of the particular problem in hand, on the mathematical context of the problem, including, wherever possible, a discussion of error analysis and control, and on the numerical procedure in step-by-step or "recipe" form. A macroscopic flow chart, adaptable to any computer, is included, together with a written description of it, estimates of memory requirements and running time, test cases, and a bibliography.

Needless to say, the editors of a book of this type leave themselves open to criticism on their choice of the numerical techniques which are included, or, more important, which are excluded from it. Thus the single article on matrix eigenvalue problems, devoted to Jacobi's method, could profitably be supplemented by articles on the power method, which is applicable to general matrices, and on the application of eigenvalue techniques to the solution of linear determinantal equations in the form $\det(A - \lambda B) = 0$. Similarly, the section entitled "Miscellaneous Methods" could well have included an article on the ubiquitous curve-fitting problems that occupy so much of the time of scientific computing facilities.

Despite these, and other controversial shortcomings, the book is well worth while, and the first book of its kind to appear. Its appearance makes one wonder why someone has not undertaken something of the sort long ago.

James L. Howland, University of Ottawa

Digital Computers and Nuclear Reactor Calculations, by Ward C. Sangren. Wiley, New York, 1960. 208 + xi pages. $ 8.50.

The author's objectives are to present an introduction to high-speed nuclear-reactor calculations for the nuclear engineer or scientist, and to provide an introduction to high-speed computation for practitioners in any field of engineering or physical science. The attempt to present so much material in so few pages leads to a rather terse style of writing, and results in a rather sketchy treatment of some topics, especially numerical analysis.

The book is divided into two parts. The first part, concerned with digital computers, programming and numerical analysis is intended as a general introduction to these topics. The chapters on computers and programming are adequate to this purpose, but the chapter on numerical analysis is very sketchy, devoting but five pages to matrix calculations and six pages to the numerical solution of partial differential equations. Each of these topics is of fundamental importance in the second part of the book. Readers interested in the topics of this part of the book would be better advised to consult the longer, but better written and more readable treatment by Alt; "Electronic Digital Computers.

The second part is concerned with the description of typical nuclear reactor calculations and of the mathematical and programming techniques employed to solve them. The problem treated in detail, that of Fission-Product Poisoning, reduces to the tabulation of an analytic solution of a pair of ordinary differential equations, and would be regarded as routine in most computing laboratories. Despite the detailed treatment afforded this problem, no mention is made, either in this part, or in the chapter on numerical analysis, of how the computer evaluates the exponential functions appearing in the solution. This calculation is the essence of the problem; the rest is mere technical detail. Other problems treated, in less detail, include diffusion calculations, the numerical solution of the transport equation, and various engineering or other non-nuclear problems associated with nuclear reactor design. One-dimensional diffusion problems are reduced to the numerical solution of certain transcendental equations; while more complicated problems are approached by means of finite-difference approximations to the basic partial differential equations. A constantly recurring problem is the treatment of interfaces separating regions of different physical properties. In addition, the linear systems arising in this way can be very large, requiring the application of iterative techniques. The treatment of these problems suffers from a profusion of formulae and complicated notation which tend to obscure the basic problems, otherwise this section has a good deal to offer to the applied mathematician seeking an introduction to nuclear reactor problems.

James L. Howland, University of Ottawa

A Primer on Real Functions, by R. P. Boas, jr. Wiley, New York, and Math. Assoc. of America, Carus Monograph, 1960. xiii + 189 pages. $ 4.00. ($ 2.00 for Members of the Association.)

As the author states in his preface, this book is not a treatise or textbook, but is a book for the beginning graduate student, showing some of the highlights of the theory of functions of a real variable. The book is ideal for such a student, being full of concrete examples, which would supplement the fairly abstract approach in the present day graduate course.

There is an excellent list of references for further study, and what is rare in a work at this level, quite a large number of examples for the reader, with outlines for the solutions at the end of the book.

One should mention the very clear development of Baire's theorem, together with a few interesting examples to show the power of the theorem.

The book has two chapters, the first dealing with sets, countability, metric spaces, compactness and ending with Baire's theorem and