Volume 19 Number 6
Friday, February 23,
1979

mathNEWS

Federaction

I read last week's Imprint article about Peter Wigglesworth's party with interest. I have no opposition to Wigglesworth or any person trying to get his party elected to council. I tried it myself. We won but didn't get an absolute majority.

What actually bothered me were rumours of Wigglesworth trying to get appointed as vice-president. First of all I must make one thing clear I have nothing against Wigglesworth's qualifications, except perhaps his inexperience and do not know him well enough to dislike him.

I am opposed to Wigglesworth's appointment as vice-president based on reasons of principle. I do not feel that a winning candidate should put his principal opponent into the number two position in government. witness Carter vs Ford, Nixon vs Humphrey, Trudeau vs Stanfield. Did any of the winners appoint their oponents to a high position after winning a close election? with the posibility of the president not finishing his term in office, should the man who was rejected by the voters be given the number two position and possibly become number one? I don't think so. If I felt that Mr. Wigglesworth was the person I wanted, I would backed him for president (the same goes for Beattie and Macneil). However I don't object to defeated candidates receiving other less sensitive posts. I did say Wigglesworth would be good in entertainment. What I am doing once again is voicing my opposition to the present method of selecting the vice-president. The defeated candidate situation is only one problem inherent in the current setup. I believe that it would be a lot better to have a properly elected vice-president.

Apparently the Imprint is half-way on the way to forcing a referendum on whether they should get a refundable fee. There should be another petition circulating asking students whether the federation should remain in NUS. I formulated this petition because I feel that NUS is rather useless and with education being a provincial concern, our needs would be better served by OFS. However this petition has not been circulated at press-time as Rick Smit has refused to sign it.

As you know this week is devoted to those arts students who need it off to recover from their heavy workload. It is obvious that the so-called 'study' week is often not used for study. Fortunately the technical faculties do not engage in this practice. A better system would be what was tried in the math faculty a few years ago. Students were given the last three days (Monday, Tuesday, Wednesday) of classes off. That way one would have six or seven days to study before the exams started on a Friday or Saturday.

jjlong

"Could it happen?" the prof glumly mused...
"Is the Kronecker delta abused?
Could a class of this sort,
Eat and sleep, yet purport
That in neither the concept is used??"

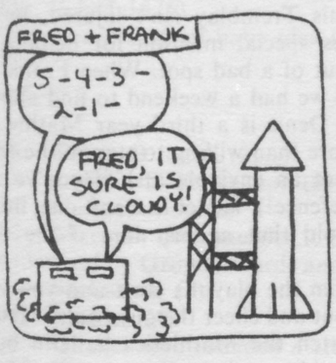
NOTICE TO ANY PROFESSORS INTERESTED IN A LITTLE FUN
FRIDAY, MARCH 2
3-4pm
ST. CLEMENTS ARENA
It's time for this term's Faculty vs Society Broomball Classic. For more information see Prof Scoins or call MATHSOC.

Prezz Sezz

This should be my very last Prezz Sezz column because as of the end of the month, I will no longer be the president of this society, so **I will dedicate this column** to all my regular readers (mainly me, myself and I).

I would like to wish the best for those persons who were acclaimed to positions on Math Society and I hope that they have less problems and more help than I had in the past year. I would like to stress again the importance of student participation in the society. The more help we get the better our services become. If their is something that you don't like about the society or about **mathNEWS** you can change it by getting involved and changing them from the inside.

Last week you saw the longest **Prezz Sezz** article and so this week you will see the shortest article in the series. All I have to say is that it was a challenge to the president of the society and I think that I did do a good job and I hope the best for next term's executive.



MATHLETICS

AT LEAST THEY'LL GET A SHOT AT IT

My fault for not writing anything in from Mathletics in the last issue, but excuuuuse me, I do have interviews, assignments, whatever. Some of the Math B hockey team reminded me of my promise to write about their brilliant exploits. Well, up until last night they weren't all that brilliant. They showed the good stuff when it counted, so they'll get the story.

First the important part:

The worst that the Math A team can do is finish third in their league, so they can start to practice for the playoffs. The Math B guys have assured that with one game left they will finish with a record of at least .500, and that should mean either a playoff position or an elimination round.

Math A

The A team assured playoff action with a 4-1 win over St. Jeromes. The Fighting Saints failed to win a game this term, but lived up to their name as one of the most physically aggressive teams. Math took the lead in the first half but gave up a soft goal to let the half end in a tie. Numerous missed scoring chances and sustained pressure but no goals tended to frustrate the team. They were definitely ahead in the play, but as has often been the case for St. Jeromes this term, their goalie was performing his best under heavy action. The St. Jeromes players wilted a bit in the second half, as they were short of bench strength and were usually on the defensive. Math finally took the lead for good, but were unable to add the extra margin until late in the game.

For the A team its now a case of waiting to see who their first round playoff opponents will be. As the defending A league champions, there are lots of teams wanting the chance to knock them off.

Math B

Math 3 Ringworms 3

This one was way back in January and the scoresheet was not in my file. Nothing new, I've made up stories before. The Ringworms had choked in their first two games, losing three goal leads on both occasions, then losing the games. The game looked all in Math's favour as they took a 2-0 lead by the half. Roingworms hadn't looked all that dangerous and our guys were skating well. The second half saw the scoreboard change to 2-1, then 2-2 on a soft power-play goal (even Denis knows it was a bad one), then 3-2 in favour of the engineers.

It took a couple of minutes to sink through the helmets, but when they realized they were losing, Math started to attack. They tied the game with more than 3 minutes remaining and continued to pressure. With less than a minute to go the puck skirted the goal line but didn't actually make it into the net; Ringworms killed the remaining seconds and held on to the tie.

Alchemists 5 Math 2

These Science students are the best in the Monday night league, featuring Brian Fitzsimmons in net. (Brian played goal for Math last year, so I had to give him a plug) He was caught dozing early in the game as Bob Valentine put one by after 35 seconds, then Hal Tohana made it 2-0 a few minutes later.

When the Alchemists got started they didn't want to stop. A couple of lucky bounces off of skates and posts tied the game before the half. The second one was a classic, with the Alchemist speeding in on a breakaway, Denis cuts off the angle, the defence moving back, the guy shoots and hits the post. Instead of rebounding harmlessly, it bounces right to another forward so he can put it in the empty net. That wouldn't happen if they were square posts.

Math was taken completely out of the game in the second half as they fell behind 5-2 in the first seven minutes. The rest of the game was checking practice, although Jim Brown managed to score when both teams were a man short.

That loss set the scene for last Monday's game. Math B was 1-1-1 and had to win at least one of their two remaining games. They'd skipped practice for the week, but got some good news. Their sweaters had arrived! Now they could look like a team (well, sort of).

Math 2 Optometry 1

I was busy studying so I was unable to be a spectator at this one. All the info was related by phone, so its second-hand at best.

Story goes that halfway through the first half Denis Tremblay let one bounce off his thumb and land in the net. That put Math in the hole. It also got Denis mad. He changed his name to Cheevers and promised to shut them out for the rest of the night.

His move obviously inspired the team, for in less than a minute Mark Carruthers scored to tie the score. Mark's goal came from a scramble in front of the Optometry net. Mark is the Math B captainnot exactly a royal positionhe handles the flack over practices, ice time, etc. You may think he's a good hockey player, but I heard that his goal on Monday was this first one since he was a little tot knee high to a grasshopper!! Not wanting to bask in his moment of glory he said he was just in the right spot at the right time.

The game winner went to Bob Valentine on a brilliant solo rush. Described as such, he circled the defenceman and put it between the goalie and the post. All accounts describe the game as the best of the term. Optometry was playing for a playoff position too, so they didn't just roll over. They tried everything included a six-man attack in the final minutes but Math managed to rag the puck long enough to ensure the win....

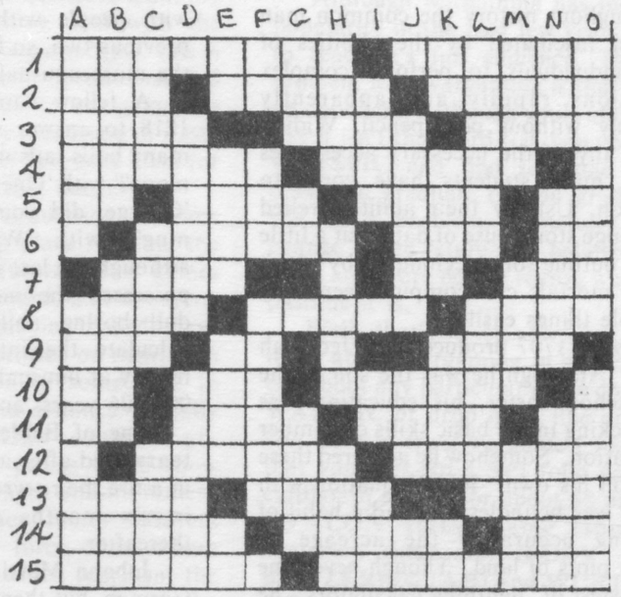
Comments about the roughness, butt-ending, and multitude of penalties were overshadowed by the excellence of the game. It sounded like a good warmup for next week's finale against Rec'em Dec'em...too bad I missed it.

A couple of injuries hit the B team in January, but I never got a chance to mention them. Frank Giblon, the regular goaltender, ran into a squash racquet and had to sit out a month. He should be ready for action next week. By the sounds of it, John Whitmore took a check that didn't help him much, and has suffered a leg injury as a result. He is not playing hockey for the rest of the term, but hopefully its not as painful as it sounds.

Denis Tremblay isn't injured, but he deserves special mention for helping the team out of a bad spot. When Frank was injured we had a weekend to find another goalie. Denis is a third year Mathie and was more than willing to step in the Math nets (not an enviable task if you've seen their defence!). He let in a soft one, but we only hold that against him if the team loses.

When the playoffs start and you want to go out and cheer the guys on to victory, just watch the Mathletics bulletin board for time/day notices.

This week's gridword is written by David Welbourn. I really get the feeling that the rest of you aren't interested, or too busy. If anyone feels like submitting a grid then please do so. The grid in number 4 had ten correct solutions, and the winner is Guy Middleton. Comments, suggestions, and submissions should get to me (a-jmalton), mathnews, or the mathsoc office.



ACROSS

1a Do not pass go (8)
1j How do you spell Rolaids? (6)
2a I will be Latin (3)
2e Rapes around sharpened pole (5)
2k Light concentrate (5)
3a Gilligan fed one corned beef (4)
3g Exchange (4)
3l Latin 'mille passus' (4)
4a Skeletons make goofs (6)
4h Uncle's daughters (6)
5a Article (2)
5d He floats (4)
5i Nail was put down (4)
5n Canada Union (2)
6c Big Bad Blew (6)
6j Negation (3)
6n Fortran less than or equals (2)
7b It is I (4)
7j United Nations (2)
7m Hur? (3)
8a Luna has leg bone (4)
8f Strip of meat (5)
8l Eats a chair (4)
9a Back in the midst of enemy (3)
9e Two (comb. form) (2)
9k Oliver's sidekick (4)
10a Is (2)
10d In spray or roll-on (3)
10h Garrison town barrack (6)
11a Region Police (2)
11d Falls mainly on the plain (4)
11i Mixed lube cheese (4)
11n Egyptian god (2)
12c Condition for "may proceed" (6)
12j A magistrate of ancient Athens (6)
13a Topsoil building material (4)
13f Little Red has one (4)
13m Potter oven (4)
14a Mrs. Howell (5)
14g Tonka's stepped on by elephant (5)
14m Mrs. Capp (3)
15a Schedule (6)
15h Acceptance of baby idea (8)

DOWN

a1 Salem B toasts (6)
a8 Lobelia S-B's weapon (8)
b1 Constellation (5)
b7 Macbeth doth murder it (5)
b13 Said by Grog forwards and by baby backwards (3)
c1 Midday (4)
c6 Quaker who founded a state (4)
c12 Flatten and make smooth (4)
d3 Luna be stellar cloud (6)
d10 Siddhartha's caste (6)
e1 After signature (2)
e4 Dennis's dog (4)
e9 Bleats (4)
e14 Yard (2)
f1 Option (2)
f4 Sofia's soft sofa (3)
f8 End (6)
(3)g1 The French
g5 You're in my eye (2)
g11 Not Edited Or Typo-checked (4)
h1 Boring Gray (4)
h6 CSC mascot (misspelt!) (5)
h12 Girl in Ecuador army (4)
i2 Half a train track (4)
i10 From Latin (2)
i13 Defective Useless Device (3)
j3 Carter plant (6)
j10 Hearst gang (3)
j14 Company (2)
k1 Letter (2)
k4 Coin becomes a plant grafting twig (4)
k9 Prophet (4)
k14 Kitchen Patrol (2)
l1 Let man sing sorrow (6)
l8 Trucks were a hit and run (6)
m1 Egyptian goddess (4)
m7 String or jelly (4)
m12 Stereo sounds like a poodle (4)
n1 Water shocker (3)
n5 Not dirty (5)
n11 Kangaroo's Hippo (5)
o1 Often (8)
o10 Explosive detective (6)

The Mean Pinball Tournament

Are you a mean pinball player? Do you consider yourself a pinball wizard? (or in the words of JW Bast, a pinball lizard?) If so, you should enter the Mean Pinball Tournament sponsored by Mathsoc. The entry deadline for this tourney is noon next Friday, March 2nd. The finals take place Monday, March 5th from 11:30 to 1:30. The entry fee is 50 cents for Mathsoc-Federation members and 75 cents for others. The rules are listed below.

1. *Deadline for entries is noon Friday, March 2. Entry fees must be paid to the Mathsoc office by that time.*

2. *Fees are 50 cents for Mathsoc members who are Federation members, 75 cents for all others.*

3a) *To qualify for the finals, a player must play at least two qualifying games, one on each of the Mathsoc pinball machines located in MC3002.*

b) *For the additional fee of 25 cents per game, a player may play additional games on either machine in order to improve his/her score.*

c) *The total of the highest scoring game on each machine will be used to determine the qualifying score of each player.*

d) *Qualifying games must take place under the witness of a registered tournament official.*

e) *Qualifying games must take place before 11:30am on March 5th.*

Calculating Progidies

(this should be Prodigies, of course!)

Throughout history the common man has been fascinated by the abilities of certain individuals to perform complex calculations rapidly and apparently effortlessly without pen, pencil, Widjet, APL or any of the necessary accessories that we math students have come to depend on. Usually their abilities relied upon a huge storehouse of data, but a little later I'll outline some techniques by which even we mortals can compute seemingly impossible things easily.

The year 1707 produced one Jedediah Buxton. Although he was the son of the village schoolmaster, his education was sorely lacking in the basic skills of number manipulation. Somehow he acquired these powers on his own. His fascination with numbers was boundless; he had a habit of estimating accurately the acreage of irregular plots of land. Though never one of the fastest of "lightning calculators", he was certainly one of the earliest to have his talents recognized. Sample problems that he successfully answered included: how many cubic inches are there in a block of stone 23,145,789 yards long, 5,642,732 yards wide and 54,965 yards thick? To what sum would a farthing amount if doubled 140 times? and How many grains of corn would be required to fill a cube of volume 202,680,000,360 cubic miles?

Now I know that these problems are so useful to modern man that you can easily see that Jedediah must have been a great boon to the local economy in the middle 1700's, but we must remember that any common problem of those days requiring solving would be trivial for a man with these powers. We must also remember to pity those unfortunate souls charged with verifying his answers.

A Zerah Colburn of Vermont had essentially the same abilities as Buxton, only 100 years later and on this side of the Atlantic. He quickly learned the multiplication table up to 100 x 100, and when he was only six, his father started exploiting his talents on the professional prodigy tour. He used a standard technique when multiplying large numbers: asked for 157 x 92 he would separately calculate 100 x 90, 100 x 2, 50 x 90 and so on, all the time keeping a running total in his head. This technique has two advantages. Since you start with the largest pair of numbers, you can begin calling out "nine thousand....." while you are still working on the rest of the problem, thus giving an illusion of speed. Also, as opposed to the normal way of multiplying on paper (does anyone really do that anymore? I find myself doing 13 x 22 on a calculator) only one total need be remembered at any one time.

The history of the 1800's is crawling with people with talents similar to the previous two, so let's just look at some of the more unusual ones.

A fellow named Bidder was able in 1818 to answer such questions as 'How many bulls tails would it take to reach the moon?' with 'One, if it is long enough', and 'George, did you take a bath this morning?' with 'Why, is one missing?', although the last is unverified. Bidder also possessed the normal standard average dull boring abilities of being able to calculate the interest on odd sums of money at unusual rates for periods of 10,000,006 years, and so on.

One of Bidder's brothers was an actuary, and after all his books were burned in a fire, he re-wrote the lot from memory in six months and died very shortly thereafter.

Johann Martin Zacharias Dase was a German, but then so were a lot of people. Our cause for concern here is not so much Dase's nationality as it is his ability to multiply two 100 digit numbers together in his head. This reportedly took him 8 hours and 45 minutes, which is an eternity when you consider that finding the square root of a 100 digit number only took him 52 minutes. These feats are generally conceded to be some of the greatest acts of mental number-crunching on record. Dase could repeat all the numbers used in a performance from memory two hours after the show, and was also able to accurately determine the number of sheep in a flock after only a cursory glance.

The best all-around calculator of recent times is/was probably Alexander Aitken of New Zealand, who went on to be a math prof at U. of Edinburghghghgh. He did not begin to exercise his powers until the ripe old age of 13, although as a child he had a remarkable ability to memorize numbers. He amused himself briefly by memorizing pi to 1,000 places. This impresses me somewhat - back in high school we had an informal competition in pi memorizing and I won with a paltry 200 places. Aitken stored in his memory complete log tables, multiplication tables (possibly as high as 1000 x 1000) and the like, as well as the answers to commonly asked questions like "How many seconds are there in a year?" or the famous "My dog has no nose." "No nose? How does he smell?" "Terrible!" , although Aitken seldom was given the correct sequence of straight lines for the last one. He employed many shortcuts. If asked to square 585, he would make use of the identity a**2 = (a+b) x (a-b) + b**2, with a = 585 and b = 15. The calculation would thus be reduced to 585**2 = 600 x 570 + 15**2.

We can use some of these tricks to impress our friends, although after I tell you the following you won't be able to use them on anyone in Math since I know how absolutely everyone reads this. I went up to the OHA EMS division Library and found located therein an interesting book entitled "High Speed Math", written by Lester Meyers in 1957. This book is chock full of clever little shortcuts, many of which are so dumb as to be really dumb. For instance, he enlightens my life by telling me that instead of multiplying by 5, I should multiply by 10 and divide by 2. If you want to learn more read the part entitled 'A Short Way of Multiplying by Three-Digit Numbers Which When Increased to an Even Hundred the Hundreds Digit is Exactly Divisible into, or is an Exact Multiple of, The Number Added, e.g. 288, 360, 576, 693, 897'.

For something more interesting, let's figure out the day on which a certain day of the week in this century fell. Suppose we wish to determine what day of the week September 12, 1959 fell. The technique is as follows:

Examine the last two digits of the year. Divide them by 12 and sum the quotient and the remainder. Add to this the quotient when you divide the previous remainder by 4. In our case, 12 goes into 59 4 times with 11 remainder, and 4 goes into 11 twice. 4 + 11 + 2 = 17.

Each month of the year has a key number as follows you have to memorize these somehow.

January	1
February	4
March	4
April	0
May	2
June	5
July	0
August	3
September	6
October	1
November	4
December	6

To the previous result, add the key number of the month. Key for September is 6, so 17 + 6 = 23. Cast out 7's, i.e. note the remainder when 23 is divided by 7. In this case, it's 2.

To the previous result, add the date of the month, and cast out 7's. We get 2 + 12 = 14, casting out 7's we get 0. The day is indicated by this result, Saturday is 0, Sunday is 1,....., Friday is 6. Therefore Sept. 12, 1959 was a Saturday.

With practice you can do this in your head in 20 seconds or so

continued on page 5

continued from page 4

Note also the following chart.

First	Fifth powers
1	100,000
2	3 million
3	24 million
4	100 million
5	300 million
6	777 million
7	1 billion 500 million
8	3 billion
9	6 billion
10	10 billion

Tell someone with a pocket calculator to think of a two digit number and raise it to the fifth power. Tell him that if he just tells you the result, you can instantly determine the initial two digit number selected. This rides on the fact that the fifth power of a number ends in the same digit of the number. Looking at the table above, as soon as he starts to call out the fifth power, determine which of the 'fifth powers' on the right it lies between, and pick out the number on the left corresponding to the lower bound. The last digit is the same as the last digit he calls out. For example, if he gives you 8,587,340,257, as soon as you hear "eight billion" you know that it lies between 6 billion and 10 billion on the chart. Thus the first digit of the fifth root is 9, corresponding to 6 billion. You wait for the last digit, a 7, and instantly know that the required fifth root is 97. This is so ridiculously easy, it's incredible.

Being a lightning calculator may be almost useless in today's nickel cadmium society, but at least we can check their answers faster and perhaps their techniques can help us punch those keys a little more efficiently.

Much of the preceding was re-arranged from works by Martin Gardner and W. W. Rouse Ball. My indebtedness is profuse.

steve hayman

CSC

Who needs a meaning anyway?
I'd settle any day,
for a very fine view.

Sandy Denny

GAMES AND THINGS

This week marks a departure from my regular column as we deal with the question: 'what is a wargame?'(p.s. this is even typed in using proff....). Also included is the usual game review (a war game this week) and of course a paper game to waste away your time in your favourite class (or in your interview for that matter...).

A wargame is a simulation of some type of combat taking place in either the past, present or the future. Most games consist of a playing board, unit counters, dice and rules. The playing boards have some type of terrain printed on them with a super-imposed grid of some type to regulate movement and distance. (usually a hexagonal grid) Unit counters are printed on cardboard pieces which show the unit's combat strength and movement ability or some other factor. Players (usually 2) control a force of anywhere from 20-20,000 units which represent the actual units that took part in the battle. These units are moved across the surface and have combat in order to achieve some objective (usually wipe out the other guy's forces...). Playing time for these games can range anywhere from 1 hour to 4 or 5 months in the more complex games.

Most wargames on the market today are put out by either SPI (SIMULATIONS PUBLICATIONS INC.) or AVALON HILL.(both U.S. companies). Most SPI games come in a cardboard tray with a strap on plastic lid and an unmounted playing board and the smallest dice I have ever seen. Most AVALON HILL games, however, come in either a large flat box or a 'bookcase' box which can be stored in your book shelf. AVALON HILL game boards are usually mounted. Both companies put out games that tend to sell in the range of $12-$18 with a few more inexpensive as well as more expensive games also available (i.e. **WAR IN EUROPE** only $79!!). AVALON HILL games seem to be the better buy for quality, but they only introduce a few new titles each year, whereas SPI seems to have an endless flow of games.

If you get a wargame you can expect to do some reading as most games have 12 or more pages of rules. These rules, however, are necessary as some games use a very complicated system of movement and combat and if any doubt arises about what to do in a particular situation, these rules should answer any questions that could arise. SPI rules on the average are more complete than those put out by AVALON HILL and usually have an index and a subordination method of collating the rules (very important if you expect to find anything very quickly, especially in a 40 page rule book!!).

Although wargaming has increased in popularity in the past few years it has yet to reach it's full audience. The biggest problem with wargaming is that of finding an opponent. Although while at the university it isn't that hard (i.e. you could go to **WATSFIC** and find someone to play), once you graduate (if you graduate...) it will be a problem. Hopefully this will change in the future as I believe it will as more and more poeple realize what a great pastime it is.

Well, that's it. If you want to know more about wargaming in general or find out about any particular game come out to **WATSFIC** or drop me a line on TSS. If you want to try a wargame I recommend that you pick up a SPI folio game (in a cardboard sleeve) for about $8 or a cheap AVALON HILL game (some good beginners titles are: **D-DAY** (AH), **BLITZKRIEG** (AH) and **WURTZBURG** (SPI)).

continued on Page 6

I ACTUALLY WENT TO A CONFERENCE!

Finally something worth writing about!!

A bit on the Ninth Annual Student Intramural Conference, held February 9 & 10 at York University. The conference is just what its title states, a student intramural gathering. Established here at Waterloo a little before my time, the conference gives those of us interested in intramural sports programs a chance to get together to discuss, exchange, and develop ideas.

This year's conference was the biggest yet in terms of numbers, the York organizers doing an amazing job in attracting over 300 registered delegates; the majority of those in attendance were from Ontario high schools, a lesser number from community colleges, and over half of Ontario's universities had representation. UW had the biggest army with eleven student reps and Peter Hopkins, the Men's Intramural Director.

The format of the conference allows for a couple of individual speeches by some of the biggies and then the students take over with a day full of presentations and discussions. It was my first time at a conference of this nature and I thought it was an excellent experience. As one of the five students on our presentation group I had the opportunity to discuss various aspects of IM sports with our audience, as well as the fun(?) of participating in our group discussion.

continued on page

continued from page 8

PANZERBLITZ by AVALON HILL is a tactical simulation of armored warfare on the Eastern Front in World War II, 1941-1945. This game is AVALON HILL's best seller and once you play it you will see why. The rules are complete and the unit counters are very colourful and worthwhile looking at. Three 'geomorphic' mapboards leave the game open-ended as they all fit togther in various ways giving you an unending variety or terrain. Twelve situations are included in the box, some of which could stand to be re-balanced (AVALON HILL has put out a book that does this however...). In typical situations, each player commands either the Germans or the Russians with about 50 units per side. The scale of the game is 250 meters to a hex (each hex is 1/2" wide) with each turn equaling 6 minutes of real time. This is a fast moving game (12 turns or less) of exciting armoured conflict (i.e. lots of tanks) which can be played time and time again without ever getting boring.

RATING:9.5 PRICE:$14.00
PLAYING TIME:2-5 hours

BATTLESHIP is a good pen and paper game for 2 players (sorry, this one needs graph paper). To start, each player outlines his 'ocean' (recommend 8x8) area and adds coordinates on the two axis: letters on one and numbers on the other. Then you hide your 15 ships in the squares as follows: 1 aircraft carrier: AAAAA, 2 battleships: BBBB, 3 cruisers: CCC, 2 destroyers: DD and 5 submarines: S. Ships must lie in a straight line either horizontal. vertical or on a diagonal. Ships may not overlap. To play, each player hides his ocean and draws another in which he searches for his opponent's ships. Each player may call out one coordinate each turn and the other player calls out a hit and ship type or no hit. The game continues until one player 'sinks' all of his opponent's ships. A ship is sunk if all of its letter coordinates are hit.

RATING:7.5 PRICE:$.00
PLAYING TIME:1/2-1 hour

mpkraatz

4a) *The top eight qualifiers shall advance to the finals.*

b) The top eight players will play off in the following manner based on their standing. (1 vs 8, 2 vs 7, 3 vs 6, 4 vs 5).

c) Games will be played on the machines decided by the convenor.

d) The games will be sudden death. Ties will be decided by a sudden ball.

continued from page 5

Mr. Hopkins was the keynote speaker of the conference, certainly the highlight of the entire weekend. Peter is the president of the Canadian Intramural Association; his talk was directed at everyone, regardless of their level of involvement in intramurals. Stressing involvement is the key to an IM program because a program is only as good as the effort put forth by everyone, and his talk ended with the Winter Intramural slide presentation, a UW student production. (This is the same slide show you may have seen at the fed flicks, depicting UW IM sports and participants from Winter '78....Take a look at it if you get a chance, you may recognize somebody. I've seen it several times and can spot many individuals, as well as our hockey and broomball teams.)

The conference gave us the chance to find out about other programs in effect at other post-secondary institutions, and although it may be a biased opinion, I think the eleven of us came away with a greater appreciation of the intramurals at UW. If you've any idea of the programs offered through our intramural department you must appreciate the amount of work involved. Peter Hopkins and Sally Kemp are the men's and women's directors, respectively, the professional people in charge, with Lynn Montag handling the task of IM secretary.

Students, as convenors and referee-in-chiefs, handle the operations and scheduling of each particular sport; as IM assistants, individuals are responsible for publicity, tournaments, officials, and other specific tasks; as referees, lifeguards, and instructors, they handle the actual sports and recreation events as they happen. Over 200 students per term work with the IM department to make the activities work. Sure, they get paid, either hourly, or in the form of an honorarium, but you don't decide to run a hockey league just for the $30 a term. It's the interest and desire to be involved that adds to the effectiveness of our intramurals.

Along with the program comes the need for representation. There are committees involved in overseeing our programs. The committees consist of students, volunteers, who put their work into helping make improvements, solving trouble spots, and representing their student units.

I'm one of those volunteers, representing Math students in the IMs. I've enjoyed what I've been doing over the past six months or I wouldn't be doing it. This is the first term since way back in first year that I won't receive an IM cheque at the end of the term; the money doesn't really matter. I enjoy my role in the program, and only hope the work I do is beneficial.

I believe our IMs are aimed at all students, possibly because we have such a large number of students in control, and directors who feel the same way. That appears to be the key point in what seemed to make our program stand out at the conference. We have problems; there are things that might improve the program, and it would certainly be foolish to let things stand as they are on the assumption that our way is best. However, in discussion with other students I continually found that their problems were uncovered and solved here some time ago, and that we've incorporated ideas for improving and modifying the program that put us a fair distance ahead in terms of intramural ideals. The conference was intended to benefit everyone, so I hope that some of the ideas the UW people were throwing around get tried out by others. Different schools have different needs, so the same method may not work everywhere.

My hope is that at the Tenth Annual Student Intramural Conference the UW delegation will get some feedback on the exchanges made two weeks ago.

Doug McInroy

PS: My activities as Mathletics Director end soon. If anyone out there is interested in sports and would like to help out as a Math rep, feel free to volunteer your services. I'm often (too often) found in MATHSOC and am quite willing to answer any questions.

INTERESTED IN POETRY OR LITERATURE?

A new periodical is starting up. Contact Sam Wagar or Ed Butts at Integrated Studies for details.

Seeing Integrals poised for the kill,
A nice little function turned ill.
The Jacobian pounced!
The poor function was trounced...
All that fuss for an answer of "nil" !

Masthead (terse option). there wasnt anyone here at 630 (all at the pub) Rosalee turned up and typed a bit. Brad offered to but couldn't find a terminal I finished the photoning at 9:00 and Karen turned up (saving angel) at 10:00. Kevin and she and I finished athalf past eleven. (11:42 GCOS time). Noone else helped which was rather irritating. O well. ajm disconnects.

writers: doug, ben, steve, mark, jj, geoff, david.