{The reviewer thinks that on p. 3, line 2, f should be assumed to be bounded; on p. 23, line 9 from the bottom, $e^{-(n+1)}t$ has to be replaced by $e^{-(n+1)t}$; that the statement at the end of p. 26 might be made clearer by referring to $\lim_{n\to\infty} g(n) = 0$; and that it might have been pointed out where in the proof of Theorem 12.2 (pages 43-44) condition III was used, since it really is a condition for the existence of functions satisfying I-II.}

J. Aczél, University of Waterloo

Estimation theory, by Ralph Deutsch. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1965. xiv + 269 pages. $9.75.

The author covers a fairly wide range of topics from both classical and modern estimation theory. Among the former are the method of least squares, linear and nonlinear estimation, recursive estimators, and method of maximum likelihood. The major topics presented in the latter category are the Wiener-Hopf theory for linear estimation, the differential equation techniques associated with the method of Kalman and Bucy, and decision theory.

From the Preface: "Only formal and heuristic mathematics are used in most arguments. Rigorous justifications and theorems for the same points are usually left for augmented reading in the referenced technical literature." Fortunately the author has supplied a good bibliography carefully keyed to the text. With enough supplementary material from the references or other sources, the book may serve as the basis for a graduate course. It should prove useful as a reference to workers in a wide variety of fields, especially in relating the classical methods to more recent developments. A background in probability, statistics, and linear algebra is assumed.

H. Kaufman, McGill University

Modern university calculus, by Bell, Blum, Lewis and Rosenblatt. Holden-Day 1966. lxix + 905 pages. $12.95.

This volume is described as the second part of "Modern Calculus", the first part being presumably the same authors' "Introduction to the calculus". It is greatly concerned with mathematical rigor, and the authors explain their concern with some cogency in the introduction that their goal is not to show that calculus is difficult, but "to provide the student with powerful tools and results".

Explanations are clear, even where clarity requires lengthiness; and the price paid for this is bulk: the book contains over 900 pages, and the core of the calculus (differentiation and integration) is not reached until page 266. In fact, the book could well be described as a text-book

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of elementary analysis; and one fundamental technique thereof (epsilonics) is cleverly introduced quite early under the name "error analysis".

Great care is taken to make the book easy to use in practice: it has a careful numbering system, a good index and table of contents, and a detailed "descriptive outline". Another useful practical idea; every exercise whose answer is given in the back of the book is marked, so that any teacher who wants to avoid setting exercises with given answers can do so.

One small blemish occurs in the topic of differential notation. The differential is defined: df is defined, in fact, by the equation $df(x, h) = f'(x) \cdot h$. But then df/dg is given a separate definition, namely $(df/dg)(x) = f'(x)/g'(x)$ provided that f and g are differentiable and $g'(x)$ is never zero. The double definition of df/dg is required, presumably, because the book does not define the quotient u/v of functions u and v unless u and v have the same domain; and df and dg in general do not. This awkwardness is soon overcome. More serious is the over-strong condition "g' never takes the value zero". It means that, for a particle executing simple harmonic motion, dv/ds is undefined (because s', i.e. v, sometimes takes the value zero).

This blemish, and the rather common one of using the notation $\lim_{t \to t_0} f(t) = L$ before proving the uniqueness of the limit (which leaves the thoughtful student to wonder why $\lim_{t \to t_0} f(t) = L_1$ and $\lim_{t \to t_0} f(t) = L_2$ do not imply $L_1 = L_2$ simply by transitivity of equality) are the only ones your reviewer noticed. In general, the clarity and accuracy of this very comprehensive text are outstanding.

Hugh Thurston, University of British Columbia

Topological spaces, by Eduard Cech (revised edition by Z. Frolic and M. Katetov). John Wiley and Sons Interscience publication, 1966, New York. 893 pages. $22.50.

The two editors have translated and rewritten the original book by Cech published in 1959 in Czech. The earlier edition contained two supplements; "Construction of certain important topological spaces" by J. Novak and "Fully normal spaces" bu M. Katetov. The original edition was an outgrowth of a seminar conducted in the late 1930's. The authors have modernised the exposition, re-arranged the contents considerably and enlarged it, placing much emphasis on topics arising from the supplements.

Despite its size, the book is not, and indeed, is not intended to be, a comprehensive account of general topology. It is, rather, a comprehensive account of closure, uniform and proximity spaces, and