

REVIEWS AND DESCRIPTIONS OF TABLES AND BOOKS

The numbers in brackets are assigned according to the indexing system printed in Volume 22, Number 101, January 1968, page 212.

49 [2, 3, 4].—JOSEF STOER, *Einführung in die Numerische Mathematik*. I; J. STOER & R. BULIRSCH, *Einführung in die Numerische Mathematik*. II, Springer-Verlag, New York, 1972; I: ix + 250 pp., 21 cm. Price \$4.70, II: ix + 286 pp., 21 cm. Price \$5.50.

Here is a modern introductory textbook for German-speaking people by leading German numerical analysts. Volume I covers interpolation, quadrature, linear equations, least squares, and the zeros of functions. An example of the scope of the work is the coverage of both the Cooley-Tukey algorithm and splines in the chapter on interpolation.

Volume II (written with R. Bulirsch) covers eigenvalues, ordinary differential equations, and the iterative solution of large systems of linear equations. An example treated at some length in Volume II is a realistic re-entry problem for a space vehicle.

Of all the English textbooks, one is reminded most of Isaacson and Keller's "Analysis of Numerical Methods".

There are problems at the end of each chapter and the book is in paperback.

B. P.

50 [2.05, 2.35].—A. MEIR & A. SHARMA, Editors, *Spline Functions and Approximation Theory*, Birkhäuser Verlag, Basel, Switzerland, 1973, 386 pp., 25 cm. Price Fr. 64.—.

This book is the proceedings of a symposium held at the University of Alberta in May, 1972. There are 15 papers and 4 abstracts and, as the title suggests, there is considerable emphasis on spline functions (seven papers). Some of the papers present original results and others survey various areas. Almost all of the papers are well done and some are excellent. The topics are so diverse that generalities do not apply; we present the author, title, length (in typewritten pages), and a very short summary for each of the 15 papers. The reviewer hopes the authors will forgive him if he has been unable to exhibit the entire content of their papers in two sentences or less.

BERENS, H., *Pointwise Saturation* (20 pages). This is a survey and reformulation of a wide variety of saturation results. The unifying theme in the presentation is the use of relationships with differential properties.

DAVIS, C., *A Combinatorial Problem in Best Uniform Approximation* (26 pages). For a function $f(x)$ which oscillates N times, we wish to determine the best approximation among those functions which oscillate $m < N$ times. Various results are given including some leading to computational algorithms.