

<<实分析和抽象分析基础>>

图书基本信息

书名：<<实分析和抽象分析基础>>

13位ISBN编号：9787506259682

10位ISBN编号：7506259680

出版时间：2003-6

出版时间：世界图书出版公司

作者：D.S.Bridges

页数：322

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<实分析和抽象分析基础>>

内容概要

The core chapters of this volume provide a complete course on metric, normed, and Hilbert spaces, and include many results and exercises seldom found in texts on analysis at this level. The author covers an unusually wide range of material in a clear and concise format including elementary real analysis, Lebesgue integration on \mathbb{R} , and an introduction to functional analysis. This makes a versatile text also suited for courses on real analysis, metric spaces, abstract analysis, and modern analysis. The book begins with a comprehensive chapter providing a fast-paced course on real analysis, and is followed by an introduction to the Lebesgue integral. This provides a reference for later chapters as well as an introduction for students with only the typical sequence of undergraduate calculus courses as prerequisites. Other features include a chapter introducing functional analysis, the Hahn-Banach theorem and duality, separation theorems, the Baire Category Theorem, the Open Mapping Theorem and their consequences, and unusual applications such as weak solutions of the Dirichlet Problem and Pareto optimality in Mathematical Economics. Of special interest is the unique collection of nearly 750 exercises, many with guidelines for their solutions. The exercises include applications and extensions of the main propositions and theorems, results that fill in gaps in proofs or that prepare for proofs later in the book, pointers to new branches of the subject, and difficult challenges for the very best students.

<<实分析和抽象分析基础>>

书籍目录

Preface Introduction Real Analysis 1 Analysis on the Real Line 1.1 The Real Number Line 1.2 Sequences and Series 1.3 Open and Closed Subsets of the Line 1.4 Limits and Continuity 1.5 Calculus 2 Differentiation and the Lebesgue Integral 2.1 Outer Measure and Vitali's Covering Theorem 2.2 The Lebesgue Integral as an Antiderivative 2.3 Measurable Sets and Functions Abstract Analysis 3 Analysis in Metric Spaces 3.1 Metric and Topological Spaces 3.2 Continuity, Convergence, and Completeness 3.3 Compactness 3.4 Connectedness 3.5 Connected Metric Spaces 4 Analysis in Normed Linear Spaces 4.1 Normed Linear Spaces 4.2 Linear Mappings and Hyperplanes 4.3 Finite-Dimensional Normed Spaces 4.4 The L_p Spaces 4.5 Function Spaces 4.6 The Theorems of Weierstrass and Stone 4.7 Fixed Points and Differential Equations 5 Hilbert Spaces 5.1 Inner Products 5.2 Orthogonality and Projections 5.3 The Dual of a Hilbert Space 6 An Introduction to Functional Analysis 6.1 The Hahn-Banach Theorem 6.2 Separation Theorems 6.3 Baire's Theorem and Beyond A What is a Real Number? B Pareto Optimality References Index

<<实分析和抽象分析基础>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>