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Titolo	Amazing and Aesthetic Aspects of Analysis [[electronic resource] /] / by Paul Loya
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ISBN	1-4939-6795-9
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XV, 722 p. 122 illus.)
Collana	Undergraduate texts in mathematics
Disciplina	515
Soggetti	Sequences (Mathematics) Functions of real variables Sequences, Series, Summability Real Functions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Some of the most beautiful formulæ in the world -- Part 1. Some standard curriculum -- 1. Very naive set theory, functions, and proofs -- 2. Numbers, numbers, and more numbers -- 3. Infinite sequences of real and complex numbers -- 4. Limits, continuity, and elementary functions -- 5. Some of the most beautiful formulæ in the world I-III -- Part 2. Extracurricular activities -- 6. Advanced theory of infinite series -- 7. More on the infinite: Products and partial fractions -- 8. Infinite continued fractions -- Bibliography -- Index .
Sommario/riassunto	Lively prose and imaginative exercises draw the reader into this unique introductory real analysis textbook. Motivating the fundamental ideas and theorems that underpin real analysis with historical remarks and well-chosen quotes, the author shares his enthusiasm for the subject throughout. A student reading this book is invited not only to acquire proficiency in the fundamentals of analysis, but to develop an appreciation for abstraction and the language of its expression. In studying this book, students will encounter: the interconnections between set theory and mathematical statements and proofs; the fundamental axioms of the natural, integer, and real numbers; rigorous ϵ - N and ϵ - δ definitions; convergence and properties of an infinite series, product, or continued fraction; series, product, and continued

fraction formulæ for the various elementary functions and constants. Instructors will appreciate this engaging perspective, showcasing the beauty of these fundamental results.
