161-4

REAL

CONARIEX ANAINS

THURD EDITION

WALTERRUDE

LOCAL SERVICE DE MANAGEMENT

Prologue: The Exponential Function

Chapter 1 Abstract Integration

Set-theoretic notations and terminology
The concept of measurability
Simple functions
Elementary properties of measures
Arithmetic in $[0, \infty]$ Integration of positive functions
Integration of complex functions
The role played by sets of measure zero
Exercises

Chapter 2 Positive Borel Measures

Vector spaces
Topological preliminaries
The Riesz representation theorem
Regularity properties of Borel measures
Lebesgue measure
Continuity properties of measurable functions
Exercises

Chapter 3 L^p -Spaces

Convex functions and inequalities

The L^p-spaces

Approximation by continuous functions

Exercises

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Chapter 9 Fourier Transforms

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Formal properties
The inversion theorem
The Plancherel theorem
The Banach algebra L¹
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Introduction

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