

This year's tournament was arranged by the Eleven A Mathematics 20 class of Crescent Heights under the leadership of Mrs. M. Melech and Miss H. Morrison. Chairman, scorekeepers, timekeepers, pages, and ushers were all volunteers from Eleven A.

BOOK REVIEW, by H. S. Hrabi

Editor's Note: Mr. Hrabi is mathematics consultant for the Department of Education.

### INTRODUCTION TO MATHEMATICS

Brumfiel, Eicholz, and Shanks; Reading, Massachusetts, (Addison-Wesley Publishing Company, Inc., 1961) xi + 323 pp., \$4.

This book is the first in a series intended to serve the mathematical needs of students from Grades VIII to XI, and results from an experimental program carried on at Ball State Teachers' College, Muncie, Indiana. The experimental program was initiated in 1955, with most of the materials being tested at the Ball State Laboratory School. However, as the experiment broadened in scope, several other high schools in Indiana became involved. Other books in the series include ALGEBRA I (Grade IX), GEOMETRY (Grade X), and ALGEBRA II (Grade XI). The latter text is still in press, but should be available shortly.

The content of Introduction to Mathematics represents a sharp contrast with conventional topics taught at the Grade VIII level. Unit I, entitled "Symbols and Numerals", includes the history of numeration systems and a study of the base 10 system, as well as systems to other bases. Unit II is entitled "Rational Numbers". Some of the very simple concepts of the real number system are discussed in the four chapters of Unit III. Unit IV, Algebra, begins with a discussion of simple notions regarding sets. These notions form the basis for the presentation of algebraic concepts. Operations with negative numbers are discussed and used in the solution of story problems. If the very small section on trigonometric relations is disregarded, the geometry content of Unit V approximates that in the present Grade IX mathematics course in Alberta. The approach is somewhat different though, in that this text uses point-set notions in defining geometric figures. For example, a line segment is defined as a set of points consisting of two points, A and B, and all the points between these points.

The conventional topics of taxation, insurance, percent, and percent as applied to business, are not included in this text. There is no reference to the construction and reading of various types of graphs (bar, line and circle). Though there are sections for drill on basic computation with whole numbers and common and decimal fractions, these sections arise from a consideration of types of number systems and operations in these systems rather than from strict computational point of view. This procedure is in line with this statement of the authors in the preface of the teachers' manual: "You will notice that this text is an idea-oriented one rather than an answer-oriented one". The authors feel that the material in the text would constitute a very heavy course; a statement in the teachers' manual outlines a minimum course and a suggested time schedule to finish this minimum course in 34 weeks. Apparently, practice has indicated that this minimum course is still too heavy for slow students because the publishers have put out a mimeographed brochure outlining a course less difficult than the minimum course mentioned in the teachers' manual.

The teachers' manual and answer book outlines the objectives for each chapter and contains suggestions. Some answers are included. A more detailed guide book would be an invaluable aid, especially to the teacher who is handling this course for the first time.

There is less emphasis on social applications of mathematical concepts, especially percent. There is more emphasis on mathematical content - numeration systems, number systems, informal geometry. As concepts are presented, their application to inequalities as well as to equations is discussed. The notion of sets alluded to by many authors as an important unifying concept in mathematics is introduced and used as a basis for developing simple algebraic and geometric concepts. For those who are sympathetic to these broad outlines for curriculum change, this book merits consideration as a suitable text.

Alberta teachers will be interested in knowing that Introduction to Mathematics (British Columbia Edition) will be the only text authorized at the Grade VIII level in the Province of British Columbia beginning in the school year, 1962-63. Aside from the provision of more review exercises at the close of each chapter, the British Columbia Edition is not significantly different from the original publication.