



## 【TikZ实例】留数定理：你想要的围道都在这儿

This note is for personal study and reference only

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本文内容仅供参考和学习使用

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# The L<sup>A</sup>T<sub>E</sub>X Project

## 1. TikZ 实例: Contour Integration

### Introduction

- 圆形围道
- 半圆形围道
- 扇形围道
- 矩形围道
- 玦形围道
- 拉普拉斯逆变换围道
- 杂例

### 1.1 圆形围道

#### 1.1.1 一般的圆形围道

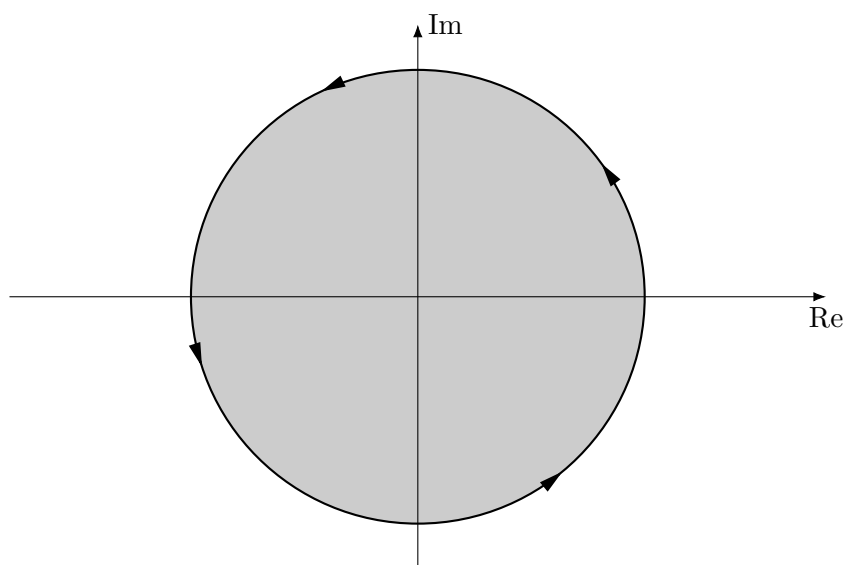


Figure 1.1: 一般的圆形围道

### 1.1.2 圆周上含奇点或支点

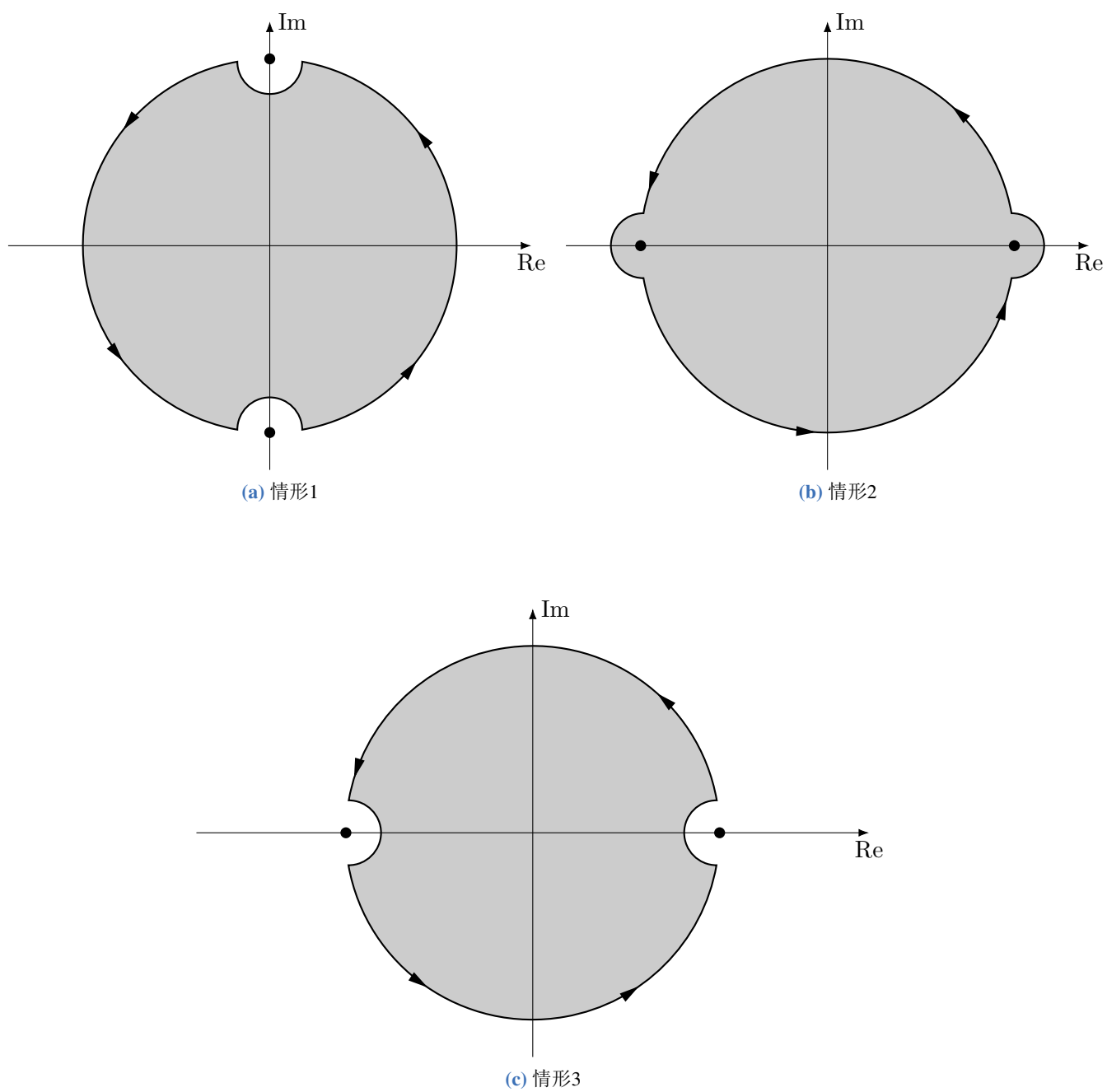


Figure 1.2: 圆周上有奇点或支点

## 1.2 半圆形围道

### 1.2.1 一般的半圆形围道

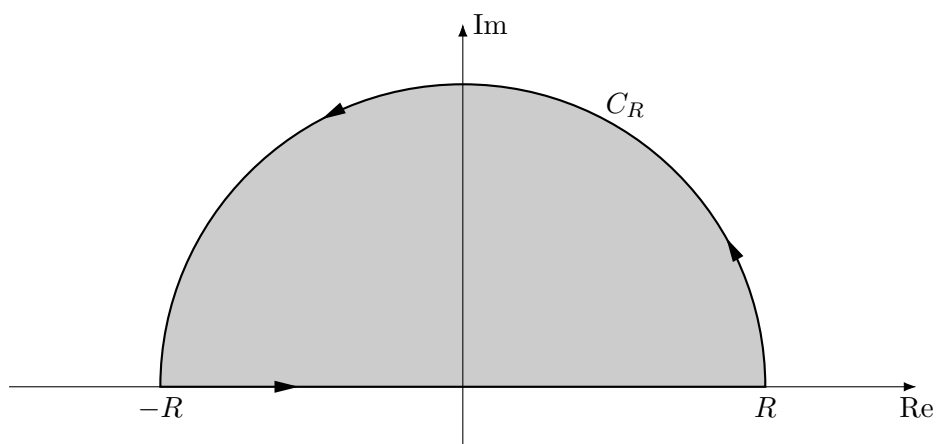
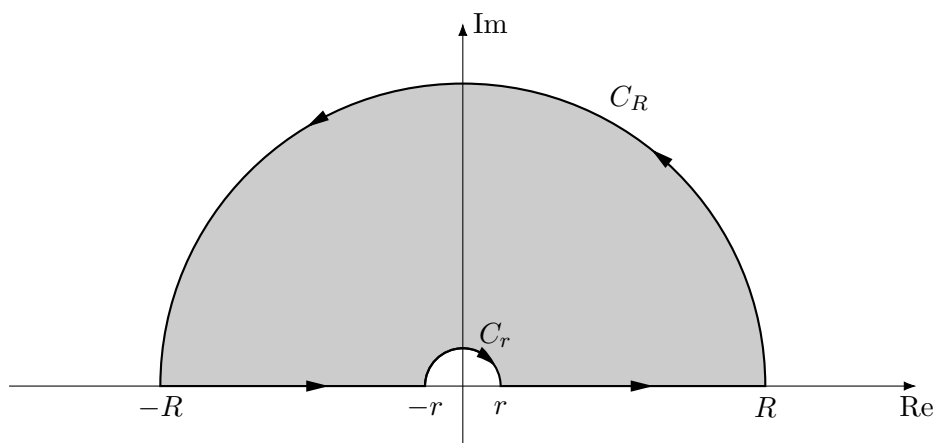
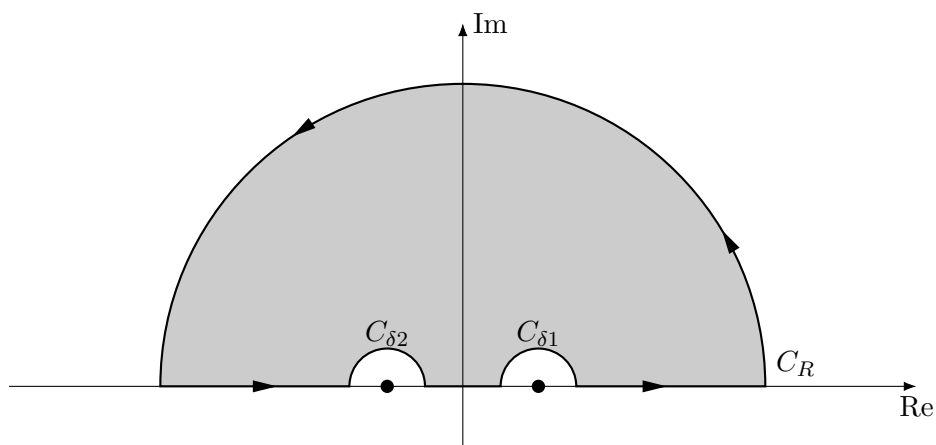


Figure 1.3: 一般的半圆形围道

### 1.2.2 半圆形围道-积分路径上含奇点或支点



(a) 横向-情形1



(b) 横向-情形2



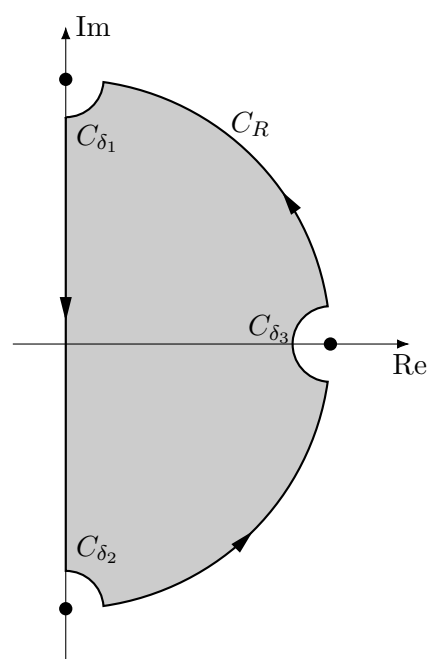
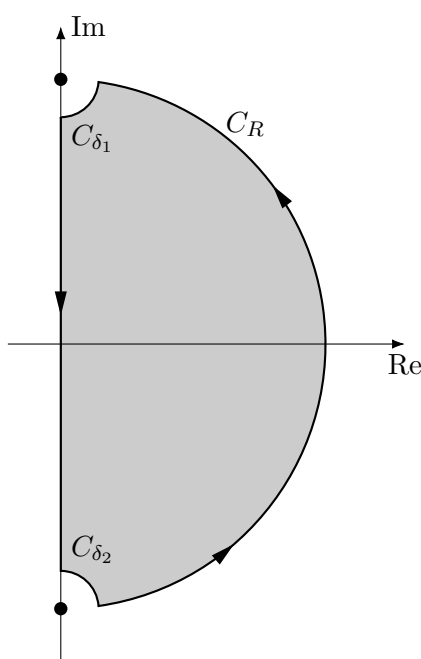
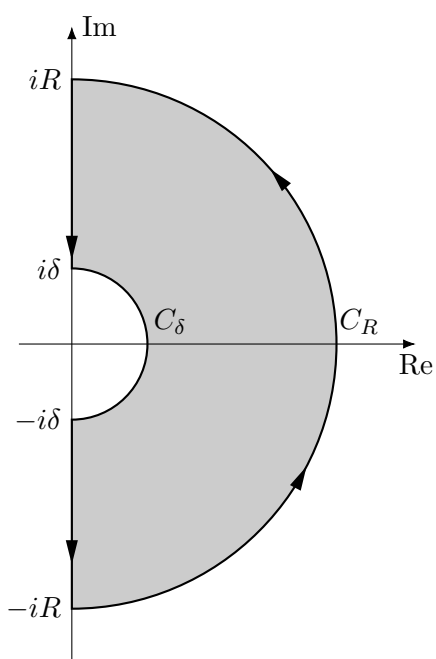
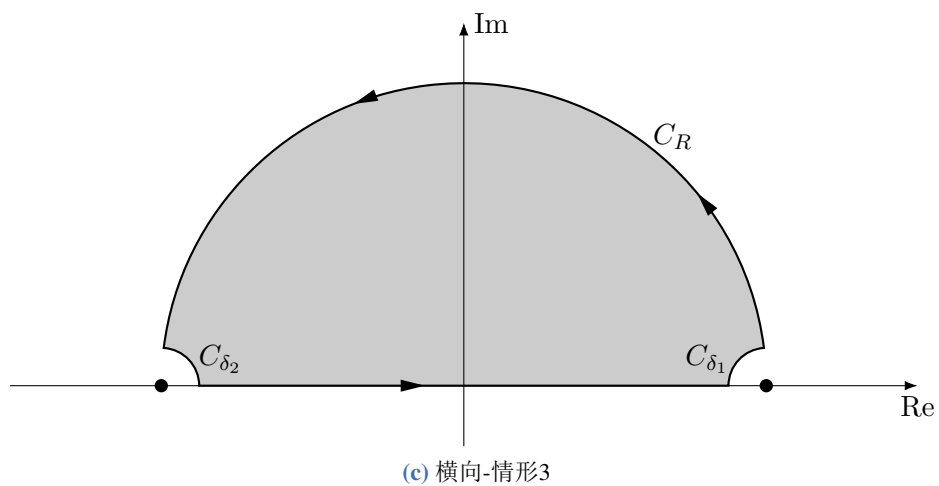


Figure 1.4: 半圆形围道-积分路径上含奇点或支点

### 1.3 扇形围道

#### 1.3.1 一般的扇形围道

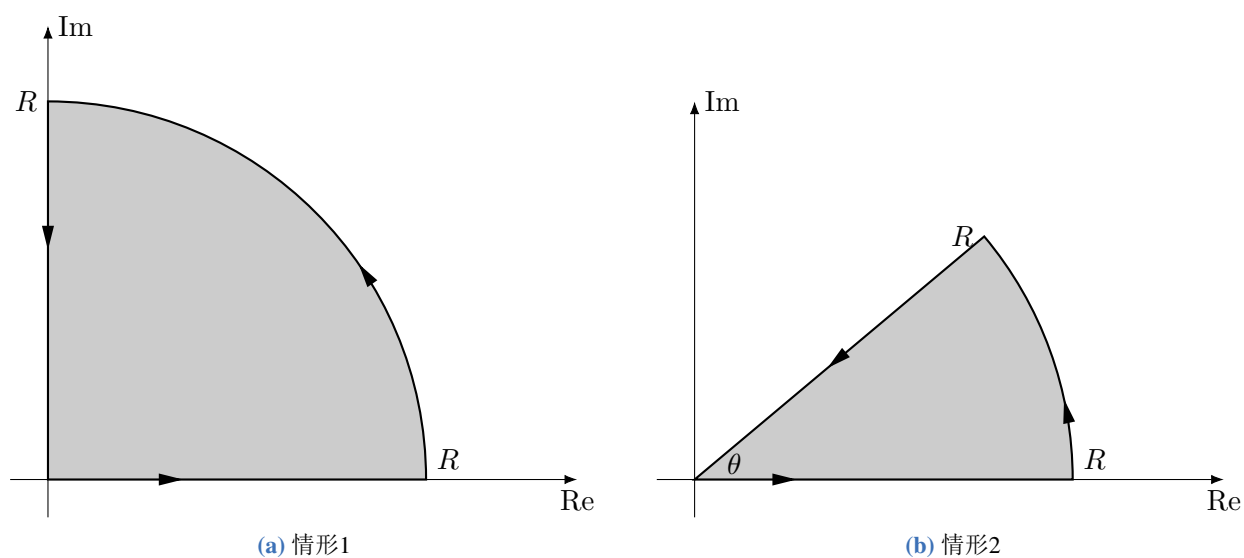
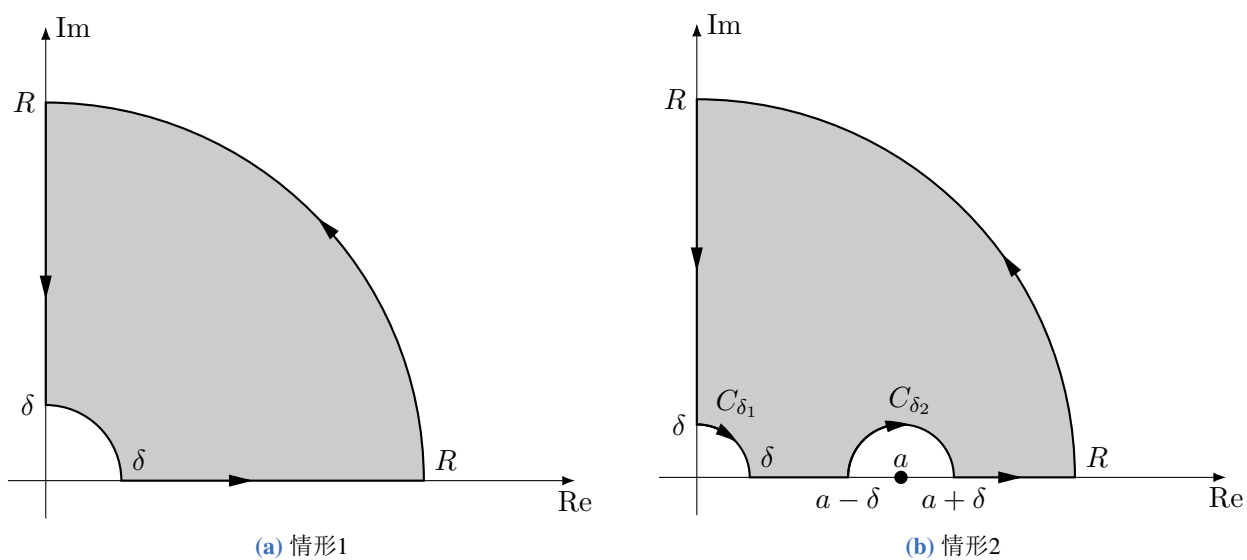


Figure 1.5: 一般的扇形围道

#### 1.3.2 扇形围道-积分路径上含奇点或支点



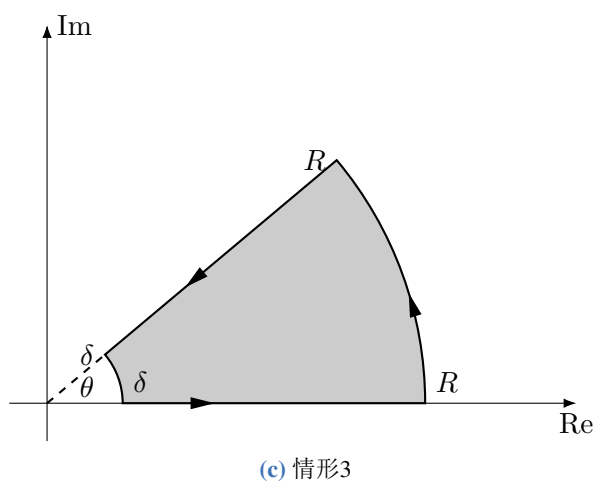
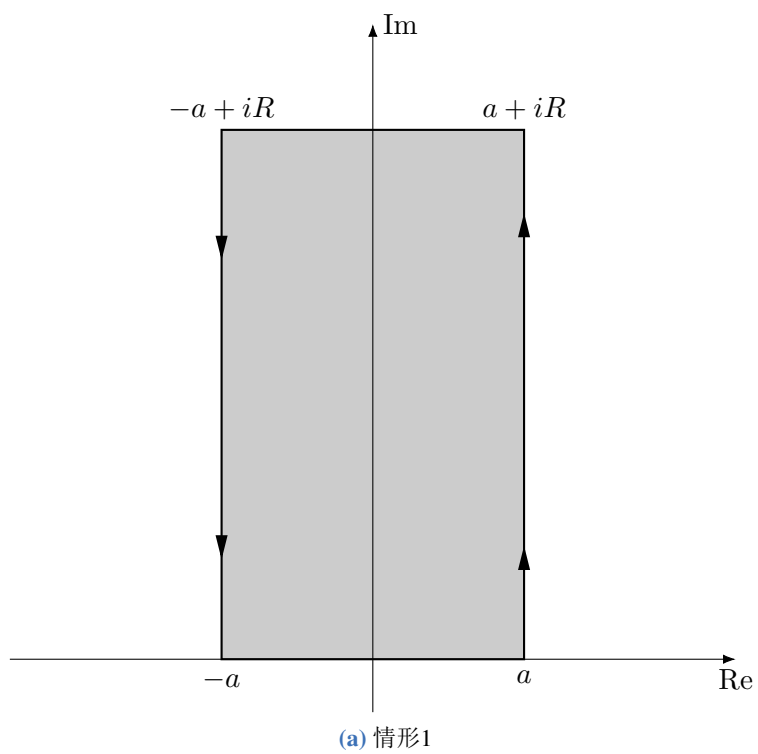


Figure 1.6: 扇形围道-积分路径上含奇点或支点

## 1.4 矩形围道

### 1.4.1 一般的矩形围道





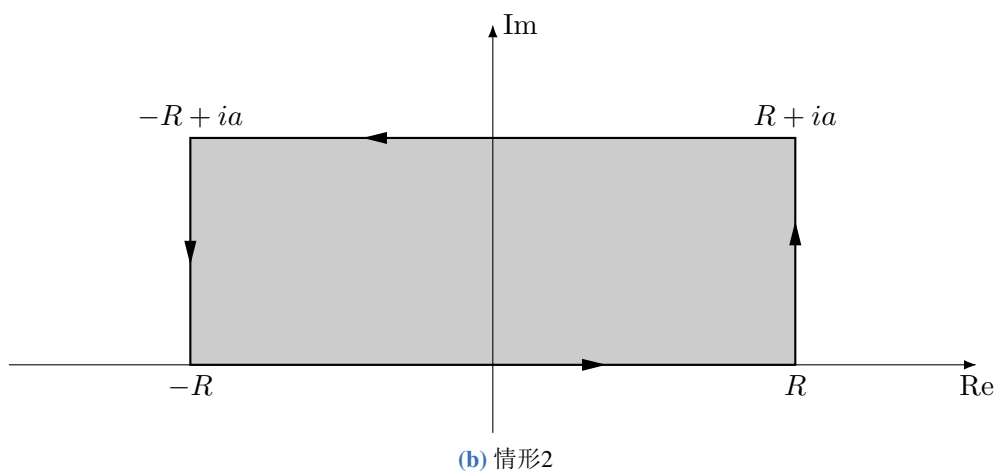


Figure 1.7: 一般的矩形围道

#### 1.4.2 矩形围道-积分路径上含奇点或支点

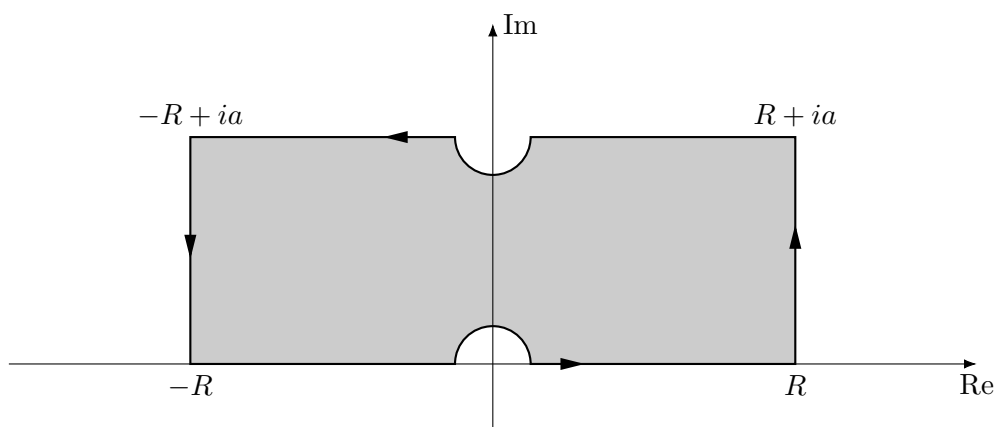


Figure 1.8: 矩形围道-积分路径上含奇点

## 1.5 块形围道

### 1.5.1 一般的块形围道

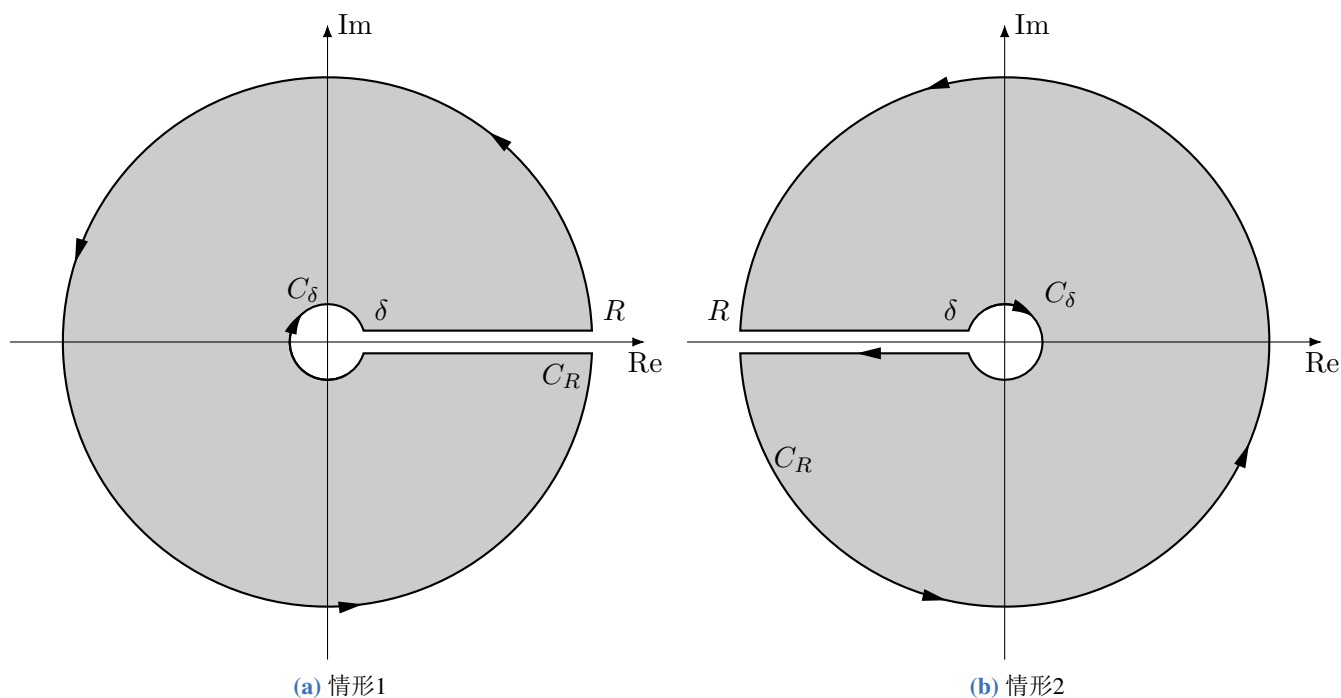
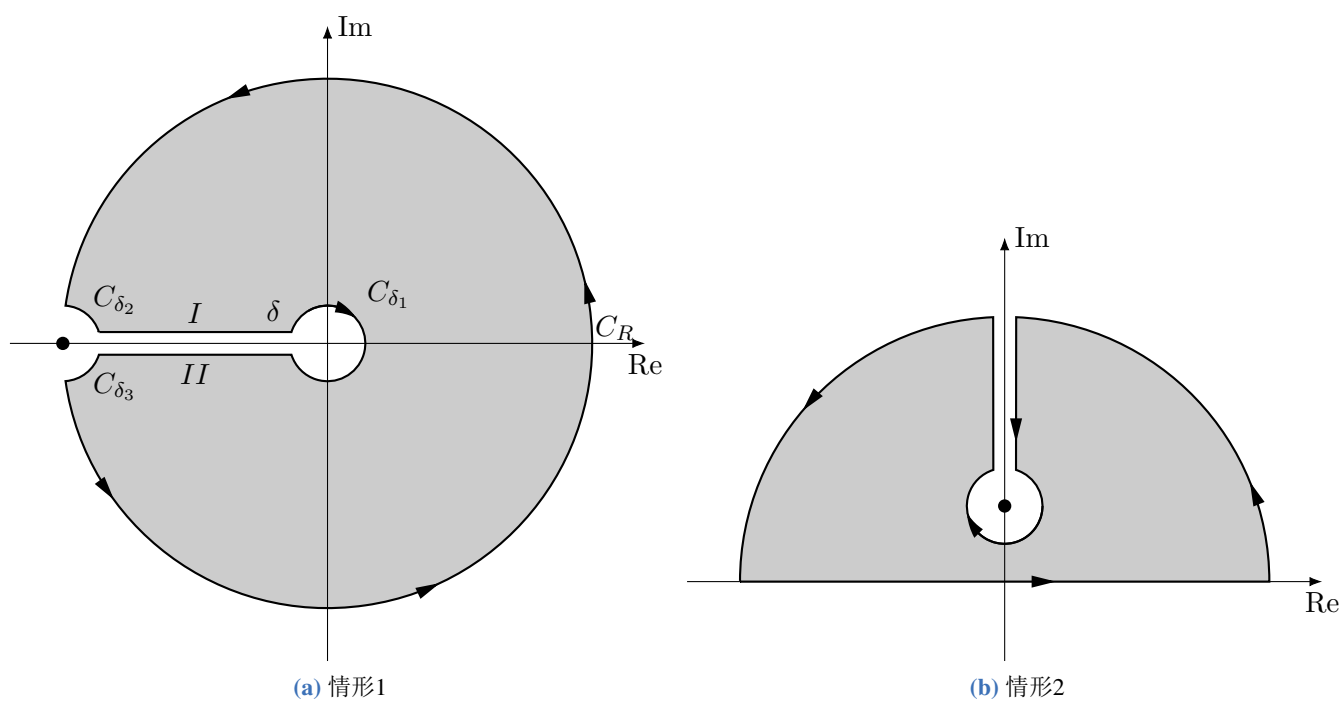


Figure 1.9: 一般的块形围道

### 1.5.2 块形围道-积分路径上含奇点或支点



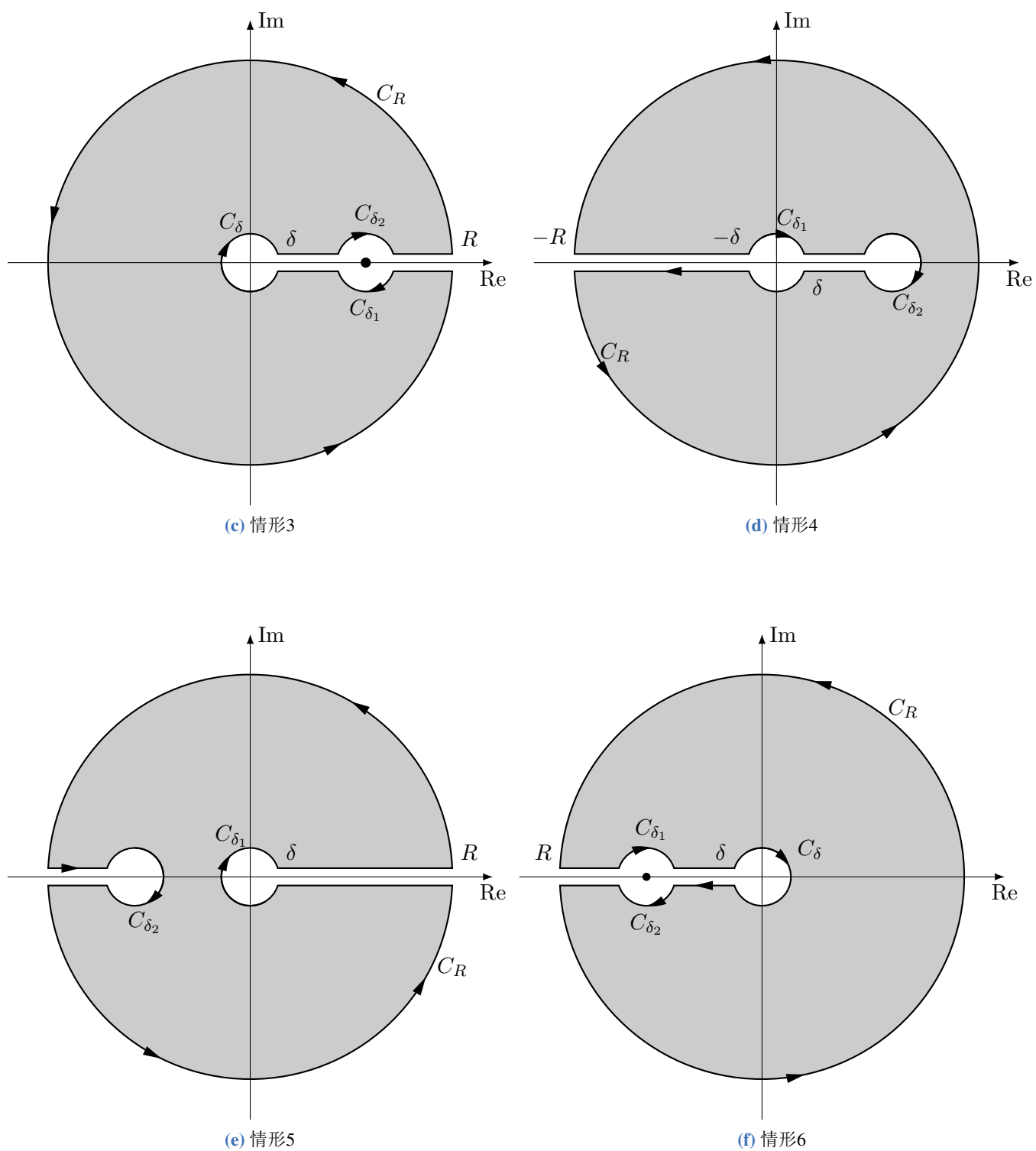


Figure 1.10: 块形围道-积分路径上含奇点或支点

## 1.6 拉普拉斯逆变换围道

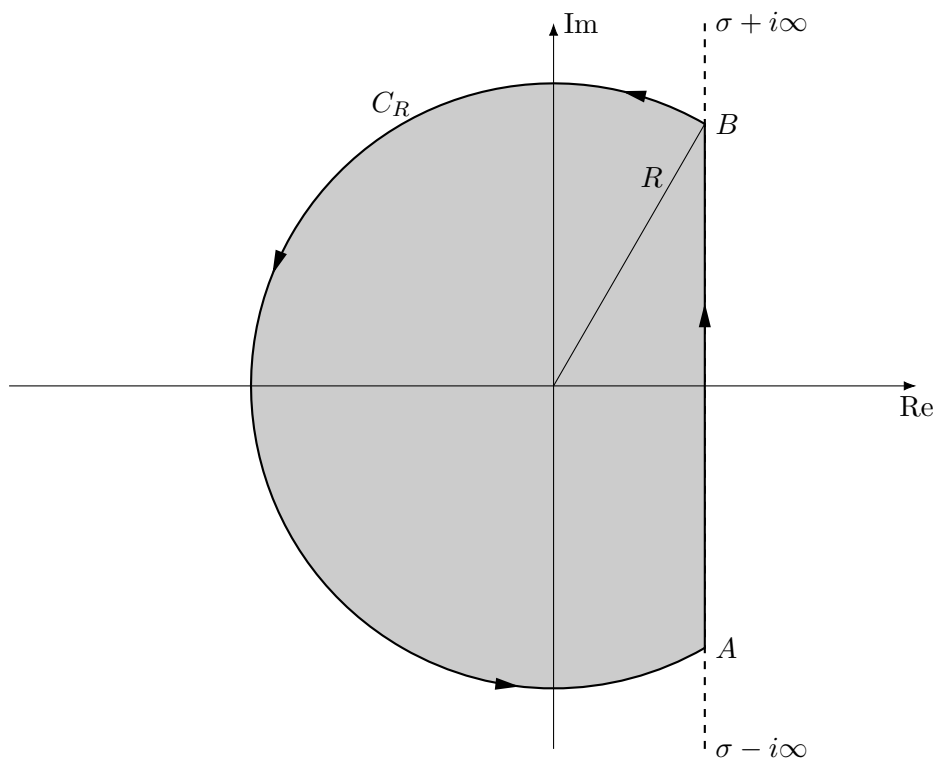


Figure 1.11: 拉普拉斯逆变换围道1

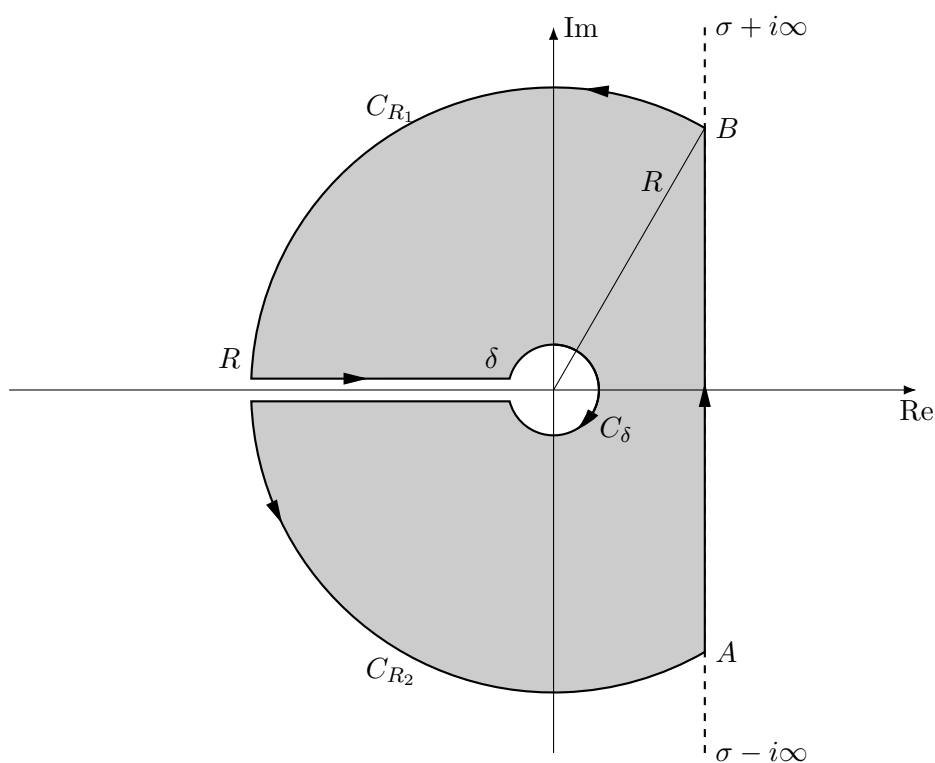


Figure 1.12: 拉普拉斯逆变换围道2

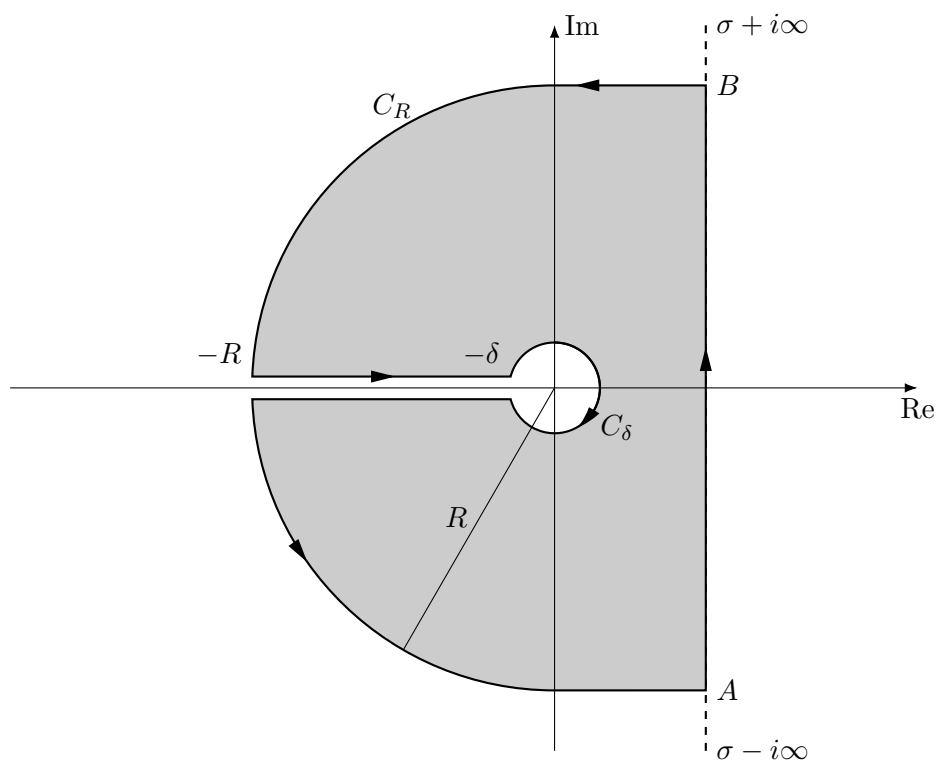


Figure 1.13: 拉普拉斯逆变换围道3

### 1.7 杂例

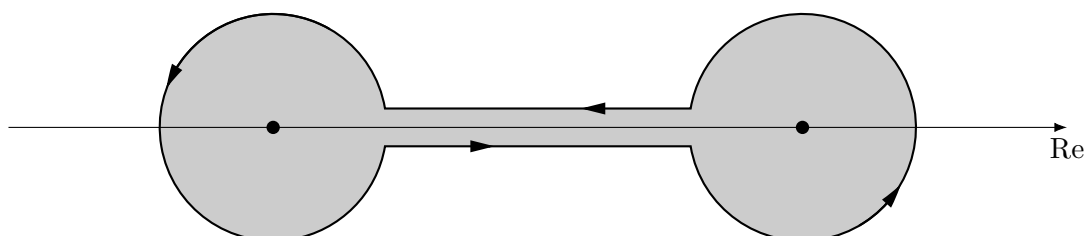


Figure 1.14: 杂例1