

BOOKS RECEIVED

"OPTIMAL SEQUENTIAL BLOCK SEARCH"

By *Li Weixuan*

Research and Exposition in Mathematics 5. Berlin: *Heldermann Verlag* 1984, viii + 209 p., soft cover, 38.00 DM.
ISBN 3-88538-205-9

Sequential block search is a mathematical method to search for the optimal value of a unimodal function. It has become an important method in operations research not only because it has extensive practical applications but also because it is a basic technique in multi-variate optimization.

Sequential search was first studied by J. Kiefer in 1953 and has since been developed by many mathematicians working in various fields. In this book, the author presents a comprehensive account of the mathematical aspects of this topic, and the emphasis is on results by Chinese researchers which appear here for the first time in English language.

"MODAL THEORY. AN ALGEBRAIC APPROACH TO ORDER, GEOMETRY AND CONVEXITY"

By *A.B. Romanowska and J.D.H. Smith*

Research and Exposition in Mathematics 9. Berlin: *Heldermann Verlag* 1985, xii + 158 p., soft cover, 38.00 DM.
ISBN 3-88538-209-1

Modal theory is a new algebraic discipline, comparable in scope and intention with the well-established disciplines of linear algebra, lattice theory, and semigroup theory. The topics of modal theory, belonging mostly to universal algebra, have broad connections to the theory of semigroups, semilattices, lattices, convex sets and geometry; also included are interesting applications to computer science. The work summ-

arizes various recent results in a new, unifying manner. The value of the work lies in the investigation of general properties of modes and modals (idempotent entropic algebras that are not necessarily associative) and in the analysis of various special cases.