1. Record Nr. UNINA9910789343003321

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Titolo	A first course in real analysis / / by Murray H. Protter, Charles B. Morrey, Jr
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 1991
ISBN	1-4419-8744-4
Edizione	[Second edition.]
Descrizione fisica	1 online resource (xviii, 536 pages)
Collana	Undergraduate Texts in Mathematics, , 0172-6056
Disciplina	515.8
Soggetti	Functions of real variables Real Functions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	1 The Real Number System -- 1.1 Axioms for a Field -- 1.2 Natural Numbers and Sequences -- 1.3 Inequalities -- 1.4 Mathematical Induction -- 2 Continuity And Limits -- 2.1 Continuity -- 2.2 Limits -- 2.3 One-Sided Limits -- 2.4 Limits at Infinity; Infinite Limits -- 2.5 Limits of Sequences -- 3 Basic Properties of Functions on ?1 -- 3.1 The Intermediate-Value Theorem -- 3.2 Least Upper Bound; Greatest Lower Bound -- 3.3 The Bolzano—Weierstrass Theorem -- 3.4 The Boundedness and Extreme-Value Theorems -- 3.5 Uniform Continuity -- 3.6 The Cauchy Criterion -- 3.7 The Heine-Borel and Lebesgue Theorems -- 4 Elementary Theory of Differentiation -- 4.1 The Derivative in ?1 -- 4.2 Inverse Functions in ?1 -- 5 Elementary Theory of Integration -- 5.1 The Darboux Integral for Functions on ?1 -- 5.2 The Riemann Integral -- 5.3 The Logarithm and Exponential Functions -- 5.4 Jordan Content and Area -- 6 Elementary Theory of Metric Spaces -- 6.1 The Schwarz and Triangle Inequalities; Metric Spaces -- 6.2 Elements of Point Set Topology -- 6.3 Countable and Uncountable Sets -- 6.4 Compact Sets and the Heine—Borel Theorem -- 6.5 Functions on Compact Sets -- 6.6 Connected Sets -- 6.7 Mappings from One Metric Space to Another -- 7 Differentiation in ?N -- 7.1 Partial Derivatives and the Chain Rule -- 7.2 Taylor’s Theorem; Maxima and Minima 178 -- 7.3 The Derivative in ?N -- 8 Integration in ?N -- 8.1 Volume in ?N -- 8.2 The Darboux Integral in ?N -- 8.3 The Riemann Integral in ?N -- 9 Infinite Sequences and Infinite Series -- 9.1

Sommario/riassunto

Many changes have been made in this second edition of A First Course in Real Analysis. The most noticeable is the addition of many problems and the inclusion of answers to most of the odd-numbered exercises. The book's readability has also been improved by the further clarification of many of the proofs, additional explanatory remarks, and clearer notation.