

## 摘要

我自学使用的教材为Stein的《complex analysis》，在此笔记中主要记录书中的核心内容，配以心得体会。

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# 1 Preliminaries

## 1.1 Complex numbers and the complex plane

## 1.2 Functions on the complex plane

## 1.3 Integration along curves

## 2 Cauchy's Theorem and Its Applications

### 2.1 Goursat's theorem

### 2.2 Local existence of primitives and Cauchy's theorem in a disc

### 2.3 Evaluation of some integrals

### 2.4 Cauchy's integral formulas

### 2.5 Further applications