Integration and Integration

K

March 18, 2021

Contents

Ι	Solving Integrals	5
1	Trigonometric Functions	7
2	Hyperbolic Functions	ę
3	Solving Integrals	11

4 CONTENTS

Part I Solving Integrals

Chapter 1

Trigonometric Functions

Chapter 2

Hyperbolic Functions

Chapter 3

Solving Integrals

Theorem 3.0.1 (Important Identities).

$$\int x^{\alpha} dx = \frac{1}{\alpha + 1} x^{\alpha + 1} + c \qquad \text{For all } \alpha \in \mathbb{N}$$

$$\int \frac{1}{x} dx = \ln|x| + c \qquad \text{If } x \neq 0.$$

$$\int e^{x} dx = e^{x} + c \qquad (3.2)$$

$$\int \cos x dx = \sin x + c \qquad (3.4)$$

$$\int \sin x dx = -\cos x + c \qquad (3.5)$$

$$\int \frac{1}{1 + x^{2}} dx = \arctan(x) + c \qquad (3.6)$$

$$\int (3.7)$$