

*School Mathematics Project, Book 1* (Cambridge University Press, 1965), 281 pp., 18s. 6d.

This is the first of four books which together will make a complete S.M.P. course leading to the Elementary Mathematics Examination at "O" level. The book is intended for pupils at the start of their secondary school career.

*Books T and T4* (1964), 296 pp., 17s. 6d.; and (1965), 330 pp., 21s.

The purpose of Book T is to break into the complete 5-year "O" level course (S.M.P.) at about the third year stage (at the age of 13); and Book T4 follows Book T to complete the S.M.P. "O" level course.

All three books provide much stimulating reading for both teachers and pupils. Great care has been taken to present the ideas new to school work in simple language and in a way which gives the pupils plenty of opportunity to discover relationships for themselves.

*Teacher's Guides to Book 1 and Book T4* (1965), 204 pp., 21s.; and 208 pp., 21s.

As well as giving good introductions for the teacher to the topics which are new to the school work, these books also provide helpful comments on the teaching of the material contained in the corresponding pupils' books.

W. T. BLACKBURN

HUSAIN, TAQDIR, *The Open Mapping and Closed Graph Theorems in Topological Vector Spaces* (Oxford Mathematical Monographs, Clarendon Press: Oxford University Press, 1965), x+108 pp., 30s.

The author's purpose in this monograph is to collect and present some of the work done in recent years on the general theory of the open mapping and closed graph theorems and various related ideas in the theory of topological vector spaces. It is therefore of a highly specialist nature.

In the first two chapters, a brief account is given of the topology and vector space theory required, with references to proofs, and then of the basic theory of topological vector spaces, where the proofs follow those in the treatise of Bourbaki. Chapter 3 contains Banach's classical open mapping and closed graph theorems, and derived results, proved for  $F$ -spaces and Baire spaces; these are followed by their extensions to inductive limits of locally convex spaces of these types. Chapters 4 and 5 consist of the contents of papers published by various writers between 1953 and 1958. In these papers  $B$ -complete (fully complete) spaces were introduced and their connection with the open mapping and closed graph theorems established; also ultrabarrelled spaces, the  $ew^*$  topology (the finest coinciding with the weak topology on equicontinuous sets) and hypercomplete spaces were defined and studied. The advantage to the reader in using the book rather than the original papers is one of uniformity of style and notation. In Chapters 6 and 7 the author gives the material in some of his own papers of the past few years. One of these is concerned with a class of spaces, called  $S$ -spaces by the author, which under certain conditions are  $B$ -complete, so that a generalisation of the Krein-Smulian theorem holds. He also studies rather general classes of spaces between which the closed graph theorem holds. The monograph concludes with some notes and a bibliography.

WENDY ROBERTSON

MORSE, ANTHONY P., *A Theory of Sets* (Academic Press Inc., New York, 1965), xxxi+130 pp., \$7.95.

This book gives a sophisticated and highly formal presentation of the author's unified treatment of logic and set theory, and contains many original ideas. Once the author's formalism has been introduced it is used almost exclusively in the main text, with a minimum of background comment in ordinary English. To assist the un-

E.M.S.—F