

Calculator Calculus

George McCarty

Laguna Beach, CA: EduCalc Publications, 3rd printing, 1980.
254 pages, \$10.95

Prof. E. McSquared's Fantastic Original and Highly Edifying Calculus Primer

Howard Swann and John Johnson

Los Altos, CA: William Kauffman, Inc., 1977. 213 pages, \$7.95

Reviewed by

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There are only two calculus books that I think are comparable to the books being reviewed. *Calculus Made Easy* by Silvanus Thompson (Mac-Millan, 1st Edition, 1910; the 3rd edition is now in the 10th printing) is the classic. Thompson based his book on the idea that "What one fool can do, another can." Neither of the above books can compare with Thompson's for coverage, style, and presentation. Indeed, the second book (*Prof.*) is more appropriate to psychedelic lights than to transferring knowledge. It is written in comic strip style with a senseless humor that may appeal to teenagers, though the content is so restricted that I think exposure to it may damage their mathematical growth. I found *McSquared's* book to be repulsive.

The second calculus book that has caused me great sweat is Whittaker and Robinson's, *The Calculus of Observations* (Blackie & Son. Ltd., London, 1965; originally published in 1924). It is a demanding book. The style is clear but the development and proofs are rigorous and substantial. The problems aren't gifts either.

Calculator Calculus, along with a supplementary text, such as the near standard *Elements of Calculus and Analytic Geometry* by George B. Thomas (Addison-Wesley High School Series, 1976) or *Calculus and Analytic Geometry* by G. B. Thomas (Addison-Wesley College Series, 1962), is an excellent introduction to calculus. The standard texts are needed to supply proofs, theorems and alternative explanations. To be sure, *Calculator Calculus* is a rapid introduction to the field as in the instantaneous appreciation of limits that can be obtained with an inexpensive calculator. Once series and limits are exploited, differential and integral calculus are covered succinctly, with problems ranging from the

simple to complex; the problems not only allow testing of how much was learned but extend the teaching process by requiring the student to intuitively grasp what has been covered so new areas are broken within the problem itself. I like that.

For someone considering calculus, *Calculator Calculus* coupled with *Calculus Made Easy* would be an ideal set of paperbacks to purchase. Completion of these books could then lead on to Whittaker and Tobinsson and more advanced texts. I believe *Calculator Calculus* may be the beginning of a true interactive learning that is hastened by the use of pocket calculators. I look forward to *Advanced Calculator Calculus* and *Calculator Differential Equations* by McCarty.

Methods of Behavioral Research

Edited by E.A. Serafetinides

New York: Grune and Stratton, 1979. 218 pages, \$22.50

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This book is not recommended for purchase. Some of the articles are published in similar form elsewhere; some of the topics are explained in greater detail in journals such as *American Scientist*, *Scientific American*, *Science* or *Psychology Today*. One of the problems with the articles may have been the editor's request for the authors to present their formulations before a "live and critical audience before writing chapters for this book." I wonder who was in the critical audience.

The aim of the book, as stated in the preface, "is to introduce interested readers to the basics of biobehavioral research." The basics have practically been reduced to a prose glossary with little detail. There are better ways to be introduced.