vibrations of a clamped plate, a numerical example being given as an illustration. The author next develops what he needs of the theory of completely continuous operators on a Hilbert space and the spectral theorem for self-adjoint operators of that class. A further chapter is devoted to the Weinstein-Aronszajn method of approximating eigenvalues of completely continuous self-adjoint operators, the passage from the spectrum of one intermediary problem to the next being given in some detail. A short chapter on the problem of the vibrating plate illustrates the method. The book ends with a rather difficult chapter on the application of the method to general differential problems.

Although no special preparation is needed for the reading of the book, a mediocre student will find it quite difficult. He is required to absorb the fundamental concepts of the theory of Lebesgue integration, Hilbert spaces, completely continuous operators, Hilbert-Schmidt operators, reproducing kernels, functional and pseudo-functional completions, and systems of stable and unstable boundary conditions for differential problems. It is an ideal book to put in the hands of the graduate student whose interest in applied mathematics has led him to believe that mathematics itself (i.e. real variables, linear spaces etc.) is of no use to him. Besides providing an excellent introduction to the subject at the level where such an introduction is most needed, the book will also be useful as a readable survey of the study of eigenvalue problems for all who are unfamiliar with the subject.

Since this is a first printing, there are a number of rather obvious misprints which will not impede the reader; at two or three places in the text there are certain oversights in the arguments themselves which may delay a student somewhat, but in no case are these very serious.

WILLIAM F. DONOGHUE, JR.

Numerical analysis. By K. S. Kunz. New York, McGraw-Hill, 1957. 15+381 pp. $8.00.

This fine text book should be useful in a first course in numerical analysis given to students with backgrounds of calculus and elementary differential equations.

The first seven chapters cover the ABC's: Finite Differences, Interpolation, Differentiation and Integration, Roots of Equations. Included here is an interesting and useful chapter on summation of series, Euler's transformation, and various summation formulae. Then follow several long chapters devoted principally to three topics: