



PROBLEM CORNER

The Department of Mathematics and Computer Science is pleased to announce a project to be known as "PROBLEM CORNER" and to be coordinated by Dr. Tomasz Kaczynski. The aim of the project is to make available to students a set of interesting and challenging problems. Another aim is the encouragement of problem solving.

The basic rules of operation of the project are as follows:

- A set of problems shall be posted at the beginning of each month.
- Solutions to any of the problems will be welcomed until the end of the month and should be submitted in writing to Dr. Tomasz Kaczynski, Memorial-104. (Please slide your submission under the door if Dr. Kaczynski is absent).
- Queries about the project and questions should be directed to Dr. Kaczynski.
- Prizes will be offered to the authors of correct and/or original solutions of any problem at a social gathering at the end of the semester.

SET 2-FEBRUARY 1989

1. A hat contains 7 ballots labeled with the numbers 1, 2, 2², 2³, 2⁴, 2⁵, 2⁶, respectively. We randomly select ballots without replacement until the sum of numbers printed on them exceeds 124. Which value of the obtained sum is most probable?

2. A French boat is fishing on Canadian waters without permission. Each casting of their net into the sea brings a catch of equal value, but during each casting the probability of being caught by the coast guard is $\frac{1}{k}$ where k is a given integer. We assume that the event of being or not being caught during consecutive castings is independent of the number of previous castings. If the boat is caught by the coast guard, all the fish is confiscated and the fishing cannot continue.

The captain plans to return home after n castings. By taking account of the risk, the total gain during the cruise is a random variable. Find the number n which will make the expected value of that random variable greatest.

3. Decide whether the number $x = 1 + \frac{1}{10}(1 + \frac{1}{10^2}(1 + \frac{1}{10^3}(\dots$ is rational or irrational.

4. Prove that, for each positive integer n , the polynomial $P(x) = 1 + (\frac{x}{11}) + (\frac{x^2}{21}) + (\frac{x^3}{31}) + \dots + (\frac{x^n}{n!})$ has no multiple roots (notation $n! = 1 \times 2 \times 3 \times \dots \times (n-1) \times n$).

Solutions are accepted until the end of February.

Councillor Plans Awareness of the Physically Challenged

by Sam Okello.

Knowing and solving limitations of disabled people may not be easy.

Such were the issues discussed last week when Jessie Campbell and I, met with the Students counsellor, Marion Basha.

Basha emphasized the significance of identifying problems faced by certain students. She mentioned that it was important to have resource people come in and point out what can be accessible to the Disabled.

Basha said that there were several groups of students with disabilities. For instance, students with Diabetes, epilepsy, and

Haemophilia were considered as some of the people whose health was at risk. "Students with a health problem should know that there is a health centre on campus", she added.

Basha suggested that the UPEI Disabled association should act as a mediator to students in "Need" and bring them to services that are available to them.

It is known that many students with disabilities don't have much work experience. Basha pointed out that such students be encouraged to join a work Co-operative and do volunteer work. "Employers should get students

with limited work experience and find out where their work experience lies," she said.

Meanwhile, these students should be looking for other jobs elsewhere. Basha added that in most cases employers don't have time to employ volunteers.

She suggested that there should be possible volunteer job opportunities on campus. She mentioned possible areas where disabled students could work on a volunteer basis. Such areas included the vet school, library, Business office, and Cafeteria. Basha gave no promises in ensuring volunteer work

Aloud Thought

by Richard Whipple

"Everyone has their [proper] place."

-Myself in discussion with UPEI Professor and Poet Richard Lemm, on the topic of Fairness and Equality.

UTOPIA;

A Governing Constitution

When I asked

Doctor Kenneth Clatterbaugh, Associate Professor of Philosophy and adjunct Associate Professor of Women's Studies and Psychology at the University of Washington (Seattle) whether or not he jived with my statement, his answer was a balanced antithesis: "If it's true, it's trivial. If it's not, it's false."

I strongly disagree with such rhetoric. The concept of a utopia is an ideal and therefore must be based on ideal circumstances. Ergo, for achieving Utopia, there must be a viable formula under these circumstances. What are these restrictions or freedoms resulting from these circumstances that permit a utopia? And, what shall be my main address; can a universal Utopia exist and, if it can, what is its governing constitution?

Doctor Clatterbaugh later qualified his overwhelming optimism by pointing out that my statement is usually used by the oppressor to suppress the oppressed. Undaunted by his cynicism, however, my rebuttal rested in my heart. I am

still of the opinion that if everyone did personally know their [proper] place that there would be few people susceptible to oppression. Furthermore, the place of a leader is to lead the people not to oppress them. In order that the leader remain as utopian as the rest of Utopia, the individual person must be absolutely qualified for the position. Naturally, this would effectively eliminate our current structure for democratic selection, which is nothing more than the facade of governing will. In application this would mean that the best individual person would get the job. Consequently my contention with Dr. Clatterbaugh is this: if the statement is true, it is made trivial by those with ambition who lack the ability to be responsible. These people who want to bastardize this truth are the oppressors. But if it is true it is the ground work for a utopia.

This distinction of place denotes a system of social structure and requires an [official] identity which must evolve to the individual person it [officially] identifies. Accordingly, this social system should not represent any more than a just classification of

the extent of an individual's capability and must exist as an evolutionary system and not be, itself, an insurmountable barrier to the people it serves. This evolutionary system of social structure would promote equality amongst the people, it would serve to unify! Proper identification and mature distinction are two sides of the same corner stone of a utopian society. This is the corner stone to the social system structure of just classification.

If a government is to hold real 'utopian' power it must realize that this is through its people. It must realize and understand that power is derived neither from force nor from the threat of force. Power is an evolutionary classification, just as the social structure must be, and, therefore, is obtained through love; its demonstration of love for its people and the people's love for it. It has been proven time immemorial that when society is against her government the relationship breaks down in protest.

—This essay is the beginning of the question of Utopia. It shall be ongoing in this column until it is answered. Happy Spring Break from my staff and myself.