Rings And Modules Of Quotients

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It is your utterly own period to do something reviewing habit. accompanied by guides you could enjoy now is **Rings And Modules Of Quotients** below.

A Course in Ring Theory - Donald S. Passman 2004
Originally a Chelsea Publishing imprint, this new AMS edition contains the core material for an undergraduate first course in ring theory. Using the underlying theme of projective and injective modules, the author touches upon various aspects of commutative and noncommutative ring theory. A number of major results are highlighted and proved. The book contains numerous exercises and a list of suggested additional reading. Part I, .Projective Modules., begins with basic module theory and then proceeds to surveying various special classes of rings. Part II, .Polynomial Rings., focuses on the study of these rings in a mildly noncommutative

setting. Part III, .Injective Modules., includes various notions of the ring of quotients, the Goldie Theorems, and the characterization of the injective modules over Noetherian rings.

Multiplicative Theory of Ideals - 1971-10-11
Multiplicative Theory of Ideals
Extensions of Rings and Modules - Gary F. Birkenmeier 2015-08-08
The "extensions" of rings and modules have yet to be explored in detail in a research monograph. This book presents state of the art research and also stimulating new and further research. Broken into three parts, Part I begins with basic notions, terminology, definitions and a description of the classes of rings and modules. Part II considers the transference of conditions between a base ring or module and its extensions. And Part III utilizes the concept of a minimal essental extension with respect to a specific class (a hull). Mathematical interdisciplinary applications appear throughout. Major applications of the ring and module theory to Functional Analysis, especially C*-algebras, appear in Part III, make this book of interest to Algebra and Functional Analysis researchers. Notes and exercises at the end of every chapter, and open problems at the end of all three parts, lend this as an ideal textbook for graduate or advanced undergradate students.

Module Theory - Alberto Facchini 2012-02-03
This book presents topics in module theory and ring theory: some, such as Goldie dimension and semiperfect rings are now considered classical and others more specialized, such as dual Goldie dimension, semilocal endomorphism rings, serial rings and modules.

Lectures on Injective Modules and Quotient Rings - Carl Faith 2006-11-14

Modules and the Structure of Rings - Golan 1991-04-24
This book offers vital background information on methods for solving hard classification problems of algebraic structures. It explains how

algebraists deal with the problem of the structure of modules over rings and how they make use of these structures to classify rings.

Introduction to Noncommutative Algebra - Matej Brešar 2014-10-14
Providing an elementary introduction to noncommutative rings and algebras, this textbook begins with the classical theory of finite dimensional algebras. Only after this, modules, vector spaces over division rings, and tensor products are introduced and studied. This is followed by Jacobson's structure theory of rings. The final chapters treat free algebras, polynomial identities, and rings of quotients. Many of the results are not presented in their full generality. Rather, the emphasis is on clarity of exposition and simplicity of the proofs, with several being different from those in other texts on the subject. Prerequisites are kept to a minimum, and new concepts are introduced gradually and are carefully motivated. Introduction to Noncommutative Algebra is therefore accessible to a wide mathematical audience. It is, however, primarily intended for beginning graduate and advanced undergraduate students encountering noncommutative algebra for the first time.

Abstract Algebra for Beginners - Steve Warner 2019-07-28
"This book [provides] a basic but rigorous introduction to abstract algebra." --

Modules and the Structure of Rings - Golan 2017-10-19
This textbook is designed for students with at least one solid semester of abstract algebra,some linear algebra background, and no previous knowledge of module theory. Modulesand the Structure of Rings details the use of modules over a ring as a means of consideringthe structure of the ring itself--explaining the mathematics and "inductivereasoning" used in working on ring theory challenges and emphasizing modules insteadof rings.Stressing the inductive aspect of

mathematical research underlying the formal deductivestyle of the literature, this volume offers vital background on current methods for solvinghard classification problems of algebraic structures. Written in an informal butcompletely rigorous style, Modules and the Structure of Rings clarifies sophisticatedproofs ... avoids the formalism of category theory ... aids independent study or seminarwork ... and supplies end-of-chapter problems.This book serves as an excellent primary.text for upper-level undergraduate and graduatestudents in one-semester courses on ring or module theory-laying a foundation formore advanced study of homological algebra or module theory.
Lectures on Injective Modules and Quotient Rings - Carl Faith 1967

Injective Modules and Injective Quotient Rings - Carl Faith 2019-08-21
First published in 1982. These lectures are in two parts. Part I, entitled injective Modules Over Levitzki Rings, studies an injective module E and chain conditions on the set $A^{\wedge}(E,R)$ of right ideals annihilated by subsets of E. Part II is on the subject of (F)PF, or (finitely) pseudo-Frobenius, rings [i.e., all (finitely generated) faithful modules generate the category mod-R of all R-modules]. (The PF rings had been introduced by Azumaya as a generalization of quasi-Frobenius rings, but FPF includes infinite products of Prufer domains, e.g., Z w .)

Torsion Theories, Additive Semantics, and Rings of Quotients - Joachim Lambek 2006-11-15
With an Appendix on Torsion Theories and Dominant Dimensions
Rings and Categories of Modules - Frank W. Anderson 2012-12-06
This book is intended to provide a reasonably self-contained account of a major portion of the general theory of rings and modules suitable as a text for introductory and more advanced graduate courses. We assume the famil iarity

with rings usually acquired in standard undergraduate algebra courses. Our general approach is categorical rather than arithmetical. The continuing theme of the text is the study of the relationship between the one-sided ideal structure that a ring may possess and the behavior of its categories of modules. Following a brief outline of set-theoretic and categorical foundations, the text begins with the basic definitions and properties of rings, modules and homomorphisms and ranges through comprehensive treatments of direct sums, finiteness conditions, the Wedderburn-Artin Theorem, the Jacobson radical, the hom and tensor functions, Morita equivalence and duality, de composition theory of injective and projective modules, and semi perfect and perfect rings. In this second edition we have included a chapter containing many of the classical results on artinian rings that have hdped to form the foundation for much of the contemporary research on the representation theory of artinian rings and finite dimensional algebras. Both to illustrate the text and to extend it we have included a substantial number of exercises covering a wide spectrum of difficulty. There are, of course" many important areas of ring and module theory that the text does not touch upon.
Module Theory - Alberto Facchini 2012-02-05 This book presents topics in module theory and ring theory: some, such as Goldie dimension and semiperfect rings are now considered classical and others more specialized, such as dual Goldie dimension, semilocal endomorphism rings, serial rings and modules.
Rings of Quotients - B. Stenström 2012-12-06 The theory of rings of quotients has its origin in the work of (j). Ore and K. Asano on the construction of the total ring of fractions, in the 1930's and 40's. But the subject did not really develop until the end of the 1950's, when a number of important papers appeared (by R. E. Johnson, Y. Utumi, A. W. Goldie, P. Gabriel, J. Lambek, and others). Since then the progress

has been rapid, and the subject has by now attained a stage of maturity, where it is possible to make a systematic account of it (which is the purpose of this book). The most immediate example of a ring of quotients is the field of fractions Q of a commutative integral domain A. It may be characterized by the two properties: (i) For every qEQ there exists a non-zero SEA such that qSEA. (ii) Q is the maximal over-ring of A satisfying condition (i). The well-known construction of Q can be immediately extended to the case when A is an arbitrary commutative ring and S is a multiplicatively closed set of non-zero-divisors of A. In that case one defines the ring of fractions Q = A [S-l] as consisting of pairs (a, s) with aEA and SES, with the declaration that (a, s)=(b, t) if there exists UES such that uta = usb. The resulting ring Q satisfies (i), with the extra requirement that SES, and (ii).

Introduction To Commutative Algebra - Michael Atiyah 2018-03-09
First Published in 2018. Routledge is an imprint of Taylor & Francis, an Informa company.

Rings and Modules of Quotients - B. Stenström 1971

Distributive Modules and Related Topics - Askar Tuganbaev 1999-08-19
A comprehensive introduction to the homological and structural methods of ring theory and related topics, this book includes original results as well as the most recent work in the field. It is unique in that it concentrates on distributive modules and rings, an area in which the author is recognized as one of the world's leading experts. A module is said to be distributive if the lattice of its submodules is distributive. Distributive rings are exemplified by factor rings of direct products of division rings, commutative semihereditary rings, and uniserial rings. Direct sums of distributive modules are studied in detail, as well as relations with flat modules and modules whose endomorphisms could be extended or lifted. Starting from a basic

understanding of linear algebra, the theory is presented and accompanied by complete proofs. A number of exercises are also included to give further insight into the topics covered and to draw attention to relevant results in the literature. This detailed and comprehensive book will be an invaluable source of reference to researchers and specialists in this area.

Ring Theory - Kenneth Goodearl 1976-03-01

Semidistributive Modules and Rings - Askar A. Tuganbaev 1998
This is monograph on the theory of semidistributive modules and rings investigates such topics as the relationship between semidistributive modules and flat, projective, injective, multiplication, as well as Bezout modules.
Canadian Journal of Mathematics - 1981-06

Cyclic Modules and the Structure of Rings - S.K. Jain 2012-09-27

This unique monograph brings together important material in the field of noncommutative rings and modules. It provides an up-to-date account of the topic of cyclic modules and the structure of rings which will be of particular interest to those working in abstract algebra and to graduate students who are exploring potential research topics.

Rings, Modules, and Closure Operations - Jesse Elliott 2019-11-30
This book presents a systematic exposition of the various applications of closure operations in commutative and noncommutative algebra. In addition to further advancing multiplicative ideal theory, the book opens doors to the various uses of closure operations in the study of rings and modules, with emphasis on commutative rings and ideals. Several examples, counterexamples, and exercises further enrich the discussion and lend additional flexibility to the way in which the book is used, i.e., monograph or textbook for advanced topics courses.

Semidistributive Modules and Rings - A.A. Tuganbaev 2012-12-06
A module M is called distributive if the lattice Lat(M) of all its submodules is distributive, i.e., Fn(G + H) = FnG + FnH for all submodules F,G, and H of the module M. A module M is called uniserial if all its submodules are comparable with respect to inclusion, i.e., the lattice Lat(M) is a chain. Any direct sum of distributive (resp. uniserial) modules is called a semidistributive (resp. serial) module. The class of distributive (resp. semidistributive) modules properly cont.ains the class ofall uniserial (resp. serial) modules. In particular, all simple (resp. semisimple) modules are distributive (resp. semidistributive). All strongly regular rings (for example, all factor rings of direct products of division rings and all commutative regular rings) are distributive; all valuation rings in division rings and all commutative Dedekind rings (e.g., rings of integral algebraic numbers or commutative principal ideal rings) are distributive. A module is called a Bezout module or a locally cyclic module ifevery finitely generated submodule is cyclic. If all maximal right ideals of a ring A are ideals (e.g., if A is commutative), then all Bezout A-modules are distributive.

Lectures on Modules and Rings - Tsit-Yuen Lam 2012-12-06
This new book can be read independently from the first volume and may be used for lecturing, seminar- and self-study, or for general reference. It focuses more on specific topics in order to introduce readers to a wealth of basic and useful ideas without the hindrance of heavy machinery or undue abstractions. User-friendly with its abundance of examples illustrating the theory at virtually every step, the volume contains a large number of carefully chosen exercises to provide newcomers with practice, while offering a rich additional source of information to experts. A direct approach is used in order to present the material in an efficient and economic way,

thereby introducing readers to a considerable amount of interesting ring theory without being dragged through endless preparatory material.

Exercises in Modules and Rings - T.Y. Lam 2009-12-08

This volume offers a compendium of exercises of varying degree of difficulty in the theory of modules and rings. It is the companion volume to GTM 189. All exercises are solved in full detail. Each section begins with an introduction giving the general background and the theoretical basis for the problems that follow.

Extensions of Rings and Modules - Gary F. Birkenmeier 2013-07-19

The "extensions" of rings and modules have yet to be explored in detail in a research monograph. This book presents state of the art research and also stimulating new and further research. Broken into three parts, Part I begins with basic notions, terminology, definitions and a description of the classes of rings and modules. Part II considers the transference of conditions between a base ring or module and its extensions. And Part III utilizes the concept of a minimal essental extension with respect to a specific class (a hull). Mathematical interdisciplinary applications appear throughout. Major applications of the ring and module theory to Functional Analysis, especially C*-algebras, appear in Part III, make this book of interest to Algebra and Functional Analysis researchers. Notes and exercises at the end of every chapter, and open problems at the end of all three parts, lend this as an ideal textbook for graduate or advanced undergradate students.

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Ring and Module Theory - Toma Albu 2011-02-04
This book is a collection of invited papers and articles, many presented at the 2008 International Conference on Ring and Module Theory. The papers explore the latest in various areas of algebra, including ring theory, module theory and commutative algebra.

Integral Closure of Ideals, Rings, and Modules - Craig Huneke 2006-10-12
Ideal for graduate students and researchers, this book presents a unified treatment of the central notions of integral closure.

Rings and Modules of Quotients - B. Stenström 2006-11-15

Exercises in Modules and Rings - T.Y. Lam 2006-12-15
This volume offers a compendium of exercises of varying degree of difficulty in the theory of modules and rings. It is the companion volume to GTM 189. All exercises are solved in full detail. Each section begins with an introduction giving the general background and the theoretical basis for the problems that follow.

Basic Algebra - Anthony W. Knapp 2007-07-28
Basic Algebra and Advanced Algebra systematically develop concepts and tools in algebra that are vital to every mathematician, whether pure or applied, aspiring or established. Together, the two books give the reader a global view of algebra and its role in mathematics as a whole. The presentation includes blocks of problems that introduce additional topics and

applications to science and engineering to guide further study. Many examples and hundreds of problems are included, along with a separate 90-page section giving hints or complete solutions for most of the problems.

Extensions of Rings and Modules - Gary F. Birkenmeier 2013-07-19
The "extensions" of rings and modules have yet to be explored in detail in a research monograph. This book presents state of the art research and also stimulating new and further research. Broken into three parts, Part I begins with basic notions, terminology, definitions and a description of the classes of rings and modules. Part II considers the transference of conditions between a base ring or module and its extensions. And Part III utilizes the concept of a minimal essental extension with respect to a specific class (a hull). Mathematical interdisciplinary applications appear throughout. Major applications of the ring and module theory to Functional Analysis, especially C*-algebras, appear in Part III, make this book of interest to Algebra and Functional Analysis researchers. Notes and exercises at the end of every chapter, and open problems at the end of all three parts, lend this as an ideal textbook for graduate or advanced undergradate students.

Lectures on Rings and Modules - Joachim Lambek 2009
This book is an introduction to the theory of associative rings and their modules, designed primarily for graduate students. The standard topics on the structure of rings are covered, with a particular emphasis on the concept of the complete ring of quotients. A survey of the fundamental concepts of algebras in the first chapter helps to make the treatment self-contained. The topics covered include selected results on Boolean and other commutative rings, the classical structure theory of associative rings, injective modules, and rings of quotients. The final chapter provides an introduction to homological algebra. Besides three appendices

on further results, there is a six-page section of historical comments. Table of Contents: Fundamental Concepts of Algebra: 1.1 Rings and related algebraic systems; 1.2 Subrings, homomorphisms, ideals; 1.3 Modules, direct products, and direct sums; 1.4 Classical isomorphism theorems. Selected Topics on Commutative Rings: 2.1 Prime ideals in commutative rings; 2.2 Prime ideals in special commutative rings; 2.3 The complete ring of quotients of a commutative ring; 2.4 Rings of quotients of commutative semiprime rings; 2.5 Prime ideal spaces.Classical Theory of Associative Rings: 3.1 Primitive rings; 3.2 Radicals; 3.3 Completely reducible modules; 3.4 Completely reducible rings; 3.5 Artinian and Noetherian rings; 3.6 On lifting idempotents; 3.7 Local and semiperfect rings. Injectivity and Related Concepts: 4.1 Projective modules; 4.2 Injective modules; 4.3 The complete ring of quotients; 4.4 Rings of endomorphisms of injective modules; 4.5 Regular rings of quotients; 4.6 Classical rings of quotients; 4.7 The Faith-Utumi theorem. Introduction to Homological Algebra: 5.1 Tensor products of modules; 5.2 Hom and $\otimes$ as functors; 5.3 Exact sequences; 5.4 Flat modules; 5.5 Torsion and extension products. Appendixes; Comments; Bibliography; Index. Review from Zentralblatt Math: Due to their clarity and intelligible presentation, these lectures on rings and modules are a particularly successful introduction to the surrounding circle of ideas. Review from American Mathematical Monthly: An introduction to associative rings and modules which requires of the reader only the mathematical maturity which one would attain in a first-year graduate algebra [course]...in order to make the contents of the book as accessible as possible, the author develops all the fundamentals he will need.In addition to covering the basic topics...the author covers some topics not so readily available to the nonspecialist...the chapters are written to be as

independent as possible...[which will be appreciated by] students making their first acquaintance with the subject...one of the most successful features of the book is that it can be read by graduate students with little or no help from a specialist. (CHEL/283.H)
Ring Theory; Proceedings - Robert Gordon 1972

Rings and Their Modules - Paul E. Bland 2011
This book is an introduction to the theory of rings and modules that goes beyond what one normally obtains in a graduate course in abstract algebra. In addition to the presentation of standard topics in ring and module theory, it also covers category theory, homological algebra and even more specialized topics like injective envelopes and proj
Lectures on Rings and Modules - Joachim Lambek 1966

Groups, Rings, Modules - Maurice Auslander 2014-06-01

Classic monograph covers sets and maps, monoids and groups, unique factorization domains, localization and tensor products, applications of fundamental theorem, algebraic field extension, Dedekind domains, and much more. 1974 edition.
Lattice-ordered Rings and Modules - Stuart A. Steinberg 2009-11-19
This book provides an exposition of the algebraic aspects of the theory of lattice-ordered rings and lattice-ordered modules. All of the background material on rings, modules, and lattice-ordered groups necessary to make the work self-contained and accessible to a variety of readers is included. Filling a gap in the literature, Lattice-Ordered Rings and Modules may be used as a textbook or for self-study by graduate students and researchers studying lattice-ordered rings and lattice-ordered modules. Steinberg presents the material through 800+ extensive examples of varying levels of difficulty along with numerous exercises at the end of

each section. Key topics include: lattice-ordered groups, rings, and fields; archimedean l-groups; f-rings and larger varieties of l-rings; the category of f-modules; various commutativity results.