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

Einfïhrung 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

