

1. Record Nr.	UNINA9910299761103321
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Titolo	Understanding Analysis // by Stephen Abbott
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2015
ISBN	1-4939-2712-4
Edizione	[2nd ed. 2015.]
Descrizione fisica	1 online resource (XII, 312 p. 36 illus.)
Collana	Undergraduate Texts in Mathematics, , 0172-6056
Disciplina	515
Soggetti	Mathematical analysis Calculus Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (pages 305-306) and index.
Nota di contenuto	Preface -- 1 The Real Numbers -- 2 Sequences and Series -- 3 Basic Topology of \mathbb{R} -- 4 Functional Limits and Continuity -- 5 The Derivative -- 6 Sequences and Series of Functions -- 7 The Riemann Integral -- 8 Additional Topics -- Bibliography -- Index. .
Sommario/riassunto	This lively introductory text exposes the student to the rewards of a rigorous study of functions of a real variable. In each chapter, informal discussions of questions that give analysis its inherent fascination are followed by precise, but not overly formal, developments of the techniques needed to make sense of them. By focusing on the unifying themes of approximation and the resolution of paradoxes that arise in the transition from the finite to the infinite, the text turns what could be a daunting cascade of definitions and theorems into a coherent and engaging progression of ideas. Acutely aware of the need for rigor, the student is much better prepared to understand what constitutes a proper mathematical proof and how to write one. Fifteen years of classroom experience with the first edition of Understanding Analysis have solidified and refined the central narrative of the second edition. Roughly 150 new exercises join a selection of the best exercises from the first edition, and three more project-style sections have been added. Investigations of Euler's computation of π , the Weierstrass Approximation Theorem, and the gamma function are now among the book's cohort of seminal results serving as motivation and payoff for

the beginning student to master the methods of analysis. Review of the first edition: “This is a dangerous book. Understanding Analysis is so well-written and the development of the theory so well-motivated that exposing students to it could well lead them to expect such excellence in all their textbooks. ... Understanding Analysis is perfectly titled; if your students read it, that’s what’s going to happen. ... This terrific book will become the text of choice for the single-variable introductory analysis course ... ” — Steve Kennedy, MAA Reviews .
