Record Nr. UNINA9910338254803321 **Autore** Brešar Matej Titolo Undergraduate Algebra: A Unified Approach / / by Matej Brešar Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 9783030140533 **ISBN** 3030140539 Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (XXIV, 316 p. 17 illus.) Collana Springer Undergraduate Mathematics Series, , 1615-2085 Disciplina 512.9 512 Soggetti Associative rings Rings (Algebra) Commutative algebra Commutative rings Algebra Field theory (Physics) Group theory Algebras, Linear Associative Rings and Algebras Commutative Rings and Algebras Field Theory and Polynomials **Group Theory and Generalizations** Linear Algebra Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Preface -- 1 Glossary of Basic Algebraic Structures -- 2 Examples of Groups and Rings -- 3 Homomorphisms -- 4 Quotient Structures -- 5 Commutative Rings -- 6 Finite Groups -- 7 Field Extensions --Frequently Used Symbols -- Index. .

This textbook offers an innovative approach to abstract algebra, based on a unified treatment of similar concepts across different algebraic structures. This makes it possible to express the main ideas of algebra

Sommario/riassunto

more clearly and to avoid unnecessary repetition. The book consists of two parts: The Language of Algebra and Algebra in Action. The unified approach to different algebraic structures is a primary feature of the first part, which discusses the basic notions of algebra at an elementary level. The second part is mathematically more complex, covering topics such as the Sylow theorems, modules over principal integral domains, and Galois theory. Intended for an undergraduate course or for self-study, the book is written in a readable, conversational style, is rich in examples, and contains over 700 carefully selected exercises.