16[H].—Chih-Bing Ling, *Values of the Roots of Eight Equations of Algebraic-Transcendental Type*, Virginia Polytechnic Institute, Blacksburg, Virginia, June 1965, ms of 11 typewritten sheets deposited in UMT File.

Professor Ling considers the eight equations $\sinh z \pm z = 0$, $\sin z \pm z = 0$, $\cosh z \pm z = 0$, and $\cos z \pm z = 0$, giving a detailed historical account of their solution as well as the mathematical procedure used in preparing his tables.

The real and imaginary parts of the first 100 roots appearing in the first quadrant of the complex plane are tabulated to 11D, based on computations performed on an IBM 1401 computer. Rules for deducing the corresponding roots in the remaining quadrants are also given. The single real root of the equation $\cos z - z = 0$ appears to higher precision (20D) in the text.

A valuable feature of this manuscript report is the bibliography of 16 titles covering earlier calculations and applications of such tables.

J. W. W.

17[H, X].—B. E. Margulis, *Systems of Linear Equations*, translated and adapted from the Russian by Jerome Kristian and Daniel A. Levine, Pergamon Press, New York, 1965, ix + 88 pp., 22 cm. Price $2.75.

This is a quite literate treatment at the high-school level, that includes elimination, determinants, successive approximation, least squares, and graphical solution, in that order. One is pained to see parentheses missing on page 1 from polynomials to be divided, but elsewhere they seem to be present where needed.

A. S. H.

18[I, X].—Philip J. Davis, *Interpolation and Approximation*, Blaisdell Publishing Company, New York, 1963, xiv + 393 pp., 24 cm. Price $12.50.

This is an excellent textbook on approximation theory, emphasizing its intrinsic relations with other areas of analysis. For example, a student who pursues this text can learn from it the fundamentals of functional analysis "on the job" while studying approximation theory. The interplay between approximation theory, functional analysis, and numerical analysis is displayed in a highly attractive fashion.

The first chapter serves as an introduction, summarizing mathematical material to be used subsequently in the text.

This is followed by a chapter on (finite) interpolation, the treatment being carried out in a very general setting but including many concrete and important examples.

The third chapter, entitled "Remainder Theory," is concerned with formulas for the difference between a function and its Lagrange interpolation polynomials.

Chapter IV ("Convergence Theorems for Interpolatory Processes") centers about the problem of convergence of the Lagrange interpolation polynomials of a given function in the complex domain.

The following chapter, entitled "Some Problems of Infinite Interpolation," is concerned, too, with interpolation in the complex domain.

Chapter VI ("Uniform Approximation") begins with the Weierstrass approximation theorem. In this connection the author develops the theory of the Bernstein