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Autore	Caminha Muniz Neto Antonio
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1 The Set of Real Numbers -- Chapter 2 Algebraic Identities, Equations and Systems -- Chapter 3 Elementary Sequences -- Chapter 4 Induction and the Binomial Formula -- Chapter 5 Elementary Inequalities -- Chapter 6 The Concept of Function -- Chapter 7 More on Real Numbers -- Chapter 8 Continuous Functions -- Chapter 9 Limits and Derivatives -- Chapter 10 Riemann's Integral -- Chapter 11 Series of Functions -- Bibliography -- Appendix A Glossary -- Appendix B Hints and Solutions.
Sommario/riassunto	This book provides a comprehensive, in-depth overview of elementary mathematics as explored in Mathematical Olympiads around the world. It expands on topics usually encountered in high school and could even be used as preparation for a first-semester undergraduate course. This first volume covers Real Numbers, Functions, Real Analysis, Systems of Equations, Limits and Derivatives, and much more. As part of a collection, the book differs from other publications in this field by not being a mere selection of questions or a set of tips and tricks that applies to specific problems. It starts from the most basic theoretical

principles, without being either too general or too axiomatic. Examples and problems are discussed only if they are helpful as applications of the theory. Propositions are proved in detail and subsequently applied to Olympic problems or to other problems at the Olympic level. The book also explores some of the hardest problems presented at National and International Mathematics Olympiads, as well as many essential theorems related to the content. An extensive Appendix offering hints on or full solutions for all difficult problems rounds out the book.

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