1. Record Nr. UNINA9910971365203321

Autore	Nitecki Zbigniew
Titolo	Calculus deconstructed : a second course in first-year calculus / / Zbigniew H. Nitecki
Pubbl/distr/stampa	Washington, D.C., : Mathematical Association of America, c2009
ISBN	9781614446026 1614446024
Edizione	[1st ed.]
Descrizione fisica	1 online resource (0 p.)
Collana	AMS/MAA Textbooks, , 2577-1213 ; ; v. 16 MAA textbooks
Disciplina	515
Soggetti	Calculus
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 477-480) and index.
Nota di contenuto	Precalculus -- Sequences and their limits -- Continuity -- Differentiation -- Integration -- Power series -- The rhetoric of mathematics (Methods of proof).
Sommario/riassunto	Calculus Deconstructed is a thorough and mathematically rigorous exposition of single-variable calculus for readers with some previous exposure to calculus techniques but not to methods of proof. This book is appropriate for a beginning Honors Calculus course assuming high school calculus or a "bridge course" using basic analysis to motivate and illustrate mathematical rigor. It can serve as a combination textbook and reference book for individual self-study. Standard topics and techniques in single-variable calculus are presented in context of a coherent logical structure, building on familiar properties of real numbers and teaching methods of proof by example along the way. Numerous examples reinforce both practical and theoretical understanding, and extensive historical notes explore the arguments of the originators of the subject.No previous experience with mathematical proof is assumed: rhetorical strategies and techniques of proof (reductio ad absurdum, induction, contrapositives, etc.) are introduced by example along the way. Between the text and exercises, proofs are available for all the basic results of calculus for functions of one real variable.