Among topics discussed are some extensions of the game of three in a row, tessellations of the plane, problems with moving counters, and the effect of cutting a Möbius strip in various ways. *Chapter V* gives a comprehensive elementary discussion of the relations between the faces, edges, and vertices and the associated angles of the regular solids and the Archimedean solids, which is well illustrated by good figures. Stellated polyhedra, solid tessellations, and the kaleidoscope each receive some attention. The use of the term Platonic for the regular solids might be questioned since they were known before Plato. *Chapters VI* and *VII* contain familiar recreations associated with the chessboard and with magic squares. Similar problems with dominoes and with magic cubes are also discussed. *Chapter VIII* treats the general theory of the four-colour problem more elaborately than the earlier editions of this book, mentions briefly such matters as orientable surfaces and dual maps, and more fully the seven-colour mapping problem on the torus, and finally considers various colouring problems on the regular polyhedra. *Chapter IX* discusses mazes and other similar problems whose solutions depend on the unicursal tracing of a route through prescribed points (nodes) over various given paths. *Chapter X* features certain combinatorial problems known under the title of Kirkman's school-girl problems, and ends with a similar problem about arranging members of a bridge club at tables so that different members shall play together in successive rubbers. *Chapter XI*, on Miscellaneous Problems, contains an account of the Fifteen Puzzle, the Tower of Hanoï, Chinese Rings, and various mathematical card tricks. *Chapter XII* contains the famous classical problems concerning the duplication of the cube, trisection of an angle, and quadrature of the circle. *Chapter XIII* is an essay on calculating prodigies which introduces over a dozen famous mental calculators beginning with Jedediah Buxton and Thomas Fuller in the eighteenth century, and including two American calculators Zerah Colburn and Trueman Henry Safford, and gives something of their histories and the type of problems they could solve. *Chapter XIV* is a chapter on cryptography and cryptanalysis written by Dr. Abraham Sinkov. It presents in easily understandable form the chief elements in a cryptographic system, and gives various possible ways for attempting to solve such a cipher.

J. S. FRAME

Einführung in die Zahlentheorie. By Arnold Scholz. (Sammlung Göschen, no. 1131.) Berlin, de Gruyter, 1939. 136 pp.

The topics which should be taken up in an introduction to the theory of numbers do not seem to have been well standardized. Each author discusses a certain minimum set of topics and then proceeds to whatever subject interests him. In this book the choice of further topics is well taken and quite varied.

After an introduction to the series of natural numbers the author takes up the subjects common to most such books. Included here is a descriptive section on the distribution of prime numbers in which a number of interesting numerical examples are given. The later part of the book takes up the representation of integers by binary quadratic forms in considerable detail and it includes a chapter on the numerical solution of various problems that arise in number theory.

The principle followed in the preparation of this book seems to have been conciseness. This is apparent, not only in the typography, but even in the author's manner of writing. The earlier chapters have been written with care but this brief manner of writing makes the later chapters more difficult to read.

Because of its conciseness this book seems more suitable as supplementary reading rather than as a first introduction to the theory of numbers.

H. S. ZUCKERMAN

Anwendung der Eulerschen Reihentransformation zur Summierung der Dirichletschen Reihen, der Fakultätenreihen und der Newtonschen Reihe. By N. Obreschkoff. Berlin, Verlag der Akademie der Wissenschaften, 1938. 36 pp.

This pamphlet is a reprint of an article published in the Sitzungsberichte der Preussischen Akademie der Wissenschaften, Physikalish-mathematische Klasse, 1938. The author applies the Euler-Knopp method of summability to Dirichlet series, to factorial series and to Newton's series, obtaining results which show that this summability method is very useful in such cases and that it is ordinarily more powerful than the methods of summation of Cesàro and of Riesz.

The ordinary Dirichlet series $\sum a_n/(n+1)^s$ is first investigated. The author shows that if this series is E_k-summable for $s=s_0$, then it is E_k-summable for every s for which $R(s)>R(s_0)$, and he gives a formula for the generalized sum there. Use is made, in the proof, of the fundamental Silverman-Toeplitz conditions for summability. A formula is derived for the abscissa of E_k-summability in terms of the E_k-transform of the series $\sum a_n$. Corresponding results are obtained for absolute E_k-summability.

Similarly, it is shown that if the factorial series $a_0/s+\sum n!a_n/s(s$