Some background material is collected in six appendices. The book concludes with a note on recent and current research.

Although there are of course many points of contact with Zygmund's famous treatise, Kahane and Salem have chosen their topics so that the actual overlapping is very small. The wealth of interesting material which they present gives convincing proof of the continued vitality of this old and important branch of classical analysis.

WALTER RUDIN

Introduction to the theory of integration. By T. H. Hildebrandt. Academic Press, New York, N. Y., 1963. ix+385 pp. $14.00.

This book has grown out of the author's courses at the University of Michigan, given over a period of many years, and may be taken as his mature view of the theory of integration. The prerequisites stated in the preface are "a basic knowledge of the topological properties of the real line, continuous functions, functions of bounded variation, derivatives, and Riemann integrals." Actually only elementary properties of the real line and of continuous functions are assumed: everything else is examined in great detail. The point of view is severely classical for the most part, contemporary ideas of integration on locally compact spaces, for example, not being mentioned at all. The author's aim is exactly this, to be sure. He wants to give a concrete treatment which will illumine the procedures of abstract integration theory.

The chapter titles are as follows. I. A general theory of limits. This is standard introductory material. II. Riemannian types of integration. This chapter contains all that anyone could want to know about Riemann-Stieltjes integrals on the line. III. Integrals of Riemann type of functions of intervals in two or higher dimension. This chapter is complicated, and to the reviewer's mind is an excellent argument by itself for the abstract approach to measure theory: functions of bounded variation in several variables are just too unwieldy. IV. Sets. This is a matter of definitions, notation and standard simple facts. V. Content and measure. Here the author treats Jordan content, Lebesgue measure, and Lebesgue-Stieltjes measures on the line. VI. Measurable functions. This chapter contains standard facts, including Luzin's theorem. VII. Lebesgue-Stieltjes integration. VIII. Classes of measurable and integrable functions. This is a treatment of L_p $(0<p\leqq\infty)$, including the Riesz-Fischer theorem. IX. Other methods of defining the class of Lebesgue integrable functions. Abstract integrals. This is a short sketch of Daniell's construction of the integral. X. Product measures. Iterated integrals. Fubini theorem. The