which satisfy suitable initial or boundary conditions are known to exhibit a maximum principle property. A detailed study of this phenomenon (mostly in the two variables case) is the subject matter of the last chapter.

In conclusion, the book gives a very readable account of the role of maximum principles in differential equations. It should be read by anyone interested in this elementary yet basic and fascinating subject. The book which contains many examples and exercises is also very suitable as a text book.

SHMUEL AGMON

An introduction to number theory by Harold Stark, Chicago, Markham Publishing Co., 1970.

This book, according to the preface, is intended for future high school and junior college mathematics teachers, rather than for budding research mathematicians. As a result, the book has a somewhat different tone from many other texts on elementary number theory. For one thing, it is a lot more fun to read.

Much of the material in the book is fairly standard; besides an introductory chapter, there are chapters on the Euclidean algorithm and its consequences, on congruences (through primitive roots), and on some simple Diophantine equations. A chapter on rational and irrational numbers concludes with Liouville's theorem (plus a list of later results). The last two chapters, on continued fractions and quadratic fields, are somewhat harder. The continued fraction chapter starts off easily enough, but concludes with material on periodic continued fractions and Pell's equation; the material on quadratic fields amounts to a brief introduction to the phenomena present in algebraic number fields. There is one other chapter, on magic squares. Stark gives general procedure (the uniform step method) for putting numbers in squares, and then gets conditions under which the resulting square is magic. I was somewhat bothered by the definition of "magic"; it seems to me that any magic square worthy of the name should have the main diagonals add up to the magic sum, but Stark imposes conditions only on the rows and columns. His method makes the analysis easier, though. Stark does discuss diabolic (or pandiagonal) squares, in which all diagonals (main and broken) add up to the magic sum. There are a few other eccentricities in his treatment; for instance, he does not require that the numbers in a magic square lie in separate squares.

One topic which is conspicuously absent is quadratic reciprocity. Stark states in his preface that he feels it is a topic better left out;