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Nota di contenuto	Preface -- Part I Group cohomology and Galois cohomology: generalities -- 1 Cohomology of finite groups -- 2 Cohomology of cyclic groups -- 3 p-groups, the Tate-Nakayama theorem -- 4 Cohomology of profinite groups -- 5 Cohomological dimension -- 6 First notions of Galois cohomology -- Part II Local fields -- 7 Basic facts about local fields -- 8 Brauer group of a local field -- 9 Local class field theory: the reciprocity law -- 10 The Tate local duality theorem -- 11 Local class field theory: Lubin-Tate theory -- Part III Global fields -- 12 Basic facts about global fields -- 13 Cohomology of the idèles -- 14 Reciprocity law -- 15 The abelianized absolute Galois group of a global field -- Part IV Duality theorems -- 16 Class formations -- 17 Poitou-Tate duality -- 18 Some applications -- Appendix -- A Some results from homological algebra -- B A survey of analytic methods -- References -- Index.
Sommario/riassunto	This graduate textbook offers an introduction to modern methods in number theory. It gives a complete account of the main results of class field theory as well as the Poitou-Tate duality theorems, considered crowning achievements of modern number theory. Assuming a first graduate course in algebra and number theory, the book begins with an introduction to group and Galois cohomology. Local fields and local class field theory, including Lubin-Tate formal group laws, are covered next, followed by global class field theory and the description of abelian extensions of global fields. The final part of the book gives an

accessible yet complete exposition of the Poitou-Tate duality theorems. Two appendices cover the necessary background in homological algebra and the analytic theory of Dirichlet L-series, including the ebotarev density theorem. Based on several advanced courses given by the author, this textbook has been written for graduate students. Including complete proofs and numerous exercises, the book will also appeal to more experienced mathematicians, either as a text to learn the subject or as a reference.

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