advanced treatment of the subject and often differs from standard texts, a description of the content may be justified.

The first chapter contains a short introduction to the elementary algebra of sets and a description of the real number system R as a complete ordered field. This provides a good basis for a rigorous development of the theory, and the lengthy construction of the real numbers from rationals is avoided. In the next chapters the fundamental topological properties of R are studied and applied to the theory of sequences and series of constants. After the introduction of the general concepts of a real function, semi-continuity, and continuity, sequences of functions and power series are treated. Differentiable functions are defined by the following property (let f be defined on an interval I): f is called differentiable at $x_o \in I$, if there exists a function g on I such that g is continuous at x_o, and $f(x) = f(x_o) + (x - x_o) g(x)$ on I. Besides the fact that this definition extends to the most general situations, it leads to very simple proofs of the elementary rules of differentiation. The elementary transcedental functions are introduced by their power series in connection with the theory of Taylor series. By means of step functions the Lebesgue integral is defined and studied in the last chapter, which includes also the usual theorems about Riemann integration.

The book is easy to read and contains numerous examples, but no exercises. The authors have announced the publication of two further volumes on Calculus of several variables, differential equations, and integration theory.

Benno Artmann, McMaster University

About vectors, by Banesh Hoffman. Prentice-Hall, 1966.

The preface states boldly that the book is written as much to disturb and annoy as to instruct. Whether it disturbs or annoys the reader depends on the reader; it fails to instruct only in that it is not a text-book in the normal sense of the word, and the exercises are unusually indefinite. Samples:-

[On definition]

Under what circumstances would an elephant qualify as a man according to [Plato's] definition?

[On scalars]

Is the magnitude of a position vector a scalar? [This is not a question to be answered with a simple yes or no. It has facets. Think it through.]

The author remarks in the preface that to describe the book in detail would "blunt its intended effect". The same applies to a review,

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but we have probably said enough for our readers to decide whether or not to look at the book itself.

H.A. Thurston, University of British Columbia

Transactions of the fourth Prague conference on information theory, statistical decision functions, random processes. Academic Press, New York and London, 1967, 725 pages.

This is the proceedings of a conference held in Prague from August 31, to September 11 in 1965. It includes 6 invited expository papers and 41 contributed research papers. The invited papers are "Some recent developments in the theory of denumerable Markov processes" by D.G. Kendall, "Some results in the theory of Wiener integrals" by E. Lukacs, "Analytical methods in the theory of controlled Markov processes" by P. Mandl, "Information theory methods in reducing complex decision problems" by A. Perez, "Statistical model building in quality control" by N.S. Raibman (in Russian) and "Recent results in the theory of controlled random processes" by A.N. Shiryaev (in Russian). Of the contributed papers 28 are in English, 2 are in German, 1 is in French and 10 are in Russian. In terms of subject matter they include 3 on the control of random systems, 2 on random systems, 7 on decision theory and statistics, 7 on Markov processes, 5 on limit theorems, 3 on stochastic approximation, 5 on information theory, 3 on random series and the remaining 6 are on miscellaneous topics.

D.A. Dawson, McGill University

S.S. Wilks: Collected Papers; Contributions to mathematical statistics, edited by T.W. Anderson. John Wiley and Sons, 1967. 693 pages.

This volume contains 48 statistical papers of S.S. Wilks. They include his works on multivariate analysis, likelihood ratio tests and maximum likelihood estimates, order statistics and nonparametric methods, as well as his contributions to the applications of statistics to science and to the problems of teaching statistics and training statisticians.

C. Kraft, Université de Montreal

Darstellungen von Gruppen. Mit Berücksichtigung der Berdürfnisse der modernen Physik. Zweite, überarbeitete Auflage. Die Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen, by H. Boerner. Band 74, Springer-Verlag, Berlin, Heidelberg, New York, 1967. xiv + 317 pages. DM 58, $14.50 U.S.

This second edition differs from the first one only in some passages, which shall be discussed below. The book has been written by a mathematician, with the physical applications in mind, however, without

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