1. Record Nr. UNISA996518464403316

Autore	Bourbaki N.
Titolo	Algebra : Chapter 8 / / N. Bourbaki and Reinie Erne
Pubbl/distr/stampa	Cham, Switzerland : , : Springer Nature Switzerland AG, , [2023] ©2023
ISBN	3-031-19293-1
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (505 pages)
Disciplina	512.4
Soggetti	Algebra Àlgebra Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Artinian Modules and Noetherian Modules -- The Structure of Modules of Finite Length -- Simple Modules -- Semisimple Modules -- Commutation -- Morita Equivalence of Modules and Algebras -- Simple Rings -- Semisimple Rings -- Radical -- Modules over an Artinian Ring -- Grothendieck Groups -- Tensor Products of Semisimple Modules -- Absolutely Semisimple Algebras -- Central Simple Algebras -- Brauer Groups -- Other Descriptions of the Brauer Group -- Reduced Norms and Traces -- Simple Algebras over a Finite Field -- Quaternion Algebras -- Linear Representations of Algebras -- Linear Representations of Finite Groups -- Algebras without Unit Element -- Determinants over a Noncommunitative Field -- Hilbert's Nullstellensatz -- Trace of an Endomorphism of Finite Rank -- Historical Note -- Bibliography -- Notation Index -- Terminology Index.
Sommario/riassunto	This book is an English translation of an entirely revised version of the 1958 edition of the eighth chapter of the book Algebra, the second Book of the Elements of Mathematics. It is devoted to the study of certain classes of rings and of modules, in particular to the notions of Noetherian or Artinian modules and rings, as well as that of radical. This chapter studies Morita equivalence of module and algebras, it describes the structure of semisimple rings. Various Grothendieck

groups are defined that play a universal role for module invariants. The chapter also presents two particular cases of algebras over a field. The theory of central simple algebras is discussed in detail; their classification involves the Brauer group, of which several descriptions are given. Finally, the chapter considers group algebras and applies the general theory to representations of finite groups. At the end of the volume, a historical note taken from the previous edition recounts the evolution of many of the developed notions.