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| Livello bibliografico   | Monografia   |
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| Nota di contenuto       | Intro -- Preface -- Contents -- Introduction -- 2400 Years of Calculus<br>-- Calculus and Education -- 1 The Real Numbers -- The Rational Line<br>-- Density of Q -- Some Basic Notions -- Irrationality of Q -- From<br>Eudoxus to Dedekind -- The Real Line -- Dyadic Series-A Construction<br>of R -- The Scarcity of Q -- The Completeness of R -- Cardinality --<br>Exercises -- 2 Sequences and Series -- Sequences -- Limits of<br>Sequences -- Cantor's Nested Intervals Theorem -- Subsequences --<br>Series -- The Harmonic Series -- Series of Positive Terms -- Series with<br>Positive and Negative Terms -- The Riemann Series Theorem --<br>Absolute and Unconditional Convergence -- Exercises -- 3 Functions<br>-- The Elementary Functions -- Polynomials -- Circular Functions --<br>The Exponential Function: Bernoulli's Inequality -- Irrationality of e --<br>Convergence of $\sum_{k=1}^{\infty} (1+ak)$ and of $\sum_{k=1}^{\infty} ak$ -- Hyperbolic Functions<br>-- Injectivity and Inverse Functions -- Curves in the Plane:<br>Parametrized Curves -- The Cycloid -- Pythagorean Triples --<br>Continuity -- Bolzano and Weierstrass -- Limits -- Limits in Ancient<br>Greece: The Area of a Circle -- Three Important Limits -- Exercises --<br>4 The Derivative -- Derivative -- Tangents -- Newton-Raphson --<br>Derivatives of the Elementary Functions -- The Chain Rule -- Derivative |

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