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Altri autori (Persone)	DevlinKeith J
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Naive Set Theory -- 1.1 What is a Set? -- 1.2 Operations on Sets -- 1.3 Notation for Sets -- 1.4 Sets of Sets -- 1.5 Relations -- 1.6 Functions -- 1.7 Well-Orderings and Ordinals -- 1.8 Problems -- 2 The Zermelo—Fraenkel Axioms -- 2.1 The Language of Set Theory -- 2.2 The Cumulative Hierarchy of Sets -- 2.3 The Zermelo—Fraenkel Axioms -- 2.4 Classes -- 2.5 Set Theory as an Axiomatic Theory -- 2.6 The Recursion Principle -- 2.7 The Axiom of Choice -- 2.8 Problems -- 3 Ordinal and Cardinal Numbers -- 3.1 Ordinal Numbers -- 3.2 Addition of Ordinals -- 3.3 Multiplication of Ordinals -- 3.4 Sequences of Ordinals -- 3.5 Ordinal Exponentiation -- 3.6 Cardinality, Cardinal Numbers -- 3.7 Arithmetic of Cardinal Numbers -- 3.8 Regular and Singular Cardinals -- 3.9 Cardinal Exponentiation -- 3.10 Inaccessible Cardinals -- 3.11 Problems -- 4 Topics in Pure Set Theory -- 4.1 The Borel Hierarchy -- 4.2 Closed Unbounded Sets -- 4.3 Stationary Sets and Regressive Functions -- 4.4 Trees -- 4.5 Extensions of Lebesgue Measure -- 4.6 A Result About the GCH -- 5 The Axiom of Constructibility -- 5.1 Constructible Sets -- 5.2 The Constructible Hierarchy -- 5.3 The Axiom of Constructibility -- 5.4 The Consistency of $V = L$ -- 5.5 Use of the Axiom of Constructibility -- 6 Independence Proofs in Set Theory -- 6.1 Some Undecidable Statements -- 6.2 The Idea of a Boolean-Valued Universe -- 6.3 The Boolean-Valued Universe

-- 6.4 VB and V -- 6.5 Boolean-Valued Sets and Independence Proofs
-- 6.6 The Nonprovability of the CH -- 7 Non-Well-Founded Set
Theory -- 7.1 Set-Membership Diagrams -- 7.2 The Anti-Foundation
Axiom -- 7.3 The Solution Lemma -- 7.4 Inductive Definitions Under
AFA -- 7.5 Graphs and Systems -- 7.6 Proof of the Solution Lemma --
7.7 Co-Inductive Definitions -- 7.8 A Model of ZF- +AFA -- Glossary
of Symbols.

Sommario/riassunto

This book provides an account of those parts of contemporary set theory of direct relevance to other areas of pure mathematics. The intended reader is either an advanced-level mathematics undergraduate, a beginning graduate student in mathematics, or an accomplished mathematician who desires or needs some familiarity with modern set theory. The book is written in a fairly easy-going style, with minimal formalism. In Chapter 1, the basic principles of set theory are developed in a 'naive' manner. Here the notions of 'set', 'union', 'intersection', 'power set', 'relation', 'function', etc., are defined and discussed. One assumption in writing Chapter 1 has been that, whereas the reader may have met all of these concepts before and be familiar with their usage, she may not have considered the various notions as forming part of the continuous development of a pure subject (namely, set theory). Consequently, the presentation is at the same time rigorous and fast.
