on p. 36 *ni pri kakom znachenii* is translated by *even for some value*; it is not pointed out that *nikakom* is basically a single word which is split round the preposition *pri* and the beginner is left wondering why *ni* means *even*). The system of numerical subscripts used to indicate differing word order in Russian and English is never explained anywhere.

However the book does provide reading practice in a wide variety of subjects including real and complex variable theory, projective and differential geometry, algebra, electromagnetic theory and mechanics.

C. J. SHADDOCK

HALMOS, PAUL R., *Lectures on Boolean Algebra* (Van Nostrand, Princeton, 1963), 147 pp., 23s. 6d.

This booklet is No. 1 of a new series of paperbacks entitled *Van Nostrand Mathematical Studies* " intended to provide a setting for experimental, heuristic and informal writing in mathematics that may be research or may be exposition ". The series under the joint editorship of the author and Professor F. W. Gehring is planned to include " lecture notes, trial manuscripts, and other informal mathematical studies ". Informality is the keynote of this racy booklet based on lecture notes given by the author in the University of Chicago. In this case the result is an undoubted success, which is not surprising since the author, already a well-known expositor, is also an editor, but one wonders at the temerity of editors who encourage authors to submit lecture notes and trial manuscripts for publication. The style of the presentation is indeed unconventional. Where else in mathematical literature would one find statements such as " the juicy existence and characterisation theorems follow in later sections " ? The text is interspersed with provocative queries such as a lecturer might put to his class and the reader is carefully guided past possible pitfalls. " The trouble with the union of two regular open sets is that there might be a crack between them."

This book is not elementary in the sense that the books by Whitesitt and Goodstein are elementary. For instance, there is no mention of Hasse or Venn diagrams. The reader is expected to be familiar with set theory, rings, topology and measure theory, but otherwise it is self-contained and makes delightful reading. Here and there one feels that the lecture notes might have been revised with just a little more care. For instance, on p. 7 we read " Let m be an integer greater than 1, ... Define ... 0 = 1, $1 = m$, ..." Even if, as seems likely, the printer had a limited number of founts at his disposal, one might have expected some distinction to have been made between the integers 0 and 1 on the one hand and the null and universal elements of the Boolean algebra on the other.

The applications of Boolean algebras dealt with in this book lie mainly in the fields of topology and measure theory. Amongst the thirty-two section headings the following titles are to be found: Boolean rings, Fields of sets, Free algebras, Ideals and filters, Boolean σ-algebras, Measure algebras, The representation theorem, Completion, Incomplete algebras, Isomorphisms of factors, Retracts, Projective algebras, Injective algebras, Epilogue. This is a stimulating and unconventional book which will be a delight to the mature reader.

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