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Titolo	Real Analysis : Foundations and Functions of One Variable / / by Miklós Laczkovich, Vera T. Sós
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Descrizione fisica	1 online resource (X, 483 p. 94 illus.)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Short Historical Introduction -- Basic Concepts -- Real Numbers -- Infinite Sequences I -- Infinite Sequences II -- Infinite Sequences III -- Rudiments of Infinite Series -- Countable Sets -- Real Valued Functions of One Variable -- Continuity and Limits of Functions -- Various Important Classes of Functions (Elementary Functions) -- Differentiation -- Applications of Differentiation -- The Definite Integral -- Integration -- Applications of Integration -- Functions of Bounded Variation -- The Stieltjes Integral -- The Improper Integral.
Sommario/riassunto	Based on courses given at Eötvös Loránd University (Hungary) over the past 30 years, this introductory textbook develops the central concepts of the analysis of functions of one variable - systematically, with many examples and illustrations, and in a manner that builds upon, and sharpens, the students' mathematical intuition. The modular organization of the book makes it adaptable for either semester or year-long introductory courses, while the wealth of material allows for it to be used at various levels of student sophistication in all programs where analysis is a part of the curriculum, including teachers' education. In the spirit of learning-by-doing, Real Analysis includes more than 500 engaging exercises for the student keen on mastering the basics of analysis. There are frequent hints and occasional complete solutions provided for the more challenging exercises making

it an ideal choice for independent study. The book includes a solid grounding in the basics of logic and proofs, sets, and real numbers, in preparation for a rigorous study of the main topics: limits, continuity, rational functions and transcendental functions, differentiation, and integration. Numerous historical notes and applications to other areas of mathematics, and to physics, are given, thereby demonstrating the practical scope and power of mathematical analysis.