

# Contents

Preface	viii
In appreciation of Emil Grosswald	1
Ph.D. students of Emil Grosswald	9
Publications of Emil Grosswald	11
A rather exact formula for the number of plane partitions GERT ALMKVIST	21
On Ramanujan's empirical calculation for the Rogers-Ramanujan identities GEORGE E. ANDREWS	27
Integers expressible in a given number of ways as a sum of two squares PAUL T. BATEMAN	37
A theorem of Ramanujan on certain alternating series BRUCE C. BERNDT AND JAMES LEE HAFNER	47
Combinatorial equivalence of definitions of the Schur function DAVID M. BRESSOUD AND SHI-YUAN WEI	59
Is there life on finite upper half planes? NANCY CELNIKER, STEVEN POULOS, AUDREY TERRAS, CINDY TRIMBLE, AND ELINOR VELASQUEZ	65
Rational period functions for $PSL(2, \mathbb{Z})$ YJ. CHOIE AND D. ZAGIER	89
Rational period functions and indefinite binary quadratic forms, III L. ALAYNE PARSON	109
Hypergeometric and modular function identities, and new rational approx- imations to and continued fraction expansions of classical constants and functions D. V. CHUDNOVSKY AND G. V. CHUDNOVSKY	117
Orbital modular equations HARVEY COHN	163

A mean-value theorem for class numbers of quadratic extensions BORIS A. DATSKOVSKY	179
On a generalization of Farey sequences, I FRANCINE DELMER AND JEAN-MARC DESHOULLERS	243
Sieve auxiliary functions II HAROLD G. DIAMOND, H. HALBERSTAM, AND H.-E. RICHERT	247
A relation between cubic exponential and Kloosterman sums W. DUKE AND H. IWANIEC	255
Function theory for Rogers-Ramanujan-like partition identities LEON EHRENPREIS	259
Forcing two sums simultaneously P. ERDÖS, D. J. NEWMAN, AND J. KNAPPENBERGER	321
Difference polynomials RONALD J. EVANS, KENNETH B. STOLARSKY, AND JOHN J. WAVRIK	329
An application of Ehrenpreis's basis method to the Rogers-Ramanujan identities JANE E. FRIEDMAN	347
Extensions of some extremal properties of prime divisors to Poisson limit theorems JANOS GALAMBOS	363
Rational period functions with irrational poles are not Hecke eigenfunctions ELLEN GETHNER	371
On the number of Fourier coefficients that determine a modular form DORIAN GOLDFELD AND JEFFREY HOFFSTEIN	385
An explicit formula of Landau and its applications to the theory of the zeta-function S. M. GONEK	395
Multiplicative properties of $\eta$ -products II BASIL GORDON AND KIM HUGHES	415
Counting subgroups of given index in Hecke groups MICHAEL GRADY AND MORRIS NEWMAN	431
Relatively prime values of polynomials JAMES LEE HAFNER, PETER SARNAK, AND KEVIN MCCURLEY	437
A new proof that every odd triperfect number has at least twelve prime factors PETER HAGIS, JR.	445

A Hecke-Weil correspondence theorem for automorphic integrals on $\Gamma_0(N)$ , with arbitrary rational period functions JOHN H. HAWKINS AND MARVIN I. KNOPP	451
Lagrange's theorem for Hecke triangle groups J. LEHNER	477
Base change and the Birch-Swinnerton-Dyer conjecture M. RAM MURTY AND V. KUMAR MURTY	481
A "natural" proof of the non-vanishing of L-series D. J. NEWMAN	495
Nonexistence of Siegel zeros in towers of radical extensions ANDREW M. ODLYZKO AND CHRIS M. SKINNER	499
Modular integrals and indefinite binary quadratic forms L. ALAYNE PARSON	513
Diagonalizing Eisenstein series, II ROBERT A. RANKIN	525
Multiplier systems for the Hecke groups $G(\sqrt{2})$ and $G(\sqrt{3})$ DAVID ROSEN	539
Low height Hecke triangle group geodesics MARK SHEINGORN	545
On the Shimura lift for Hilbert modular forms THOMAS R. SHEMANSKE AND LYNNE H. WALLING	561
Dirichlet's class-number formula revisited H. M. STARK	571
Closed form (pun intended!) DORON ZEILBERGER	579
Gert Almkvist's generalization of a mistake of Bourbaki DORON ZEILBERGER	609