Elementary Number Theory, by Edmund Landau, translated by Jacob E. Goodman; with exercises by Paul T. Bateman and Eugene E. Kohlbecker. Chelsea Publishing Company, 1958. 256 pages. $4.95.

From the Publisher's Preface: 'Professor Landau gave a six-semester course on Number Theory at the University of Göttingen which was published in three volumes as "Vorlesungen über Zahlentheorie" (Leipzig, 1927) each volume being in two sections. The titles of these six sections are "Aus der elementaren Zahlentheorie" and "Aus der additiven Zahlentheorie" (Vol.I), "Aus der analytischen Zahlentheorie" and "Aus der geometrischen Zahlentheorie" (Vol.II), "Aus der algebraischen Zahlentheorie" and "Über die Fermatsche Vermutung" (Vol.III). The present work is a translation of "Elementare Zahlentheorie". The book is well known to mathematicians in its earlier German editions (one of them in America, 1947); a new review and recommendation is therefore deemed to be unnecessary.

H.S.

Lectures on Ordinary Differential Equations, by Witold Hurewicz. Published jointly by the Technology Press of the Massachusetts Institute of Technology and John Wiley & Sons, Inc., New York, 1958. xvii+122 pages.

Hurewicz' lecture notes on differential equations first appeared in mimeographed form in 1943 under the title "Ordinary Differential Equations in the Real Domain with Emphasis on Geometric Methods" (Brown University), and were reissued by M.I.T. in 1956. Their appearance in book form is most welcome.

The first chapter presents the basic existence and uniqueness theorems for first-order equations in a single unknown, employing first the Cauchy-Euler approximation method, and secondly the method of successive approximations.

The analysis for systems is carried out in Chapter 2. The third chapter deals with linear systems, and includes a section on Green's function.

Chapter 4, "Singularities of an Autonomous System", and Chapter 5, "Solutions of an Autonomous System in the Large", are especially valuable. The fourth chapter includes a detailed analysis of non-linear systems besides the standard material on linear systems. The chief result of the fifth chapter is the Poincaré-Bendixson theorem on limit cycles. The chapter ends with a discussion of Poincaré's index of a curve, orbital stability of