

These theorems of Zassenhaus and Huppert, together with a result of Suzuki on strictly doubly transitive groups and a description of the Mathieu groups, form the last third of the book. The first two-thirds deal with introductory material giving the necessary tools in permutation groups, transfer theory and linear representations, as well as giving the theorems of Frobenius and Thompson on Frobenius groups. Since so many results are needed in the last part these earlier chapters make a nice introduction into methods in the theory of finite groups.

This book is to be recommended as a valuable source on Frobenius groups and multiply transitive groups, and a useful introduction to some basic tools in finite group theory.

John D. Dixon, Carleton University

A first course in abstract algebra, by Hiram Paley and Paul M. Weichsel. Holt, Rinehart, and Winston, New York, 1966. xiii + 326 pages.

This is a textbook on Modern Algebra. The first chapter is set theory. The second chapter is on number theory, and includes axioms for the integers, the euclidean algorithm, congruences, and the fundamental theorem of arithmetic.

The next chapters include the basic properties of groups and rings one expects in a book at this level. The final chapter is on advanced ring theory, including the Artin-Wedderburn Theorems for semi-simple rings and the characterization of semi-simple rings in terms of injective and projective modules.

This textbook could be used in an undergraduate honours course at Manitoba in its entirety. We normally use a book whose final topic is Galois theory rather than advanced ring theory; perhaps the ring theory would be more useful. This book has been used here twice in our general course programme with omissions. The number theory chapter is a good introduction to abstract mathematics for this group of students.

N. Losey, University of Manitoba

A first course in linear algebra, by D. Zelinsky. Academic Press, New York, 1968. viii + 266 pages. U.S. \$6.50.

This book is an excellent introduction to the algebra and geometry of vectors, matrices, and linear transformations. It follows closely the recommendations of CUPM. A student is slowly introduced to the concept of vector spaces, linear transformations, determinants and quadratic forms; the job is well done. Each section in the book is followed by a wealth of examples. The book is practically free of typographical errors. I strongly recommend the book for a first course in linear algebra.

B.M. Puttaswamaiah, Carleton University

Introduction to the theory of algebraic functions and numbers, by M. Eichler. Academic Press, New York and London, 1966. xiv + 324 pages. U.S. \$14.50.

The book is translated from the German. Although it is called an introduction, the book is too difficult to serve this purpose suitably for,