# math/EWS

Volume 40 Number 4

Friday, February 28, 1986

# Warriors Band Trounces Western

Basketball season had just begun in earnest at Waterloo as the Warriors Band travelled to Western and Brock last week, picking up two big wins in the process.

The Band, with slightly reduced numbers (so reduced that the London Free Press called them a mini-band) travelled to London last Wednesday to cheer the #10-ranked Warriors on to a 92-70 victory over the then #6-ranked Mustangs. They also trounced the even smaller Mustang Band in a knock-em-down, drag-it-out battle featuring 9 renditions of Hogan's Heroes March. The Warriors Band won the battle as the Western Band could not play it faster than Waterloo, nor could they play it as a waltz. (Wait for the latest Warriors Band album, Walts Around The Clock, coming to the Federation Record Store sometime this century.) Highlights of the evening included Leap Frog and an impromptu "look-Ma-no-music" rendition of Bonanza.

Last Saturday another mini-band headed for St. Catharines and a second-place showdown with the Brock Badgers. The winner of this game won the right to play winless Guelph in the OUAA West Division quarterfinals; the loser would play an always tough McMaster team.

The game, and the Band, started slowly. Brock's band (actually, the Laura Secord Secondary School band) has a lot to learn about cheering a team to victory, and the Warriors Band showed them a few pointers. The Brock band played the Washington and Lee Swing (the CIT song from the movie Meatballs) during a particularly boring moment in the game. The Warriors Band, by fortuitous coincidence having the same arrangement of the same piece, a completely different instrumentation than the Brock band, and a familiarity with the piece, played it faster. The other band gave up.

# Socially Speaking

The other day in the library I overheard this guy say something to the effect of, "Who ever heard of the Jitters? What's MathSOC trying to inflict on us?" Well guy, that pub was going to be Nash the Slash/FM, but they cancelled at the last minute and MathSOC (don't blame me) was left to find an alternative. Unfortunately, the propaganda sent by the Jitters didn't have "We are a SHITTY band" written all over it. Oh well, live and learn!! So, no more bad bands.

The Forgotten Rebels are playing this Friday!!! If you've heard of them you're probably a die-hard fan, and if you haven't, we'll see you Friday. They're the perfect band for the Life's-a-Bitch-and-Then-You-Die February Blues.

And then there's the stupendous, spectacular, awesome WINE and CHEESE. The W & C is going to be Saturday March 8th and as one mathie once said(wrote), "Anyone who's anyone goes to the WINE and CHEESE".

The End of Term pub features THE BOX. If you haven't seen a video of theirs, you must not own a television set. By the way that's March 19th. And I'm looking into some other GOOD (a relative term) bands ... Stay tuned!!

Lisa Seabrooke Social Director After repairing a sign which got ripped up by some snot-faced brats from Thorold (after the game they irreparably damaged it) the Band got down to some serious business as Peter Savich fouled out with just under 6 minutes to play in the second half. The Warriors clung to their slender lead until Paul Boyce fouled out with about 1:10 remaining. Brock tied the score at 88, got the ball back with one second to play and missed the 65-foot shot to send the game into overtime. There the Warriors took control, even though Rob Froese fouled out with 3 minutes to play. Pressure free-throw shooting by Jamie McNeill, John Bilawey and Jerry Nolfi sealed a 108-94 victory for the Warriors, earning them the second bye (actually, a game against Guelph) in the divisional playoff. Rob Froese was named player of the game for Waterloo.

Tuesday night the Warriors played Guelph. If they won, tonight and tomorrow they will be at the divisional tournament in London (Alumni Hall, U. of Western Ontario) playing the winner of the Brock-McMaster quarterfinal in the semifinal. The other semifinal features either Laurier or Windsor against the Western Mustangs. The winners play tomorrow for the divisional championship, and the winner of that goes to the home of the East Divison champion Monday night for the provincial title.

After that is over, the real playoffs begin as Waterloo hosts one of four CIAU regional tournaments. These tournaments determine which four teams will go to Halifax for the national championship tournament. The action begins next Friday night at 7:00 pm with the consolation final on Saturday at noon and the championship at 2:00. Win or lose this weekend, the Warriors are in the tournament, and so this is your absolute last chance to see them at home this season. Tickets are available for \$5 for a two-game session or \$10 for the tournament (yellow cards don't count for this one) this week, but hurry because the prices go up to \$6 and \$12 next weekend.

dwarf

### In the SAC

SAC, the Student Advisory Council to the Dept. of Coordination and Placement says:

- As of Feb. 11, there were 505 Math students looking for jobs, and 881 jobs. - All faculties have more jobs than students except for Arts which is 4 jobs short.

#### WANT TO BE FAMOUS?

The Department of Co-ordination and Placement is compiling a video library of mock employee/student interviews so that froshies won't be afraid of their first interviews. Any student wishing to be immortalized on camera in a fake interview should contact Patti Shapton ext. 4064 (or 884-4064).

You don't need to be going through interviews: you just need some good clothes and a desire to be a star.

## LookAhead

#### **Math Events**

28 Feb Forgotten Rebels

3 Mar Pre-registration begins—be there!!

3 Mar CS Information Night for 3B CS students

19 Mar The Box concert

22 Mar Math Grad Ball

#### Co-Ops Only

6 Mar Ranking Forms Available (11 am)

7 Mar Rankings Due (4:30 pm)

17 Mar Employment Results Available

Fed Flix \$1 Feds, \$3 aliens

AL116 at 8 pm (extra shows at 10:30 pm on Fri, Sat)

28 Feb-2 Mar Commando

7-9 Mar Remo Williams: The Adventure Begins

14-16 Mar Jagged Edge

Cinema Gratis 9:30 in the CC-it's free!

(with selected short feature)

5 Mar Elephant Man (The Real Inside)

12 Mar Road Warrior, Mad Max

19 Mar Falcon and the Snowman (Vertical Roll)

#### DCS Courses Free!

Contact DCS (MC 2045) for more information

· Note the micro demos coming up

3-5 Mar UNIX® Part 1

3-5 Mar CMS Part 1

6 Mar Amiga Demonstrations

7 Mar Tandy Products Demonstrations

10-12 Mar UNIX™ for Documentation

10-12 Mar CMS Part 2

#### **UW Arts Centre**

Call 885 4280 for more info and tickets

28 Feb-1 Mar Skirmishes, by UW Drama Dep't (tickets available at HH 148)

1 Mar Steep and Deep

(from UW Dep't of Athletics Ski Club)

2 Mar Danceworks '86

6 Mar Heather Bishop with Tracy Riley (tickets available from the Fed Office)

8, 9 Mar Steppin' Out '86

12-15 Mar Richard III

17 Mar Peter Samelson (magician)

#### Other Events

28 Feb - 1 Mar OUAA West Division Basketball Playoffs Alumni Hall, U. of Western Ont.

1 Mar ASEANS Potluck Dinner, HH 373, 6 pm

6 Mar "Where is God When it Hurts?"

Talk by Terry Winter, 5 pm, AL 116

7, 8 Mar CIAU Regional Four Basketball Tournament (Tickets: \$5/day, \$10 for the tournament all week)

11 Mar Campus Day

#### mathNEWS

3 Mar Deadline for articles

3 Mar Next production night<sup>™</sup> (MC3038, 7 pm)

7 Mar Next mathNEWS hits the streets

#### Prezz Sezz

Everyone on this campus must be aware that the computer fee is a result of the fundamental and underlying problem of underfunding. But does the public at large know? If one sits back and thinks for a while - why should those not connected with this institution and other universities know? Now is the time to educate the public at large - the professional organizations, parents who have kids that will in the future be heading for university, the economic community, etc...

Most people care about the future of Canada and want to see it grow. Without the people - mindpower - we will never realize our potential.

You will soon be hearing of a shutdown of all Ontario universities through the cooperation of the administration, graduate and undergraduate associations of all universities, to take place sometime in March. The Committee of Mandatory Computer Fees, chaired by Ian Mitchell, has been meeting regularly to organize this protest and others and discuss ways to combat the underfunding problem. Alongside this shutdown will be a march down King Street in KW. This way we can make the public aware of our situation. Education affects everyone. The repercussions are many if our youth are unable to afford a university education. We all know about the brain drain to the United States. I would like to work in Canada and see my friends and our children live and work here. But if an education is too expensive to be had here, or what I want in an education is not available in Canada, I will go elsewhere. The government is well and aware of our plight but refuses to do anything. We need the public pressure to change the situation. By educating the public at large through this protest with media coverage we hope to gain their support and therefore battle the government. Most of us are willing to pay more for our education but only as long as the government pays more. Maybe our academic buildings will be like the ruins of Egypt if something is not done now. The effects of underfunding will soon be felt and our children - the future of Canada - will suffer. Math is planning a shutdown pub the day before the shutdown so come on out to the pub and protest. It only takes a few hours of your time but the impact should last a lifetime. If you care, be there!!

Wilma van der Veen MathSoc President

## Ultra-Classified



Duty Roster: Guido - out of town on assignment. Gino - requested to escort Tony Saturday night. Whaddayacall "music 'preciatshun". Bring Mr. Thompson.

Anyone named Theodore interested in helping me take legal action against Burger King for defamation of character, please write 106 Evans Ave. Toronto Ont. M6S 3V8. My name is Herb.

Blair MacDonald, why don't you quit Math and go to Engineering where you belong.

GRM: Just a note to wish you luck on Saturday night. Gino will take care of the music critics, an' I will personally handle "donations to the cause." See you there.

Waterloo Summer '86: roommates wanted to share prof's house in Parkdale Plaza area, May to early August, rent \$200/mo. for 3 months. Call 885-5454.

Notice: anyone interested in a game of Star Fleet Battles, on Saturday (tomorrow), check the notice on the Watsfic door, Mc 1009.

# More Quotes

Fifty minutes is a long time for a professor to talk without saying something silly. The increase in the number of quotes that math-NEWS receives is evidence of this. We will keep printing them as long as you keep sending them in. (The chance to submit a quote is one of the best reasons for paying attention in class.) Yes, we have no Wong.

Randy Goebel, CS486

The assignments are put in pessimal order.

Randy Goebel, CS486

Some guy is registered in section 2, attending section 3, and getting assignments back in section 1.

Randy Goebel, CS486

It's wrong in the sense that it doesn't work.

Randy Goebel, CS486

Let's say 'very simple'-'wrong' is such a strong word.

Randy Goebel, CS486

There, that's half an hour down. We've got one hour left for the last question.

Ken Davidson, taking up M130B midterm

You want the thing in my pants.

Peter Ponzo, AM 391

Infinity is a large number.

S. M. Seager, C&O 351 Instead of taking i to infinity, I'm taking i to four, which is a dangerous thing.

Keith Geddes, CS 375

This event will occur infinitely often, but not very often.

C. Small, STAT 333

A large prime doesn't contain powers of two, or powers of ten, or powers of anything for that matter.

G. Gonnet, CS 340

This is not exactly reality we are talking about, but in mathematics.

D. Siegel, AM 365

By this time it's all moot, I could be talking about anything.

D. Siegel, AM 365

I wonder if I'm actually accomplishing anything here.

George Cross, MATH 230B

I don't really know what this is for.

Mosevich, CS 330

All these midterms I throw at you are really midterms, so I feel morally clean.

Romas Aleliunas, CS 435

A spline is something engineers used to use, and a spline isn't kinky.

Romas Aleliunas, CS 435

If you feel cheated by me stopping early, you can stay for a few minutes and watch me erase the boards.

Chris Springer, ACTSC 221

Let those little chippies test themselves.

Rudy Seviora, EE 427

If you have a joint you have everything.

Christian Genest, STAT 330

Make it simple, even though it is more complicated.

Wendy Myrvold, CS 360

(in response to an engineer) You probably know too much for your own good right now.

Dave Taylor, CS 354

It's not obvious to me that a flowchart is the best way to describe this, but since one was promised, here comes one.

Dave Taylor, CS 354

Have you ever seen anything written in SNOBOL that was understand-

Dave Taylor, CS 354 If n is a prime we call it p. That's just the way we do things.

Dave Easton, PMATH 340

Unsanitary as it may seem, first you P on the chopstick. Then no one else can P on the chopstick until you've V'd on it.

Doug Dyment, CS 354

This isn't a trick. If you use a trick more than once it becomes a method. This is a standard method.

John Baker, MATH 332B

So, this is left as an exercise for the instructor.

Bruce Char, CS 350

A sort of instantaneous proof by induction. If it's true for n = 4 it must be true for all n.

Bruce Char, CS 350

What you actually probably did, probably you actually solved this in MATH 130B.

Ed Moskal, MATH 230B

Is it clear that this condition very easily obviously holds?

Prof Shah, MATH 234A

After a short delay, one of the gates immediately becomes one.

K. Culik, CS 369

You can do this in an arbitrary order, if you do it sequentially.

K. Culik, CS 369

In Canada, or in the English speaking world...

Prof Kreindler, CS 498L

I screw up my subscripts because I'm an idiot.

Erich Fraga, CS 337

Oh, shit ... I'm sorry guys ... O.K...

Erich Fraga, CS 337

I have to learn to stop swearing in class, otherwise it gets printed in mathNEWS.

Dave Easton, PMATH 340

Does anybody here read mathNEWS? Does anybody here submit quotes to mathNEWS?

Peter Dibble, CHEM 363

# International Women's Day

In case you didn't know, International Women's Day is on March 8th. We'll be celebrating this on campus on March 6th and 7th. There will be displays in the Campus Centre from about 10am until

Groups from campus and from the community will be participating. These include the Women's Centre, Birth Control Centre, WPIRG (information on a new contraceptive), Anselma House, CARAL (the Canadian Abortion Rights Action League), and Birthright, to name a few. Also, there will be an art display, films, self-defense classes, and a speaker talking about equal pay for work of

In addition, the YWCA will be recognizing International Women's Day with about 30 groups offering displays. They will also have an art exhibit, films, and will be demonstrating self-defense techniques.

Watch Imprint for more details or contact the Women's Centre or Women's Commission.

Come and join us. Everyone is welcome.

Merrill Albert Women's Commission Volunteer

#### ISSN 0705-0410

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

Editor: dan schnabel

#### The Surfin' Einsteins

# Big Showdown

A True Story by W. Flaghoople

If you didn't read about the Surfin' Einsteins in the last issue of mathNEWS, get with it! Go and scrounge up a copy before you read this.

This week's episode starts in the music room of the White House in Washington DC. The president is sitting cross-legged on the floor listening to music on a pair of headphones. Enter Danny Partridge, (no relation to the TV star), one of the CIA's top agents. He's tough, dressed entirely in black, and wearing shades and an "I Drink Milk"

DANNY: What is the situation, Mr President?

RONALD REAGAN: Well, Danny, I've been listening to the latest Jesus & Mary Chain album, and I can't decide whether they're just another example of English media hype, or if they really represent the angst of today's youth. What have you been doing?

DANNY: Well, I worked out this morning by crushing newborn kittens with my bare hands, then I went to the airport and chased Hare Krishnas for a while, then....

RR: Uh, well, what news have you brought with you today?

DANNY: We have evidence that the KGB has been showing a keen interest in the Venice Beach area of California.

RR: Hmmmmm....

DANNY: We know it has something to do with those pesky Einstein brothers and their work on the Unified Field Theory.

RR: But I thought the Einstein brothers have said that they will not release any of their discoveries to the world out of fear that they would be used for war, as their grandfather's atomic bomb was.

DANNY: I know what they said sir. But, let me tell you something. You know how I always get that funny feeling when I see a Marxist? Well, last time I talked to that freak Sonny Einstein, I GOT THAT FEELING. My nose must've bled for three days! I'll bet they'd sell those secrets to the commies at the drop of a hat.

RR: In that case, I think we had better do something.

DANNY: Well, sir, knowing how you would have felt on the subject, I already dispatched our best agent to eliminate the Einsteins at their summer home in Los Alamos.

RR: God bless you (Puts headphones back on.)



#### folker-Craig Ltd.

330 Weber Street North Waterloo, Ontario, Canada N2J 3H6

(519) 884-9300

m In Toronto Call (416) 456-2070

Toll Free 1-800-265-8883

Refurbished Data Terminals

From \$195.

DEC · DG · ASCII · TEKTRONIX

COMPATIBLE MODELS

Call Peter or Gail at 884-9300.

(Meanwhile, on the Einsteins' secret patio near Los Alamos, New Mexico)

SONNY: Okay, now if this thing works right, this thing should send them through the fifth dimension ending up... (looks at map) ...right

BOBO: Hot diggety! That's the Philippines!

LOU: Right on! It'll take them forever to get back.... Joey! You're spilling beer on the control panel.

JOEY: Mmmmf.... (takes a drink of his beer).

(The CIA agent who was assigned to eliminate the five wondrous brothers, has arrived at the place where they were supposed to meet the Newtonians, a scant six kilometres from the Einsteins' secret pa-

LOU: Look over there! (Points to the CIA agent on the horizon) FRANK: (Looks through binoculars) That's not one of the Newtonians! JOEY: (Accidently leans on the control panel, flipping over an ashtray, which knocks his beer can on its side.) Mmmmf....

Beer foams all over the control panel. Sparks fly. A puff of black smoke rises from the back of the panel.

BOBO: Oh no! He's started the chain reaction! It's going to...

There is a blinding flash, followed by a ball of fire, and finally, crippling winds hurling twisted wreckage all about. A mushroom cloud rises ominously.

Next: The day after.

### Seminars Galore

It's incredible! The information meeting put on by the Applied Math Club was a big success in a big way. It seems as if putting our seminars in the mysterious 6th floor isn't good enough to frighten you away anymore. As a result the casual discussion about graduate studies and working in the private sector was informative despite the sardine free-for-all going on in the background.

Continuing on our never ending quest to inform and entertain you we will be providing a large number of seminars in the near future. Mark these down in your calendars!

March 6th, 4:30 in MC 6091A, Dr Yuon who works in the private sector and helped with the construction of the Space Shuttle arm, has been invited to speak on Control Theory

We have invited Dr. Robert Borelli, director of Harvey Mudd College in California to give two talks:

> March 11th, 3:30 in MC 3003 March 13th, 2:30 in MC 2035

Harvey Mudd College is a school with a special program for applied math undergrads where besides taking courses the students participate in solving real life problems commissioned to the school by local industry. He will be talking about the work he is doing at the school and some of the industrial problems he has solved.

It seems as though we may have a professor from MIT giving a talk at the end of term as well so stay tuned and watch for posters for more information.

> Bruce Sutherland AM Club President

# By Bread Alone?

{Reprinted from the Japan Times (Dec. 1985), this editorial represents one newspaper's reactions to a visit by UW officials promoting this university and the co-op system. }

We are in the season of Christmas and New Year's. Despite the press of secularization on our cultural circumstance, these two major religious feasts-one Christian and the other Shinto-retain the air of high holy days.

It is, in other words, an appropriate time to assay our spiritual and cultural condition. This can be thrown into highest relief by re-examining the counter-case: the argument that holds that money and material well-being, not culture of the things of the spirit, are the uchallenged pillars of modern sensibility.

There are some institutions that powerfullly embody the philosophy of material gain, including a certain North American university. This university has made an undiluted commitment to the occupational and financial well-being of its students.

Students who read or major in a marketable field like computer science are encouraged to undertake a year-round program of study and work.

Cycles of four months of study at the university are followed by four months of employment at, for example, a software firm.

At the end of five years, the student has a degree and over two years of actual work experience. The product of the university is enormously marketable but is he or she in any cultural or spiritual sense educated?

The question is central. The student-trainee programs of instututions like this university are based on the assumption that the university's prime function is to be, to paraphrase Lenin, "a small cog and little screw" in the greater apparatus of money-spinning. Material appetite is all.

The 2500-year-old legacy of Plato's Academy-the whole assumption that the student should be removed from the immediate influence of market and political forces-has been in effect abandoned at this university and many other instutitions of higher learning.

That a student of such higher education can pass through the course of his studies in a Western setting without ever readiung a Platonic dialogue, hearing a late Beethoven sonata, memorizing a Miltonic elegy, looking at a Rembrandt drawing or acting in a Shakespeare play is a source of despair to a genuinely educated sensibility.

It is part of the modern failure to educate the young and is as much of a disappointment at the big-name North American institutions as this university.

But the university's assumption that one count oneself as an educated member of society after four years of computer science and a course on watching silent movies numbs with its philistine boldness.

The riposte is obvious. The last decade has not been kind to Canada where this university is located. Economic growth has been poor, inflation high and jobs scarce.

Hence the insight that for a materially secure future Canadians must dispense with the cultural niceties of liberal education and set about "getting on" in a serious manner.

At the same time, can one name another North American university that is as "successful" as this university?

But all this is actually obscuring fog. The real goal is not life or liberty, national pride or academic excellence but the pursuit of individual economic gain.

The Shintoist perception that every human being has a unique capacity for extraordinary achievement because of his divine lineage finally resists the philosophy of the "bottom-line."

In the fourth chapter of Matthew, the apostle writes: "Man shall not live by bread alone." This is the famous bit of the quotation but the rest of the line contains the punch line: "...but by every word that proceedeth out of the mouth of God."

For the Christian, the message is unambiguous. For the secular humanist, a variety of "compensatory heavens" could be suggested to complete the line.

The point is that in a Western of Japanese setting, all the teachings on man's higher nature would bear on the "spiritual."

Neither the Shintoist nor the Christian, not the Buddhist nor humanist would finally concede that human redemption proceeds from a cash register.

The brave new woirld or unrestrained materialism is of course not confined to this university, or to Canada or to the United States. It characterizes much of the Pacific Basin.

It dimishes man while it lines his pockets.

# Beer and Slothing in Waterloo

I remember when I turned eighteen, my pappy told me, "Boy, I dunno how we gonna afford it but I wanna see you in un'versity 'fore I pass on."

Well, dad never got his wish. He was zapped by lightning while putting up a scarecrow the next day. However, the insurance money (plus the money we got from selling the farm) was enough to set me up for five years here at UW, and set my mother up for life in a condo in Oakville.

Anyway, looking back at all that I have accomplished at university since that fateful day, I'm sure that even if my father were still alive, he would regret sending me here.

There was the time, in Village 2, that I smoked a full pack of cigarettes before getting out of bed, or the time I got drunk and tried to walk to Buffalo. (I got as far as the Kent Hotel.) Those were days when I was young, vital, and free. Entire armies of green men could not have stopped me when I was in my prime. I was a general, a king, an angel, a god.

Now, those days are far behind me. All I have to remember them by is this bloated balloon I carry above my belt. I am tired. I can't concentrate on anything for more than four seconds. My hair is falling out.

Despite all this, I do not regret consuming any of the 1400 or so beers that I bought in first year: being burned out is my fate. If, by some ungodly miracle, I was reassigned the youthful vigour I had then, I would not change a thing.

I can still see my father as if it were yesterday, in his overalls and straw hat, looking down at me from his tractor, saying 'Ahhh... you'll never be nothin'."

Oh yeah?

J. Smith

# Omego XI

SPECIALISTS IN IBM COMPATIBLE
COMPUTERS & SOFTWARE



home computer centre

255 KING ST WEST KING CENTRE, KITCHENER

(519) 745-6789

#### FeedBack

Dear Dianne Kilcoyne (MGB representative)

(re: MGB button scandal.) Apology accepted. Thank you.

Dear Minority

The Loud Minority

Acceptance accepted. C+D day on Wednesday March 5, bring your button!

D. Kilcoyne

To the editor

Congratulations to Lisa Seabrooke and MathSoc for booking a real rock 'n' roll band into Fed Hall. Yes the Forgotten Rebels are coming to town tonight and hopefully Club 750 will never be the same.

For those who don't know, the Rebels are a hard, fast, furious and fun irreverent band somewhat like a cross between the Ramones and Teenage Head. The Rebels' songs are characterized by driving rhythm, chain saw guitars and lyrics that would make even an ICR construction worker blush.

Hailing from Hamilton, the Rebels have been embroiled in controversy for their attacks on pop idols ("No Beatles Reunions", "Elvis is Dead"), Canadian government ("In Love With The System"), the Boat People ("Bomb the Boats and Feed The Fish"), and general offensiveness ("Fuck Me Dead").

This is Rock 'n' Roll that has not been sanitized for top 40 radio. This is music for bopping, thrashing, slamming, or just enjoying - whatever your taste. This is an evening that will be the perfect antedote for midterm blues. Hope to see you there.

Brian Wheeldon

#### Dear mathNEWS

As I read your newspaper, there is one thing that constantly puzzles me. Why do you let Gooch contribute articles when he is so obviously an [expletive deleted] and offends so many people? I read math-NEWS for entertainment, and I don't find it very funny to read stupid, insulting articles from some dumb frosh that nobody likes. Get rid of the jerk! I'm sure he'd be just as happy writing articles for the Toronto Sun, and mathies would be a lot happier.

Not the Back Row Committee (or any other committee)

Dear Not the Back Row

The first article we received from Gooch was pretty good and i am convinced that he can write if he is given the proper direction. If he's not given the proper direction he tends to write about himself. When he does this we get those offensive articles to which you refer. The second article he submitted this term was of this form and i was left with no choice but to print only half of it (see last issue). If Gooch submits another such article we wont print it. If he submits good articles i'll print them.

Last term things were done a little differently and there was a tendency to print anything that came along.

dan the editor

To the Editor

Why do Artsies get reading week but Mathies don't?

Anonymous

Dear Anonymous

Reading week is sometimes referred to as Suicide Prevention Week since February is a good month for that pass-time.

The reason we don't get a reading week is that this is the way the administration tells us how much we are wanted.

Take heart though; Mathies get mathNEWS but Artsies don't!

dearest editor

We (the Back Row), on behalf of Bill-The-Cat (Ack) and Opus, could like to take this opportunity to thank those who voted for us in the recent election, and to inform the public on how we are doing on our campaign promises.

Re the smokestack: The green men vetoed painting it where it now stands, but suggested that if we moved it into a MC building stairwell it would soon become a lovely hue of yellow.

Re the bombshelter: We gave it an intensive inspection the other night and failed to find a single thermo-nuclear device. Unfortunately the same cannot be said of Fed Hall, where we get bombed every time we enter.

Re profs and the E.L.P.E.: Negotiations are still underway on this one. Their latest offer is to write phonetically in Hebrew.

Oh, by the way Mr. Editor, we're still waiting for the Hubba-Bubba on our chairs that you promised us last issue.

The Back Row

Dear Back Row

Good to keep hearing from you guys, but if you didn't get the Hubba-Bubba i'm in some serious trouble with somebody else (or maybe i accidently put it under the seat.)

dan the editor

Dear dan the editor

My friend Steve and I have just made a bet for \$100 (American money) and we need your help. You see, both of us are taking a course called AM 365, and we always argue vigorously over whether our prof is smiling or that's just the way he is. Please help! Solve this paradox for us.

FS confused in '365

Dear FS

Easy question. Truth is, there is no such thing as continuum mechanics and he's pulling the biggest gag of his career - he can hardly keep from smiling. Sorry you were taken in but think of how the Dean feels.

dan the editor

Dear editor

Thank you for the illuminating explanation of Statistics professor Chris Springer's lineage appearing in the last issue of mathNEWS. Could you enlighten us as to the heritage of another math professor - Dan Field?

Rumour has it that he is the misbegotten son of Donald Knuth, author of "The Art Of Programming" and a female Swedish lion-tamer. There are also those, however, who say he is related to the Mikey of Life cereal fame. What is the truth?

interested CS dude

Dear dude

While in Detroit presenting a lecture on the programming of art Donald Knuth fell in love with a struggling actress. It was one of those relationships destined to fail. He would pay more attention to computers than to her. She always lied to him. One evening, after she told him of her days taming Swedish lions they conceived a child. That child inherited traits from both Donald and his wife Beulah. He did those Life cereal commercials and, after changing his name, became your CS prof, Dan Field. He also tends to lie a lot. dan the editor

# New, Improved Tales of Dirk Halfspeed

Part 4

Seran was bemusedly wondering what had happened to Dirk when Sirius hit Joe King and pointed dazedly at the speakers. The reason for this unusual behaviour seemed to be the message being broadcast over said speakers.

"ATTENTION! THIS THE END OF IS

UNIVERSE!"

And it was

#### Math Column

Once upon a time, Mrs Vera Odd and Mr Rectangulus Odd were living in an old house. Vera decided to retile the bathroom floor. She found a tile shape that was her initial (the three unit squares below) and thus decided to use it.



Mr Odd didn't like it; it wasn't rectangular. Vera insisted, though, so they finally reached a compromise. It must occupy the smallest possible rectangle with odd dimensions (since they are both Odd people). Also, since one of the Odd couple is very neat, no holes can be left and no tile can be broken or placed over another tile. Vera, however, wasn't sure what size of rectangle would satisfy the conditions. Can you help her?

#### The Computer Science Department, in conjunction with The Computer Science Club

mathSOC is proud to present:

4th Year CS Information Night & Meet the Professors For 3B CS Students (and anyone else who's interested)

Confused about fourth year CS courses? Can't decide between CS 478 and CS 488? Don't know whether Computer Law is really less work than Real Time? Then come on down! This is your meeting.

We will begin with an information session in MC2065, where Professors Dyment, Tompa, Munro, Simpson, Walker and others will discuss preregistration and the various fourth year CS courses.

We will then move to the fifth floor Faculty and Grad Lounge (MC5136) answering questions on a one-on-one basis. Several fourth-year CS students will be there to give their opinions.

This is the most important year of your university career. Make sure you are well informed!

> Monday, March 3, 1986 7 pm - 8:30 pm MC2065 8:30 pm - ??? MC5136

# The Ballad of the Diehard

The Diehard never worried About the time of night The Diehard wasn't happy Until his answer's right The Diehard never settled To get nine out of ten The Diehard kept on trying And then he'ld try again

The Diehard was a proud one "No problem can't be beat" The Diehard will die trying Before he claims defeat And so begins the story Of how it came to be The Diehard has been locked up For Gross Insanity

It all began so simple One morning he awoke Someone had placed beside him (Intended as a joke) A single piece of paper A test for him to try For on it, neatly written Appeared the question "Why?"

There wasn't much to go on No axioms were found No premises, or givens No predicates or nouns But nonetheless the question Aroused his prying mind And so he started working To see what he could find

Oh yes, the Diehard sat down With pencil in his hand Determined to discover A way to understand He went through tons of paper And worked all day and night But never once did get close To find an answer right

'Twas then that people noticed A twinge in his right eye And if you listened closely You'd hear him mutter "Why?" He lost all thoughts of grooming And seldom ate or slept Intense was his frustration Occasionally he wept

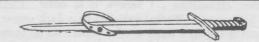
The townsfolk called the doctor And asked "What can it be?" The old man shrugged his shoulders "Dunno-Insanity?" And so to the asylum The Diehard was thus sent Some say he never noticed His mind was so far bent

The Diehard, and his papers Have all been locked away But still he keeps on trying Until this very day To solve this tiny puzzle With no true place to start Oh no, the Diehard won't quit The Diehard won't lose heart

There's been some speculation On how much he's achieved But one thing I assure you His quest won't be relieved The Diehard will continue (Although he's locked away) To fight his nasty problem Until his dying day

The ballad of the Diehard A man too much obsessed Gives all of us a warning When we go on a quest So if by chance you wonder The moral of this tale It's message is quite simple "Don't be afraid to fail"

grmcfarlane



# IMPERIUMS TO ORDER

(Role-Playing and War Games)

103 QUEEN ST. S. KITCHENER ONTARIO, N2G-1W1 (519) 744-3831

10% Off With This Ad

Valid Until March 6 Only

# The Raj Of Rochester

#### Part Four

{It seems that as soon as our hero, adventurous student Pierce Arrow Williams, finds somewhere to go in the new and strange world he has plunged into, something happens to thwart his intention. Now 'Sir Percival', as he has been dubbed by companion Regall Pander, has fallen prey to the evil King Karmelos.}

It was dark inside and, like everything else in Karmelos' enclosure, it stank. But this stink was a different stink; it was the stink of power, the dominion of man over men. Karmelos held court in a long hall, lit fitfully by flitting flames on sticks. Gathered here and there around games of dice or lumps of suspect food were groups of soldiers, clothed in coarse hides and carrying painted pikes at their sides.

The far end of the hall was obscured by steam. As the bearers approached with rhythmic slowness, I began to see the edge of a huge cauldron set into the floor. With slow steps their ears could not hear the mutes drew near the cauldron and set us down.

"Oh, do loose them. They must hear and see all." This was a new voice, from the far side of the steam. It was the first real voice I'd heard; elegant in the extreme, it was almost the stage voice of a snob. That was when I started worrying.

"Please allow me to introduce myself. I am known as King Karmelos; this is my associate, Warkal, whom you may already have met." The thin robed figure smiled indulgently at us. "Most captives, of course, do not receive such treatment, as they are usually put to work—if we find them useful—or, if not, put into the pot with little delay." Then Karmelos drew a small black rod from his robe and tapped the stone edge of the cauldron. Immediately a hundred eyes bobbed up from the bubbling goo, staring at us. Pander shrieked and covered his face.

"But these are mere idle playthings." Karmelos dispelled the eyes with a wave of his arm. "Warkal and I, we have better games to play. Now we play against a great adversary, an agent of the Light. He is called the Raj of Rochester." For the space of several breaths, Karmelos watched us like a cat; unsatisfied, he turned away. "It is power that we want, power over the Raj."

The shaman Warkal then rose from his seat.

"Power like we hold over you. Power as you have never seen!"

"As friend Warkal has alluded, we have obtained your services with the assurance that you cannot resist our will; for you shall bring us the Raj."

I had to admit, this was going way over my head. How could I, a helpless stranger, possibly carry out such a quest in this world? And how could Karmelos make me do his bidding? As I struggled do say something-anything-the tyrant read my thoughts.

"Further explanation, I believe, is in order. Please, Warkal, bring the kwisagerei." Warkal vanished to a dark corner of the hall and returned dragging a small wooden coffer. As he opened the lid a strange, vibrant green glow filled the room. Warkal then lifted out two large emeralds whose brightness seemed to extinguish all other light. Inside each stone I could make out a small, twisted image, like an insect in amber.

"These are kwisagerei. These are your souls." With startling clarity I realised it was my own small, twisted head I saw inside the stone; In the other was Pander's. Each head seemed to be screaming, and I strained to hear the sound that wasn't there. "Each kwisager is a jar, a magic prison for your souls. They allow us a certain measure of your control. Of course, absolute control, while within our reach, would not be desirable in your case, Sir Percival. Absolute control means absolute dependence of the controlled on the controller. We do not wish to lightly dispense with your own skills as an adventurer."

"Karmelos! We will die ourselves before we do your work!" head snapped back as Warkal made a sharp gesture.

"This may very well be, in your case. The effect of the kwisagerei as instruments of geas is enhanced by demonstration—and there are always more singers than songs. If you will, Warkal?"

Suddenly Pander and I were immobilised. Warkal stepped silently over to the minstrel and held the kwisager against his head. The shaman uttered a word-plytha-and then handed Regall Pander a wire garotte. With a calm, almost happy expression on his face, Pander then began to wrap the instrument of death around his own neck, tighter and tighter.

"No! You can't make him ... it's not his fault!" My words fell on deaf ears as Pander's blue eyes began to bulge. It took all of a minute of agony to end his life; Karmelos looked politely away in the last few seconds, but I could not. After an eternity of silence, Karmelos' voice boomed inside my head.

"Sir Percival, I charge you under geas to find and capture the Raj of Rochester. Know well that, should you turn aside in your quest, your fate shall be worse than that of your companion." I began to feel an eclipsing blackness inside me, and a moan that grew louder and louder until I knew it was my own. "The power, Percival. Do not forget the power."

Thomas Ivey

# Platter Splatter

Depeche Mode released a new single called "Stripped", in the U.K. about two weeks ago. Included on the 12" version are four new tracks plus yet another remix of "Fly On The Windscreen". The new tracks range from typical album filler ("Stripped") to gawdawful noise ("Black Day") with "Breathing in Fumes" and "But Not Tonight" falling somewhere in between. The next album from Depeche Mode is due out sometime in April and hopefully will fair better than the above mentioned single.

The groups "It's Called A Heart" has finally been released as a 12" single domestically, but contains real crummy remixes - you're better off picking up the "Catching Up With ..." album package.

The Public Image album (called "Album") is already out and is really nothing to jump up and down about. I've only heard a couple of tracks so far; I liked both "Rise" and "Fishing". If nothing else, this album will win the worst album cover of the year award.

Jim Morrison update No. 7 - researchers feel they are closer to finding out what really happened to Jimmy. One group of researchers suggest that he shortened his name to Jim Morris and opened a Mr. Grocer store in Westmount Plaza. Go in and ask to speak to the manager - the resemblence is astounding. Another popular belief involves the fact that Wham! played their first gig just after Jim misplaced himself. Yes, that's right, George Michaels is really Jim Morrison. Believe it or not.

Tonight the Forgotten Rebels are playing at Fed Hall (presented by MathSoc). this group has been around for a while and have two albums out. Seeing the group play songs like "Elvis Is Dead" should easily justify the \$3.00 cover (\$5.00 for non-feds). The Calling played at Fed Hall last night. If you want to hear more of this band watch for a compilation album featuring bands from the Hamilton area called "Noise Next Door".

Albums in the forseeable future include: Echo and The Bunnymen (with a new ruffer sound) sometime in April or May; Siouxsie very soon; Human League (also with a new ruffer sound) might have something out by May; XTC will have another work-of-art out sometime around mid-April; New Order are ready to release their next album early this summer; and there will also be an OMD soundtrack album out sometime this spring.

The Jesus and Mary Chain album "Psycho Candy" has just been released domestically. Don't forget to get tickets for their March 19th Concert Hall show.

Other concerts to watch for are MOEV at the Copa on March 24th, Lloyd Cole and the Commotions at the Copa on the 25th and Violent Femmes, March 18th at the Concert Hall.

CS Kittens

## The Scope Memoirs

Oh the endless tedium of life; the mind-boggling dullness of it all. Sitting, waiting, dreading the inevitable torture to come. Why don't I just walk away? The simple fact is, I can't. Condemned I am, forever above this god-forsaken sink in a run-down townhouse, in a world whose inhabitants spend so much time concerned with who's dating who that they totally ignore what is going on right under their noses.

Oh, I'm sorry, I didn't introduce myself. My name is Jack; I'm a Scope bottle. Sure joke all you want — "Hey, green stuff, expectorating anyone for breakfast?". Ho ho ho, very funny; listen I have feelings too you know. While you were worrying about a scraped knee years ago I was suffering one of the most traumatic moments of my career as a sample size of Scope. Throughout my life I've been in an endless contest with the Listerine Brothers in the conquest of new frontiers for mouth and wash alike. As a young scope bottle I used to dream of being the first mouthwash in space. There I was, up among the stars, swishing between John Glenn's teeth. He wouldn't gargle, the saint. It was a paradise all right, but as reality was to portray, an unattainable one at that.

The fateful day came when as I did my paper route I noticed the malicious headlines:

#### NASA ANNOUNCES LISTERINE TO

#### BE USED IN SPACE PROGRAM

Only my mother, that quart of green inspiration, prevented me from defecting to Russia. Despite her aid, however, fate was to decree that I would never attain such states of grandeur. Unions decided Listerine was the only mouthwash for their members and the Brothers even gained the monopoly on the 76, 80, and 84 Olympics. It's just not fair I tell you.

But what a cruel twist of destiny to place me in this rotting sewer referred to, even affectionately, as Sunnydale. And what luck to be owned by some idiot named Frank who was so stupid he flunked out of Trent.

Every morning Frank stumbles into the washroom without even so much as a "Hi Jack!", or "Morning Scopey". Instead his hand lashes out maliciously, grasping me by the throat, while simultaneously his other hand spins off my cap as fast as if he thought I was a helicopter. Oh the agony of it all! John Glenn would have treated his mouthwash with respect. But the worst part is yet to come—the gargle. What satanic beast could have inspired such ceremony! It's like saying, "hey Jack, I'm going to swallow you—not yet—now, almost—now I'm really going to swallow, look out Jack here it comes—ooooh! that was a close one". Yet this isn't enough for Frank as he decides to start humming Figaro, climaxing with grandiose hand gestures before he mercifully expels me into the sink. I can only think how lucky Frank is because my mother gave me the manners not to jump up his nose—unlike the Listerine Brothers.

So here I am, no more than half a capful left of me. And just my luck, this would be Valentines day. That's right, I can tell just from the way that creep is snoring. Going to impress that girl today, aren't you Frank? Wouldn't look too good with mouthwash running out of your nose, would you?

I used to have a girlfriend to. Her name was Roxanne. She was a 500mL Listerine but in my eyes see was a half litre of golden beauty. Yes I know, not only was she metric, but she was akin to the Listerine brothers. Nonetheless, our meeting seemed inevitable. We first laid eyes on each other in a co-ed residence in Peterborough, and continued to meet secretly behind the shower curtains where we expressed our true feelings for each other despite the leering of the shampoo bottles. Alas, our relationship was not to be, when Frank got kicked out of Trent and was forced to move to Waterloo in an honours engineering programme. We didn't even get to say good-bye. One morning I

cuddled up next to her in the medicine cabinet, and the next moment I found myself pressed against the rear window of Frank's station wagon repeating Roxanne, Roxanne, over and over.

Damn it! There goes Franks alarm. It won't be long now before that animal slithers in here and stuffs me between his jaws. What a way to end!

#### SMASH!

Looks like you missed your alarm clock Frank, you gunkie. Here comes the slimy wombat. Preparing to attempt my usual sarcastic greeting, the door opened. Then, somehow, something stirred inside me and I ended up falling on my face crying "Oh please Frank, show me some mercy. The girl isn't worth it, not after all we've been through. I never choked you, or ran up your nose. For the sake of God in heaven show me some pity!"

"Morning Scopey", replied Frank.

No it can't be! Could he really have changed? Has my only remaining dream finally come true?

"Big day today, Scopey. Today's the day I ask Susan out, and I'm

going to need all the help I can get!"

"Ooh nooo!" His teeth shone maliciously as he strangled me and through off my cap crushing it beneath his feet. "Come to Papa", was the last I heard before I plunged into his gaping, laughing mouth.

Swish, swoosh, gargle, arrrgghhhhh!

You know, it's strange. I never realised you could get such a good view from someone's nose before. And boy did Frank have difficulty saying, "hey Thuthan, you wannu gor oot". Yep, I think I could handle this for a while.

Fozzie

#### Ask D.K.

Dear D.K .:

My HKLS midterms are next week, and I'm worried. Is something wrong with me?

J. Otis Graham

Dear JOG

Nothing's wrong. You're just a nervous Rec.

D.K.'s Understudy

#### PEKING EXPRESS

Luncheon Special 11:30 - 2:00 pm \$2.95 + tax

150 University Ave. W., Waterloo 884-9220

The above ad is a correction to the ad in the last issue where the time was listed as 1:30 - 2:00 pm. Apologies are extended to Peking Express and its customers for any inconvenience caused by our error.



### The Adventures of Watman

When we last left those caped crusaders, Watman and Duck were in the clutches of Statwoman. This was no mean feat indeed, as this situation was at variance with their super-strength and free will. Will Watman and Duck die? Will Statwoman rule the epsilon-universe?

"...the  $\chi^2$  distribution approaches a normal distribution when it is applied an arbitrarily large number of times..." the tape droned on, draining the life force from Duck, while Watman was under Statwoman's control. Was there no way out?

All of a sudden, Watman began to utter some kind of statement with every milligram of Wat-strength that he could muster: "Unnh...This...is a...contradiction. Mmmpg...This sentence is a contradiction."

With that, Statwoman screamed, as she could not handle the inherently paradoxical sentence, and she fainted as her brain overloaded with recursion. This gave Watman and Duck enough time to break free, just moments before Statwoman started to revive.

"That was something I learned from Captain Kirk. Now, for something completely different"

"Okay, let's do our stuff," said Duck.

But suddenly, Statwoman spoke up, "You wouldn't punch a lady, now would you, Watman, darling??"

"Why, no. As honourable citizens [read sexist wimps], we couldn't do that, now could we? We'll do this instead!! Come on, Duck!"

Quickly, Duck put the Walkman on Statwoman, and before she had time to react, Watman started to play a CS 360 lecture. Statwoman then screamed as she melted to the floor.

"Wholly correlation coefficient, Watman, what happened to her?"

"Quite simple, my boy mallard, she was subjected to a nonstandard deviation."

And thus endeth the tale of Statwoman. Or does it? Watch for an exciting new adventure in our next issue, same Wat-time, same Wat-place.

Tra-la la-la la-la la-la, la-la la-la la-la la-la... WATMAN!

The Chuckler

#### C&O 230:

# A Quick Cure for Insomnia

Would you believe that Combinatorics and Optimization can be used to solve real-life problems? (I do not consider "Find the number of ordered ways of getting a total of n in k rolls of a p-sided die" to be a real-life problem.) Well, it does: you can use it to go to sleep quickly, and not just by attending the lectures (this is the "trivial solution"). Well, here goes...

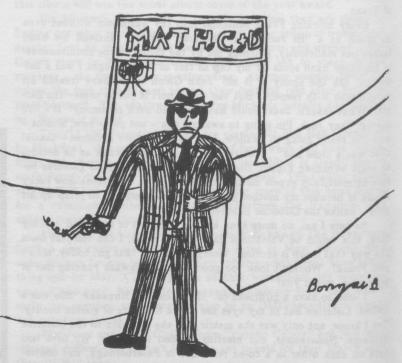
For uncounted millenia, the standard way of going to sleep has been counting sheep until you stop doing so by virtue of achieving a state of mind in which you can't count sheep. (The fact that you are motivated to do something by the fact that you don't want to do it is beyond the scope of this article.) So let's apply some high-falutin' C and O to this archaic, inefficient method. Construct a generating function

$$\Phi^{(w)}_{N}(x) = x^{1} + x^{2} + x^{3} + \cdots = x(1-x)^{-1},$$

say the magic words "x times one minus x to the minus one," and you've counted at least as many sheep as ever has been previously necessary to get you to fall asleep.

Unfortunately, one minor flaw will soon become apparent if you live in the Villages and attempt this. The guy down the hall is playing Twisted Sister loud enough to warp the space-time continuum. Not only that, he is doing so for a continuous interval of time, and mathematical induction only works with discrete things like sheep and integers (have you ever seen 4.68 sheep?), not continuous things like real numbers or time. So the principle of mathematical induction breaks down, and transfinite induction must be applied to the generating function. Stay tuned next week (or next year or two, when I take a course involving that), when I explain how to get to sleep in the Villages.

Center of Gravity



Loud Music and Lousy Coffee Give me Heartburn



CLASSES
HAVING STARTED
SAMPSON ONE
DAY CHECKED
HIS SCHEDULE
AND REALIZED
THAT HE HAD
A MINTERM THE
NEXT DAY!!—
SO HE HASTILY
GRABBED HS
BOOKS AND
HEADED DEF TO
THE LIBRARY













## mathNEWS Notice:

Due to excessive underfunding and a lack of resources math-NEWS will be going weekly for the rest of this term. The purpose of this is to provide you, our readers, with a suitable method of occupying your time during Friday morning lectures. If you are wondering about the appearance of real advertisements in our paper, we here at mathNEWS would like you to know that we have learned "How to solicit funds!" (see vol. 39 issue 4) Also mathNEWS is not now, nor has been (for a considerable time) considering implementing a crosscampus mathNEWS user fee!

Given 
$$\frac{1}{\infty} = 0$$

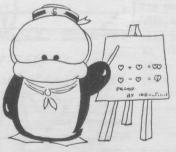
Prove  $\frac{1}{0} = \infty$ 

Proof:
We know that
$$\frac{1}{\infty} = 0$$

Rotate 90° counter-clockwise
$$-18 = 0$$

Add 8 to both sides
$$-10 = 8$$

Rotate 90° clockwise
$$\frac{1}{0} = \infty$$
as required.



## M.C. Addition

As everyone has noticed, the M.C. is so crowded that math classes are held in the P.A.C. The main problem is an obvious oversight in the original design; the M.C. was built in only 3 dimensions! To correct this blunder, we propose that a 4th dimensional wing be added to the building without increasing its 3 dimensional volume. A contest is therefore being held to determine the best design. The weight of the books must be taken into account and cost estimates must be in two dimensional currency. Please submit plans to mathNEWS on 3 dimensional paper before Jan. 31, 1986. The winner will be announced Jan. 1, 1986.

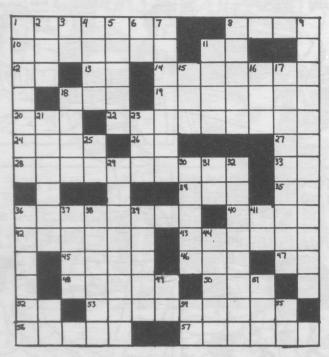
#### Masthead

Thanks to all involved in the production of mathNEWS. It's something we all can be proud of. Thanks specifically to: Tom Ivey, Rick Kuzel, Andrew T., Cary Timer, Camille G. Glenn M., Paul Obeda, John Omielan, Ken Shirriff, Bruce Sutherland, Kerry Garnier, Rob Muir, Jim Jordan, Laurie Reedman and all contributors.

Also, thanks to all who made my birthday wonderful. You're all very precious.

dan schnabel (that editor kinda guy)



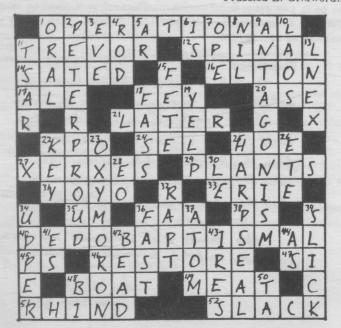


# The Effect Of Gamma Rays On Man-In-The-Moon GridComments

Congratislations go the breve adwanderers who salved lust tissues crudward. Weill crrakt salvations where received from Karin Wills, Carl Angers & Phil Locker, Glenn Langford & Peter Koning, The Friday Afternoon Bombshelter n, and Claudette Richardson & David Dexter, the frust wan wart stabmitted bei Dan Wevrick. Mastur Wevrick kin pack up hist mastorgulous prys ut MathSoc oar abt the mathNEWS orifice.

Salations fore thus currant griddleward mast be sebmuddled two the Black Box on the thard fluor MC, by Friday, March 7.

Frazzled E. Gridwordman



#### Across

- 1. get she to a nunnery
- 8. Lincolnshire short
- 10. saviour in time of danger
- 11. Ringworld protagonist
- 12. engulfed, enclosed by
- 13. blue Babe, eg.
- 14. pertaining to nuptials
- 18. she buried Paul
- 19. pirate, ruffian in jail
- 20. Bobby scorrs
- 22. responses to actions
- 24. tranquil, at peace
- 26. see 12. across
- 27. stuttering syllable
- 28. Shelley's king of kings in an antique land
- 33. 'look!', 'see!'
- 34. short Clovis
- 35. successor to  $\lambda$
- 36. depends on luck
- 40. french your honey
- 42. models of rarity
- 43. my German friend
- 45. exploding device
- 46. was given the sight of
- 47. department store founder (init.)
- 48. shaped like a wing
- 50. Icsus Hominum Salvator
- 52. a name I call myself
- 53. flying dinosaur
- 56. bye-bye Hawaii
- 57 near the posterior

#### Down

- 1. Venezuelan river
- 2. writing tool fences animals
- 3. Health & Safety
- 4. short dismal science
- 5. town near Thebes
- 6. that is
- 7. badge of mourning
- 8. Italian Lewis
- 9. chilly brush-off
- 11. formal legal document
- 15. curve segment
- 16. The ... Of Physics
- 17. Henry VIII's standby in marriage
- 18. Paris airport
- 21. Stoppard's On the ...
- 23. a single German
- 25. Martha and the Muffins
- 29. Latin machines
- 30. San Francisco Youth Club In retrograde
- 31. has a big talent showcase
- 32. rather, I'd say
- 36. wheezy complaint
- 37. Napoleonic sunset isle
- 38. Marie Hitler's little boy
- 39. friendly Spanish card game
- 41. diaphragmless Device 44. increase net height
- 49. short annum
- 51. French are all over
- 54. disjunctive
- 55. lover of Isis

## Mathematical Puzzles

#### Solution to Last Week's Puzzle

Initial positions Position after 3 moves







After 6 moves

After 12 moves

After 9 moves After 15 moves (Finished)

#### This Week's Puzzle

Given a triangle of pennies as in (a), what is the minimum number of pennies that must be moved in order to invert the triangle as in (b).

> 000 0000



The Wizard of Id