

《数学分析基础/Foundation》

图书基本信息

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内容概要

This classroom-tested volume offers students of mathematics not only a well-defined view of the basics of modern analysis but also a broad spectrum of the ways in which analysis can be applied to statistics, numerical analysis, Fourier series, differential equations, mathematical analysis, and functional analysis. A self-contained textbook, it offers the background necessary for a firm grasp of the limit concept. (The first seven chapters could constitute a one-semester course on introduction to limits.) Subsequent chapters examine differential calculus of the real line, the Riemann-Stieltjes integral, sequences and series of functions, transcendental functions, inner product spaces and Fourier series, normed linear spaces and the Riesz representation theorem, and the Lebesgue integral. Supplementary materials include an appendix on vector spaces and more than 750 exercises of varying degrees of difficulty (hints and solutions to selected exercises, indicated by an asterisk, appear at the back of the book). Upper-level undergraduate students with a background in calculus will benefit from the teachings of this volume, as will beginning graduate students seeking a firm grounding in modern analysis.

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书籍目录

Preface Preface to the Dover Edition I Sets and Functions 1. Sets 2. Functions II The Real Number System 3. The Algebraic Axioms of the Real Numbers 4. The Order Axiom of the Real Numbers 5. The Least-Upper-Bound Axiom 6. The Set of Positive Integers 7. Integers, Rationals, and Exponents III Set Equivalence 8. Definitions and Examples 9. Countable and Uncountable Sets IV Sequences of Real Numbers 10. Limit of a Sequence 11. Subsequences 12. The Algebra of Limits 13. Bounded Sequences 14. Further Limit Theorems 15. Divergent Sequences 16. Monotone Sequences and the Number e 17. Real Exponents 18. The Bolzano-Weierstrass Theorem 19. The Cauchy Condition 20. The \limsup and \liminf of Bounded Sequences 21. The \limsup and \liminf of Unbounded Sequences V Infinite Series 22. The Sum of an Infinite Series 23. Algebraic Operations on Series 24. Series with Nonnegative Terms 25. The Alternating Series Test 26. Absolute Convergence 27. Power Series 28. Conditional Convergence 29. Double Series and Applications VI Limits of Real-Valued Functions and Continuous Functions on the Real Line 30. Definition of the Limit of a Function 31. Limit Theorems for Functions 32. One-Sided and Infinite Limits 33. Continuity 34. The Heine-Borel Theorem and a Consequence for Continuous Functions VII Metric Spaces 35. The Distance Function 36. \mathbb{R}^n , \mathbb{C}^n , and the Cauchy-Schwarz Inequality 37. Sequences in Metric Spaces 38. Closed Sets 39. Open Sets 40. Continuous Functions on Metric Spaces 41. The Relative Metric 42. Compact Metric Spaces 43. The Bolzano-Weierstrass Characterization of a Compact Metric Space 44. Continuous Functions on Compact Metric Spaces 45. Connected Metric Spaces 46. Complete Metric Spaces 47. Baire Category Theorem VIII Differential Calculus of the Real Line IX The Riemann-Stieltjes Integral X Sequences and Series of Functions XI Transcendental Functions XII Inner Product Spaces and Fourier Series XIII Normed Linear Spaces and the Riesz Representation Theorem XIV The Lebesgue Integral Appendix: Vector Spaces References Hints to Selected Exercises Index Errata

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