REVIEWS AND DESCRIPTIONS OF TABLES AND BOOKS

The numbers in brackets are assigned according to the American Mathematical Society classification scheme. The 1980 Mathematics Subject Classification can be found in the December index volumes of Mathematical Reviews.

1[35Bxx, 49Gxx].—C. BANDLE, *Isoperimetric Inequalities and Applications*, Monographs and Studies in Mathematics 7, Pitman, Boston, 1980, vii + 228 pp., 24 cm. Price $51.00.

This well written and timely book by one of the leading researchers in the area of isoperimetric inequalities serves the useful purpose of organizing and unifying the large number of special techniques that have been developed in this area over the past 30 years. In this sense it may be regarded as a supplement to the treatise of Pólya and Szegö (Isoperimetric Inequalities in Mathematical Physics) which appeared in 1951. It is largely self contained with numerous examples, and an assortment of problems of various degrees of difficulty.

This book clearly displays the roles played by geometry and analysis in this diverse and rather complex area of study and shows how tools from both areas combine in applications.

The first chapter introduces the needed geometric tools and extends a number of classical results to domains and surfaces. The second chapter deals with various types of symmetrization techniques and applies them to a number of specific problems. Chapter 3 is devoted to linear eigenvalue problems, bringing together a large number of seemingly unrelated techniques and results, and Chapter 4 deals with boundary and initial value problems for linear and nonlinear elliptic and parabolic equations.

Although this book does not purport to give a complete up-to-date picture of the present state of the field of isoperimetric inequalities, it does contain an extensive bibliography which refers to most of the important advances made over the past 30 years. It would clearly be an excellent reference source for graduate students, applied mathematicians and researchers in differential geometry and partial differential equations.

L. E. PAYNE

Department of Mathematics
Cornell University
Ithaca, New York 14853

2[41A21].—J. GILEWICZ (Editor), *First French-Polish Meeting on Padé Approximation and Convergence Acceleration Techniques*, Proceedings of a Conference held in Warsaw, June 1–4, 1981, CPT, CNRS, Marseille, 1982, 94 pp., 21cm.

For several years close contacts between French and Polish mathematicians have been developed in the field of Padé approximation and convergence acceleration

0025-5718/84 $1.00 + $.25 per page