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Nota di contenuto	Galois Theory; CONTENTS; Preface to the First Edition; Preface to the Second Edition; Notation; 1 Basic Notation; 2 Chapter-by-Chapter Notation; PART I POLYNOMIALS; 1 Cubic Equations; 1.1 Cardan's Formulas; Historical Notes; 1.2 Permutations of the Roots; A Permutations; B The Discriminant; C Symmetric Polynomials; Mathematical Notes; Historical Notes; 1.3 Cubic Equations over the Real Numbers; A The Number of Real Roots; B Trigonometric Solution of the Cubic; Historical Notes; References; 2 Symmetric Polynomials; 2.1 Polynomials of Several Variables; A The Polynomial Ring in n Variables B The Elementary Symmetric PolynomialsMathematical Notes; 2.2 Symmetric Polynomials; A The Fundamental Theorem; B The Roots of a Polynomial; C Uniqueness; Mathematical Notes; Historical Notes; 2.3 Computing with Symmetric Polynomials (Optional); A Using Mathematica; B Using Maple; 2.4 The Discriminant; Mathematical Notes;

Historical Notes; References; 3 Roots of Polynomials; 3.1 The Existence of Roots; Mathematical Notes; Historical Notes; 3.2 The Fundamental Theorem of Algebra; Mathematical Notes; Historical Notes; References; PART II FIELDS; 4 Extension Fields
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7 The Galois Correspondence7.1 Galois Extensions; A Splitting Fields of Separable Polynomials; B Finite Separable Extensions; C Galois Closures; Historical Notes; 7.2 Normal Subgroups and Normal Extensions; A Conjugate Fields; B Normal Subgroups; Mathematical Notes; Historical Notes; 7.3 The Fundamental Theorem of Galois Theory; 7.4 First Applications; A The Discriminant; B The Universal Extension; C The Inverse Galois Problem; Historical Notes; 7.5 Automorphisms and Geometry (Optional); A Groups of Automorphisms; B Function Fields in One Variable; C Linear Fractional Transformations D Stereographic Projection

Sommario/riassunto

Praise for the First Edition "". . .will certainly fascinate anyone interested in abstract algebra: a remarkable book!""-Monatshefte fur Mathematik Galois theory is one of the most established topics in mathematics, with historical roots that led to the development of many central concepts in modern algebra, including groups and fields. Covering classic applications of the theory, such as solvability by radicals, geometric constructions, and finite fields, Galois Theory, Second Edition delves into novel topics like Abel's theory of