leading. On page 60, the statement that the Fourier method is "the less rigorous because it neglects the boundary conditions" is questionable. The extensive treatment of iterative solution methods for implicit difference approximations to the heat conditions equation in one space variable seems to lack a certain amount of motivation.

As a text, this book fills a genuine gap in the literature and, on the whole, is recommended for use by senior undergraduates or by beginning graduate students.

R.G. Stanton, University of Waterloo

Discrete Dynamic Programming, by R. Aris. Blaisdell Publ. Co., New York (Division of Ginn and Co.), 1964. x + 148 pages.

A welcome feature of the publication scene in the past few years is the appearance of brief books devoted to timely topics and written in a style that makes them accessible to a wide class of readers. In the present case the required background appears to be little more than a good first course in calculus. Various types of optimization are described in the first chapter. The example of a chemical reaction in a sequence of tanks is then used to lead up to the formal definition of a discrete deterministic decision process, followed by the principle of optimality. The remaining chapters include graphical methods, Lagrange multipliers, problems drawn from economics, communication theory, curve fitting and reliability theory, the connection between the continuous and discrete cases, and some extensions to feedback systems and countercurrent systems.

The author's lucid style and the publisher's pleasing format combine to make a most attractive book. The bibliography is carefully keyed to the corresponding sections in the text (a minor error: the name Vajda is consistently misspelled Vadja).

H. Kaufman, McGill University

Computer Software. Programming Systems for Digital Computers, by Ivan Flores. x + 493 pages. Prentice Hall, Englewood Cliffs, N.J., 1965. $12.00.

This is one of the first text books to be written on computer programming systems - the software which is as important as the hardware of large scale digital computers, and as such it will be extremely valuable to the prospective systems programmer. The book is comprehensive and treats in considerable detail the concepts behind all aspects of systems programming as currently available in IBM 7094 systems. It includes a description of assembly systems, macro-commands, the IOCS buffer subsystems and operating commands, service systems, the monitor, the supervisor, and the loader. However, no mention is made of compiler techniques for translating from an algorithmic language

320