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Curves and Elliptic Curves -- 39. Elliptic Curves with Few Rational Points -- 40. Points on Elliptic Curves Modulo p -- 41. Torsion Collections Modulo p and Bad Primes -- 42. Defect Bounds and Modularity Patterns -- 43. Elliptic Curves and Fermat's Last Theorem. 44. The Topsy-Turvy World of Continued Fractions -- 45. Continued Fractions and Pell's Equation -- 46. Generating Functions -- 47. Sums of Powers -- 48. Appendix: A List of Primes -- Index.

Sommario/riassunto

For one-semester undergraduate courses in Elementary Number Theory. A Friendly Introduction to Number Theory, Fourth Edition is designed to introduce students to the overall themes and methodology of mathematics through the detailed study of one particular facet-number theory. Starting with nothing more than basic high school algebra, students are gradually led to the point of actively performing mathematical research while getting a glimpse of current mathematical frontiers. The writing is appropriate for the undergraduate audience and includes many numerical examples, which are analyzed for patterns and used to make conjectures. Emphasis is on the methods used for proving theorems rather than on specific results.
