

and the derivative operators xD and Dx are studied in Chapter VI.

Each chapter contains numerous examples and problems for the reader. Undoubtedly, these should be useful for self-study and to locate specific examples needed in a wide variety of problems.

Y. L. L.

65[4, 7, 8, 11, 13].—MURRAY R. SPIEGEL, *Mathematical Handbook of Formulas and Tables*, McGraw-Hill Book Co., New York, 1968, x + 271 pp., 28 cm. Price \$3.95 (paperbound).

This relatively inexpensive compilation of mathematical formulas and tables is a recent addition to the popular Schaum's Outline Series of books mainly in mathematics and engineering.

The book is divided into two main parts. Part I (Formulas) consists of 41 sections, of which 39 present a total of 2309 formulas (supplemented by diagrams and graphs) selected from a wide range of topics in such fields as algebra, geometry, trigonometry, analytic geometry, calculus, differential equations, vector analysis, Fourier series, Fourier and Laplace transforms, special functions (gamma, beta, Bessel, Legendre, elliptic, and others), and probability distributions. The first and last sections of Part I consist, respectively, of a table of 27 frequently used mathematical constants (given to from 10S to 25S) and a useful table of conversion factors.

Part II (Tables) consists of 52 numerical tables, preceded by a set of sample problems illustrating their use. These tables, which generally range in precision from 3S to 7S, cover the standard elementary functions as well as a large number of the higher mathematical functions, including the gamma function, Bessel functions, exponential integral, sine and cosine integrals, Legendre polynomials, elliptic integrals, and the error function. Also included are tables for the calculation of compound interest and annuities, and a small table of random numbers. An appended index of special symbols and notations and a general index have also been included.

Despite the existence of several errors (listed elsewhere in this issue), this reviewer considers this attractively arranged and clearly printed book to be a valuable addition to the ever-increasing number of such handbooks.

J. W. W.

66[3, 8].—PETER LANCASTER, *Theory of Matrices*, Academic Press, New York, 1969, xii + 316 pp., 24 cm. Price \$11.00.

This book differs considerably in the material presented from most books on matrices and linear algebra and deserves wide adoption, especially in courses intended for students majoring in other areas who are interested primarily in applications. Nevertheless, only a few sections are devoted to applications as such, and then only in terms of their mathematical formulation with no discussion of the physics itself. Thus there are sections on small vibrations, differential equations, and Markoff chains.

After a rather standard introduction in the first two chapters, the third discusses the Courant-Fischer and related theorems; the Smith canonical form and the Frobenius and Jordan normal forms are developed in the next chapter; the