=3.2$ ? How about 2.9 ? Witt inflation recently, maybe
we should make $x=4$. While were on the topic, I had this Eco -op job where let $x=10 \ldots . .$.
etc etcetce...



At our last encounter with the disfortunate duo, it appeared that the gauntless Gobbler would set up a terrificly tasteless turkey tally in the Bill Davis Computer Building while a congealing concentrate consumed the hapless heroes who could carve no turkeys for Thanksgiving. How can a turkey attack be totally transcended?

Returning to the slimy scene, we now listen to the concentrated conversation:
"Holy slimy holiday meals, Watman, how can we escape to save Thanksgiving weekend for Watham City?" demanded Duck.
"We don't have to do anything, Duck. You've forgotten one important difference between Watham City and the real world."
"Of course, Watman, we run on mathNEWS Obscure Pseudo-Quasi-Random Substandard Time. It's already two week's after Thanksgiving weekend!"
"That's right, Duck, and every turkey within ten miles of here will have been devoured long ago!"

With Watham well-off, our faithful friends still had to solve the situation of the solidifying slime. A thready thought came to Duck, "Wouldn't the Gobbler be the one to get us out of this sticky situation albeit unwittingly?"
"Good reasoning, Duck, but I fear the Gobbler would have been consumed with all the other gobblers at Thanksgiving."

Out of nowhere appears the Gobbler, "Think again Watman, you forger the Gobbler is an American turkey and hence Thanksgiving hasn't happened yet!"
"You may be right Gobbler but your preposterous plan for the turkey farm has been eaten up!"
"Again you're wrong. You forget that next week is Hallowe'en and I need to practise. This has all been a trick on you. This is really just a Gobbler disguise." With that, the galvanised Gobbler gyrates to translate the turkey top to reveal the true identity as . . . Watgirl!!
"Great Gobbler guises, Watgirl. Now we can be released." But no, the Wat-team is little aware of the curse bestowed on heroes wearing arch-villain costumes-that they actually become the arch-villain! "Wrong still again, because of the costume curse I've now become the actual Gobbler and you are now done for. Hee gobble hee gobble gobble haw!"

What masterfully morose making does Watgirl cum Gobbler have for our famed friends? Will wayward Watgirl whisk away the Watduo? Is the Watgirl identity lost forever? Can Watman make good gravy from the Gobbler goo? Stay tuned to these and other exciting escapades next issue-same Wat-time, same Wat-channel.

## Na-na na-na na-.....

"Wholly unpleasant unprecedentedness, Watman! We haven't moved yet! If the episode ends here, we'll be closeted, coated in this coagulating quagmire, for another week!"
"You're right, Duck. I already had to cancel an Oktoberfest date with a real hot tomale last Friday and, frankly, I'm really pissed off."

In sympathy for our heroes social lives (and fear of the Superheroes Union of Watham City) the saga continues...
"So, Gobbler, you won't join the side of good, will you?" said Duck.
"No, my dear Duckie! I refuse to join the side of you do-gooders, even if I was Watgirl, for good denies power. Ha-ha-ha!"
"But consider the Babel Goose," chimed Watman, "it is an essentially good creature, yet it is among the most powerful in the universe."
"Oh dear, I hadn't thought of that" said the Gobbler, and at that moment the Gobbler disappeared in a puff of logic, leaving in his place, Watgirl.

Now most theologians and philosophers would consider the above to be sheer rubbish, but at least it will get our heroes rescued.
"Now that we have saved you, Watgirl, please could you extricate us from this terrible turkey trap."

Watgirl looked at them, cringed and squeamishly held her nose. "Ewwwww," she said, the gooey gunge having temporarily overcome her olfactory sensibility.

At this point our heroes, quite by chance, were saved. The football team, having taken the lead 11-0 in the first quarter of their game that afternoon, thought that a good way to preserve the lead would be to leave. So they left.

The team happened upon the scene of the Dynamic Duality's distress only to see a tasty, after-game snack, nicely layed out for them. Having been fed Village Cafeteria food only during training, they could not resist such a feast, namely the oozing sludge with which Watman and Duck were so lavishly spread.

They tackled our heroes and ravenously devoured the Gobbler's goo thus delivering the duo from their dilemma and causing Watgirl to display a considerable variety of skin colours and have amazing success in her weight loss program over the next few days.

Subsequently, Alfred drove alongside the heroes in the recently repaired Watmobile, and Watman, Duck and Watgirl returned to the Watcave.
"Wholly hitch hikers, Watman, do you think the Gobbler is gone for good?"
"I don't know, Duck, but as long as someone doesn't pass the puff of logic through a digital-to-analog converter, Watham should be safe. Now to see how the Warriors are doing..."

Suddenly, the sky was covered by a huge chevron.
"Watman, it's the Wat Signa!!", shouted Watgirl.
"Wholly lighthouses, Watman! Watham is being covered in a vast amount of fog!"
"That can only mean one thing..." said Watman.
Will Watham be brought to a standstill by the fog? Can Watman and Duck stop this obstruction to the vision of Watham's citizens? Who is the fiend behind all this, even? And what did Watman mean by saying it can only mean one thing? Tune in next issue, same Wattime, same Wat-channel.

Na-na-na na-na-na na-na-na na-na-na na-na-na na, WATMAN!
The Chuckler


## IMPERUMS TO ORDER

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## Excerpts from

## Doctor Heartbreak's Book Of Love

## YOU'RE NOBODY UNTIL SOMEBODY LOVES YOU

I once read this on a rather tacky kitchen plaque, part of a collection of tacky kitchen plaques and souvenirs hanging in a tacky kitchen in a tacky boarding-house. The intention was to say just how wonderful love feels. The contrapositive is, if you are not in love you are a nobody. Gee, thanks, I murmur through my third cup of watery tea. Of course one is loved by one's family, but that loving is of such a different kind and tenure that it becomes an unconscious, almost biological process, like breathing or going to the County Fair.

The love we're concerned with implies, nay, demands a total acceptance of another person's petty faults and flaws. This is a hard pill to swallow. Many of us today are rugged individualists, thanks to Gutenberg, Luther and Thoreau. We're used to holding our own opinions as the way to perceive the world-so there are as many worlds as people in the world. When you first try to walk on an alien world you are uncomfortable. You need your own air supply. But minds adapt faster than we think. After a while you discard your space suit.

Nobody said it would be easy. It takes much effort and not everyone is willing to make that effort. It would be nice if more people did. Perhaps the plaque should read, "You're nobody until you love somebody."

## YOU HAVE TO FALL ON YOUR FACE SIX OR SEVEN TIMES BEFORE YOU GET IT RIGHT

"Gosh, I'd better hurry up and fall on my face a few times."
It isn't that you will screw up the first few relationships, it's just statistically likely. Pray, indulge me and follow the argument. If you assume the Lord will provide, then there has to be someone out there with whom you will fall in love, marry, have children, grow old, die in each other's arms, etc. Realistically, unless one sets one's standards ridiculously high, there will be several such someones out there. Now multiply by the likelihood of being at the right time and place to meet this person, of being at the right time in each other's lives, when you both are unattached and able to spend time together, of living in the same geographical area for a reasonable period of time, etc. It's obvious the deck is stacked against hitting it off first time. Still, maybe someday ...

## Puzzle Time

Here is a short little puzzle that you and your friends can try in your next Calculus class:

The Phantom thinks of two numbers between (but not including) 1 and 100 . He determines their sum and gives the sum to a person called S . He then finds the product of the two numbers and gives them to another person called P . Then, the following conversation ensues:

S: I don't know what the numbers are.
P: I don't know the numbers, either.
S: I knew you didn't know.
P: Well, in that case, I do know.
S: In that case, so do I!
What were the two numbers? Send your solutions to mathNEWS. Thanks to Barry Koster, who mentioned this puzzle.

Codeine the Barbarian
(the Mind Destroyer)

## Be Repulsed

Be Very Repulsed

Of the many sculptures that have been placed on the UW campus, few have had the massive derision or the supposedly short longevity of a particular obscenity called "Convolution". This "sculpture" consisted of a big orange-red twisted worm with either head cut off. Due to the enthusiastic public response to this work of art, it was allegedly blown to bits one day by an unsung group of campus guerillas.

And that was that. Or so we thought.
After my travels throughout the great cities of the Canadian world, I came to London, where I was walking along Talbot St. just north of Dundas. In between the Bell Canada building ("Talbot Square") and a government building, there was a cute little parkette. Cute, except for a red-orange sight somewhere among the trees. After taking a closer look, I was rather shocked. The dreaded Convolution appeared to be alive! And it's going after the citizens of London!

Well, it appears that nothing this evil ever dies. Or at least it's going to take somewhat more than a stick of dynamite to rid the planet of the likes of "Convolution". So be warned; it will get you. Somehow. Somewhere.

Woody Tobias, Sr

## ElseWhen

## mathNEWS ten years ago

HACKS STACK BACK-It appears pretty certain that the AIA, using free chevron workers as pawns, will stack the upcoming general meeting of the Federation of Students. Each worker will be given five (the legal limit) proxy forms to allow each person to effectively have six votes. The Hacks plan to arm themselves similarly with a pile of proxies and attempt to similarly stack the meeting. This might allow them to force through a motion to make it illegal for the Board of Entertainment to allow Disco at any of their functions..
NO KIDDING-Well, it finally happened! mathNEWS was the recipient last week of a completely error-free Gridword... For obvious reasons, creator Ray Butterworth's submission was disqualified from the set of correct solutions..
EPIDEMIC WARNING-There appears to be a new disease on campus, as yet unisolated. The main symptom of this disease is an elusive hardware failure which staunchly refuses to be repaired... So far, the disease's only victims have been of the relatively weak PDP-11 breed, specifically Unix and the interface for the widset free-room... This is not very serious, since both of these computers are totally insignificant to most hacks; however, the disease is spreading! ...Even our beloved 6060 (salute when you say that, son) will not survive!
Excerpted from mathNEWS, Volume 12, Number 5, Monday, October 25, 1976.

## Probably Not Intended for Publication

[Editor's Note: The following was included with an article submission. By its appearances it was not intended for publication, (no math, no news- but that's not really a good indication). In any case, somebody's notes are incomplete, so here goes ...]
d'airs mais elles reussisent a les reunir. Pour apprendre la lecon politique de cette piece, il faut regarder les hommes. Mais pour apprendre une lecon plus importante, pour comprendre mieux la vie, il faut regarder les femmes.

## Football Warriors Impress, Depress

The Waterloo Warriors, fresh from a $29-19$ loss to the Toronto Varsity Blues, took on the Guelph Gryphons the Thursday before Thanksgiving, and came close to beating them.

Guelph, like so many opponents this year, scored a touchdown on their opening drive. Waterloo responded with a single on a missed field goal. At half-time, Guelph went to the dressing room with a 22-8 lead.

After a scoreless third quarter, the Warriors got rolling. They went in for a touchdown in the second minute of the last quarter, and forced a fumble at the Gryphons' 10 -yard line after the kickoff. Unfortunately, their field goal attempt was blocked, and Guelph regained possession of the football. They only scored once more, though, as Waterloo fought to an impressive 23-29 "moral victory".

Just as the Warriors Band was thinking that they had a chance to watch the first football victory in over two years last Saturday at York, the football team got the same idea-for fifteen minutes.

Waterloo cruised to an 11-0 quarter-time lead, but two interceptions led to York scoring drives, and Waterloo would not score again. York took a 16-11 half-time lead, and won their third straight game, 30-11.

There seems to be a pattern to Waterloo's football play this season: put on two good performances, then fall apart completely, repeat until the season ends. Fortunately, the season ends tomorrow when the Warriors, destined to finish in last place again, take on the Windsor Lancers at Seagram Stadium. Windsor is in a tie with Toronto for 6 th spot at 2-4, and is coming off a big win over the Laurier Golden Hawks. Maybe the Lancers were playing above their heads, but if the Warriors don't regain their composure, it won't make a difference even if the Lancers come down. Prediction: an exciting game as Waterloo football goes, with Windsor expected to win by 7 points.

What about the Band? Well, they first described the Guelph game as a "moral victory," and Skip Johns of the $K$-W Record quoted them in his article (and their headline writer quoted them in the headline!). Despite the depleted numbers, their sound was, well, tonal for both outings, and they even taught the Malvern Collegiate percussionist a few things at the York game. The Guelph cheerleaders were the recipient of a few jeers from the Band, which collectively wondered whether the red at the front of their pants was outlining a target area or not. I guess we'll never know...

I'll leave you with this final note. While the team was in Wilmington, Ohio for their exhibition game, I asked Carl Totzke, our director of athletics, what his prediction for the season was. He said that we would win three games against York, Windsor and McMaster. He also said that I could quote him on that. Then, too, he and you and I all know how little predictions mean. (For the record, I figured (after two games) that we could beat Mac, York and Windsor, too.)

## What is an SVA?

Someone who can help you learn how to:

> - identify a career direction
> - write a good resume
> - succeed in an interview
> - search for a job (summer or full-time)

Office Hours:

> 11:00-1:00 Tuesday 1:00-2:00 Thursday MC 3035

# Do You Have What it Takes to be a Computer Programmer? 

Take this simple test and find out!

1. What is your name?
2. Without looking, are you male or female?
3. Which of the following numbers is a 1 ? ... 1
4. Can you find your way through this maze?

$$
\text { IN } \quad \text { OUT }
$$

5. What is the sum of 1 and 1 ? Be careful, there's a trick to this one! 6. What is your favourite colour? Why not?

## Scoring:

$0-1$ : Regrettably we can't all be computer programmers.
2-5: You have the potential, with work, to become a professional programmer. All you need is a little training.
6: You either cheated or you are already a computer programmer. Congratulations!

# C+D Prices around Campus 

October 1, 1986

There has been a lot of talk and much bad information passed around about the MathSoc C +D prices this term. This article compares the prices at $\mathrm{C}+\mathrm{D}$ 's around campus. It is important to note that price alone is not a complete comparison! Many factors affect the price that a $\mathrm{C}+\mathrm{D}$ can offer you, notably:

The MathSoc C+D is non-profit (i.e. no money goes into people's pockets or MathSoc's operating budget), but it is not run at break-even, since it needs to accumulate money to pay for new fridges, repairs, and other operating expenses. Of the approximately $\$ 50000$ the Math C+D had accumulated by last year, over $\$ 30000$ went to buy new furniture for both lounges. A further $\$ 8000$ helped to fund the Pink Tie Bursary and the Natural Log Bursary for Mathies. Most of the rest of the surplus was used to cover the loss (that's right, loss) that the $\mathrm{C}+\mathrm{D}$ had over the winter and spring terms. This loss is why the prices jumped so high this term. This is the first major price increase in the last 'number of years'.

The EngSoc C+D is run at just above break-even. They have lower managerial costs, are only open until around 3:00 and do not provide any place for patrons to sit, although some seating is available nearby. The MathSoc C+D manager tells me that the EngSoc C+D's sub prices are below the price Math pays for their subs, even though they are both bought from Food Services.

The Arts $\mathrm{C}+\mathrm{D}$ is a much smaller operation with little overhead. They sell day-olds to save money.

SciSoc's C+D is tiny, only offering 5 items. They have no noticeable overhead, provide no seating and have limited hours, but they cannot buy in bulk and have fewer items to spread their fixed costs (wages) over.

Food Services has a lot more variety but has much higher fixed costs. Food Services limits what can be sold at the C + D's.

|  | Math | Eng | Arts | Food Services ${ }^{1}$ | Oth |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bagel w/butter | . 50 | 40 | 45 | . 50 | Sci | . 50 |
| Bagel w/cheese | . 60 | . 60 | . 60 | . 80 | Sci | . 65 |
| Chipwich (eqv) | 1.00 | . 90 |  |  | Scoops | 1.00 |
| Choc Milk-Sml | . 45 | . 40 | . 45 | . 50 |  |  |
| Choc Milk-Lrg | . 85 | . 70 |  |  |  |  |
| Coffee ( 7 oz ) | . 35 | 20 | . 35 | . 35 | Sci | . 30 |
| Coffee (\# oz) | .50(10) | .30(13) | .60(13) | .55(10) |  |  |
| Cookie (Large) | . 40 | . 35 | . 40 | . 50 |  |  |
| Croissant | . 45 | . 55 | . 75 | . $50-.75$ |  |  |
| Donut | . 30 | . 25 | . 35 | . 40 | Sci | . 25 |
| Hot Choc ( 7 oz ) | . 40 | . 30 | .60(13 oz) | . 50 |  |  |
| Ice Cream treat | . $50-.60$ | . 50 |  |  |  |  |
| Juice (can) | . 60 | . 50 | . 65 | . 75 |  |  |
| Kaiser-Veg. | 1.50 | 1.35 | 2.00 |  |  |  |
| Kaiser-Other | 1.65 | 1.35 | 2.00 |  |  |  |
| Milk-Sml | . 45 | . 40 | . 45 | . 50 |  |  |
| Milk-Lrg | . 80 | . 65 |  |  |  |  |
| Muffin-Sml | . 30 |  |  | . 35 |  |  |
| Muffin-Lig | . 60 | . 50 |  | . 60 | Sci | . 65 |
| Pop | . 50 | . 40 | . 55 | . 60 |  |  |
| Pop-Crush | . 60 |  | . 55 |  |  |  |
| Popsicle | . 25 |  |  |  | Scoops | . 15 |
| Salad | . 85 | . 75 |  | . $60-.90$ |  |  |
| Sandwich-Egg | 1.10 | 1.10 | 1.55 | 1.15 |  |  |
| Sandwich-Other | 1.55 | 1.10 | 1.55 | 1.45-1.60 |  |  |
| Sub | 2.25 | 1.70 |  | 2.20 |  |  |
| Sub (half) |  |  | 1.30 |  |  |  |
| Tea ( $70 z$ ) | . 35 | . 20 | . 30 | . 40 | Sci | . 30 |
| Tea (\# oz) | .35(10) | .25(13) | .35(13) |  |  |  |
| Tea (Herb) | +. 10 | +. 00 | +. 00 | +. 10 |  |  |
| Yogurt (\#g) | .60(125) | .70(175) | .70(125) |  |  |  |
| ${ }^{1}$ Food Services prices are taken from the Arts Coffee Shop |  |  |  |  |  |  |

EngSoc and Food Services prices were taken from typed price lists provided by them. MathSoc, ASU, and other prices were copied from their price boards or were stated by the cashier. The survey was conducted during the week of Oct. 1, 1986. The items compared are gen-
erally similar in size and quality, but items like salad and croissants are hard to judge. The subs, sandwiches, and kaisers are all from Food Services.

This is an independent, hopefully unbiased, survey. It does not include all places on campus or all the items they sell. This article has been proof-read by the MathSoc President, Vice-President and Treasurer as well as the Math $\mathrm{C}+\mathrm{D}$ manager, but there is no guarantee that it is $100 \%$ accurate or complete [especially after being typed up - Typist]. Don't believe everything you read. Recent stories in mathNEWS that the MathSoc C+D currently has or ever had the lowest prices on campus or that they haven't raised their prices in a 'number of years' just aren't true. This survey has made a strong effort to find out exactly what the truth is, but if something in this doesn't seem right, don't just believe it-find out for yourself.

Keep in mind that this is your C+D, you are the boss, it is up to you to be informed and tell those in charge at MathSoc what you want done. Please note that the $\mathrm{C}+\mathrm{D}$ cashiers are not the ones in charge, they are just doing their job. $\mathrm{C}+\mathrm{D}$ financial statements were presented at the MathSoc Annual General Meeting, on Wednesday, Oct. 15 (open to everyone). MathSoc minutes and $\mathrm{C}+\mathrm{D}$ financial statements are available in MathSoc, yours for the asking. So ask!

Brett Martin

## Engineer Refused Admission to Math

A Pig Mistake

At midnight, on Wednesday, the 8th of October, certain engineers were (illicitly) carousing in the MathSoc office. Apparently overjoyed to have found their way to this Nirvana, away from their usual dreary haunts, they appear to have had one too many and, in the resulting confusion, accidentally left one of their number behind. This happy engineer was found wearing a gay pink tie, such was his joy at being so near the cultural centre of the universe.

Alas, mere mortal engineers cannot be allowed to tarry more than a few brief moments on Olympus, and so it was the sad duty of two kindly mathies to escort the porcine fellow home. Over his protesting squeals and grunts, the agitated engineer was helped into the EngSoc office, where he spent the night in quarters more befitting his divinely ordinal position.

We hear that he returned home the following morning, a little the worse for wear, and looking forward to his morning slops.

## The Mathematician's Reply

When I asked him, what is the point in getting to the point, in straightening out the matter, in evening everything out, in thinking about it squarely, in keeping in line, he answered me rather acutely:
"Don't be so obtuse. You're just missing the point because you're coming at it from the wrong angle."

Culled from various journals by Norm Szcyrek

Good morning math-cadets. What's that? Unidentified objects have just come into scanner range? Can you confirm their composition? Ohmygosh . . . . scores and scores of class E (for endless) type assignments! Yellow alert! More assignments than you can shake a HP-15C at and they're coming straight for us! Now what? A pair of class D (for "Doomsday") student-seeking midterms dead ahead! Red alert and prepare to give evasive responses to "discoveryexercise" questions! And stay well clear of those innocent inclass prof-queries - definite mark reduction potential there. We're taking hits! Hard to port! Full power to all-night study session defense shields! Damage control, give me a status report. What did you say? All this (and more if you're in 2 A ) isn't due until next Friday?
. Cancel red alert. Resume normal course attitude. Take a bite from your double-chocolate doughnut and survey .

## mathNEWSquiz \#9

1. The operatic works of which composer are featured at the "Bayreuth Festival"?
2. Who was Dr. Richard Kimble?
3. Rene Robert, Rick Martin and Gilbert Perreault combined to form which famous NHL forward line?
4. In which 1973 film does Miles Monroe awaken after sleeping for 200 years, to find a brave new world where sex has been outlawed and doctors advocate fried foods and cigarettes as keys to good health?
5. Name the two moons of Mars?
6. Who's responsible for the "Peter Gunn", "Baby Elephant Walk", and "Pink Panther" themes?
7. Name the Canadian winner of the 1971 National League Cy Young award.
8. In October 1960, which world leader "hammered his shoe" before the General Assembly of the United Nations, in protest against a reference to "communist satellites" made by Lorenzo Sumulong of the Philippines?
9. With which nineteenth century politician would one associate the campaign slogan "The Old Man, the Old Flag, the Old Policy"?
10. What do Singapore, Morocco, Utopia, Rio, Bali, Zanzibar, and Hong Kong have common?

Quiz solutions may be submitted on or before October 26, 1986, in the BLACK BOX on the third floor outside the C + D Lounge. Consideration will be given to all solutions, and a fortunate prize winner will be announced along with the solutions to mathNEWSquiz \#9, plus a brand new mathNEWSquiz, in the next issue of (your friend) mathNEWS

And now, before you can say "spherical coordinates" (assuming of course, that you've dried out from Oktoberfesting), the solutions to mathNEWSquiz \#8: Benny Goodman, Lionel Hampton, Gene Krupa , and Teddy Wilson formed the Benny Goodman Quartet; "The Man Who Was Thursday" by G.K. Chesterton; Scottie's first name is

Montgomery ("an' the engines still canna' take anymore!"); Bob Nystrom was the last of the original NYIs; Rochester knows that Jack Benny used to say "Now cut that out!" (risky to say the least, if uttered around a vivisectionist); "Raindrops Keep Falling On My Head"; the "Green Monster" dwells at Fenway Park, Boston, Mass.; the Rt. Hon. John George Diefenbaker; Milton "Uncle Miltie" Berle; and the "sheep in sheep's clothing" is Clement Atlee.
"Is there life after midterms and assorted assignments?" Well, I'm afraid not, Virginia . . . . . but you'll be delighted to learn that our most recent mathNEWSquizexpert is Steve Rapaport Esq. with a fine score of 3.25 out of a possible score of 10 on mathNEWSquiz \#8. Congratulations to you, Steve, and you may pick up your prize at the

MathSoc office (MC 3038) during their hours. The "Close But No Cigar" award goes to the collaborative geniuses of Cary Timar and Jim Jordan ("Go Warriors Band!"). Tune in next issue for more mathNEWSquiz.
the mathNEWSquizmaster

## Mathematical Puzzles

## -Solutions to last week's puzzles:

(a) It is not possible to cover the chess board (with diagonallyopposite corner squares missing) with 31 dominos. An easy proof of
this can be seen as follows: this can be seen as follows:

Each domino covers two squares-one of each colour. Since the two missing squares are of the same colour, it is impossible to cover the remaining squares with the 31 dominos.

Another way to see this is to cover 60 squares with 30 dominos. The remaining two squares are of the same colour and hence cannot be adjacent. Thus the 31st domino cannot be placed to cover the remaining two squares.
(b) There are many possible routes from A to D and drawing them all is tedious. A simpler solution is to break the problem down to a manageable size and then work towards the full solution.
Note the following facts:
i) There is only one path from A to each of the intersections a2, a3, a4, a5, b1, c1, c1, e1.
ii) From (i) it is clear that there are exactly two distinct paths from $A$ to $b 2$.
iii) To go from A to b3 there is one path from a 3 and there are two paths from b2, for a total of three distinct paths. Similarly there are 3 distinct paths from A to c 2 .

Since all moves are upwards or to the right, the general method for determining thee number of paths from $A$ to each intersection is to add the number of paths shown in the intersection below and the intersection to the left. Continuing until point D is reached gives a total of 70 different routes from A to D.
[The editor notes: A solution was handed in for this noting that the path from $A$ to $D$ consisted of four moves to the right and four moves up, which could be taken in any order. Thus, the solution may be found by counting the permutations of 8 objects, of which two pairs of four are identical: $P(8,8) / 4!4!=8!/ 4!4!=701$

## -This week's puzzles:

i) A company needed to ship a truck full of equipment from the company's manufacturing plant to a busy international shipping warehouse. The truck was to arrive at exactly 7:00 in the morning-the time the warehouse opened. This would allow the truck to be unloaded before other trucks arrived. If the truck driver drove at 30 mph , he would arrive at 8:00am-one hour late. If he drove at 45 mph , he would arrive at 6:00am-one hour early. At what speed should he drive to arrive at exactly 7:00am, and how far is the company's manufacturing plant from the warehouse?
ii) Two cyclists are 144 miles apart when they begin cycling towards each other. Each cyclist travels at a constant speed of 12 mph . A mosquito bites one fo the cyclists just as he begins cycling and then immediately flies towards the other cyclist, bites him, and then flies back towards the first to bite him again. The mosquito continues in this manner until the two cyclists meet. Assuming that the mosquito flies at 24 mph and that the time the mosquito spends biting each cyclist is negligible, how many miles did the mosquito fly?

## Cryptic

Across

1. Not apparent that a card game beat the start of half a dozen or none of us. (9)
2. A donkey with an alien may be a plus (5)
3. Cross sprinted at the athletic event and hesitated to get the Star Trek device (11)
4. Tacos crumpled on the tie (5)
5. The camper is hot about the surrounding air (11)
6. Area port or hard bourbon, much less goodless (7)
7. An accountant's lair has a hundred ways of voice modulation (7)
8. Established the place of time guided (7)
9. Maybe I am bent on encompassing (7)
10. Slight suggestion in the wrong uranium at the particle (11)
11. Copying the first letter in a split movie rating (5)
12. Take the first four equivalent libraries and one initial used mannequin for balance (11)
13. Strict way of a sea-bird (5)
14. Out of the German house, Ted was very tired (9)

Down

1. Noteless fault of the sun god is extreme (5)
2. A box moves along in the game (5)
3. For a little demon, I am quiet! (3)
4. One racist stir is ironic (7)
5. It's magical that a vulgar fellow is in between the double of a supporter (11)
6. A way to swap to become the other half $(3,5)$
7. A statement to your will (9)
8. Additional or divided by an article (5)
9. A seated bird tells all? $(5,6)$
10. Pauses to raise a collection near being pardoned (9)
11. Subsequently north, I consumed to revenge (9)
12. The princess is upset about the argument (7)
13. A girl unusually left the start void (5)
14. In the direction of the radius, we have a doughnut (5)
15. Negative insane wanderer (5)
16. Airway terrorist group (3)

## Final Daylight Savings GridComments

We regressed to only 13 solutions this week. I don't know about you guys; it seems you can do more in one weekend than you can do in two weeks. Seriously, I think that maybe the puzzles were just a little hard-I have trouble judging whether they are difficult or not so if it seems difficult it probably is. For just that reason, I was pleased to see someone hand in an incomplete solution. Feedback of any form (well almost any) is greatly appreciated ie. comments on clues, ideas for improvements, anything that is wrong, etc. Remember this puzzle is for you!

Submit solutions, incomplete or otherwise, via the BLACK BOX across from the third floor lounges. You just might win a wunderbar prize. Solutions must be in by Monday October 27 (again that gives you only one weekend). This week's winners are: Wimen Mei, Kevin Ferguson, and the team of Olynthin Welly, Jemnette 弗loughbmen and Kndrew Stribling. One of the above winners handed in an incomplete solution. Just goes to show one need not be perfect to have great things happen to them. Winners may pick up their prizes from the MathSoc office, MC3038. Other correct solutions appeared from: The Chuckler, Bill McCuaig, Randy Richard, Impopp, Dani Roloson, Gary \& the Ottawa Co. A few incorrect solutions came from: Ziggy, Jonathan Koven, The Society for the Nullification of Offensive Trends (who 'are taking over'), James Cherry, and the Chuckler. I apologise to Jack Rehder for having missed his solution last week. It was totally correct.

Comments de la semaine: 'These are neat', 'In memory of Mel Ballack', 'Too \#@*! hard!' (direct quote), 'I hate Kitchener transit', 'Should have one with all the clues invisible', 'harder this time-couldn't finish it in 466', 'Through sweat and determination', 'He-he-he-he', 'Great remedy for boring classes'.

Good Luck (Has anyone seen the missing umlauts?)
fletniowski


## Conventional

Across

1. WRONGLY INSTRUCTED (hyph.)
2. FINGER
3. KEEP HER RIGHTFUL PLACE ( 3 wds .)
4. MEASUREMENT AROUND
5. A LA MODE
6. SUMMARISE
7. ROBBER
8. EXCLUSIVE RIGHTS
9. PROLONG
10. REVELATIONAL
11. COLD RAIN
12. PROVED CORRECT
13. SINGER: BOB
14. MONETARY MANAGER

## Down

1. DOMINANT THEME
2. CERTAIN BONES
3. EMPLOY
4. OK GESTURE (2 wds)
5. HAZARDOUSLY
6. IRREGULAR SOLDIER
7. CERTAIN FIGURE
8. WASH OUT
9. DEPRESSION
10. 'AND' SIGN
11. RECOVERING
12. FLOG
13. PERSONNEL
14. SACRED SONG
15. DECEIVE
16. VESSEL


[^0]:    "In case you're quoting me, my name is John Smith. John Smith, in the faculty of combinatorics and Computing."

