7. O. I. MARICHEV, *Handbook of Integral Transforms of Higher Transcendental Functions*, Ellis Horwood, Chichester, 1982.

6[62Hxx].—FIONN MURTAGH & ANDRÉ HECK, *Multivariate Data Analysis*, Astrophysics and Space Science Library, vol. 131, D. Reidel Publishing Co., Dordrecht, 1987, xvi + 210 pp., $24\frac{1}{2}$ cm. Price $49.50/Dfl. 120.00.

This book gives a basic introduction to selected methods of multivariate statistical analysis. It is aimed at students and researchers in the astrophysical sciences, and its main strength is an extensive, carefully annotated bibliography of research papers in astronomy where multivariate methods have been applied. Because of its specialized audience and narrow coverage, the book is rather unlikely to appeal to statisticians or numerical analysts.

The topics covered include principal component analysis, cluster analysis and discriminant analysis. Some other techniques are briefly discussed. Most chapters are supplemented by illustrative examples and by listings of FORTRAN programs. Since some of the listings are fairly long and difficult to copy without error, the reviewer would have preferred appropriate references to subroutine libraries like NAG, IMSL and EISPACK.

BERNHARD FLURY

Institute of Statistics and Operations Research
Victoria University of Wellington
Private Bag Wellington
New Zealand

7[11F11, 11Y60, 33A25, 33A70, 65D15].—JONATHAN M. BORWEIN & PETER B. BORWEIN, *Pi and the AGM—A Study of Analytic Number Theory and Computational Complexity*, Canadian Mathematical Society Series of Monographs and Advanced Texts, Wiley, New York, 1987, xv + 414 pp., 24 cm. Price $49.95.

When the reviewer was a teenager, he and three friends, after a high school basketball game, would frequently get in a car and drive over the labyrinth of country roads in the rural area in which they lived. The game we. played was to guess the name of the first village we would enter. Since there were many meandering roads and countless small hamlets that dotted the rural landscape, since it was dark, and since we were not blessed with keen senses of direction, we were often surprised when the signpost identified for us the town that we were entering.

For one not too familiar with the seemingly disparate topics examined by the Borweins in their book, one might surmise that the authors were travelling along mathematical byways with the same naivete and lack of direction as the reviewer and his friends. However, the authors travel along well-lit roads that are marked by the road signs of elegance and usefulness and that lead to beautiful results. They do not take gravel-surfaced roads that lead to dead ends in cow pastures. But sometimes the destinations are surprising—at least to those not familiar with the landscape.