

$e^{2+3} = e^2 \cdot e^3 = e^5 > \dots > e^1 > 0$

2+3=?

$\ln(2+3) = ?$

$x \log x = 2+$

SCHOOL'S OUT

$\alpha | e \quad \alpha \in \mathbb{R}, 3 \in \mathbb{R} \quad \frac{\sqrt{3-2}}{2 \cdot 2}$

$\alpha \rightarrow b \quad \alpha \sim b \rightarrow \sim \alpha$

$x \leftarrow +/\square$

$\int_2^3 e^{-\frac{1}{2}x^2} dx$

2+3=3+2

Good Luck on Exams!

Weebees Wailers Triumphant

It was a warm Thursday afternoon when the Weebees Wailers, the MathSoc representatives, arrived at the dusty diamond for their last game of the season. Their opponents, Ritaz Rats. The determination that was evident all year was now permanently etched in the faces of the players.

As manager-player-coach, Dave "the Wailer" Wiebe surveyed his team, the painful decision of the starting line-up was again upon his shoulders. It was hard for the Wailer to believe that the team he so carefully drafted in the spring was now in the "C" Championship game. Wiebe called on all his years of experience to come up with the chosen nine.

The starting pitcher was the Wailer fireballer, Bev Beauchamp. Her great consistency in pitching throughout the season and her being the only pitcher was the reason for this selection. They could not have done it without her.

Catching for Bev was Chuck Snelgrove. Chuck loved to be in the thick of things and was occasionally found on the mound. His enthusiasm was sometimes greater than the backstop. But it was a managerial decision that kept him catching the ball and not chucking it.

On first base, Ken Coward added the professional touch to the team. With his big league attitude, Big Mac uniform and anti-glare sunglasses, Ken's intensity was a definite element in the Wailer's outstanding season.

The second base decision was an easy one for Wiebe as he filled it with himself. This was his greatest vantage point to watch his players in action and to yell at them when something went wrong.

Third base was not such an easy decision. Still, for some reason, he went with Chuck "E" Kelly. Chuck usually had as many errors as he did hits. But his bat was strong and the errors did not really hurt the team that much, so Wiebe risked him again.

Scott Roche at short-stop would be a safe bet as there were no distractions in the crowd to make him choke. Scott's solid performance all season was enough to guarantee his starting position.

In left field, Joel Prussky, a true Weebees Wailer, got the nod. In the quarter finals Joel demonstrated his determination to field all the balls that came his way when he slid head first at a pine tree to try and field a foul ball. Everybody should have one of these guys on their team.

The centre field starting position was an obvious one, Phil Bolgar. Phil did not say much, even when it came to calling those fly balls. But he covered the field well and performed well at the plate like a good ball player should.

The last, but certainly not the least of the starting nine, was Jim Moir in right field. Flashdance took the whole season to come up to his potential, but was in time for the playoffs. Way to go big guy!

These nine players started the final game and played magnificent ball. Kelly and Wiebe both had homers, Flashdance and Prussky were hitting at the plate and Bev had a shutout going when the big move came. Why did the Wailer make the managerial decision to pull half his team and play the remaining six team members? Well let's just say it's intuition and fair play on his part.

Gary Belleville, the next Gary Carter, came in to fondle the pitches.

Gary's continued excellence behind the plate and clutch hitting aided in the construction of the road to the final game. His performance did not cease here.

John Clayton came in at first and proved once again that he deserved to be on the team.

John Huntjens took over at second and John Busch at third. Busch snuffed the Rats only threat to put runs on the board when he turned a beautiful double play and doused the fire.

John Hartog came into centre field with a big smile for the fans. If it were not for him the total attendance figure for the season could have been approaching zero.

Jim Miller was substituted into left field and helped keep the Wailer win in their hands.

When the game came to a close, the final score was 9-0 in favour of the Weebees Wailers. Truly an amazing story in these Wailers, a team of gifted individuals bound by a common goal. The victory was never more deserving and the celebration continued well into the night.

I would like to give special thanks to all those players who made this all happen.

Dave Wiebe

LookAhead

A glance at upcoming events

Cinema Grats

Starts in the CC at 9:30 pm.

Get there early and get a good seat!

August 1: *Rebecca, Rear Window*
(last CG this term)

DCS Courses

Free! One to three one-hour lectures;
contact DCS to register.

August 7, 9 CMS Part II
August 13, 14, 16 Unix for Documents

Other Things

July 27: *WATSFIC Games Day from 2 PM*
Over 30 games available to play.
Bring your own games
or opponents if you wish.
See WATSFIC MC3036 for more
details.

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Editor-in-Chief: Tom A. Ivey

Platter Spatter— To Sum Up

Lurking deep in the panacea of a midnight summer dream lies the ogre of unrequited love. He is rather an ugly brute, and always difficult to contend with.

Back in 1967, when I was five, the world was a much simpler place. The wars being fought were easy to protest; people knew what was going on. The generation gap was nice and wide. The old standards were crashing in ruins around us. Things were groovy. This was the summer of love.

Since then, we have yet to see a reprise of such a time. Although the Orwellian vision—of a world where the personal freedom to do what you wished, especially to love whom you chose, was denied—has not yet arrived, can we truly say that the world we have is that much better? In this time we call the 'New Age of Reason', the 'New Romanticism', or the 'New Intellectualism', are we not still throwing up walls between what we want for ourselves and what we should be giving to others? Should they not be more closely related? Is the collective relationship between two people not more important than their own individual gratification? Unless the 'me first' attitude which has been grown and nurtured by 'Third Wave' mentalities crumbles as old standards did in 1967 (incidentally also a great year for music), then another summer of love will never appear.

Of course, the people who profess to be 'radical' in our age may fool some of the people, but they're not fooling me. They walk around with permanent scowls on their faces, listen to 'angry' music, and they don't care about anyone themselves (indeed, sometimes not even about themselves). These kind of people make me sick. Not only are they posers of the worst kind (it was only last week they finally got the courage to chuck out all their old **Black Sabbath** albums), but they're *stupid*. They don't realize that they're rubbing salt into the world's wounds. When the **Jefferson Airplane** sang

*Don't you want somebody to love?
Don't you need somebody to love?*

back in 1967, I don't suppose they imagined how applicable the music would be seventeen years later. What the world needs *now* is love. Indeed, when **Elvis Costello** sang

What's so funny 'bout peace, love, and understanding?

a few years ago, he was obviously on the right track, as were others of his ilk, but people were and are unwilling to really listen to such messages. They're afraid of being reached.

Howard Jones asks *What is love anyway?* and I certainly wish someone would tell me, because I've been having such trouble with acquaintances of the opposite sex these days that I feel that maybe some of my views are misguided. Who can say?

In any event, if you've been feeling melancholy these days, as I have, you might want to pick up the new **David Sylvian** album **Brilliant Trees**, and play it several hundred times, as I have. It's safer than flinging pieces of famous cathedrals at doors and not as drastic as joining the French Foreign Legion.

Enough of this. Thanks for giving me your ears this term.

Slash Sinatra

National Campaign

The Rhinoceros Party of Canada opened their Toronto headquarters last week announcing that they were planning to run 142 candidates in this election, just enough to form a majority government. Proposing such new policies as nationalizing pay toilets and creating a chain of subsidized parliamentary restaurants for anyone on the federal payroll (including UIC and welfare), they announced that they had finally hit on a slogan with which everyone can identify.

"*Sex, Drugs, and Rock & Roll*" will be the standard resounding from coast to coast if the Rhinos have their way, a possibility considering that they placed second in two Quebec ridings in the 1980 election, ahead of the Tories, NDP, and Social Credit. Since then, however, there have been problems in that other parties have frequently stolen policies which the Rhinos found to be very popular. **mathNEWS** does have one question, however. Will the Rhinos run a candidate in Waterloo North?

The Restaurant at the End of the University

Non-Ultimate Answers

1. Engineers get degrees in Fahrenheit, Mathies in Celsius; Sci's get 'em in Kelvin, but Artsies get *Kelvin-Cline*.
3. The *Chevron* does not, literally, exist within our universe. The newsprint you see is merely the physical manifestation of micro-intelligent shades of the colour red, whose attempt to invade our timespace is hampered by limited vocabulary.
5. Like Smurfs, engineers are made, not created. Syssies were made to give other engineers something non-woollen to abuse. The same beings that make engineers also control Thom Hallison. These creatures once lost a digital watch between V1 and Lot M. Fed Hole is just a ruse designed to conceal the search for this watch. These beings are also fond of penthouses. Thom met them out west. They are called *drumlins*. When wet, they add, subtract, multiply and divide, and declare a new Fed Budget. If fed after midnight, they become engineers (see above).
9. With Kitchener ChanceIt, there is no next bus in any sense of the word. As for the next bus, it's all a matter of a chance glance and some tight pants, a quick dance, ta-da—romance!
- 6*9. How much Village Food could a woodchuck chuck (if a woodchuck could chuck food)? Why are you reading this? Provoking, isn't it?

Sauron

P.S. *I'm a Pterodactyl, obviously.*

Not the Mathematics Column

By Not Young Frank Einstein

I would like to take this opportunity to thank all those who read this column this term, and especially to those who responded. To finish off the term, I would like to leave you with a few random observations.

First, here's a proof that $1=2$:

Take $x^2 = x + x + \dots + x$ (x times)

Then differentiate:

$$2x = 1 + 1 + \dots + 1 \quad (x \text{ times})$$

$$= x$$

Now, divide by x (let $x \neq 0$):

$$2 = 1 \quad \square$$

As a corollary, the answer to any problem would of course be 2π . (This "proof" was actually found in an old mathNEWS, in Volume 27).

Now, can you find the answers to the following?

$e^x = \text{cabin}$. What is x ?

Can you list all the possible regular polyhedra?

If a certain strain of bacteria doubles every minute, and a jar is full at 3:22 pm., what time is the jar $\frac{1}{4}$ -full of bacteria?

I'll leave these questions for you to figure out on your work terms, or wherever you may be going. Do take care in the coming months, and perhaps this column will return in January.

Not Young Frank Einstein

Marxists-Leninists Choose to Boycott Election

Waterloo (Chevron) In the July 20 issue of the *Chevron*, an announcement concerning the current election campaign was carried reporting that the Communist Party of Canada (Marxist-Leninist) had chosen not to field any candidates, the first time in five federal elections it has not participated. Such actions bring into question whether the party will actually continue to operate—to remain a recognized federal political party, it must run a minimum of forty candidates in any federal election. Loss of recognition as a political party would in turn mean that it could not run candidates in a future election or by-elections nor collect donations which are tax refundable.

Also of concern is whether such moves mean that the Communist Party of Canada (Marxist-Leninist) is forsaking democratic methods of achieving power in favour of some other, unnamed methods.

Sketches

He'd never wanted to fly before. A feeling just overwhelmed him one day — he'd have to learn to fly. Not before next summer. Not by next week. He was going to learn to fly by tomorrow afternoon. This was very convenient as it would give him something to show his teacher and classmates in show-and-tell the day after. He did not think about the fact that learning to fly can be dangerous. He didn't stop to wonder whether his talent would cause problems with the local air traffic control centre. He merely tried his hardest to solve the problem of human flight — and failed.

An explosion of colours—white, green, gold, burgundy, shimmering red WashING BACK AND forth, the ticking of the clock and sounds and noise and bussle and tingling stabbings in my feet while the sun bathes my head and the cool sea licks my legs.

The small, calculated movements of the row of carpenter ants catch my eye as I walk past our old sour cherry tree, it's pinkish white blossoms floating gracefully to the ground to rot. The humus of long years of blossoms melts amid the growing roots of marigold yellow dandelions and dark spring-green grass. A flitting humming-bird flicks in and out of tiny cherry flowers while the carpenter ants cut and snip, slicing silky cloth for the diapers of who-knows-how-many baby ants, and the sun bathes my head and our german shepherd licks at the mud on my bare feet.

I fly, and my hair caresses the beams of the sun—my wiggling, laughing toes tickle the passing clouds. I am lamb amongst lazy, puffy fleece-white sheep, small under the grandure of the starlight.

M.L.E. (emily)



Opcodes of the World

ADB	Another Damn Bug [UNIX]
AR	Alter Reality
AS	Add Sideways
BCU	Be Cruel and Unusual
BD	Backspace Disk
BF	Belch Fire
BFM	Be Fruitful and Multiply
BNCB	Branch Never Come Back
BPL	Branch Please
BRA	BRanch Anywhere
BSST	BackSpace and Stretch Tape
BTJ	Branch and Turn Japanese
BW	Branch on Whim
CAC	Cash and Carry
CAI	Corrupt Accounting Information
CAIL	Crash After I Leave
CBA	Compare and Branch Anyway
CC	Call Cavalry
CCD	Choke, Cough and Die
CD	Complement disk
CF	Come From (replaces Go To)
CIZ	Clear If Zero
CRN	Compare with Random Number
CTDMR	Change Tape Density, Mid Record
CUC	Cheat Until Caught
CWAH	Create Woman And Hold
DA	Develop Amnesia
DC	Degauss core
DCR	Double precision CRash
DHTPL	Disk Head Three Point Landing
DIRFW	Do It Right For Once
DK	Destroy Klingons
DLN	Don't Look Now...
DPN	Double Precision No-op
DPS	Disable Power Supply
DR	Detach Root
DSI	Do Something Interesting
DTI	Do The Impossible
EBR	Erase Before Reading
EPRS	Emit burnt resistor smell
EFE	Emulate Fatal Error
EHC	Emulate Headless Chicken
ENF	Emit Noxious Fumes
EOP	Execute Operator
EPS	Electrostatic Print and Smear
ERIC	Eject Random Integrated Circuit
ESD	Eject Spinning Disk
ESL	Exceed Speed of Light
ETI	Execute This Instruction [for recursion]
FB	Find Bugs
FCJ	Feed Card and Jam
GBB	Go to Back of Bus
GORS	GO Real Slow
GSU	Geometric Shift Up
GTJ	Go To Jail (don't pass 0000, don't set flags)
HSJ	Halt, Skip, and Jump
IDI	Invoke Divine Intervention
INOP	Indirect No-op
IRE	Insert Random Errors
JAA	Jump Almost Always
JPA	Jump when Pizza Arrives
JSC	Jump on System Crash
JTZ	Jump to Twilight Zone
JWN	Jump When Necessary
KSR	Keyboard Shift Right
LPRTC	Load Program Counter from Real-time Clock

LRA	Load RetroActively
MAN	Make Animal Noises
MBTD	Mount Beatles on Tape Drive
MDDHAF	Make Disk Drive Hop Across Floor
MNI	Misread Next Instruction
MW	Malfunction Whatever

Thanks to:
watmath!jsgray
seismo!keith

I'se The Bye

(Mathie Version)

Lard, t'underin' holy s**t, it's t' last week o't'erm, me son, me son. An' we ha'e f'r ye a li'l song t'splane wha' y'sha'e be doon'. A'leest t'ae's t'way we been doon' it f'r y'ars a' M'morial in Sint Jahn's.

Jahn Crosbie

I'se the bye that takes the course;
I'se the bye that fails her.
I'se the bye that skips me class
And gets me notes from Liza.

Chorus:

Bribe the T.A., bribe the prof,
Bribe the department chairman.
Don't you try to bribe the dean!
All around the circle.

ElseWhen

mathNEWS 10 years ago

RIBBIT TO CHALLENGE WORLD'S BEST— Ribbit, a computer chess program from UW, will represent UW and Canada in the First World Computer Chess Championship, August 5-8, 1974, in Stockholm, Sweden... The program is authored by three UW students: Ron Hansen, a graduate student in Computer Science; Jim Parry, a fourth year Computer Science undergraduate; and Russell Crook, a second year Physics undergraduate... Ron Hansen and Jim Parry will travel to Stockholm to run Ribbit in the tournament. Ribbit will be run on a Honeywell 6060 computer provided by the ASEA in Vasteras, Sweden... The program has been under development for approximately one year on the UW Math Faculty Honeywell 6050...

MAILBOX— We are pleased to announce that mathNEWS has a new mailbox. The box is located on the third floor outside the math lounge. It will be very easy for you to contact mathNEWS since you no longer have to wait until the Math-Soc office is open...

MATHSOC AWARDS— faculty who, in lieu of having fun, decided to go to U of W this summer...

{Taken from mathNEWS, Vol. 5, No. 6, July 25, 1974}

Entertainment

by Marcel Kahnt

Well, it's hard to believe, but it is once again time to fail your exams. This means that this is the last entertainment column this term (and if my average doesn't improve, perhaps forever). We can keep this one rather short as Fed Flicks are done, so here we go.

The n-4 Starfighter

As n goes to infinity, so does the time it takes for this movie to actually get going. In all honesty, I must say immediately that I was not impressed. While there are several good movies showing around at the theatres, this is not one of them. Even though many scenes use the Cray X-MP Supercomputer (listed in the credits at the end), they are flat and generally lifeless. They try to present many extremely intricate images and the graphics capabilities are admittedly overwhelming, but Walt Disney accomplished a much better job which is more lively and much more realistic using conventional methods for *Bambi*, *Snow White*, and *Cinderella*.

In general, the movie style was frequently undecided as to what direction it would take. At times turning to an adventuresome drama, it would suddenly swing about and be a parody of science fiction parodies. The only bright moments arose when the beta unit was having trouble with assassins or certain internal operations (such as an over-sensitive hearing system requiring the removal of the head to properly repair). I hate to give low ratings, but on technical it gets 6.5, acting gets 6, and script gets 1 (the story is actually that bad), for a score of 4.4. Technical was for attempting to tame the Cray, as other than that, there was nothing to distinguish the movie as much better than mediocre. Acting is up to six as they were actually sufficiently upon their toes to create a few bright moments in a burnt-out story.

Cc Goodies

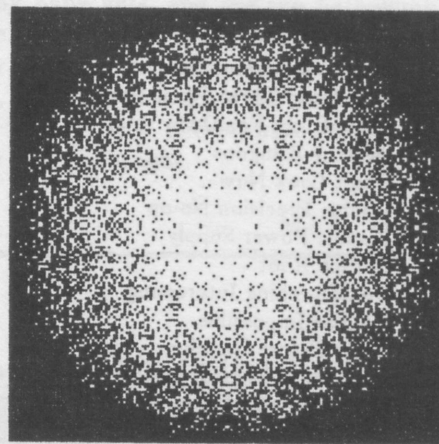
Two features, *Rebecca* and *Rear Window*, are being shown this week. I have not, to my memory, seen either, but I

have purchased a guide to movies of 1979 and before, and it rates each as tremendous. *Rebecca*, starring Laurence Olivier, Joan Fontaine, George Sanders, and Judith Anderson, was produced by David O. Selznick (of *Gone With the Wind* fame) and directed by someone new to movies, an English chap named Alfred ... Hitchcock. Let me say that it is comparable in quality to *Casablanca* and leave it at that.

Rear Window is the story of a news photographer with an immobilizing broken leg who witnesses a murder in a room on the other side of a central courtyard. Produced in 1954, fourteen years after *Rebecca*, it showed the many developments of the director of both movies, and an excellent script and tremendous acting ability come through to carry the day.

Supernova of the Week

mathNEWS presents the first supernova of the week, the Timex-Sinclair XT-1000. This supernova may be read in by RS-232 compatible ports (if the hardware can support it).



thanks to Sauron

LastHead

Term Review

As this term draws to a close, I'm starting to wonder if it is all worthwhile—knocking yourself out every second Monday night, getting up late every second Tuesday morning. I mean, why people do things like this?? I suppose it's just dedication, masochism, a pinch of egoism, and the hunger for pizza.

But the pizza has to be divide among many, man people—so many that I am afraid I'll forget some. This term mathNEWS was composed of contributions from dozens of people. BLScarse wrote a string of humourous pieces (Sex for Mathies, Non-Ultimate Questions, etc.), as did the valiant Dwarf (chromicide, elsewhens, as well as the concept of **Combina-politan**), and Captain Combat (first Co-op's Cookbook). Not Young Frank Einstein (who is not W. Ross Brown) produced a series of Math Columns. Countless timely news articles were written by Scooter! (with thanks to UW's News Bureau) and Marcel Kahnt's entertainment column kept all of us abreast on celluloid past and present.

Smatterings of Platter Spatter appeared without fail, thanks to Slash Sinatra (yes, that is his name), with Tom Watts and Chris Seyffert. Watts also wrote computer-related articles such as SCUMSbag/Pulse, WatCOW, brackets, and the Graham interview, as well as the MathSoc and SAC reports. The gridwords this term were created by Maggie Brunton (2-d) and Dave Leibold (n-d), with occasional help from mathNEWSes of years back. Glenn McFarlane regularly wrote features (Textbooks, Pink Ties, LoveLikes, etc.). Sports articles appeared by Marcel (baseball), Glenn (football), Dave Wiebe (Weebees), and Dwarf (Islanders). Georg Mandrive contributed his prolefeeds, cooking expertise, and a record review (Glenn Gould). His colleague Rena Weese, along with Stella Gazer, wrote several features for **Combina-politain**.

I nearly forgot about Ron Pfeifle and his Chines Restaurant article, MLE's Sketches and Strawberry Field Theorem, and Sean Romenco's Required Electives. Sauron (the Dark Lord) with his Sculptures and scurrilous Answers, BSTomcatt's valedictions, Steve Hayman and Jahn Crosbie's song, Greg Bingleman's riddle, and tedoner's erudite designs shouldn't be forgotten either. Then there was my lamentable Questions column—no more of that. Oh well, I've probably forgotten somebody, but it's getting late.

Production

The production crew this term included djcl, Brian Scarse, Ron Pfeifle, Athos once, wjjordan, Chris Seyffert, Sean Romenco, and Glenn McFarlane. Our logistical thanks go to gandalf, sytek, the Imagen laser printer, watdcsu, Jan Gray & watmath, i/o room operators, mfcf operators, not to mention godfather's and pizza palace. My special thanks go to Tom Watts for his guidance throughout the term, to Scooter! for staying till the last dog was hung, and to Genia Krubnik for her inspirational perseverance on into the wee hours of the night.

Oh well, time to start my work report ...

Best of Luck,
Tom Ivey

One Thing Leads to Another

This is it, man, the end of the term. No more pencils, no more books, No more professors' dirty looks! Time for me to ramble now; taivey can do it, I read it in his "Questions" column! "The horror, the horror." So what am I going to write about? "Son, sometimes you just have to say 'What the heck!'" "Okay, pop, you got it!"

STAT 230, Friday, 1:30 pm.

Thinking about religion, again, man. All this math gets me thinking so mathematically, too. Somewhere in Genesis, God made man in His own image, so man is the image of God under the function/procedure Creation. Thus,

Creation:God→Man

Hey, I can Pascalize this!

FUNCTION Creation(God:real; man:integer):integer

Oops, period's over and Gord's giving me dirty looks. Bye now!

Visual ramblings are possible too. Start with what wjj calls a tesseract, draw a spaceship but get bored so turn it into a faucet. Add the tap and the bathtub so you can wash your brain. Don't forget the soap and shampoo (sorry, you ran out of Agree creme rinse!) How about some ceramic tiles for your bathroom wall? Now you can put on a happy face—so SMILE! Aw, isn't that nice? Now be careful, because one thing leads to another...PEEKABOO!!!!

B.S. Tomcatt

The TAKITH Prize of the Week

This week, we have a guest submission:

28 dgcasperson Tue Jul 17 1984 16:07

Whereas

The chances of finding coffee and donuts in the C&D lounge appear to be governed by the Pauli exclusion principle, that is to say vanishingly small after 1:30 p.m.

and

Whereas

The title "CVD lounge" would not be understood by non-logicians,

Be it Resolved That:

The C&D lounge be hereafter renamed the Unicorn lounge, since one can as easily buy a unicorn there as coffee & donuts simultaneously.

Love Likelihood Functions

(definitely NOT The Mathematics Column)

So another spring and summer has come and gone and you still haven't found that special someone to spend your valuable free time with? Or maybe you spent the term ogling several of your classmates and couldn't decide who to move in on. Well, you're out of luck this time round, but at least you can be well prepared for next term.

Allow me to introduce to you the Love Likelihood Function. After all, if your social life was severely restricted by school, you might as well put to good use what you have been learning.

The idea goes like this—pick something you consider most important in a relationship, for example how you would like to spend time with him/her. Write down several possibilities in this category and apply a weight to it expressing your enjoyment/preference of the possibility. These weights are between 0 and 1, with the sum of the weights equalling 1. For instance,

name	movie	dancing	bowling	intimate evening at home	calculus party	
A (generic example)	0.2	0.2	0.05	0.5	0.05	= 1.0

Now, select some potential mates and ask them to do the same and compare your answer with theirs. The one that best fits your "model" is the one you have been looking for!

I might mention here that these functions are linear. That is, if you consider several topics (such as spending time, conversation, favorite couch positions, etc.) the summation of these topics would provide the Maximum Love Likelihood function.

So how does one determine the goodness of fit (if I may borrow a stats term)? One test is to simply multiply each associated weight together and sum the products. The highest sum is your best match. For instance,

name	movie	dancing	bowling	intimate evening at home	calculus party	
B (opposite generic sex)	0.2	0.5	0.1	0.2	0.0	= 1.0
C (ditto)	0.1	0.1	0.2	0.1	0.5	= 1.0

If A was contemplating B or C,

$$\Sigma A \times B = 0.2(0.2) + 0.2(0.5) + 0.05(0.1) + 0.5(0.2) + 0.05(0.0) = 0.245$$

$$\Sigma A \times C = 0.2(0.1) + 0.2(0.1) + 0.05(0.2) + 0.5(0.1) + 0.05(0.5) = 0.125$$

So A is better suited with B.

Another method is to sum up the absolute values of the

$$\begin{aligned} \text{differences and go for the lowest summation. So,} \\ \Sigma |A-B| &= |0.2 - 0.2| + |0.2 - 0.5| + |0.05 - 0.1| \\ &\quad + |0.5 - 0.2| + |0.05 - 0| \\ &= .7 \end{aligned}$$

$$\begin{aligned} \Sigma |A-C| &= |0.2 - 0.1| + |0.2 - 0.1| + |0.05 - 0.2| \\ &\quad + |0.5 - 0.1| + |0.05 - 0.5| \\ &= 1.2 \end{aligned}$$

Again, B wins out.

I leave as an exercise (hopefully just in time for exam prepping) possibly the best solution—linear regression.

$$A = \bar{x}A = \bar{y}y = \beta_0 + \beta_1 \bar{x} + \epsilon_i$$

We want $\beta_1 = \frac{S_{xy}}{S_{xx}}$ to be closest to 1.

You may also want to take into account σ^2 or do other weird and wonderful things that statisticians like to do. The simplicity or complexity of the test is up to you. Also, please note that biased sampling is definitely encouraged. Happy hunting!

grmcfarlane

Close, but...

One day not too long ago, Joe Regelski, a newsperson for local radio station KQAK, mentioned on the air that he liked Safeway's Cragmont Cola. Joe quickly received three cases of the cola in the mail. KQAK DJ Alex Bennett thought about this for a while. Then he mentioned it on the air, and added "Boy, I sure love those Macintosh computers."

Next thing Bennett knew, a large package arrived. The return address was Apple Computer. Bennett talked to his boss, his lawyers, and the FCC. No one could figure out any reason he couldn't accept it. So he ripped open the box.

Inside were four six-packs of Cragmont Cola!

[abstracted from a recent InfoWorld]

Definition of the Week

Smiles—increased arclength as a result of a parabolic movement with positive velocity

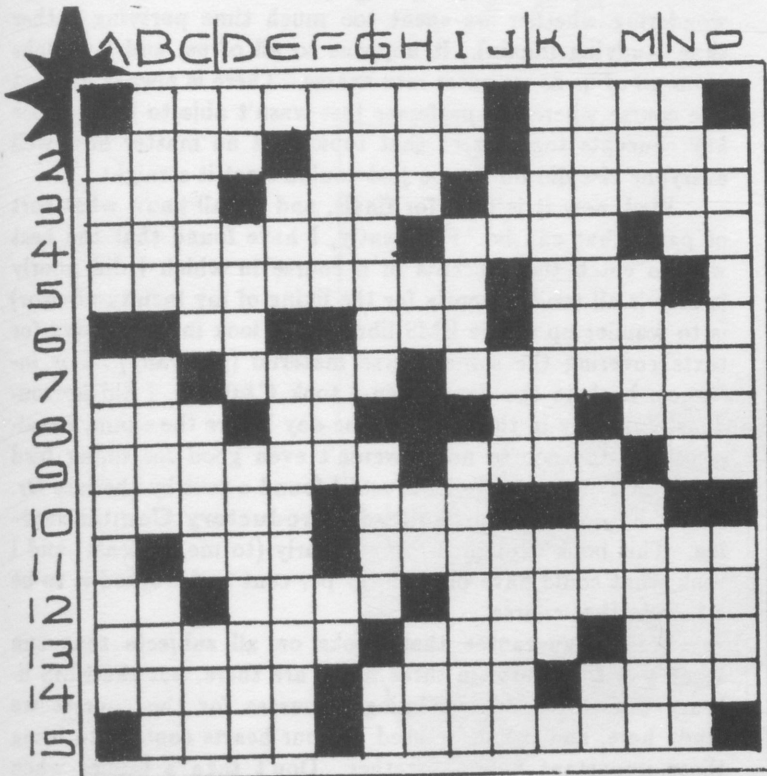
Jim Frankruyter

The Final GridWord

Since this is the last GridWord (and the last day of classes) this term, there will be no prizes for submissions this issue. The answer should be printed elsewhere this issue. Enjoy! □

GRIDWORD

THE MOTION PICTURE



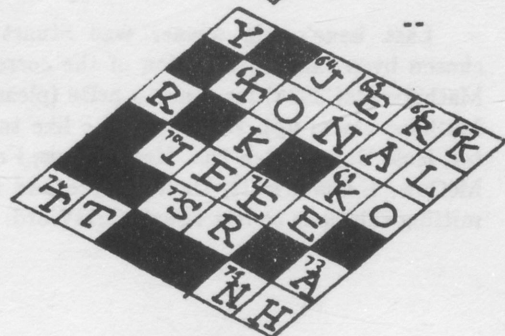
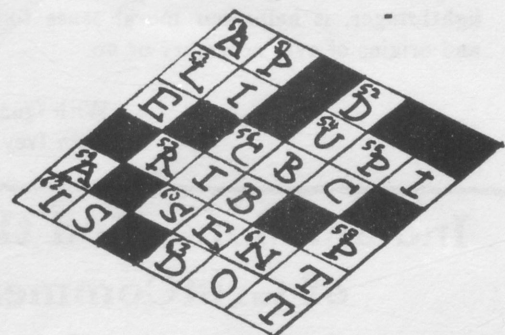
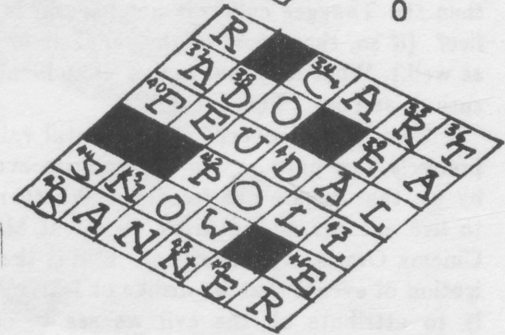
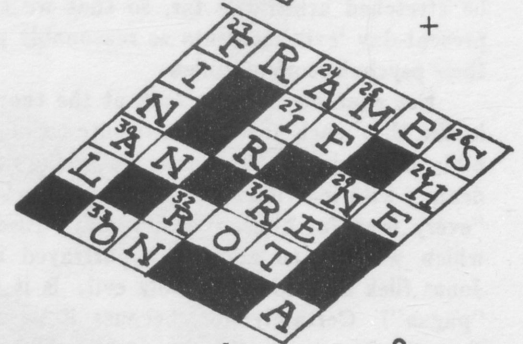
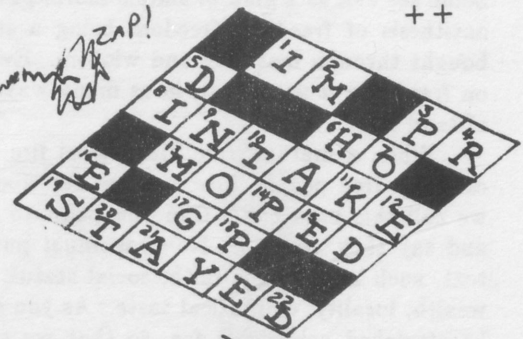
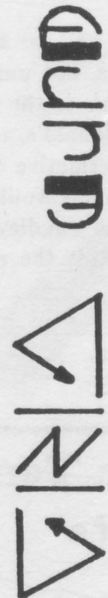
ACROSS

DOWN

- 1b TV Game allows computer access (8)
- 1k A man, a , a canal, Panama! (4)
- 2a Sea eagle makes money (4)
- 2f Newts (4)
- 2k Robby (5)
- 3a Vitamin (abbr) (3)
- 3e Of the magi to last (4)
- 3j Dog (6)
- 4a Many Joannes (7)
- 4i Parasites (4)
- 4n Musical note (2)
- 5a Tape or musical (9)
- 5k Association for 11G (3)
- 6c Street saint (2)
- 6g For two (3)
- 6k Saged impression was French (5)
- 7a Iron (2)
- 7d Soup work (4)
- 7i PET not commodore (7)
- 8a Cleo's snake (3)
- 8e Article (2)
- 8j Biblical city (2)
- 8m Unhappy ads (3)
- 9a He has equal vote as everyone else (7)
- 9i Treble (4)
- 9n One (Scot.) (2)
- 10a Redhaired Yookooohoo (5)
- 10g (Un)Lucky Munchkin (3)
- 10l For example (2)
- 11c Got switched (3)
- 11g New mobilis become a movement (6,3)
- 12a Egypt (2)
- 12d "Batch job", Tom said crunchingly (4)
- 12i Shatner margarine (7)
- 13a Swinging walk (6)
- 13i Tired jean (4)
- 13m Non Standard Terminal (3)
- 14a 2nd Level AD&D spell (5)
- 14g "This!" dit Tom succinctly (4)
- 14l Inspired thought (4)
- 15b Son of Adam (4)
- 15g Doctor's affairs are indoors (8)

- a2 When or for (4)
- a7 Justice (8)
- b1 Deadly sin (5)
- b7 Latin to be (4)
- b12 Guys and slag (4)
- c1 Actions in cast almost frantics (6)
- c8 ...and you didn't know it (4)
- c13 Perceive with the eyes (3)
- d1 Direction of c13 (2)
- d4 Dorothy's dog (4)
- d9 Pulling wool over the croc (7)
- e3 Half of Gorgon (3)
- e7 Two Graphs (9)
- f1 Strange what I drew (5)
- f7 Numera? (3)
- f12 Unusual Yabbering (2)
- g1 Typographical insertions (7)
- g9 Down or Boy's (4)
- g14 Cryptic Inscription (2)
- h1 Really Terrible Trick (3)
- h5 Again (comb. form.) (2)
- h10 Sephine or anne West (2)
- h13 Mightier than sword (3)
- i1 Data Structure (2)
- i4 Law exam (4)
- i9 Powder puff is small (7)
- j3 Goes both ways (2)
- j7 Three fifths of RULER (3)
- j11 And Bert (5)
- k1 Pascal subroutine (9)
- k11 Boolean operator (3)
- l1 What happened to canal water when lead dumped (7)
- l9 First Enigmatic System Macro (4)
- l14 Any current fad (2)
- m1 Absolute (3)
- m5 Sage is getting older (4)
- m10 Witch of the South (6)
- n1 When born is the king of Israel (4)
- n6 Fonz marks? (4)
- n11 Insufferable Stupid Silly Enigmatic Letters (5)
- o2 Sweat it! (8)
- o11 "It's Greek to me", Tom said bitterly (3)

They cut down trees for this?



Questions

On Evil

Is there any room in present day society for the concept of evil? What is evil? To some people, evil is a palpable black liquid, oozing from the mouths and minds of the unprincipled. Some see evil as a kind of simple moral poverty. I see it as the antithesis of freedom, freedom being a state of mind dearly bought through maturity and wisdom. Evil does not encroach on freedom—it negates it, in as many ways as there are grains of sand ...

When a mature, free man opens fire on a restaurant full of other free people, how can we describe our reactions? Do we call this man *evil*? Can you point to any woman or man and say they are evil? No—you *must* put this evil in a context, such as religious faith, social status, ethnic background, wealth, locality, or musical taste. As you see, this context can be stretched arbitrarily far, so that we can rationalize most present-day 'evil' incidents as reasonably predictable events in their psychohistorical milieu.

For example, we can look at the thousand or so murders in the U.S. each year and attribute them to the public availability of handguns. This may not make much sense if you are dealing with individual motives, but does fit in with the gun-ho "every man for himself" philosophy. Elsewhen, the Kali cult which we saw so admirably portrayed in the new Indiana Jones flick seemed undeniably evil. Is it the fact that it was "pagan"? Certainly not, because if pagan means primitive, then the Thuggee cult was not pagan. Is it the human sacrifice? (If so, then most of the religions known to man are evil as well.) What is it that makes us suddenly drop the rationalizations and say "This is evil."?

Clearly, the concept of evil is still valid, and we use it for precisely this purpose—to characterize events, not understood by us, that negate our freedom. Whether this is the freedom to live out our normal lives, to eat at Macdonald's, or to see Cinema Gratis, it matters not. Evil is the instinctive externalization of events that we dislike or fear. While it would be folly to attribute all the evil we see to some candlewhisp or lightbringer, it helps our moral sense to admit the existence and origins of evil, necessary or no.

With Qualms,
Tom Ivey

Indiana Jones and the Temple of GridComments

Last issue's big winner was Stuart Hodgins who was chosen by a random selection of the correct entries. Come to MathSoc (MC3038) for a neat prize (please do it today before MathSoc closes up). We would also like to thank Cornell Carter, Ross Dolson, Ben Hui, Kerri Jarvis, Frank Letniowski, Jim McCaw, Kevin Picott, David Rozee and Brad Sokol for submitting solutions to last issue's GridWord.

It's Almost Over

What Has Been Learned?

Yet another term winds to an ungraceful end and we discover still more unfinished assignments, marks that just didn't seem to pick up the way we had hoped this time about, and a wondering whether we spent too much time partying rather than studying (again). It happens to all of us, and it weighs upon all of us as we enter into exams. There is always at least one course where the professor just wasn't able to bring those key concepts together or that topic that no matter how well everyone else did on it, you just couldn't get it straight.

Well, now it is time for finals, and we all know what sort of panic that can be. Frequently, I have found that the best way to catch the concepts of a course in which I did poorly (which is all too frequently for the liking of my faculty advisor) is to wander up to the EMS library and look in their index for texts covering the same course material (generally). For instance, back in the days when I took C&O 230, I did horrendously pitifully in the course. The day before the exam, I realized that the course notes weren't even good for lining bird cages, and so I went to EMS and I found a text by the late Dr. K. D. Fryer and others entitled **Introductory Combinatorics**. This book explained things clearly (to me, at least) and I took what could have been thirty per cent and worked it to be a pass in that course.

I don't guarantee that books on all subjects that can teach you the course in three hours are there, but the EMS library does have overwhelming resources for the courses we study here, and it can be used to your hearts content to bring those important points together. Don't take a failure when EMS resources could give you the edge to gain a pass.

Scooter!

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Have you been having your workterms in Ottawa or Calgary and find out that you have a slight problem getting mathNEWS out there? Well, your troubles are over, thanks to the mathNEWS Subscription Service. For a paltry sum of \$3, you can have this Fall's issues of mathNEWS delivered to your work term address through the mercy of Canada Post. Just give the \$3 (this is for postage) and your address via the MathSoc Office **today** (who knows when MathSoc will be open during exams), or you can leave your subscription fee and address under the door at MC3035. If you pay via MathSoc, make sure you get a receipt.

The first issue should be available by mid-September. Don't miss out on all the new features that will be appearing this Fall (and likely all the old features as well). Thrill to the adventures of Tom Ivey, Tom Watts, Alfred Ed. and sundry other people. Act now and be informed and entertained on your work term.