covering only twenty-six pages and the remaining eighteen pages are devoted to brief expositions of twenty typical applications of the elliptic functions. The collection of formulas is based on the Jacobi-Legendre fundamental functions and notation, as being, in the author's judgment, better adapted to applications involving numerical computation than the Weierstrassian forms used by Schwarz in his collection, though these latter are of the highest theoretical importance.

Thomae's collection puts in concise and accessible form the whole range of the elliptic function doctrine, as based on the theta function, the zeta function, the omega function, and the Legendre normal forms, and shows fully how useful and practical this development becomes in application to a wide class of problems.

In conclusion it seems quite clear that collections of principles and formulas are highly appropriate and useful for students in advanced stages of progress, but that for elementary students the form of presentation to be commended is that in which problems and exercises are skilfully used in the text to lead up to the statement and proof of principles, as well as to illustrate and clarify the theory in immediate connection with its formal development.

H. E. SLAUGHT.

THE UNIVERSITY OF CHICAGO,
May 28, 1906.

SHORTER NOTICES.

Einleitung in die Funktionentheorie. Abteilung 2. By OTTO STOLZ and J. ANTON GMEINER. Leipzig, B. G. Teubner, 1905. viii + 355 pp.

WITH the publication of the second part of the Stolz and Gmeiner Funktionentheorie, the revision of Stolz's Allgemeine Arithmetik is complete. The Theoretische Arithmetik and the Funktionentheorie, which must still be regarded as parts of the same whole, together present a course in analysis which begins with the integers and includes all the usual operations except differentiation and integration. Taken in connection with Stolz's Calculus, they form a kind of German Cours d'Analyse.