

## CONTENTS

Foreword .....	vii
Effective methods in Diophantine problems. II .....	1
BY A. BAKER	
Character transformation formulae similar to those for the Dedekind eta- function .....	9
BY BRUCE C. BERNDT	
On large sieve type estimates for the Dirichlet series operator .....	31
BY M. FORTI AND C. VIOLA	
(PRESENTED BY ENRICO BOMBIERI)	
On Iwasawa's analogue of the Jacobian for totally real number fields .....	51
BY JOHN COATES	
The distribution of values of Euler's phi function .....	63
BY HAROLD G. DIAMOND	
On connections between the Turan-Kubilius inequality and the large sieve: Some applications .....	77
BY P. D. T. A. ELLIOTT	
On the number of solutions of $m = \sum_{i=1}^k x_i^k$ .....	83
BY P. ERDŐS AND E. SZEMEREDI	
The large sieve and probabilistic Galois theory .....	91
BY P. X. GALLAGHER	
Some remarks on arithmetic density questions .....	103
BY LARRY JOEL GOLDSTEIN	
Relations between the values at integral arguments of Dirichlet series that satisfy functional equations .....	111
BY E. GROSSWALD	
On the incompatibility of two conjectures concerning primes .....	123
BY DOUGLAS HENSELEY AND IAN RICHARDS	

On the intervals between consecutive terms of sequences . . . . .	129
BY CHRISTOPHER HOOLEY	
The difference between consecutive primes . . . . .	141
BY MARTIN HUXLEY	
On the Mertens conjecture and related general $\Omega$ -theorems . . . . .	147
BY W. B. JURKAT	
The distribution of the values of real quadratic forms at integer points . .	159
BY D. J. LEWIS	
The classification of transcendental numbers . . . . .	175
BY K. MAHLER	
The pair correlation of zeros of the zeta function . . . . .	181
BY H. L. MONTGOMERY	
Metric theorems on the distribution of sequences . . . . .	195
BY H. G. NIEDERREITER	
Bounds for sequences of consecutive power residues. I . . . . .	213
BY KARL K. NORTON	
Rational points on certain elliptic modular curves . . . . .	221
BY A. P. OGG	
Arithmetic functions and Brownian motion . . . . .	233
BY WALTER PHILIPP	
Brun's method and the fundamental lemma . . . . .	247
BY H.-E. RICHERT AND H. HALBERSTAM	
Estimation of the area of the smallest triangle obtained by selecting three out of $n$ points in a disc of unit area . . . . .	251
BY K. F. ROTH	
Euler products associated with Beurling's generalized prime number systems	263
BY C. RYAVEC	
Systematic examination of Littlewood's bounds on $L(1, \chi)$ . . . . .	267
BY DANIEL SHANKS	
On the Riemann hypothesis in hyperelliptic function fields . . . . .	285
BY H. M. STARK	
Class numbers of totally imaginary fields . . . . .	303
BY JUDITH S. SUNLEY	
Exponential sums and the Riemann conjecture . . . . .	305
BY PAUL TURÁN	
A new estimate for the exceptional set in Goldbach's problem . . . . .	315
BY ROBERT C. VAUGHAN	
On Euclidean rings of algebraic integers . . . . .	321
BY PETER J. WEINBERGER	
Author Index . . . . .	333
Subject Index . . . . .	337