ous kinds of convergence of sets of linear, bilinear operations, and transformations are discussed. In many respects the last two chapters might be thought of as carrying over into the general setting the results of Hilbert and his followers on limited matrices and functional operations on ordinary Hilbert space.

The method of exposition in this second part follows closely the lines of the first part. Each chapter has an introduction giving an excellent survey of the material to be covered in the chapter, most theorems are stated not only in words, but also in the adaptation of the Peano symbolism introduced by Moore. To any one reading any considerable portion of this work, and consequently acquiring easily a familiarity with the symbolism used, this constant presentation of the same ideas in two forms unfortunately gets to be a little bit tiresome. The exposition is throughout very clear, very easily followed, and might even in some instances have assumed greater intelligence on the part of the reader. The reviewer was conscious of the paucity of references to the supporting literature, especially that current at the time when these developments of Moore were under way. While an isolationist point of view may have been justified at the time of development, the work would be enhanced historically and in comprehensibility if more frequent contacts with the literature were made available, and this would be in line with the spirit of E. H. Moore as the reviewer knew him thirty years ago.

To make an estimate of the value of this publication at this time is a little difficult. Much of it seems only historically worth while in the light of more recent developments in linear functional theory. The general limit has already shown its value in recent work. In the same way, the reviewer feels strongly that the notion of modularity is important, as well as the constructive procedure for hermitian operations on which Hilbert spaces are based. These two notions alone make this part worth while. Many of the results presented are basic to the parts of this publication to appear later, and so complete judgment must be deferred until these further developments are presented.

T. H. Hildebrandt

Lezioni di Analisi Matematica. Part 1. By Francisco Tricomi. 4th edition. Padova, Cedam, 1939. 8+328 pp.

It is to be understood that this is the first of two volumes on analysis and hence the author's aim is only to cover some of the traditional fundamentals of algebra and calculus.

The author introduces the subject with a discussion of determinants, and then applies them to the solution of linear equations. Next, real numbers, rational and irrational, are defined and some fundamental operations discussed, including the partition of rational numbers. The idea of "limit point," or point of condensation, is stressed.

Functions of one variable are defined and discussed, including the limit of a function, continuous function, and some properties resulting from continuity. In this chapter (V), the author is particularly generous with illustrative examples and figures.

Sixty-eight pages are devoted to the derivative. Some of the applications include: Rolle's theorem, theorem of mean value, theorem of L'Hospital, maximum and minimum, indeterminate forms, tangents, differential of arc, asymptotes, concavity, order of contact, curvature, osculating circle, and evolutes.

The indefinite integral and some elementary differential equations are more briefly treated. The definite integral is introduced, but the concept of a definite integral being the limit of a sum of products is omitted.

Although the chapter on series follows a discussion of the derivative and the integral, the treatment is entirely algebraic. It is confined to definition and properties of an infinite series, and rules for convergence and divergence of a series or sums and products of series.

After defining a complex number as a number pair, and showing some fundamental operations including De Moivre's formula, the author briefly shows that the preceding concepts of limit, series, function, derivative and integral as applied to real numbers could be developed along similar lines for complex numbers.

In a discussion of the rational integral equation of one unknown the reviewer was prepared to meet remainders, resultants, discriminants, methods of finding rational and irrational roots, symmetric functions, solution by formula of quadratic, cubic and quartic equations; but it was a pleasant surprise to find not just a reference to but a proof of D'Alembert's fundamental theorem of algebra.

The author closes with a discussion of linear transformations and their application to quadratic forms.

The book is well written, explanation is clear; whenever possible, theory is illustrated by both example and figure. No supplementary exercises are included, although the author points out that they are available in both printed and lithograph form.

AMOS BLACK