

<<近世代数概论>>

图书基本信息

书名：<<近世代数概论>>

13位ISBN编号：9787115162311

10位ISBN编号：711516231X

出版时间：2007-8

出版时间：人民邮电

作者：Garrett Birkhoff,Saunders Mac Lane

页数：496

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## <<近世代数概论>>

### 内容概要

《近世代数概论（英文版）（第5版）》出自近世代数领域的两位科学巨匠之手，是一本经典的教材。

全书共分为15章，内容包括：整数、多项式、实数、复数、矩阵代数、线性群、行列式和标准型、布尔代数和格、超限算术、环和理想、代数数域和伽罗华理论等。

《近世代数概论（英文版）（第5版）》曾帮助过几代人理解近世代数，至今仍是一本非常有价值的参考书和教材，适合数学专业及其他理工科专业高年级本科生和研究生使用。

## <<近世代数概论>>

### 作者简介

作者：(美国)伯克霍夫(Birkhoff.G.) (美国)麦克莱恩(Mac Lane.S) Garrett Birkhoff (1911-1996) 已故世界著名数学家，生前曾任国际数学家大会组织委员会主席、美国数学会副主席，美国工业与应用数学会主席、《大不列颠百科全书》编委，美国科学院院士，哈佛大学教授，1933年开创格论研究，使其成为数学的一个重要分文。

## 书籍目录

Preface to the Fourth Edition1 The Integers1.1 Commutative Rings; Integral Domains1.2 Elementary Properties of Commutative Rings1.3 Ordered Domains1.4 Well-Ordering Principle1.5 Finite Induction; Laws of Exponents1.6 Divisibility1.7 The Euclidean Algorithm1.8 Fundamental Theorem of Arithmetic1.9 Congruences1.10 The Rings  $\mathbb{Z}_n$ 1.11 Sets, Functions, and Relations1.12 Isomorphisms and Automorphisms2 Rational Numbers and Fields2.1 Definition of a Field2.2 Construction of the Rationals2.3 Simultaneous Linear Equations2.4 Ordered Fields2.5 Postulates for the Positive Integers2.6 Peano Postulates3 Polynomials3.1 Polynomial Forms3.2 Polynomial Functions3.3 Homomorphisms of Commutative Rings3.4 Polynomials in Several Variables3.5 The Division Algorithm3.6 Units and Associates3.7 Irreducible Polynomials3.8 Unique Factorization Theorem3.9 Other Domains with Unique Factorization3.10 Eisenstein's Irreducibility Criterion3.11 Partial Fractions4 Real Numbers4.1 Dilemma of Pythagoras4.2 Upper and Lower Bounds4.3 Postulates for Real Numbers4.4 Roots of Polynomial Equations4.5 Dedekind Cuts5 Complex Numbers5.1 Definition5.2 The Complex Plane5.3 Fundamental Theorem of Algebra5.4 Conjugate Numbers and Real Polynomials5.5 Quadratic and Cubic Equations5.6 Solution of Quartic by Radicals5.7 Equations of Stable Type6 Groups6.1 Symmetries of the Square6.2 Groups of Transformations6.3 Further Examples6.4 Abstract Groups6.5 Isomorphism6.6 Cyclic Groups6.7 Subgroups 1436.8 Lagrange's Theorem6.9 Permutation Groups6.10 Even and Odd Permutations6.11 Homomorphisms6.12 Automorphisms; Conjugate Elements6.13 Quotient Groups6.14 Equivalence and Congruence Relations7 Vectors and Vector Spaces7.1 Vectors in a Plane7.2 Generalizations7.3 Vector Spaces and Subspaces7.4 Linear Independence and Dimension7.5 Matrices and Row-equivalence7.6 Tests for Linear Dependence7.7 Vector Equations; Homogeneous Equations7.8 Bases and Coordinate Systems7.9 Inner Products7.10 Euclidean Vector Spaces7.11 Normal Orthogonal Bases7.12 Quotient-spaces7.13 Linear Functions and Dual Spaces8 The Algebra of Matrices8.1 Linear Transformations and Matrices8.2 Matrix Addition8.3 Matrix Multiplication8.4 Diagonal, Permutation, and Triangular Matrices8.5 Rectangular Matrices8.6 Inverses8.7 Rank and Nullity8.8 Elementary Matrices 2438.9 Equivalence and Canonical Form8.10 Bilinear Functions and Tensor Products8.11 Quaternions9 Linear Groups9.1 Change of Basis9.2 Similar Matrices and Eigenvectors9.3 The Full Linear and Affine Groups9.4 The Orthogonal and Euclidean Groups9.5 Invariants and Canonical Forms9.6 Linear and Bilinear Forms9.7 Quadratic Forms9.8 Quadratic Forms Under the Full Linear Group9.9 Real Quadratic Forms Under the Full Linear Group9.10 Quadratic Forms Under the Orthogonal Group9.11 Quadrics Under the Affine and Euclidean Groups9.12 Unitary and Hermitian Matrices9.13 Affine Geometry9.14 Projective Geometry10 Determinants and Canonical Forms10.1 Definition and Elementary Properties of Determinants10.2 Products of Determinants10.3 Determinants as Volumes10.4 The Characteristic Polynomial10.5 The Minimal Polynomial10.6 Cayley-Hamilton Theorem10.7 Invariant Subspaces and Reducibility10.8 First Decomposition Theorem10.9 Second Decomposition Theorem10.10 Rational and Jordan Canonical Forms11 Boolean Algebras and Lattices11.1 Basic Definition11.2 Laws: Analogy with Arithmetic11.3 Boolean Algebra11.4 Deduction of Other Basic Laws11.5 Canonical Forms of Boolean Polynomials11.6 Partial Orderings11.7 Lattices11.8 Representation by Sets12 Transfinite Arithmetic12.1 Numbers and Sets12.2 Countable Sets12.3 Other Cardinal Numbers12.4 Addition and Multiplication of Cardinals12.5 Exponentiation13 Rings and Ideals13.1 Rings13.2 Homomorphisms13.3 Quotient-rings13.4 Algebra of Ideals13.5 Polynomial Ideals13.6 Ideals in Linear Algebras13.7 The Characteristic of a Ring13.8 Characteristics of Fields14 Algebraic Number Fields14.1 Algebraic and Transcendental Extensions14.2 Elements Algebraic over a Field14.3 Adjunction of Roots14.4 Degrees and Finite Extensions14.5 Iterated Algebraic Extensions14.6 Algebraic Numbers14.7 Gaussian Integers14.8 Algebraic Integers14.9 Sums and Products of Integers14.10 Factorization of Quadratic Integers15 Galois Theory15.1 Root Fields for Equations15.2 Uniqueness Theorem15.3 Finite Fields15.4 The Galois

Group15.5 Separable and Inseparable Polynomials15.6 Properties of the Galois Group15.7 Subgroups and Subfields15.8 Irreducible Cubic Equations15.9 Insolvability of Quintic EquationsBibliographyList of Special SymbolsIndex489

<<近世代数概论>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>