

1. Record Nr.	UNINA9910824848503321
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Titolo	Algebra and number theory : a selection of highlights / / Benjamin Fine [and four others]
Pubbl/distr/stampa	Berlin, [Germany] ; ; Boston, [Massachusetts] : , : De Gruyter, , 2017 ©2017
ISBN	3-11-051626-8 3-11-051614-4
Descrizione fisica	1 online resource (332 pages) : illustrations
Collana	De Gruyter Textbook
Disciplina	512.9
Soggetti	Algebra Number theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Preface -- Contents -- 1. The natural, integral and rational numbers -- 2. Division and factorization in the integers -- 3. Modular arithmetic -- 4. Exceptional numbers -- 5. Pythagorean triples and sums of squares -- 6. Polynomials and unique factorization -- 7. Field extensions and splitting fields -- 8. Permutations and symmetric polynomials -- 9. Real numbers -- 10. The complex numbers, the Fundamental Theorem of Algebra and polynomial equations -- 11. Quadratic number fields and Pell's equation -- 12. Transcendental numbers and the numbers e and π -- 13. Compass and straightedge constructions and the classical problems -- 14. Euclidean vector spaces -- Bibliography -- Index
Sommario/riassunto	This two-volume set collects and presents some fundamentals of mathematics in an entertaining and performing manner. The present volume examines many of the most important basic results in algebra and number theory, along with their proofs, and also their history. ContentsThe natural, integral and rational numbersDivision and factorization in the integersModular arithmeticExceptional numbersPythagorean triples and sums of squaresPolynomials and unique factorizationField extensions and splitting fieldsPermutations and symmetric polynomialsReal numbersThe complex numbers, the

Fundamental Theorem of Algebra and polynomial equations
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Transcendental numbers and the numbers e and π
Compass and straightedge constructions and the classical problems
Euclidean vector spaces
