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Autore	Vallin Robert W
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Nota di contenuto	Cover; Title Page; Copyright Page; CONTENTS; Foreword; Preface; Acknowledgments; Introduction; 1 A Quick Biography of Cantor; 2 Basics; 2.1 Review; Exercises; 3 Introducing the Cantor Set; 3.1 Some Definitions and Basics; 3.2 Size of a Cantor Set; 3.2.1 Cardinality; 3.2.2 Category; 3.2.3 Measure; 3.3 Large and Small; Exercises; 4 Cantor Sets and Continued Fractions; 4.1 Introducing Continued Fractions; 4.2 Constructing a Cantor Set; 4.3 Diophantine Equations; 4.4 Miscellaneous; Exercises; 5 p-adic Numbers and Valuations; 5.1 Some Abstract Algebra; 5.2 p-adic Numbers
	5.2.1 An Analysis Point of View5.2.2 An Algebra Point of View; 5.3 p-adic Integers and Cantor Sets; 5.4 p-adic Rational Numbers; Exercises; 6 Self-Similar Objects; 6.1 The Meaning of Self-Similar; 6.2 Metric Spaces; 6.3 Sequences in (S, d); 6.4 Affine Transformations; 6.5 An Application for an IFS; Exercises; 7 Various Notions of Dimension; 7.1 Limit Supremum and Limit Infimum; 7.2 Topological Dimension; 7.3 Similarity Dimension; 7.4 Box-Counting Dimension; 7.5 Hausdorff Measure and Dimension; 7.6 Miscellaneous Notions of Dimension; Exercises; 8 Porosity and Thickness-Looking at the Gaps
	8.1 The Porosity of a Set8.2 Symmetric Sets and Symmetric Porosity;

Sommario/riassunto	"This book is a thorough introduction to the Cantor (Ternary) Set and its applications and brings together many of the topics (advanced calculus, probability, topology, and algebra) that mathematics students are required to study, but unfortunately are treated as separate ideas. This book successfully bridges the gap between how several mathematical fields interact using Cantor Sets as the common theme. While the book is mathematically self-contained, readers should be comfortable with mathematical formalism and have some experience in reading and writing mathematical proofs. Chapter coverage includes: a biography of Cantor; an introduction to the Cantor (Ternary) Set; Self-Similar Sets and Fractal Dimensions; sums of Cantor Sets; the role of Cantor Sets to create pathological functions; and additional topics such as continued fractions, Ana Sets, and p-adic numbers"--