BOOK REVIEWS

GRUENBERG, K. W. and WEIR, A. J., *Linear Geometry* (Van Nostrand, London, 1967), viii + 186 pp.

This is a carefully written algebraic exposition of the basic concepts of affine, projective and euclidean geometry. By omission of certain sections it can be used as a text on linear algebra.

A succinct survey of elementary vector space theory precedes the introduction of affine and projective geometries (Chapter 2). Isomorphisms of these geometries are discussed in Chapter 3. Linear mappings and bilinear forms are the topics of the next two chapters, including the introduction of quadrics and a brief mention of sesquilinear forms. The stage is then set for euclidean geometry. The final seventh chapter introduces modules, leading up to the classification of collineations.

The reviewer apologizes for the long delay in the appearance of this notice. During the time the book has been on his shelves he has found it a useful reference on a number of occasions. As a textbook for a course he feels it is rather stiff, at any rate for undergraduates. He confesses to being old-fashioned, and liking his geometry (linear or otherwise) with pictures. These the authors do not provide, arguing that diagrams can most profitably be drawn by the reader himself. Nevertheless the reviewer considers that an elementary traditional geometry course would be a necessary preliminary for many students. For those with such a background, or who already have substantial experience of the abstract approach, it should provide a rewarding course of study and introduction to more advanced work.

The compactness of presentation can be judged by taking the remark in the Preface that " the material can be adequately covered in about one hundred lectures " along with the observation that the main text occupies a mere 164 pages, of which the equivalent of perhaps 30 are taken up by the good supply of exercises! Fortunately the authors " do not expect it to be read in mathematical isolation ". Clearly the lecturer must supplement the text with further explanations and illustrations of the concepts. Following the main part of the book are 13 pages of solutions, a list of symbols and an excellent index. The book is available in both clothbound and paperback editions. It merits close study by those preparing systematic courses in the topics with which it deals.   D. MONK

FENYÖ, S. and FREY, T., *Modern Mathematical Methods in Technology*, Volume 1 (North-Holland 1969), xii + 403 pp., £8·20.

Contents: Extension of the classical concept of an integral, Lebesgue, Stieltjes integrals (67 pp.). The operational calculus (76 pp.). Fundamentals of distribution theory (134 pp.). Analysis of nonlinear differential equations. The theory of nonlinear vibrations (121 pp.). Numerous examples and exercises.

The basic problem in writing a book on mathematical methods is that of striking a proper balance between the mathematical development of the method and the explanation of the relationship between the method and its fields of application. In order to keep the size and the price of the book down it is not unknown for either proofs or applications to be excluded or relegated entirely to the limbo of an appendix. The present authors have taken a more laudable middle course and have included

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