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Autore	Boas Ralph P (Ralph Philip), <1912-1992>
Titolo	A primer of real functions / / Ralph P. Boas [[electronic resource]]
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Nota di contenuto	Preface to the fourth edition -- Preface to the third edition -- [ch.] 1. Sets -- 1. Sets -- 2. Sets of real numbers -- 3. Countable and uncountable sets -- 4. Metric spaces -- 5. Open and closed sets -- 6. Dense and nowhere dense sets -- 7. Compactness -- 8. Convergence and completeness -- 9. Nested sets and Baire's theorem -- 10. Some applications of Baire's theorem -- 11. Sets of measure zero -- [c.h.] 2. Functions -- 12. Functions -- 13. Continuous functions -- 14. Properties of continuous functions -- 15. Upper and lower limits -- 16. Sequences of functions -- 17. Uniform convergence -- 18. Point wise limits on continuous functions -- 19. Approximations to continuous functions -- 20. Linear functions -- 21. Derivaties -- 22. Monotonic functions -- 23. Convex functions -- 24. Infinitely differentiable functions -- [ch.] 3. Integration -- 25. Lebesgue measure -- 26. Measurable functions -- 27. Definition of the Lebesgue integral -- 28. Properties of Lebesgue integrals -- 29. Applications of the Lebesgue integral -- 30. Stieltjes integrals -- 31. Applications of the Stieltjes integral -- 32. Partial sums of infinite series -- Answers to exercises -- Index.
Sommario/riassunto	This is a revised, updated and significantly augmented edition of a classic Carus Monograph (a bestseller for over 25 years) on the theory of functions of a real variable. Earlier editions of this classic Carus Monograph covered sets, metric spaces, continuous functions, and differentiable functions. The fourth edition adds sections on measurable sets and functions, the Lebesgue and Stieltjes integrals, and applications. The book retains the informal chatty style of the

previous editions, remaining accessible to readers with some mathematical sophistication and a background in calculus. The book is thus suitable either for self-study or for supplemental reading in a course on advanced calculus or real analysis. Not intended as a systematic treatise, this book has more the character of a sequence of lectures on a variety of interesting topics connected with real functions. Many of these topics are not commonly encountered in undergraduate textbooks: for example, the existence of continuous everywhere-oscillating functions (via the Baire category theorem); the universal chord theorem; two functions having equal derivatives, yet not differing by a constant; and application of Stieltjes integration to the speed of convergence of infinite series.