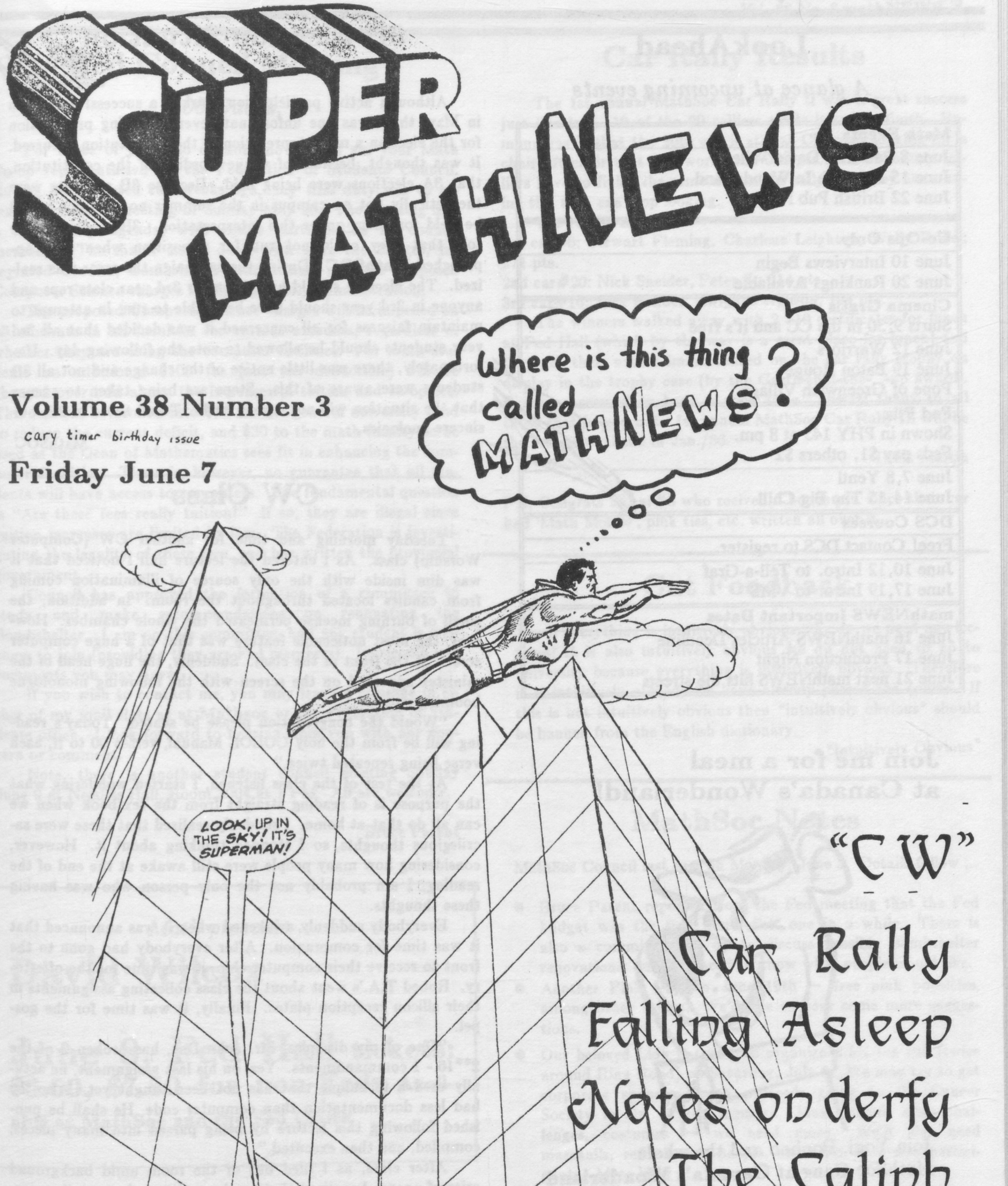

SUPER MATHNEWS
Where is this thing called MATHNEWS?
LOOK, UP IN THE SKY! IT'S SUPERMAN!

Volume 38 Number 3

cary timer birthday issue

Friday June 7

"CW"

Car Rally

Falling Asleep

Notes on derfy

The Caliph

A vernicious grid

LookAhead

A glance at upcoming events

Math Events

June 8 Pub with David Wilcox
June 15 A Lunch In Wonderland
June 22 British Pub Night

Co-Ops Only

June 10 Interviews Begin
June 20 Rankings Available

Cinema Gratis

Starts 9:30 in the CC and it's free

June 12 Warriors
June 19 Baton Rouge
Pope of Greenwich Village

Fed Flix

Shown in PHY 145 at 8 pm.
Feds pay $1, others $2

June 7,8 Yentl
June 14,15 The Big Chill

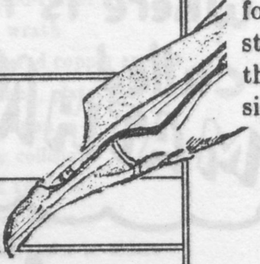
DCS Courses

Free! Contact DCS to register.

June 10,12 Intro. to Tell-a-Graf
June 17,19 Intro. to VMS

mathNEWS Important Dates

June 16 mathNEWS Articles Deadline
June 17 Production Night
June 21 next mathNEWS hits the streets



3B Election Situation

Although active participation marked a successful election in May, there was one unfortunate event. During preparation for the election a misinterpretation of the constitution occurred. It was thought, because of vague wording of the constitution, that 3A elections were being held. Because 3B students were theoretically not on campus in the summer no elections would be held for them under this interpretation. 3B students were told that they could not run for a position when they approached **MathSOC**. During the campaign the error was realized. The election should have been for 3rd year class reps and anyone in 3rd year should have been able to run. In attempt to maintain fairness for all concerned it was decided that all 3rd year students should be allowed to vote the following day. Unfortunately, there was little notice of the change and not all 3B students were aware of this. Steps are being taken to ensure that the situation will not repeat itself. To all those in 3B, our sincere apologies.

MathSOC

CW Class

Tuesday morning and time for another CW (Computer Worship) class. As I entered the lecture hall I noticed that it was dim inside with the only source of illumination coming from candles located throughout the room. In addition, the smell of burning incense permeated the whole chamber. However, the most noticeable feature was that of a huge computer screen at the front of the class. Suddenly, the huge head of the minister appeared on the screen with the following monologue booming out:

"Would the congregation please be seated. Today's reading will be from the holy COBOL Manual, verses 00 to ff, each verse being repeated twice."

As the rest of the class listened, I started wondering what the purpose is of reading straight from the textbook when we can all do that at home. I suddenly realized that these were sacrilegious thoughts, so I stopped thinking about it. However, considering how many people were still awake at the end of the reading, I am probably not the only person who was having these thoughts.

Everybody suddenly awakened when it was announced that it was time for communion. After everybody had gone to the front to receive their computer chip, it was time for the offertory. Robed T.A.'s went about the class collecting assignments in their silicon reception plates. Finally, it was time for the gospel.

"One of my disciples, Mr. John Doe, has broken 2 of the 2**16 - 1 commandments. Yes, on his last assignment, he actually used a technique that has not been taught yet. Also, he had less documentation than computer code. He shall be punished following this lecture by being parsed into many pieces, compiled, and then executed."

After class, as I filed out of the room amid background cries of agony, I realized that as always it was just another normal CW class.

The (Continually) **Mad** Irishman

P.S. The idea for this story was generated by RUD.

Fed Council Meeting

100 Bucks!

For those of you who do not know me, I am your Math Co-op representative on the Federation of Students Council. Having been elected two weeks ago, my first duty was to attend the council meeting of Sunday May 26. The meeting had a very heavy agenda, with active participation by council members. The major issues dealt with were the budget, Integrated Studies, Bombshelter renovations, and the proposed Computer Science charges by the university administration.

The proposed Computer Science charges will be imposed on all students in all faculties for various amounts, regardless of whether they are using the computer facilities. For math students an additional $100 fee (not tax deductible) will be charged over and above the increases in tuition and co-op fee. This fee will be broken into $70 for the general university fund to reduce the current deficit, and $30 to the math faculty to be used as the Dean of Mathematics sees fit in enhancing the computer facilities. There is, however, no guarantee that all students will have access to computers. The fundamental question is "Are these fees really tuition?" If so, they are illegal since tuition increases are limited by law. The Federation is investigating the legality of these fees, and has written the provincial government.

Council has approved the formation of a committee to study and make recommendations on renovating the Bombshelter. I am on this committee, and any student is welcome to join (providing they are Fed members). I welcome any comments you may have.

If you wish to contact me, you may leave a message in either of my mail slots at at Mathsoc or the Federation of Students office. I look forward to hearing from you with any concern or comment.

Note, there is another student council meeting Sunday June 9 at Needles Hall, Room 3004 at 1 PM. All are welcome.

Bruce Parent

Math presents ...

David Wilcox

June 8, Fed Hall tickets: $6.50, $7.50 for non-Feds Available at MathSoc and the Fed Office

What has 23 teeth and an IQ of 50? (The first 8 rows of any wrestling crowd.)

Car Rally Results

The 1st annual MathSoc Car Rally II was a great success just like last. 19 of the 20 ralliers made it to the finish. Rumour has it that the 20th car is still at Chicopee looking for a chair lift chair that was worth 100 000 pts. Unfortunately ralliers have to finish the same day as the rally so if they are reading this they can stop looking.

The results are:

1st car#6: Stewart Fleming, Charlene Leighton, Wally Bridel; 271 pts.
2nd car#20: Nick Sneider, Peter Z.; 214 pts.
3rd car#16: Jack Rehder, Dwight Ferguson; 194 pts.

The winners walked away with 2 $10 certificates for lunch at Fed Hall (which by the way is a great place for lunch) and they get their names immortalized on the car rally trophy on display in the trophy case (by the Garth-shut-the-...-up award). Everyone seemed to have a good time. Special thanx to all those that helped out. 1st annual MathSoc Car Rally III will be the second weekend in Jan./86.

Brett Martin

P.S. Congrats to car#3 who recived 5 bonus pts. since their car had 'Math Mobile', pink ties, etc. written all over it.

Cat Foodback

If everything is intuitively obvious why do we need any lectures? It is also intuitively obvious we do not need to go to university because everything is intuitively obvious. Therefore it is intuitively obvious we have already passed the course. If this is not intuitively obvious then "intuitively obvious" should be banned from the English dictionary.

"Intuitively Obvious"

MathSoc Notes

MathSoc Council last met on Monday, June 3. Details follow ...

- Bruce Parent reported from the Fed meeting that the Fed budget was the first non-deficit one in a while. There is also a committee set up to discuss possible Bombshelter renovations, but they need to know what people would like.
- Another Pink Day on June 19th — free pink popsicles, among other things. We'd like to hear some more suggestions.
- Our beloved Lida is trying to organize a 5K fun run (twice around Ring Road) on Saturday, July 6. We may try to get corporate sponsors, with proceeds going to the Cancer Society in Dr. Fryer's memory. Ideas include class challenges, costumes — we need more. We'll also need marshalls, refreshment people, etc., and of course participants. More later ...
- There are many other things going on around MathSoc that I haven't mentioned here. See the newest "MathSoc Presents".

-BP/GM

Doing Derivatives

I was only seventeen when i left a rather conservative family in a rather conservative western city to come to Waterloo. The night before i left my father gave me some advice which i would like to pass on to you.

"Son", he said, "Integrating is okay, but someday you'll find yourself at a party where people are taking derivatives. Your mother and I think we've been good parents and we think you'll do the right thing. Oh and son, stay away from those complex numbers."

Well Dad was right. When i started here i was very series but i soon began to diverge. I started to integrate and very soon found myself at an Integration-By-Parts party. That was when i first did derivatives. Now i take derivatives regularly just like all my friends. I use the chain rule and have been experimenting with open sets and boundedness. Friends of mine are into S&M (scalars and matrices.) I have been seen with degenerating functions and i frequently fool around with complex numbers (just look at my personal pronouns). Last week i discovered partial derivatives.

Hyperbolic dan gent

Falling Asleep

Are you falling asleep in class? (Since you are reading this, you probably are in danger, so read on.) If you are, make sure that you learn to do it in style from "How to Fall Asleep", written by an expert in the field, Sleepy (of the Seven Dwarfs), and published by ZZZZZZ Inc. In this book there is a special section on how to fall asleep in class.

There is the "It Was A Long, Hard Day's Night" technique — you lean back in the chair with the head tilted back slightly. This technique should never be used with a chair that tips back easily. Also, snoring and a stiff neck are often problems. A second suggested method is the "Full Face" technique — with the arms at the side, lean forward resting your face on the table. To avoid binder cuts in the forehead, it is best to have a large (preferably calculus or physics) textbook, open to the middle, to rest your weary head. The third, highly inadvisable method is the "Front Row Centre" strategy — sit straight up, pretend to listen, but slowly lean to one side as you drift off. Be sure to nod your head occasionally when the prof makes a good point.

In the appendix are a few ways to avoid sleeping in class. Most popular is the "Friend's Elbow" method (needs no explanation), followed closely by the "Uncomfortable Chair" — select a nice wood-and-metal-tube model (remember final exams?). Students are not advised to ingest caffeine-reeking substances (all propaganda about "coffee achievers" aside), but doing crossword puzzles is advised. If you're *really* bored, write an article for **mathNEWS**!

The (Continually) Mad Irishman
as adapted by Geörg
from an idea by RUD

P.S. Try to not fall asleep while reading this!

Mathlete of the Bi-Week

The Situation: The bottom of the 5th (in a 6-inning game). The bases are loaded, with 2 out. The score: 9 to 6 (for the other guys). At bat: Sparky's Machine.

The Sparks were in dire need of a slugger, a god(ess), a light from heaven. Up to the plate steps their saviour. Her overwhelming physical attributes were obvious. Height: 5'1¼"; weight: 96-lbs; eyes--blue. It was then that the pitcher made the fateful mistake. He threw the ball. The eyes were closed, contact was made, and the ball flew down the right field foul-line.

When the dust finally settled, a grand-slam was chalked up for Miss Ann Curtin, this week's athlete of the week. She doesn't win anything for this honour, just the adulation of fans and teammates across campus.

"Tim N"

Physics Puns Your Mother Warned You About

Last term, I saw the following written in a washroom cubicle in the physics building:

"Friction is a drag."

(Below it:) "You physics guys really crack me up."

After completing my business there (V1 breakfasts are a moving experience, as a classmate of mine has remarked on numerous occasions), I went down to the highlight of the day - The Physics Lecture. It was so attention-riveting that I promptly began leafing through the text for more ideas of this sort. Some conclusions:

Gravity gets me down.

Astrophysics is far out.

Angular momentum makes my head spin.

Nuclear fission gives me a splitting headache ("Wow!", you say; a joke about fission that makes no mention of catching trout, bass, *et al.*

Fluid dynamics just goes in one ear and out the other.

Fluid statics puts you under a lot of pressure.

Of course, mathie puns exist also, but since math isn't quite so applied to the real world as physics is, they seem to be fewer in number. Attributed to Indiana Fermat, the deejay of East 5, and a physics student who shall remain nameless for his own good, respectively:

Subscripts are a pain in the rth.

Do you need a warrant to conduct a binary search?

ISSN 0705-0410

mathNEWS is a bi-weekly, sometimes triweekly, publication funded by, but otherwise independent of, the Mathematics Society at the University of Waterloo. Content is the responsibility of the **mathNEWS** editor. 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.

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Managing editor: dan schnabel Trade Mark

More Notes On My Life

Village Semi-Formals

Last fall I decided that I was going to go the Village semi-formal, come hell or high water. Being a realistic person, the possibility occured to me that some female might actually NOT want to go out with me, so I resolved to keep on asking girls until one said yes - and didn't change her mind. I ended up asking 36 ½ girls over a period of 23 days (averaging 1.58696 girls per day) before a girl agreed to come to the semi-formal.

Of the 35 ½ girls who rejected me most of these fell into one class :

NO WAY !

Then there were the responses that were slightly .... different.

"My boyfried, 'KILLER' Mad Doug Smith might have a few things to ... *say* to you."

"I'm getting married."

"Je ne parle pas anglais."

Then there was the rejection that shattered the misconceptions I had had about the girls that reside at Notre Dame (you know - good, pure, innocent, Christian girls - hey they told me that they shoot males on sight if they try to visit outside official hours and derfy if he tries to visit at any time.)

I knew a girl at Notre Dame, and I decided why not ask her ? So I phoned her up and got her room-mate instead.

"Sorry, but she's busy mud-wrestling."

So I asked her.

"I've never mud-wrestled before, but I think that I'm going to be joining her."

Then I asked the telephone receptionist at Notre Dame.

"Sorry, but I have a girl-friend visiting for the weekend."

Her girl-friend just happened to be there, so I asked her also.

"I don't go on blind dates."

"But I'm not blind!"

She didn't appreciate that.

Then there was the girl who rejected me BEFORE I asked her.

"I have no intention of going."

(She was the ½ a girl). I was certain she must be a clairvoyant. Until someone pointed out that after I asked every other girl on her floor she might have guessed. Amusingly, this girl later ended up on her house's "Date DESPARATELY Wanted List".

Did you know that there exist girls that say yes, wait a little while and then change their mind ? (About going on a date, you silly person !) This doesn't bother me TOO much, *except when I immediately go out and buy a pair of tickets,* while she's changing her mind. (at $30 bucks a pair, they ain't exactly cheap, ya know).

The first girl to change her mind took 8 hours. ("Two guys I know just let me know that they will be visiting me that week-end, so ...") Well, scratch one date.

The second girl took 2 hours ("I had forgotton that my mother was coming to visit me, so ...") Well, scratch another date.

The third girl took ½ an hour ("I have a music lesson that I just can't get out of, so ... but ask this girl, she would like to go and she's really nice.") Scratch another date.

Having a mathematical bent (more like warped if you ask me - d.ed) I noticed a pattern : 8 hours, 2 hours, 1/2 an hour. Logically, if the "nice girl" was going to change her mind, she would do it within 1/8 of an hour. So I took a timer along when I approached her.

I ask her. She says yes. I turn on the timer and commence the countdown. 1 minute passes. 3 minutes pass. 7 minutes pass. The countdown continues. 30 secs. 29 secs. ... 10 secs. 9 secs. ... 1 sec. 0 sec. Yipee ! 1/8th of an hour has passed, so she can't possibly change her mind, so I have a date !!! Ya-ho !!

At the event itself there were only quality dining tables with comfortable chairs - except for a beaten up old table with wobbly chairs in one corner. Guess where we were seated.

The food finally arrives. Only one problem. No plates or cutlery. It's amazing how enjoyable it is to try and eat mashed potatoes with your fingers. Yum.

Finally the dancing starts. Yaba-daba-doo ! (I like dancing). My date and I get up to dance. Just for the heck of it I set my timer up and start it. (I forgot to not take it with.) After a little while my date decides that we should take a breather ("I'm too tired, let me rest.")

7 minutes, 10 seconds have elapsed.

We sit down.

7 minutes, 21 seconds have elapsed.

I turn around to stare at the wall. (hey, not dancing at a dance isn't exactly the epitome of excitement).

7 minutes 25 seconds have elapsed.

From behind me I hear "Hey <nice girl> (actual name omitted to protect the ...) how about a dance ?"

(My thoughts on the matter : Why bother asking ? She told me that she's too tired to dance, and you heard her say that.)

7 minutes, 28 seconds have elapsed.

I hear from behind me : "Sure !"

(What ?!?! But ... you said to me ...)

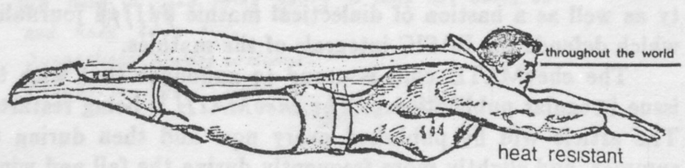
7 minutes, 30 seconds - an eighth of an hour - has elapsed.

I turn around. I look left. I look right. I even look under the table. Oh &**!!??##$%#&*!!!! Scratch yet another date.

(The fact that she weighed 110 lbs. (whoops - 50 kg.) and had imbibed 1/2 litre of wine, a gin-n-tonic, a gin-n-fresca and possibly a Pan-Galactic Gargle Blaster (leading to a derficiency of blood in her alcohol stream) may have caused her to see me in a new light - or rather, not see me at all.)

derfy

P.S. This may be the last chapter in the Notes In My Life series - and, incidently, my life - as I have just discovered that the nice girl in question is a MARITAL ARTS EXPERT (oops - shouldn't that be MARTIAL ARTS ? - d.ed) and that she may being coming around to give me *free lessons* ! "Good-bye, cruel world !"



The Caliph of Caliphornia

When last we left our tired protagonists, they were slowly trudging across the desert lakes of Nevada, on their way to sanctuary at the Sesame Street Institute of the Philosophies. Led through day and night by dan of the always visible hair, at long last they have attained their objective, but are confronted by a tall yellowish type. After the suspicious introduction of the valiant staffers, he admits to being none other than the renowned Dr. Magnus Byrd, scientist extraordinaire.

"We are come to meet with the members of the Department of Philosophy and Theology." spake Cary their celebratory spokesman.

"Have you arranged an appointment?"

"No, but the chairman of DPT is a close friend and acquaintance of ours."

Just then, who should appear but Dr. Ernie himself! After many happy greetings, the old friends fell to discussing their problems.

"Alas!"

"Alackaday!"

"O woe are we!"

"Whatever shall we do?"

Meanwhile, back in Las Vegas, our two Irishmen have just broken the bank, using a strategy developed in a **mathNEWS** article on gambling, when a team of armed men enter the casino.

"The IRA!" exclaims dour O'Beda.

"That's right, Mac. We're from the Investment Recovery Army of the Internal Revenue Agency. We are here to enforce the payment of 117% tax on all gambling profits above $10. Give us all your money, in the name of the law!"

So it was that O'Melian and O'Beda spent their night on park benches, while the IRA soldiers lost heavily at the roulette wheel. In the morning, not greatly refreshed (and every DRAM should be refreshed regularly), they turned once again into the setting sun.

In frigid Cuba, derfy was forced off his jet, and into a ramshackle palace where Eunix Faithless ruled. At that very moment, the King's daughter, a true derfyiette, entered the dungeons. Spotting derfy, she fell head over heels in love at first sight. After he had picked her up, she proposed marriage.

"If you accept, you'll become a prince, and can do whatever you like. If you don't, I'll make Daddy behead you!"

The wedding took place twenty minutes later. After the marriage was consomme´d, derfy remembered that he must needs rush to the aid of his friends.

"But we've only been married 48 minutes!"

"And twenty-six seconds. I know, but I must leave now. I shall return!"

And leaping into the royal jet, he was off to rejoin his companions...

... who were even now setting out from the Sesame Institute to find the LaserWriter.

Cary, disguised as a contestant in a beauty contest, and with his legs shaved, went with Bonita on a special mission into San Francisco, where only those two would be safe.

Dr. Ernie and Camille, disguised as a grad student, attended a special Logic Conference in Berkeley, known to be a front for the Caliph's operation.

Gëorg rushed to Los Angeles, where he was to exhibit dan as a painting in an exhibtion of art by the colour-blind.

And the Shirriff escorted Tom and Alfred on their special mission to Mount St. Helen's.

Meanwhile, derfy's plane was hijacked to Shanghai in -35° weather.

The chevMATH

An article that defends the BASIC integrals of the mathies

With this issue, *The chevMATH* is resuming publication after a period of six (Albanian) months (fifteen Waterloo months, or fifteen and a half in Newfoundland). The *London Times* ran an article on February 31, 1984 reporting that *The chevMATH* was "now defunct". The reporter did not attempt to interview anyone who worked on our (defunct) paper. He just made up this false report, this untrue report, this terrible misleading report, a report which expressed the wishful thinking of the *London Times* (who feared our competition), as well as the MathSoc administration and local (nuclear) reactionaries, not Objectivist reality.

The chevMATH was not published since the last issue in February, 1984 because of temporary difficulties in the production of the paper (a $150 000 lawsuit decided against us left us a bit short of money). Many students (or at least our one writer) expressed their disappointment when we had to suspend publication of the paper, for *The chevMATH* had become renowned not only in the Math Faculty but also at another faculty as well as a bastion of dialectical mathie ~~bullsh~~ journalism which defends the BASIC integrals of the mathies.

The chevMATH club is proud to announce that with this issue irregular publication of *The chevMATH* is being restarted. The article will be published every now and then during the summer, and slightly more frequently during the fall and winter semesters (definition: semester = six months).

The chevMATH is produced by the chevMATH Club, which is open to all students, faculty and staff who are interested in agreeing with the editor of *The chevMATH*. The editorial policy of *The chevMATH* is to (publish Albanian propaganda, oppose anything and everything and) defend the BASIC integrals of the mathies. This means that we address the minor problems of calculus, problems which affect and are of great concern to the vast minority of mathies – the algebraic crisis, the militarization of trigonometry and the danger of differentialist war, and the attacks on the democratic rights of party members.

As in the past, *The chevMATH* will continue to:

1. Demand simultaneous jobs and education for all, and full compensation for the same.

3. Oppose the shifting of the burden of the algebraic crisis onto the backs of the manual labourers of the working class, including the mathies and tenured professors, and advocate that the society be organized in such a manner that it can serve the needs of our writers.

π. Fight for sovereignty for the mathie people by making war against NATO and NORAD, the two superpowers and the U.S. and the Soviet Union, and their military blocs and NATO and the Warsaw Pact and all their war preparations.

n. Defend the democratic rights and freedoms of the mathies by opposing the use of Parliament and legislatures (and ligatures).

And so on.

— The chevMATH Club

Alternate Uses of Math - Part 2

Cryptanalysis Continued

As promised in the last issue of **mathNEWS**, here is the solution to the encrypted message. a = 15 and b = 2 giving the message:

Congratulations! You have just solved an encrypted message. The next issue of **mathNEWS** will describe another, more interesting encryption technique.

The encryption method described in the last issue (using a linear transformation) was a monoalphabetic cipher. In other words, a given plain language letter is always represented by the same cipher letter. Consequently, all the properties of plain language such as frequencies and combinations are carried over to the cipher and thus could be used to help with the solution. In effect, one can say that the properties are invariant except that the names have been changed.

Greater security could be obtained by using more than one alphabet in enciphering the message. For example, consider the method developed by the French cryptographer, Vigenere. It utilizes the encipherment square, called the Vigenere square, where the successive rows consist of the normal alphabet shifted by 1 place, 2 places, etc. In addition, the correspondents agree on a keyword with this the only thing that needs to be memorized. The general system consists in the successive use of the alphabets designated by the letters of the keyword to encipher successive letters of the plain text.

For example, suppose that the keyword is SYMBOL. The substitution alphabet would then be as follows:

Plain	A	B	C	D	E	F	G	H	I
Cipher1	S	T	U	V	W	X	Y	Z	A
Cipher2	Y	Z	A	B	C	D	E	F	G
Cipher3	M	N	O	P	Q	R	S	T	U
Cipher4	B	C	D	E	F	G	H	I	J
Cipher5	O	P	Q	R	S	T	U	V	W
Cipher6	L	M	N	O	P	Q	R	S	T

Plain	J	K	L	M	N	O	P	Q	R
Cipher1	B	C	D	E	F	G	H	I	J
Cipher2	H	I	J	K	L	M	N	O	P
Cipher3	V	W	X	Y	Z	A	B	C	D
Cipher4	K	L	M	N	O	P	Q	R	S
Cipher5	X	Y	Z	A	B	C	D	E	F
Cipher6	U	V	W	X	Y	Z	A	B	C

Plain	S	T	U	V	W	X	Y	Z
Cipher1	K	L	M	N	O	P	Q	R
Cipher2	Q	R	S	T	U	V	W	X
Cipher3	E	F	G	H	I	J	K	L
Cipher4	T	U	V	W	X	Y	Z	A
Cipher5	G	H	I	J	K	L	M	N
Cipher6	D	E	F	G	H	I	J	K

As can be seen, there are 6 different alphabets with the alphabets beginning with the letters of the keyword, SYMBOL.

For example, suppose that the message to be enciphered is as follows:

This is the last article about cryptanalysis. Hopefully, the next issue will contain an article about another alternate use of math.

The encipherment would proceed as follows. The first letter of the message, T, would be enciphered by means of alphabet S (Cipher1). The resulting cipher, L, would be found at the intersection of column T and row S Similarly, the second letter, H, would be enciphered by means of alphabet Y (Cipher2) with the result being F. This process continues until all the letters in the keyword are used up. Starting with seventh letter, the same set of alphabets is used in succession to encipher the next six letters, then the next six, etc. until the entire message has been enciphered.

As can be seen, every letter whose original position number in the original message is congruent to *a* modulo 6 would be enciphered by the alphabet designated by the *a*-th letter of the keyword. This kind of system which selects a set of alphabets and uses them repeatedly in the same order is called a *polyalphabetic cipher system.*

Analysis Technique

Using the technique, any cipher letter may represent one of six different plain text letters, depending on its position in the message. No longer is it possible to associate the frequency of each cipher letter with that of a particular plain text letter. Repeated plain text letters may be replaced by different cipher letters, and a different cipher letter may represent different plain letters.

This makes the solving of the encryption much more difficult. I do not have room in this article to properly describe the technique so I will just give a brief outline. First, the decoder has to determine that a polyalphabet was used, usually through the frequencies of all the letters being roughly equal. Next, he has to determine the number of alphabets being used. This being accomplished, he can divide the message up into the separate alphabets and then use frequency tables or other such monoalphabetic techniques to decode each separate alphabet, and thus the whole message.

The above information was obtained from:

Sinkov, Abraham, "Elementary Cryptanalysis", Random House, 1968, pp. 58-78

The (Continually) **Mad** Irishman

Meat Sched

Well we really have a super issue today. Thanks
to everyone who made it out any who wrote
something.
We have a good thing going so why not come out
and have some fun.
Suggestions always welcome.
Thanks for your support

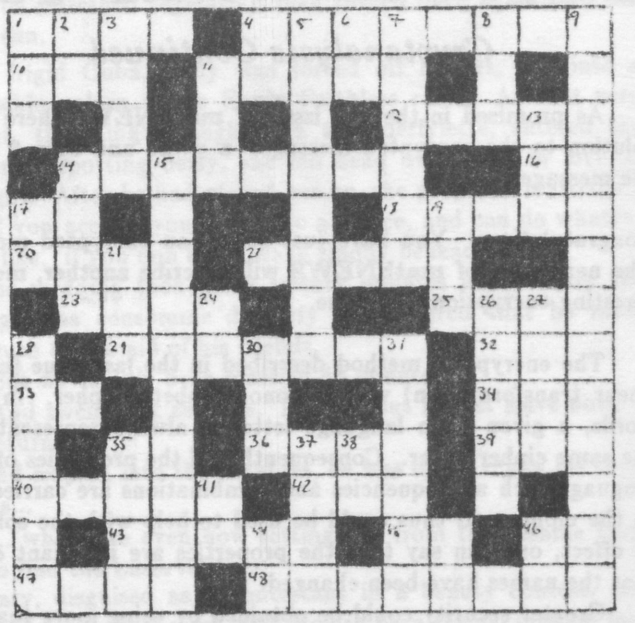
dan schnabel

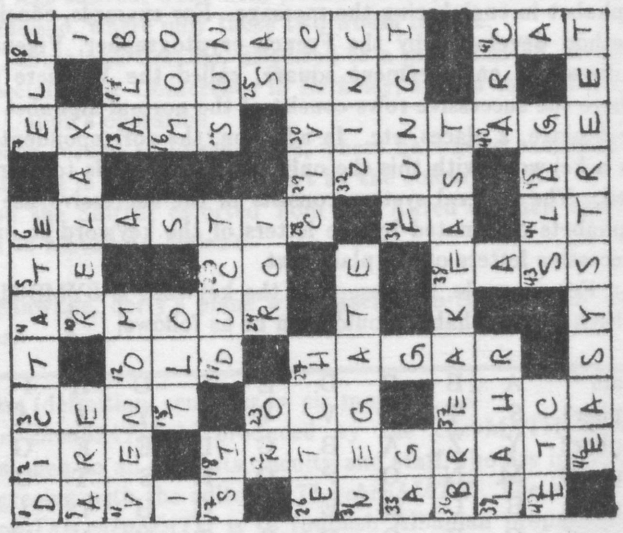
Indiana Jones and The Temple of Gridwords

by Tom Ivey

Whoa, there! Last week this 'steamed journull got swamped by a delugegate of **17** crract salutations to Gridword's last issue. We picked on two lacky winners, Karin Wills and the trinity of Dave Brolley, Gary Lesage and Bruce Johnson. Each winner gets a 2 for 1 deal on a **mathNEWS** subscrubtion at the terminal end (no, goys, only one subscraption amangst the three of you). Runners up comprise M. Behm, Jackie Collier, Edwards Nagamatsu & Rozee, Jim McCaw, Steve Rapaport, Ray Stacey, Robert New, Ralph Hempel, David Balkwill, Kevin Picott,"Fozz"Sutherland, Jeff Jaslin, nel & niv, Mark Dufrene & Dave Whiting, and Michele Page.

Corollarily this weaks' Crudward is meant to supperate the Manx from the Bays. Submote sif you dare solitons to the **Black Box** on the 3rd floor.





Clues

Across

1. popular, not defamy

4. colourful simian

10. Jedi mentor

11. CSC Dalek

12. Homer's troy-poem

14. raging eye-falls

16. modifier, possessed

17. vicar of Prof

18. waves sound unseen

20. Fortran's Napierian

22. CMS editor

23. Queen's player

25. way out egress

29. Infinite curse in finite area

32. scrambled article

33. an egyptian, sunny

34. small deer

35. 5th generation science (abbrev.)

36. astringent, purifier

39. Ontario Hockey League

40. rushin' river

42. here, French

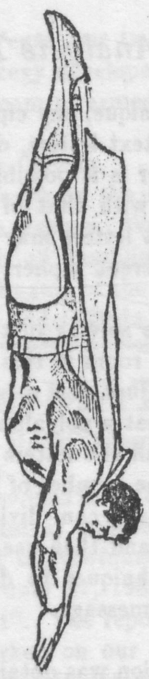
43. partied, celebrated

45. Numerical Analysis

46. Athletic Knit

47. Russian peasants arise

48. bum-boy



Down

1. enemy

2. normal, sort of

3. Mrs. P.M.

4. Cellist, yo-yo

5. Ptolemy's text

6. preceding Xi

7. D in DSCH

8. Roman trio

9. Arthur's sword-giver (4 wds.)

11. ⅛ of 40s dance

13. French, my friend

17. see 17 across

19. paste less postscript

21. Whoa, foolish lout

24. note to follow So

26. to photocopy

27. Integer to Hex

28. crave a tie

30. see 11. Down

31. strange animal

35. Romeo's car

37. leading, not EngSoc

38. Union Catalogue

41. succeeds XT

44. t minus (and so forth)

46. see 41. down

Classifieds

Unpersonals

Hey that "derfyiette" ad was just a joke - no more responses please ! (Some of your responses were very amusing - if any of you were serious, I know a very good shrink ...) Answering some of your questions : no, no, definitely not, and I'm not that weird ... yet.

Two unmarried females with a taste for the finer things in life seeking intellectual male companionship to share interest in bingo, mud wrestling, and hang gliding. Must be fluent in Sanskrit and familiar with medieval iconography. Serious replies only.