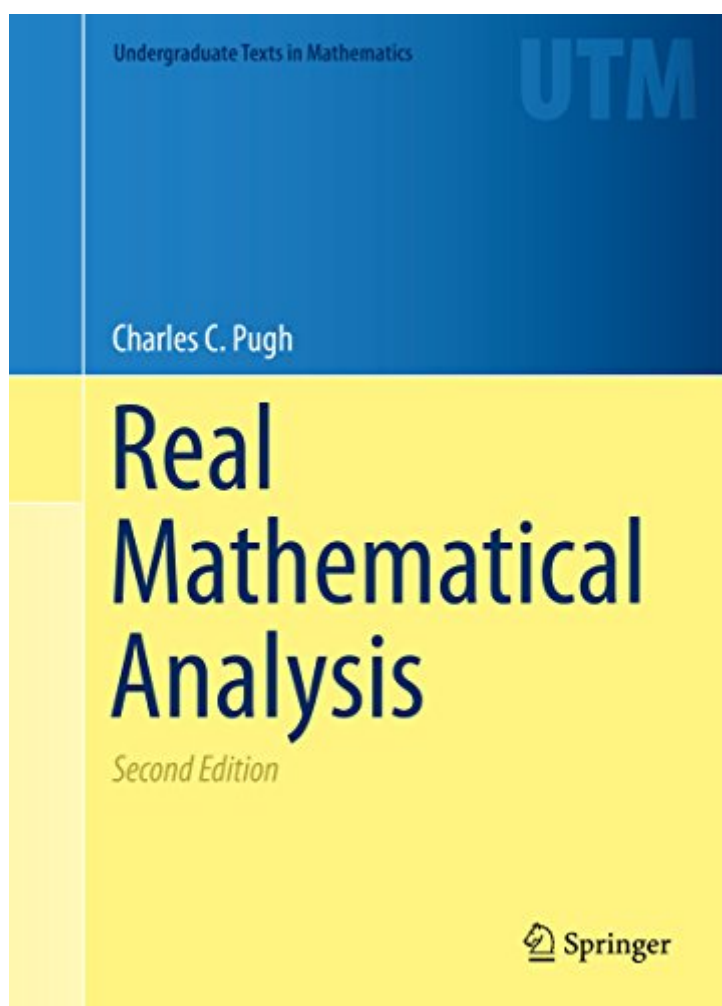


The book was found

Real Mathematical Analysis (Undergraduate Texts In Mathematics)



Synopsis

Based on an honors course taught by the author at UC Berkeley, this introduction to undergraduate real analysis gives a different emphasis by stressing the importance of pictures and hard problems. Topics include: a natural construction of the real numbers, four-dimensional visualization, basic point-set topology, function spaces, multivariable calculus via differential forms (leading to a simple proof of the Brouwer Fixed Point Theorem), and a pictorial treatment of Lebesgue theory. Over 150 detailed illustrations elucidate abstract concepts and salient points in proofs. The exposition is informal and relaxed, with many helpful asides, examples, some jokes, and occasional comments from mathematicians, such as Littlewood, Dieudonné, and Osserman. This book thus succeeds in being more comprehensive, more comprehensible, and more enjoyable, than standard introductions to analysis. New to the second edition of Real Mathematical Analysis is a presentation of Lebesgue integration done almost entirely using the undergraph approach of Burkill. Payoffs include: concise picture proofs of the Monotone and Dominated Convergence Theorems, a one-line/one-picture proof of Fubini's theorem from Cavalieri's Principle, and, in many cases, the ability to see an integral result from measure theory. The presentation includes Vitali's Covering Lemma, density points which are rarely treated in books at this level and the almost everywhere differentiability of monotone functions. Several new exercises now join a collection of over 500 exercises that pose interesting challenges and introduce special topics to the student keen on mastering this beautiful subject.

Book Information

File Size: 12688 KB

Print Length: 478 pages

Publisher: Springer; 2 edition (July 29, 2015)

Publication Date: July 29, 2015

Sold by: Digital Services LLC

Language: English

ASIN: B0132QWOZW

Text-to-Speech: Not enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #901,655 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #25 in Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Infinity #100 in Books > Science & Math > Mathematics > Infinity #127 in Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Mathematical Analysis

Customer Reviews

(There are already several reviews about the content of the book under the first edition.) During the last year, Springer has published new editions of several books in the UTM series (Axler: Linear Algebra Done Right, Ross: Elementary Analysis, Abbott: Understanding Analysis). I have bought all of these from and received nicely produced books, on good paper quality and all in exactly the same format. When I received the second edition of Pugh: Real Mathematical Analysis, however, it was immediately clear that this is a print-on-demand book, even though it was first published on July 30, 2015. The format is weird, much bigger than the other books in the series. The paper quality is cheap, like what you use for your printer, not what you expect from a book. Presumably Springer has not even bothered to do a first run of proper copies, but have gone straight to the POD quality that they use for most books. I thought it was safe because the book was just published, but I was wrong. Maybe I was just unlucky, but I just wanted to warn other buyers who might care about this issue.

This is the first course in Real Analysis. The book starts with set theory, includes point set topology, theory behind differentiation and Riemann integration, functional spaces, multivariable calculus, and ends with a chapter on Lebesgue integration. The chapter on point set topology is so much better than what you find in Rudin. Even chapters on multivariable calculus and Lebesgue integration are better explained than in Rudin. This author stresses on intuition and has lots of diagrams that makes this text quite different from other books on basic real analysis.

[Download to continue reading...](#)

Real Mathematical Analysis (Undergraduate Texts in Mathematics) Introduction to Mathematical Structures and Proofs (Undergraduate Texts in Mathematics) Discrete Mathematics: Elementary and Beyond (Undergraduate Texts in Mathematics) Mathematics and Its History (Undergraduate Texts in Mathematics) Understanding Analysis (Undergraduate Texts in Mathematics) Applied Linear Algebra and Matrix Analysis (Undergraduate Texts in Mathematics) Complex Analysis (Undergraduate Texts in Mathematics) Real Estate: Learn to Succeed the First Time: Real Estate Basics, Home Buying, Real Estate Investment & House Flipping (Real Estate income, investing,

Rental Property) An Epsilon of Room Real Analysis: Pages from Year Three of a Mathematical Blog (Graduate Studies in Mathematics) The Pleasures of Probability (Undergraduate Texts in Mathematics) Calculus with Vectors (Springer Undergraduate Texts in Mathematics and Technology) Conics and Cubics: A Concrete Introduction to Algebraic Curves (Undergraduate Texts in Mathematics) Elementary Number Theory: Primes, Congruences, and Secrets: A Computational Approach (Undergraduate Texts in Mathematics) Ideals, Varieties, and Algorithms: An Introduction to Computational Algebraic Geometry and Commutative Algebra (Undergraduate Texts in Mathematics) Rational Points on Elliptic Curves (Undergraduate Texts in Mathematics) Elementary Topics in Differential Geometry (Undergraduate Texts in Mathematics) The Foundations of Geometry and the Non-Euclidean Plane (Undergraduate Texts in Mathematics) Topology (Undergraduate Texts in Mathematics) Basic Concepts of Algebraic Topology (Undergraduate Texts in Mathematics) Introduction to Partial Differential Equations (Undergraduate Texts in Mathematics)

[Dmca](#)