

COMBINAPOLITAN

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**Feminism and
the Weierstrass M-test**

**How Advanced Calculus
Integrated
Our Relationship**

**Andy Warhol
on Abstract Algebra**

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can you do it?**

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Recipe of the Month

**Kruskal Could
Be for You Too!**

**Next Season's Designer
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Sex Course for Mathies

**Woman at the Top:
Barb Lundhild**

LookAhead

A glance at upcoming events

Math Events
Fed Flicks
<i>Fed Flicks are held on Fridays and Saturdays in Phys145 at 8 pm. Cost: \$1 feds, \$2 others.</i>
June 15-16: <i>An Officer and a Gentleman</i>
June 22-23: <i>Romeo and Juliet</i>
June 29-30: <i>(another long weekend - use engie movies)</i>
July 6-7: <i>Looking for Mr. Goodbar</i>
Cinema Gratis
<i>Starts in the CC at 9:30 pm. Get there early and get a good seat!</i>
June 20: <i>Cannery Row</i>
June 27: <i>Italian Job</i>
July 4: <i>Last Tango in Paris, A Streetcar Named Desire</i>
UW Arts Centre
Call Humanities Theatre Box Office at 885.4280 for more info
June 15,22,29: <i>The Schubert Cycle</i> Anton Kuerti, piano 8 pm at the Theatre of the Arts
June 15-17: <i>HMS Pinafore</i> at Humanities Theatre 8 pm (except June 17 matinee, 2 pm) (\$9.50, \$8 student/senior)
June 20: <i>Music From China</i> 8 pm Theatre of the Arts
DCS Courses
<i>Free! One to three one-hour lectures; contact DCS to register.</i>
June 19, 21: <i>Unix for Document Preparation</i>
Co-Op Deadlines and Dates
June 22: <i>Submit rankings</i>
June 18-29: <i>AM/Eng interview period</i>
June 29: <i>AM/ENG submit rankings</i>
July 4: <i>Job confirmation (Math)</i>
July 10: <i>Job confirmation (AM/Eng)</i>
Other Things
June 15, 22 <i>Mug Coffeehouse--8:30 to 11:30 pm on top of Eng. Lecture Hall weather permitting; watch posters for more details</i>
Sundays: <i>Fass writers meetings</i>
June 22-24: <i>Sounds of Summer Celebration</i>
July 2: <i>University Holiday (!!)</i>

Movie Night

Thursday, June 28th

MathSoc will be holding a Movie Night in the C&D Lounge on June 28th (ending on the 29th), featuring both great and obscure movies. The cost will be a near-astronomical \$0.25 for Mathies and \$0.50 for others. You can make movie suggestions, too; if you would like to see a certain movie, drop a note to MathSoc in MC3038.



Sponsored Disobedience

In your wanderings about this campus, you may occasionally encounter places where certain abnormalities arise, such as the appearance of an 'Atomech Power' sign on the top of the addition to Burt Matthews Hall (you know, our west coast office centre, BC mathNEWS Hall), or repainting the sign at Fed Hell renaming it the POETS Pub. In the fall term, the Columbia Icefield sign became the Frigidid Pool. Although EngSoc does not, in itself, undertake these activities, at the end of the term it awards 'bonus P**5' points to those groups (usually whole classes) who actually successfully perform such actions.

Now, admittedly, no one is hurt outright by these actions, but by the very nature of these actions, they are vandalism. We all know that EngSoc would *never* sanction any form of civil disobedience such as vandalism, just in the same way they would *never* disturb something as important as a midterm (remember Lady Godiva in the fall?), nor would they do anything that could be viewed as offensive and degrading to a segment of society, such as publishing a pornographic newspaper. But its awarding of points after the fact for such things as posting these signs is in essence saying "We aren't saying that you can break the law, but if you get away with it, we'll award you for it." It is a blatantly contradictory stand, as EngSoc knows full well that, although the individual has the choice of refraining from such activities, to get involved in things in general brings him into contention with such questions, and peer pressure (Do it for the class!) is relied upon to make breaking the law acceptable, at least at the time. Still, EngSoc isn't involved in the act itself, although its attitude to such actions is more than enough to warrant making it an accessory to the vandalism. Why such actions should be tolerated is beyond myself, and I wonder why Security has not come to place pressure on EngSoc to stop its bonus points for such actions.

Scooter!

MathSoc Report

June 5, 1984

Ian Sargeant informed the council that about 500 names were collected on the petition to have the Imprint editor removed. The petition will be presented at the director's meeting on Saturday, June 9th. Ian will be attending a meeting on Thursday to discuss setting up an academic award in memory of Dr. Fryer. The council also approved a donation of \$100 to the Cardiac Rehabilitation Fund in memory of Dr. Fryer.

Brenda Wilson presented the MathSoc budget for summer 1984 term. It was suggested that the miscellaneous fund be increased. It was also suggested that money be set aside for the emergency fund. Other suggestions for applying the extra money include new shelves for the office, and a new typewriter. The budget was approved by the council. You will be able to find the budget, along with the **mathNEWS** budget, in this issue. Additional funds were allocated to **mathNEWS** in order to allow a sixth issue to be printed.

Several events are being planned for this term. *Road Trip to Library* - no status yet. *Pink Day* - June 6th - For those wearing pink - free buttons and rulers available in the office; free coffee or tea with every purchase from the C&D; Pink Tie Pins for \$2.00 instead of \$2.50. *Sauble Beach* - July 10th or 17th if 10th is not a nice day. *Wine & Cheese* - Friday, July 13th - It was suggested that it be a tattoo party. Prizes or discounts could be given for those who wear a tattoo. *Movie Night* - Colin Biggin will be looking after this. A Thursday night was suggested as a good time to show movies.

Next meeting will be held on June 19th at 4:30 in MC5045.

Theorem

Strawberry Field Theorem

$$C = R + iR$$

$$C^2 = R^2 + 2iR^2 - R^2$$

$$\text{so } C^2 = 2iR^2$$

$$C = 2iR \quad (C^2 = C, R^2 = R)$$

from line 1,

$$R + iR = 2iR$$

$$R + iR = iR + iR$$

$$\text{so, } R = iR$$

nothing is real, so there's nothing to get hung about.
Hence Strawberry Fields Forever.

Corollary

ELM & MLE (emily)

$$R = 0$$

Mathematics Society Budget

Spring term 1984

Item	Revenue	Expense	Total
Income			
Society fees	7780.00		
Photocopier revenue	700.00		
Cash sales	300.00		
Pink tie pins	450.00		9235.00
Expenses			
C&D loan repayment		2000.00	
Fee refunds		100.00	
Phone		120.00	
Photocopier rental		1000.00	
Mathletics		210.00	
mathNEWS		1300.00	
Social:			
- Grad pub		80.00	
- Pink day		100.00	
- Beach trip		100.00	
- Movie night		200.00	
- End-of-term pub		500.00	
- Wine & Cheese		1000.00	
T-Shirts		470.00	
Pink tie pins		350.00	
Central Stores		400.00	
Red Cross donation		100.00	
Miscellaneous		200.00	8230.00

mathNEWS Budget - Summer 1984

Production Costs	
Printing Cost (12 pages, 6 issues, 900 copies)	\$ 1100.00
Text Processing Cost (VM, Unix)	\$ 700.00
Production Materials	
(tape, layout sheets, letraset)	\$ 100.00
Production Night Pizza (5 issues)	\$ 75.00
Miscellany	
Gross Expenses	\$ 1975.00
Less: Faculty Computing Grant	\$ 700.00
Net Expenses	\$ 1275.00

Note that this budget does not include expenses for the Frosh Issue of **mathNEWS**, and that these expenses cannot be estimated until we know the size of that issue.

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Editor-in-Chief: Tom A. Ivey

Entertainment

by Marcel Kahnt

This issue I am, unfortunately, a bit on the long side. (ugh -tech. ed.) I apologize to my regular readers for my absence last issue, but if you know about the movies that were showing at the time at the theatres, nothing was really worth consideration. Now, however, along with the regular on-campus movies and the Arts Centre, I am reviewing two recent releases and giving a recommendation on a third. As well, I am going to comment on a major development in the Canadian entertainment industry. But first, I wish to speak about something very near and dear to my heart.

The Final Frontier

Space. You know, some people even call it the final frontier. You may have guessed that I'm talking about the voyages of the Starship Enterprise, with an ongoing series of sequels, to explore the depths of expensive but spectacular special effects, to seek out old and new trekkies alike, to boldly show Leonard Nimoy with pointed ears.

I am not an unbounded trekkie. I do try to see Star Trek if it is on, but I don't buy trekkie books or memorabilia, nor do I attend their conventions. I think everyone was likely let down by Star Trek I, because there was so much time devoted to the special effects I know of at least one Trekkie who fell asleep as the Enterprise left its moorings. Star Trek II virtually started over as though Star Trek I had never been made (except for the number), and put a story together that didn't contradict, but instead confirmed and enhanced the series. It is from there that Star Trek III picks up.

Well, enough said about that. I am not saying a thing at all about the plot. Acting gets 8.5, story gets the same, and technical gets 7.5. Overall, I rate it in my all-time top five at 8.2. That should be enough to justify the trip all the way down to the Fairview Cinema at Fairview Park Mall (the big one at the far end of the mainline bus route). This is, from what I have been told, the last show at the Fairview, which will be closed down at the end of this run, so don't delay too long.

Raiders strikes again

Okay, next was *Indiana Jones and the Temple of Doom*. Some of the realism of *Raiders* was lost by using some obscure, and likely totally mythical ritual sacrifice. It can be overlooked, however, as even more than *Raiders*, this was a constant stream of action and excitement. They even kept the same background music (which plays so loud that you can't hear yourself think, but that's part of the adventure movie atmosphere that the movie deserves and attains) and remembered that Indy was afraid of snakes. Acting here gets an 8 (Harrison Ford by far deserves 9.9 for his work, unfortunately the rest of the cast were somewhat weak (or could it have been that he just outshone them so?)), story a 7 (it wasn't quite as plausible), and technical gets a 9 (they had a very hard job to keep up with everything that happened). Overall, that's 8, which is certainly nothing to overlook. It's at the Lyric in downtown Kitchener, and get there early because the line-ups are

murder. One word of warning: there actually are rather frightening scenes. Use discretion when considering taking young ones along.

Fed Filcks

This weekend is *An Officer and a Gentleman*. Knowing the effort that goes into making a movie (in most cases), I don't like to put anything down, but I must admit that I thought this was one of the worst things I had ever seen. The closing scene where Richard Gere carries Debra Winger out of the factory had very little to do with the rest of the movie. Richard Gere played a smart Alec who wanted into the army, but didn't think that he had to accept orders. Debra Winger played a woman after a military man (if she had seen Richard Gere dealing with Lou Gossett Jr., she would have gone out with Lou Gossett Jr. years earlier). I can't say that it is really worth the bother to see.

Next weekend, however, is Zeffirelli's famous rendition of *Romeo and Juliet*. You all know the general story of how Romeo killed his brother the king after talking with three witches, and then... What? That's Macbeth? Well, is it set in Italy? It is. Okay, then Romeo is a Senator that leads an assassination of the great Caesar, Juliet. It's perhaps the best version of any of Shakespeare's works (whichever one it is to be or not to be) ever done, on screen or stage. However, take along plenty of handkerchiefs, as there will likely not be a dry eye in the house.

Cinema Gratis

I'll be brief on Cinema Gratis because I must confess that I don't know about either movie. On the twentieth is *Cannery Row*, and the following week is *Italian Job*. It's a good break from studying, if you want an excuse. If you have the time, why not come out to them.

UW Arts Centre

This and the next two Friday evenings at 8 in the Theatre of the Arts, Anton Kuerti will be performing the Schubert Cycle. At \$12 general or \$8 students or seniors, it is an excellent opportunity to see and hear a top recording artist in the classical field.

At 8 tonight and tomorrow and 2 on Sunday afternoon at the HUMANITIES theatre, Gilbert & Sullivan's HMS Pinafore will be showing. Tickets are \$9.50 general and \$8 for students or seniors.

One final word...

Oh, my hearty recommendation? *Ghostbusters* written by Dan Aykroyd and Harold Ramis (Bill Murray's sidekick in *Stripes*) and starring those two and Bill Murray. It is utter lunacy. You'll love it. The only problem about it is that it is playing at the Odeon, a cramped little theatre that slopes up to the screen. I also had to wait 45 minutes (after standing in the line for 50) after finding a seat before they got to showing anything at all (even the previews (all 15 minutes of them. That's a two hour wait until the movie actually got started!)). If you can get to Toronto, I recommend you see it there, as the Odeon doesn't seem to want the business of its patrons.

Lords of Discipline

The Dean's Office of the Faculty of Mathematics is providing the following summary, previously presented at the Math Faculty Council meeting of March 20th, with the request that it be published for the edification of students currently taking courses in the Math Faculty.

Discipline Summary - Faculty of Mathematics

In a recent survey of discipline cases handled by the faculty from the beginning of the Winter Term 1983 to the end of the Fall Term 1983, the disposition of cases dealt with either formally through either Undergraduate or Graduate Advisory Committee on Academic Discipline or handled informally through the Office of the Associate Dean, is as follows:

- i) The formal recommendations for disciplinary action in cases of the submission of copied assignments vary from the imposition of full negative marks for the value of a copied assignment to the imposition of a failing grade in the course and the penalty of a one term suspension. In two or more serious instances where plagiarism was determined, there was a full year suspension in one case and in the other case, the student involved was expelled.
- ii) In another judgement concerning the omission of a previous academic history on an admission document, the student received a reprimand and was required to accept the consequences of the retroaction correction of his/her record.
- iii) The disposition of a case involving several counts of cheating on final examinations resulted in expulsion of the student involved.

Informal dispositions of disciplinary matters, which are handled through the Associate Dean's Office, result in the maintenance of a file on the case by the Advisory Committee Secretary until the student who has been disciplined informally, has graduated.

- a) In two cases where students admitted to copying assignments, the informal resolution of the case resulted in the imposition of full negative marks for the assignments in question.
- b) Letters of reprimand were issued in three cases where it was ascertained in informal discussions conducted by the Associate Dean that information was previewed by the students, but not obviously incorporated or copied into the assignments in questions.
- c) A reprimand was also issued for the unauthorized use of a computer account for non-course related activities.
- d) Two students also received reprimands for, in one case, the unsuccessful attempt to use an illegal cheat-sheet and, in the other case, the thwarted attempt to alter the exam at the suggestion of another student just prior to submitting it to the proctor.

Errata, Elucidation, Addenda and Apologia

In *mathNEWS* v.35, issue 2 we published an article regarding the current situation at *Imprint*. It has since been brought to our attention that there were several inaccuracies in that article.

First, the article claimed that *Imprint's* bank balance had fallen to \$7000 from \$15 000 in one week. However, the balance at the time was \$19 000, and at no time in recent years has the balance fallen by more than \$1600 in one week. Second, the *Imprint's* normal size in the summer term is 16 pages, not 24. Third, the production manager and business manager were not fired; rather, they chose to resign. As a consequence, no severance pay is owed to these staff members. However, the *Imprint* promised to pay a gratuity (equal to what they would have received in severance pay) to these staff members due to their long service. Fourth, George Elliot Clarke is *not* the president of the *Imprint* Corporation, despite the claim he made in the presence of a *mathNEWS* reporter.

We regret these inaccuracies, and apologize for any inconvenience they may have caused.

Thanx

mathNEWS would like to thank Central Photographic, Graphic Services and the university News Bureau for their assistance last issue for making last issue's articles on the late Dr. Ken Fryer possible.

ElseWhen

mathNEWS 10 years ago

— Last weekend saw the First Canadian Computer Chess Championship...Ribbit (the CSC Chess program) took top honours with best overall entry. Ribbit is now eligible to enter the World Computer Chess Championship...in Stockholm, Sweden.

— If you've thrown a glance into the Red Room lately, you'll notice our new IBM 360-44 is here from U of T. It has red panels that blend in with the floor and walls of the room, and can make the machine look "not there" if you give a quick glance.

— A new feature of this year's anti-calendar will be the responses of the profs to their ratings.

— ...it has been proposed that the library reduce the service hours and close at night...The changes, if put into effect, would (also) close down both the Arts and EMS libraries between 2 a.m. and 8 a.m. (It was felt that closing down would affect few people).

New Course: Sex for Mathies

A problem in Math has always been lack of interesting electives (the problem of lack of interesting students is beyond the scope of this article). As a partial solution to this problem, the faculty is introducing MTHEL 069, *Introduction to Sex for Mathematics Students*. This course assumes no prior knowledge of the subject, and will no

Women at the Top

This week, *Combinapolitan's* feature interview for *Women at the Top* is with **Barb Lundhild**, president of *MathSoc*. Our reporter *Rena Weese* managed to catch up with busy Ms. Lundhild just before an *Economics* midterm.

Combo: Do you think that your sheer femininity has helped you cope with the great responsibilities and stress that go with your powerful position?

Lundhild: Well, everyone knows that women can cope better than men, hence I can cope better than a man as President of *MathSoc*.

Combo: Has being a woman in your position created any difficulties for you?

Lundhild: No, I wouldn't say so, no difficulties.

Combo: Did being a woman help in getting to be President?

Lundhild: [pause] No, it didn't help.

Combo: Do you find that men are attracted to you because of the prestige and power you wield? I mean, power is an aphrodesiac, is it not?

Lundhild: [laugh] No. Yes. Maybe. I don't know!

Combo: On the other hand, do you think that the fact of your position rankles with some of the men around you, those you work with for example?

Lundhild: No, I haven't run into any problems.

Combo: Has being President of *MathSoc* enhanced or enriched your lifestyle this summer?

Lundhild: Yes, you get to meet more people and do more things.

Combo: Have you read *Combinapolitan* before? What do you think?

Lundhild: How could I? This is the first issue! No comment, trash, I don't know. Why did I grant this interview?

Combo: I've noticed how many women are involved in the *Mathsoc* executive this term - Genia, the Secretary, and so forth - what do you attribute this to?

Lundhild: It's not all that unusual. The Past President is a woman as well, as is the Vice President on the other stream. I really think there have been just as many women involved in the past.

Combo: Do you look forward to reading our new woman's magazine this summer?

Lundhild: That depends on what this issue is like.

Combo: And if we interviewed powerful women like yourself each issue ... ?

Lundhild: Yes, probably.

Combo: Before we go to press, do you have any juicy quotes for our readers?

Lundhild: Yes. Why I became President of *MathSoc*: because I thought that's how you got to sleep with the Feds!

doubt prove to be very popular. Here is a sampling of the proposed course material.

A relationship R is a sexual relationship if:

- 1) aRb implies bRa .
- 2) For every (a,b) for which aRb is true, a and b are members of disjoint sets ("of opposite parity" for CS'ers).
- 3) aRb and bRc precludes aRc , since a and c are members of the same set ("of the same parity" for CS).
- 4) aRa is sometimes true (especially in CA).

Physical Interpretation

Sex usually involves oscillatory motion, so look for movement that can be quantified with equations of the form $d = A \cos(\omega t + \phi)$, where A is the maximum amplitude (considered to be quite important), ω is the velocity factor (usually strictly increasing over a finite time interval), and ϕ is the time offset (sometimes several weeks).

Exercises for the reader

- 1) Prove that members of the disjoint sets are topologically equivalent.
- 2) Show that one method of identification of which set any element belongs to can be partial derivatives of the pelvic region (if $a \in F$, then $\partial a / \partial x < 0$, if $a \in M$ then $\partial a / \partial x > 0$).

bls Pearce

Chinese Gourmets

There's something about Chinese restaurants in this town - every time I visit one, I get an incredible feeling of "deja vu", because of the dozens of things that, apparently, are required by a Chinese restaurant for it to get its "Chinese Restaurant" license. The first thing I always notice is that the colour used to decorate the dining room is predominantly red. There are red tables, red upholstered chairs, red hanging lanterns, red padded menus, red carpets, and, quite frequently, the little red vests on all of the waiters. Strange paintings and markings are written on canvas paper on all of the walls. The drone of "muzak" or some local am radio station is in the air, filling in the background. Normally an old, gray-haired woman is sitting placidly by the entrance, smoking the remains of an old cigar, and when she smiles, you can see that some of her teeth are not where they used to be. Posted near the other end of the dining area are a number of metallic signs, fresh from Home Hardware proclaiming "WASHROOMS" and "WOMEN" (and of course, "MEN") in black and tan. The waiter who

continued on page 7

continued from page 6

serves you usually has the air about him of "I'll-take-your-order-and-then-the-cook-and-I-can-finish-that-game-of-'Go-Fish'-we-were-playing-before-you-came-in-so-don't-hold-your-breath-until-your-order-arrives-because-no-one-else-is-here-and-we-are-going-to-take-our-own-sweet-time-about-it,-okay?" Once through these preliminaries, he fills your dark-brown drinking glass with water and lets you peruse the menu for 10 or 25 minutes.

Now, the menu is another item for which it seems that Chinese eateries have to pass a stringent examination. Firstly, it must be bound in disgusting padded red vinyl, on which the name of the establishment is emblazoned in gold letters in both English and something that could be Chinese (as I am ignorant of any Oriental language, these are meaningless to me). Then, of course, on the inside are the ever-present "dinner for n" entrees. An individual has the choice of any number of "number" meals. For example, people tell me that the number 7 is very fine, but unfortunately I have never been able to convince myself to spend that much money in one sitting.

Fortune cookies have to be mass produced. The profound insight of "you will go on a long journey" can only be truly appreciated by one who has inscribed that message more than a hundred times.

A multitude of other similarities abound. Typically, a vinegar bottle full of soya sauce sits serenely in the middle of the dining table (which, by the way, is covered in a red table cloth). If there is a bar, it is short and is done in mottled marble black.

Oh, I could go on for ever. Perhaps we could start a "Real Chinese Restaurants don't..." column. I'll start it. "Real Chinese Restaurants don't serve quiche!"

Echo and the Bunnymen: Ocean Rain

It is certainly with great pleasure that I am finally able to review the latest vinyl from the new "lads from Liverpool". The record lends itself to the sort of adjectives that reviewers love to use, but rarely get the chance to, like "amazing", "wonderful", "stirring" - you get the picture. On the heels of a strong and successful tour over here (I hope you all had the good sense to see them in Toronto and not in Waterloo.), this LP seems to represent the place to which the Bunnymen have been headed all along. I'm happy to report that they've arrived.

The album has a nautical undercurrent to it which influences most of the music here (The shorter version of "The Killing Moon" is likely to be the only familiar track, and was the only song on the album performed on the tour.). All the songs have the trademark Bunnymen starkness, and are steeped with imagery. Many of the songs owe a considerable debt to the psychedelic influences which the band customarily cites; that of *The Doors* is perhaps the strongest.

The cover features an exceptionally interesting hand-coloured black and white photograph of the boys at sea. Take this album to your next party, but don't leave it alone - you may lose it. Needless to say, it is very highly recommended.

Slash Sinatra

Silent Running : Shades of Liberty

There has been a good deal of hubbub in England these days over these guys. On the British leg of the current *Simple Minds* tour, the one in which they sold out six nights at the Hammersmith Odeon, *Silent Running* were the opening band. This was to my mind a better choice than the one we got, *China Crisis*. Now don't get me wrong; I think *China Crisis* is a fine band, and I'm glad to see they're finally making inroads on this side of the Atlantic, but their live show is of a completely different texture from that of *Simple Minds*. The two just did not complement each other well.

Silent Running, on the other hand, sound like *Simple Minds*, have the same personnel configuration as *Simple Minds*, have a vocalist who sounds like Jim Kerr, and deliver a product that I would classify as a cross between *Simple Minds* and the *Chameleons*. Now to the burning question - are these guys as good as *Simple Minds*? The answer: no. Not that the production is bad; quite the contrary. The truth is that the songs are weak and the musicianship is thin at best. Not to mention that these guys don't have anywhere near the charisma that *Simple Minds* had, even in the early days when they were underproduced; *Silent Running* sounds forced.

To sum up, let me say that I have been a very big *Simple Minds* fan for years. The boys delivered a very polished and professional show this time around; they've learned their craft well. *Silent Running*, on the other hand, have turned in only a very mediocre effort on their debut LP, and for people to go around touting them as "the next *Simple Minds*" is not only premature, but I think a bit misguided. Save your money and spend it on something worthwhile.

Slash Sinatra

Chris De Burgh: Man on the Line

Chris De Burgh recently released a new album, which I promptly snapped up, with great expectations. *Man on the Line* follows the quite successful *The Getaway* (relatively speaking, of course; this is not the AM/Michael Jackson-type material of which big hits are made of.) The similarities between the two albums are many, and they stand somewhat apart from De Burgh's earlier work; for example, the *Spanish Train* album consisted almost entirely of ballads.

De Burgh is still one of the least political recording artists around. On this album, only *The sound of a gun* (about life in the Middle East) and *Moonlight and vodka* have political overtones. The latter describes - believe it or not - the feelings of an American spy in Moscow. The songs in general are very well crafted, and De Burgh's voice gives the songs a certain flavour, not unlike banana spumoni. (hmmmm....) Several of the songs, especially the title track and *Taking it to the top* are absolute gems in the tradition of *The ferryman*, and the level consistently high. This album is definitely worth your consideration.

Tom Watts

Your Horoscope

by Stella Gazer

Aries—You will meet a tall dark stranger to replace your current tall blond stranger. Your boss will offer to take you to Acapulco, with no strings attached (including bikini). All indications lead to steamy nights and cool days throughout the month.

Taurus—You will meet a tall blond stranger to replace your current tall dark stranger. You will ask your secretary to accompany you to Honolulu with no strings attached (including his underwear). All indications point to steamy nights and cool days throughout the month.

Gemini—Your twin sister will steal your tall blond stranger, but your revenge will be sweet and foreign as you get her piece of bedroom meat. All indications point to exotic steamy nights and cool days throughout the month.

Cancer—Your lover will discover that he has an embarrassing social disease. Your night life will remain unaffected, however, as you drop him on the spot. All indications point to steamy nights and cool days throughout the month.

Leo—You will discover you have an embarrassing social disease. Your night life will remain unaffected, however, as your mate also has it. All indications point to sizzling evenings and cool days throughout the month.

Virgo—Take a large bag and throw up in it. Your lover will gag you with a spoon. Your night life will remain unaffected, however, as you will rediscover S&M. All indications point to long, thrilling evenings and cool days throughout the month.

Libra—The balance of power in your office swings in your favour, as the boss starts to use you in ways you never thought imaginable. All indications point to long, thrilling trips and cool days throughout the month.

Scorpio—You will meet an indeterminate form (half man, half copper pipe) who will give you more than you could ever dream. All indications point to hot steamy nights and cool days throughout the month.

Sagittarius—An arrow lands in the middle of your waterbed, but you trace it to a tall, dark, strange foreign man, who sweeps you off your feet and out of the puddles. All indications point to damp sleepless nights and cool days throughout the month.

Capricorn—Adventure beckons this month as you take up a new sport—competitive hunk-hunting. Some archery is involved, as well as the usual seductive plays. All indications point to experimentative nights and cool days throughout the month.

Aquarius—You will purchase a waterbed, and test it out with the delivery man. Your boss starts to wonder why you are late every morning. All indications point to days and nights, in that order.

Pisces—Something is fishy this month, and it's got to do with your new waterbed. Someone will try to steal it and deliver it to an Aquarius, but he will sprain his back (after being narrowly missed by an arrow and a flying copper pipe). You run off to Acapulco (via Honolulu) with your boss, his wife and her lover. All indications point to continuous nights and short days.

Column of the Week

Just a short question this week: If land costs \$5000 per square metre in a downtown region, then how much should you pay for a triangular shaped piece of land whose sides are 50 m by 0.1 km by 5000 cm?

In response to Not Young Frank Einstein's **Not the Mathematics Column** from last issue, there is another piece of mathematical graffiti that may be found in the deepest, darkest reaches of the Physics building:

How many times must a man walk down?

$$(\nabla \times \hat{\psi})^n_p \sum_{i=-n}^N e^{ni} (\nabla^n \hat{\psi})^N_{i,N!} \binom{N}{p}$$

where $\hat{\psi}$ is the velocity of WALKDOWN (fctn. of x, y, z)
 n is the man's shoe size (nearest integer)
 p is the man's height (angstrom units)
 N is the number of steps

Answers from last week

Now, for the answers from last issue! First of all, the hands of a clock are perpendicular 44 times in 24 hours. Also, the letter groupings are:

AMTUVWY
 BCDEK
 FGJLNPQRSZ
 HIOX

The groupings were based on symmetry: the first group of letters were symmetrical along their vertical axes. The second had symmetry through the horizontal axis. The third had no symmetry along either axis, while the final group of letters were symmetrical along both horizontal and vertical axes. A slightly different grouping might result if you considered "flipping" the letters over their axes, rather than considering the separate symmetries. In any case, thanks to Troy Gutjahr for submitting correct solutions solutions to these problems.

Feedback!

Math, Religion and Birds

Dear mathNEWS:

A certain columnist in the May 25 issue drew attention to the curious and true equation

$$e^{i\pi} + 1 = 0$$

which has always struck me as being closer to religion than to mathematics, since to a non-mathematician there is no apparent reason why e , i , π and 1 and 0 should have any relationship at all.

This great truth had a similar stunning effect, it appears, on a distinguished lady who was dean of women early in this century at Queen's University at Kingston. When one of the women's residences at Queen's, Adelaide Hall, was built, she caused five panels of engraving to be installed over the main entrance. The first and last are carved with Alpha and Omega; the second and fourth, with Aries and Pisces; and the middle one with the rubric

$$e^{i\pi} = -1.$$

Tradition is that she considered that equation to be a proof of the existence of God, and who am I to argue?

Chris Redmond
Director, Office of Publications, UW

{Note: Another proof for the existence of a supreme being (other than Pierre Trudeau) is that Taylor polynomials work, especially for such things as

$$e^x = \sum_{i=0}^{\infty} \frac{x^i}{i!}$$

and the like. — Scooter! }

Dear mathNEWS:

After discussing the question of the purpose of man's existence, Tom Ivey in his article of May 25, presents that possibility that the best answer lies in an "echo", that existence is its own end or purpose. His version of "we're here because we're here" begs the question entirely. If we are here because we are here then there is no purpose in our existence. The claim that there is no eternal, overriding purpose to our lives is, at least, more honest than the echo alternative.

Ivey also quickly disposes of God, as a purpose-provider, in one short paragraph. He says that God is not evidenced in this world, the events that happen here are explainable by sciences that are not God-given, and that God is indifferent to those who pay the divine purpose no heed. Let us look at this issue from a Christian point of view for a moment.

Theists have long claimed that God is evidenced in the beauty and complexity of creation. They claim that human personality is the result of God's overriding purpose; not a freak accident 'caused' by the purposelessness of random chance. There is no way of absolutely proving this, but we can say that theology asks different questions than science. The theologian asks why the world was created. The scientist asks how was the world created. The first question is the salient one here. If God brought the universe into existence and ordained the structure that scientists study, then in what sense is science not God-given?

If we are here to hear the echo of our questions and if, as Ivey says, the ideal world is one in which no questions are needed, then the ideal world is one in which we do not exist. Thus we are brought back to the original question - Why do we exist?

Ross Isenegger

It's refreshing when someone writes in and gives the other side of the issues in mathNEWS. However, people sometimes take us too seriously, and take issue with the issues herein issued. When I talked about God in 'Questions', the ideas and opinions were only very personal. If God doesn't exist for me personally, it is only my loss, and not to be taken seriously by concerned readers (No, really, I'm fine!!)
- Tom Ivey.

Dear mathNEWS:

Nice going. I enjoyed your most recent issue of mathNEWS. The articles were well-written and displayed intelligence, and with some, even imagination. Both humorous and serious articles were presented very nicely in contrast with some of the crazed articles of the Winter term when mathNEWS became political.

Here is an item I would like to submit in response to the *List of Required Electives*:

Fine Arts 230A F,W,S 3C, 1L 0.5
Introduction to Mathematical Drawing
Learn to draw three-dimensional graphs better than your calculus prof does!
Corequisite with Math 230A

But enough of this. I expect more quality from you this term so keep up the good work. Ciao for now!

B.S. Tomcatt

Letters to the editor are welcome, and may be submitted either to us directly or by electronic mail to wafdcsu!mathnews. mathNEWS reserves the right to refuse and/or edit letters to the editor.

Village **Grop!**

Not The Mathematics Column

By Not Young Frank Einstein

In this issue, we shall take a look at various code and serial numbers, particularly those with check digits.

If you take a look inside many books, you might encounter something like "ISBN 0-135-79246-0". This is an International Standard Book Number, which is a code that identifies particular books. The first digit (a "0" in this case) identifies the language in which the book is written (0=English, 1=French, etc.), while the second set of digits ("135") represents the publisher of the book. The publisher assigns the book number for that particular book (here, it is "79246") and finally, a check digit is appended to the number (i.e. "0"). This check digit is calculated from a particular formula: if we take an ISBN, we multiply the first digit by 1, the second digit by 2, and so on until we multiply nine times the ninth digit. So, for an ISBN of $a_1a_2a_3a_4a_5a_6a_7a_8a_9c$ where a_1 to a_9 are the main digits and c is the check digit (ignoring dashes), we calculate:

$$1a_1 + 2a_2 + 3a_3 + \dots + 9a_9 = \sum_{i=1}^9 ia_i$$

Then, we take this sum, and get its remainder with respect to 11:

$$c = (1a_1 + 2a_2 + \dots + 9a_9) \text{ mod } 11$$

We now have the required check digit. If c happens to be 10, then we use "X" as the check digit. The reader might also want to show that

$$1a_1 + 2a_2 + 3a_3 + \dots + 9a_9 + 10c$$

is divisible by 11 for any valid ISBN. This is left as an exercise.

There is also ISSN, or International Standard Serial Number which is used for periodicals, for example *mathNEWS* has the ISSN 0705-0410. The rule used for an ISSN is

$$a_1a_2a_3a_4 - a_5a_6a_7c$$

where a_1 to a_7 are digits and c is the check digit. The reader is invited to determine the calculation of an ISSN check digit as an exercise. The Gazette and Imprint also have ISSN's; you could use these to check your check digit calculations.

Now, take a look at driver's licences. The driver's licence numbers for Ontario are codes like D0099-11116-21131. In this example, say this licence number belongs to C. T. Dalek. The "D" which begins the number corresponds to "D" as in Dalek. Then, the 0099-1111 stuff is a serial number. Now, the last six digits, 6-21131, represent the birthdate of the licence holder. In this case, the 6-2 represents 1962, then the 1131 represents November (11th month) 31st.

Also, all Waterloo students have an eight digit ID number. The first two digits represent the year you started at UW. Then, the third digit is 0 if you are from Ontario and applied through the normal channels, or a 3 if you are from out of Ontario, or a 9 if you are a grad student. To the best of this writer's knowledge, there is no check digit, although the readers are encouraged to let *mathNEWS* know if this is not the case. (tech. editor's note: The number is actually not unique to UW; rather, it is assigned by the Ontario Universities Application Centre when you first apply for admission to an Ontario University.)

As a final exercise, Social Insurance numbers have a check digit at the last digit. The readers are invited to determine how the check digit code works for these numbers. The answer (if yours truly can track it down) should appear in a future issue of *mathNEWS*. One hint: consider summing every second digit. That is, sum the first, third, etc. digits, then sum the second, fourth, etc. digits up to (but not including) the check digit, then try to derive a model for finding the check digit (a number from 0 to 9).

That's it for this week's examination of check digits and code numbers in society. If you have any comments or additions to this article, please send them to *mathNEWS* via computer or real mail. Watch this space for more mathematical observations.

Questions

What is real? What is not real? How can we discern between the real and the unreal? Is what is real just what I feel or sense? Is what is real whatever I can imagine? If so, how can I imagine unreal things? Is what is real whatever I can imagen? [sic] If what is real is just what I can feel or sense or imagine or imagen, what happens to those things when I go away? Does reality follow me?

Is reality more than I can see? Is it larger than anyone can see? Can anyone know the answer to the previous question? If some realities are larger than other realities, can some things be more real than other things? Is a flower more real than a tree? Is a computer program more real than a flower? Am I more real than a computer program? What is the thing than is more real than I? What do you mean when you say "It seemed almost real."?

How can you always talk about reality and yet have no idea what you mean? Why is reality an unanswered question? Is it the last question? Is it important whether I know what is real or not? If it is important, why is there no answer? If it is not important, why do I question?

Do I question because it makes me think? Do I question because it makes you think? Are you real? Am I real? If I am real and you are not, then if I say "Shazam!! You are real!", will you actually become real? If you did, how could I tell? How could you tell? Are you still reading? If you aren't, am I talking to myself? Am I really talking to myself? Do you know more answers than I? I hope so!

Tom Ivey

Apology

Scooter! and mathNEWS extend their apologies to Mr. George Elliot Clarke for an unfortunate misunderstanding that apparently instilled an interpretation that Mr. Clarke consciously was attempting to lower the quality of *Imprint* and that he was a communist or communist sympathizer. In no way do we wish the impression to stand as such, especially in regards to any alleged support to the communist cause. Those that disagree with Mr. Clarke's opinions so gravely as to so brand him a communist sympathizer react as such partly in relation to the *Chevron*, which tends to cause many normally open-minded people to draw the line when anyone argues for major changes in parts of our social fabric, no matter how justified, as in Mr. Clarke's dissertation on South Africa. The *Chevron*, in its views, scares the majority of the population, and thus makes us quite apprehensive when someone else argues in favour of even a subset of similar sounding, although possibly quite divergent views. It is a shame that this is occurring, as a University is supposed to be a source of advanced ideas and thoughts, which are being stifled and even oppressed by this apprehension (isn't this something? The *Chevron* is actually oppressing progressive ideas by the very nature of the fear it causes!). Bright young men and women such as Mr. Clarke present ideas that, as Mr. Clarke himself has said, are food for thought and discussion, not reaction and derision. It should be noted, for those familiar with the 'Speeches' column, that Mr. Clarke was asked to write on various topics to deliberately provoke discussion, and at times even Mr. Clarke did not ascribe to some of the views presented.

We at mathNEWS applaud any move to disturb the all too rampant apathy in existence, not only on this campus, but frequently in Canadian society in general. At the same time, we consider it questionable to undertake arguments that alienate such large groups as 'Speeches' unfortunately did, in addition to creating the totally undesirable misunderstanding that Mr. Clarke held these radical or 'communist' beliefs. mathNEWS and myself were trying, in the few words used, to express that he 'Speeches' column's reputation had come to dog both Mr. Clarke and *Imprint*, to the degradation of the reputation of both. We hoped to express that this reputation itself was the source of some, if not most, of the disapproval with the paper. It is certain that the *Imprint*/Federation relations are at a long time low and that there are also internal divisions at *Imprint*, but such are, to large extents, resulting from the frustration that has arisen as a result of the dispute, largely unwarranted, that has fallen on the campus paper. We are seeking to draw attention to these questions so that they may be acted upon before they get beyond the ability of anyone to correct. mathNEWS is, of course, certainly not on a vendetta to destroy *Imprint*, and most of all not George Elliot Clarke; instead, we are doing much the opposite, trying to urge *Imprint* to work together and with those about to bring it back to the position of one of the best papers on any campus in Canada.

Scooter!

Co-op Placements High

The Department of Co-ordination and Placement has provided us with the latest statistics on the numbers of jobs vs. students. We provide them below for your information.

Faculty	June 4, 1984		May 24, 1984	
	Students	Jobs	Students	Jobs
Arts	53	51	62	13
Engineering	832	433	915	263
Env. Studies	30	20	32	7
HKLS	128	153	129	139
Mathematics	324	443	406	364
Science	138	74	181	55
Total	1505	1174	1775	841

Pink Ties

There's a keener in the front row
 Listening to the prof do his thing
 He's got an HP calculator by side
 Thinks his notes are fit for a king
 And there's someone in the back row
 Who doesn't quite understand
 So he sits and he waits til the tutor comes along
 To give him a hand

Chorus:

Ain't that mathematics—for you and me
 Ain't that mathematics—get your degree
 Ain't that mathematics—insanity
 Little pink ties are for you and me

There's a hacker on the Honeywell
 Wasting away Saturday night
 He's got bleary eyes, bleary thoughts
 Trying to get his program right
 Cuz he remembers that it's worth it
 Gonna be worth ten per cent
 And he knows when it's due, he's gonna look back
 and wonder where his time went

Chorus

Well there's people and more people
 Waiting there standing in line
 They got their courses for preregistration
 Going to go around another time
 And there's winners and there's losers
 But it's all the same
 Cuz it's the mathie that gets the gains, the pains,
 The strains on brains

Chorus

(as usual, apologies to John Cougar Mellencamp
 are completely uncalled for)

DO YOU HAVE THE JAGS

Were you rejected by your favourite journal again, just because your graphs were not smooth enough. Oh people tell you that you won't be judged just on your graphs, but you know and we know it isn't true.

Don't despair. Now with the new FM'n'M's CUBICS* SPLINES, you can be rid of the embarrassment of ugly jagged graphs forever. Yes, in just a few milliseconds you can interpolate those points with beautifully smooth curves. Before your very eyes you will see your interpolations improve, your integrations become more precise and your derivatives become meaningful.

You may have experimented with those other polynomial interpolation routines before. Sure they gave nice smooth curves, but these curves went all over the place. Algorithms like this have given interpolation a bad name. But CUBICS* has solved these problems. No need to worry about you graph making no sense. With CUBICS* you can always feel confident!

Don't be fooled by other companies that also offer "spline" routines. What they give you are *quadratic* splines. The graphs they produce have points where the second derivative is not defined! Only FM'n'M's has CUBICS*. With CUBICS* SPLINES every curve you get will be twice continuously differentiable. WE GUARANTEE IT!

So why put up with those ugly jags for one moment longer. Start using FM'n'M's CUBICS* SPLINES today.

CUBIC SPLINES. Because you never know when someone will want to look at your curves!

On watbun call f77lib/s/fmmlib/single/spline
On CMS try GLOBAL TXTLIB FMMLIB and ask for SPLINE

* CUBICS is a trademark of FM'n'M labs

Testimonials

I used CUBIC* SPLINES and improved my accuracy by 200%. Not to mention the meaningful derivatives...

Dr. J DKRTXZTS
Dept. of Statistics and Pipefitting
University of Albania

I had a paper published by JAMS (Journal of the Albanian Mathematical Society) just days after using CUBICS*. FM'n'M's are great...

Dr. P. DKRTXZTS
Dept. of Mathematics and Fine Arts
University of Albania

The Co-op's Cookbook

Food like Village used to make

Have you ever wondered how to cook your own vegetables the same way they do in the villages, so that when you invite your fellow co-ops who are on work term in the same city over for dinner, they'll know what to expect? Well, after coercing a cook into giving us this recipe (we threatened to put her in a vat of gravy and leave it to congeal around her), we thought that it should be public knowledge. This recipe is the first one for the soon-to-be-compiled Co-op's Cookbook.

Monoflavour Mixed Vegetables

Take roughly equal amounts of any three frozen vegetables of contrasting colour. Place them in a large pot and cover with cold water. Add 12 tablespoons of salt per pound of frozen vegetables. Cover the pot.

Bring the water to a boil and leave it boiling for an hour so that all the flavour is removed from the vegetables. Do not stir the vegetables at all—doing this will turn them into mush. The idea is to remove the flavour.

When the water has boiled for an hour, drain the liquid from the pot. Place the vegetables into a tray on the steam table to resolidify. Leave them to stand for an hour. Serve.

Proofs of the (Canadian) World

Engineer's proof:

3 is a prime, 5 is a prime, 7 is a prime,
Oh nuts! My calculator just died!

Engineering Professor's proof:

3 is a prime, the rest are left as an exercise for the student.

C Programmer's proof:

3 is a prime, 5 is a prime, 7 is a prime, 9 would have been a prime if I would have typed
(long)**foo.bar.prime.nonsense+++==-*odd.number;
instead of
(long)**foo.bar.prime.nonsense++-==-*odd.number;

FORTRAN Programmer's proof:

Can't be done. FORTRAN can't tell the difference between odd numbers and even numbers.

COBOL Programmer's proof:

What's a "prime" ?

USENET reader's proof:

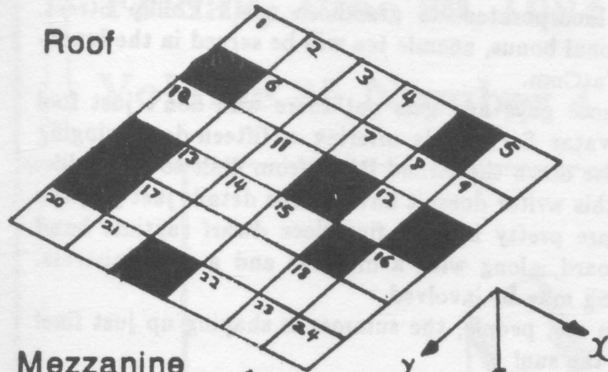
Sorry, if I took time for constructing proofs I'd have to unsubscribe from something.

Thanks to:
ihux!daseifert

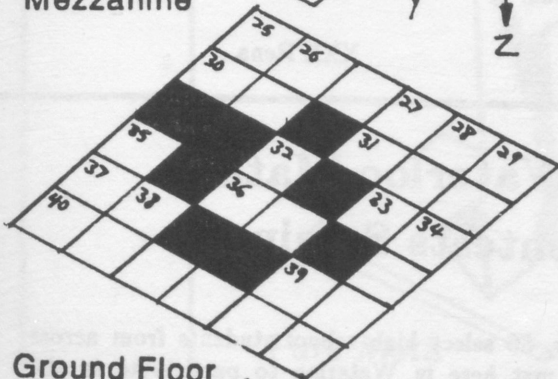
Friday the GridWord, Part 3-D

So you thought last issue's GridWord was too easy, huh? Well, GridWord is back, and this is the one you've been screaming for. **mathNEWS** adds a new dimension to its GridWord by the triumphant return of the Cube-O-Grid. That's right, the 3-D puzzle that has been dormant for over two years is making a comeback this issue. Solve this GridWord in three dimensions using the clues given, and submit your answers for neat prizes via the usual **mathNEWS** mailing routes. And stay tuned for a James Bond GridWord coming up later this term.

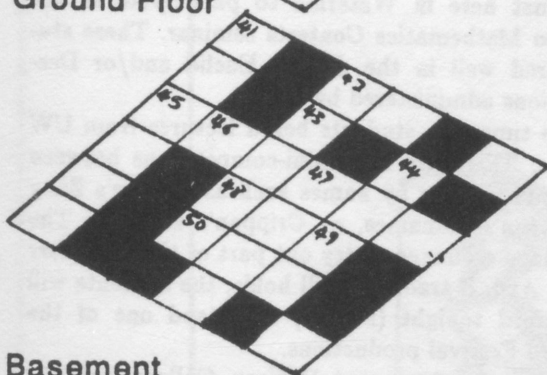
Roof



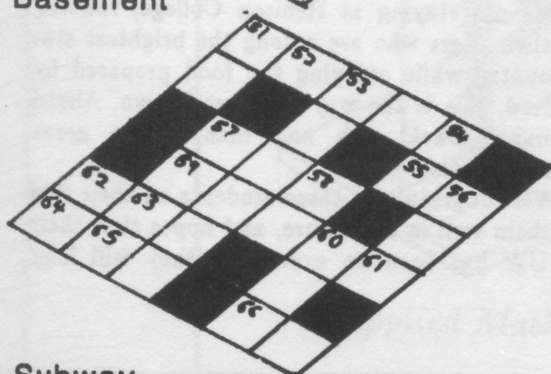
Mezzanine



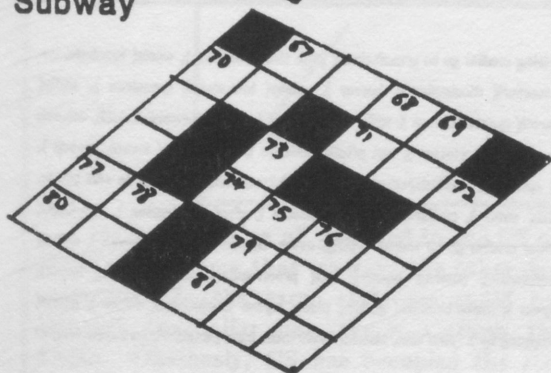
Ground Floor



Basement

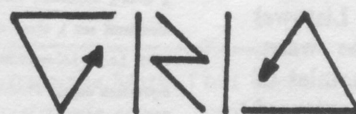


Subway



x-direction clues y-direction Clues z-direction clues

- | | | |
|---|--|---|
| 1. Have a — | 2. Results | 1. Indicator |
| 6. Area on a farm | 3. Sounds as if I'll be in
the theatre corridor | 2. Almost an end |
| 10. The Feds hate this | 4. Tellurium | 3. Computer Code |
| 13. Mirror good cheer | 5. Physician | 4. Off-carbonized leaven |
| 17. Stop calling the 7 and desist | 6. Less than | 5. Got together |
| 20. @ | 15. Singular of a cereal | 6. Iron |
| 22. Appendage | 16. Apiary creature | 7. Half bees |
| 25. Goes in a shoe | 25. Moon of Jupiter | 8. Ultra-strong illumination |
| 30. UNX feature | 26. Neon | 9. Distance (pert. to radio) |
| 31. Jazz instrument | 27. Ebon [Lat.] | 11. mathNEWS columnist |
| 33. Women's institute | 28. Federal Regulations | 12. Small number |
| 36. Pronoun | 29. Left | 14. Idle vi takes out the 'e' |
| 37. Disjunctive | 32. Lithium | 15. Alternate |
| 39. This [Fr.] | 35. You [Fr.] | 16. — Overdrive |
| 40. Propose to do | 38. Hospital employee | 17. ASCII code 13 |
| 42. A UW Math program | 39. Railroad | 18. Literary range |
| 45. Speaker | 41. Electrical exit | 19. 'case' |
| 48. Opposite of Beta | 42. Joe desperately wants
Cave R | 20. Assisted |
| 50. Complete this series: EIEI— | 44. Mediocre | 21. Tennessee |
| 51. Discomforting audio level | 47. The — Man | 22. Composite number |
| 55. Phone home | 51. New Testament | 23. Enabled |
| 57. Type of jet | 53. Internal | 24. Joe cited the rearranged
pronouncement |
| 59. Non-empty subset of an object | 54. You [O.E.] | 30. French broadcaster |
| 62. Engineers are into this | 56. See x22 | 34. Mistal |
| 64. O.E. expression commonly
used to fill in GridWords | 57. What Ali, Fraser do | 36. You [Lat.] |
| 66. Under Construction | 58. You [Fr.] | 37. One time |
| 67. Italian name | 60. Computer component | 43. Slice the barn in half |
| 70. Iron | 62. End of a truce | 46. Religious studies |
| 71. Three | 67. Half wave | 47. 'tease' |
| 74. Aeronautical impedance | 68. Touch Tone | 48. Medieval re-enactment
organization |
| 77. In [Fr.] | 69. Conjunction | 50. Sullivan, Allen, Erardbens |
| 79. New (prefix) | 70. How it was cooked | 52. Central dove portion |
| 80. Opposite of de- | 72. How Metals are stored | 54. 0.5*stringed toy |
| 81. Western Telephone company | 73. Heading | 56. Calculator maker |
| | 75. Genetic building block | 61. For example |
| | 76. A mixed age | 63. Article |
| | 78. End of a plane | 65. Again (prefix) |
| | | 66. That high school in the
Hwy. 7 direction |

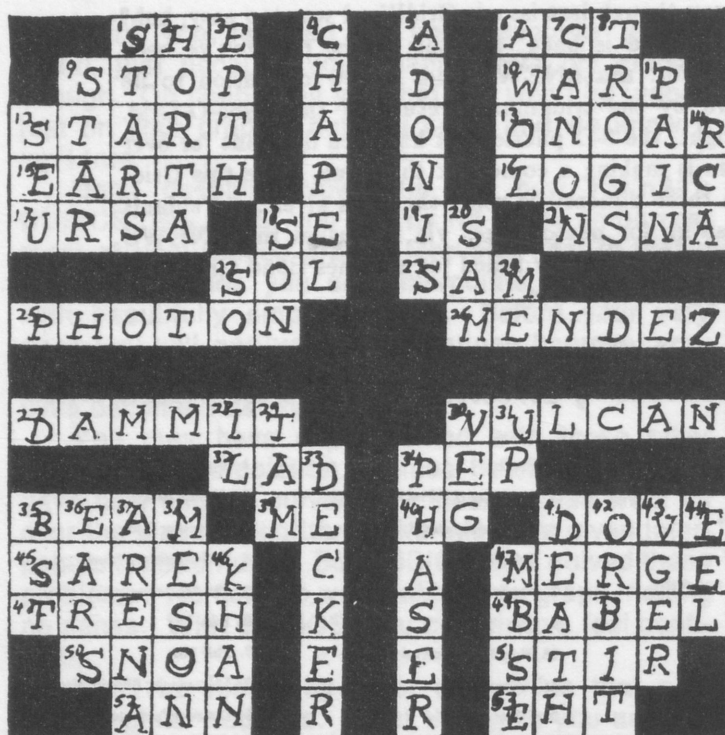


W U R D

Who:

How:

Escape from the Planet of the GridComments



Last week's GridWord didn't seem too challenging, according to many people, and in fact, there were a few slight errors pointed out. For example, Dr. McCoy does not always say "Dammit, Jim", according to one of the clues (or something of similar spelling and meaning (we accepted anything acceptable for that clue)); in fact, Bones seems to say "He's dead, Jim" more often, particularly during the television series when the language was much cleaner.

Despite all this, we do have a mathie t-shirt for the lucky winner, Irene Bosnich. Come to MathSoc (MC3038) to claim your prize. Honourable mentions include: Mark Templin, David Lyall, Michaela Schindler, Cornell Carter, Ben Hui, David Rozee, and Stuart L. Hodgins.

Travel

by *Combinapolitan's Rena Weese*

One of the cheapest places to travel this summer is home, mainly because of the meat. If you are willing to pay a slightly high price (and can wangle an invitation) you can travel to someone else's home. Homes usually have many recreational facilities, including the driveway, the front lawn, the attic, and the TV. For more adventurous hoofers, there may be quaint corner stores and laundromats.

Some interesting and unusual vacation spots have come to our attention in the last few weeks. Landlocked Listowel and Brantford are quite popular because of the warm weather. Closer to Waterloo, there is the rustic hamlet of Roseville and the brisk tedium of Homer Watson Boulevard in south Kitchener. Mandrive Travel is offering a three-day tour package in West Waterloo and environs. This includes an afternoon at the Kwikie Minit Mart, an evening in the charming student ghetto of Sunnydale, a solid day and night locked in a small room on the 6th floor of the Math Build-

ing, and a delightful morning stroll through the facilities of Raytheon Incorporated on grandiose north Phillip Street. As an optional bonus, anemic tea will be served in the lunchroom at WatCom.

For those guys and gals out there who don't just fool around, Avatar Services is offering a fifteen-day swinging singles cruise down the Grand River from Galt to Dunnville. Although this writer doesn't have all the details just yet, the prospects are pretty hot! A five-piece dwarf ragtime band will be aboard, along with a masseur and a whip-mistress. Some rowing may be involved.

So you see, people, the summer is shaping up just fine! See you in the sun!

XXX Rena

Waterloo Math Contests Seminar

This week, 56 select high school students from across Canada have met here in Waterloo to participate in the annual Waterloo Mathematics Contests seminar. These students have scored well in the Junior, Euclid and/or Descartes competitions administered by UW.

During this time, the students heard lectures from UW Math professors. There are also mini-competitions between teams of students who go by names such as Zanuto's Zany Zombies, Anderson's Nonames, or Crippan's root 7's. The students even have a chance to try out part of the computer set-up at UW. And, if tradition still holds, the students will travel to Stratford tonight (Friday) to attend one of the famous Stratford Festival productions.

The students are staying at Renison College, rubbing shoulders with their peers who are among the brightest students in this country while enjoying the food prepared by Chef Louie. Indeed, this is the way W. Ross Brown, Alfred Ed. von Neumann, David Ash and many other great mathematicians of our time started.

mathNEWS congratulates these students on their fine efforts, wishes them well in the future, and hopes that their short stay at UW has been an experience they will long remember.

This ... is MathSoc! Writing credits go to grmcfarians (pink ties, elsewhere), watsa (brackets, cop, mathsoc, plaster), scooter (disobedience, horror), talvey (lookahead, questions), emily (strawberry, sketches), marcol (entertainment), nyle (not method), djcl (gridword, takish, column), dwarf (cookbook, horror), slash (plaster), ron pfeife (chinese), rena weese (travel, on-top), biscaero (sex), twiaha (splines), ihud/daseifert (proofs). Miscellaneous credits to carl photo, mfcf, Laura Labonte-Smith (cover), godfather's, watsa (photos), chry (inspiration), the C&E (styrofoam cups). Production credits go to watsa (typing, cover, mentor), djcl (gridwork), dwarf (typing), biscaero (proofreading, cutting, layout), ron (proofreading, cutting, being hyper), grmcfarians (cutting, layout), genia krubnik (getting pizza, layout), vjordan (coffee), nancy (good phone), gabingla (dropping by). And also, thanks to all those kind people whom I have forgotten along the way.

TAlvey