

CONTENTS

PART 1

OLIVIER ROZIER	
The $3x + 1$ problem: a lower bound hypothesis	7
PALLAB KANTI DEY	
Elliptic curves with rank 0 over number fields	25
TODD COCHRANE, MISTY OSTERGAARD, CRAIG SPENCER	
Small solutions of diagonal congruences	39
BADRIA ALSULMI, VINCENT PIGNO, CHRISTOPHER PINNER	
Jacobi-type sums with an explicit evaluation modulo prime powers . .	49
NAO TAKESHI	
Family of elliptic curves with good reduction everywhere over number fields of given degree	61
KAMEL MAZHOUDA, LEJLA SMAJLOVIĆ	
On relations equivalent to the generalized Riemann hypothesis for the Selberg class	67
FRANÇOISE BASTIN, LOÏC DEMEULENAERE	
On the equality between two diametral dimensions	95
STÉPHANE R. LOUBOUTIN	
Simple zeros of Dedekind zeta functions	109
DANIEL A. GOLDSTON, JULIAN ZIEGLER HUNTS, TIMOTHY NGOTIAOCO	
The tail of the singular series for the prime pair and Goldbach problems	117