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Autore	Al Subaiei Bana
Titolo	A Gentle Introduction to Group Theory // by Bana Al Subaiei, Muneerah Al Nuwairan
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ISBN	981-9901-47-2
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (429 pages)
Disciplina	512.2
Soggetti	Group theory Algebra Computer software Set theory Group Theory and Generalizations Mathematical Software Set Theory Teoria de grups Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Background Results in Set Theory -- Algebraic Operations on Integers -- The Integers Modulo -- Semigroups -- Groups -- The Symmetric Group -- Subgroups -- Groups Homomorphisms and Isomorphic Groups -- Classification of Finite Abelian Groups -- Group Theory and SageMath.
Sommario/riassunto	The book is intended to serve as an introductory course in group theory geared towards second-year university students. It aims to provide them with the background needed to pursue more advanced courses in algebra and to provide a rich source of examples and exercises. Studying group theory began in the late eighteenth century and is still gaining importance due to its applications in physics, chemistry, geometry, and many fields in mathematics. The text is broadly divided into three parts. The first part establishes the prerequisite knowledge required to study group theory. This includes topics in set theory, geometry, and number theory. Each of the chapters

ends with solved and unsolved exercises relating to the topic. By doing this, the authors hope to fill the gaps between all the branches in mathematics that are linked to group theory. The second part is the core of the book which discusses topics on semigroups, groups, symmetric groups, subgroups, homomorphisms, isomorphism, and Abelian groups. The last part of the book introduces SAGE, a mathematical software that is used to solve group theory problems. Here, most of the important commands in SAGE are explained, and many examples and exercises are provided.
