

results from related fields. As the author remarks many of the theorems can be understood by a gifted high school student, but a full understanding requires considerable concentration and some maturity from the reader. The printing is excellent and there are numerous illustrations motivating the proofs. R. A. RANKIN

KNOPP, K., *Theorie und Anwendung der unendlichen Reihen* (Springer, 5th edition, 1964), 582 pp., DM. 48.

The author of this famous textbook died in 1957. The fifth edition appears to be a photographic reprint of the fourth edition of 1947 with insignificant alterations; the quality of the printed text is inferior to the high standards normally expected from the house of Springer. The English translation published by Blackie in 1928 occupies a place between the second and third German editions and differs from the later editions in minor respects; for example, new proofs are given for two theorems on divergent series in the third and following editions. It is somewhat surprising that no attempt has been made to bring references up to date by including, for example, mention of G. H. Hardy's *Divergent Series* (O.U.P., 1949).

R. A. RANKIN

HEMMERLING, EDWIN M., *Fundamentals of College Geometry* (John Wiley & Sons, 1964).

The treatment is entirely deductive, based upon 15 briefly stated axioms together with 33 postulates which include that of Playfair. The notations of set theory and of mathematical logic are introduced, but are not much in evidence later. Thereafter the matter is roughly that of a British "O" level course, with the emphasis in important proofs being laid upon underlying reasons, step and justification occupying parallel columns. There are short chapters on the trigonometry of right-angled triangles and on the coordinate geometry of the straight line. In Chapter 12, the results of 18 theorems on 3-dimensional geometry are stated without proof.

The theorem and its converse on the bisectors of the vertical angle of a triangle does not appear either in text or examples, nor does the fact that a straight line perpendicular to each of two intersecting straight lines at their common point, is perpendicular to their plane.

The book is excellently arranged and produced, only two misprints being noticed. Within the limitations set himself by the author, and despite a claim on the dust-cover to show students "how to relate abstract materials of geometry to experiential areas such as politics, sociology and advertising," the work should in fact enable some, preferably having prior knowledge of Euclidean geometry, to increase their understanding of its underlying assumptions. S. READ

ALDER, H. L. AND ROESSLER, E. B., *Introduction to Probability and Statistics*, 3rd edition (W. H. Freeman and Co., San Francisco and London, 1964), xiv + 313 pp., 36s.

The first and second editions of this book were reviewed in this journal in June 1961 and June 1963 respectively. The third edition has expanded the brief chapter on the Sign Test to a more general chapter on Non-parametric Tests and includes details and examples of the Wilcoxon Tests for two general samples and two paired samples. Tables of the Wilcoxon Distributions are included. The only other change is the inclusion, in the chapter on Analysis of Variance, of a section dealing with transformations of data which may be required to ensure that standard methods of analysis are applicable. Details are given of square root, logarithmic, reciprocal and arc sin transformations together with a table for the transformation of percentage to arc sine $\sqrt{(\text{percentage})}$. The additional material is lucidly presented and enhances the value of the book. J. R. GRAY