## Volume 19 Number 5 February 16, 1979

## math NDWNS

## Apathy Lives

For those of you care, there will be a Math Pub in MC 5136 at 8:00 p.m. on Thurs. Feb. 22. Judging from the attendance at our last pub, nobody does care. Apparently we re doing something wrong have no way of knowing just what the problem is. If you are among the dissatisfied, why don't you drop by Mathsoc and tell us why you are dissatisfied. If you just sit back and vegetate, we won't know what you want us to do. In other words, "Get off your ass and help us get things done!"

Greg Bezoff
Social Director

## ARTS CENTRE NEWS One-Man Show

Bold, bright images that are idealized, conventional and yet artificial all at once put together in a complex way to make reality even more real these are the paintings created by ART GREEN, whose one-man show opened at the UW Arts Centre Gallery on Thursday, February 8 and will run until March 4. The paintings in the show, with only one exception, are all oil on canvas. Admission to the UW Arts Centre Gallery is free of charge and everyone is welcome.

The UW Arts Centre Gallery is open Monday-Friday from 9 a.m. to 4 p.m. Sundays 2-5 p.m.


## Smokescreen

It was recently brought to my attention that there exists a City of Waterloo bylaw which states that in any place of public gathering, at least $50 \%$ of the area must be designated as a non-smoking area. In view of this, the present arrangements in the Campus Centre Great Hall are illegal. Rather than attempting to raise hell, I asked some people to make some inquiries for me. Here are the results.

The turnkeys, when questioned regarding this, responded by blowing smoke in my informant's face, and subtly telling him to stuff it. Let's hear it for our helpful, hardworking turnkeys.

The matter was then taken up with Security, who told us that they are a law unto themselves, and that they decide what the laws will be on the UW campus. This attitude seems to me to be just a little unreasonable. One might ask, for instance; are the laws the same today as they were yesterday? Is it permitted to walk with your hands in your pockets at 1:02 a.m. on Tuesdays? Is murder legal on campus? If so, I have a few people inumind.

It seems that the University of Waterloo considers itself a sovereign state independent of the federal, provincial, and municipal governments. This is obviously muddy "thinking" on the part of the administration. Without government grants, the university would go belly up in nanoseconds.

If you expect to enjoy the benefits of a society, then you must also conform to the rules of that society. It's time some people realized that they are not the Masters of the Universe, and that in fact the Universe would do quite nicely without them.

The contravention of the no smoking bylaw is not, in itself, a matter of earth shaking importance. The type of thinking it indicates however, is suicidal. We can only hope that certain persons can be induced to modify their outlook. We are not, after all, an island.
gvbezoff

FORTRAN
(sic)


## Prezz Sezz

I recently read about the malicious damage that was inflicted upon the VolkerCraig terminals in the slow terminal room. I want to stress that such damage could mean that the Math building will become like every other building in the aspect that they might lock up the building after seven on weekdays and all weekend. I know that no-one would like this at all but if this unnecessary and willful damage continues, we might be faced with this problem. I would fight such a move if it all boiled down to that but I would also feel foolish trying to fight the administration on this if these problems continue.

This isn't the first time something like this has happened in this building. Back in 1976, if you can remember that long ago, some body decided to pour acid down the back of the mini that was on the third floor. About the same point in time, many of the bulletin boards around the building were set on fire causing very little damage but they caused a lot of problems for some of the people on campus. This damage almost lost us the right to book the fifth floor lounge for licenced events, if it wasn't for a few people who fought with the faculty over this point, we wouldn't be allowed to hold pubs at all.

I thought that all of our problems were behind us and that we could focus our attention on more important matters that affect you the students, but at the last pub we had, some body decided that it would be funny to pull the fire alarm on the fifth floor. I would like to tell the person who pulled this sensleless prank that I personally had to run around for ten minutes trying to explain to security, the fire department and the custodians that the alarm was just a prank. Earlier this week some one decided to break the front glass on one of the vending machines and last term some one put a book of matches in the microwave oven totally destroying the inside of the unit. People might have noticed that Canteen of Canada will not put such an oven in this building because they have lost three different units in one term in this building. You might have noticed, also, that some body had broken the glass on one of the pinball machines. I know that many of you like those machines and would be upset if we decided to return the machines. I would also like to point out that two of our lockers have been damaged beyond repair and if this continues, we might be forced to make people pay deposits to obtain the lockers.

It hasn't come to the point of having our building locked at nights but if this damage doesn't stop then we might find this situation changing. Just remember that the outcome is up to you.

## CSC Flash!

This term's wild and extravagant series of Computer Science Club meetings continued last week with a seminar entitled "True Confessions of a MicroComputer Owner". We had a guest panel of students that own personal computer systems talk about what they have bought, why, and what they think in retrospect. The meeting was intended as an introduction for those who were not aware that it was so easy to become a computer magnate, and as a "consumer report" to the more seasoned section of the audience. The CSC has had talks in the past by experts in this field; this meeting was aimed at more modest practical goals. It seemed that students who had actually made a commitment of a thousand dollars or more in personal computing would be any interesting group to hear from.

Dean Edmonds and Brad Templeton spoke about the Commodore PET; Mike Sargent and Peter Rowley about the Radio Shack TRS-80; and Tom Keith spoke about the Apple-II. Thanks to Dean, Mike, and Tom, there were demonstrations of each of these computer systems.

The PET was seen by its owners as having a good control programme and base language (Basic) implementation; good monitor screen control; and general usability.

The TRS- 80 was liked because of its low price, its expandablility, and its versatility. The control programme and base language (Basic again) were not very highly thought of, but it was claimed that using the assembler was not too distasteful. Mike used his TRS as a general home computer, and writes new software much of the time he also uses it as a terminal to other (for example, the University's) computers. Peter was primarily interested in the latter application. There were some tense moments as Mike waved his computer over his head to demonstrate its ruggedness.

The Apple-II was quickly seen as a superior system to either of the aforementioned, but did cost almost twice as much. It has a large capacity for additional memory, comes with (colour) graphics, and has a primitive music generator. Tom was also interested in using the Apple as a terminal, and had on display a working prototype of the extra required hardware that he and Peter recently constructed.

After talks by the proud (and, as I said at the meeting, some of them are really quite humble) owners, we broke for tea and doughnoughts, and oohed and aahed as appropriate at the demonstrations the panelists were kind enough to provide.

Many people seemed generally enthusiastic about the future of personal computing, but many were less than ecstatic about the quality of software provide with off-the-shelf systems such as those we saw Thursday night.

The cost of your own computer is now about the same as your own good audio system, and a number of people have made the plunge. Still more are waiting to see what happens next.

The meeting was very well attended and received; thanks very much to the guest speakers for their time and enthusiasm.

This Thursday (probably last Thursday by the time you read this), the CSC meeting will feature a presentation by Professor Ron Baecker of U of T, entitled "Recent Advances in Interactive Graphics: Some Film and Video Examples".

Next next Thursday, the CSC meeting will feature Rick Beach speaking on "Computers in Publishing at UW: Typesetting and Text Processing." The talk will review the software facilities and hardware on campus, as well as discussing some of the projects underway. The work of The President's Commitee on Automated Text Processing will be described, especially its Task Force on Typesetting. Rick has also hinted that he'll be interested to hear comments and feedback about typesetting, so if you have a special interest, or even if you just wonder when the Gazette will be entirely set in Illuminated Sans Serif Orthagolux, I urge you to attend.

Computer assisted document preparation and phototypesetting is exceedingly critical here at Waterloo without these techniques, mathNEWS would be just another piece of outstanding journalism!
Thats 8pm, 22nd February, in MC5158. Tea and $\mathrm{D}^{\prime}$ aoustNoughts too.

Volker-Craig sent the CSC an announcement recently of an upcoming surplus sale. It will be at Volker-Craig, 266 Marsland (one block east of Weber), at 10:00 AM, on Saturday 24th February. There is a vague list of sale items in the CSC office (MC3037). The CSC hopes that those persons inordinately fond of certain parts of Volker-Craig terminals will take advantage of this opportunity to stock up.
-RLBiddle

## GAMES AND THINGS

This week we take a look at yet another Parker Brothers game (no, I'm not on the take, they just make good games) as well as a pen and paper game. My thanks to daholmes who suggested SPROUTS. Keep the cards and letters comming as I can be reached via mathNEWS or on TSS.

BOGGLE by Parker Brothers is a game for 2 or more players which is a combination of SCRABBLE and PERQUACKY all in one. The game comes with 16 letter-dice, a holding tray + lid and a timer (probability about $40 \%$ of getting wet sand...). To play the game, the dice are rolled and fall into place in the $4 \times 4$ grid tray. All players then proceed to write down all of the words that they can form from connecting letters. When the time is up, players reveal their words and score.

This game is very simple and is a lot of fun for anyone who can spell 4-letter words. It is a lot more exciting than SCRABBLE and can be played in a fraction of the time. NOTE: avoid good SCRABBLE players, they have a knack for the game! (i.e. my girlfriend... ARGH!)
Rating:8.5 Price:\$7.50 Playing Time:1/2 hour +

SPROUTS is a pen and paper (you don't even need graph paper for this one) game for 2 players. To start, put any number (recommend 5) of dots in random fashion a fair distance apart on the page. To play, join 2 dots with a line and draw another dot in the centre of the line. A dot may not have more than 3 lines coming out of it and lines may not cross each other. Players alternate, drawing one line each turn. The last player to be able to move is the winner. (this game seems to be a favourite in mathematical circles...) Rating:8 Price:\$. 00 Playing Time: 15 minutes
mpkraatz

Job Search Workshops
Needles Hall
Workshop 1: Room 3004
Mar. 5
Is there a job for me?
Mar. 6
Mar. 7
Resume/Letter Writing

Workshop 2: Room 1020
Mar. 13 Is there a job for me?
Mar. 14 Resume/Letter Writing
Mar. 15 Interviewing.
All sessions 11:30 AM to 1:00 PM. Bring your lunch. These workshops are designed to assist you to look effectively for suitable employment after graduation.

Please sign-up in the Career Planning \& Placement Office, 1st Floor Needles

# the Fungaloids from Planet X 

with Mr. Science

It was a starry, steamy night as the cannibal king and the voodoo dame strolled hand in hand down a tiger trail in the dark Amazon jungle. The snakes dangling from the tree boughs fluttered in the hot breeze; the song of three hundred pound bullfrogs, the cries of the chimpanzees, the mad laugh of the kukkaburra bird; the silver light of a full moon was a setting that brought the magic of romance to these two tropical lovers. So wrought with passion were they that the ominous hum, growing ever louder, went unnoticed. The hum was like the buzzing of a million insect's wings, a sound like what has never been heard before in the Amazon jungle. So enraptured were they with the feel of soft flesh that the world was miles away until, at the last moment, the light of the moon was blotted out by a dark, swirling cloud. The hum had reached a deafening roar. And a look of terror swept over their faces - a shriek of fear split the night as the plauge of uungaloids descended upon them.

Beneath the flaming canopy of a winter Aurora Borealis, Upchuck the Eskimo of Great Bear Lake stands by the water's edge, praying for the spirit of the great white bird to come upon him. Before him is an altar constructed of ice blocks, scattered with fish and the jawbones of the sea lions he has hunted. He lights the lamp in the midst of the altar and, raising his arms above his head, begins to chant. His noisy exhortations masks the ominous hum that is growing ever louder. He raises his eyes to the Aurora and cries in terror the sky is filled with swarms of raging destruction! The swirling debri rains down on him as he screams for the mercy of the Great White spirit. But soon the Arctic snowscape is quiet. And the plauge of fungaloids takes to the sky once more. Mr Sci: Hello once again. The two filmclips you have just seen are true - they document a new menace to mankind A menace more threatening than the San Andreas fault, more devastating than bubonic plauge, more dangerous than the neutron bomb! Yes! I'm talking about the fungaloids from planet X ! On today's show we have a panel of experts to discuss the possibilty of our survival. First we present Captain Scott Marshall of NASA to explain their origin.

Capt M: There are several theories about where these nasty little bugs came from. Many speculate that they are really intelligent organisms that have migrated from a distant galaxy. They normally never migrate to previously inhabited planets but these are not normal fungaloids. They were carried to Earth on the surface of moon rocks - when passing through the Van Allen belt, their chromosones were horribly mutated. This plus the presence of an oxygen-rich atmosphere has driven them wild.
Mr Sci: Reverend Smit, what has brought this plauge down upon us?
R Smit: Woe to the Amazon fornicatars! Woe to the Eskimo idoltars! Woe to the inhabitants of the earth because of the power of the fungaloids! In a spine chilling biblic prophesy, the end of the world is foretold as being brought about by fungaloids, their numbers being greatly increased by the detonation of a neutron bomb. The radiation that follows quickly turns every tiny insect into a raging monster of destruction. Listen as the prophets speak

When he opened the Abyss, smoke rose from it like the smoke of a giant furnace. And out of the smoke, locust came down upon the earth and were given power like that of the scorpions of the earth. They were told not to harm the grass of the earth or any plant or tree, but only the people who did not have the mark of God on their. foreheads. They were not given power to kill them, but only to torture them for five months. And the agony they suffered was like that of a sting of a scorpion when it strikes a man. During those days men will seek death, but will now find it; they will long to die but death will elude them.

Compare the accompanying actual photograph with the biblic description of these 'locusts with the sting of a scorpion':


The locusts looked like horses prepared for battle. On their heads they wore something like crowns of gold, and their faces resembled human faces. Their hair was like woman's hair and their teeth were like lions' teeth. They had breastplates like breastplates of iron, and the sound of their wings was like the thundering of many horses and chariots rushing into battle. They had tails and stings like scorpions, and in their tails they had the power to torment people for over five months.
Mr Sci: Doctor Duck, what do you think? Dr Duck: I'm afraid the Reverend is right, Mr. Science. The end of the world has finally arrived. But you didn't really expect the earth to last forever anyway. In only five billion years the sun will explode into a supernova and destroy the entire solar system. This is only normal as each star eventually does nova. But even before that another ice age is bound to come. If mankind can survive that, we'll be riding wooly mastadons to the watering hole and wearing sabre-tooth tiger fur coats. As if that isn't enough, in 1984 the Jupiter effect is bound to wreck havoc on the earth. The Jupiter effect is a unique alignment of all the planets in the solar system on the same axis of solar orbit; the resulting gravitational pull is expected to be so strong that great skyscrapers will be wrenched out of the earth and flung into the far reaches of outer space. Earthquakes and tidal waves will destroy our cities. San Fransisco and Manhattan island, even Newfoundland will be swallowed up by raging waters and rest forever on the ocean floor. And soon the return of that etherial specture of light and fire, Halley's comet will come to orbit our sun and bring with it who knows what from the distant galaxies. Perhaps beasts that attatch themselves to our spinal colummns and control our minds. Perhaps carnivorous and superiorly intelligent creatures that will feast on our flesh! R Smit: And so until mankind learns to live peacefully with one other, he will not live peacefully with the other creatures of the worlds around him. Disaster upon disaster will be brought upon him until only the righteous remain. Famine and oil shortages will be his lot. Baren caves and all night discoteques will be his home! Big Macs and corn puffs his daily bread!
$\mathbf{M r}$ Sci: Well there you have it from the mouth of experts, kids. There is no question about it - we are all doomed to die horrible and unnatural deaths. Be sure to tell your parents when the commercials come on. Adios until next week (if there is one) ... from Mr. Science!

Last week's grid (by David Welbourn) had eight correct solutions (and a few incorrect ones). The correct ones came from (Gene Cassidy, Charlene Tinney, Robert Holland, Bob McLeish), Steve Czapor, Guy Middleton, K. J. Newey, P. Galloway, David Barber, T. J. Tarrant, ajzeldin, and Bob Gore. Apl (again) awards the (non-existant) prize to $P$. Galloway. Sometime there might actually be real prizes for you winners (and submitters) it'd be nice if someone submitted some now and then. Apart from David and I no-one has written any this year; this one was put together on Tuesday morning. Comments and abuse should be sent to ajmalton or mathnews on the 'bun, or put in the mailbox on the third floor.

## Across

1a Fragile little parasites all over the inside of the fruit (8)
1 j
2 e
3a
3 g
4 a A pig teaching linear algebra? (4)
4f Dumb ring-bearer (3)
$4 \mathrm{j} \quad$ Ranger's attribute (4)
$5 \mathrm{i} \quad$ Girl to be found in Shilo ring (4)
$5 \mathrm{f} \quad$ Negative part of a tree (5)
5 m Buck's mate (3)
$6 a \quad$ Important and surrounded by time (7)
$6 \mathrm{i} \quad$ At last I ran holding a twist (5)
$6 \mathrm{n} \quad$ Not applicable here (2)
7e Printer's measure put in backwards (2)
$7 \mathrm{j} \quad$ Game birds with illicit weapons? (6)

8c Hydrogen Peroxide Asssociation (3)
$8 \mathrm{~g} \quad$ It's sick but it's correct (3)
8 k Roman Goddess (3)
9a Gunning for a Chinese vase (6)
$9 \mathrm{j} \quad$ Three-toed sloth (2)
10:1 The metric system (2)
10d Lady confused with cheese (4)
10 i Last in the picture but malleable (7)

11a Little sister both ways (3)
lif A thousand in Rome (5)
111 D3 in gaelic (4)
12c French prayer (4)
12 h Eyes in suffix (3)
121 Stanislav truncated (4)
13a Spider which inspired a dance (9)
13 k Term of duty restricted (5)
14c He's at the end of the pain (4)
14 i Papal vision (3)

## Down

al
Twice as much as you'd expect (6)
a8 A little box for keeping tape (8)

b4 Tie up the boat backwards inside
(4)
b9 3
cl Wooden function (9)
b11 Jack or a smelt (5)
d3 A girl from Ireland (4)
d8 Cherry constant (3)
d12 We are rats in it (4)
el $\exp \left(\right.$ i* $^{*}$ theta) (3)
e6 Terran antelope (5)
e12 International Nurd's Honda Race (4)
fl The accumulator (2)
f4 I'm not (hahahahahahaha) (4)
f9 Playing with organic chemicals (7)
g1 King with a noisy end (6)
g10 Third note of the scale (2)
h3 Palindromic washing soap (3)
h7 Made the same both ways (3)
hll This girl looks the same back to
front! (3)
i5 Dataset (2)
i10 Make happy, if you don't mind (6)
j1 Ring around the feet? (7)
j9 Beers (4)
j14 Half an em (2)
k1 The other half of major- (4)
k6 The place of ink and spice (5)
k 13 Complete the arrangement (3)
11 Delay a job in TSS (4)
16 Royal Ink Eater (3)
110 One sixth (arch.) (4)
ml Made softer (5)
m 7 The first piece of a divider (9)
n5 No power can change it (3)
n10 A revolutionary area (4)
ol Shrink with a kink in it (8)
ol0 One hundred pounds (6)

## Federation

For a change this column contans some good news. Congratulations are in order to MathSoc. Through some action ( perhaps the work of the president) MathSoc was able to reduce refunds by over $75 \%$. From a record high of 72 (out of 2450 ) refunds last term, MathSoc's winter refund rate has fallen to 15 (out of 2200 ) which is less than $1 \%$.

I also must point out that only 23 Math students withdrew their Federation fees. Though only coop students were eligible to take that fee back the total of 23 is less than the 41 co-ops in the fall and the over 50 co-ops last summer who took back their fees. Overall the refund rate of 181 was the lowest ever and would've been lower if not for the mechanical engineers who removed their fees in order to protest the gay lib club. There were few moochers. Much of this success must be attributed to Rick Smit for what he did in his presidenby, but I guess he mainly be remembered for finally getting The Chevron offcampus.

There I go again, I shouldn't have mentoned The Chevron. They are now offcampus, we don't pay for them, and they can publish what they want. You can still pick it up if you want, but you don't have to read it. I don't believe they will be publishing on campus in the foreseeable future, so really I can't and won't complain about them. I understand that another paper is planning to take their place (they already moved in CC140), but more about those people at a later date.

I've been told that my column does not relate enough to Math students, so I am re-introducing the hack of the week. This week's winner is R.L. Biddle. Mr. Biddle is a former UW Math undergrad now a grad student in computer science. He was recently elected president of the CSC and has just returned to UW after working in Ottawa for four months. Mr. Biddle has an interest in daleks (I think daleks suck). which are computerized robots with a rather roundish and squat appearance. They were apparently popularized on a TV show called Dr. Who. R.L. Biddle also regularly writes for this paper.

You may have noticed last week's five cent rise in the pop prices at C\&D. Now I feel the increase was justified since CocaCola raised the price on C\&D twice. Besides, at 25 cents, C\&D is well under the 30,35 or 40 cents charged by retail outlets. What bothered me, however, is the way the manager changed prices overnight with no public warning to the C\&D patrons. jjlong

## Pride

Standing tall
Beautiful, proud
Always a smile
For those
Who are near
A sturdy post
To lean upon.
Who would ever guess
Her head's
In a turmoil.
Not even I
As close as I am.
She's falling Why cant I be her post.

Her Pride.
Lenora Mason

## A Success Story

I am a graduate of the Coop philosophy program.

My title is "Corporate Philosopher" in the Department of Deadweight of a major company. My job is "Platitude Generation and Propagation".

When I applied for the job, they were impressed with my qualifications. I was a former "Partial Pronouncement Promulgator". This involved attending parties, where I would remain seated, and sporadically shout such half truths as "If the shoe fits!" or "A stitch in time!" or "A bird in the hand!".

Without the Co-op program, I would never have had this experience. So for those of you in doubt, I can attest to the fact: Coop is worthwhile!

Richard Elton
(RFELTON)

In commemoration of Want-Ad weekend, I hereby submit the following to math NEWS

## Want Ad:

## Company: Assasin's International

 AllianceJob A \#400XXXXX (classified) Course: Coop Assassination Program Job Title: "Trainee"
Job Description: We are a small but growing organization providing services to prominent clients.

Under supervision of a senior assassin, the student will be involved in site selecton, disguise techniques, weapons preparation, client fee pick-ups, and if student looks mean enough, client fee negotiations.

Interpersonal skills are unimportant. The student must be willing to travel. He must be discrete, and preferably has few personal contacts. The ideal applicant is a mute, friendless orphan.

How to Apply: Do not fill out a card. Do not attempt to contact us. We will contact you.

## Advertisment

Assasins for hire. Good work at slashed rates. We have a $98 \%$ success rate. Credit terms available. We have a $100 \%$ collection rate. Quantity dicounts available (Ask about our massacre opion). Rates can be negotiated, if you dare.

## Generalist for Hire

Can talk with some knowledgeability on any subject not involving details. Willing to do anything except specific things. A consistent worker. Will accept apprentices.
> math NEWS ISSN 0705-0410 -. A weekly (sometimes biweekly) publication of the Math Society, University of Waterloo. math NEWS is funded by, but independent of Mathsoc, and is the only weekly newspaper on campus with an all-volunteer staff. Editorial content is the responsibility of math NEWS staff and editors. Circulation this issue: 100 copies.

Mas thad:
This week's mathNEW was pitifully thinly staffed. I started photoning at 8:00 after steve hayman jan gray and I finished the typing. After kevin and gary (operator) helped fixed the photon, we actual$1 y$ started getting typeset output at $9: 30$. Geoff and I did the layont, finishing at $12: 30$, finally. Writers were greg bezoff, jjlong, rlbiddle, mpkraatz (who still hasn't learned to use typesetting commands), rmmcmullan. Mr. John Bullen provided ${ }^{2}$ first of 8 a series of articles and stuff from the $f_{\text {acuity }}$.

