## R Volume 35 Number 2

Friday, May 25, 1984
math
 D

K.D. Fryer 1924-1984

## LookAhead

## A glance at upcoming events

| Math Events |
| :--- |
| June 6: Pink Day! |
| Fed Flicks |
| Fed Flix are held on Fridays and Saturdays in Phys145 |
| at 8 pm. Cost: \$1 feds, \$2 others. |
| May 25-26: Trading Places <br> June 1-2: Daniel <br> June 8-9: Paternity <br> June 15-16: An Officer and a Gentleman |
| Cinema Gratis |
| Starts in the CC at 9:s0 pm. <br> Get there early and get a good seat! |
| May 30: Kelly's Heroes <br> June 6: Steve Martin Festival! The Jerk, Dead Men <br> Don ' Wear Plaid, The Man With 2 Brains |
| June 13: Deliverance |
| UW Arts Centre |
| Call Humanities Theatre Box Office at <br> 885.4280 for more info |
| June 1, 8, 15: The Schubert Cycle Anton Kuerti, piano <br> June 13-17: HMS Pinafore at Humanities Theatre <br> 8 pm (execept June 17 matinee, 2 pm) <br> (\$9.50, \$8 student/senior) |
| DCS Courses |
| Free! One to three one-hour lectures; <br> contact DCS to register. |
| June 5, 7: Introduction to UNIX <br> June 19, 21: Unix for Document Preparation |
| Co-Op Deadlines and Dates |
| May 25: AM/Eng Want Ads are out <br> May 28: AM/Eng job applications are due <br> June 11-22: Math interview period <br> June 18-29: AM/Eng interview period |
| University Deadlines and Dates |
| May 28: Deadline for dropping courses <br> June 6-8: Pre-Registration |
| Other Things |
| June 22-24: Sounds of Summer Celebration |

PL/1 Programmers do it on big machines.
LISP Programmers string it out forever.
C Programmers do it with any type.
COBOL Programmers do it with pictures.
FORTRAN Programmers DO $100 \mathrm{I}=1,68$ Assembler Programmers do it the hard way.
BASIC Programmers do it without comments.
APL Programmers do it mysteriously.
ALGOL Programmers do it without I/O.
Systems Programmers do it to annoy others.
Contract Programmers do it for money.
Ada Programmers just pretend to do it.
FORTRAN is for pipe stress freaks and crystallography weenies.

## Questions

It is not often that a common man like myself asks serious, important questions. When these questions are posed, it takes no small effort to examine and try to answer them. This column is about questions like "Why am I here?", "What do I want?", "What is freedom?", "What is the past?", or "What is memory?". Being a common mathie, not that learned in philosophy, oration, or rhetoric, my thoughts on these matters will no doubt be crude in form. But perhaps there will be a certain sting in their essence that merits attention.

For example, when I ask, "Why am I here?", I should first ask "Am I here?" or "Where is here?". Decomposing big questions into smaller ones usually fives you simpler questions, but these may be less answerable than what you had before. Can the small question "Am I here?" be dispelled by the answer "Of course-because here is always right where you are."? Not right away, because I may not understand always or even the am/is/are concept! Is it absurd to argue this way? It is certainly more absurd to ask more questions than necessary. (An ideal world for me, anyway, would be one where you didn't need to ask questions at all.) Hence I conclude that decomposing questions is not the right way to address them.

Why not examine the context of the question more thoroughly? Probably every student around has asked "Why am I here?" where here is one of "at this university", "in this city", "in this program", or "in this class". When you ask this, you give the nice impression that you have no knowledge of (or had nothing to do with) why, indeed, you are here. This is a false impression because education, a rare thing, is never thrust on people; rather, there was a conscious (if unwise) choice in all our careers that put us on this present path. Don't ask "Why am I here?" to shirk responsibility; ask it to get an answer.

But if you want an answer, whom do you expect to answer it? God? Whether that being exists or not (pretend for now that he does), he is certainly not in evidence in what we assume is his creation. Most events in the universe, certainly all of those events important to us, are explainable by sciences that are not god-given. If a god cared enough to endow each of us with a purpose (an answer to "Why am I here?"), would he not be alarmed that so few payed him heed? In the face of uniform divine indifference, I greatly doubt such a purpose exists.

Perhaps the best answer lies in an echo. You are here just so that you can hear that echo, the echo of the question you asked out loud, to yourself. This is a roundabout way of saying that intelligence (existence, perhaps) is its own end or purpose. Do you think this is a cop-out, a cheap answer? If so, look at why Edmund Hillary climbed Everest, or why people study pure mathematics. On echo-answered questions our intelligence cuts its teeth, feeds itself, and matures.
Why, even my meagre wits have perked up at the challenge this column will pose. Let's talk again sometime.

Tom Ivey

## Dr. Fryer Remembered

At mathNEWS, we received some sad news this production day. On last Saturday the nineteenth, this Faculty and University lost one of its greatest professors, Associate Dean Dr. Kenneth D. Fryer. A man of great talent and wisdom, he must be credited with being instrumental in making Math at UW what it is today. We at mathNEWS join the rest of the University community in expressing our deep and utmost sympathy to his wife Pat and their family.

Kenneth Dudley Fryer came to UW in 1959 in the early days of the University as a professor of Pure Mathematics after working at Royal Military College, Queen's, and U. of T. Born in St. Thomas, Ontario on June 13, 1924, he received his B.A. in Mathematics and Physics in 1946 from Western, an M.A. in Math the next year from U. of T., and his PhD in Mathematics the year after. Specializing in Algebra, he also worked to help strengthen high school mathematics in Canada by co-authoring eight texts published by Holt, Rinehart \& Winston, as well as helping to establish and run the Canadian Mathematics Competition, a source of inspiration to many bright young students.

In September of 1949, Dr. Fryer married Patricia Dorothy Clark, who survives him with their son and four daughters. In addition to his involvement with the University Faculty Association (he was President in 1960-61), he was on various University committees and was a member of the University Senate. Dr. Fryer was a member of several associations, including the Canadian Mathematics Congress and the Ontario Association of Teachers of Mathematics. He was appointed Associate Dean, Undergraduate Studies in the late 1960's.

## Academic Achievements

During the 1950's and early 1960's Dr. Fryer authored and co-authored several papers on problems in Combinatorics, Algebra, and Lattice Theory. At Waterloo he co-

## From J. Alan George <br> Dean of Mathematics

I am sorry to report that our friend and colleague Ken Fryer died on Saturday, May 19, 1984. His many and varied contributions to the Faculty were instrumental in our current success and strength. We will miss him very much, not only because of all the things he did for us, but also because of the warm, friendly, and caring way in which he did them. On behalf of all of us, I extend our sincere sympathy to his wife Pat and their family.

Funeral services were held at 3 p.m. Tuesday at the Church of the Holy Saviour, 33 Allen St. East in Waterloo. Interment followed at the Park View Cemetery on University Avenue East in Waterloo. The Edward Good funeral home was open for visitations until 1:30 Tuesday.

The family asks that contributions in lieu of flowers be made to the Waterloo Regional Cardiac Rehabilitation Foundation, 509 Park Street, Suite 2, Kitchener, N2G 1 N8.

Alan
authored the high-school texts "Algebra and Solid Geometry" (1963), and "Algebra and Vector Geometry" (1972) with R.G. Stanton. Also with Stanton (first Dean of Math), he edited "Topics in Modern Mathematics" (1964), a book designed for teachers and engineers that attempted "to answer the questions raised about terms used in modern mathematics." With Gerald Berman he wrote the texts "Introduction to Optimization" (1970) and "Introduction to Combinatorics" (1972). These texts were (for several years) used for introductory C\&O courses, which Dr. Fryer often taught. At this Spring Convocation, Fryer was to receive UW's Distinguished Teacher Award.

Dr. Fryer was an inspiration to his students. A Gazette article in March 1984 stated A current high school teacher remembers that when he was an undergraduate, 'We used to come early to get seats near the front because we did not want to miss anything. His expressions have become standard in hundreds of classrooms across the province." Of course, Dr. Fryer was also known for his sense of humour.

## The Birch John Society

(excerpted from the KW Record, November 1971)
The Chamber of Commerce was made privy Wednesday night to a new organization supposed to be forming at the University of Waterloo. It is the Association for the Preservation of Wooden Toilet Seats, a splinter group of the Birch John Society. The lid was lifted for chamber members at Caesar's Forum in 'Meet Your Waterloo', a skit by two professors and a piano-playing student said to be from Flushing, N.Y.

The one-hour lampoon on the university, its facilities, faculty and administrators was staged by Kenneth Fryer, dean of mathematics, and John Pierce, assistant professor of recreation. With the aid of a slide projector they depicted the board of governors as group of monkeys and showed president B.C. Matthews tied to his desk by paper work and about 50 feet of clothes line.

They claimed it was impossible to sabotage the university's computer, the fastest in Canada, because it was backed by a Chinese abacus. "You can count on it," Dean Fryer said. The professors laced their fast-talking, Smothers Brothers style skit with a wealth of statistics. The university's 22,000 students spent $\$ 6.8$ million a year in the Twin City community. And those from this area save their parents $\$ 1,000$ a year by living at home.

Flashed on the screen at appropriate intervals to represent the university's co-operative student program, in which classroom work alternates with on-the-job stints, was the picture of a pretty miss in a minimum miniskirt. "Who's she?" Prof. Pierce asked.
"A co-operative student," Dean Fryer said. Prof. Pierce asked what the pretty miss in the minimum miniskirt worked at when she wasn't taking classes. "At cooperating," Dean Fryer said.

## A Mouldy World

In November of 1969, Dr. Fryer addressed the students and parents of McGregor Secondary School in Chatham, advising them to stand up and be counted if they disliked the way the world was heading. He said he was fed up with the hypocrisy of both the old and new generations. Dr. Fryer quipped, "You and your children must live in a world which is now being molded. From what I can see, it is getting pretty mouldy"

More seriously, he quoted Edmund Burke in saying "The only thing needed for evil to triumph is for good men to do nothing", and urged his audience to "get into the arena" before they were swamped by a vocal minority. Among these minorities, he criticized the idealists who "protest the political murders" in Vietnam, but condone abortion, which he termed "convenience murder". Dr. Fryer said young people are protesting against the Vietnam war, "but the senseless slaughter on our highways appeals to no imaginations".

As he finished his address, Dr. Fryer gave a few words of advice to lead us out of the mouldy state of world affairs: Talk when others are silent.
Say 'men' when others say 'money'.
Say 'love' when others say 'hate'.
Say 'everyman' when others say 'one man'.

## Personal Impressions

Dr. Fryer was perhaps most familiar to the students of the Math Faculty through his work on the Canadian Mathematical Contest (including the Cayley, Fermat, Euclid and Descartes Competitions). name on the bottom of my J.M.C. certificate. Later came congratulatory letters and more certificates, until the day when, as a fledgling Descartes Fellow, I met with seven other shy frosh in his office. The meeting was tense, but Fryer talked amiably to us and had each of us introduce ourselves. Somehow, he seemed like a friend after that, one of the first I made at Waterloo.

Dr. Fryer had been seriously ill with cancer during the last six months, but nevertheless spoke to parents on Campus Day, and to the graduating class at the Math Grad Ball. The contributions mentioned here are only a fraction of Dr. Fryer's work in his 25 -year career at UW.
-Tom Ivey, Scooter!

## Attention All Sun Worshippers!

MathSoc is trying to organize a road trip to Sauble Beach. The tentative dates for the trip are:

## Wed. June 20

Thurs. June 21
or Fri. June 22.
We would appreciate any feedback on these dates (but no later than May 31). The trip will hopefully begin at 8:00 am and return around 12:00 pm. Drop in at MathSoc or leave a message for Ron Balcarras.

## MathSoc Report

The Math Society Council has met twice this term. In an effort to inform the students, we are bringing you a (heavily edited) summary of what happened at the meetings.

$$
\text { May 8, } 1984
$$

All the class reps for the summer term were ratified. They are: Laura Redican, Vivek Swarup, Jenny Tscharke, Tom Haapanen, Greg Hodgins. The new MathSoc executive was also ratified: Barb Lundhild [president], Brenda Wilson [treasurer], Ian Sargeant [vice-president].

Laura Redican presented the plan for the renovation of the 3rd floor (non-C\&D) lounge. The cost will be about $\$ 14$ 000 , of which $\$ 6000$ will be covered by a grant from the Dean, and another $\$ 6000$ by a loan from the Descartes Foundation. The renovations will include carpeting and furniture, including new couches and study tables. Laura was also appointed the External Affairs Director of MathSoc.

Mark Haygarth, treasurer of the Orientation ' 84 committee, requested that MathSoc allocate $\$ 1000$ towards the cost of orientation in the fall term. The request was turned down until a later date due to large discrepancies in the proposed orientation budget. The council approved a Welcome Back Pub on May 25th for graduates returning to convocation. The cost of the pub ( $\$ 200$ ) will be covered by ticket sales. The pub will be held at Waterloo Inn. The MathSoc termial [once a term -ed.] Wine \& Cheese will be held at South Campus Hall on Friday, July 13th.

## May 22, 1984

The council was informed of the new Math "Twist your mind" T-shirts, which will be available in MathSoc, MC3038, by the time you read this, at a cost of $\$ 5.00$. Kathy Pittens was ratified as a class rep, and Laura Redican announced that the next meeting of student-faculty liaison committee would be held (but the time and date were not clear). The mathNEWS budget for this term was approved by an almost-unanimous vote - look for it elsewhere in this issue. No budget was approved for the mathNEWS Frosh Issue, as it was felt it should be part of the Orientation budget.

Sean Romenco made an urgent plea to the students for more Math student representatives in the Student Advisory Council. As a result, he received some sympathy as well as at least two members, W. Jim Jordan and Tom Haapanen. Sean will report in a future issue on what exactly is the Student Advisory Council (or else! -ed.).

A Red Cross Blood Donor Clinic will be sponsored by MathSoc in Village 1 on May 30th. MathSoc will also donate $\$ 100$ to cover the clinic expenses. The council also gave a go-ahead to investigate the establishment of a scholarship or a bursary in the name of the late K.D.Fryer.

## Tom Watts

## Imprint Staff Divided

Complaints have arisen since the last issue that mathNEWS is on a witchhunt when concerning Imprint. Our policy concerning Imprint, and any other official student newspaper on campus, is that there exists a strong responsibility to report fully and without bias all occurences of concern to the student body in general. When the fulfillment of that duty comes into question, it is a matter of general concern to be brought to the attention of the student body in order to bring pressure upon that paper to "shape up or ship out". The Chevron was a subject of such censuring and chose to ship out, as did Enginews. The Federation of Students has brought forth complaints about Imprint, which mathNEWS presents to the student body to weigh and judge for themselves. mathNEWS tries, by being somewhat detached from both the Federation and Imprint, to present as best as known and available the facts. We do not stand with or against Imprint on this question; we only seek to determine and present the facts. And now the most recent developments.

MathSoc was approached on Tuesday of this week with a proposal that a petition be undertaken to recall the election of George Elliot Clarke as Imprint Editor. At press time, no information was available as to whether MathSoc was going to take a stand on the issue, but we hope to know better in time for the next issue.

Reliable sources within Imprint report that both long time Production Manager John W. Bast (a founder of the paper), as well as the Business Manager were fired, their places as yet unfilled. As a result, the paper must rely upon a part time typesetter. Reports are also filtering out that the Imprint financial books are two weeks out of date and that the balance in the bank dropped from $\$ 15,000$ to $\$ 7,000$ in a one week period, while the paper owes close to $\$ 5,000$ in severance pay to both dismissed staff members. Fears are arising among advertisers as to the continuation of the paper, bringing about an exodus of advertising, some going to the Engineering papers and some withdrawing entirely. Our sources doubt that, with the fiscal problems developing at Imprint, it will be able to maintain solvency through the end of the term.

On the day of the last issue of mathNEWS (May 11), the Board of Directors of Imprint met and rumours began flying that Imprint Editor-in-Chief George Elliot Clarke was in danger of losing his position as president of the corporation that owns and publishes Imprint, which places his editorship in jeopardy as well from those sources. The Imprint offices were much more calmed to passers-by with an attempt being apparently made to work together to see the paper through this crisis, the first signs of the possibility that the paper may survive. EngSoc B argued in Iron Warrior that Tom Allison was out of control by demanding the resignation of Mr. Clarke, which is contrary to the information this reporter has obtained, including an interview with Mr. Allison.

The second issue of Imprint this term came out amid great apprehension from those of us close to the story. Reduced to twelve pages from the normal size of close to twenty-four, it concentrated on news and arts, with a limited but revived sports page on the back. Although the layout quality is still weak compared to previous terms, the Imprint staff showed a marked attempt to present the happenings as fairly and professionally as possible. Unlike previous terms when Imprint only used its own staff as sources for news, it has begun using other sources, although it would strongly be advised to state its sources when using other publications.

In analysis, the worst may be over at Imprint, and it may recover. In order to protect the various papers on campus, mathNEWS invites Imprint and the society papers to join with it and look into the establishment of a common news service and a committee of co-operation between the editors of the various publications. For too long these papers have been competing against one another for news, staff, and status. The time has come to share resources for the betterment of all concerned.

## Scooter!

## Instant Teller Wars

Last issue, mathNEWS reported on the impending installation of automated banking machines in the Campus Centre basement. Not to be outdone, however, is Canada Trust, whose Johnnycash machines are expected to be in operation at Westmount Place on June 18. (You heard us right, Johnnycash machines (after all, Why Walk The Line?)) The Canada Trust machines can dispense cash in multiples of $\$ 10$ compared to multiples of $\$ 20$ for the Commerce campus instant tellers. (Turnkeys beware! Breaking up $\$ 20$ s is not exactly everyone's cup of tea). However, they only handle withdrawals, not deposits, transfers or bill payments.

Johnnycash is expected to be available 24 hours a day. Now, you may ask why the Commerce are only available from 6 am to 10 pm on weekdays, and limited weekend hours. This is primarily due to security reasons; Security felt that there would be too many risks to the people using the machines in the Campus Centre basement in the wee hours of the morning.

Finally, Canada Trust seems to be going all out in promoting its new machines. On Monday and Tuesday this coming week, Johnny Cash (the musician, not the machine) will be in concert at the Centre in the Square for Canada Trust customers.

Here I am again with a masthead at the bottom of $h e$ page! Who helped/contributed to this isine? Scaoter! (pizza, i/p, umprint, Dr Fyyr), Geivia Krubnik (layout, cutting), Watts (typing, cover, wATCOW, Scums, hookahsad, mathioc), Ron Pfei fle (layout doit, FLPL), bl Mcearce (Persmal, Bach), Marcel Kahnt (eating pizea, basekall), duarl (lagait, cover, confessions, elsewhan,
 hiley, tellers), vänämiönen, Slash, The Barbarion, Sauon (). Magsie Brunton (gridword), and HE (etc.)... Tom griurare,

# Marcel's Near Accurate Baseball Predictions 

## (not guaranteed to be successful)

Fach yoar for the last eight years, Marcel and the boys would argue about who had the best chances of winning the World Scries. Actually, Marcel tends to ignore everyone else and puts together his Near Accurate Baseball Predictions. It might be a good idea that he ignores the boys, because he has an accuracy rate of $75 \%$. No system other than his "I've got a feeling they'll do it this year" method is used, and although nearly a month of the season has already elapsed, these predictions were made back during spring training, thus making them fair and unaffected by the present standings.

Nat's League

| East | West |
| :--- | :--- |
| Philadelphia | Los Angeles |
| Montreal | Atlanta |
| St. Louis | Houston |
| Pittsburgh | San Diego |
| Chicago | Cinncinnati |
| New York | San Francisco |

## Al's League

| East | West |
| :--- | :--- |
| Baltimore | Chicago |
| Milwaukee | Oakland |
| New York | Texas |
| Toronto | Minnesota |
| Detroit | Kansas City |
| Cleveland | California |
| Boston | Seattle |

Nat's Playoffs: Los Angeles over Philadelphia in 4 games. Al's Playoffs: Baltimore over Chicago in 3 games. World Series: Baltimore romping over Los Angeles in 5 games.

## Nat's League

## East

New York is perhaps doing Seaver a favour by letting him escape this sinking ship, although it is not much worse than Chicago, which seems to be playing in the dark (their stadium doesn't have any night lights). Pittsburgh is trying, but not getting anywhere, as is St . Louis, although with more enthusiasm. Montreal is inspired by the big name of Rose who rises a bit, but it is not even over .500 as Philadelphia leads this lacklustre division.

## West

Other than San Francisco, Cinncinnati, and to some degree San Diego, this is a division that will be fighting, with Los Angeles, Atlanta, and Houston battling out for the leadership of not only the division, but the league in general. Expect that the teams will be within three games of one another most of the season, and when the dust settles at the end.

## Al's League

## East

This is the division of the battling of the baseball season this summer. Baltimore, Milwaukee, the Yankees, the Blue Jays, and Detroit will all be in the heat of it, with the strong possibility that two of the teams may be tied in the standings at the end of the season. Cleveland and Boston can both be written off, and I'm not as optimistic about Toronto as everybody else seems to be.

## West

Wanna laugh? Only Chicago deserves to be in the major leagues in this division, and Seattle will likely be the worst in all of baseball this season. Last year, Chicago won by something like 30 games. This year it will likely be 50 .

## The Demise of the WATCOW

Well, we have the watrose, watmath, watbun, watdcs, watdcsu, watcsg, watbank, watcgl, wateng, watcow, watarts, ... WATCOW?!?! What is the watcow? Well, it's a Digital Equipment PDP $11 / 10$, and it has been used by the CSG (Computer Systems Group) for on-site debugging of WATFOR and WATFIV installations since the early 1970's.

The "cow" in watcow is an acronym, and stands for Computer On Wheels. This stems from the packaging of the system, which was one of the first portables on the market (In fact, it is rumoured that Osborne copied the watcow in bringing the Osborne portable to the mass market...). The system is packaged in four units, containing the CPU, the disk drive, the printer and the card reader. Each of these colour-coded (battleship gray) containers measures a mere $90 \mathrm{~cm} \times 50 \mathrm{~cm} \times 30 \mathrm{~cm}$, and weighs in at a feathery 40 kilos. Portability was further enhanced by the optional cart capable of carrying all four units, and hence the name.

Alas, there is no longer much need for on-site debugging of WATFOR compilers, and so CSG is now willing to sell the unit. If you're interested, contact Central Stores; CSG reportedly wants $\$ 20,000$ for the unit, but this might be somewhat negotiable, as one can buy a brand-new VAX 11/730 (a lot better than a PDP-11 (and a 11/10 yet!)) for less than $\$ 50,000 \ldots$

## List of Required Electives

In a unanimous decision, it has been decided to make the following list of courses manditory for filling elective slots. It was recommended that first year students also not take Physics or Chemistry as these courses are useless later in life.

## Legend: EP. Easy to Pass (with minimal work) $E A$ : Easy to Ace (no work required) VI: Very Interesting (minimal work)

## ACC 121 F 3C,1L 0.5 EP

Understanding and Using Financial Accounting Information
This is a course for non-accounting majors. No weekly assignments, one midterm, one project, final.
Prerequisites: two functioning brain cells

## CS $1 x y, 234,235$ F,W,S 3C,1L 0.5 EA <br> Introduction to Computing. <br> Includes all first year CS courses. <br> Prerequisites: warm body

## ECON 101/102 F,W,S 3C 0.5 EP

Microeconomics/Macroeconomics
Introducion to economics; not taxing on the brain, no assignments and lots of multiple choice on midterm and final.

## ENG 109 F,W,S 0.5 EP

Introduction to Essay Writing 1
Introduction to leisurely studies in University. No final. Write essays, improve work reports, pass ELPE.

## ENG 210 F,W,S 0.5 EP <br> Report Writing

For those who want an outstanding work report.
Prequisites: Second Year standing or above.

## ENV S 111 F 3 C 0.5 EA

Introduction to the Study of the Future
Marked on attendence, class participation. Limited enrollment. Sit around, talk about the future. No tests, no midterms, no exam.
Not offered in 1984

## ENV S 411 F 3 S 0.5 EA

Alternative Future Environments 1
Exactly the same as ENV S 111.
Not offered in 1984

## ENV S 412 W 3C 0.5 EA <br> Alternative Future Environments 2 <br> Similar to ENV S 411, but no reading. <br> Not offered in 1985.

## GEOG 101 F,W 2C,2L 0.75 EA

Introduction to Human Geography
This course is actually interesting. Anyone with grade 11 Geography can ace this course (except Geography Majors!). Final is $50 \%$ multiple guess, $50 \%$ short answer. Especially easy if Geoff Wall is teaching.

## HLTH 140 F 3C,1T 0.5 EP

Introduction to Health Sciences 1 Focus, of course, is on Grade 7 health concepts and the reproductive system.

## MTHEL 100 F,W,S 2C 0.5 EA

Commercial and Buisness Law for Math Students
Basic law concepts made simple. An easy and interesting course, especially if Barney Lawrence is the prof. Note 2 hours of lectures per week.

## PHIL 140 F,W,S 3C 0.5 EP

Introduction to Formal Logic
Introduction to bird courses. While not necessarily easy to ace, this course is difficult to fail. Cannot be taken concurrently with PMATH 430a. (Hint-PMATH 430a is on the CS option list!). These courses can be taken on different terms.

## P SCI 291 F,S 3C 0.5 EA

## The Canadian Legal Process

This course is not available for credit to engineers because it brings up their averages about $5 \%$. No texts, no assignments. Also not available to Political Science students.

P SCI 292 W,S 3C 0.5 EA
Issues in Canadian Criminal Law
Similar to P SCI 291.

## PSYCH 101 3C 0.5 EP

Introductory Psychology
Learn what Psych majors obtain degrees in. Learn techniques in "Behavioral Science." Neat facts about electroconvulsive therapy. Great course for lab animal fanciers. Multiple guess final.

## PSYCH 236J 3C 0.5 VI

## A Psychological Analysis of Human Sexuality

Offered at St. Jeromes(!?!). A good course to desensitize one to sexual taboos. Movies are viewed during course (i.e., Not a Love Story, etc.), essay on personal history or course related topic to be done at end of term. Prerequisites: PSYCH 101 or parental consent

SCl 205 F,W,S 3C 0.5 EA
Introduction to High Fidelity Sound Reproduction Listen to music, learn about buying and making stereo equipment. Multiple choice midterms and exam.
Credit will only be granted for one of SCI 205 or STEREO 101.
continued from page 7

## SCl 238 W,S 3C 0.5 EP

## Descriptive Astronomy

This is a non-mathematical approach to astronomy designed for science, math and engineering majors. An optional weekly lab will be held at night to look at the sky.
Prerequisites: Grade Six Science or equivalent
SCI 270 F,W 3C 0.5 EA

## An Introduction to Nuclear Science

A course designed for 3rd year Poli Sci students. Three midterms, no exam. (Each has two parts, one arts, one math, you may do either one, but not both.)

Sean

## Not The Mathematics Column

## by Not Young Frank Einstein

One day, as I took part in a week-long seminar some years ago, I noticed the equation

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

scrawled on a wall. Sometime later, at a dinner we attended, I took a paper napkin and proceeded to scrawl some formulae in an attempt to prove that equation. I first reasoned, what if I expanded one of the terms in a MacLaurin series:

$$
\begin{aligned}
e^{i \pi} & =1+\frac{i \pi}{1!}+\frac{(i \pi)^{2}}{2!}+\frac{\left(i \pi^{3}\right.}{3!}+\cdots \\
& =1+i \pi-\frac{\pi^{2}}{2!}-\frac{i \pi^{3}}{3!}+\frac{\pi^{4}}{4!}+\cdots \\
& =\left(1-\frac{\pi^{2}}{2!}+\frac{\pi^{4}}{4!}-\cdots\right)+i\left(\pi-\frac{\pi^{3}}{3!}+\ldots\right) \\
& =\cos \pi+i \times \sin \pi \\
& =-1+(i) \times(0) \\
& =-1
\end{aligned}
$$

Hence, $e^{i \pi}+1=0$ Q.E.D.!
Actually, I found out sometime later that I had stumbled upon a specific example of one of Euler's properties. The general form is:

$$
e^{i \theta}=\cos \theta+i \sin \theta
$$

That's it for a rather brief look at mathematical graffiti this week. I hope that the above wasn't too complex, so to speak. If you have any further graffiti, feel free to send it to mathNEWS via the usual channels. Until then, happy mathematics.

## Co-op Program

## Work-term subroutine pseudo pseudo-code

```
begin {work_term }
month := 1;
while month<=4 do
    begin
    If home<>place_of_work then
        output rent_money;
    output bills_money;
    day := 1;
    while day<month_end do
        begin
        weekday:= 1;
        while weekday<5 do
        begin
        get out_of_bed, breakfast;
        get ready_for_work, on_bus;
        if weekday=1 then
                    writeln "Monday (groan)";
            gosub work;
            get supper;
            If month=4 and day>15 then
                panic work_term_report
            else
                read a_book;
            If weekday=2 then
                input A_Team
            elself weekday=3 then
                goto watpub
            else
                Input The_National;
            weekday:= weekday + 1;
            day := day +1;
            end
        gosub weekend;
        end
    month := month + 1;
    end
do too_little_documentation;
return {to_school }
procedure work
    begin
    call job;
    nop until time=1700;
    If weekday = payday then
        get paid;
    return { home }
procedure weekend
    begin
    perform strange_acts;
    out all_nite;
    return { exhausted }
```


## Madness: Keep Moving

Madness is back again! No, I don't mean mathNEWS or the beginning of classes, but the group who earlier did Our House and other less well-known songs. Madness recently released a new album, entitled Keep Moving, their fourth. This British band is composed of (count 'em!) seven members, including two vocalists (Carl Smith and Graham McPherson) and a sax player (Lee Thompson). Mike Barson goes mad on the keyboards, while Chris Foreman plays the guitar.

The title track, Keep Moving, is a nice little tune that (I think) is about interpersonal relationships, but could be interpreted as describing the London subway as well... Wings of a Dove (background vocals by The Pentecostal First Born Church of the Living God) appears to be a parody, but these guys' lyrics really have me guessing... The nicest piece on the album is definitely Barson's The Sun and the Rain, a very catchy tune with more lyrics with well hidden meanings. The album overall has a very good, even quality (even a contest on the back of the cover) and is highly recommended.

## Vainämơinen

## The Icicle Works

Well, the long-awaited debut LP from this fine U.K. trio is finally here. It certainly hasn't taken very long for the masses to catch on to it. The more enlightened of the record-buying public undoubtedly first discovered them last summer when their first single Birds Fly was released. They created quite a stir in England where they played to packed houses in such places as the Camden Palace and other trendy clubs. The single, and the follow-up Love is a Wonderful Colour, released lasted fall, were available only as imports in North America on the Beggar's Banquet independent label. They received a fair bit of airplay on Toronto's CFNY and some campus stations.

The album release contains three previously released songs, namely the two singles (although it is a shorter version of Colour which is included here), and Waterline, which was one of the two songs on the $B$ side of Colour. The other tracks are all new material, and stand up very well to many playings. The contrast of songs with a harder edge, whose stylings are comparable to those of U2, to others of an easier tone (of which Out of Season, a chilling lament, is stalwart) suggests a basically romantic band with a strong political outlook. The lyrics support this while rendering very strong visual elements, literary devices, and imagery.

In conclusion, this record covers a wide spectrum of musical styles, and thus would appeal to a wide variety of tastes. No self-respecting fan of the British music scene can afford not to own it. Very highly recommended.

## "Weird Al" Yankovic in 3-D

A review of "Weird Al"? Somebody must be joking. Right? Not by a long shot. "Weird Al" Yankovic in 3D may not have any redeeming features as far as musical score or arrangement go, but then why is it so popular?

The answer may surprise you. "Weird Al" Yankovic has touched upon the two things that today's society can't seem to get enough of. Sarcasm and satire. Two people may never agree about what party is best for Canada but, give them a chance to deride the National Enquirer (Midnight Star) or snort at recent horror movies from Halloween I to Friday the 13th III (Nature Trail to Hell) and all of a sudden there is a startling amount of unity. If you're the kind of person who hates the K-tel and Ronco ads, then "Weird $\mathrm{Al}^{\text {" }}$ has something for you, too (Mr. Popeil). Buy Me A Condo even goes so far as to take a shot at todays materialistic tendancies. Not only that, but the type of music and the accent used also seem to be commenting on the "plight" of some immigrants.

It's obvious, even to the untrained ear, that "Weird Al" Yankovic in 3-D has a lot to say.

All the sarcasm and satire put aside, this album is also, plain and simple, one hell of a lot of fun.

## The Barbarian

## J.S. Bach - Two and Three-Part Inventions

## Glenn Gould, piano

The CBS Masterworks Portrait label is the result of CBS's efforts to revive many of its find Masterworks recordings from the 1960's and early 1970's. These include performances by Bernstein, Casals, vintage Rudolf Serkin, and of course by Glenn Gould. This recording of Bach's Zwei- und Dreistimmige Inventionen was produced in 1964, and a "Dolby-A" process was used to give new life to the old master tapes for this 1983 Portrait release.

In recordings like this one the piano presents a unique problem to recording engineer and listener. The intimacy of the sound demands that a sharp focus be brought to each note, but at the same time these sounds must knit together to form a cohesive, fluid structure. When Gould prays Bach, his carefully executed interpretations make especial demands for this kind of fluid focus.

As pure music, this recording is highly satisfying. Bach wrote and rewrote these short pieces, originally keyboard exercise for his son Wilhelm Friedemann, unto a level of "small masterpieces", comparable to the Well-Tempered Clavier pieces or the Goldberg Variations. Musical ideas, usually short phrases or subtle turns, unfold as canons, with a counterpoint as sure as logic. Gould brings to this logic an emotional interpretation that never fails to captivate the listener.
continued from page 9
Perhaps not so captivating is Glenn Gould's soft humming, always next to the listener's ear, not a gadfly but rather a literal ghost in the machine. Although rather unnerving to the uninitiated, it draws one into the intimacy of the music. This 'ghost' leads me to speculate on what recordings we listeners would have today (if Gould were alive), instead of ceaseless re-releases and improvements on the triumphs of the past.

Despite this, Columbia's new recording is still worth the ten or twelve dollars it costs. Tastefully jacketed in black and gold, its tri-lingual liner notes are mostly concerned with conflicting manuscripts for Bach's pieces. Why not reprint Gould's original liner notes, both provocative and informative? You can't have everything, I suppose. When it comes to Glenn Gould, I count my blessings.

## -Georg Mandrive

## Weebees Wailers Wompted

The Wailers got off to a rough start this year as the Grad Club snuck by them 8-1 last Thursday. The Weebees Wailers are the Math representatives in the fastball league this summer. Talking with the captain, Dave "Sparky" Wiebe, after the game, he described the events leading up to the game as unique and warned against speculation that the Wailers would be wading in the basement. "It was a tough decision drafting those 26 choose 15 players. That's over 7 million team combinations!" Wiebe exclaimed. "But the season is young and the team is dedicated so there shouldn't be too many obstacles to overcome."

The pitching was little shaky in the first inning as the Grad Club accounted for all of their eight runs at that time. Wiebe went to his bullpen early and received great consistency from what could be the best looking pitcher in the league. Bev Beauchamp, a Penetanguishene native, blanked the opponents in the remaining innings.

The defence became tenacious once the pitching problems were resolved. Not one ball made it by third base and the infield worked together like well-oiled machinery. The outfield held their ground as well, proving there's more to do out there than picking dandelions and watching the clouds.

The offense is going to need some work as the only run came from the bat of the veteran Ken Coward. Ken ripped his first home run of the season over the left fielder's head. However, there is definite potential for a high scoring club.

The Wailers schedule is posted on the glass window at the C \& D, and all good baseball fans are welcome to come and watch the Wailers in action.

The team members are:
Dave Wiebe - Cpt.
Bev Beauchamp
Gary Belleville
Phil Bolgar
John Busch
John Clayton
Ken Coward
John Hartog

John Huntjens<br>Chuck Kelly<br>Jim Miller<br>Jim Moir<br>Joel Prussky<br>Scott Roche<br>Chuck Snelgrove

## SCuMSbag

Welcome back to the (more or less) wonderful world of SCuMS, 'bun, microNET and other wondrous things! I'll just drop a couple of hints this issue for those just starting on new systems.

SCuMS Commands You can find a list of allowable CMS commands (plus time limits, if any) on your SCuMS userid in the file STUDENT COMMANDS B.
bun Directories Change your current directory with the setc command. A pathname beginning with a slash means it's relative to the current directory; otherwise TSS (that's what the 'bun operating system is called) will assume the first part of the pathname is a userid. You can create and destroy new directories with the acce command, with which you'll be familiar from your CS240 assignments. sete without any arguments will reset your working directory to your userid's master directory. Incidentally, a good idea is to pick up a set of free! TSS and Fred manuals from the MFCF consulting office on the 3rd floor.

## Tom Watts

## ElseWhen

## mathNEWS 10 Years Ago

BUNGLING (MATHSOC STYLE) - Last week several students walked into the MathSoc office (when it was open) and then walked out with two cashboxes, 500 dollars worth of Tshirts, one record player, four decks of cards, ten chess sets, one clock, a terminal, five chairs, three desks, two phones, an electric pencil sharpener and 65 feet of pink tie...There was no one in the office even though the door was wide open. Fortunately, the students were very honest and returned everything. If MathSoc is not careful, one day it is going to find that the only thing left in 3038 is a pink wall... CO-OP MASTERS- The Department of Statistics at the University of Waterloo plans to begin a co-operative Masters program in applied statistics in May, 1975. This will involve two work terms with an employer in government or industry, and at least two terms on campus during which the normal academic requirements for a Masters degree will be met. The aim will be to prepare students for statistical practice rather than for theoretical research...Before being admitted to the co-op Masters, students would be expected to have background equal to that of a graduate in Honours Statistics at the University of Waterloo...
mathNEWS INDUCTED- On Wednesday, May 29, another chapter in the annals of mathNEWS' brief history was written...Miss Ada Berti, head of theEMS library, accepted on behalf of the University, two sets of past mathNEWS issues destined for the University's archives. A third set was acquired to be made available in the EMS library...The archives has [sic] the important campus newspapers...mathNEWS, Coryphaeus, Chevron, Gazette...
(Taken from mathNEWS, Vol. 5, No. s, June 19, 1974 (we didn't have a copy of 5:2).)

## The First Legal Programming Language

There has been a move recently to make computers accessible to everyone through interactive, user-friendly programs and simple programming languages. This, however, has left most of the legal and political types out in the cold, since they cannot comprehend anything simple. A programming language, called the First Legal Programming Language, or LPL/1, has just been introduced to solve this problem. Lawyers and politicians can now program in a language similar to their natural tongue-gobbledygook.

LPL/1 has some features desired only by lawyers. To maximize verbosity of programs, variable names must be a minimum of twenty characters long. The only looping capability is a WHILE loop-like construct, and arrays are not supported. The label JAIL is provided, but no others may be defined. Base data types include the ordinal type PARTIES for phrases "party of the first part," "party of the second part," et cetera, and DOLLARS for bill calculations. The standard INTEGER, REAL and TEXT types are also defined. There are three intrinsic functions-one for generating random gobbledygook phrases, one for translating an English phrase to Latin and a third for computing the bill for producing a document. No comment facility is provided in LPL/1 since it is verbose enough that any lawyer can understand it. All output from LPL/1 programs is on $8 \%{ }^{\prime \prime} \times 14^{\prime \prime}$ paper, with an option for output using an illegible script font on yellow foolscap.

An LPL/1 program must be rigidly structured. Procedures are given the name ARTICLE, as well as constant and variable declaration sections. Each procedure can contain smaller blocks, called PARAGRAPHs and SUBPARAGRAPH. ARTICLES must be numbered consecutively using Roman numerals. PARAGRAPHs and SUBPARAGRAPHs must be numbered consecutively within procedures using Arabic numerals and periods. The description of the program's purpose is given in a section called the PREAMBLE. This section must be a minimum of six lines long or the program will not compile. The PREAMBLE must precede ARTICLE I. The last ARTICLE of the program must contain the date that Royal Assent was given to the program.

Since the legal profession uses only global variables in their documents, all variables used within an LPL/1 program are also global. No local variables are allowed.

To illustrate the usefulness of LPL/1, the following sample program is provided:

A Program for Illustrating the First Legal Programming Language, commonly known as LPL/1

## PREAMBLE.

Whereas the Legal Profession of Barristers and Solicitors has been withouth the capability to program an Electronic Computing Device;
And whereas there has been a movement to make the use of such Elec-
tronic Computing Devices possible for all people;
And whereas a language for programming such Electronic Computing Devices exists which makes programming in a "natural" language possible for
Barristers, Solicitors and Politicians;
Be it resolved that this program be used for the purpose of illustrating the use of this programming language, called "The First Legal Programming Language," in the manner specified herein.

## ARTICLE I. Constants.

> For the purposes of this program only, THE_APPROPRIATE_GOVERNMENTAL_BODY shall have the value "The Office of the Prime Minister".

## ARTICLE II. Variables.

For the purposes of this program only, THE_NUMBER_OF_CONSTITUENTS shall be of data type INTEGER;
THE_AREA_OF_THE_CONSITUENCY shall be of data type INTEGER;
THE_POPULATION_DENSITY shall be of data type REAL;
THE_CONSTITUENCY_NAME shall be of data type TEXT; THE_OPTIONAL_MESSAGE shall be of data type TEXT; THE_NUMBER_OF_VISITS_TO_MAKE shall be of data type INTEGER;
THE_CURRENT_OUTPUT_LINE shall be of data type TEXT.
ARTICLE III. The Procedure for Computing The Number Of Constituents per Square Kilometre Within A Constituency.

Henceforth, THE_POPULATION_DENSITY shall have the value equal to THE_NUMBER_OF_CONSTITUENTS divided by THE_AREA_OF_THE_CONSTITUENCY, rounded to three decimal places.

ARTICLE IV. The Procedure for Determining the Message to be Printed.

PARAGRAPH 1
In the event that THE_POPULATION_DENSITY is less than 1 , then henceforth, THE_OPTIONAL_MESSAGE shall have the value "Ignore this riding"
else henceforth, THE_OPTIONAL_MESSAGE shall have the value
"Send the Prime Minister here"
unless THE_POPULATION_DENSITY is less than 10 but greater than or equal to 1 ,
in which case henceforth, THE_OPTIONAL_MESSAGE shall have the value "Feign interest in their concerns"
otherwise henceforth, THE_OPTIONAL_MESSAGE shall have the value "Send outer cabinet flunkies here" notwithstanding the event that THE_POPULATION_DENSITY is greater than or equal to 50 .

PARAGRAPH 2.
In the event that THE_OPTIONAL_MESSAGE is equal to "Send the Prime Minister here"
then henceforth, NUMBER_OF_VISITS_TO_MAKE shall have the value equal to NUMBER_OF_VISITS_TO_MAKE plus 1.
ARTICLE V. The Procedure for Accomplishing the Purpose of the Program, commonly called Mainline.
PARAGRAPH 1.
Obtain the file containing "Constituency Data."
Open the file containing "Constituency Data" for input.
Select Legal Secretary.
Open Legal Secretary for output.
PARAGRAPH 2.
While there is suitable data in the "Constituency Data" file do
SUBPARAGRAPH 2.1 .
Get THE_CONSTITUENCY_NAME,
THE_NUMBER_OF_CONSTITUENTS,
THE_AREA_OF_THE_CONSTITUENCY.
Calculate THE_POPULATION_DENSITY in the manner previously specified in ARTICLE III.
Determine THE_OPTIONAL_MESSAGE in the manner previously specified in ARTICLE IV.

SUBPARAGRAPH 2.2.
Henceforth, THE_CURRENT_OUTPUT_LINE shall have the value equal to THE CONSTITUENCY_NAME followed by five spaces followed by THE_OPTIONAL_MESSAGE.
The Legal Secretary shall record
THE_CURRENT_OUTPUT_LINE.

# Wanted (Unwanted) 

(or, Blatant Filler Section)

Send all enquiries regarding mathNEWS personals to us via our black box on the 3rd floor. Note that the staff is not responsible for the content or impact of these ads.

Anxious for news? And it's two weeks before the next edition of any free campus newspaper? Well, tune in to WBNA-AM, Radio Bad News America, where you can hear all the bad news from Canada, the U.S., and around the world. Ask for our WBNA program guide soon!

Domestic servant and sex slave required, female. Must be able to clear floors, make a great quiche, and handle a whip well. Pay negotiable. Send enquiries with photo to Georg.

Bored of work term? Avatar Services will put a lookalike mannikin in your place on the job for only $\$ 50$ a week. Our new models are designed to look busy, and can drink and spill a variety of beverages, particularly around electronic equipment.

New Ghostwriting program available. Writes bug-ridden programs in seconds that would have taken you hours. The new version 1.3 of our AutoDebugger is out as well. Ask about Ghost!Solver Products.

Turtle - Your birthday present is not at the Marina on Sunday.

Marina - Don't expect a Turtle for your birthday Saturday.
David K. - Please call me re embarrassing item left in E2 Friday morning - Cheryl.

Rid yourself of procrastination! Well, maybe next month. Write to Box 23621573, c/o mathNEWS for more information.

Extras and spear-carriers (several hundred) needed to fill out upcoming AIA demonstration at U of T downtown campus. Contact the Chevron Club for details and pay scale.

The mathNEWS staff wishes to repeat that the content of these ads is not our responsibility and that any slur on the name of another campus newspaper (or club) is unintended.

Distributors needed for the UW Chevron. Must be tall, thin, have anemic or ashen complexion, wear a worn black coat, and have heavy callouses from hard labour in Albania. Hours as yet uncertain, pay meagre. Dedication/gullibility is a must.

For Sale Assorted New York Islanders paraphenalia; pucks, sweaters (still smelling like B.S. (the guy who was pulled from goal twice)), pennants, programs, and a Drive for Five

T-shirt. Will trade for a Penguins sweater and cap. Call Al, (516) 794-9300 after golfing hours.

## Valley of the GridComments

Shown in the accompanying diagram is the solution to last issue's GridWord. The following people have submitted solutions: Rob Gleeson, Roni Kosh, and Helen Shipley (all on one GridWord), and L. McFarlane 3A (all on another...any relation to Glenn by the way?). Unfortunately, neither entry was totally correct, but mathNEWS congratulates these people for a fine effort. They shall be aptly rewarded with their choice of MathSoc buttons (one pi or e button apiece), or a MathSoc ruler (in one of four colours!). Just drop into MathSoc and claim your prizes. The correct solution for last issue's GridWord appears elsewhere this issue, and a new GridWord appears, just in time for the new Star Trek movie. Enjoy. Well award a $T$-shirt is there is a correct solution submitted...

## Congratulations

mathNEWS extends congratulations to the people working on the Gazette for their fine effort in reducing the number of shadowed boxes in their publication. The May 9 and May 16 issues each contained just one shadowed box, on an inside page where the ink could not stain clothes when the paper was being carried. Keep up the good work!

## continued from page 11

PARAGRAPH 3.
Henceforth, THE_CURRENT_OUTPUT_LINE shall have the value of a blank line.
The Legal Secretary shall record THE_CURRENT_OUTPUT_LINE. Henceforth, THE_CURRENT_OUTPUT_LINE shall have the value equal to

THE_APPROPRIATE_GOVERNMENT_BODY followed by
" must make preparations for "followed by
NUMBER_OF_VISITS_TO_MAKE followed by
" visits, one each to the indicated constituencies.".
The Legal Secretary shall record THE_CURRENT_OUTPUT_LINE.
The Legal Secretary shall record "This stinks.".
The last line shall be stricken from the record.
PARAGRAPH 4.
The Legal Secretary shall be closed and dismissed.
The file containing "Constituency Data" shall be closed, refiled and lost.

ARTICLE VI. Royal Assent.
Royal Assent for Compilation and Implementation given on this day, 198405 25, by Calum T. Dalek (his bit mask).

As you can see, LPL/1 is a very explicit programming language, but the expert in it can always find loopholes for exploitation. Since it compiles very slowly, any programmers will get overtime pay if more than five compiles are required in a day. The greatest advantage of LPL/1 (and, ultimately, the only reason it was developed) is that it makes COBOL a comparative joy to use.
dwarf

GridWord, the Second Generation

Star Trek Edition
Solve this week's special GridWord and submit it to mathNEWS. Subsequently, you might receive such things as your name in print, and perhaps even a prize. Answers next issue!


Who:

## $d y / d x$

1. pronoun for the Enterprise
2. what William Shatner, Leonard

Nimoy et. al. do for a living
9. Opposite of go
10. - factor
12. beginning
13. ROONA : 51324
15. home planet
16. Spock uses it all the time
17. -- major
18. South-East
19. Episode: "For the World -- Hollow"
21. Never Say Never Again
22. sun in Latin
23. Kirk's brother, killed in
"Operation Annihilate"
25. .---- torpedo
26. character in "The Menagerie"
27. .-.- Jim! (The only thing

McCoy ever says)
30. Spock's planet
32. young boy, to Scotty
34. energy

35, 39, 31D. ... - Scotty!
40. Mercury
41. episode: "Day of the --_"
45. Spock's father
47. come together
48. not stale
49. episode: "Journey to -----"
50. Science Nuts of America
51. mix
52. Association of Nice Nurses
53. THE : 321
$d x / d y$

1. bright lights in the sky
2. creature in "Devil in the Dark" (eats rock)
3. THEP : 3412
4. Nurse Christing --
5. epsiode: "Who Mourns for --_-"
6. absent without leave
7. member of cathedral chapter
8. the miners in "The Cloudminers"
9.     - Trek
10. Spock doesn't feel this
11. send enough units
12. record company: -- Victor

## How:

\section*{| Last Issue |
| :--- |
| This Week |}

" ( -2 5

## Column of the Week

Before we plunge into more questions, we would like to take this opportunity to clear up a popular misconception. All your life, you have been told you could only count up to ten on your fingers. This, however, is not so. Using your fingers as bits in a computer, it is possible to represent the numbers from 0 to $2^{* *} 10-1$ (or 1 K different digits!). If you become proficient at this you can then learn to represent negative numbers using 2 's complement. This, however, decreases the range of positive numbers which can be represented, and gives a range from $-\left(2^{* *} 9\right)$ to $2^{* *} 9-1$.

As an alternate method, sign and magnitude representation can be used, with your tongue representing the sign bit. It should be noted that doing this in public will fail to impress people, and others may be offended if they see you working with the number 132 . It is also possible to use double precision in your calculations, by including your toes. This is a little tricky, but can be mastered with practice.

Now, back to our regular (?) features. (and now for something completely different?--ed.)

## Nursery Rhyme of the Week

Ride a fast plane
And don't spare the cash
To see the math wizard do sums in a flash
Roots on his fingers
And powers on his toes
He carries $\log$ tables wherever he goes

## Problems of the Week

1. How many times in 24 hours are the minute and the hour hands of a clock perpendicular?
2. The letters of the alphabet can be grouped into four distinct groups. The first thirteen letters will establish the categories.

## A M

BCDEK
F G JL
H I
Place the remaining thirteen letters in their proper categories.

Send us the solutions to these problems to mathNEWS via the mathNEWS box on the third floor, or slip it under the MC3035 door, or send it via computer to mathnews at watdcsu. If you have any problems that are presentable in this column, please send them in also.

- RuMar (Reprinted from mathNEWS, Vol. 16, No. 8.)


## Confessions of an Islander Fan

Sigh. The dynasty of the New York Islanders is over.
As an Islander fan, I was naturally disappointed with the two 7-2 defeats and the 5-2 defeat the Islanders suffered at the hands of the Oilers in Edmonton. But I cannot be bitter about it. The Islanders were, and this year showed that they still are, a great hockey team. The Oilers are also a great team, and they, too, showed it this year. But they have a long way to go before they reset the standard of excellence established by the New York Islanders.

The Islanders had, prior to their loss on Saturday, won 19 consecutive playoff series, a record. The Montreal team that won five consecutive Stanley Cups only had to win 10, and could have won a maximum of 11 (the 1961 semifinal series). The Oilers have now won just four consecutive series.

Pat LaFontaine's two goals in the first 35 seconds of the third period in Game 5 is also a record-the fastest two goals at the beginning of a period by a player in the Stanley Cup playoffs. Any Oiler is going to have to be mighty good and the goaltender mighty unalert to better that feat.

The Islanders went from being the worst team in the NHL in 1972-73, their first year of operation, to being the Stanley Cup champions in 1979-80, a span of eight seasons. The Oilers have been a professional team for 12 seasons (going back to the WHA, which formed in 1972-73). Even with Gretzky, they did not win an Avco Cup (they lost to Winnipeg in their only appearance in the final in 1979, the last year of the WHA). The Oilers did not need to make the turnaround the Islanders had to in order to win the Stanley Cup. That the Oilers won the Cup in their fifth season in the NHL is an accomplishment, though. No non-original-six team has won the Cup so quickly after entry to the NHL.

All this is not meant to take anything away from the Edmonton Oilers. They defeated the four-time defending champions soundly and fairly. They took away the Islander offence and cracked the Islander defence. The Islanders could not faze the Oiler offence in Edmonton, and could not penetrate the Oiler defence often enough to get a reasonable scoring chance. In short, they were stymied.

I extend congratulations to the Edmonton Oilers for a job well done. They are deserving Stanley Cup champions. As for the New York Islanders, I thank them for being great champions, and for setting a standard that, right now, only the Oilers have an opportunity of resetting. Four years from now, we will know if they have succeeded.

## dwarf

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