A Short History of Mathematics. By Vera Sanford. Boston, Houghton Mifflin Company, 1930. xii+402 pp. $3.25.

The author of this scholarly volume has been eminently successful in focusing attention upon the development of the elementary branches of mathematics and their adaptations to the varied practical needs of the times.

There are abundant and well chosen illustrations; the material has been carefully selected; and the style is simple, clear, varied, and lively. The chapters on commercial mathematics and the place of mathematics in the school curriculum are perhaps the most unusual.

The book will be valuable not only for teacher training classes but also for certain teachers in service who have regarded high school mathematics as fixed in quantity and quality and have therefore been indiscriminately antagonistic toward all suggestions for modifying either the content or the methods in algebra or geometry.

This book is under the editorship of John Wesley Young and has an introduction by David Eugene Smith. For a more detailed review the reader is referred to The American Mathematical Monthly (vol. 37, 1930, pp. 540–542.)

ELIZABETH B. COWLEY

Die Differential- und Integralgleichungen der Mechanik und Physik. Edited by P. Frank and R. vonMises. Erster, Mathematischer, Teil, edited by R. von Mises, with the cooperation of L. Bieberbach, C. Carathéodory, R. Courant, P. Frank, R. Iglisch, K. Loewner, H. Rademacher, E. Rothe, G. Schulz, and G. Szegö. Zweite, vermehrte, Auflage. Braunschweig, Vieweg, 1930. xxiii+916 pp.

The first edition of this volume appeared in 1925 and was reviewed in this Bulletin, volume 33, page 365. The second edition is also labelled the eighth edition of Riemann-Weber's *Partiellen Differentialgleichungen der mathematischen Physik.*

The present volume is essentially of the same form as the preceding one but it has been worked over carefully to eliminate errors and to make additions which have increased the size from 687 to 916 pages.

The list of collaborators includes three names which did not appear in the earlier edition. Philipp Frank, the general editor of the second, or physical, part of the work, has contributed to Chapter 2 an article on the theory of groups of linear transformations and G. Schulz has contributed to Chapter 12 a section on singular integral equations. R. Iglisch has entirely rewritten Chapter 15 on boundary value problems in general and has added considerably to Chapter 18 on boundary value problems of partial differential equations of the second order.

Besides the additions made by the new contributors, Chapter 3, by K. Loewner, contains a more complete treatment of elliptic integrals and functions. In Chapter 17, G. Szegö has added to his discussion of the potential an article on the problem of the condenser and in Chapter 19, H. Rademacher and E. Rothe have extended their exposition of the special problems of partial differential equations connected with mathematical physics.

W. R. LONGLEY