of group theoretic methods to quantum mechanics, could have been far more thoroughly discussed on the space available. As it is one is referred in decisive moments to some other source book so that it is not possible to learn the underlying principles by studying this book though, of course, new applications of representation theory to quantum mechanics have been discovered since the appearance of Van der Waerden's book which are discussed in this book.

There is no intrinsic evidence given why a student of theoretical physics interested in the application of group theory to quantum mechanics should not directly proceed to study the books by E. Wigner and by L. D. Landau and E. M. Lifschitz on Quantum Mechanics.

Hans Zassenhaus, McGill University

Russian-English Mathematical Dictionary. Words and Phrases in Pure and Applied Mathematics with Roots and Accents, Arranged for Easy Reference, by L. M. Milne-Thomson. The University of Wisconsin Press, Madison, 1962. xiv + 191 pages. $6.00.

This will be a valuable aid for all those mathematicians who wish to read mathematical work in Russian. In spite of the fact that a good deal of the Russian mathematical literature is now being translated into English (and (or) German and French), many readers will find it desirable to be their own translators. This will not only enable them to get to know earlier; in the case of books they will have them at one fifth of the price of the corresponding American edition.

An outline of the Russian grammar is added which will enhance a more intelligent use of the dictionary and perhaps induce the beginner to undertake a more extensive study of the Russian language without which even the best dictionary is only a makeshift tool.

H. S.

Vector Analysis Including the Dynamics of a Rigid Body, by G. D. Smith. Oxford Mathematical Handbooks, Oxford University Press, London, 1962. 192 pages. $4.50.

This book is the third in the series of Oxford Mathematical Handbooks, and is aimed at the reader interested in applications of vector analysis.

A geometrical treatment of vectors, with a careful definition of a vector as a directed line segment, is given in the first five chapters.

Vector algebra and differentiation are dealt with in the first three, vector calculus in the fourth, and operator techniques and Orthogonal Curvilinear Coordinates in the fifth, each chapter being well supplied with worked examples and problem exercises. Related topics from applied science are interspersed with vector ideas.

The sixth chapter begins with a discussion of the "nature of science" and uses vectors to systematically develop the theory of the dynamics of a rigid body.

R. J. Tait, University of Alberta

Elementary Real Analysis, by H. G. Eggleston. Cambridge University Press, Cambridge, 1962. viii + 282 pages.

This text is intended to cover all of the theoretical aspects of real variable analysis needed in the first two years of honours mathematics courses at British universities. In fact, as seen from the outline below, certain portions of complex analysis are also covered. The flavour and spirit of the text can be accurately inferred from the following quotations from the author's Preface:

"It was my intention to write a book in which no assumptions were made except those stated as such, in which definitions were made as explicit as possible, in which there were no forward references to results to be proved later and in which the development of the subject was logically self-contained. With these restrictions I found it advisable to defer the introduction of the elementary functions, cos, sin, exp, log until a comparatively late stage, with the result that no exercises involving these functions could be included until after Chapter 19.

Only those parts of analysis that any analyst will be certain to need have been included. Anything in the nature of 'applied analysis', such as differential equations, Fourier series, etc., has been omitted."

In addition, the text contains no problems (or examples) of an applied nature, and none on the techniques of calculus. Thus, terms such as velocity, acceleration, mass, force - even length, area and volume - do not appear at all. The text consists of 28 chapters, each containing a few worked examples and followed by from 7 to 20 exercises, mostly of a "theoretical" character. There is a 20 page Appendix on the number system (beginning with Peano's axioms, and on to the reals by Dedekind cuts), plus a valuable 55 page section entitled "Hints on the solution of exercises and answers to exercises". A simple computation reveals that the 28 chapters average about 7 pages per chapter.