

The remainder of the book consists of "optional" topics, the major ones being change of variable in an integral, signed and complex measures, conjugate spaces and weak convergence, Fourier transforms, and ergodic theory.

The book is well supplied with exercises and should make quite a satisfactory text. Its brevity comes not from terseness but from judicious editing. I would guess that students will find it quite readable and that professors will object because their pet theorems are missing.

I have three specific criticisms.

(i) Zaanen defines $I(f)$ —the integral of f —as $I(f^+) + I(f^-)$. He calls f integrable if this exists and summable if it is finite. I object mildly to this terminology, but my real criticism is that he has listed $\infty - \infty = 0$ as a postulate for the extended real number system. So, I do not think he means what he says about integrability.

(ii) He does not define the word function and seems to use f and $f(x)$ interchangeably. In certain transfinite proofs he refers quite properly to a "union of functions" with a parenthetical explanation that will probably be meaningless to the student who has never seen a function defined as a set of ordered pairs.

(iii) He introduces the metric space of measurable sets with the measure of the symmetric difference as a distance function but so far as I can discover he does not prove it complete or even discuss the question of completeness. Yet, on p. 183 he applies the Baire category theorem to this space deriving the usual inference, and this requires completeness.

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Introduction to difference equations. By Samuel Goldberg. New York, Wiley, 1958. 12+260 pp. \$6.75.

This extremely well-written book is "primarily intended for social scientists who wish to understand the basic ideas and techniques involved in setting up and solving difference equations." In the introduction, examples are given of problems which give rise to difference equations—a learning model and the study of the variations in national income. Throughout, numerous exercises are chosen from economics, psychology, and sociology with references to the literature of these subjects. Discussions are devoted to economic dynamics, inventory analysis, learning models, communication theory, and income variation.

On the mathematical side, the author gives an extremely lucid and careful explanation of the techniques of solving linear difference equa-