although only a basic knowledge of algebra and function theory is supposed, the proofs are very concise.

One hundred pages are devoted to the general theory underlying the theory of algebraic functions and numbers; ten pages are devoted to the special study of algebraic numbers; and two hundred pages to the study of function fields.

Much material is covered and unified. Many references are given. Indeed, the last few sections are mainly summaries of the papers quoted. The book's main value is for reference - it serves this purpose well, although it omits the description of the theta and zeta functions of algebraic number fields and covers only summarily the theory of complex multiplication.

Chapter I. A review of linear algebra in which the author develops the theory of linear divisors and the Riemann-Roch theorem for linear divisors. In an appendix the theta function is discussed.

Chapter II. The general framework of the theory. Ideals, discriminants differential Hilbert theory. A brief section on algebraic number fields.

Chapter III. Algebraic functions and differentials. The author returns to a description of classical function theory rather than continuing the methods of Chapter II. The Riemann-Roch theorem for a function field.

Chapter IV. Algebraic functions over the field of complex numbers. Riemann surfaces, elliptic functions, modular functions.

Chapter V. Correspondences between fields of algebraic functions. Applications to number theory. Correspondences of modular functions and applications to quadratic forms. In this chapter are the most interesting and deepest applications. The proofs, however, are at best very sketchy.

The book is well-translated, physically appealing; the notation clear and consistent.

A. Trojan, McGill University

Fibonacci and Lucas numbers, by Verner E. Hoggatt Jr. Houghton Mifflin Company, Boston, 1969. 92 pages.

This little book offers the reader a beautiful, and yet casual, introduction to the fascinating topic of Fibonacci and Lucas numbers. The close relationship between these two types of numbers is continually pointed out to the reader. All the proofs given are elementary in nature. The one thing this book lacks is a chapter on some recent interesting results (e.g. the determining of all the Fibonacci numbers and Lucas numbers which are perfect squares) and some unsolved conjectures.

H. London, McGill University

Studies in number theory, edited by A.V. Malyshev. Consultants Bureau, Plenum Publishing Corp., 227 W. 17th St., New York 10011, 1968. 66 pages. U.S. $12.50.