The topic of elliptic equations occupies the third chapter. After a short proof, due to Privalov, of the minimum-maximum theorem for solutions of the Laplace equation, the author turns to the Dirichlet problem for the circle. Using the Poisson integral representation, the standard sequence of theorems concerning harmonic functions is derived. The existence of a solution for general regions is then proved using the Poincaré-Perron concept of superharmonic functions. In order, the author discusses the exterior boundary value problem, the Neumann problem, potential theory, and the application of potential theory to the solution of boundary value problems. Following these results, there is a brief discussion of the approximate solution of the Dirichlet problem by means of finite differences, following an approach due to Lusternik. As in the previous chapters, this chapter closes with a survey of some of the most important results for elliptic equations.

The last chapter is a very brief one, and sketches the application of some of the techniques developed in the previous chapters to the solution of some simple problems in the theory of heat conduction.

The only fault in the book is a small one—there is no index. The bibliography is given in footnotes, and this also is not completely desirable. Apart from these minor items, the book is highly to be recommended. It is printed very attractively, reads very smoothly, and all in all is to be regarded as an elegant introduction to an attractive field of mathematics.

<div align="right">RICHARD BELLMAN</div>

Vorlesungen über Approximationstheorie. By N. I. Achieser. Berlin, Akademie-Verlag, 1953. 10+309 pp., 10 figures. 29.00 DM.

This splendid book (translated from the Russian edition of 1947) gives much more than the title promises. Besides a discussion of specific problems of approximation it provides also an introduction to many different parts of analysis, as can be seen from the following list of topics in Chapter I: Elements of functional analysis. Chapter II: Approximation in C (Chebyshev approximation). Chapter III: Fourier analysis: L^2-theory, Fejér's theorem, Watson transforms, conjugate functions. Chapter IV: Entire functions of exponential type bounded on the real axis, S. Bernstein's inequalities for the derivatives of these functions and generalizations. Chapter V: Problems of best approximation by trigonometric polynomials and by entire functions of exponential type. Chapter VI: Wiener's Tauberian theorem.

The presentation is very clear and interesting. The author has achieved a happy mixture of the abstract and the concrete. Defini-