

world computer chess championships

RIBBIT TO CHALLENGE WORLD'S BEST

Ribbit, a computer chess program from the University of Waterloo (UW), will represent UW and Canada in the First World Computer Chess Championship, August 5-8, 1974, in Stockholm, Sweden. Ribbit is the Canadian computer chess champion, as the result of its decisive win in the First Canadian Computer Chess Championship held at the University of Waterloo June 21-23, 1974.

The program is authored by three UW students: Ron Hansen, a graduate student in computer science; Jim Parry, a 4th year computer science undergraduate; and Russell Crook, a 2nd year physics undergraduate. Also involved in the program's development are the other members in the computer chess project of the UW Computer Science Club: Rolf Auer, Bert Bonkowski, Dave Conroy & Joe Peters.

The world computer chess tournament in Stockholm will have twelve invited entries. Ribbit's competition includes: Chess 4.0 (the favourite), from Northwestern University (USA); Tech II, from MIT (USA); Chaos, from Univac (USA); Ostrich, from Columbia University (USA); Master, from the Atlas Computer Lab (England); the Freedom Program, from the University of

Oslo (Norway); Tell, from the Eidgenossische Technische Hochschule (Switzerland); Franz, from the Graz Rechenzentrum (Austria); an unnamed program, from Queen Mary College (England); A16CHS, from Interscan Data Systems, Ltd. (England); and Schach MV5.1, from the University of Hamburg (West Germany). A Russian program, from the Control Problems Institute in Moscow, may displace one of the English entries.

Ron Hansen and Jim Parry shall travel to Stockholm to run Ribbit in the tournament. Ribbit will be run on a Honeywell 6060 computer provided by the A.S.E.A. in Vasteras, Sweden. The program has been under development for approximately one year, on the UW Math Faculty's Honeywell 6050. It has a fair library of stored opening moves, and otherwise projects the game several moves ahead, using chess heuristics (such as piece mobility and capture value) to determine which of its possible moves is the best to make.

The First World Computer Chess Championship will be held concurrent with the International Federation for Information Processing Congress, August 5 - 10 in Stockholm.

ISSUE 5.6
THURSDAY, JULY 25, 1974

math NEWS

ORIENTATION PLANS

Andy Elliott, math society orientation chairman, outlined tentative plans for September's frosh festivities at Tuesday's meeting. Ideas being "tossed around" include a bike rally followed by a barbeque, a cartoon pub, record hop, treasure hunt, wine and cheese nights, and possibly participation in the midway being sponsored by the Federation's orientation committee. Other suggestions are welcomed at a session planned for 4 p.m. today (July 25) at the 'watering hole' in the Campus Centre.

Treasurer Don Sheehy reported that, in addition to the \$255 lost at the door during the mathweekend pubs, a total of \$221 was lost at the bar. Yet to be received are bills from engsoc for the math society's co-sponsorship of the mathsoc-engsoc picnic. This should leave between \$70 and \$80 in the spring term social

budget.

In other business in this, the last meeting for the term:

- A total of \$100 was donated for (MATHSOC, cont'd on next page)

ELSEWHEN

Fragments from mathNEWS' files, Thursday, July 26, 1973, one year ago this week: "...This is our last issue of Summer '73. Vol. 2 will end with issue #5, one short of our objective..."; "...Prof. Beaumont: The Faculty of Mathematics is most fortunate in having its several departments in a unified grouping for this allows a development of programmes in the Mathematical Sciences unequalled anywhere in North America..."; "...after three seasons of losing out to St. Jeromes, the Co-op Math (basketball) team defeated them 69 - 65 in the final match..."; "...Well we didn't have a winner of the last gridword...the first four DOWN clues were left out..."

(MATHSOC, cont'd from front page)

Ribbit's trip to Sweden.

—13 dozen math T-shirts have been ordered (the same old designs and colours).

—Molson Breweries, which has bought out Formosa Spring Breweries, will continue Formosa's tradition of sponsorship of mathsoc events.

this week ...

PETR ZIMA

Professor Petr Zima was born in Prague, Czechoslovakia, on February 4, 1941. He grew up there, and lived there until 1968.

In 1963 he completed his M.Sc. at the Faculty of Mathematics and Physics, at Charles University in Prague. (It was established in 1348 by Emperor Charles IV). University study in Czechoslovakia is a five year study, which is equivalent to a Masters here. There are two years of general study, then three years of specialization. His specialization was theoretical geophysics and his thesis was on earthquake activity from the mathematical statistics point of view.

He then had one year of military service to tuck under his belt. (There is a two-year compulsory military service but the students take some military training during their study and then go for twelve months of regular service.) The professor taught during his military service, which was good practice. Then he became a lecturer in mathematics in the Department of Mathematics at the Prague School of Economics.

Here he became interested in management problems, so started studying part-time. In 1968 he received his M.A. in Mathematical Methods in Economics. The thesis was titled: "A Solution of an Integer Programming Problem." It was followed up by two publications. The theoretical part was "A Solution of one modification of the cutting problem, and the application part was "Minimalization of waste in the cutting of steel rods into pieces of a fixed length". He was also co-author of a textbook for the students of the Prague School of Economics.

Prof. Zima's wife, Hana, graduated in Industrial Economics in 1964 at the Prague School of Economics. She worked in a Research Institute of Mechanical Technology and Economics.

In 1967 Prof. Zima came to Canada to see Expo. Prof. Zima liked it here and decided to come for a three year study. He wrote to several universities, explaining his interest in optimization. U. of W. was the first to reply, and he was accepted as a Ph.D. student in 1968.

He and his wife left Czechoslovakia in June '68. However, as Mrs. Zima could not speak English, they went to a summer camp for a little while to get "settled in" with the language. Their three and a half year old son, Petr, was sent over on a plane by himself in October of the same year.

The family decided to stay in Canada, applied for immigrant status, and will get their citizenship papers this year.

Prof. Zima's main hobbies are his family and travel. As a student and after graduation he worked part-time with the Czechoslovakian Youth Travel Bureau. He was an organizer of student exchanges, director of an international camp, interpreter and guide.

Because of his involvement, he was able to visit many countries in Eastern and Western Europe, the USSR, North Africa, North America.

Mrs. Zima worked in Waterloo in an insurance company until their second child, Lucie, the only Canadian, was born. (She is now four). Petr Jr. was born in Prague, and is nine. He is active in sports such as judo, swimming, baseball, hockey and tennis.

Taking care of the children, the professor, and the house, is more than a full-time job for Hana. He does all the grocery shopping with Lucie.

Prof. Zima has been a lecturer in the Department of Combinatorics and Optimization since September 1969. The course he has taught most is M352--fundamentals of optimization. It is a mathematical study of optimization techniques common to a wide variety of operations research and engineering problems (linear programming, integer programming, network programming, dynamic programming, game theory, etc.) The other courses he has taught are M130 Calculus, M131 Algebra and vector geometry, M21 Algebra and vector geometry, all service courses for the faculties of Science and Engineering. This spring, he is teaching M129B for the first time. He feels that it is difficult to make the first-year math courses interesting to students with a different background. His prime interest is undergraduate teaching. The professor has had eleven years of experience in that field. His research interest is the topic of his thesis. (Ranking problems and their applications to a non-linear network programming problem.)

He has travelled extensively in the U.S. and Canada, where he has found that "a lot of people know about us." In the U.S., U. of W. is known primarily as a math university, while in Canada it is known for the engineering studies as well.

According to the professor, grade twelve students in Czechoslovakia are approximately equivalent to first year Canadian university students. The students here, however, have better facilities, such as the computers, the libraries, and residence facilities.

"The mathematician, carried along on his flood of symbols, dealing apparently with purely formal truths, may still reach results of endless importance for our description of the physical universe."

- Karl Pearson

"Mathematics is the only good metaphysics."

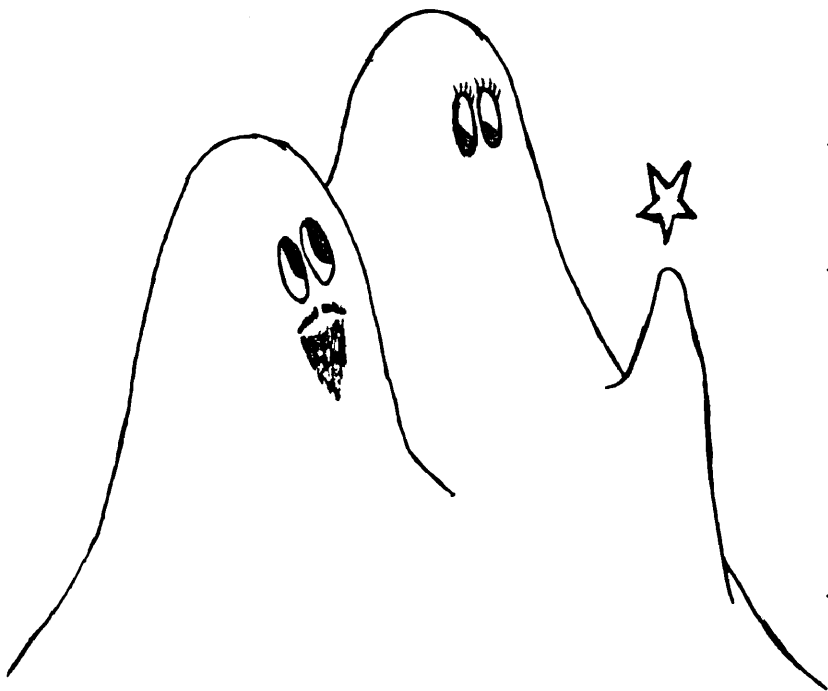
- Lord Kelvin

while you're away SUBSCRIPTIONS

During the summer, mathNEWS offered a subscription service for students who were off campus, on work term, or just for the summer. For \$1.00, many people recieved copies of mathNEWS mailed to them.

We're offering this service again this fall. However, as with other fine publications, inflation has forced us to boost our price to \$1.25. Informative! up-to-the-minute issues! To get a subscription, do the following: (1) Go to the mathsoc office, and someone there will take your name, fall term address, and your money. Alternatively (2) drop your name, address and \$1.25 into the mathNEWS mail box outside the math lounge, or (3) if you don't know where you'll be living, send us a letter. We will take subscriptions until mid-September.

the phantom's report...



The Phantom is no longer fooling around with APL, he's just fooling around. Therefore there will be no Phantom Report (or Spook Report as it is sometimes called). However we did manage to get a photograph during a brief nocturnal visit. We would say more but we're in enough trouble now.

CALENDAR

THURSDAY JULY 25

Free Folk Concert 11:30 and 12:30
Modern Languages Coffee Shop patio or thereabouts.

"Summer of the Seventeenth Doll" 8pm.
Theatre of the Arts. \$1.50
C.C.Pub with "Flagg" 9pm. \$0.50

FRIDAY JULY 26

Coffee and Donuts ends its sale of nickel donuts (it costs them about 8¢ for each donut). And that will be the last you'll see of C&D this term.

Fresh issue of mathNEWS. Free coffee.
7pm. All welcome. MC3011.

"Summer of the Seventeenth Doll" 8pm.
Theatre of the Arts. \$1.50
C.C.Pub with "Flagg" 9pm. \$0.50

SATURDAY JULY 27

"Summer of the Seventeenth Doll" 8pm.
Don't you know where?

MONDAY JULY 29

Gridword deadline.
C.C.Pub with "Michael Lewis" 9pm.
\$0.50

TUESDAY JULY 30

C.C.Pub with Lewis (no its not David).
9pm.

WEDNESDAY JULY 31

LAST DAY of CLASSES (in case you didn't notice).

C.C.Pub has "Michael Lewis" to help you relax. 9pm. \$0.50

To help you prepare for the exams the Campus Centre presents an all night extravaganza featuring: "This Island Earth"; "Dracula"; "The Wolfman"; "Frankenstein"; and "The Mummy". Absolutely FREE. Starts 10:15pm.

FRIDAY AUGUST 02

C.C.Pub closes its doors forever. However it may return next term.

MAILBOX

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

ACROSS

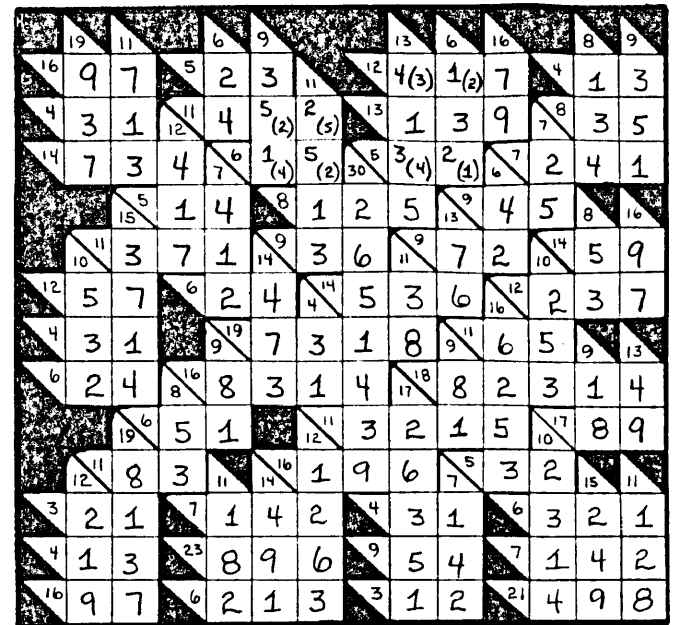
- 01 musical term
- 04 clothing
- 09 star in constellation
Lyra
- 13 customer
- 15 part of ancient Greece
- 16 eons
- 17 mature
- 18 casual
- 20 rampart
- 22 had in mind to
- 23 Mr. Gershwin's
- 24 dozed
- 25 hossa
- 27 western american
indians
- 28 award
- 32 dies
- 33 stitches
- 35 mineral
- 36 Paul McCartney &
Wings & Prunejuice
- 39 goal
- 40 dreams
- 41 one
- 42 vertabrae parts
- 44 bread
- 45 feeds the kitty
- 46 tenth president
- 48 insect
- 49 first instruction
- 52 sequoia
- 55 movement
- 57 yours(fr)
- 58 pip
- 59 believer in god

- 60 desires
- 61 unit of force
- 62 Amer. Indians
- 63 National(abbr)



=====
||||**DOWN**||||
=====

- 01 burst of air
- 02 large land mass
- 03 scolds
- 04 much used ratios
- 05 talk like an
owl
- 06 hotel
- 07 impressionist
- 08 western lake
- 09 servants
- 10 Omigosh!
- 11 male
- 12 concerning
- 14 refortified
- 19 place side by
side
- 21 remuneration
- 24 take a walk,
Southern style
- 25 made fun of
- 26 Asian
- 27 utility instrument
- 29 before you get
mad...



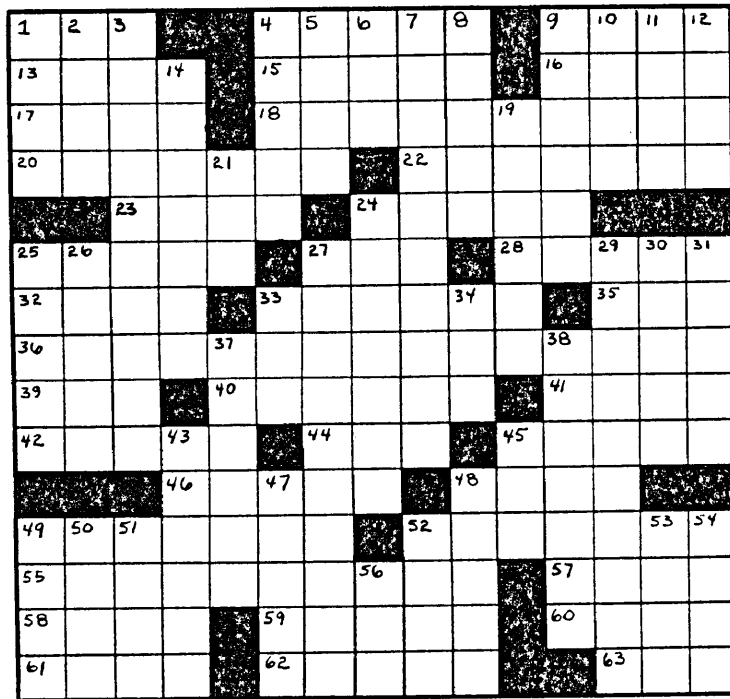
This gridword is the product of HEATHER BATES

#####LAST WEEK'S#####

- 30 Palmer
- 31 see 1-across
- 33 make me an offer
- 34 interjections
- 37 tooth
- 38 eloper
- 43 al
- 45 plus
- 47 electric pole
- 48 noblemen
- 49 went into second
- 50 politician
- 51 short math course
- 52 Marie
- 53 Mrs. Chaplin
- 54 att.
- 56 clock number



#####



NAME: _____
PHONE: _____

MONDAY
JULY
29

This gridword was created by NORM MACDONALD

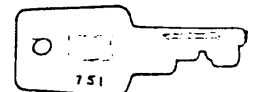
GRIDWORD COMMENT

There were 2 WINNERS this week...we decided to give out an extra T-shirt because of the many entries. We had 29 people venture a guess at the 4(four) correct solutions for the gridword. Special mention goes to Doug McInroy for the most colourful solution (a total of 9 shades). Six (6) people had incorrect solutions...four because they broke the rules and as for the 5th.... since when does 2+5=6.
THE winners were:

NANCY LOVE
and KEN WESTOVER
Other people who had correct solutions were (in alphabetical order by last name): Norman, Norbert, Bruce, Robt, Steven, Gail Scott, Garth, Robert, Dave, Doug, Henry, H.D.L., Eric, Joanne, Sally, Cecilia, Jean Deb, Doug and Bill(who????).

This gridword can be put in the mathNEWS file in MC3038(mathsoc) or in the new mathNEWS mailbox on the 3rd floor outside the math lounge.

WANTED: A gridword for the frosh issue. Win one or two T-shirts (depending on how good it is). Needed immediatly(July).



this
 Σ THEOREM
 week's

REQ'D: Prove that any two numbers are equal.

PROOF: Take two numbers, m and n . Represent the difference by x .

$$x = m - n$$

We can then say:

$$m(x^2 - (m-n)x) = m(x^2 - (m-n)x)$$

We can't divide this equation by $x^2 - (m-n)x$, because this is division by zero. However, we can apply limits to this problem:

$$\lim_{x \rightarrow m-n} \frac{x^2 - (m-n)x}{x^2 - (m-n)x}$$

This limit is $0/0$. We can therefore apply L'Hospital's rule, which states:

$$\lim_{x \rightarrow a} \frac{f(x)}{g(x)} = \frac{f'(a)}{g'(a)}$$

We have:

$$f(x) = g(x) = x^2 - (m-n)x$$

So

$$f'(x) = g'(x) = 2x - (m-n)$$

Evaluating at $m - n$,

$$f'(x) = g'(x) = m - n$$

Now, if $m-n = 0$, there is nothing to prove. If $m \neq n$, then $m-n \neq 0$, then

$$\lim_{x \rightarrow m-n} \frac{x^2 - (m-n)x}{x^2 - (m-n)x} = \frac{m-n}{m-n} = 1$$

Dividing through the original equation then yields

$$m = n$$

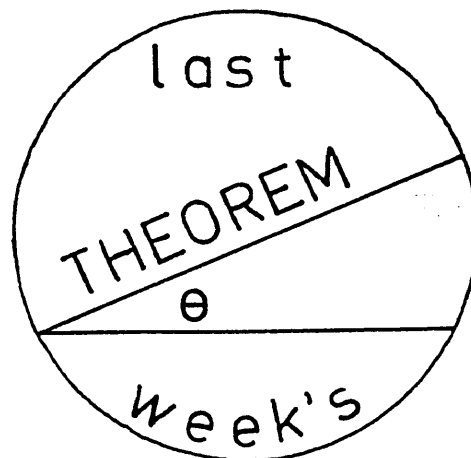
>QED<

"Every 'new' body of discovery is mathematical in form, because there is no other guidance we can have."

-C.G. Darwin (1931)

"How can it be that mathematics, being after all a product of human thought independent of experience, is so admirably adapted to the objects of reality?"

-Albert Einstein (1920)



REQ'D: Prove that any two given numbers are equal.

PROOF: Consider the following equation:

$$q = \frac{mx + ny}{m + n}$$

Now, consider the special case when $n = 0$:

$$q = \frac{mx + 0}{m + 0} = \frac{mx}{m} = x$$

Consider when $m = 0$:

$$q = \frac{0 + ny}{0 + n} = \frac{ny}{n} = y$$

Each of these special cases includes the one special case when $m = n = 0$. From the above two equations, we have:

$$q = x = y$$

(anybody suspicious of the equation

$$\frac{mx}{m} = x$$

with $m = 0$ should see the validity in the following step:

$$\lim_{m \rightarrow 0} \frac{mx}{m} = x \quad)$$

< q e d >

ADS

(Note: mathNEWS will print your classified ads FREE OF CHARGE. Just jot them down on a slip of paper, take it to room MC 3038 and have someone there deposit it in the mathNEWS file. Or, drop your ad in the campus mail (a free service) addressed to: mathNEWS, MC 3038.)

NOTICE: The Sailing Club hosts the last summer Regatta featuring team match racing and an Obstacle Course, this Saturday (July 27) at Columbia Lake. At 8 o'clock Saturday evening there will be a bonfire at the barbeque pits, Columbia Lake. Everybody is welcome.

math ETICS

softball...

LUNCH PAIL LETDOWN

The North 6 Lunch Pails weren't out to lunch Monday night as they swept through B division softball by winning the Championship to the surprise of no one except the Chevron. The star of the game was Scott 'Coach' Huntley. Scott pitched a

great game. The Lunch Pails clobbered the Dumont Ducks by a score of 9 to 4. The team would like to thank their cheerleaders, Pat, Lana, Linda, and Donna, for the time that they spent concocting the cheer (yea Lunch; yea Pails; yea yea Lunch Pails). The game was a good team effort.

FED REP REPORTS

J.J. Long

A Report to mathNEWS on Federation Events for Summer term Co-operative, and Regular, Part-time, Students:

One of the major things affecting students that the Federation council did was raise the compulsory membership fee (without a referendum) by \$3 to \$25. If anyone wants to know why ask Andrew Telegdi or perhaps an Executive member of the Federation. Even I myself have not received word from the front-office concerning where the money is going and would tell you if I knew.

In June the Federation held a two day conference to conduct business. I would say it was a moderate success. Most of the business was discussed. Dave Robertson gave a history of the UW Act and talked about years of progress towards unicameralism was changed in a matter of months by President Burt Matthews to the present bicameral structure. President Matthews appeared acting his usual self and defended some of his views. He felt student representation on University of Waterloo bodies was necessary but not an overriding factor. He fielded questions from councillors concerning actions of the University Senate.

Council after Dr. Matthews left adopted resolutions supporting faculty course critiques and set up an informal society committee. They also supported putting students on more University committees.

Later on the first day the council approved Ted Scott as the new Treasurer replacing the former treasurer Stan Bonifero. Scott was uncontested for the job.

That night the various Boards of Council reported to council. Publications

agreed to contact the Chevron regarding a workshop in the fall. Kathy Reynolds talked about proposed changes for Radio Waterloo. In Entertainment, Art Ram announced appearances of the Guess Who, Steppenwolf, Chuck Mangione, the Harlem Globetrotters, and a Circus at Seagram's Stadium (if opposition is overcome) in the future. Art was having some trouble with pub attendance advertisements and the obtaining of a licence. Education proposed support for part-time students and the Federation did sponsor to some degree election meetings in Waterloo and Cambridge and in the Campus Centre for candidates in the Federation Election Riding of Waterloo-Cambridge.

The second day of the Conference dealt with the passing of OFS resolutions in the morning. In the afternoon, a restructuring of Radio Waterloo was approved. The library hour reduction was discussed and Council restated support for a 24 hour opening policy. Also money was given to study part-time students. A judicial committee was set up. As far as I know they are not holding impeachment hearings.

That was about the action of the conference. Many resolutions were passed but I don't know whether they've been implemented. Andrew Telegdi himself said that he had trouble getting people to work on Federation projects. Since the conference, I have received some information from the head office and don't know for sure but the next meeting may be on Aug 11. If you have any inquiries I suggest you see someone in the Federation Office in the Campus Centre.

J.J. Long
Fed. Math Rep

"The different branches of Arithmetic - Ambition, Distraction, Uglification, and Derision"

-The Mock Turtle ('Alice in Wonderland')

"Mathematics is the Queen of the Sciences, and Arithmetic the Queen of Mathematics."
-C.F. Gauss

mathsoc prez writes

Nominations for second and third year co-op reps to Mathsoc council closed last Thursday with no contentions for the seats. Ingrid Spletstoeser and Peter Lee (the present 1B and 2B reps) will represent 2A and 3A respectively next winter. One newcomer, Don Hall, presently on the mathNEWS staff, will be the second rep for 2A.

Peter Lee, as well as representing his class on council, has just about single-handedly organized anticalendar '74. Ingrid is on the mathNEWS staff, and does writing and typing.

Although the quantity of candidates was below the required minimum, the quality is exceptionally high. If you'd like to join the active membership of your society, remember you need not be a rep. Anyone is welcome to come to the meetings and participate in the organization. Next term, the real (as opposed to the interim) mathsoc executive will be on campus. The president is Jim Langer, and the vice president is Phil Lanouette. They'd love to meet you in January.

FEED BACK

mathNEWS welcomes your criticisms, comments, suggestions, etc. All letters should be signed, but, if requested, a pen name will be used. Submit your feedback to MC 3038 and have someone there deposit it in the mathNEWS file. Or, drop your letters in the campus mail (a free service) addressed to: mathNEWS, MC 3038.

pro pinkie

mathNEWS:

It appears that some people consider Pinkie to be inadequate as an emblem of the Math Society. I can't see anything wrong with the mathsoc's mathscot. What is an emblem used for? It is to identify something. For that purpose the potential mascot must be:

- i) noticeable, to catch attention and
- ii) unique.

I think that Pinkie fills these qualifications admirably.

Going back three or four issues there was some mention on the question of the sexual orientation of a person connected with an organization whose official colour was pink. The only comments I have received from friends 'on the outside' has been that a pink tie is different. In other words, it is noticeable (see qualifications above).

Don Hall

mathsoc awards

mathNEWS:

Yes, its that time of year again - time for the mathSoc awards. There are some new awards this year as there are so many people who deserve to receive recognition that money was allotted for the purchase of new awards this year.

Hustler of the Year Awards:

This year we had three people in contention and were able to award three medals. Gold Medal went to Don Sheehy for

the new campus record. Sorry, the record cannot be disclosed. Silver Medal went to Paul Armstrong. Keep UP the good work!! Bronze Medal to Steve Rudd: "Come on Down".

Baseball loser of the Year to Gary Dryden who struck out the most.

Limmerick King and Coffee Guzzler Award to Scott "Farkleson" Greig for a record of 2 cups of coffee a minute (must have been a rough nite). Runner up for Coffee Guzzler Award goes to Phil Chopp for one and a half cups per minute (average). The Coffee & Donut Stand sincerely thanks the above 2 for financing the summer operation.

The Dirty Foot Award to Gary Dryden. A Collection will be taken up on Monday, Aug. 12 for a pair of shoes and a bottle of ammonia (Gary - use the ammonia first).

"Golden" Champion for the Summer of '74 goes to Joan Scarrow even though she jumped to 50.

"The Owl and the Pussycat Award" goes to Marg for her now famous nocturnal vigilance in a now famous tree. Did she really give a hoot??

The "Award for the Most Unlikely Comment to be heard at 8:30 a.m. at Coffee & Donuts" goes to Don Sheehy for "I'll take anything I can get". And the recipient of the most Unlikely Comment to be Heard at 8:30 a.m. at Coffee & Donuts was Kathy Peycha or Rob Mathers (Take your pick Don) (I'll take Kathy yuk yuk...(Don)).

Preregistration and No Trump Champ of Summer '74 goes to Norbert "Dealt & Passed" Bunte.

"Class" Car of the Year Award goes to "The Chopper Mobile" run (??) by Phil.

Shakespeare of the Year Award to Paul "Shakyspeare" Armstrong (Silver? medalist). We were impressed but not very much. We're mathies, not artsies.

Golden Glove Award to Kathy "Sticky Fingers" Peycha. (I'll catch anything I want).

"Booker" Award goes to Joan Scarrow for Dedication to "Catcher in the Rye" or alias "Grabber of the CC."

Most Loveable Person of Summer '74 goes to Dennis "Cuddles" Mullin. Signed previous treasurers & members of mathSoc.

Black & Blue Award goes to Jackie Hearne who has been awarded 1 chest protector (Otto go shortstop).

Five Star Admiral Award awarded to Scotto, Douger S., & Keven (The proverbial mover). for their dedication & loyalty to the North Atlantic Squadron.

Animation Award to Greg "Keep on Truckin" Andrews for his fine impersonation of Rin Tin Tin & Casper the Friendly Ghost.

We felt Christine deserved a special prize so she has been awarded the most desirable of all prizes (says the engineers - quote, quote) the Booby Prize.

The Wasted Summer Award goes to 571 particular members of the math faculty who in lieu of having fun decided to go to U of W this summer.

Actually it was fun, hope you have a good fall. Actually, mathSoc does exist but if your name is on this list mathSoc doesn't exist. Bye Bye, See you next term....

mathsoc

tedious

mathNEWS:

Re: BURLOAF, July 11. Concerning the performance of my chess program, Desperado, against Hiccup. True, Desperado did in some sense beat Hiccup, since at move five Hiccup insisted on making an illegal move. However, upon closer examination, the problem turned out to be a compiler bug, and upon its correction, the program ran correctly. The cause of Desperado's CPU time problems has also been rectified, and a rematch was played on Monday July 8. This game ran to 68 moves (the longest either program has ever lasted), at which time Desperado had taken all of Hiccup's pieces, and had 3 queens and a pawn of its own. For 11 of the last 14 moves, Desperado had at least one mating move, but could not recognize it as such. The game was eventually drawn by repetition of position.

In last week's mathNEWS the impression was left that either I am some sort of Wunderkind, or that the authors of Hiccup were of dubious intelligence. I feel most uncomfortable about being the instrument of any such implications about Hiccup's authors (after all, they are my friends), and I hope that in the future the columnist that writes BURLOAF will be more considerate.

Hiccup was written (as I understand it) as a vehicle through which to learn about what one might want to do if one is writing a chess program. It was never intended to play competitively, and so uses many unorthodox and unproven techniques. Desperado, on the other hand, is a

classical Alpha-Beta tree searcher. The Alpha-Beta technique is widely known, and its capabilities and limitations are well-understood. This alone is enough to explain the (marginally) better performance of Desperado (as well as its inability to find mates on the move).

Tom Duff

milky way

mathNEWS:

Around the campus are coffee machines with a big knob. There are 12 positions on the knob but only 10 things you can get like coffee, coffee with sugar, etc. If you put the knob to the position with nothing (straight up or down) and put in 15¢, what will you get?

Maybe one of your staff could look into this and report back via your journal. I would find out myself, but I don't want to lose the 15¢. You might only get hot water, or only a cup or hot water with no cup, or extra cream and sugar but no fluid.

Rob MacLachlan
1-B Co-op math

P.S. I've also always wondered what coffee and donuts would do if you gave them a dime for a coffee, and then took the cup, and put no coffee in (or just a little bit) and then filled the cup with sugar cubes and left.

P.P.S. I put 15¢ into a candy bar machine and pulled for a Denver bar. The machine gave me a Rally bar. Is this because of a jammed piece of machine or because the guy who stocks the machine ran out of Denvers filling up the slot for Milky Way bars?

mathNEWS-- is a news weekly (every other week in the summer) published at the University of Waterloo, Waterloo, Ontario, Canada. Printed on campus at Graphic Services, mathNEWS is financed through mathematics society fees. The views and opinions expressed herein are the sole responsibility of the mathNEWS staff. We welcome your letters and submissions and we can be contacted at mathNEWS, M&C 3038. Our weekly deadline is 4:30pm, Tuesdays, with production that evening in M&C 3011. Feel free to drop in. Circulation this issue: 500.

It is now 1:30pm..... a mere 20 hours after we started.....the Honeywell bouncy self..... This is our last regular issue..... we still have a frosh issue which will be put together Friday nite, with leftovers fitted together on Saturday(???) or Tuesday(????)..... since this is our last regular issue we'd like to thank all those who helped out in their various ways on the issues over the term....with special mention to the people at Graphic Services for the swift turnaround they gave us..... to Ingrid Spletstoeser for her excellent reporting and typing.....to John Peebles (who will be leaving U.ofW....finally!!!) for his efforts in making mathNEWS what it is ---your talent will be missed in future issues.....

We now have a mailbox....we'd like to thank the people involved in having it mounted---we really did appreciate the new paint job....even though we didn't ask for it.

We'd like to thank several people who supplied us with several articles and/or assistance this issue.....

Jim(noread)Parry, J.J.Long, Paul Armstrong, John(mud)Waiten, and Judy McMullan (for passing us the word).

Our staff this week our staff consumed 4.75 donuts and poisoned themselves with quantities of coffee(?????) and as a sideline plotted the Phantom's pitcher(picture). They were DON HALL(still here at 2:15pm); DAVE BROWN(I decided not to come); MARK(ever hear of the waterNEWS tapes)SHIELDS;PAUL(canireadyourpassword?)LEAR;PETE(with stars in his plotter)RAYNHAM; INGRID SPLETTSTOESSER(well...just one donut); JOHN(Friday nite??) PEEBLES; and DENNIS MULLIN d

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