

Melvyn B. Nathanson: Mathematics Papers

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2. An exponential congruence of Mahler, *Amer. Math Monthly* 79 (1972), 55–57.
3. On the greatest order of an element in the symmetric group, *Amer. Math Monthly* 79 (1972), 500–501.
4. Complementing sets of n -tuples of integers, *Proc. Amer. Math. Soc.* 34 (1972), 71–72.
5. Shift dynamical systems over finite fields, *Proc. Amer. Math. Soc.* 34 (1972), 591–594.
6. Sums of finite sets of integers, *Amer. Math. Monthly* 79 (1972), 1010–1012
7. Integrals of binary sequences, *SIAM J. Appl. Math.* 23 (1972), 84–86.

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8. On the fundamental domain of a discrete group, *Proc. Amer. Math. Soc.* 41 (1973), 629–630.

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9. Catalan's equation in $K(t)$, *Amer. Math. Monthly* 81 (1974), 371–373.
10. Minimal bases and maximal nonbases in additive number theory, *J. Number Theory* 6 (1974), 324–333.
11. Approximation by continued fractions, *Proc. Amer. Math. Soc.* 45 (1974), 323–324.

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12. Maximal asymptotic nonbases (with P. Erdős), *Proc. Amer. Math. Soc.* 48 (1975), 57–60.
13. Products of sums of powers, *Math. Mag.* 48 (1975), 112–113.
14. Linear recurrences and uniform distribution, *Proc. Amer. Math. Soc.* 48 (1975), 289–291.
15. An algorithm for partitions, *Proc. Amer. Math. Soc.* 52 (1975), 121–124
16. Oscillations of bases for the natural numbers (with P. Erdős), *Proc. Amer. Math. Soc.* 53 (1975), 253–258
17. Round metric spaces, *Amer. Math. Monthly* 82 (1975), 738–741.
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19. Polynomial Pell's equations, *Proc. Amer. Math. Soc.* 56 (1976), 89–92.
20. Partial products in finite groups, *Discrete Math.* 15 (1976), 201–203.
21. Partitions of the natural numbers into infinitely oscillating bases and nonbases (with P. Erdős), *Comment. Math. Helv.* 51 (1976), 171–182.
22. Piecewise linear functions with almost all points eventually periodic, *Proc. Amer. Math. Soc.* 60 (1976), 75–81.
23. Difference operators and periodic sequences over finite modules, *Acta Math. Acad. Sci. Hungar.* 28 (1976), 219–224.
24. Mellin's formula and some combinatorial identities (with S. Chowla), *Monatsh. Math.* 81 (1976), 261–265.

25. Prime polynomial sequences (with S. D. Cohen and P. Erdős), *J. London math. Soc.* (2) 14 (1976), 559–562.

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26. Permutations, periodicity, and chaos, *J. Combinatorial Theory Ser. A* 22 (1977), 61–68.
 27. s -maximal nonbases of density zero, *J. London Math. Soc.* (2) 15 (1977), 29–34.
 28. Nonbases of density zero not contained in maximal nonbases (with P. Erdős), *J. London Math. Soc.* (2) 15 (1977), 403–405.
 29. Asymptotic distribution and asymptotic independence of sequences of integers, *Acta Math. Acad. Sci. Hungar.* 29 (1977), 207–218.
 30. Oscillations of bases in number theory and combinatorics, in: *Number theory day (Proc. Conf., Rockefeller Univ., New York, 1976)*, *Lecture Notes in Math.*, Vol. 626, Springer, Berlin, 1977, pages 217–231.

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31. Multiplication rules for polynomials, *Proc. Amer. Math. Soc.* 69 (1978), 210–212.
 32. Sets of natural numbers with no minimal asymptotic bases (with P. Erdős), *Proc. Amer. Math. Soc.* 70 (1978), 100–102.
 33. Monomial congruences, *Monatsh. Math.* 85 (1978), 199–200.
 34. Representation functions of sequences in additive number theory, *Proc. Amer. Math. Soc.* 72 (1978), 16–20.

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35. Bases and nonbases of squarefree integers (with P. Erdős), *J. Number Theory.* 11 (1979), 197–208.
 36. Additive h -bases for lattice points, in: *Second International Conference on Combinatorial Mathematics (New York, 1978)*, *Ann. New York Acad. Sci.* 319 (1979), 413–414.
 37. Systems of distinct representatives and minimal bases in additive number theory (with P. Erdős), in: *Number theory, Carbondale 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979)*, *Lecture Notes in Math.*, Vol. 751, Springer, Berlin, 1979, pages 89–107.
 38. Classification problems in K -categories, *Fund. Math.* 105 (1979/80), 187–197.

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39. Sumsets of measurable sets, *Proc. Amer. Math. Soc.* 78 (1980), 59–63.
 40. Connected components of arithmetic graphs, *Monatsh. Math.* 89 (1980), 219–222.
 41. Minimal asymptotic bases for the natural numbers (with P. Erdős), *J. Number Theory* 12 (1980), 154–159.
 42. Sumsets contained in infinite sets of integers, *J. Combin. Theory Ser. A* 28 (1980), 150–155.
 43. Lagrange’s theorem with $N^{1/3}$ squares (with S. L. G. Choi and P. Erdős), *Proc. Amer. Math. Soc.* 79 (1980), 203–205.
 44. Arithmetic progressions contained in sequences with bounded gaps, *Canad. Math. Bull.* 23 (1980), 491–493.

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45. Waring's problem for sets of density zero, in *Analytic number theory (Philadelphia, Pa., 1980)*, Lecture Notes in Math., Vol. 899, Springer, Berlin, 1981, pages 301–310.
46. Lagrange's theorem and thin subsequences of squares (with (P. Erdős), in: *Contributions to Probability*, Academic Press, New York, 1981, pages 3–9.

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47. Review of *Gauss: A Biographical Study*, W. K. Bühler, Math. Intelligencer 4 (1982), 208–209.

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48. Largest and smallest maximal sets of pairwise disjoint partitions, J. Number Theory 17 (1983), 103–112.

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49. The exact order of subsets of additive bases, in: *Number Theory (New York, 1982)*, Lecture Notes in Math., Vol. 1052, Springer, Berlin, 1984, pages 273–277.

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50. Cofinite subsets of asymptotic bases for the positive integers (with J. C. M. Nash), J. Number Theory 20 (1985), 363–372.

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51. Divisibility properties of additive bases, Proc. Amer. Math. Soc. 96 (1986), 11–14
52. Waring's problem for finite intervals, Proc. Amer. Math. Soc. 96 (1986), 15–17.
53. Independence of solution sets in additive number theory (with P. Erdős), in: *Probability, statistical mechanics, and number theory*, Adv. Math. Suppl. Stud., Vol. 9, Academic Press, Orlando, FL, 1986, pages 97–105.

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54. A short proof of Cauchy's polygonal number theorem, Proc. Amer. Math. Soc. 99 (1987), 22–24
55. An extremal problem for least common multiples, Discrete Math. 64 (1987), 221–228.
56. Multiplicative representations of integers, Israel J. Math. 57 (1987), 129–136.
57. Thin bases in additive number theory, in: *Journées Arithmétiques de Besançon (Besançon, 1985)*, Astérisque 147-148 (1987), 315–317, 345.
58. Problems and results on minimal bases in additive number theory (with P. Erdős), in: *Number Theory (New York, 1984–1985)*, Lecture Notes in Math., Vol. 1240, Springer, Berlin, 1987, pages 87–96.
59. A generalization of the Goldbach-Shnirel'man theorem, Amer. Math. Monthly 94 (1987), 768–771.
60. Sums of polygonal numbers, in: *Analytic number theory and Diophantine problems (Stillwater, OK, 1984)*, Progr. Math., Vol. 70, Birkhäuser Boston, Boston, 1987, pages 305–316.

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61. Sumsets containing infinite arithmetic progressions (with P. Erdős and A. Sárközy), *J. Number Theory* 28 (1988), 159–166.
62. Partitions of bases into disjoint unions of bases (with P. Erdős), *J. Number Theory* 29 (1988), 1–9.
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64. Simultaneous systems of representatives for families of finite sets, *Proc. Amer. Math. Soc.* 103 (1988), 1322–1326.
65. Minimal bases and powers of 2, *Acta Arith.* 49 (1988), 525–532.

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69. Combinatorial pairs, and sumsets contained in sequences, in: *Combinatorial Mathematics: Proceedings of the Third International Conference (New York, 1985)*, Ann. New York Acad. Sci. 555 (1989), 316–319.
70. Additive problems in combinatorial number theory, in: *Number Theory (New York, 1985/1988)*, Lecture Notes in Math., Vol. 1383, Springer, Berlin, 1989, pages 123–139.
71. Sumsets containing long arithmetic progressions and powers of 2 (with A. Sárközy), *Acta Arith.* 54 (1989), 147–154.
72. Long arithmetic progressions and powers of 2, in *Théorie des nombres (Quebec, PQ, 1987)*, de Gruyter, Berlin, 1989, pages 735–739.
73. Additive bases with many representations (with P. Erdős), *Acta Arith.* 52 (1989), 399–406.
74. Two applications of combinatorics to number theory, in: *Graph theory and its applications: East and West (Jinan, 1986)*, Ann. New York Acad. Sci. 576 (1989), 408–410.

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79. The simplest inverse problems in additive number theory, in: *Number theory with an emphasis on the Markoff spectrum (Provo, UT, 1991)*, Lecture Notes in Pure and Appl. Math., Vol. 147, Dekker, New York, 1993, pages 191–206

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81. Addition theorems for σ -finite groups (with X.-D. Jia), in: *The Rademacher legacy to mathematics (University Park, PA, 1992)*, Contemp. Math., Vol. 166, Amer. Math. Soc., Providence, RI, 1994, pages 275–284.

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82. Inverse theorems for subset sums, *Trans. Amer. Math. Soc.* 347 (1995), 1409–1418.
83. Independence of solution sets and minimal asymptotic bases (with P. Erdős and P. Tetali), *Acta Arith.* 69 (1995), 243–258.
84. Adding distinct congruence classes modulo a prime (with N. Alon and I. Z. Ruzsa), *Amer. Math. Monthly* 102 (1995), 250–255.

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86. On the sum of the reciprocals of the differences between consecutive primes (with P. Erdős), in: *Number theory (New York, 1991–1995)*, Springer, New York, 1996, pages 97–101.
87. Finite graphs and the number of sums and products (with X.-D. Jia), in: *Number theory (New York, 1991–1995)*, Springer, New York, 1996, pages 211–219.

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88. On sums and products of integers, *Proc. Amer. Math. Soc.* 125 (1997), 9–16.
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90. Linear forms in finite sets of integers (with S.-P. Han and C. Kirfel), *Ramanujan J.* 2 (1998), 271–281.

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91. Inverse theorems and the number of sums and products (with G. Tenenbaum), in: *Structure theory of set addition*, Astérisque 258 (1999), 195–204.
92. Number theory and semigroups of intermediate growth, *Amer. Math. Monthly* 106 (1999), 666–669.

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93. Partitions with parts in a finite set, *Proc. Amer. Math. Soc.* 128 (2000), 1269–1273.
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- 95. Convexity and sumsets (with G. Elekes and I. Z. Ruzsa), *J. Number Theory* 83 (2000), 194–201.
- 96. Growth of sumsets in abelian semigroups, *Semigroup Forum* 61 (2000), 149–153.

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- 99. A functional equation arising from multiplication of quantum integers, *J. Number Theory* 103 (2003), 214–233.

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- 100. The inverse problem for representation functions of additive bases, in: *Number theory (New York, 2003)*, Springer, New York, 2004, pages 253–262.
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- 104. Representation functions of additive bases for abelian semigroups, *Int. J. Math. Math. Sci.* (2004), 29–32.
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- 107. Quadratic addition rules for quantum integers (with A. V. Kontorovich), *J. Number Theory* 117 (2006), 1–13.
- 108. A new upper bound for finite additive bases (with S. Gunturk), *Acta Arith.* 124 (2006), 235–255.
- 109. Additive number theory and the ring of quantum integers, in: *General Theory of Information Transfer and Combinatorics*, Lecture Notes in Computer Science, Vol. 4123, Springer, Berlin, 2006, pages 505–511.

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- 112. Density of sets of natural numbers and the Lévy group (with R. Parikh), *J. Number Theory* 124 (2007), 151–158.
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- 114. Problems in additive number theory, I , in: *Additive Combinatorics*, Amer. Math. Soc., Providence, 2007, 263–270.
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- 116. Representation functions of bases for binary linear forms, *Funct. Approx. Comment. Math.* 37 (2007), 341–350.
- 117. Asymptotic estimates for relatively prime subsets of $\{m + 1, \dots, n\}$ (with B. Orosz), *Integers* 7 (2007).

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147. Adjoining identities and zeros to semigroups, in: *Combinatorial and Additive Number Theory (CANT 2011)*, Springer, New York, to appear.
148. Growth polynomials for additive quadruples and (h, k) -tuples, preprint.
149. Decomposition and limits of de Bruijn’s additive systems, preprint.
150. Cantor polynomials for semigroup sectors, preprint.
151. On sequences without geometric progressions (with K. O’Byrant), preprint.
152. A forest for linear fractional transformations and the Gaussian integers, preprint.