

This text gives a brief but excellent account of the methods of mathematical physics. Despite the fact that this monograph is concerned primarily with the applications of the operational calculus to geophysics, one interested in a bird's-eye view of certain classical phases of mathematical physics can find them put down in short order. Many unusual problems of theoretical physics with geophysical applications are to be found.

A. E. HEINS

Matrix and Tensor Algebra for Engineers and Chemists. By Clarence E. Rose. Brooklyn, Chemical Publishing Co., 1940. 8+143 pp. \$4.00.

Matrix and Tensor Algebra has been written "for electrical and communication engineers and chemists who wish to learn about determinants, vectors and tensors." Its only mathematical interest lies in the complete novelty of its point of view.

For example, no need is felt for proofs; theorems are stated as *obiter dicta*. Such definitions as "a matrix is a group of independent but related quantities," "a determinant is a finite, imaginary, or complex quantity, or generalization of the algebraic number zero" illustrate its unorthodoxy further. However, as the book was not designed for mathematicians, it would be out of place to go into more detail.

GARRETT BIRKHOFF

Compendio di Meccanica Razionale. 2d revised edition. By Tullio Levi-Civita and Ugo Amaldi. Bologna, Zanichelli, 1938. 12+423+8+310 pp.

The two thousand page work by the same authors, entitled *Lezioni di Meccanica Razionale*, has already been adequately reviewed by K. P. Williams (this Bulletin, vol. 36, p. 781). It is one of the great standard works on mechanics of almost an encyclopaedic nature.

The *Compendio*, the work now under review, represents an attempt to cut down the *Lezioni* to the usual academic course of study in Italian universities and technical schools. This has been done by wholesale omissions of entire subjects rather than by abridged exposition. On the contrary, the emphasis on the foundations of the subject has been strengthened by a certain amount of additional material. Also included are a few minor corrections and revisions. For the most part, however, whole sections of the *Compendio* read word for word exactly as do the corresponding sections in the *Lezioni*.

Some of the subjects omitted in the *Compendio* are rather sur-