

# Contents

Preface		
S. TABACHNIKOV		ix
The Arithmetic of Binomial Coefficients		
D. B. FUCHS AND M. B. FUCHS		1
Do You Like Messing Around with Integers?		
M. I. BASHMAKOV		13
On Bertrand's Conjecture		
M. I. BASHMAKOV		21
On Best Approximations. I		
D. B. FUCHS AND M. B. FUCHS		27
On Best Approximations. II		
D. B. FUCHS AND M. B. FUCHS		37
On a Certain Property of Binomial Coefficients		
A. I. SHIRSHOV		49
On $n!$ and the Number $e$ (Several Approaches to a Certain Problem)		
L. G. LIMANOV		57
Rational Approximations and Transcendence		
D. B. FUCHS AND M. B. FUCHS		65
Close Fractions		
V. N. VAGUTEN		71
On the Equation $\binom{n}{m} = \binom{n+1}{m-1}$		
A. I. SHIRSHOV		83
On Regular Polygons, Euler's Function, and Fermat Numbers		
A. KIRILLOV		87
2-adic numbers		
B. BEKKER, S. VOSTOKOV, AND YU. IONIN		99
On the Number $e$		
E. KUZ'MIN AND A. I. SHIRSHOV		111
Markov's Diophantine Equation		
M. G. KREIN		121

The Arithmetic of Gaussian Integers A. B. GONCHAROV	127
Three Formulas of Ramanujan V. S. SHEVELEV	139
Amazing Adventures in the Land of Repeating Decimals V. G. STOLYAR, E. A. KURAEV, Z. K. SILOGADZE, G. A. GAL'PERIN, AND A. V. KORLYUKOV	145