second by offset lithography. It is unchanged except for the correction of errors and the removal of misprints. A review of the second edition appears in an earlier issue of the BULLETIN.

W. JONSSON,
McGILL UNIVERSITY

Introduction to Commutative Algebra. BY M. F. ATIYAH and I. G. MACDONALD. Addison-Wesley, Reading, Mass. (1969). xx IX + 128 pp.

An amazing amount of information is included in the 128 pages of this book. A considerable amount of this information is included in the exercises to the eleven tersely yet clearly written chapters. In the body of each chapter the basic ideas and techniques are exposed. The chapters are: (1) Rings and Ideals (2) Modules (3) Rings and Modules of Fractions (4) Primary Decomposition (5) Integral dependance and Valuations (6) Chain Conditions (7) Noetherian Rings (8) Artin Rings (9) Discrete Valuation Rings and Dedekind Domains (10) Completions (11) Dimension Theory.

The authors make no claim to have written a substitute for more voluminous texts on Commutative Algebra such as Zariski-Samuel or Bourbaki, but on the other hand do cover more ground than Northcott's Ideal Theory. The approach emphasises modules and localisation. The role of homological algebra in the subject is acknowledged, but only some of the more elementary methods and theorems are included — some work with exact sequences, diagrams, the serpent lemma, exactness properties of the tensor product.

That the roots of the subject lie in Algebraic Geometry and Algebraic Number Theory is continually emphasized through the examples and the exercises. This book can be recommended to any graduate student wanting to learn Commutative Algebra.

W. JONSSON,
McGILL UNIVERSITY

Introduction to the Theory of Abstract Algebras. BY RICHARD S. PIERCE. Holt, Reinehart & Winston Canada Ltd., Toronto (1968). vii + 148 pp.

This book is a presentation of some basic results of universal algebra. After an introduction on set-theoretical preliminaries there is a chapter presenting in great generality the concepts of concern in universal algebra; most concepts are defined for relational systems and then specialized to partial algebras and (full) algebras.