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Titolo	The Enchantment of Numbers / / by Eric L. F. Roettger, Hugh C. Williams
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Altri autori (Persone)	WilliamsHugh C
Disciplina	510
Soggetti	Mathematics Number theory General Mathematics and Education Number Theory Teoria de nombres Estadística matemàtica Llibres electrònics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Division, factors, primes, congruences, gcd, etc -- Representations of Integers -- Integer Powers -- The Binomial Congruence -- The Binomial Coecients -- Public-Key Cryptography -- Fibonacci and Lucas Numbers -- Sociable Numbers -- Lucas and Lehmer Sequences -- Primality -- Prime Curios -- Linear Recurrence Sequences -- Simple Continued Fractions -- Integer Factorization -- Sieve Devices -- Simple Continued Fraction of -- Formulas for Primes -- The Pell Equation -- Some Diophantine Equations -- Conclusion.
Sommario/riassunto	Inspired by the classic Recreations in the Theory of Numbers—The Queen of Mathematics Entertains by Albert H. Beiler, this book brings the excitement of recreational number theory into the 21st century through the lens of computational techniques. While Beiler's work, originally published in 1964, captivated readers with its breadth and charm, some sections have become dated. Here, we re-examine most of the key topics Beiler covered, while introducing fresh updates and insights rooted in computational number theory. The authors aim to

present efficient computer algorithms to tackle various problems that arise in the theory of numbers, providing a deeper and more modern perspective on these timeless puzzles. Though we cannot rival Beiler's exuberant prose, we hope our enduring fascination with these topics — cultivated over decades of study and teaching — will shine through and resonate with readers. The book is structured into 21 chapters, each focusing on different facets of number theory with which the authors have extensive expertise. From ancient problems to contemporary computational challenges, this volume will reignite the joy and wonder found in numbers while incorporating the power of modern computation. Whether you're a seasoned mathematician or a curious learner, this book promises a journey through the rich and playful landscape of number theory, making both historical and new discoveries accessible to all.
