It's _that_ time of year again...

EXAMS!

(Merry Christmas!)
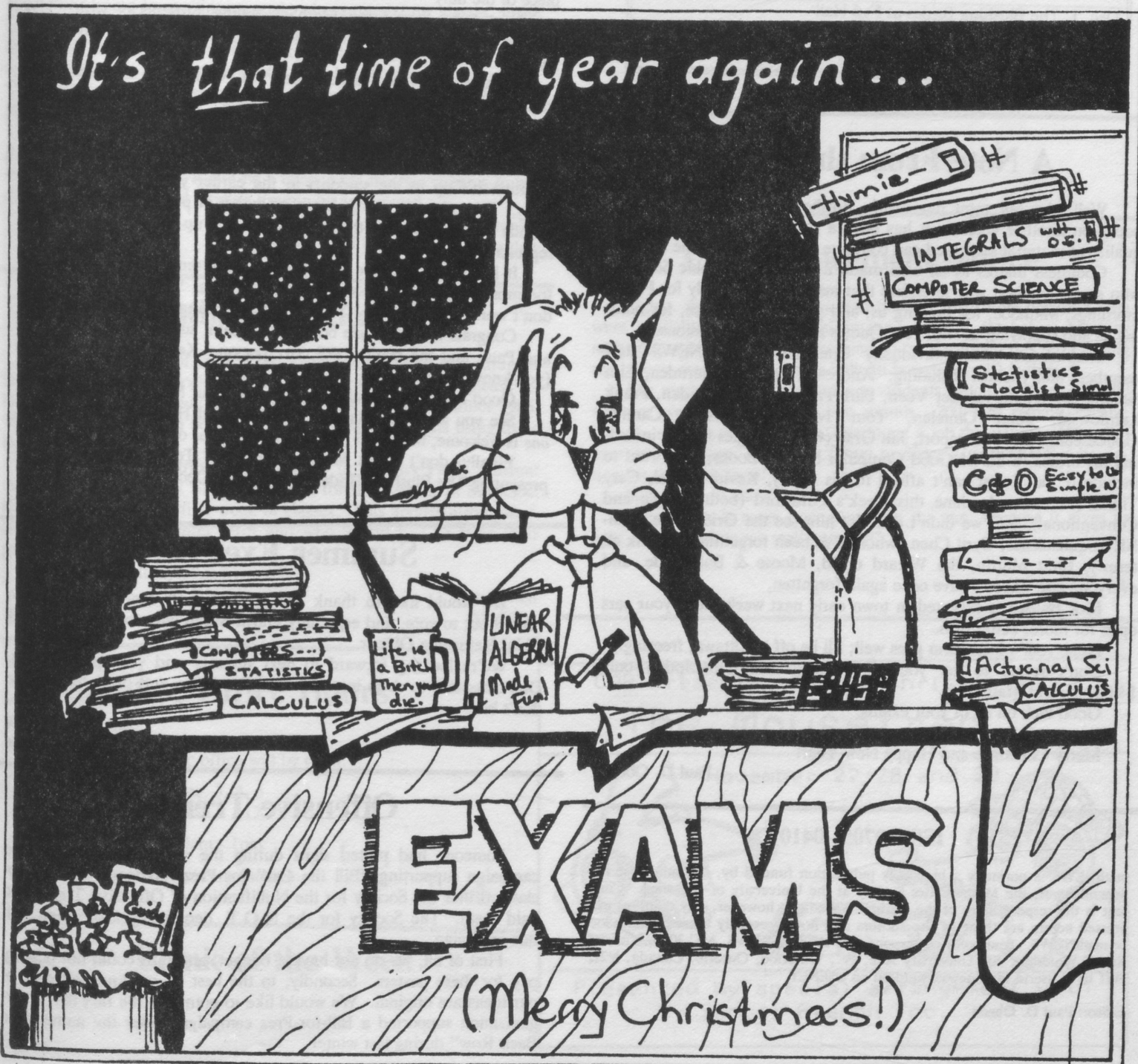
LookAhead

Co-Oops Only
Fed Flicks $1 Feds, $3 others
Cinema Gratis *9:30 in the CC—it's free!*
Dec 3 My Brilliant Career
Dec 10 Butch Cassidy & the Sundance Kid
Dec 17 Reuben, Reuben & Les Mistons
UW Arts Centre
Call 885-4280 for more info and tickets
Dec 1-2 Opera: Cinderella
Dec 13 Magician Danny Orleans
Other Events
Dec 1 The Blushing Brides at Fed Hall
Dec 3 MathSoc dinner at Fed Hall
mathNEWS

A Note From the Editor

Well, the fall term has nearly finished. **mathNEWS** closes its books on another volume. It has been a good term. I hope that the quality of material presented can continue to be as high in the future.

Countless thanks to all who made it possible: Graphic Services, who go out of their way to ensure that **mathNEWS** is ready for Friday mornings; MathSoc, for funding us; and you, our audience, for reading us and supplying us with Prof Quotes and other submissions.

Thanks are also individually extended to **mathNEWS** staff members and friends, including: Andrew Tron, Rob Harnden, Lisa Seabrooke, Wilma van der Veen, Barb Palmer, W.Jim Jordan, Frank Letniowski, John Omielan, Tom Ivey, Rob Muir, Camille Goudeseune, Steve Rapaport, Jan Gray (with apologies for not including his article—a list of Good Computer Science Books; I do want to include it, but I just can't afford it this week), Kevin Rockel, Cary Timar (he's already done this week's Gridword (both Cryptic and Conventional), and we didn't even let him see the Grid!), the **math-NEWS**quizmaster, Cyril Chen (whom I've been forgetting to thank all term!), Brett Martin, the Wizard of Id, Moose & Bullwinkle, and everyone else whom I have once again forgotten.

Rick Hansen is expected in town early next week—keep your ears open for more, better info.

Hope your winter term goes well; I'll be off in Ottawa, freezing.

Don't forget to get yourself a **mathNEWS** subscription—only $4.00. Ask at MathSoc.

Good luck on all of your exams.

Merry Christmas and Happy New Year!

Paul D. Obeda

Prezz Sezz

So another term comes to an end. Exams are just around the corner but so is Christmas and a small vacation. This is the end of my presidential term and my last year at U of W. I have greatly enjoyed being a part of MathSoc and I will continue to be active next term. I know that if it weren't for MathSoc and the other things I am involved with, I never would have made it through the four years.

A bouquet & a bottle of wine to the women of MathSoc, a bottle of cognac to the guys (sorry if it can't be the real thing). Special thanks to all office workers (especially M.S.). I urge everyone to get involved whether it's MathSoc, the Feds, SAA, etc. The benefits are great and the experience unmatchable. There is more to university than just going to classes and finishing a degree.

Looks like our pink tie ($) is permanently stained, but we hope to get a new one. We will probably cut out a smaller tie from the old one and sell off pieces of the remains for a nominal price. (Get a piece of the tie!)

Next term should see MathSoc selling turtlenecks with "UW Mathie" on the collar. What better way to stay warm out in the snow?

Have you got your raffle tickets yet (wanna win a microwave)? Proceeds go towards a class gift—something to benefit the university. Suggestions are still welcome for the gift. Talk to Bonnie McKenzie in MathSoc.

The Class of '87 yearbook is looking great. If this is to become a tradition it's up to the students in the earlier years to start clicking away. Take pictures *now* at MathSoc events or parties, etc. of all your friends and don't lose the negatives. It's up to you to be well-represented.

It looks very possible that program requirements will be lowered for most programs but details won't be final 'til mid-December so don't worry about it now. You can always change your schedule.

Congrats to our female boat racing team, summer exec Bill, Lisa, and Paul, and the **mathNEWS** coverperson. Keep in contact, 3B-ers (you know who you are).

Good Luck to all graduates; let's make our MGB the best.

See you all at the MathSoc dinner at Fed Hall, Dec. 3rd. *Everyone* is welcome, but you'll have to pick up your own tab.

Finally, don't forget MathSoc's End Of Term Pub at Fed Hall, presenting The Blushing Brides on Monday (December 1st).

Wilma

Summer Exec Sezz

We would like to thank (on behalf of all candidates) all who turned out to vote, and especially Garth Mann who took on the job of Chief Returning Officer.

We're looking forward to next summer and your participation. Don't hesitate to drop into the MathSoc office and offer to help—we don't bite!

Bill, Lisa, & Paul
Summer '87 Exec

Offensive Trends

Someone had posted signs during the recent MathSoc election campaign supporting "Bill the Cat" for Prez. Whoever did so proclaimed that the Society for the Nullification of Offensive Trends had paid them. The Society for the N.O.T. denies any association with this campaign.

First of all, we do not have a budget, and thus could not possibly pay for these posters. Secondly, to the best of our knowledge all of our ideas are original. We would like to point out the fact that an organization supported a Bill-for-Prez campaign under the name "The Back Row" during last winter.

Election Results

Well everyone, elections are now over for next summer's MathSoc executive. We had one of the largest turnouts that we've ever had for an election—20.3% of the eligible voters cast a ballot.

The summer executive of President, Vice-President, and Treasurer will be Bill Tilford, Lisa Falco, and Paul Obeda. Bruce Boulding will serve as the member for the Campus Centre Board.

—CRO

Math Grads

A short last note 'til next term. I wish I could thank all the people who helped out this term individually but I'm bound to forget someone. On behalf of the Math Grad Committee I'd like to thank: people who came to meetings, people who arranged for glasses, turtle cards, pizza days, buttons, C+D days, Rocky Horror, raffle tickets and prizes, love and hate turtles, people who sold any of the above, and last but **not** least, the people who *bought* any of the above. Thanks also to the Yearbook, Publicity, Class Gift, and Grad Photographer's people. Thanks, everybody!!! No, really, I mean it.

Next term there will be a B.Y.O.P.G. (bring your own plastic glass) party for **all** grads. This will probably occur in the first or second week of classes. It will be a chance for the two streams to socialize. Date, place, and tapping time to be announced.

Lisa Seabrooke
Chairman of Math Grad Committee

MathSoc Lockers

Note that the end of term is fast approaching. This is a reminder to the current users of lockers # 3 - 300 and # 571 - 594: please remove the contents of your locker and the lock by 31 December 1986. This reminder applies to both Co-op and Regular students using these lockers.

Lockers will be distributed again early in January 1987. Current users of lockers # 301 - 570 MUST sign for them again in MathSoc; please do so during the first week of classes. This applies also to anyone studying in the Winter term and who would like to keep their present locker.

Enjoy your holidays!

Cyril Chen
MathSoc

MathSoc Office Hours

The MathSoc office will be open:

Dec. 3, 4, 5
Dec. 8 - 12

10am - 1pm

for your convenience.

—BP

Blank of the Week

Co-op Placement Notice

Sigh... the joys of a 4-day lead time. I wish more accurate data were available, but all the information I could get before Monday night out of Needles Hall concerning co-op placement this term (being too lazy to count names on the bulletin boards myself) is this:

For math, accounting, and arts students, about 130 out of 1400 students were not placed in first rounds. 200 jobs remain vacant, though, so everyone should be able to get a job this winter. Have fun apartment-hunting, and don't forget to order a **mathNEWS** subscription for the work term!
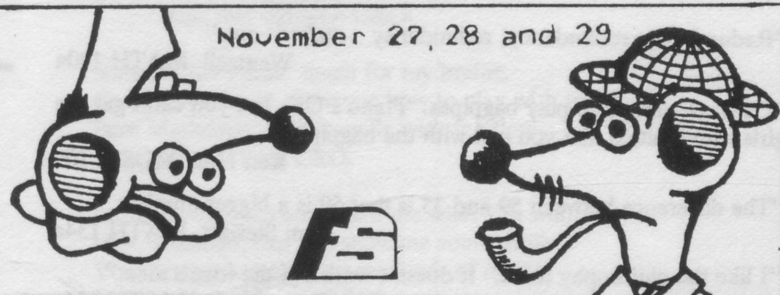
Silly quote to end the term:

"The moon is more important than the sun, because it gives us light at night; when we really need it!"

Center of Gravity

Prof Quotes

Well, another term is drawing to a close and exams are drawing near. And with the end of lectures comes the end of Prof Quotes. That means that you are going to have to survive ALL of December without reading the Pulitzer Prize winning **mathNEWS** with everyone's favourite column of all—Prof Quotes. And if you're going on work term and are too cheap to walk into the MathSoc office to shell out 4 bucks postage so you can get **mathNEWS** in Pinawa, then you'll have to wait until May for more quotes.

In any case, this column is getting more popular as time goes on. This week, we have submissions from Math (yeaahhh), Science, Arts, and even Engineering (some of them are literate after all). Next term we may even get some HKLS. Onward...

"One thing you must have learned by now is that in mathematics there are a number of delightful ways to express ideas in such a way that nobody can understand what you are talking about."

Ron Read C&O 230

"Let's start fooling around here and see what I prove."

Hoffman MATH 134a

"This is how you do it, but you don't know that."

Wentzell MATH 130a

"It is easier to prove that bla-bla-bla is greater that zero than it is to prove that bla-bla-bla is greater than blee-blee-blee."

D Higgs MATH 134a

"I looked at this transparency earlier and I figured out that I didn't understand what it said."

N Ostlund CS 354

"Can I abandon this proof? I don't want to do it ... You don't know what a rough weekend I had."

S Vanstone MATH 134a

"Everybody knows the earth is flat ... approximately."

D Siegal AM 481a

"I've mixed things up here, obviously, and you should be confused, and if you aren't confused then something is wrong. But if you are confused then things are OK, because you should be."

LJ Cummings

"To build a hardware model of God is non-trivial."

D Dyment CS 354

"On the computer you would replace infinity with some enormously large number, say 15."

Ron Read C&O 230

"I don't know why it works ... you'll have to talk to La Grange about that."

RA Wentzell MATH 230b

"Redundancy, redundancy, redundancy ... take it out."

Wentzell MATH 130a

"I always wanted to play bagpipes. Piano's OK, but you can't get the girls with a piano like you can with the bagpipes."

Ken Hull MUSIC 100

"The difference between 59 and 35 is that 59 is a bigger number."

Cam Stewart MATH 134a

"I like the philosophy there. It doesn't work but the idea's nice."

Cam Stewart MATH 134a

"It may be true and it may not be true, but at least it looks nice!"

Cam Stewart MATH 134a

"I'm trying to make a particular point here and I don't want to obscure it with another one."

JW Graham CS 180

"If you can do these problems, don't bother; if you can't do them, you should do them."

Wentzell MATH 130a

"I take the Christian attitude toward exams ... it is more blessed to give than to receive."

Wentzell MATH 130a

"I'm sure they (ie Engineers) understand now where formulas come from. Nowadays they might be able to think up a few on their own."

JW Graham CS 180

"I may not be answering your question, but let's answer what I think you asked."

JW Graham CS 180

"Notation is not important in mathematics, it's just confusing."

Cummings MATH 134b

"Did anyone get this answer? No. Seems reasonable."

Pete Simpson (tutor) PHYS 121

"They built ... and by them I include such respected names as IBM."

D Dyment CS 354

"Sine function is an odd function. It's not queer, it's just odd."

J Baker MATH 234a

"You make me feel like I'm from a different planet."

DM Jackson MATH 234a

"The reason we have initial conditions is because we forget what happened before $t=0$ ... something like coming back from a work term."

E Jernigan SD 212

"I think it's reasonably intuitively obvious ... I think."

FO Goodman AM 270

"That's a good question and I appreciate you asking that ... I wish I knew the answer though."

DH Younger MATH 134a

"What are you laughing at? Are my trousers falling down?"

Frank Goodman AM 270

"Traditionally, the reported final marks in this course have had nothing to do with the actual marks achieved in reality."

D Wood CS 360

"Just work oligopolistic differentiation into a conversation with your parents and they'll think you've learned *something* at University."

Larry Smith ECON 101

"If you're looking for black magic, take Quantum Mechanics."

SG Davison AM 465a

"I promise not to say anything so I will not appear in **mathNEWS**."

Zeidan MATH 230a

CSC/
(CSC slash)

The Third Annual CSC Open Computer Othello Tournament was held on Saturday, November 15. There were eight programs entered. The winner was Mickey Mouse, by David Rowley. Second place went to Fudge, by Tom Keith, and third went to Gray Blitz by Jan Gray.

A CSC EOT party is tentatively scheduled for sometime before the end of term. It's so tentative, in fact, that that's all I can say about it. Watch the bulletin boards for further details.

ElseWhen

mathNEWS *ten years ago*

ORTHOGRAPHICAL CONQUEST—The Artsoc-sponsored Pandemonium Week Spelling Bee, held last Thursday, finished just the same way as last year's... All the mathie semifinalists met simultaneously, so Mike Moran needed only to defeat an artsie to win the final... Next was the team event. Moran took the round from his opponents, and mathNEWS's Mark Brader took the last round to complete the Math sweep.

GENERAL CS PROPOSAL—A proposal for a general degree programme in computer science is currently under scrutiny by the CS department curriculum committee. The student representative on the committee is soliciting responses to pass back to the faculty members concerned... One comment states that the programme should have stricter requirements...

SOCIETY NEWSLETTERS POOL RESOURCES—The editors (or co-editors) of mathNEWS, SciSoc News, Arts Lion and ESS News decided to form an Association of Society Newsletters in order to promote co-operation among the newsletters in the areas of photography and news coverage. One of the plans of the ASN is to ask for financing from the Board of Publications in order to ensure that we are able to provide a broad-based alternative to the regular campus newsletters...

WE BEAT THE RECORD—We notice that the *Kitchener-Waterloo Record* has just completed their conversion to photocomposition, about nine months behind mathNEWS...

Excerpted from mathNEWS, *Volume 12, Numbers 9 and 10, Friday, November 26 and December 3, 1976.*

mathNEWS Subscriptions

Well, frosh, about half of you are going to be going off on work term come January, and that means that you won't be able to get mathNEWS every other Friday. That's right, we don't automatically send a stack of them to IBM to be distributed among you.

And what's so bad about getting away from everything that reminds you about this University? Well. You'll be missing Prof Quotes, Watman, Gridword, the Squiz, and all the other finitely generated, real dimensional silliness that makes four out of five dentists surveyed recommend mathNEWS for their patients who take math. Also, the administration will be sending around your co-ordinator to check up on you, so there is no reason why you shouldn't have a copy of math-NEWS to help you ignore the co-ordinator like you ignore all your profs on Friday afternoons.

Do you want more reasons? If you are stuck in Moose Factory or Pinawa you are going to be bored out of your skull for weeks on end, and the Canada Post dogteam will provide you with hours of excitement when they bring the week's copy of mathNEWS. Also, NOBODY will be sending you mail during your workterm, because by the time that they find out what your address is, you'll be back on campus. Your bi-weekly mathNEWS may very well be the only mail you will get for FOUR MONTHS.

Well, it seems as though EVERYBODY will benefit from getting mathNEWS during their workterm. Here's how to go about it. Go to the MathSoc office. Say "Hello nice MathSoc person. I want my mathNEWS for the workterm." Give the nice person at the desk $4. Fill out your name and workterm address on the card they hand you (find out what your postal code is). Say "Thank you, nice MathSoc person. Now I will be enriched during my workterm."

AIESEC

What is AIESEC? AIESEC (Eyesec) is the French acronym for International Association of Students of Economics and Commerce. It is a club, based at Wilfrid Laurier University which functions on international, national, and local levels. The scope of people, however, who can become involved is not limited to business students attending Laurier. Anyone with an interest in personnel, fundraising, marketing, computers, mathematics or communications should ask about AIESEC.

A few years ago the University of Waterloo established its own AIESEC club but was unfortunately unable to maintain it because of the extensive Co-op program. Some Waterloo students have already inquired about AIESEC. Hopefully, as more information is passed along, the interest will continue to grow.

Currently there are 452 universities participating in AIESEC all around the world. Involvement from many countries facilitated the creation of exchange programs. These programs provide for an excellent opportunity to experience a different culture while continuing school. The duration of the exchange can last anywhere from two months to a year.

Recently there has been a large demand for computer and political science students. Companies are eager to hire individuals with a background in these fields, but the supply is just not there.

The main ingredient to becoming a candidate for a position on a traineeship is involvement. The more involved one becomes in AIESEC the more favourable a review he/she will receive.

Becoming involved is a reward in itself. The many business skills acquired that can be put to future use, various contacts and friends made, and the fun that always coincides with the hard work are a few benefits of the group. So ask about AIESEC and find out more: phone 884-1970, ask for the Campus Clubs office, and then ask for Nancy Lake, VP Communications.

Old Time C&O

(words: C. Sneer; music: Bob Seger)
—from the forthcoming LIFE'S A BITCH lp, "And Then You Die"
Jest take those old textbooks off the shelf,
I jest might read 'em one night all by myself.
Today's mathematics ain't got the same soul,
I like that old time C&O.

Don't try to teach me any Act Sci!
There ain't no math that I can even apply.
I ain't leavin' here with nuthin' to show,
I like that old time C&O.

CHORUS: Still like that old time C&O!
    That kind of math jest soothes my soul.
    I reminisce about those days of old
    And that old time C&O!

Statistics ain't doin' much for my brains,
Computer science shows me how to play with trains.
Pure Mathematics ain't really with the flow.
I like that old time C&O.

So, come on, Jackson, teach me what you will!
Hey, Goulden, can you show me some thrills?
Your textbook really cost me loads of dough,
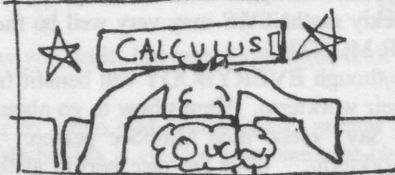Still like that old time C&O!

CHORUS

Fred the Math Bunny

— the Final Chapter —

the continuing stooory of a rabbit that is the living personification of the old saying: "Life is a Bitch. Then You Die"

Panel 1: When last we saw Fred, he was suffering from a splitting headache caused by having too much Calculus on his mind

CALCULUS!

Ouch

Panel 2: Fred plots his revenge

HOME SWEET HOVEL

Hmm!

drum drum

Math

Panel 3: Fred continues to plot his revenge

Hmm, no use doing any work until I get this off my mind

Panel 4: So after Fred has thought about it over 4 hrs of T.V. and slept on it for 8 hrs....

I Got It!

Watership Down

Panel 5: Later, next day, Fred sneaks up on the SKG.

Heh Heh Heh

: Snicker :

SNEAK SNEAK

Panel 6: Gotcha

NAB

mrph!

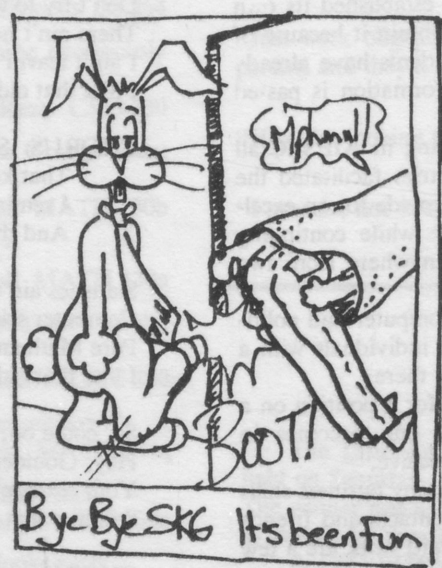**Panel 7:** So off Fred and the SKG go to "donate" the SKG's services as a lab specimen to Anth 337 *

* Anth 337 — "An Ethological Approach to the 'Keener'" See last issue of Mathnews

Panel 8: Mphmm!

BOOT!

Bye Bye SKG Its been Fun

Panel 9: Thus Fred heads off to his work term feeling damn proud about himself. Hey, is this a happy ending or what?

ANTH 337

Bye

Ouch, Ahh, No, Oh No, Ahhhh

Hymie

THE CONTINUOUS ADVENTURES OF
WATMAN

When we last left our illustrated superheroes, they had been swallowed whole by the Boa Contractor's snake and were seated on a randomly generated pachyderm in the middle of the snake's stomach. If one put one's ear to a certain bulge in the snake's body, one would hear this conversation:

"Well, Duck, I think it's curtains this time. We can't seem to get out, and in a few hours, we'll be completely digested."

"I don't know about you Watman, but I am *hungry*! Hungry enough even to eat this piece of Salisbury Steak I have here in this doggy bag from the banquet at the Village thrown by the Boa Contractor."

"Give it to me!" Watman exclaimed.

"No. Get your own!" Duck replied.

Taking charge, Watman seized the doggy bag, took out the Salisbury Steak, and threw it into the snake's digestive tract. Needless to say, the snake found it to be extremely disagreeable, and was forced to expel it. As a result, Watman and Duck (and the unfortunate elephant) were freed.

"Wholly taste sensations, Watman. We're freed!"

"Must you always state the obvious, Duck?"

"But Watman, we're 20 feet off the ground on the back of an elephant! How do you get down from an elephant?"

"You don't. You get down from a duck!"

Moments later, with Duck feeling somewhat violated, our heroes were once again firmly on the ground. They shook hands with the elephant who, having fulfilled his duty as the vehicle for a bad joke, quickly left.

Suddenly, Duck exclaimed, "Watman, what do we do with the snake?"

"This." Watman reached for his Wat-utility Belt. He pressed a button. A minute later, the Watham University Zoology Department's Formaldacopter was on the scene, taking the snake away.

"We must get to the Institute for Boa Contractor Replication. We must stop the Boa Contractor!"

"Must you always state the obvious, Duck?" Watman sighed as he pulled Duck onto the back of the elephant and pointed it to the IBCR.

Watman and Duck were standing in front of the Boa Contractor Replicator, the heart of the Institute for Boa Contractor Replication. It consisted of two parts: the photocopier from the MathSoc office (slightly modified to replicate Boa Contractors), and an enormous computer to control the process.

"Here's the plan, Duck. Take some Watglue and glue the "Copy Size" switch to full reduction. I'll reprogram the software by redirecting output channels back into the input. This way, the machine will no longer be a Boa Contractor Replicator. It will be a ..."

"... A Boa Contractor Reducer. Smart thinking, Watman! This way, the Boa Contractor will be caught in an infinite loop and be exponentially reduced to zero!"

"Must you always state the obvious, Duck?"

Just when Watman and Duck were finishing with their work, the Boa Contractor stormed in. "So there you are. Stand back, and watch the power of the Boa Contractor Replicator! What, you're not afraid of me? Well, we'll see about that!". He advanced, wielding his boa menacingly.

"**Oof! Thud! Ha ha ha that tickles!**" When the sound effects had subsided the Boa Contractor was laughing convulsingly on the copy glass of the Replicator.

"Quick, Duck, turn it on NOW!"

"Must you always state the obvious, Watman?" said Duck triumphantly, pressing the switch. The Boa Contractor was pulled through the machine and shrunk to 62% of his original size. The Boa Contractor's laugh grew higher and quieter as he converged to a singularity.

"Well, that's the last we'll hear of the Boa Contractor, Duck. Now I can study for my exams. Do you realize that with all the superhero extracurricular activities I have by day, I haven't studied a bit of Algebra? And the final's next week ..."

So, until next term, it's ....

Na-na-na-na na-na-na-na, na-na-na-na na-na-na-na ... Watman!

The Chuckler

Stage Plays

The Mousetrap

This weekend the Creative Arts Board of the Federation of Students is presenting Agatha Christie's immortal mystery *The Mousetrap*. The play has survived a continuous run in London, England since it first opened in the early 50's. This is due not only to the mastery of suspense but also to the satirical poking at societal foibles. And now, after almost three months of publicity and preparation, the production is here.

Our local performance is presented by an energetic blend of suspicious eccentrics. Each character has been drawn out from their respective stereotypes to play on the comedy of manners theme which runs throughout. The play builds from the initial introduction of the mysterious cast to the final climax with a tense emotional confession. Even if you manage to guess the guilty party (a greater feat than I could manage), the final confrontation with the crime and the criminal is worth waiting for.

The Mousetrap is set in the Theatre of the Arts in Modern Languages. The performances continue tonight and tomorrow at 8:00 PM. Tickets are $3.00 for FEDS and $5.00 for others and are available from the FED office, BASS and the HUM Box Office. The play, with all its action, suspense and comic interludes is worth the time, and the final resolution of the crime is a mastery of mystery theatre.

Final excerpts from

Doctor Heartbreak's Book Of Love

FALL NOT IN LOVE, LEST IT STICK ON YOUR FACE ...

Maybe we'd be better off without the whole phenomenon of love. What other single force has caused so much individual pain and hardship? And now with new technology we can guarantee contraception and make perfectly satisfactory babies in test-tubes; we can supplant the biological function of love with no-strings-attached sex, artificial insemination and eugenics. Wouldn't this mean the breakdown of the family unit and the end of Western Civilization as we know it? Not necessarily; we've done without quite well before. In medieval times marriage was strictly for convenience—dynastic or financial—and love was quite another matter. In fact, some believed that love and marriage were mutual exclusives. As for the family unit, it seems to be only a recent development in human social evolution. At other times and places the more important unit was the tribe or town or extended family—some community of larger size.

Romantic love originated in the Art of Courtly Love, prescribed reading for medieval knights-errant, along with the Code of Chivalry. The idea gradually gained popularity through written literature and ballads sung up and down Christendom. Then the Renaissance happened and put a permanent intellectual kink in our history. But it was in the Romantic Era proper, the early nineteenth century reaction to the Renaissance and the Enlightenment, that love became a necessity for marriage—read Byron's "My Last Duchess," for example.

Perhaps the problem with romantic love is the amount of excess baggage we drag along with it: Romantic Era *sturm und drang*, with a dose of modern *weltschmerz* to boot. While the reader searches for his German dictionary, I wonder what happens when we peel off the outer layers of this mixed metaphor. Perhaps there is something *pure* inside, small and bright, clean and white ...

COME LIVE WITH ME AND BE MY LOVE
AND WE WILL ALL THE PLEASURES PROVE ...

Perhaps those shepherds and shepherdesses knew something we don't. I should clarify—the shepherds may not have existed at all. They may exist today and still be not what I mean. (As the words 'peasant' and 'serf' drop out of usage we forget what they mean, and how miserable their lives really were.) The only analogue I can find for what I mean is the life led by people in my home town. Like many students at this rather provincial institution, I come from a rural background. Perhaps only a twentieth part of the youth there go on to higher education. Of the rest, some drift from town to town and job to job, never quite knowing what they want. The rest (as far as I can predict in these troubled times) will settle down to a firmly fossilized smalltown existence, wedding smalltown spouses and raising smalltown families. They may get drunk, have the occasional fight, and once in a blue moon there's a murder, but on the whole I think they are happy. These latter-day pastorals are free from Unanswered Questions. They either don't ask themselves questions—and blessed indeed are they—or have so few choices available to them that the answer is obvious.

What am I skating around? Who is the Hyperborean in the woodpile? Let me say that I once sat in an outhouse on a Sunday morning. It wasn't one of those ill-smelling plywood jobs that conservation authorities like to build. It was clean and bright, pleasantly painted and sporting small sympathetic square windows. I stared up at these patches of sky as the single word "Why?" echoed in the narrow space—and a marvelous sound it was, both in its tone and its meaningful harmonics. Perhaps I wasn't so much asking about love or its denial as why I was put into existence at all. You who read these words give me the same answer: a perfect, golden silence that echoes through the trees, across the water and over the green hills.

Waterloo, Sept. 14 1986

Part I

Sitting in Algebra
Bored out of my mind
I look all around me
And what do I find?

There's a guy in the front row
Who has flaming red hair
He's keening away
But no one else could care.

We sit under the air vent
This is not a mistake
The current of coldness
Helps keep you awake

The prof asks a question
But let it be said
He won't get an answer
'Cause the class is brain dead.

Part II

Back in class after a break
Still a struggle to keep awake.

When the prof came in, he looked quite grim
We wondered what was wrong with him
And then we thought and realized
He dog had just been paralyzed.

Oh woe is us, what can we do
When our prof is feeling blue?

My advice to you: Don't get upset
Because it isn't Friday yet
Hold back your tears and do not weep
Look to the weekend, when you'll get lots of sleep!

Part III

We're sitting here learning cardinality
Struggling in a search for words that rhyme
I think we're losing our rationality
Faster and faster all the time.

Watching the clock & bothering Bullwinkle
Is there more that I could ask?
Finding a word that rhymes with Bullwinkle
That has now become my task.

All these journals I have read:
Imprint, mathNEWS, and the Gazette
The problem which I haven't mentioned
The lecture hasn't finished yet.

Ten minutes remain and how to fill it?
Paying attention isn't a choice
Worse than torture or death by bullets
Is the sound of our professor's voice.

Done with bijection, injection, surjection
Cardinality's finished too
Now he's inviting strange new symbols
To come and live in our Algebra zoo.

The class is done--a celebration
But what does this young poet find?
During the writing of this creation
I'm four and a half blackboards behind.

Moose & Bullwinkle

'Twas The Night Before Calculus

Apologies to Clement Moore.

'Twas the night before calculus,
when all through the dorm,
not a creature was converging,
not even the norm.

Limits were hung
by the chimney with care,
in the hopes that St. L'Hopital
soon would be there.

The frosh were nestled
all snug in their beds,
while visions of integrals
danced in their heads.

When from the den there arose such a clatter,
I sprang from my bed to see what was the matter.
Away to the room I flew in a flash,
and peeked in to see if the Unix had crashed.

There stood a young lady
all dressed in pure white,
with textbooks and wand
so cheery and bright,

That I knew without a trace
of doubt or suspicion,
it must be the
good exam ... mathematician??

As I stared 'cross the room, she took out a list
and examined it closely to see what she'd find,
who should be given a break on exams,
and for whom she was not so benignly inclined.

She went to the beds
and she paused at each one,
spurning each sleeping student,
each poor mother's son.

With a wink of her eye
and a flick of her wand,
I knew that I'd ace it
where before I'd have bombed.

Then with a tap of her wand and a magical sine,
she began to go fuzzy, shimmer and shine.
But she exclaimed before fading out of sight,
"Good luck to you all, and to all a good night".

The mathNEWS staff

Boat Racing

Mathies reign! The defending champion Math Girls beat all comers to retain their title of Boat Racing Champions. The guys team beat most of the Engineering teams, but didn't quite make it to the finals.

in memoriam JFK

i saw on freedom's slopes the stones, proud volcanic men,
over withered by the winds who didn't give a damn:
Biko, King and Jonathan Swift, and you who died
just as i was born — who was it did this,
who set these stones to look over the sea,
and wrote freedom's cancer in your hearts?

one man's death serves another as symbol;
unwilling but unchoosing we put yokes
like Equality and Justice and Ask Not What Your Country
on martyr's shoulders not quite their own,
and gee aren't they great now that they're dead?

i saw on freedom's slopes the stones, staring out
at an ideal they shall never see, nor i,
for the mother has no milk to feed her dying child
and the people bleed cattle universally, and yet
i stand on freedom's barren slopes, staff bent, and salute you

Tom Ivey
November 22, 1986

Grad Photos

If the proofs aren't here already, they will be next week. Your grad photo proofs can be picked up from MathSoc as long as it's open, or next term (the sooner you select which ones you want, the sooner you'll get the final package).

A number of people have asked if they can get grad photos taken again in January if they don't like the ones already taken. I don't think the photo company will mind if this means you will spend more on your grad portraits, but the shot that goes in the yearbook will not be changed.

Please bring in your yearbook writeup when you pick up your pictures, if you haven't done so already.

Negatives submitted for reprints for the yearbook can also be picked up, as well as yearbook receipts ... please make sure that you did get a receipt, as a few weren't written!

Thanks to all the people who helped out this term with the yearbook. 40 pages (of 120) are done and sent to the publisher (hooray!). There will be some yearbook production between now and next term—please let me know if you will be here and can help out.

—Barb

Mathematical Puzzles

—Solution to last week's puzzle:

A ⟵ 1200 m ⟶ B
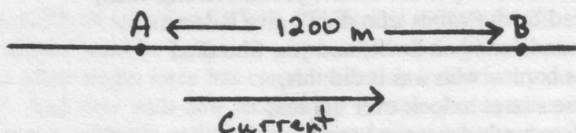
Current ⟶

Instead of regarding the hat as floating from A to B, consider the hat as being fixed at A and B "moves" towards the hat. Thus B "moves" towards A at the speed of the current. From the perspective of the hat, there is no current to consider. Thus the couple paddle away from the hat for 20 minutes and towards the hat for 20 minutes. They reach the hat at A, exactly when B reaches A. Therefore, the speed of the current is:

1200 meters / 40 minutes = 30 meters/minute

—This week's puzzle (no solutions will be printed for this puzzle):

Peg solitaire has an unknown origin. The form shown below is the most popular.
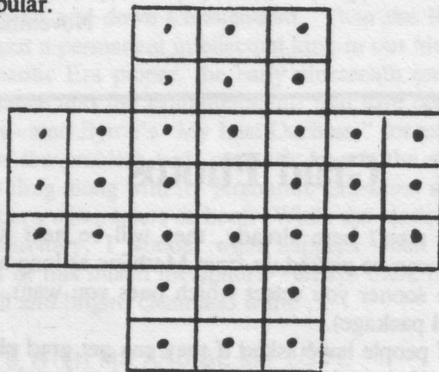
All cells contain a peg except for the center cell. The object of the game is to reduce the board to a single peg by jumping over other pegs as in the game of checkers (except that no diagonal moves are allowed). A "jump" consists of moving a peg over any adjacent peg to land on the next empty cell. The jumped peg is removed. If no jumps are possible then the game ends. If there is only one peg left on the board then you win. Otherwise, you lose. Clearly, 31 jumps are required to win the game.

For a more challenging version of the game, the remaining peg should end in the center cell.

Some interesting variations of peg solitaire are shown below. The first one was created by Noble D. Carlson in 1960.

i)

ii)
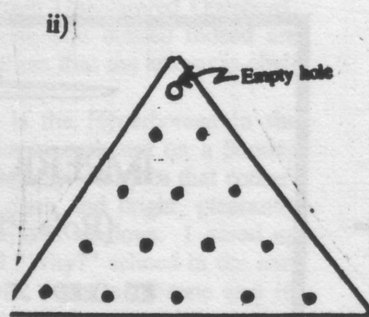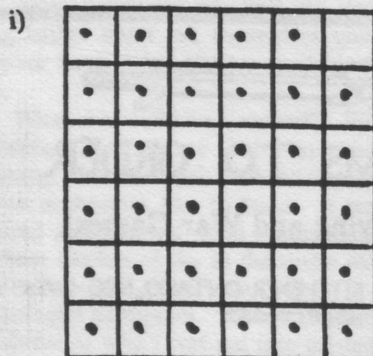
—the Wizard of Id

From the Lab ...

CS Student Quotes

Prof Quotes is one of our favourite columns. Now's the time to turn the tables.

• It [the computer] won't go.
• My computer seems to be stuck.
• I did it right. The computer won't work.
• How do I know that it's really saved?
• Where did it go?
• I did what you said and I got a system error.
• Does this mean I'm going to lose everything?
• Why is it doing this?
• It won't stop!!
• My computer doesn't want to print.
• If this @#$%* computer tells me my file is lost, I'll scream and shatter the window!!
• What does this flashing bomb on my screen mean?
• Can I leave to go to the washroom or what?
• I have this little problem. There's a bomb on my screen.
• Something is like, uh, majorly wrong with my printer.
• The mouse is stuck.
• My printer is doing really bizarre things!
• Bad things are happening on my computer.
• I think I broke it.
• There's something really wierd you have to look at.
• My computer doesn't seem to want to co-operate.
• What d'ya mean I was supposed to save it ... Does this mean it's gone?
• My screen really went wacko.
• Forget pretty. Just go for easy!
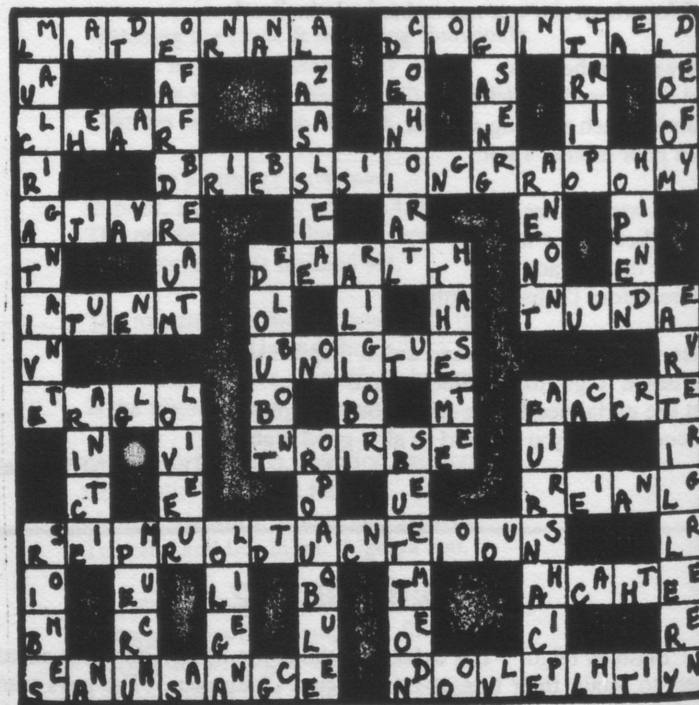
Good morning math-cadets. Aren't you glad your lectures are almost over this term? Too bad about the three assignments and two term projects that stand between you and finals. (For those keeners who "aced" their interim examinations during the last week of classes, the mathNEWSquizmaster suggests that you might consider using the anti-calendar to convey your holiday greetings (bleatings?) to your fav' prof—just be sure to grasp the pen firmly in your mouth (no drooling, please), scribble legibly and remember to remove all finger prints). But hey, . . . it could be worse! Remember 1A? (Sorry , Frosh.) Or how about writing CS one night, algebra the next morning and then calculus the next day following? ("Stupid scheduler!") Or a co-op placement in sunny . . . . . Sarnia! The mathNEWSquizmaster thinks that all non-singular mathies have got the message by now. It's time to take the quick way out! No, not strychnine, cyanide, arsenic or Stats 333 (dummy). For *fast* relief, administer . . . . .

mathNEWSquiz #12

1. Which famous consulting detective was first introduced to the reading public in "A Study in Scarlet" published in "Beaton's Christmas Annual for 1887"?

2. What were the five nations of the Iroquois Confederacy?

3. What wind velocity scale, ranging from 0 (calm) to 12 (huricane), was named for a British admiral who died in 1857?

4. By what name is Victorian author and mathematician Charles Lutwidge Dodgson better known?

5. Which Texan fort was defended by a handful of soldiers lead by Jim Bowie and William Travis against the assault of the Mexican army of General Santa Anna in March of 1836?

6. Which rock group recorded the hit single "Time of the Seasons" in 1969?

7. On the Batman television series, which character did Ethel Merman portray?

8. The United States of America placed a complete trade embargo on which nation on October 19, 1960?

9. Which poem, by an English-born Canadian author, begins with the words: "There are strange things done in the midnight sun/ By the men who moil for gold;/ The Artic trails have their secret tales/ That would make your blood run cold; . . . "

10. What do Arsenal, Aston Villa, Notts Forest, Tottenham Hotspur and West Ham United have in common?

Quiz solutions may be submitted on or before December 14, 1986, in the "Black Box" on the third floor outside the C+D Lounge. Please be sure to include a forwarding postal address if you're not to be on campus during the Winter term. Consideration will be given to all solutions, and yet another skilled mathNEWSquizexpert will be announced along with the solutions to mathNEWSquiz #12, plus a brand new mathNEWSquiz, in the first issue of volume 43 (wow!) of (your friend) mathNEWS.

And now, for the uninitiated, and for those who just have never tried, here are the solutions to mathNEWSquiz #11: Raymond Chandler; the Mason-Dixon Line; N.B.'s own Ron Turcotte jockeyed "Secretari-at"; "Ron and Phil" Everly; the Seven Deadly Sins; Major Frederic McLaughlin founded the Chicago Blackhawks (where is Stan Mikita and Tony "O" now that they really need 'em?); there are six "Brandenburgs"; Penelope; "You'll Never Get Rich" became "The Phil Silvers Show"; and "007" almost encountered "Kitty" Galore.

"Try, and try again!" Famous last words for some, but the success secret for this week's mathNEWSquizexperts . . . . . Owen Sagness Esq. and Jeff Clark Esq. with a score of eight of a possible ten on mathNEWSquiz #11. Good work, Owen and Jeff (although not necessarily in that order), and you may collect your prize plus your

especial mathNEWSquizexpertcertificate at the MathSoc office (MC 3038) during their hours. Other fine efforts were turned in by John Ryan (7), Don Marks (6), W. Jim Jordan (5A Advanced Insanity?), Geoff Waddington and the E4PF's (5), Collen Evans and Jody Stocks, Kerry Garnier & Steve Rapaport, and Greg Clarke. The mathNEWSquizmaster notes that prior mathNEWSquizexperts Patricia Clarke and Vicki Gohl have yet to pick up their mathNEWSquizexpertcertificates at the MathSoc office. Good luck to all aspiring mathNEWSquizexperts on this mathNEWSquiz and tune next term for more mathNEWSquiz.

the mathNEWSquizmaster.

We thought they was offensive, so we, uh, nullified dem.

GRIDWORD
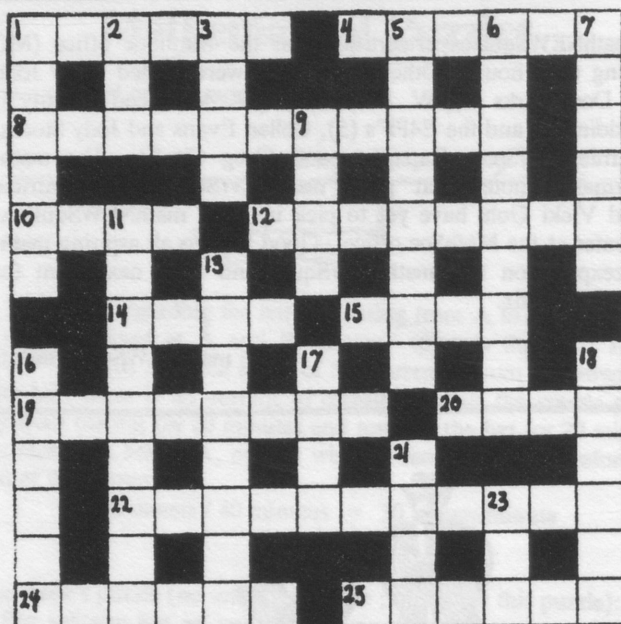
Conventional

Across

1. INHERITANCE
4. LAYERS
8. COIN COLLECTOR
10. FORMERLY
12. PLOT
14. PEAL
15. LEVEL
19. MUSICAL INSTRUMENT
20. SMALL LAND
22. STRENGTHEN
24. FUEL
25. PHYSICIST

Down

1. FOREIGN CITY
2. TREE PRODUCT
3. MONEY
5. FIGURE
6. GOUT
7. PENMAN
9. CURVE
11. DIARY
13. MAKE KNOWN
16. ENTERTAINED
17. STORAGE BUILDING
18. SPACE OBJECT
21. SIMILAR
23. EVERYTHING

Cryptic

Across

1. Repeatedly attack a female back this way (6)
4. Is it possible for a computer language to be a country? (6)
8. Study the parent repeatedly around the article on clock sounds (11)
10. Send forth a westerly occasion (4)
12. The only thing to stand in your way (8)
14. Sound, smell, and money (4)
15. Pop looks, also daydreams (4)
19. Attractive wizardry surrounded the fish-catcher (8)
20. A fight urged outside after iron (4)
22. Swap a start to every real pocket content (11)
24. A section of tree on ship? (6)
25. Deviate when 2 directions veer away (6)

Down

1. Shakespeare wrote about a small pork meal?? (6)
2. The sailor made up the first ship deserter (3)
3. The street has opposite ways to simmer (4)
5. A passenger train noted on the flyer business (8)
6. A companion like thus, American intelligence raised an alien (9)
7. Please make unconscious (6)
9. Father has a degree up and down (6)
11. Mixed about less recognition of anonymity (9)
13. An animal originally bet near hesitation (3-5)
16. A 'Three Stooge' better at leading very small things (6)
17. A ripe form of dock (4)
18. Stick a commercial at this place (6)
21. What a way to reach room temperature! (4)
23. Neither companion right on up? (3)

Comments of the GridApocalypse

Just one minute please ... I just have to catch my breath ... WHEW! I have just lifted the *FIFTY-SIX* solutions up onto the table where I can type your names in. I'm (like, totally) impressed with the number of solutions you finally decided to hand in. Within my knowledge, that is a record! I'm just a little disappointed that you waited until the end of term to show your true colours (??) But don't despair for I will return in the winter to give some excitement (??) to those traditionally boring Friday mornings. So for the co-op types amongst you, remember to get those subscriptions in!

Altogether there were 42 cryptic solutions, of which 40 were correct, and 14 conventional solutions of which 8 were correct. Many of the conventional solvers had trouble with spelling 'AZALEA'. Also all conventional solutions used 'LOAN' for 30 down instead of 'LIEN' which appears in the solution. 'LOAN' is probably more correct.

The winners of the week are: conventional ~~Angela and Tilly and co.~~ and cryptic ~~William Hughes~~ (I bet you thought you'd never win). They can pick up their solutions in the MathSoc office, MC3038 before it closes for the term. As this is the last issue of the term, no prizes will be awarded. The solution for this puzzle will be displayed in a few days outside the **mathNEWS** office, MC3036.

Correct Submitters: Deb Bouck & Jeff Clark, Geoff Waddington & the East 4 Pink Flamingos, BulletProof, W.Jim Jordan, Colleen Evans & Jody Stocks, The Society for the Nullification of Offensive Trends (Hey! what about defensive trends? That's discrimination!), Buttersworth & Ho, Sandy Metzger, Arthur Norris, Jayne Caldwell (en France!), Dani Roloson, John McIntosh (guest appearance from work term), D.McCuaig & M.Vieira, The Grim Reaper, Mansoor Haider, Peter Found, Gary Matsell, James Cherry, Burke Pond, Randy Richard, Arthur Schultz, Helen Cameron & Glen Ditchfield, Scott Graney, Jack Rehder & Kerry Garnier (I got it this time!) & Brian Capstick, Len Popp, Larry Knerr, Mike Lunney, Karen Tremblay, Mark Earnshaw, Sean & Dianne & Julie, Cynthia Kelly, Bruce (Fozzie aka not Alison Wonfor), Mike & Steve, Dave Balkwill & Andrew Tron, Christina & Michele & Antica & Patty, Scott Hayward, Mike Farber, Carlos (aka Cecil) Donald, Darryl McCarthy, MK & SK & TZ, Henry & Eric & Angus. Just as important (but, you guessed it, WRONG) solutions accepted from: Walli & Mark, The Wild Man of Borneo (should I be honoured?), Dr. Geek PhD Proctology, ET & Lady Di & Phil & A2 3wd, Chris Krantz, The Bigot Family, and Kublai Khan.

As I'm sure I've already used lots of room, I'm restricting comments from last issue to the answers to 'Favourite Clue'. The ones that received the best response did because of their solutions not their clues (I'm sure). They were conventional 17 across (undressed = nude) and cryptic 28 across (solution is 'reproduction'). We know where your minds are! Non-seriously, 7 people indicated the CLUE board game or movie, and 2 people thought I had put 'Favourite Glue' (as in LePage's). I'm glad to see that there was an assortment of favourite clues which hopefully means the puzzles are appealing in different ways to you.

Joyeux Noël! (I just had to get one more umlaut in)

fletniowski