A JUNIOR HIGH SCHOOL MATHEMATICS CLUB IN ACTION

By Marcy Herchek

Editors' Note: Mrs. Herchek is a teacher of mathematics in Allendale Junior High School, Edmonton; a coordinator of mathematics serving several schools; treasurer of the MCATA; and chairman of a committee of the Council compiling information for use of those interested in organizing a mathematics club in a school.

In September, 1966, the members of a Grade IX class (9C) at Allendale Junior High School decided to form a mathematics club. During a class period a discussion was held on how to form such a club. From it emerged three decisions:

1. Membership would be limited to 9C.
2. Meetings would be held each Thursday after school for one hour.
3. A committee was formed to gather information regarding the organization and formation of a mathematics club.

At the first meeting, the committee members reported from materials they had found. These materials were books from lending libraries and a paper on mathematics clubs prepared by N.A. Rebryna (head of the Mathematics Department of the Harry Ainlay Composite High School, Edmonton).

A discussion followed, resulting in the following:

- A club was formed by 20 students of 9C as members.
- Membership was limited to 9C for the time being, with a decision to review the situation in January, 1967.
- Officers were elected.
- A fee of 25 cents per member per year was set.
- Members were to begin searching for material to suggest individual projects.
- Projects for the club as a whole were discussed.

The club members decided to include in their program (a) to learn how to play mathematical games, (b) to go on field trips and see mathematics in action, (c) to experiment with new concepts other than those presented in their texts, (d) to invite speakers and consultants to their meetings, and (e) to make physical mathematics models.

To date the club has learned to play chess, yatche, cribbage, rommoli and three-dimensional tick-tack-toe. Field trips have been made to a welding shop to learn about tolerance in measurement, also to the new Edmonton Post Office to find out how a math formula was used to determine the number of employees, based on a movement-time factor, and to see the use of geometric designs and simple computers to expedite the handling of letters and parcels.

A consultant has been invited to help them learn how to use a slide rule. Club members challenged a teacher, who is a good chess player, to games of chess. They built math models using paper, plastic rods, string and pegboard. Two books were bought to begin a club library.

Future plans of the club involve the completion of some individual projects; a trip to see a computer in action; a study of probability, permutations and combinations; and improvement in proficiency at some of the games.

This club does <u>not</u> provide extra time to work on material from the school curriculum. The club members plan and do the work themselves, and the teacher present does not act as a teacher but rather participates as a member of the club and helps with supervision.

Georg Cantor, the mathematician responsible for the theory of sets, the foundation of modern mathematics, had a view which every teacher should recite before each mathematics lesson:

"The essence of mathematics
lies in its freedom."
