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	Soggetti	Number theory
		Algebra
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		Number Theory
		Field Theory and Polynomials
	Lingua di pubblicazione	Inglese
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	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Unique factorisation in the natural numbers -- Number fields -- Fields, discriminants and integral bases -- Ideals -- Prime ideals and unique factorisation -- Imaginary quadratic fields -- Lattices and geometrical methods -- Other fields of small degree -- Cyclotomic fields and the Fermat equation -- Analytic methods -- The number field sieve.
	Sommario/riassunto	The technical difficulties of algebraic number theory often make this subject appear difficult to beginners. This undergraduate textbook provides a welcome solution to these problems as it provides an approachable and thorough introduction to the topic. Algebraic Number Theory takes the reader from unique factorisation in the integers through to the modern-day number field sieve. The first few chapters consider the importance of arithmetic in fields larger than the rational numbers. Whilst some results generalise well, the unique factorisation of the integers in these more general number fields often fail. Algebraic number theory aims to overcome this problem. Most examples are taken from quadratic fields, for which calculations are easy to perform. The middle section considers more general theory and results for number fields, and the book concludes with some topics which are more likely to be suitable for advanced students, namely, the

analytic class number formula and the number field sieve. This is the first time that the number field sieve has been considered in a textbook at this level.