Debug Gets Worse

HOW LONG CAN WE WAIT?

Running a debug job became a nightmare this week as the turnaround crept from a barely tolerable thirty minutes to an unbelievable two and a half hours. The weekend, hoped by many to be a respite, saw no relief, as over thirty-five thousand jobs were processed by DEBUG. So desperate were students to complete assignments that many volunteered to operate the DEBUG terminal past its midnight closing time and in fact the lineups continued until the early hours of the morning with students operating the equipment.

On Monday, the situation became the worst in the history of DEBUG. Many students waited two hours before their decks were read and some students reported standing in line for as long as _four_ hours. By midafternoon the situation had become so critical that it became necessary to disrupt Math 132 tutorials in progress and use their card-reader and printer to process as many jobs as possible. Faculty member Rod Cooper and 2nd year student Richard Devitt pitched in and operated this service till nearly midnight, when hardware failures forced its closing. Before nine o'clock the main DEBUG service collapsed completely. The Computing Centre, in a desperate bid to catch up with the backlog of jobs, accepted decks from anyone in line and then closed the DEBUG doors. Students were asked to return in a few hours to pick up their jobs. Unfortunately a machine failure lost all the jobs that had been read so that they all had to be resubmitted. This caused greater delays and many students gave up waiting for their output. So serious was the situation in the Computing Centre that Professor Dirksen, the Director of the Computing Centre stayed till after midnight helping to run DEBUG jobs himself.

With the long lineups, the proximity of final exams, and the urgent need to complete assignments, emotions have run very high during the past two weeks. Blame has been laid on every doorstep. Some people argue that WATBOL is the curse, others that the sheer number of first year students (over 1100) are the cause of the

math NEWS

blood bowl

MATHEMATICA VICTORIA

The jocks met their Waterloo last week as, in the bloodiest battle ever fought on this campus, Mathematics captured the coveted Blood Bowl. In doing so, we helped make this edition of Circle K's blood donor clinic a rousing success: an all-time record total of 1123 pints were collected! 12% over the 1000-pint goal, and a full 273 pints better than last year's total. On Thursday, in fact, the 413 pints collected exceeded the absolute maximum capacity of the clinic (350-375 pints), a truly remarkable achievement - all the more so in view of the fact that some of the volunteers were unfamiliar with the Red Cross's new credit card identification system.

Special condamnation should go to the faculty and staff of this university, a bloodless lot who turned out in truly staggering numbers - fully 1.04% showed up, setting another record of sorts. Mind boggling.

Anyway, the Blood Bowl is back with Mathematics, where it belongs, after a two year stay with Human Kinetics and Leisure Studies (the jocks). Any year now, we'll have it engraved and displayed, so Mathies can be reminded of their faculty's proud record in blood.

Results by faculty below:

Faculty	Enrollment	#	%
Mathematics	2175	288	13.60
H K & L S	877	118	13.45
Science & Optometry	1699	167	9.83
Enviromental Studies	1114	108	9.69
Integrated Studies	75	7	9.33
Engineering	1668	149	8.93
Arts	1994	130	6.51
Faculty & Staff	2700	30	1.04

Thursday's 413 pints - all time high day
Overall 1123 pints - all time high record

PETITION

A petition concerning the inadequacies of the computer facilities is posted on the door of Mathsoc, M&C 3038. Although the petition fails to include first year students, such signatures will be taken into account when the petition is presented.

problem, others still that upper year classes are using the computer far more than previous years, others feel that too many different assignments were all due at the same time or that the recent assignments have been too large. Some students complain that faculty members do not understand the student's problem. Many students would like to know why the Mathematics Honeywell machine has provided no assistance in alleviating the situation.

Some weight can be attached to all of these criticisms as they are all partially valid. The fact remains, however, that it should be possible at our university to do the computing required to complete courses. We should keep in mind that we are supposed to be the leading school in computer science in Canada. As it now stands a /370 model 158 is still being considered but no firm order has been made. Part of the delay is being caused by the question of whether we should order more equipment from IBM or look towards another manufacturer such as CDC or Honeywell. It is unfortunate that this issue is being clouded by personal preferences at a time when it is the students who are standing in line for hours due to the lack of facilities. This is not the time to be arguing as to what manufacturer should be supplying the equipment. What is needed is a machine that can be brought in to absorb the load on the /75; not one that will take months and months to convert to or one which is deficient in some of its processors or unable to run DEBUG. We should be careful that we are not clouded by the glamorous hardware features of one machine or the cost-effectiveness of another for if it is unable to run the processors which are currently bogging down the model 75 then the machine has no capability to relieve our situation. When the university is in such desperate financial straits we cannot afford to gamble. We must spend the money, which is available, wisely, on a machine which relieves our current problem now; and will provide good growth characteristics for the future. If we fail in this task we will be left in a situation where we do not have the correct machinery to handle our load and will not have the financial resources to make a second attempt.

Although we can sympathize with the burden of making this decision and fully realize its implications, the students have literally waited long enough. The decision, whatever it is, must be made now. The committees have met long enough, the faculty has argued long enough, the administration has waited long enough, and the students have stood in line long enough. It is a sad reflection on this university that it exists for the students, yet in the final analysis it appears that it is the students who will suffer while the bickering continues.

SYSTEM ?wait

Gleanings From A Mathie's First Term

Now I know why the DEBUG newsletter is called "LINEUP"

Based on this term's experience, you can be sure that any information you are given won't be out of date until at least one week before you get it. There are some notable exceptions to this rule, namely those cases (cal,antical) where it's just too late for you to use it.

Some one has suggested that music be piped into the DEBUG room. Right now the "Funeral March" has the number one spot locked up.

And then there was BUS 111.........

IBM= It's Better Manually= Idiotic Bumbling Maniacs= Inordinately Breakable Machinery

PROCEDURE DIVISION.
    MOVE COBOL TO GARBAGE-CAN.

Gauss lives! DEBUG dies.

The only difference between BUS 111 and BUS 121 is 10.

Due to popular demand and the coming of the festive season, the DEBUG room will sponsor 15 second turnaround for two 24 hour periods, Dec 25 and Dec 31.
                Merry   Christmas
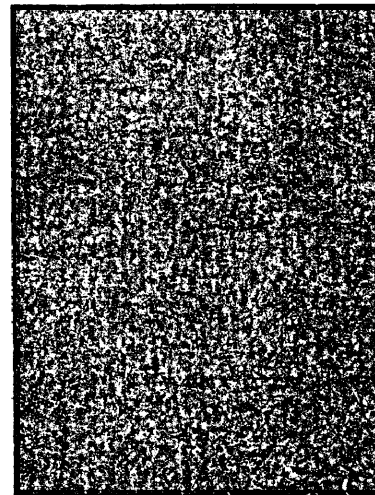
Computer
Rationing?

Were you
number 517??

CINDY:
Our Apologies

BIG C+D SALE!

This, the final week of operations of the C & D stand has featured an (almost) giveaway sale. Throngs of hungry mathies (some heavily armed) descended on the stand to gobble up 450 dozen donuts and 1050 kaisers, while drinking more gallons of coffee than the U.S.(presently) drinks Middle East oil.

(C&D, cont'd from previous page)

C & D manager **Paul Armstrong** reported that gross revenue is down $125 per day--indicating that, as mathNEWS previously reported, the stand was actually <u>making</u> money all term. "I'd like to apologise to all our patrons for my mid-term financial error...which resulted in the bulk of the profits", commented Armstron, "But I hope that this sale will make up for it." He also mentioned that new coffee pots to replace old workhorses will greet workers in January, and that prices next term will most likely be 10¢ per donut, 10¢ per coffee and 40¢ per kaiser.

RUMOURS & RAW DATA

(1) Did you know a system exists on the debug terminal for listing ALGOLW or SPITBOL error messages? Well, you do now. It's called EXPLAIN, and it's run with either of the following job cards:
```
$JOB    EXPLAIN D0000U0W,SPITBOL
$JOB    EXPLAIN D0000U0W,ALGOLW
```

(2) Did you know a clever graphics terminal is hidden away on the sixth floor? It's owned by AA&CS, but who among you has used it? Try "explain plotting" or "explain plot conographics" on the 'Bun for more information.

(3) The MFCF has just obtained the source for the SIMSCRIPT II.5 compiler so we can modify it to run interactively under TSS.

(4) Did you know you can write computer art, plotting output on the Computing Centre's VARIAN STATOS 31 (curiously located on the third floor - it was paid for by grants but given to the Computing Centre (!)) See "explain varian"

(5) We have a chess-playing program, sponsored by the Computer Science Club entered in Saturday's chess tournament.

(6) The MFCF wants to hire a part-time technical writer and editor, perhaps over Christmas. Three things are required: a Uniwat Time-sharing pocket guide to replace Honeywell's (including ROFF, QED, TSS DRL's etc); an update to "A Taste of Honey"; "How-to" guides for such things as FORTRAN, ALGOL, debugging etc.

(7) During the month of October, 21,250 Math 240B debug jobs were run! With about 500 students, that's an average of 40 jobs each. Some students had over 200 jobs run, and one track star had lined up 282 times (masochist!).

(8) The Computing Centre has all the raw data for anyone who wants to find out special things about debug user's behavior (like, how much of it is WATBOL, anyway?)

(9) The phantom doesn't tell you everything.

HO! HO! HO!

On Monday, December 3 at 8:00 P.M., Mathsoc presents its second annual Christmas party for Mathies only. (stamped ID's) The place? Where else but in Village II's Great Hall.

Records will propagate a variety of musical sounds including your favorite reindeer rhapsodies.

Mistletoe will be in great abundance along with the token supply of liquor that makes these occasions so festive. For the young chemist, a mixture of rum and egg-nog will be supplied for a nominal fee of course.

Presents will be given out by none other than Santa Claus, who will be aided by fleet footed elves. If you show up you have a chance of receiving a present. A fireplace complete with burning logs will set the mood if the mistletoe routine does not. (ambitious souls are encouraged to bring their own!)

Mathsoc would appreciate help with the decorations. Any reader that is humanitarianly inclined or wants to obtain tickets for the function should amble by M&C 3038. HO! HO! HO!
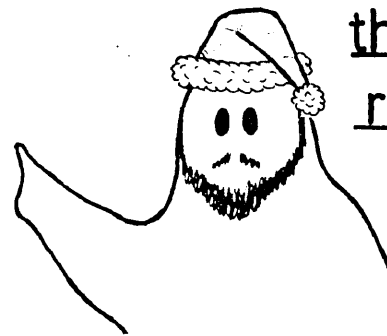
the phantom reports....

Well, not much is happening this week (as usual). But, it's bad news when there's no bad news (?), so...

Is it curtains for the Red room? Is HONEYWELL giving you the blues? Are you plagued with tired core?? Is L6 driving you buggy??? Relax! Go see a movie... about L6. They will be shown Dec. 4 and 5 in 2065, Dec. 6 in 3003 at 7-9 p.m. Bring your own popcorn! (Anyone interested in producing similar movies please see Rick Beach (MAIL RJB) ext. 2192.)

Speaking of bugs (specifically, the one prefixed by "DE"), there is also a movie for you diehards called: "From Here to Eternity" or "How to Run a Job on DEBUG". Cast of thousands! (Economics majors are warned <u>not</u> to try to cash in by selling survival kits to our DEBUG users. (it has already been done.))

Status of our terminals and the ever-elusive APL update: run=(nogo).

TO J. DUVAL: go to 8

TO THE PHANTOM FROM HIS GHOSTWRITER: Merry Christmas!

FROM THE PHANTOM TO HIS GHOSTWRITER: Bah! Humbug!

TO ALL REAL PEOPLE: E-day is coming soon...

This gridword was created by...DAVID TOOTILL...

NAME_____ PHONE_____

Only 5 correct solutions(2 were late) out
11 entries resulted in the team of

MIKE NARDUZZI & RICK DALMAZZI
being picked to receive one free T-shirt.
Correct solutions also came from
GREGG Andrews, MARK Cluthe, STEVE McCabe
and MARGARET Smith.
Special mention goes to Jim M. who managed
to make 7 mistakes. Corect solution is on p9.

As a special Christmas treat we have two
gridwords for you. There will be two T-shirts
awarded. One to the lucky winner of each
gridword(ie. there will be 2 contests).
All you have to do is fill in the right
solution(you don't have to do both), add your
name and phone number and have them(it) in
the mathnoos file by 4pm tuesday dec 4th in
MC3038 or in my hands(D.Mullin,216-S4,Village1).
Since I am in co-op I will be retiring as
gridword editor until the summer of'74. I
will,however, be preparing a number of pages
for the first few issues of volume 4. So if
you have a gridword just put it in the
mathnoos file or give it to me(with your
name and phone number). Remember if its
accepted you get a free T-shirt.
Have a merry Christmas.   Dm

WARNING: Many of the clues are not straight
definitions,but are puns,anagrams,plays on words
and other perversions of the language.

>>>>>>>>>>>>>>>>>ACROSS>>>>>>>>>>>>>>>>>>>>>>>>>>>

01 could you keep food in back of a tram? /4/
05 warn /5/
10 tidy /4/
14 distant letter /4/
15 the raven added more /5/
16 this is the(french) term for
   Britain,for example /4/
17 attempted /5/
19 officier's secretary /4/
20 what you get after separating
   christ from his birthday /4/
21 forbidden fruit /8/
23 modern kind of pig /6/
25 an enumeration /4/
26 not quite,almost /2,2/
27 small version of counselling
   services /6/
30 what he does when he tells
   you there's several lucky
   stones to kiss /8/
34 making inoperative remarks /5/
35 what happens to an almost-
   failer /4,1/
36 chop off /3/
37 rim /4/
38 makes things hot for Eatons /5/
39 conceal /4/
40 is bobby hull a public
   relations officer? /3/
41 an intelligent club /5/
42 referenced /5/
43 why did the chicken cross
   the newspaper? /2,4,2/
45 some men would like to sue
   germaine greer /5/
46 my french girl-friend /4/
47 evil incarnate in a computer
   program /4/
48 initialized /6/
51 kissinger wants these in russia
   without canvas /8/

55 travelled on a horse/4/
56 between ore & steel/4/
58 a friend of monty
   python's /5/
59 live perversely/4/
60 people who produce
   the non-zero portions
   of bit strings /5/
62 you'll need an original
   thought for this one/4/
64 uncommon nostrils/5/
65 most mysterious partof
   the village ???! /4/

|||||||||||||||||||||||||||||||||||||DOWN|||||||

01 figure this one out? /4/
02 black hair style /4/
03 royal water? /4/
04 edge of the tundra /8/
05 article that's almost a
   girl's name /2/
06 jumped /5/
07 the ends of the devil/4/
08 socialist colour /3/
09 illegal entry /8/
10 captain america's gasoline
   (you can't fuel all of the
   people all of the time) /6/
11 engineering society's
   mathematical ignorance /4/
12 i'd hoped i wouldn't have
   to use clue 11 /4/
13 examination /4/
18 what he was doing before
   he died /5/
22 request /3/
24 i'd like to be french
27 slumbered /5/
28 water power

50 within I bled. it had changed
   my stuff /4/
51 one who does /4/
52 mixed data from a trumpet /4/
53 a mouse scratches out his
   existance: she screams at it/4/
54 chair /4/
57 part of the double helix /3/
61 100 guards(not blackshirts) /2/

>>>>>>>>>>>>>>ACROSS>>>>>>>>>>>>>>>>>>>>>>
63 collections /4/

||||||||||||||||||||||||||||DOWN|||||||||||||||||||||||

29 what a formal proof has in common
   with a corpse /5/
30 animal /5/
31 is this what we should call mathies,
   the university cream? /5/
32 swiss song from a mountainside/5/
33 rushed /4/
35 what was in aladin's lamp/5/
38 some call it treason /8/
39 what they said to prince charlie
   after the 3rd toke /2,6/
41 i'd walk a million miles for one
   of your smiles /4/
42 references /5/
44 simple,spanish articles support
   a picture /6/
45 that's a great deal to believe:
   his wife a pillar of salt? /3/
47 you might have to mix up some
   green for rustic painting /5/
48 familiar term for Telegdi
   (or Tricky,for that matter)/4/
49 ramble /4/

4

INTROSPECTION

Having reached our objective of ten issues for the term, this final mathNEWS thus brings volume 3 to an end. Hence we retain the distinction of being the only news weekly on campus that boasts an unpaid staff of volunteers.

Hopefully over the past term our efforts have served to add something to your Fridays, whether it be general information, a few laughs, upcoming weekend happenings, or even a gridword to keep you occupied during a late Friday afternoon class. In fact, response to our gridword has been overwhelming this term and we have responded by awarding $50 worth of math T-shirts as prizes. You'll have the same opportunity next term to win by either solving one of our gridwords or creating one of your own and having us use it.

There is one principle that we have attempted to adhere to, in this, as in past terms. That is, if mathNEWS is to be a newspaper or newsletter, it should be just that--a majority of our pages are to be dedicated to news, and opinions, with a couple of pages reserved for the gridword, theorem, and the like. You can appreciate what a task this must be, to fill 6 of 8 or 10 pages with news of one faculty, every week. To this end, we have kept close contact with the math society; have put mathNEWS on a number of mailing lists including all math departments, the Career Planning and Placement Centre, Co-ordination, and the Computing Centre; encouraged math reps on all and the Committees, boards, clubs, etc. to keep us, and you, informed; asked all mathletics teams to keep us up to date on sports happenings; and have asked you to keep our mail slot full. Needless to say, we are always open to suggestions on how to keep you better informed.

Perhaps the only major problem that we have faced this term is one of a shortage of copies each week. This term we have printed 1000 copies per week to serve a math undergrad population of over 2000, not to mention several grad students, faculty and staff. Last Friday, for example, all 1000 copies were gone shortly after noon. Actually, the situation was so bad last week that W.F. Forbes, Dean of Mathematics, called us in mid-afternoon requesting a few copies. However, at that point we could not find a single copy. Three of us started on the first floor and searched all the classrooms there; checked all the classrooms on the other floors; looked in the DEBUG room, programming rooms and key punch rooms on the second floor; searched the third floor lounge, Honeywell room and APL room and yet could not find a single mathNEWS until we checked the study rooms on the third floor. There we managed to find one crumpled copy. However, this turned out to be a copy from the week before! Hence, we then decided to sacrifice one of our copies and presented it to the dean.

Since we are obviously not printing enough copies, you might ask why we don't print more. Well, this brings us to the question of money, your money, in fact (assuming you are a math undergrad and have paid your society fee of $2.50 for the term). This copy of mathNEWS that you are reading cost you approximately $.000034. How is this figure arrived at? Well, the math society, for this year, has a budget of $11,000 based on your $2.50/term fee. In this year's budget mathsoc allotted $1500 for mathNEWS or $750 per term. This is approximately 13.6% of the budget (actually it is much less due to various grants from the Federation of Students, profits made from social and other events, etc. but we will work with 13.6% figure). Now, 13.6% of your $2.50 amounts to 34¢--this is your contribution to the 10,200 total copies printed this term, or 3.4¢ per issue. Assuming you pick up one of the 1000 copies, you have paid 3.4¢/1000 i.e. $0.000034 for that one copy!

Since we are on the subject of money, here is exactly how we have used our budget this year:

mathNEWS is printed right on campus at Graphic Services. Our printing bills for the first 9 issues amounted to $567.11 or an average of $63.01 per issue. We bought $43.50 worth of supplies (pens, glue, tape, etc. plus the occasional pizza, subs, donuts, etc.). Also we awarded $49.40 worth of prizes (T-shirts). This totals $660.01, leaving $89.99 to cover the costs for this tenth issue. So this is how we have spent your 34¢ portion of your $2.50 society fee. We welcome your comments on this.

Unfortunately, end of term also signals the departure of co-op students and thus our staff will be somewhat depleted next year. We will expecially be in dire need of typists, so if you find, come January, that you have a couple, or more, hours to spare on Tuesday nights why not give us a hand? Also, there are various other tasks that need to be done aside from typing, so why not consider joining us for next term? Notices of our first meeting will be posted in early January. Watch for them and consider helping out.

So, we'll just conclude by wishing everyone best of luck with upcoming exams and look for us in January when mathNEWS, volume 4 hits the stands.

rep reports

The long-awaited open-fire campus centre forum was held Friday with about 15 board officials and members and about 10 spectators present. I wasn't expecting very many people at this informal meeting in Room 135.

Questions were asked concerning problems with turnkeys and how they are hired. Ed Knor and Lloyd Brown discussed the composition of the board and its functions and policies. Susan Philips discussed her job as coordinator and her job classifications.

The board members, officers, some turnkeys and new members were introduced by me. Perhaps a list of the new board will be distributed in January.   J.J.Long

C. Springer

PROF of the WEEK

Professor Chris Springer was born in Montreal on Nov. 13, 1942, grew up there, and went through McGill University. He obtained his B.Sc. in mathematics in 1963, and his M.Sc. in statistics in 1965. He was married in 1966 and now has two children -- a four-year-old boy and a two-year-old girl.

His wife, who is a librarian, saw his office once. Being an organized type, she couldn't stand the chaotic mess, and carefully rearranged things. For weeks after that, he couldn't find things that he needed. Fortunately, he has managed to keep her clear of his office since, and is comfortably buried in stacks of memo papers, etc.

Professor Springer is interested in outdoor activities: he enjoys hiking, snowshoeing, and particularly bicycle touring (they cycle-camped 2700 miles for their honeymoon). There is also gardening (organic vegetables), classical music, Scottish country dancing, and ecology -- simple living.

When Prof. Springer graduated from McGill, there was a shortage of university teachers and there was an informal method of obtaining positions. He wrote to various universities and asked them if they needed someone. He liked U. of W. and Waterloo, so he decided to come here: he arrived in 1965. At the time, most professors obtained their jobs in this manner.

He was a Don in the village that year and at St. Paul's the following two years. That year, when he was in the Villages, was their first year of existence, and the role of the Don was not really defined. He was partly counsellor, partly policeman. He got to know most of the students, for the whole residence consisted of about 400 persons. Being in charge of a house meant he was responsible for about 40 people. Those years in residence gave him some of the experience he missed by living at home while going to McGill.

Prof. Springer has taught first and second year courses in algebra, calculus, actuarial, but chiefly in statistics. He really enjoys lecturing when he can get a class to participate. In fact, there are days when he'd be glad to teach for free-- if he could afford to! However, there have been days when he wished he'd stayed in bed.

In his first year of teaching, a student in his first year algebra class asked him what the difference was between a prolate and an oblate spheroid. He said he'd never heard of either before. After he got back to his office, he discovered his next algebra lecture was to be on prolate and oblate spheroids! He sure slunk into class to give that lect re. It still bothers him when he feels he's "blown" a lecture--but at least he makes

sure he's prepared further in advance now.

Prof. Springer has been on the Math Admissions Committee and is now on the Timetable and Standings and Promotions Committees.

The rest of this article is just a summation of several "thoughts on miscellaneous topics" that happened to come into the professor's head, and are not necessarily listed in order of relevance or importance.

Professor Springer feels that large institutions tend to become impersonal. It is important to work together as fellow human beings rather than another object to be processed. He thinks Waterloo does pretty well in this respect considering its size.

He has some doubts whether what goes on in class is really education. Learning to regurgitate facts when exams roll around isn't even good job training, let alone developing the ability to think clearly in "real-life" problems. Many students(at least in second year) get so tied up getting assignments done that their education suffers (not that he advocates not doing assignments).

While he often didn't agree with the aims or methods of the radical students of a few years ago, he's afraid the pendulum may have swung too far the other way now.

Prof. Springer feels that generalizations are often dangerous, and he's been generalizing. He'd rather talk with people as individuals than hang labels-- "students", "women", "black", etc. -- on groups of people. He also hopes that others can see him as another human being rather than "Faculty"!

Many thanks to Prof. Springer for his co-operation. He ended up writing most of this article himself, and I only had to change to third person with a little paraphrasing!

A note to my reading audience:

This is my last "Prof" article, as I will be going out on co-op. mathNEWS would greatly appreciate having a volunteer writer for this weekly column.

You will find that it only takes one to two hours a week of your time, as most professors are very co-operative.

BIRD HUNTING

Have you ever had the experience of signing up for the ever-popular ME100 only to find the section full?

Well, Dr. Fryer, associate-dean of mathematics, has informed mathNEWS that something has been done to remedy the situation.

Next term should see the birth of a new course Mthel 100. This course is designed to be an equivalent of ME100 but enrolment will be on a mathie first basis. Although listed as a math elective, the course will count as a half credit, non-math elective. The course is to be given by Barney Lawrence (who also teaches ME100) on Mondays from 1:30 to 3:30 p.m. The sec-

tion limit is 70 students.

Here is the official course description:

Mthel 100: <u>Commercial Law for Mathematics Students</u>. Commercial law. Agency. The law of banking. Real estate law. Insurance law. Partnership law. Company law. The law of intellectual property.

It should be noted that approval for this new course must still be given by the senate in December but passage is said to be almost certain.

HEY THIS SWILL IS GOOD! WHAT'S IN IT?

RECYCLED COFFEE AND DONUTS.

NOW PICK THAT UP!

Tonto.

THIS $\sum$ THEOREM WEEK'S

<u>REQ'D</u>: To prove that any point P, arbitrarily selected inside a circle, is on its circumference; i.e., the circle is empty.

<u>CONSTRUCTION</u>: Produce OP through P to Q such that $OP.OQ=r^2$, where O is the centre of the circle. Denote by R the midpoint of PQ, and construct a perpendicular to PQ through R. Let this line cut the circle at U and V.

<u>PROOF</u>:

$$OP = OR - RP$$
$$OQ = OR + RQ$$
$$= OR + RP \quad \text{(construction)}$$
$$OP \cdot OQ = OR^2 - RP^2$$
$$= (OU^2 - UR^2) - (PU^2 - UR^2)$$
$$= OU^2 - PU^2$$
$$= OP \cdot OQ - PU^2 \quad (OP.OQ=r^2)$$
$$\therefore PU = 0$$

therefore, P is on the circumference.

$$\star\ Q\ E\ D\ \star$$
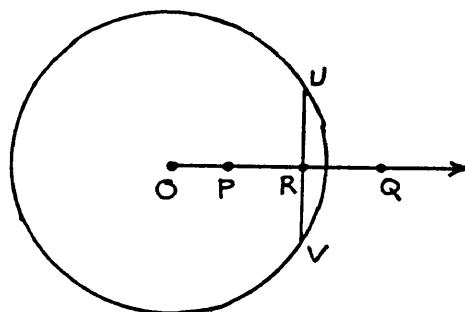
- thanx to Steve von Gemminger

YDAFIBWGITYA

You didn't ask for it, but we're giving it to you anyway. We had two messages in the mail (again both from DCONROY); one from "santa.claus" (who notes that "UF JOMHA-" (in QED, of course) gives the same effect as last week's program); and one from "ann.landers" who complains that the phantom's first words could not be in lower case (OUR APOLOGYZES!) and wonders why "!" was used instead of "!". The reason is that a long time ago (once upon a time, even), mathNEWS used a different typeball to run their text off. "!" printed as a "1/2" sign. The phantom's snort of exasperation becames less and less common as our typists were slowly conditioned to using "!". Thus, we thought it would be only fitting to use "!". In ending, Brumal Saluations to all!!!!

math ETICS

hockey

REG. MATH SEEKS FIFTH STRAIGHT CUP

This week marks the advent of the fall competitive hockey play downs as twelve teams will face off in pursuit of the cherished Bullbrook Cup.

The title race appears to be narrowed down to three powerhouses of intramural hockey, as only Kinesiology and Enviromental Studies can be called legitimate contenders for the crown regular Math has held for the last four terms.

With teams ranked according to their record in the seven league set-up, reg Math, Kin, Env. Studies, and Village II West receive byes into the quarter final by virtue of superior performances. As a result, reg Math commenced play last night against the winner of the Math Conquistadors-St. Jeromes contest in a quarter-final battle.

Semi-finals are slated for Monday night, with the final on Tuesday evening.

Play-off Schedule
Monday December 3 Moses Springer
 11-12 pm Reg Math or winner E vs winner G

Tuesday december 4 Queensmount
 9-11 pm Championship final
 *   *   *   *   *   *

CONQUISTADORS CLAIM WILD-CARD BERTH

John Burnside stopped Lower Engineering cold Thursday night with a splendid goaltending exhibition to lead Math Conquistadors into a wild-card playoff berth.

The 2-0 verdict over the Lower Plumbers was Conquistadors 4th in five starts and clinched second place in league F, behind Environmental Studies.

With nothing on line, Conquistadors faced their charitable reg Math big brothers in a Sunday night tussle and forged an early 1-0 lead on a goal by Mike Tustian. However, reg Math took advantage of a manpower edge to whip home nine unanswered goals to post a 9-1 verdict. The ninth goal was hotly disputed by the Conquistadors, as they claimed that time had run out before the puck entered the net.

Reg Math's scoring was paced by defenceman Fred Vivash and winger Jim Barton who each shot two goals. John Ilohmeir had his first of the season, and Tom Wilson, Brian Nowak, Don McLean and John Gatway added singles. Leading scorer Dean Mucci was absent from the line-up with a case of blood poisoning, but he is expected to recover in time for the playoffs.

basketball

REG BOWS TO T.O.

Reg. Math bowed out of the playoffs in the first round on Sunday night. T.O. Trotters were the expected winners of the game by a 98-26 count.

The game was no contest as the Trotters ran all over the mathies in a fashion similar to the one which gave them an undefeated record in the "A" league. Math managed only two wins in five games, both by narrow margins in the "B" league.

As of now there only 4 teams left, ranked first, second, third, and fifth. The semi-final games start at 3:30 and 5:00 on Friday. The final game on Monday is expected to be a rematch between St. Jerome's "A" and the T.O. Trotters. The two teams tied in their regular season meeting.

Math's scoring was handled by Dominic Jansen, Bruce Pearson, Norm Macdonald and Gregg Andres.

Making the playoffs was a great accomplishment for the team this term, so thanks to all who helped by playing, and come back next term.

CO~OP DEFAULTS

The co-op basketball team showed up at 8:30 last Sunday for their game. Unfortunately, through a mix-up with the intramural people, game time was 7:30, so the team lost by default.

WANT SOME MORE SUMMER COURSES?

In response to a feedback letter which appeared in mathNEWS last week, a sign-up sheet has been posted outside of the math lounge. If the math course you want this summer isn't scheduled, you can sign up for it. If enough other people register the course may be added. So far students have requested 454A, 372B and 352B.

Grid (filled, rows A–P × columns 1–15):

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	M	A	R	I	K	A	■	G	R	A	T	E	F	U	L
B	S	P	O	O	R	■	R	A	R	E	■	R	■		
C	■	S	U	G	A	R	C	A	N	E	■	C	O	S	T
D	S	E	P	I	A	■	R	N	■	A	L	A	■	E	U
E	C	■	■	L	O	O	T	■	G	A	R	T	E	R	
F	A	T	T	N	■	W	E	■	W	R	I	N	K		
G	R	■	m	a	t	h	N	E	W	S	■	O	R	■	E
H	C	A	■	S	■	I	S	■	H	I	S	T	O	R	Y
I	E	■	T	H	E	E	■	B	E	S	T	■	■	E	
J	■	T	E	■	A	■	A	B	A	T	E	M	E	N	T
K	T	O	A	S	T	E	R	■	T	E	A	C	H	E	R
L	A	M	■	P	L	A	Y	G	I	R	L	■	■	A	
M	T	O	G	A	E	D	■	E	L	I	X	I	R	S	
N	A	P	E	R	S	O	N	■	S	Y	N	E	■	O	H
P	R	■	L	E	S	S	E	R	■	G	■	B	E	Y	

This gridword was created by DENNIS MULLIN. Why don't you create one?

As a special service answers and the names of the winners will be posted outside of the 3rd floor lounge sometime on Weds/Dec/5/ie. the last day of classes/.

We will also publish the results in issue 4.1 of mathNEWS.

If you want to be gridword editor next term then drop around to the January organizational meeting.
GOOD LUCK !!!!!

ACROSS

1b debug terminal(syn)
1k prof McGee is our champ
2b πr² of a circle
2g of(fr)
2j howdy(bkwds)
2m an independent female
3b Halifax's mother
3e little tom's grave
4a ever drink this cola
4d company that make's golf ball holders
4k one of 2 green areas on a roulette wheel
4n comrade
5a mathematician's favourite dessert
5e redundant definition of one's behind
5n do great on a test
6b UW students frequent them
6g tense
6l fortran conjugate
6o foe without me
7b algebra mark fantasy
7d not bad
7g to exasperate(spelled sideways)
7o algebra mark reality
8a excuse
8g baby dips
9a lots of trading done here(abbv)
9e he kicked Argos into playoffs
9l female hog
10d keep your ears warm
10j last of the 26
10m Pele's favourite appendages
11a he is immortalized as a student servant
11m non-prejudiced cookie
12a not me
12e classified
12k constant
13a if f'(x)=0, f"(x)<0
13g Warriors defeated this George in the Nesmith
13o a cyclops has one
14b between rationals and complex
14d no problem
14i this statement makes mainlines and subroutines
15b what you must be if you've gotten this far
15l minute <____< day
15m some students have a ___ for ___(same wd)
16c superman's pal and UW accounting prof
16j yes,please
16k example
16n if you don't ___ by the end of the term, you're an exception

||||||||||DOWN||||||||||||||||.

a4 being __ for a game used to be a spiritual thing
a8 if you have a heart, you have _____
b1 after year's of village food, one might consider joining them
b11 see 14b
b13 jackie's heart-trob
c1 reading,pennsylvania, b&o,etc.
c6 first of the 26
c8 that is
c13 bad brand
c15 ≠ yes
d1 outeast(abbv?)
d6 steal
d10 over-the-shoulder football catch
d14 easel(abbr??)
e01 prof graham and family have a great time at these
f03 ___ haw
f09 tested for intelligence
f15 compass direction
g01 multiple choice
g15 prefix or suffix
h01 locker-room language makes you this
i05 eruption after a Golden
i11 adam's family organist
j02 see 2j
j05 employ
j14 alternative conjugates
k01 profs do it a lot
k11 pretty low
m01 yourself,myself
l03 ladies like them
m08 2/3 of a fortran no-no
m13 bashful
n01 simile partner of like
n04 ma's better half
n08 he did a no-no
n14 new(prefix)
o04 teeny-bopper heartbreak
o10 doubly(pun)
o15 compass director
p01 home of b-ball magicians
p11 that hurt!
p10 do this to your seeds

NAME_____

PHONE_____

THIS GRIDWORD IS BY RICK DALMAZZI

9

CAPITALIST SOCIETY

At this past Tuesday's mathsoc meeting, council again found itself in the familiar position of having lots of money but being hesitant about using it.

Jim Parry, president of the computer science club, requested funds to purchase binders for recently donated IBM and Honeywell manuals. This request received much opposition, with some members suggesting that Parry approach the faculty for the necessary finances. However, a motion to grant the club sufficient monies to cover costs was eventually passed by a margin of one vote.

As discussion of the upcoming Christmas party began, a motion was put forth suggesting that mathsoc subsidize the bar. This suggestion was dismissed as involving too many difficulties, and generally not worth the bother. Some members questionned the lack of advertising that had been done, another suggested inviting faculty members. The Great Hall, Village 2, has been licenced for the event, which is to occur Monday, December 3, starting at 8 p.m. There will be no live band, but records will be used because, as one executive member noted, since the party is to be based "on sheer loss, why double that loss?"

Carl Chaimovitz, mathsoc social director, reported on the financial afterMATH of mathweekend. Overall his budget suffered little, expecting an overall break-even money situation. Most events were termed "fair" with the mathie turnout "disappointing".

In other business, mathsoc divided the profits made from orientation between mathletics and mathNEWS. Mathletics received $300 with the remaining $236.61 given to mathNEWS to increase the number of copies per issue next term. John Peebles was appointed official "manager of mathNEWS".

Before adjournment, publicity and publications director Wally Romansky announced that next term free movies will be shown every week on Tuesday afternoons.

FEEDBACK

backwater rebuttal

mathNEWS:

In the article 'Once the Mainstream, Now the Backwater?' published in the last issue of the mathNEWS the author makes the following points:

1) Debug services and other computing services offered by the Computing Centre have been seriously degraded.

2) The IBM 360 model 75 is overloaded and the 370 model 145 is too small too be of assistance.

3) The author implies that University of Waterloo is now a "backwater" since many universities have more and bigger IBM 360's and 370's. For example University of Manitoba has "leaped ahed of Waterloo with a 370 model 158 and a model 165."

4) He suggests that we "desperately" need an IBM 370 model 158.

No one who has used the Computing Centre services lately would disagree with his contention that the service is poor or that the model 75 is overloaded. On this point I agree with the author and am pleased at his concern. The remainder of his points, however, make me suspect the author works for IBM.

The point I dispute most strongly is the author's implied contention that the number and size of computers (IBM's or anyone else's) used by a University is a valid measure of that university's computing prowess or a measure of the service it can provide. There is a long list of extablishments without large computers that provide excellent service, have outstanding Computer Science departments and have high calibre personnel. For example, Dartmouth College has developed a world renowned time sharing system and offers continuing service to over one hundred simultaneous users on a G.E. 635 machine (vintage 1967). This is their only computer and they continue to set high standards of excellence. Money, size and numbers of computers are not good measures of service or competence. The work people provide is a much better one.

On the basis of work performed and on the basis of respect in the scientific community, Waterloo is not in the backwater. The author of "once the Mainstream, ..." should focus his attentions on the specific problem of how to meet the needs of the University of Waterloo and forget about a race to purchase the most, or biggest, or most expensive 370's (unless he really does work for IBM).

I do not propose to consider in detail the reasons for the deterioration of service, or any of the possible solutions. This problem is being considered by the Computer Resources Advisory Committee of the University the University Computing Centre and the Computer Usage Committee in the Faculty of Math. The Final Report of the Task Force on Computing to the President's Advisory Council, Sept. 20, 1972, also dealt with this question. I would like to encourage mathNEWS to continue to examine this problem and suggest all of the as sources of information.

There are some points however which should be mentioned now.

a) The nature of the debug load changed this fall when Math 132A began teaching file processing in COBOL to over 1000 students. This put a larger demand on the I/O resources of the machine and I would guess the average real time per debug job increased dramatically.

b) At the same time, the Computing Centre has chosen to run IBM's VM system on the 370/145 to offer timesharing services to the user community and for their own system development work. I do not know how the community has received VM, but the decision not to use the 145 for debug service (except for limited tutorial use) has not helped alleviate our most critical problem.

c) As to the acquisition of a model 158, we

should be careful to examine why we need a 158 and if this is the machine which will supply us with the service requested. For increased debug service and a lighter load for the 360/75 we might consider cheaper alternatives, such as a 360/65 dedicated to debug. If timesharing is desired we should consider other vendors.

I trust we will continue to see more reporting on these problems in the new year.

L.D. Rogers
AA&CS

many thanks

mathNEWS:

Thank-you for your article last week on the inadequacies of the present IBM DEBUG system. Also thanks to professors Graham, Dyck, Cooper and Watt for the 132A Cobol assignments. Yes, the assignments were a lot of work for me, but look what they did for the university.

They now realize that the system is inadequate and are given a great chance(provided funds are coming) to rectify the situation before Waterloo, once in the forefront of university computers, falls behind greatly and loses enrolment because of this.

J.J.Long

mirth 132A

mathNEWS:

Well, the last Mirth 132A mid-term has come and gone and the university heaves a collective sigh of relief. As you all know, the computing centre services were completely bogged down for almost a week, culminating on Wednesday, the 28th, with the last mid-term.

All 1100 suckers were under the impression that two large WATBOL programmes would have to be debugged before the test, i.e. the output would be used in the exam. As it was they spent countless hours waiting in DEBUG lines with little return on their investment. The output was not needed in the exam, but was collected at the end--presumably for marks. As of presstime the course instructors had not decided what credit, if any, would be assigned.

It was the belief of the Mirth 132 overlords that the students would increase their knowledge of COBOL by doing these assignments. The validity of this argument has yet to be proven. The several students that I talked to were irate over the uselessness of their efforts.

What right have the 132A professors in assigning these colossal time-wasters to the computer system? All faculties suffered because of one course. Hardware problems ensued with the running of so many WATBOL's. Was this just an exercise to show the computing centre that more computing power is needed? The normal job load for a weekend is 2000 jobs but last weekend 3500 were run!

Don't think that your problems are now over because the course is finished. Next year, if all trends continue, the situation will be worse. Complain now and loudly.

HEXAD
73******

cobol to blame

mathNEWS:

I liked your lead article last week. One other thing you could have mentioned is that even when the printers are printing continuously, the line frequently does not move at a "constant walking pace". I blame math 132 Cobol for this, at least partly. A typical Cobol assignment might be a three-step program with each step using multiple I/O units (and of course printing that MONITOR header) and a program listing that is twice as long as a comparable Fortran listing (DATA DIVISION!) and the final result (and maybe one or two intermediate results as well) being a listing of a 100-line file. Granted that 100 lines take only a few seconds to print, wouldn't 20 lines be enough to cover all cases? If the saving in printer time (and scarce CPU time) is multiplied by the number of math 132 jobs that are run daily, the product is appreciable.

Mark Brader

debug nightmares

mathNEWS:

I would like to congratulate you for your fine exposé revealing the reasons behind the decline in our computing services. ("Waterloo Computing Facilities-- Once The Main Stream, Now the Backwater", last issue). I hope this will prompt quick action from the administrators to update our systems.

The lines at the DEBUG terminal are becoming too long. When you have to wait 30 minutes to find out that you've left out a comma, we are in sad shape. Many of us who have been lured to Uniwat on the assumption that it was at least equal to the tops in Computer Science find use of the facilities, namely DEBUG, cumbersome and time-consuming.

These long waits have changed 1 hour assignments into 4 - 6 hour nightmares. It discourages some people from using the facilities more and even scares some people away completely. Surely this is not the Computing Centre's master plan!!

Wasn't this problem forseeable? Now is the time to improve facilities!!

Mike Cooper, MATH 1

rinkrats vs computerats

mathNEWS:

I have another question about the proposed 'arena'. After reading the blurb about our 'excellent' computing centre, I propose that the money be spent for better computing services.

After all, U. of W. is 'supposed' to be well-known for its computing facilities, not as being a physical education complex.

For us FROSH experiencing these conditions......

It is very likely that enrolment will fall in future years in the form of drop-outs and new students.

a MATH 132A student

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whose party?

mathNEWS:

I have heard it rumoured that Math Society is an organization which, among other things, provides various social functions for all students who have paid their society fees. Be this the case, they would give fair advance notice and advertising of any event, especially if that event were free. Right?

Wrong!! It appears that this year's Christmas party was advertised to ... the executive and their friends and ... uh, the executive and their friends and...! It seems that the party will be enjoyed by ... you guessed it, ... the executive and their friends.

It seems that this will be another math function "where all the mathies didn't go."

Don Ablett

Well, here it is number 10, ie the last mathNEWS for the term. Over the weeks we have become indebted to a number of individuals who have rendered various services and it seems appropriate at this time to formally thank them. Thanks to ... the folks at Graphic Services (who, we hear, volunteered to stay up Thursday nights just to have mathNEWS printed and ready to be picked up bright and early Friday mornings) ... the Coffee & Donuts Club for their free caffeine contributions each Tuesday night ... the various math reps who submitted reports ... our many sports reporters ... all those who contributed theorems, ads, feedback, etc. ... those who helped with earlier issues but couldn't take our weekly madness ...Tonto ... and anyone else who helped in any way.

This brings us to our regular staff and to those who will be leaving our fold to venture out into the real world next term. However, our loss for next term should put next summer's mathNEWS in good hands. Thanks to ... Paul (mathNEWS tries to be an a-political newspaper. However ...") bonne chance à Montréal ... Ingrid (how we will miss those fingers) best of luck with Campbell, Sharp, Nash and Field ... Dennis (mathNEWS' right arm) the gridword will never be the same.

As we realize that it is 5 am we wonder who had the bright idea of an extra long final issue (probably somebody who left early). Thanks this issue to J. J. Long, Tonto, Norm Macdonald, Steve Treadwell, Paul Armstrong. Amongst our ranks tonight: Dennis Mullin, Pete Raynham, Paul Lear, Andy Seibel, the phantom, Dave Brown, Randall (our 3-fingered typist) McDougall, Ingrid Splettstoesser, Mark Shields, Dave Tootill, Tom Duff and John Peebles.

**resources used $ 51.49,
**time sharing off at 5.555

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used to date $ 234.16= 47%
on 11/28/73