
Complex Analysis

Math 214 Spring 2004
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Fowler 316 MWF 3:30pm - 4:25pm
<http://faculty.oxy.edu/ron/math/312/04/>

Class 35: Wednesday April 21

SUMMARY Preparing for Exam 2

CURRENT READING Saff & Snider, §4.1, §4.2, §4.3, §4.4 §4.5, §5.6, §5.5, §6.1, §6.2, §6.3, §7.3, §7.4

Worksheets

Contour Integration

Independence of Path

Applications of the Cauchy-Goursat Theorem

Cauchy's Integral Formula and Examples Galore

Applications and Implications of the CIF

Understanding Contour Integration (Theorems)

Poles, Zeroes and Cauchy's Residue Theorem

Cauchy's Second Residue Theorem and Introduction to Laurent Series

Using Laurent Series to Evaluate Residues

Application of Residues to Real Integrals (Trigonometric)

More Applications of Residues (Infinite Series)

Cauchy Principal Value of Improper Integrals

Introduction to Linear Fractional Transformations

The Complex Logarithm

More Practice with LFTs

Quizzes

Application of Contour Integration

Generalized Cauchy's Integration Formula

Application of CIF to Trig Integrals

Computing Residues

Cauchy's Second Residue Theorem

Application of Residues

Cauchy Principal Value