300 flowcharts. Another is a rather strange use of the word 'round' to mean both round and truncate. The authors assume that the reader is familiar with binary arithmetic, not necessarily true in this reviewer's experience with college students. The explanation of computer hardware, especially on core storage, is confusing and sketchy. The book has several misprints which may confuse the beginner. However, these are all minor and should be corrected in the second printing.

The exercises are ample and excellent and should serve students with a wide range of aptitudes and interests. In combination with one of the programming supplements, or with any programming text, the book should be very successful in classroom use.

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5[3].—ROBERT T. GREGORY & DAVID L. KARNEY, *A Collection of Matrices for Testing Computational Algorithms*, John Wiley & Sons, Inc., 1969, ix + 154 pp., 28 cm. Price $9.95.

A much needed collection of matrices for testing algorithms, which arise in numerical linear algebra, is provided by this book. The authors provide both well-conditioned and ill-conditioned test matrices for algorithms concerning: (1) inverses, systems of linear equations, determinants and (2) eigensystems of real symmetric, real nonsymmetric, complex, and tridiagonal matrices. The construction of test matrices is discussed, and a large number of references and a table of symbols is provided.

The authors do not discuss the perplexing problem concerning how a user must choose the appropriate test matrices. In particular, test matrices must be chosen so that all parts of the algorithm are tested. It may not be clear to a user by looking at the examples which matrix (if any) will go through a particular part of his algorithm. Then, he must construct his own examples by working backwards through his algorithm.

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6[5].—DALE U. VON ROSENBERG, *Methods for the Numerical Solution of Partial Differential Equations*, American Elsevier Publishing Co., Inc., New York, 1969, xii + 128 pp. Price $9.50.

This book serves as a good introduction for anyone interested in finite difference methods. In the preface, the author states "This book is written so that a senior undergraduate or first-year graduate student in engineering or science can learn to use these methods in a single semester course, and so that an engineer in industry can learn them by self-study." The book succeeds admirably. The style is very readable