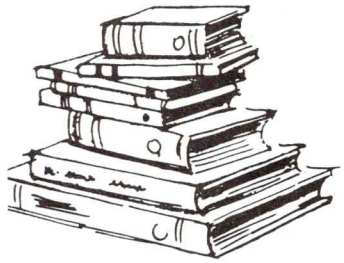
BOOK REVIEW



The *Houghton Mifflin Mathematics Enrichment Series* is a set of seven books (from 30 to 90 pages each) dealing with the following topics:

1. *Legislative Apportionment* - Albert E. Meder, Jr.
2. *Stereograms* - Donald W. Stover
3. *Mosaics* - Donald W. Stover
4. *Sequences* - Katherine E. O'Brien
5. *Topics from Inverse Geometry* - Albert E. Meder, Jr.
6. *Induction in Mathematics* - Louise Johnson Rosenbaum
7. *Fibonacci Numbers and Lucas Numbers* - Verner E. Hoggett, Jr.

In general, the set of seven books seems appropriate for high school matriculation students, especially those with a keen interest in formal proofs. All books extensively rely on geometric and algebraic proofs and theorems.

Three of the books provide a non-mathematical incentive to the learning of their contents. These are:

Stereograms
Mosaics
Legislative Apportionment

The books on stereograms and mosaics would probably lend themselves to an activity approach, because both provide for drawing and cutting activities to supplement the mathematical ideas behind the concepts. The book of stereograms stresses coordinate systems, chart reading, graphing, and algebraic manipulation. All of these culminate in a three-dimensional picture which "pops out" of the paper. A special set of glasses is provided in the back of the book to help achieve the three-dimensional effect.

The book on mosaics also provides meaningful mathematics activities for a student, which lead on to formal mathematics concepts. The book utilizes such mathematical ideas as one-to-one correspondence, the sum of the exterior angles of a polygon, the measure of the interior angles of a polygon, and mosaic symbol notation. The last is adequately explained, and is the basis for most of the exercises in the book. The number of possible mosaics is extensively covered, both formally (using algebraic and geometrical proofs) and informally (by attempting to build mosaics with different shapes of colored papers).

Legislative Apportionment is based on the American political system, but could easily be adapted to the Alberta and Canadian systems. The book is excellent for showing a practical side of mathematics to skeptical social science students (and teachers). Algebraic manipulation, inequalities, and the four arithmetic operations are the necessary mathematical tools required. This book would be best used by a teacher to set up a series of lessons related to the local scene.

I will review the other four books in the next *Newsletter*.

Gerald Worger
Mr. Worger is on leave of absence from the Calgary Public School Board, where he has taught in elementary, junior and senior high schools. At present he is working on an M.Ed. at The University of Calgary in the field of Math Education.

A GAME YOU PLAY TO LOSE

Hexapawn: A Game You Play to Lose has been produced by International Business Machines Corporation. This game, devised by Martin Gardner and first published in *Scientific American* in 1962, demonstrates how a machine can be instructed to "make decisions" and avoid repeating past mistakes. It is based on a simple version of checkers and is intended to increase interest in computers and computer programming among high school students. Teachers, or those who work with teachers, can secure copies of *Hexapawn* by writing to:

Manager, Editorial Promotions,
International Business Machines,
Armonk, New York 10504