

product in older books, are supposed to be known. For this, as well as for some of the details left out, the reader might find useful the book *Structure of rings* by N. Jacobson, which is a standard reference, but it is also more general and more difficult to read. There are several misprints in the book such as exponents which appear as factors, some changed symbols, a couple of exponents omitted, etc. We think that only two of the misprints have some importance. One which could cause some trouble when only the theorem is consulted appears in the statement of Theorem 5.1.7 where instead of $\sum_{i=1}^t \chi_i(a)\chi_i(b) = 0$, it should read $\sum_{i=1}^t \chi_i(a)\overline{\chi_i(b)} = 0$. In Theorem 6.3.2 the ring B is a direct product (or complete direct sum) of fields, and not just a direct sum as stated.

This book will appeal to many a reader. It would be wonderful as a textbook, and, in fact, it is based on the author's lecture notes published by the University of Chicago. But it can also be useful as a reference and as a source of information on counterexamples and recent literature. Only people looking for the most general form of a particular theorem are advised to turn to other books, but the reader interested in studying or reviewing its subject-matter or looking for a rounded account of it could do no better than choosing this book for this purpose.

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Introduction to the theory of abstract algebras, by R. S. Pierce. Holt, New York, 1968. ix+148 pp. \$5.50.

If the author of one book on universal algebra is asked to review another, he inevitably thinks in terms of comparisons. This is especially so when these are the only two books published in the field (though a third, by G. Grätzer, will appear in 1969). There should be no harm in making such comparisons as long as one guards against bias, both rational (preferring one's own children because one considers them more beautiful) and irrational (preferring them because they are one's own flesh and blood). The reviewer has made an earnest attempt to excise all such bias from this review; any traces that remain will easily be spotted by the reader, who has thus been forewarned.

Professor Pierce's book is intended as an introduction for graduate students, and clearly not necessarily students specializing in algebra, for as the author rightly says: "familiarity with this theory should be standard equipment for all mathematicians." After two introductory chapters, one reviewing the necessary set-theory and one on the basic concepts (homomorphisms, subalgebras, congruences, etc.) the