

Contents

Volume 1

A. Diophantine equations and integral forms	1
Commentary on A: Diophantine equations and integral forms <i>by R. Tijdeman</i>	3
A1 Sur les nombres de Mersenne qui sont triangulaires <i>avec Georges Browkin</i>	11
A2 Sur quelques propriétés des nombres $3/n$ et $4/n$, où n est un nombre impair	13
A3 Sur l'existence d'un cercle passant par un nombre donné de points aux coordonnées entières	17
A4 Sur les sommes de trois carrés	18
A5 On the Diophantine equation $\sum_{k=1}^n A_k x_k^{\theta_k} = 0$	22
A6 Polynomials of certain special types <i>with H. Davenport and D. J. Lewis</i>	27
A7 An improvement of Runge's theorem on Diophantine equations	36
A8 On the equation $y^m = P(x)$ <i>with R. Tijdeman</i>	41
A9 Zeta functions and the equivalence of integral forms <i>with R. Perlis</i>	47
A10 Quadratic Diophantine equations with parameters <i>with D. J. Lewis</i>	54
A11 Selmer's conjecture and families of elliptic curves <i>with J. W. S. Cassels</i>	62
A12 Families of curves having each an integer point	67
A13 Hasse's principle for systems of ternary quadratic forms and for one biquadratic form	87
A14 On Runge's theorem about Diophantine equations <i>with A. Grytczuk</i>	93
A15 On sums of three unit fractions with polynomial denominators	116
A16 On equations $y^2 = x^n + k$ in a finite field <i>with M. Skalba</i>	124

B.	Continued fractions	127
	Commentary on B: Continued fractions	
	<i>by Eugène Dubois</i>	129
B1	On some problems of the arithmetical theory of continued fractions	131
B2	On some problems of the arithmetical theory of continued fractions II . . .	149
B3	On two conjectures of P. Chowla and S. Chowla concerning continued fractions	161
C.	Algebraic number theory	167
	Commentary on C: Algebraic numbers	
	<i>by David W. Boyd and D. J. Lewis</i>	169
C1	A refinement of two theorems of Kronecker <i>with H. Zassenhaus</i>	175
C2	On a theorem of Bauer and some of its applications	179
C3	An extension of the theorem of Bauer and polynomials of certain special types <i>with D. J. Lewis and H. Zassenhaus</i>	190
C4	On sums of roots of unity. (Solution of two problems of R. M. Robinson) .	197
C5	On a theorem of Bauer and some of its applications II	210
C6	On the product of the conjugates outside the unit circle of an algebraic number	221
C7	On linear dependence of roots	238
C8	On Sylow 2-subgroups of $K_2 O_F$ for quadratic number fields F <i>with J. Browkin</i>	253
C9	A class of algebraic numbers	264
C10	On values of the Mahler measure in a quadratic field (solution of a problem of Dixon and Dubickas)	272
D.	Polynomials in one variable	281
	Commentary on D: Polynomials in one variable	
	<i>by Michael Filaseta</i>	283
D1	Solution d'un problème de K. Zarankiewicz sur les suites de puissances consécutives de nombres irrationnels	295
D2	On the reducibility of polynomials and in particular of trinomials	301
D3	Reducibility of polynomials and covering systems of congruences	333
D4	Reducibility of lacunary polynomials I	344
D5	Reducibility of lacunary polynomials II	381
D6	A note on the paper "Reducibility of lacunary polynomials I" <i>with J. Wójcik</i>	403
D7	Reducibility of lacunary polynomials III	409
D8	Reducibility of lacunary polynomials IV	447
D9	On the number of terms of a power of a polynomial	450
D10	On reducible trinomials	466

D11	On a conjecture of Posner and Rumsey <i>with K. Győry</i>	549
D12	Reducibility of lacunary polynomials XII	563
D13	On reducible trinomials II	580
D14	On reducible trinomials III	605
D15	On the greatest common divisor of two univariate polynomials I	632
D16	On the greatest common divisor of two univariate polynomials II	646
D17	On the reduced length of a polynomial with real coefficients	658
E.	Polynomials in several variables	693
	Commentary on E: Polynomials in several variables <i>by Umberto Zannier</i>	695
E1	Some unsolved problems on polynomials	703
E2	Reducibility of polynomials in several variables	709
E3	Reducibility of polynomials of the form $f(x) - g(y)$	715
E4	Reducibility of quadrinomials <i>with M. Fried</i>	720
E5	A general irreducibility criterion	739
E6	Some arithmetic properties of polynomials in several variables <i>with H. L. Montgomery</i>	747
E7	On difference polynomials and hereditarily irreducible polynomials <i>with L. A. Rubel and H. Tverberg</i>	755
E8	On a decomposition of polynomials in several variables	760
E9	On weak automorphs of binary forms over an arbitrary field	779
E10	Reducibility of symmetric polynomials	828
F.	Hilbert's Irreducibility Theorem	835
	Commentary on F: Hilbert's Irreducibility Theorem <i>by Umberto Zannier</i>	837
F1	On Hilbert's Irreducibility Theorem	839
F2	A class of polynomials	846
F3	The least admissible value of the parameter in Hilbert's Irreducibility Theorem <i>with Umberto Zannier</i>	849

Volume 2

G. Arithmetic functions	859
Commentary on G: Arithmetic functions by <i>Kevin Ford</i>	861
G1 On functions $\varphi(n)$ and $\sigma(n)$	866
G2 Sur l'équation $\varphi(x) = m$	871
G3 Sur un problème concernant la fonction $\varphi(n)$	875
G4 Distributions of the values of some arithmetical functions with <i>P. Erdős</i>	877
G5 On the functions $\varphi(n)$ and $\sigma(n)$ with <i>A. Mąkowski</i>	890
G6 On integers not of the form $n - \varphi(n)$ with <i>J. Browkin</i>	895
H. Divisibility and congruences	899
Commentary on H: Divisibility and congruences by <i>H. W. Lenstra jr.</i>	901
H1 Sur un problème de P. Erdős	903
H2 On the congruence $a^x \equiv b \pmod{p}$	909
H3 On the composite integers of the form $c(ak + b)! \pm 1$	912
H4 On power residues and exponential congruences	915
H5 Abelian binomials, power residues and exponential congruences	939
H6 An extension of Wilson's theorem with <i>G. Baron</i>	971
H7 Systems of exponential congruences	975
H8 On a problem in elementary number theory with <i>J. Wójcik</i>	987
H9 On exponential congruences	996
H10 Une caractérisation arithmétique de suites récurrentes linéaires avec <i>Daniel Barsky et Jean-Paul Bézivin</i>	1001
H11 On power residues with <i>M. Skalba</i>	1012
I. Primitive divisors	1031
Commentary on I: Primitive divisors by <i>C. L. Stewart</i>	1033
I1 On primitive prime factors of $a^n - b^n$	1036
I2 On primitive prime factors of Lehmer numbers I	1046
I3 On primitive prime factors of Lehmer numbers II	1059
I4 On primitive prime factors of Lehmer numbers III	1066
I5 Primitive divisors of the expression $A^n - B^n$ in algebraic number fields . .	1090

I6	An extension of the theorem on primitive divisors in algebraic number fields	1098
J.	Prime numbers	1103
	Commentary on J: Prime numbers	
	<i>by Jerzy Kaczorowski</i>	1105
J1	Sur certaines hypothèses concernant les nombres premiers	
	<i>with W. Sierpiński</i>	1113
J2	Remarks on the paper “Sur certaines hypothèses concernant les nombres premiers”	1134
J3	A remark on a paper of Bateman and Horn	1142
J4	On two theorems of Gelfond and some of their applications	
	Section 5	1145
J5	On the relation between two conjectures on polynomials	1154
K.	Analytic number theory	1193
	Commentary on K: Analytic number theory	
	<i>by Jerzy Kaczorowski</i>	1195
K1	On Siegel’s zero	
	<i>with D. M. Goldfeld</i>	1199
K2	Multiplicative properties of the partition function	
	<i>with E. Wirsing</i>	1211
K3	On an analytic problem considered by Sierpiński and Ramanujan	1217
K4	Class numbers and short sums of Kronecker symbols	
	<i>with J. Urbanowicz and P. Van Wamelen</i>	1224
L.	Geometry of numbers	1245
	Commentary on L: Geometry of numbers	
	<i>by Wolfgang M. Schmidt</i>	1247
L1	A decomposition of integer vectors II	
	<i>with S. Chaladus</i>	1249
L2	A decomposition of integer vectors IV	1259
L3	A property of polynomials with an application to Siegel’s lemma	1274
L4	On vectors whose span contains a given linear subspace	
	<i>with I. Aliev and W. M. Schmidt</i>	1288
M.	Other papers	1303
	Commentary on M: Other papers	
	<i>by Stanisław Kwapien</i>	1305
	The influence of the Davenport–Schinzel paper in discrete and computational geometry	
	<i>by Endre Szemerédi</i>	1311
M1	Sur l’équation fonctionnelle $f[x + y \cdot f(x)] = f(x) \cdot f(y)$	
	<i>avec S. Götqb</i>	1314

M2	A combinatorial problem connected with differential equations with <i>H. Davenport</i>	1327
M3	An analogue of Harnack's inequality for discrete superharmonic functions	1338
M4	An inequality for determinants with real entries	1347
M5	Comparison of L^1 - and L^∞ -norms of squares of polynomials with <i>W. M. Schmidt</i>	1350
	Unsolved problems and unproved conjectures	1365
	Unsolved problems and unproved conjectures proposed by Andrzej Schinzel in the years 1956–2006 arranged chronologically	1367
	Publication list of Andrzej Schinzel	1375