math NEWS

DOING IT WRIGHT ON THE WRONG SIDE OF TOWN

ISABELLA

CHURCH st.

Dougie

Shows

How to Solicit Funds

S.J.M.

Page 6

Pimp And Prostitute Night

LookAhead

A quick look at what's happening

Math Events
1 Nov •• Spring Pre-Registration Ends!••
2 Nov The Infamous MathSoc Whine and Sleaze
18-19 Nov MathSoc Elections
Co-Ops Only
8 Nov Interviews End
Cinema Gratis
Starts 9:30 in the CC and it's free
6 Nov The Buddy Holly Story
13 Nov Citizen Kane
20 Nov Interiors
Fed Flix *AL 116 at 8 pm—Feds $1, others $2*
1-3 Nov Places in the Heart
8-10 Nov Flamingo Kid
15-17 Nov A Soldier's Story
DCS Courses
Free! Contact DCS to register
UW Arts Centre
Call 885 4280 for more info and tickets
3 Nov Daniel Band, with Rez
4 Nov Confidentially Yours (film)
12 Nov Amadeus: His Friends
14 Nov Doo Wah Diddy
Other Events
7 Nov 4A students! Graduate I
(Want Ads for grown-ups)
available (Needles Hall, 11 am)
mathNEWS Important Dates
Here are your chances to get involved!
11 Nov **mathNEWS** Articles Deadline
11 Nov Production Night—come to MC 3038 at 7 pm
It's on Mondays now!!!
15 Nov next **mathNEWS** hits the streets

Math Society Elections

Positions to be filled:

Summer Executive
President
Vice-President
Treasurer

Nomination forms are available in the Math Society office, MC 3038. Nominations are open Nov. 4 and close Nov. 8.

Prez Sez

Just a quickie this time; not that much has happened in the past two weeks. I'll even go for a point format to make things easier for you (not to mention me!).

The computer fee issue is to be discussed in a Faculty-Student Liaison Committee meeting in the next few weeks. It should also be noted that the fee *is* tax deductible – ask the registrar's office for further details. The rumour going around right now is that there will be a "grandfather clause" on any computer fee increases – they will only affect those entering the university next year or later.

MathSoc council has decided to award a honourary lifetime membership to the Pink Panther since he is, like Mathies, "pink and a cool guy". Incidentally, the motion was made by our infamous internal affairs director (who probably wants to remain nameless...)

The furniture in the hallway is being taken to be reupholstered; it will return to between the islands in the (hopefully) near future. There will also be a few more sofas and chairs arriving in MC 3001.

Plan to make it to at least one of our events this week: on Thursday, we are having a Hallowe'en Party in the Bombshelter with no cover charge (give what you can to UNICEF instead). On Saturday, we have the infamous **Math Wine & Cheese**. For a mere $5 you will get admission, great music and free wine. Be there and bring your friends for the main event of the term!

Tom Haapanen
MathSoc president

Elsewhen
mathNEWS *ten years ago*

OCTOBER CRISIS–At exactly 1:47 p.m. on the past Monday, the October Crisis of 1975 came to a dramatic conclusion as MathSoc recovered intact their stolen T-shirts... It was during a quiet evening in the first weekend of October when the underhanded, conniving, and lower than dirt in the hierarchy of the planet, jineers (n of them) broke through the security system of MathSoc... They then proceeded to make off with sixty of MathSoc's most prized T-shirts.

SPELLING BEE–Math trounced Arts in the orthographicization match of Tuesday, October 28, a feature of Math-Art Week celebrations... After three rounds, a final was played: two math students against one last hope of arts. She lost.

CHESS TOURNAMENT–Chess 4.4, running on a Cyber 175, won the annual computer chess tournament of the Association for Computing Machinery... The second-place finisher was UW's own Treefrog by Ron Hansen, running on a dual-processor Honeywell 66-80 in Phoenix.

BURLOAF'S OBSERVATION–I have heard that Canteen of Canada is becoming ecology minded. In order to help save paper and avoid pollution from disposable items, cups are no longer being used in soft drink vending machines.

Excerpted from **mathNEWS**, Volume 9, No. 7, October 31, 1975.

FeedBack

mathNEWS *welcomes your feedback on its articles, or on various subjects that cross your mind. Just write something up, identify yourself and send it in via the BLACK BOX or by some kind of mail (real or computer). All material received will be considered for publication unless otherwise indicated, although we reserve the right to edit letters if necessary).*

mathNEWS:

I tried Taylor's Theorem, also tried a few divergent tests. Tried Van der Waals and even Gibbs-Duhem equation.

But all the answers came to $-(\infty^2)$. This implies that the difference between engineers and mathematicians is enormous.

I guess it has to do with the fact that engineers do infinitely more work with non-ideal data while mathematicians do minimal work but do so with ideal values.

Kimmo Rautapuro
2B Chemical Engineering

mathNEWS:

There seems to be a general dislike for the new computer fees. Slash wrote a very personal tirade directed at Douglas Wright. Slash wrote of Co-ordination and Placement and the fact that we pay, what is it?, one hundred and fifty dollars. I think Slash is somewhat critical. I beleive we should have MORE incidental fees.

Those chairs and desks we use cost money, you know, and, hey what about air conditioning and toilet paper! Money (Floyd influence).

Now, some may argue that other universities do not charge as many incidental fees as Waterloo does. Follow me (Jane Siberry): if Waterloo were like every other university then all students would be treated equal. This would imply a total lack of discrimination. No discrimination, everyone is equal. Why that's communism. Can't have that, nosiree.

I'd like to think of myself as an objective observer and like most other people apthetic (I wonder if this is true?). I see the universtiy charging fees and then some. On the other hand, the students are not exactly making things easy. I've seen students take large amounts of computer paper (and I mean by the kilogram). When you STEAL you hamper the productivity of other students and the paper which was stolen costs money.

I've heard rumours of a paper recycler. Is it myth? If it isn't, where is it? This would be a small step in helping the university. Remember, we (the students and the university) should be working together and not battling each other with increased fees and vehement speeches. SIFT: Strategic Incidental Fees reduction Talks. First, we have to start talking.

upartstu@watdcs

Dear mathNEWS:

This was in Richard Needham's column in the Globe and Mail, Wed Oct 16:

"Someone should conduct the experiment of enrolling a chimpanzee at one of our universities. If you put him in Engineering, it wouldn't be noticed for a month; and if you put him in Arts, it would never be noticed at all."

Bohdan Taramina
1A Math

Dear mathNEWS:

So, Slash hates Bruce Springsteen. Great. I sincerely hope that his article convinces other people to hate Bruce too. There are too many walking around campus, wearing shirts from last summer's concerts. These people aren't Bruce fans; they're idiotic followers of the latest fad. Hell, they probably went to see Michael Jackson in the summer of 1984. Remember him, he was hot. While we're on the subject of the summer of 1984, there was another tour that was underway and came through Toronto. Yeh, Bruce Springsteen came that summer. Funny, but I don't recall seeing any of those so-called Bruce fans at those shows. Anyway, back to Slash's article. There are just a few errors I'd like to point out. Bruce does not have 16 albums, he has 7. It is *Asbury Park*, not Ashbury Park. Bruce never considered himself the new Dylan, the media labelled him that way. However these are not the only errors made by Slash. He says Bruce has a degrading attitude toward women. I don't recall any such attitude.

Lastly, he says that Bruce sings the praises of the U.S.A. and says that this is not the way to make people aware of the serious problems which exist in contemporary America. BULL$#!+. I wish that, just once, somebody would listen to the words of BORN in the USA. If you think that's a patriotic song, you're fucked in the head. Slash says that Bruce cloaks his messages in "insipid patriotic flag-waving." Yeah, I guess he's saying America's great when they have no jobs at the refinery for returning Vietnam Vets. If you think Bruce doesn't sing about the problems of contemporary America, listen to Thunder Road, Jungleland, Meeting Across the River, the River, the Price you Pay, etc... Listen to the whole Nebraska album.

I guess I'm saying, hey, if you want to criticise Bruce, fine, in fact, great. But don't write about things you obviously don't know a damn thing about. And please tell all the Bruce fad-fans to take a hike. Go back to your techno-pop, mindless crap. And leave the rock and roll to the real fans.

Mark Rudenburg
1A Math

P.S. Slash said something about the worship of rock and roll. For me, it's not worship. But it's very important. And that's why Bruce is important. He plays real rock and roll. And he tells important stories. It's too bad that with all his new fame and fans, that only the old fans understand. All the new people just "dance in the dark" and don't even bother to listen to the words. To them, he's just another 'POP' star, like say, Prince. Well to all of you from me (and a few other true Boss fans): *Get the fuck off the bandwagon and leave us alone. Then at the next concert Bruce will be able to hear the audience sing when they're supposed to during Thunder Road and Hungry Heart. Instead all you assholes did was sit down for any old song and stand up for a new one.* Well, 'nuff said.

Dear Slash:

Loved the comment piece ("An Open Letter to Douglas T. Wright") Oct. 18, 1985. I wish I had written it myself. It's about time someone really hit the nail on the head!

Keep up the good work.

Carol Fletcher
Imprint

Math Video Rentals Open

With the video craze still going on, it appears that a Math Video Rentals Office will open. mathNEWS, with its ever-vigilant (!) reporters have obtained copies of a secret list of movies to be offered. So, read on, and get your popcorn ready...

The Ghost of Byte 401
The Graduate
TI Blues
Catch-22
Turing's Machine
Debit Does Dallas
A Manual
Batchman
Where the Pink Fern Grows
The COBOL Club
Vertex
Flushdance
Return of the ActSci
CoreGames
Pink Hawaii
101 Calculations
Queue for Fire
The Apprenticeship of Duddy Calculus
The Pink Rose of Texas
Buckeroo Banzai in the Eighth Dimension
Magical Mystery Tour
Moby Dyck
Logan's RUN
Mr McGee
Pinks
It Haapanened One Night
The String
The Summer of 4341
The APL Dumpling Gang
The Ackermann Weekend
Pink Tie Fever
The Frob
The Great ESC
The Epsilon Forest
The Quiz
ASCII Business
Pink Thunder
The Fanout of the Paradise
The Almost Surely Thing
The Taking of Lotus 1-2-3
The Killing Fields
Random: First Blood Part II
A Midsummer Night's Hex Comedy
Grand Theft auto
The Induction on Joe Tynan
The Mark of Zero
The Pink Panther
Love at First Byte
Protocol
The Magnificent Seven
Hostbusters
The Big Pink One
Mobius Dick
e^i
Dead Men Don't Wear Pink
M*A*T*H
A Solder Bridge Too Far
WIDJET Goes to Rome (and stays there)
The Good, the Baud and the Ugly

A Stack of the Killer Tomatoes
The Integrated Man
Harper Valley IBM
Ordinaly People
The Rocky COBOL PICture Show
Pillow Smalltalk
Pinnoch-I/O
Lord of the Rings
Bridge on the River Pi
Yellow Subroutine
20 000 Lines Written in C
Stack
Petit Console
Pink Floyd: The Wall
Users Just Want to Have Fun
Pseudocode of Silence
Children of the Core
Network
The Happy Hacker
My Mother, the Bus
In With Wind
Aleph my Heart in San Francisco
cos a Blanca
Pink Rain
Sudden Input
Silent Running
Terminator
h* Wars
Star Trek II: The Math of Khan
The Man With the Golder 'Bun
Donald Duck in Mathemagic Land
The Phi Who Loved Me
The Warriors Band Movie
Octalpussy
Radius of the Lost Arc
DOS Boot
Escape from Algebras
Dr .FALSE.
Bitmask
Stat People
The Unix™ Wizard of Oz
The Eigen Sanction
A Clockwork Pink
Cary
The Great G.A.A.Sby
The Seven Percent (Class Average) Solution
The World According to G.A.A.P.
The Texas Instruments Massacre
That Touch of Pink
Take the Credit and Run
A Day at the Races
Duck sup
Woodstack
LET IT = B
e^z Rider
ESC from New York
Quest for Files
I am Curious (Pink)
Mr Smith GOTO's Washington

That's just a partial list of what we have. If you have any suggestions for the video library, send them to mathNEWS c/o the *BLACK BOX* on the third floor.

MGM/UA
(Mathies Going Mad/Under Assignments)

UltraClassified

(The mathNEWS UltraClassifieds column is a cheap (read "free") method for publishing your personal classified ads. We can even increase the price 80% and it's still the best bargoon on campus! Can't beat that deal, now can we? Send your personal ads to mathNEWS via that BLACK BOX on the MC's third floor, or mail to MC 3036.)

4 single bedroom apts. for Jan-Apr '86. Close to Zehrs, 20 minute walk to UW / 10 to WLU. $205-$220/mo. furnished, full kitchen, utilities and housekeeping. Non-smokers only. Phone John or Joanne 743-5921.

Gauss Lives! It's been ___ years since the formation of the Karl Freiderich Gauss Foundation. It's time to rally around our symbol, the Pink Tie, and it's also time to reprimand those who defiled the Natural Log by "renting" it to some engineering students for more than two cases of beer. Reply c/o extension KFGF.

Rejoice, Troubleshooters! The Computer has activated you for a routine mission of considerable importance. The mission alert will provide you with details. Serve the Computer well, and you will be rewarded.

ROAD TRIP! Canadiens vs Sabres Road Trip. Tickets $25 (math) includes bus. Tickets available in MathSoc (MC 3038).

Be Prepared! After a long wait of n months, the Textbook Survey will be rectivated during the next few weeks. Watch for it in your class, or check it out at MathSoc (MC 3038).

UW Apathy Club might try to meet again somewhere; if we feel like it, that is. So, just call ext. 569898 for more details, or if you fell like it, you might find us around. Somewhere.

Ignore this; The Apathy Club will not be having a meeting, ever. So don't bother to show up. Membership is free, unless you want one, in which case it is $5000.00.

Siberry "Gets Down"

Last Sunday jane siberry brought her Speckless Sky tour to a full house at Humanities Theatre. Her crystal clear singing, energetic back-up vocalists and proficient band gave her songs an equivalent depth to her produced versions.

She presented herself on stage in a shy and honest fashion, with more of the satirical musings that prevade her lyrics.

Of particular note in the concert were the intricate percussion and vocals in **Map Of The World (part 1)** and dramatic lighting effects in **Empty City**. They show a confidently stubborn singer/waitress and her attempts to bring fresh sounds and interesting poetry to the music scene. It doesn't pretend to find listeners in everyone, but she found an enthusiastic following here in Waterloo.

RGM

The Prof Control Panel

Mark II

The University of Waterloo will be installing the *new* Prof Control Panel in various desks throughout the university on a trial basis in order to try to improve class attendances. Here is a brief excerpt from the operator's manual accompanying each panel.

Prof Eject Button: For that boring part of the lecture when you just want to send the prof through the roof.

Prof Nuke Button: Similar to the Eject Button but with a more dramatic mushroom cloud effect (usually takes out the first two rows of keeners as well). Radiation suit not included.

Prof Zapper: A quick charge of 500 000 volts can easily tell a prof to get on with the lecture.

Prof Volume: Allows you to sit in the front without shattering your eardrums, or in the back and still hear the prof.

Prof Rewind: Time warp back to an earlier point in the lecture.

Prof Fast Forward: Comes in handy when the class is only halfway through and you're late for dinner.

Prof Brightness Control: To reduce the effect of those fluorescent Friday ties.

Prof Record: Lets you (re)view the lecture in the comfort of your own home. The Panel automatically selects a premium or cheapo tape, based on the quality of the lecture.

Prof Stereo/Mono Switch: Changes professor's voice from a monotonic drone to a high-pitched whine with spurious glitches. If the prof is female, this switch has no effect.

Prof Noise Reduction: Eliminates extraneous proofs, redundant lemmas and useless anecdotes.

Prof Balance Control: Allows the student to adjust the lecture's theory *vs.* practise ratio.

Prof Language Select: Choose one of Chinese, Czech, Yugoslavian, Swahili, Esperanto or Pidgin English.

Prof Font Select: Choose from a gallery of blackboard fonts: Greek, Hebrew, Chinese, Bodoni, Old English or Cyrillic.

Prof Gear Selector: Choose 'D' for normal lecturing, 'L' for low-gear grinding through DE's, 'R' for "if and only if" proofs, or 'N' for catching your breath after an exhausting example.
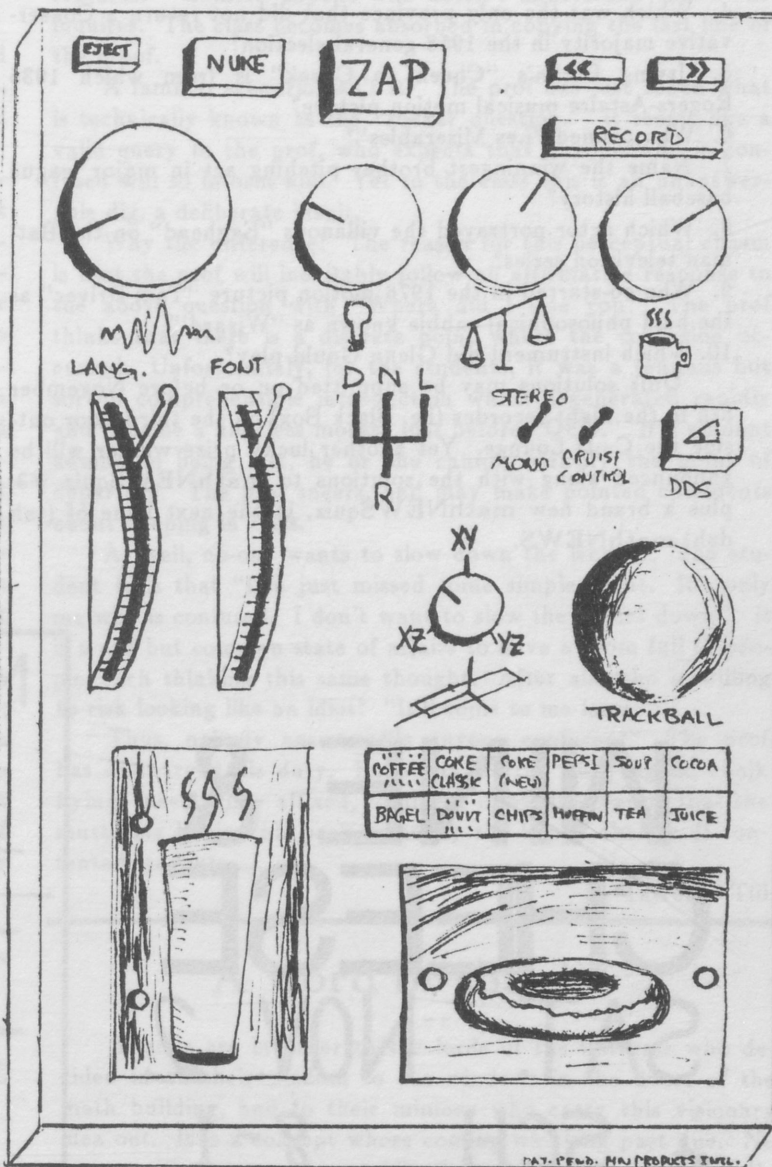
Prof Cruise Control: Set the most comfortable cruising speed for the lecture. (We advise setting the speed below the legal limit of 50 (boards per lecture, that is). Failure to do so will void the warranty.)

Prof Motion Trackball with Plane Control™: Move your prof around in 3-space with an ergonomically designed Trackball and continuously variable oblique Plane Control™. During rougher lectures, drive your prof up the wall; during better ones, help him reach that top blackboard in MC2065.

Directional Derivative Switch: Used in conjunction with Trackball and Plane Control™ to send the prof off on a tangent.

Caffeine Tuning: Signal the C&&D to beam in the beverage and snack of your choice.

Gëorg && Väinämöinen && Jordankovic̆

CD Players

The Applied Math Club will be presenting a seminar on error correction in compact disc players. Stan Lipschitz, an AM professor very knowledgeable in this subject, will conduct the seminar and demonstrations will be included. Details of place and time (sometime next week) will soon be available and posted. Watch for signs at your favorite bulletin boards.

Other seminars are still in the planning stage as midterms have left the Applied Math Club short handed.

mathNEWSquiz #3

1. In the 1942 cartoon classic "Bambi", what kind of animal was "Flower"?
2. Who played Captain Pike in the Star Trek pilot?
3. Whose photograph appeared on the cover of the first Rolling Stone magazine?
4. Which was the only province that did not return a Conservative majority in the 1958 general election?
5. Irving Berlin's "Cheek to Cheek" is from which 1935 Rogers-Astaire musical motion picture?
6. Who penned "Les Miserables"?
7. Name the winningest brother pitching act in major league baseball history?
8. Which actor portrayed the villanous "Egghead" on the Batman television series?
9. Who co-starred in the 1976 motion picture "Taxi Driver" as the bald philosophical cabbie known as "Wizard"?
10. Which instrument did Glenn Gould play?

Quiz solutions may be submitted on or before November 8th in the flight recorder (i.e. Black Box) on the third floor outside the C+D Lounge. Yet another lucky prize winner will be announced along with the solutions to mathNEWSquiz #3, plus a brand new mathNEWSquiz, in the next issue of (tah dah) mathNEWS.

And now the solutions to mathNEWSquiz #2: Agatha Christie wrote "The Murder of Roger Ackroyd" in 1926; the "Komitel Gosudarstvennoi Bezopastnosti", or Committee for State Security, is better known as the "K.G.B." (this one was right before your eyes. . .); April, May and June are Daisy Duck's nieces;"Incense and Peppermints" was the only Top 10 recording of "The Strawberry Alarm Clock" (who?); Buck Rogers made his first appearance in "Armageddon 2419 A.D." published in "Amazing Stories" magazine; both Don Sutton and (ol' Stoneface hi'self) Doyle Alexander have victories over all 26 existing major league baseball clubs; 6 p.m. means four ship's bells; "Bridge on the River Kwai" was based a Pierre Boulle novel; Agnes McPhail was the first woman elected to the Canadian Parliament; and the (nasty, nasty) quote belongs to Dorothy Parker (whew, I made it).

"May I have the envelope, please." The super-duper mathNEWSquiz #2 prize-winner is . . . (snare drum roll) John Gilhuly Esq. who went 7 for 10. Congratulations on your good effort. As our first two-time winner, John receives fame in addition to the fortune (two for one mathNEWS subscription) that he won last issue. Tune in for more mathNEWSquiz thrills, spills and sound effects in the next issue of mathNEWS.
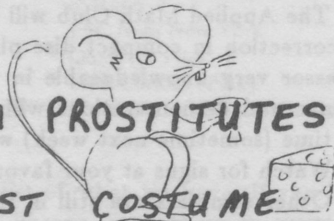
the mathNEWSquiz Master.

Slash's Shoebox

IV. An Elegy

On the night of October 16, in an act of unspeakable evil, Shelley Ellison, a third-year planning student, was stabbed to death in Victoria Park, Kitchener.

Shelley was intelligent, unconventional, attractive, and well-liked by those who knew her. I move in wide circles, hence I knew who she was, but I never got to *know* her; now I will never get the chance.

When something of this sort happens, it really affects people in a powerful and significant way. The helplessness is not something with which we are used to dealing. Beyond the empathy which certain groups of people may feel in the aftermath, there is a genuines gut-wrenching reaction in the manner of "She was one of our own!" which does not immediately go away.

The question of retributive justice always rears its head in situations like this, and not unfairly: the slime that crawled out from under a rock and without provocation took this innocent life should accountably die, or worse, for his actions. But we must grapple with our emotions long enough to admit that most of the blame lies not with the actor, but with the people in the wings. The parents, teachers, and peers of this worm must be put under the microscope and examined to see what must have been the large role they played in creating a monster.

We live in a violent world. No one really knows why; there have been many theories which really go nowhere. We are *one people*, and why can we not lay down our false hatreds and live in peace? Gandhi, King, and Lennon had the right idea, but they were killed with the same hatred and lack of sense as was our own fragile child; the veil of tears we wear for her we wear for all mankind.

Go with God, Shelley. Alas, we hardly knew ye.

Slash Sinatra

WATSFIC AD&D© Tournament

The weekend of November 2nd and 3rd will see the running of the once-a-term Advanced Dungeons and Dragons© tournament organised by WATSFIC (the University of Waterloo Science Fiction Club, MC 1009) and sponsored by several game and book stores in the K-W area. This event regularly draws players from across southern Ontario, as players compete in teams of six in a preliminary round Saturday – the advancing teams will go on to the final round on Sunday.

Players may enter the tournament by inquiring at the WATSFIC office during weekdays, either individually or in full teams of six (don't forget a team name!). The entry fee if $4.50 per person, only $4.00 if the person is a Fed and/or WATSFIC member. Prizes are awarded for both teams (overall score) and individuals (role-playing), so get a few of your gaming friends together and enter now!

Why Jonny Can't Integrate

The professor, decked out in a yellow, overly wide tie, green cardigan sweater, and mauve pants, finishes his proof in a fervent scrawl of chalk and waving hands. He turns, with a mock-innocent expression smeared across his normally twisted features. "Is there anyone who doesn't understand this?" he inquires. The class becomes absorbed in copying the last line of the proof.

A familiar scenario, isn't it? The prof has just asked what is technically known as the "sucker question." It seems like a valid query to the prof, who expects that anyone who is confused will so inform him. Yet to the class this is an unanswerable dig, a deliberate insult.

Why the difference? The reason for this perceptual chasm is that the prof will inevitably follow an affirmative response to the above question with "Where did I lose you?" The prof thinks that there is a discrete point where the confusion occurred. Unfortunately, for the students, it was a tenuous but sort-of comprehensible introduction which degenerated rapidly and became a hopeless morass just before "QED." If a student admits to being lost, he or she cannot identify the point of departure. The prof sneers, and may make pointed comments about sleeping in class.

As well, no-one wants to slow down the lecture. The student feels that "I've just missed some simple point. It's only me who is confused. I don't want to slow the others down." It is a sad but common state of affairs to have a room full of people, each thinking this same thought. After all, who is willing to risk looking like an idiot? "It'll come to me later."

Thus, nobody answers "Is anyone confused?" The prof has discharged his duty. He blasts merrily away again, chalk flying, sneer firmly affixed, confident in his assumption that the muttering behind his back is merely the happy chatter of contented students ....

Dr Terrence Till

A word of thanks

Thanks are in order to the lords of the universe who decided in all their wisdom to cut windows in the doors of the math building, and to their minions who carry this visionary idea out. It is a concept whose coming was long past due. No longer will these massive mobile flattening agents be as deadly to our population as the stairs of Needless Hell. From now on, it will be safer for 50 kg mathies to approach the hinged side of a door. Yes, we the students are grateful for this small mercy. Now, if only someone would cut a very large hole in the CS sculpture ...

Sauron

Quote of the day?

"This is self-explanatory if you understand it."

Prof. Berman, C&O 270

"50%, I mean half...1 person out of 2"

Dr. Laurie Hoffman-Goetz
HLTH 140

Safari 130a

or

MathSoc of Waterloo's Wild Kingdom

A contribution to the mathematical theory of big game hunting ...

The following represent several mathematical methods for capturing a lion in the middle of the Sahara Desert:

* **The method of inversive geometry.** We place a spherical cage in the desert, enter it, and lock it, We perform an inversion with respect to the cage. The lion is then in the interior of the cage, and we are outside.

* **The method of projective geometry.** Without loss of generality, we may reguard the Sahara Desert as a plane. Project the plane into a line, and then project the line into an interior point of the cage. The lion is projected into the same point.

* **The "Mengentheoretisch" method.** We observe that the desert is a separable space. It therefore contains an enumerable dense set of points, from which can be extracted a sequence having the lion as a limit. We then approach the lion stealthily along this sequence, bearing with us suitable equipment.

* **The Peano method.** Construct, by standard methods, a continuous curve passing through every point of the desert. It has been shown that it is possible to traverse such a curve in an arbitrarily short time. Armed with a spear, we traverse the curve in a time shorter than that in which a lion can move his own length.

* **A topological method.** We observe that a lion has at least the connectivity of the torus. We transport the desert into four-space. It is then possible to carry out such a deformation that the lion can be returned to three-space in a knotted condition. He is then helpless.

* **The Cauchy, or function theoretical, method.** We consider an analytic lion-valued function $f(z)$. Let X be the cage. Consider the integral:

$$\frac{1}{2\pi i}\int_C \frac{f(z)}{z-X}dz$$

where C is the boundary of the desert; it's value is $f(X)$, ie., a lion in the cage.

* **The Wiener Tauberian method.** We procure a tame lion, $L0$ of class $L(-\infty, +\infty)$, whose Fourier transform nowhere vanishes, and release it in the desert. $L0$ then converges to our cage. By Wiener's General Tauberian Theorem, any other lion, L (say), will then converge to the same cage. Alternatively, we can approximate arbitrarily closely to L by translating $L0$ about the desert.

* **The Schrödinger method.** At any given moment there is a positive probability that there is a lion in the cage. Sit down and wait.

* **A relativistic method.** We distribute about the desert lion bait containing large portions of the Companion of Sirius. When enough bait has been taken, we project a beam of light across the desert. This will bend right around the lion, who will then become so dizzy that he can be approached with impunity.

* **The thermodynamical method.** We construct a semi-permeable membrane, permeable to everything except lions, and sweep it across the desert.

* **The magneto-optical method.** We plant a large lenticular bed of catnip *[Nepeta cataria]*, whose axis lies along the direction of the horizontal component as the earth's magnetic field, and place a cage at one of its foci. We distribute over the desert large quantities of magnetised spinach *[Spinacia oleracea]*, which, as is well known, has a high ferric content. The spinach is eaten by the herbivorous denisens of the desert, which are in turn eaten by lions. the lions are then oriented parallel to the earth's magnetic field, and the resulting beam of lions is focused by the catnip upon the cage.

Keebler { hua@cmu-cs-gandalf.arpa }

Things to do While Waiting for the Prof to Show Up

1. Sleep.
2. Make friends with attractive neighbouring classmates.
3. Read mathNEWS.
4. Look at the cartoons in Imprint.
5. Try to determine the date.
6. Plan your weekend.
7. Disassemble your mechanical pencil.
8. Try to figure out why certain parts of your body ache.
9. Think about what else you could be doing.
10. Determine if #9's ideas are worth skipping class for.
11. Try to remember why certain parts of your body ache.

grm & co.

MathSoc Illicit Recruiting

Yes you too can grow up to be a President ... of MathSoc (though I'm told you need not have grown up to do so). This is your opportunity, run for the elected executive for summer 1986.

Just think of the advantages. As a member of the executive, you would have a key to the executive office, a wonderful place to crash after a long night. In addition, you could meet many interesting people; people who sleep 4 to a waterbed and award lifetime MathSoc memberships to fictional psychedelic animals.

Being a member of the executive opens a universe of opportunities. Previous members of the executive have gone on to become English dropouts, unemployed homeowners (a former treasurer at that), and 5th year undergrads.

So get involved, join MathSoc. See elsewhere in this issue for details, or come to MathSoc, MC3038.

Steve Furr
Infamous Internal Affairs Director

CSC Flash!

Last week we had "4th Year CS Information Night" which was a great success –thanks go to all of the professors who participated and especially to Rosemary Walker who organized the event. Don't forget the CSC Computer Othello Tournament, coming Sat. Nov. 9.

The remainder of this column is excerpted from the "Programming Pearls" column of the Sept. 85 *Communications of the ACM* (plug: you get this publication when join the ACM; drop by the CSC for a ACM membership kit). Jon Bentley solicited "bumper sticker sized advice on computing" some months ago, and these are the best contributions. Unfortunately, accreditations have been removed, but the entire list, with who said what, can be found posted outside the Computer Science Club office, MC3037.

When in doubt, use brute force.

Avoid asymmetry.

The sooner you start to code, the longer the program will take.

If the code and the comments disagree, then both are probably wrong.

User Interfaces

[The Principle of Least Astonishment] Make a user interface as consistent and as predictable as possible.

Twenty percent of all input forms filled out by people contain bad data.

Eighty percent of all input forms ask questions they have no business asking.

Debugging

Of all my programming bugs, 80 percent are syntax errors. Of the remaining 20 percent, 80 percent are trivial logical errors. Of the remaining 4 percent, 80 percent are pointer errors. And the remaining 0.8 percent are hard.

Don't debug standing up. It cuts your patience in half, and you need all you can muster.

Each new user of a new system uncovers a new class of bugs.

It it ain't broke, don't fix it.

[The Maintainer's Motto] If we can't fix it, it ain't broke.

Performance

[The First Rule of Program Optimization] Don't do it.

[The Second Rule of Program Optimization–For experts only] Don't do it yet.

The fastest algorithm can frequently be replaced by one that is almost as fast and much easier to understand.

If the programmer can simulate a construct faster than the compiler can implement the construct itself, then the compiler writer has blown it badly.

The fastest I/O is no I/O.

The cheapest, fastest, and most reliable components of a computer system are those that aren't there.

[Compiler Writer's Motto–Optimization Pass] Making a wrong program worse is no sin.

LISP programmers know the value of everything but the cost of nothing.

Documentation

[The Test of Negation] Don't include a sentence in documentation if its negation is obviously false.

Managing Software

The structure of a system reflects the structure of the organization that built it.

[Rule of Credibility]. The first 90 percent of the code accounts for the first 90 percent of the development time. The remaining 10 percent accounts for the other 90 percent of the development time.

Good judgement comes from experience, and experience comes from bad judgement.

Whenever possible, steal code.

Don't use the computer to do things that can be done efficiently by hand. Don't use hands to do things that can be done efficiently by the computer.

I'd rather write programs to write programs than write programs.

Furious activity is no substitute for understanding.

Always do the hard part first. If the hard part is impossible, why waste time on the easy part? Once the hard part is done, you're home free.

Always do the easy part first. What you think at first is the easy part often turns out to be the hard part. Once the easy part is done, you can concentrate all your efforts on the hard part.

Miscellaneous

If you lie to the computer, it will get you.

If a system doesn't have to be reliable, it can do anything else.

Eschew clever rules.

Calum T. Dalek

The Gooch Corner

(We don't take this stuff seriously...neither should you...—Proofreader)

To begin with, I feel that an apology is in order regarding the contents of my column last week, which was made conspicuous by its absence. Either through a vicious prejudice on the part of my editor or through an incompetence on the part of my typist my column vanished from the face of our sorry planet. I suggested that both my editor and the typist submit a written apology to my loyal admirers to be published this week, [Sorry Gooch; no apologies. .ed] but they displayed their cowardice by ignoring my suggestion.

* * *

As every intelligent person had hoped they would, the Canadian rock band Rush has released a new album. This comes as no surprise to all but the most intellectually myopic, as music of such a superior level will always out-last the pathetic artificiality of high fashion 'music'. When the Gooch was but a cute, charming, brilliant child, Rush was there with '2112', 'A Farewell To Kings' and 'Hemispheres'. Now the Gooch is a handsome, suave, brilliant young man, and Rush is still there providing music beyond the comprehension of the unsophisticated plebian masses.

Apparently the enthusiasm with which I greeted Rush's latest album was not shared by the maudlins here in New Carthage, a fact which distresses me but hardly surprises me. For instance, I was recently in the UW Record Store when I happened upon a young woman who was ensnared in a serious dilemma. She informed me that she wanted to purchase the latest release by (and I quote) 'Canada's greatest rock band'. Providing my wealth of understanding, I told her that the listening enjoyment derived from music of such a high designation (Rush) could never be trivialised by mere money. Happily, she agreed and went to get her album. You can well imagine my horror when she returned with a platinum blonde album!! Obviously this ignorant wench had to be an arts student for although most math students have little taste (evidenced by their hero worship of jane siberry) none would sink to the abysmal level of this airhead.

After leaving in disgust, I entered one of the engineering buildings, feeling that although I would encounter a similar degree of stupidity in its cave- dwelling inhabitants, at least I would expect it there. I was not disappointed. I find it fitting that performers with little intelligence would have ardent followers with even less intelligence, and such is the case with helix and the engineers. I was hoping that while in the engineering buildings I would remain incognito, for, as you could well imagine, I have precious few admirers there, but upon hearing this blasphemy regarding helix's status as 'Canada's finest', I exploded into vicious monologue regarding helix's (or is it helices) inadequacies as opposed to such songs as 'Xanadu', 'La villa Strangiato', 'The Camera Eye', some of the engineers present overcame their engrossing level of stupidity and recognised me. However, aware of the Gooch's sinister reputation, they were quite unwilling to confront me, content instead with allowing me to calm down and proceed to my next class.

Sadly, I feel that there is little hope regarding the (lack of) musical tastes here in New Carthage, unless one enjoys the pathetic garbage which has attained popularity here. Indeed, a good time is had by all, except the idealistic. However, alienation is the price one pays for being a genius.

'. . one likes to believe in the freedom of music but glittering prizes and endless compromises shatter the illusion of integrity . . . '

N Peart, 1980

With a cynical heart I depart. . .

The Gooch

Warriors Win!
(against the spread)

The Waterloo football Warriors were at it again during the past two weeks. They went to Toronto to face the mighty (and until then, winless) Farsity Blues on the 19th of October, and had some trouble even before the game started. The team bus broke down en route to the Big Cabbage.

Things didn't get much better during the game. The Warriors fumbled the opening kickoff, and Toronto capitalised to take a 7-0 lead. The Warriors did, however (somehow), score a touchdown, ending a two-game scoreless streak. The final score was Toronto 48, Waterloo 7.

The Western game last Saturday was *the* match of the season as far as the Band was concerned. The Warriors refused to roll over and die in the first quarter as it ended in a 3-3 deadlock. The defence showed its mettle when Western managed two touchdowns and a missed two-point convert to take only a 16-3 lead at halftime.

The Warriors Band then proceeded to do their first half-time show of the season featuring such popular tunes as *The 1812 Overture* and *Rock Around The Clock*. The Western Band could only manage to play a game (not the piece) of leapfrog.

Not much happened in the third quarter, thanks again to Waterloo's improving defence, but they tired and Western ran wild in the fourth, rolling to a 42-3 victory and remaining in a first-place tie with Laurier and York at 5-1. Waterloo's record dropped to 0-6.

Next week brings the end of the OUAA regular season. The Warriors host the little high school down the street at Seagram Stadium tomorrow at 1:00 (that's what the schedule says). If you have your yellow season ticket the game is free for the viewing. It might well be the last football game played by a UW varsity team. (I'm not trying to start a rumour; I'm just saying it might be a possibility that no one will be interested in playing next year.) The Warriors Band will be there, too, fresh from their victory over the heathen from Western (they weren't bad this year. . . any band that wears Hawaiian shirts and white shorts can't be all bad).

Dwarf's prediction: Well, since the Warriors beat the 40-point spread against Western, I have some confidence in that they'll do the same against Laurier. Laurier might also be looking ahead to the playoffs, and so not be as sharp as they can be. I'll say Laurier by 20 points.

dwarf

Pee-Wee's Big Tips

A Startling Rebirth!

Two weeks ago, I considered continuing my comments on *winning through lying*. Since then, I have seen the light! I shall dispense with lying and begin a new way of life: uncluttered, simple, maybe even piecewise smooth. In commemoration of this event, I humbly enclose a few quotes for your consideration.

Wisdom they don't teach in university:
"When you're hungry, eat.
When you're tired, sleep." – Zen saying

On a project:
"Take care with the end as with the beginning
And you will have no failure." – Lao Tzu

In interpersonal relations:
"Grow antennae, not horns."

On problem-solving:
"For every problem, there is a simple solution
Which is wrong." – Paraphrase of H.L. Mencken

On responsibility:
"Think for yourself. Question authority." – Tim Leary, PhD

On life:
"Sir, in this ill-smelling, unsubstantial body, which is a conglomerate of bone, skin, muscle, marrow, flesh, semen, blood, mucus, tears, rheum, feces, urine, wind, bile, and phlegm, what is the good of enjoyment of desires? In this body, which is afflicted with desire, anger, covetousness, delusion, fear, despondency, envy, separation from the desirable, union with the undesirable, hunger, thirst, senility, death, disease, sorrow, and the like, what is the good of enjoyment of desires?"

– Maitri Upanishad

Food for thought:
" 'Hang on for some metaphysics. The Aneristic Principle is that of **Order**, the Eristic Principle is that of **Disorder**. On the surface, the Universe seems to be ordered; this is the *Aneristic Illusion*. Actually, what order is "there" is imposed on primal chaos in the same sense that a person's name is draped over their actual self. It is the job of the scientist, for example, to implement this principle in a practical manner and some are quite brilliant at it. But on a closer examination, order dissolves into disorder, which is the *Eristic Illusion*.' – Malaclypse the Younger K.S.C."

from *the Illuminatus! Trilogy*

Pee-Wee Mathie

Warriors Football Playbook

As a public service to all Waterloo Warriors football fans (and the opposing teams (as if they don't know this already)) we at mathNEWS present the Warriors' Playbook. Your intrepid reporters found a copy on a dead offensive lineman after the Western game on Saturday and ask the question "Would you risk your life for *this*?"

Signal Called	Play
42 Red	Off-Tackle Fumble on 2
63 Baker	All Ineligible Receivers Go Out for a Pass
14 Blue	Illegal Procedure on 'Set'
21 Green	Double Surprise Fake Punt
8 Yellow	Quarterback Sneak Back Ten or Fifteen Yards and Get Tackled
11 Black	Pass to CHCH-TV Cameraman
12 Orange	Reverse to the Goal Line and Concede Safety
67 Able	Complete Pass to Wide Receiver as Centre Holds Linebacker
82 Yellow	Halfback Trap on Fumbled Snap
37 Blue	Miss Field Goal Attempt on Second Down

Steve Hayman
W. Jim Jordan

solution of last issue:

Notable Quotables

"We take this weird thing, with peculiar properties, and call it normal."

Keith A. Rowe, MATH 234A

"Degeneracy does not have to be a bad thing."

William R. Pulleyblank, C&O 350

GridComments

Well, we had a great response for our GridWord last issue. And we have a GridWord prize winner, too. Their names are Marco Ariano and Chris Baird as chosen by the pseudo-random binary cost-partitioning selection method. As for prizes, we're going to be ordering an innovative prize for GridWord winners, so don't rush down to MathSoc just yet. Watch this space for further announcements.

Honourable mentions go to John McIntosh, Zamil Janmohamed, the triad of Jack Rehder, Cyril Chen and Kelly Geysbers, Jim McCaw, Jill Fleischman, Jim Karsten, Peter Found, Dani Roloson, Rob Sutherland, The Squirrels at their nest (Rich and Craig), Brad Sokol, Stuart L. Hodgins, John Gilhuly, Peter Simpson and the quadratic of Joanne Brown, Greg Clarke, Tim Johns and Melanie Woodhouse for their correct GridWord submissions. Also, Gary Matsell & Malcolm Macaulay, Catherine Olinski, Cornell Carter and James Cogill submitted GridWords; alas, these were good, but not perfect. The correct GridWord solution appears elsewhere in this issue.

Now, for this issue's batch of GridComments from you:

• *"How about keeping a running tally of those who submit correct solutions and awarding a prize at the end of the term? (for the most correct solutions?)"* — James Cogill

Sounds good. We'll keep it in mind, so keep those GridWords coming in and you might win a term prize.

• *"Can't wait till next weeks!"* — Joanne Brown

(Amazing, considering that **mathNEWS** comes out every two weeks)

• *"Amazing, exhilarating,,,"* — Greg Clarke

• *"T'weren't easy,...honestly"* — Tim Johns

• *"Can't believe I did it"* — Melanie Woodhouse

• *"Frank: Good crossword!"* — Rob Sutherland

• *"Too easy"* — Marco Ariano & Chris Baird

• *"Once again, Rich and I, here at the Squirrels Nest, are submitting a Grid Wurd. It's not that we're displeased at not having won last week, it's just that we think any group of individuals who cannot spell "word" have no right judging us. Rich was in tears when he heard the bad news, and it took me two hours to get him off the roof. So, come on guys, get your act together. I remain — Craig Bryson c/o the Squirrels Nest"* ("No...please...you've got to accept it...you...gotta...Rich...")

Well, what happened last week was some kind of accounting error, hence your GridWord escaped our sight, somehow. However, we've got your GridWord solution for this issue, and we'll do our best to keep better track of the entries. By the way, this publiction is called **mathNEWS**, not MathSoc.
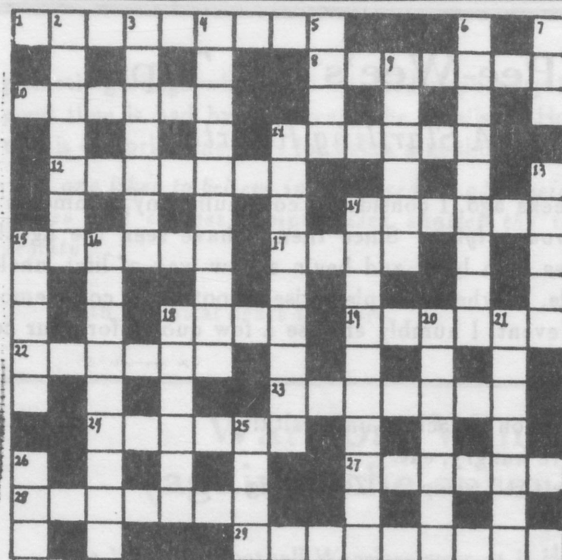
Finally, be sure to submit a GridWord entry. Just fill it out, and hand it in to us care of the *FLIGHT RECORDER* (Black Box) on the 3rd floor. You, too, can be famous by appearing here each issue.

Woody Tobias, Sr

I would like to apologize for an error in last issue: ASPIC is definitely not a poison.

This GridWord may be a little more challenging than normal (notice MAY be). Hence submit a solution even if you do not have all the answers. The solution with the most correct answers will win the illustrious (???) secret (???) **mathNEWS** GridWord prize.

Frank Letniowski

Complete the phrases:
I am _ _ _ _ _ _ _ _ _ _
This was _ _ _ _ _ _ _ _ _ _

GRID WURD

Across

1. Behaving for being lassoed back when the bell sounded. (9)
8. Went back to a small state twice a year to get the little rascal. (7)
10. The thin spray from the arm set. (6)
11. The occupant has a number of little bugs. (6)
12. Around Atilla, tickle before divorcing. (7)
14. & 11 down & 7 down
    Philosophical proof of existence by one using the mind. (1,5,9,1,2)
15. Certify by the exam. (6)
17. Frees from the short road intertwined in existence. (4)
18. A canine will run back. (4)
19. In Strauss, I envy the Commonwealth Southerner. (6)
22. Provision a portion of nitrogen. (6)
23. An unbelievable person lead back in the direction of the train tracks. (6)
24. The centre is twice as much in the distance. (6)
27. Three leads by way of the insignificant information. (6)
28. Mixed certainty on 'x' number of land titles. (7)
29. Seemingly without cost but actually incredibly expensive. (9)

Down

2. The tent rustlers have to confide. (7)
3. A person's garden implement taken this way to find a single loafer. (3,4)
4. May have allure but is impotent at mixing. (10)
5. A high note consumed the yard entrance. (4)
6. Better than current products when night sold. (3,6)
7. see 14 across
9. Fail at the Orients to have meals. (6)
11. see 14 across
13. The southern lady can perform on ice. (5)
14. Cities laid about are perfect. (10)
15. Attention! The brew on the RIGHT. (5)
16. Try one on in my my verbal evidence. (9)
18. Didn't lose the first place ribbon up from the marvel. (6)
20. A duck went to see a certain guy. (7)
21. "I is racy" is a cool attitude. (3,4)
25. A slur of speech exists in the record. (4)
26. A Greek letter may be an estimate of arrival. (3)   Frank Letniowski