

1. Record Nr.	UNINA9910299980103321
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Titolo	More Calculus of a Single Variable // by Peter R. Mercer
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2014
ISBN	1-4939-1926-1
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XVI, 411 p. 60 illus.)
Collana	Undergraduate Texts in Mathematics, , 0172-6056
Disciplina	510
Soggetti	Mathematical analysis Analysis (Mathematics) Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Preface -- 1 The Real Numbers -- 2 Famous Inequalities -- 3 Continuous Functions -- 4 Differentiable Functions -- 5 The Mean Value Theorem -- 6 The Exponential Function -- 7 Other Mean Value Theorems -- 8 Convex Functions and Taylor's Theorem -- 9 Integration of Continuous Functions -- 10 The Fundamental Theorem of Calculus -- 11 Techniques of Integration -- 12 Classic Examples -- 13 Simple Quadrature Rules -- 14 Error Terms -- A The Proof of Theorem 9.1 -- Index.
Sommario/riassunto	This book goes beyond the basics of a first course in calculus to reveal the power and richness of the subject. Standard topics from calculus — such as the real numbers, differentiation and integration, mean value theorems, the exponential function — are reviewed and elucidated before digging into a deeper exploration of theory and applications, such as the AGM inequality, convexity, the art of integration, and explicit formulas for $e^x$ . Further topics and examples are introduced through a plethora of exercises that both challenge and delight the reader. While the reader is thereby exposed to the many threads of calculus, the coherence of the subject is preserved throughout by an emphasis on patterns of development, of proof and argumentation, and of generalization. More Calculus of a Single Variable is suitable as a text for a course in advanced calculus, as a supplementary text for courses in analysis, and for self-study by students, instructors, and,

indeed, all connoisseurs of ingenious calculations.

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