

reviews in NUMBER THEORY

edited by **WILLIAM J. LeVEQUE**

In these six volumes Professor LeVeque has attempted to include all the reviews in Volumes 1—44 of *Mathematical Reviews* which bear directly on questions commonly regarded as part of number theory. The 14,426 reviews reprinted here include all but a handful of those that appeared in the section of *MR* entitled *Theory of Numbers* (those not included seem to have been misclassified originally), together with about three thousand items selected from other sections. These supplementary selections were made partly by scanning relevant sections of *MR*, and partly by checking all articles cited in reviews already included.

A difficulty lay in deciding what is and what is not number theory. Wherever one stops there is a gray area just beyond, and in the end personal judgments must enter. The editor intended to be rather liberal on inclusion questions, and approximately equally so in the various fringe areas, but could give no short set of criteria which would account for all the decisions made.

Some of the work's useful features: The editor retained the original *MR* reference for each review (e.g., "10, 588C" means the third review on p. 588 of vol. 10), and added an "appearance number" specifying the location in the present volumes by chapter, section and number within the section. Articles cited in reviews are frequently referenced by *MR* numbers, and the equivalent appearance numbers are indicated by equations following the review, when the cited article occurs in these volumes.

At the beginning of each chapter and of each section there are comments on what is or is not to be found in the reviews following, and where else to look for related material.

On the whole the reviews within one section are arranged in the order of their *MR* numbers, and so are roughly chronological.

A vertical bar in the margin between two reviews means that one should not be read without the other.

The author index gives the appearance numbers of all articles reviewed in these volumes. There is in addition a subject index which lists not only words and phrases occurring in the classification scheme but also other terms which are commonly used without explanation but would be mystifying to the uninitiated.

From the preface to Volume 6 "To The Reader"

volume 1

- CHAPTER A** Congruences; arithmetic functions; primes, factorization; continued fractions and other expansions
B Sequences and sets
C Polynomials and matrices

volume 2

- CHAPTER D** Diophantine equations
E Forms and linear algebraic groups
F Discontinuous groups and automorphic forms
G Diophantine geometry

volume 3

- CHAPTER H** Geometry of numbers
J Diophantine approximation
K Distribution modulo 1; metric theory of algorithms

volume 4

- CHAPTER L** Exponential and character sums
M Zeta functions and *L*-functions; analysis related to multiplicative and additive number theory
N Multiplicative number theory
P Additive number theory; lattice point problems
Q Miscellaneous arithmetic-analytic questions

volume 5

- CHAPTER R** Algebraic number theory: global fields
S Algebraic number theory: local and *p*-adic fields
T Finite fields and finite commutative rings
U Connections with logic

volume 6

- CHAPTER Z** General **SUBJECT INDEX**
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