Academic mathematics is principally concerned with the exact solution of ideally posed problems: practical mathematics requires mainly the approximate solution of problems deriving from models of acknowledged imperfection. The insistence on rigor necessary for the former is more often than not a positive hindrance when approaching the latter. In this book, which is written at the high school or freshman level, an attempt is made to acquaint the mathematician who wishes to be useful, with the facts of his life, not by brutal confrontation after he has taken his degree, but by preparation for them at an earlier age.

The book deals mainly with the solution of equations. By means of simple examples (a stone falling down a well, Achilles and the tortoise), the way in which equations arise in Physics and Engineering is illustrated. Iterative methods (the method of chords, Newton's method, etc.)' are then discussed; their motivation is explained with the help of numerous diagrams, and some conditions for convergence are derived.

The standard of exposition is extremely high, and the book is attractively produced.

In view of the level at which the material is presented this book is hardly of interest to the research numerical analyst, nor will it command the direct attention of those teaching numerical analysis, but for the enterprising student and the inquisitive layman it is certainly a welcome addition to the literature.

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98[X].—CALVIN H. WILCOX, Editor, *Asymptotic Solutions of Differential Equations and Their Applications*, John Wiley & Sons, Inc., New York, New York, 1964, x + 249 pp., 23 cm. Price $4.95.

This book consists of the transactions of the symposium dedicated to Professor Langer and held at Madison, Wisconsin, May 4–6, 1964. Survey articles, as well as detailed presentation of recent results, are included. A careful reading of the book yields a very good idea of the methods of obtaining asymptotic solutions of differential equations, as well as their tremendous importance in the applications. Each article also contains a very good bibliography. The authors of the articles are: Clark, Erdélyi, Kazarinoff, Lewis, Lin, McKelvey, Olver, Sibuya, Turrittin, and Wasow.

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99[X, Z].—A. V. BALAKRISHNAN & LUCIEN W. NEUSTADT, Editors, *Computing Methods in Optimization Problems*, Academic Press, New York, 1964, x + 327 pp., 24 cm. Price $7.50.

This book is the Proceedings of a conference on Computing Methods in Optimization Problems held at UCLA in January, 1964. The papers appearing in this volume will be reviewed individually, and, by necessity, these reviews must be brief.

In the first paper, entitled "Variational theory and optimal control theory," by Magnus R. Hestenes (pp. 1–22), a general problem in optimal control is formu-