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# Complex Analysis

Math 214 Spring 2014  
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Fowler 307 MWF 3:00pm - 3:55pm  
<http://faculty.oxy.edu/ron/math/312/14/>

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*Class 27: Friday April 11*

**SUMMARY** Reviewing For Exam #2

**CURRENT READING** Zill & Shanahan, §4.1, §4.2, §4.3, §5.1, §5.2, §5.3, §5.4 §5.5, §6.4, §6.5, §6.6

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## WORKSHEETS

**Class 13: The Complex Exponential**

**Class 14: The Complex Logarithm**

**Class 15: The Complex Exponents  $z^c$  and  $c^z$**

**Class 16: Review for Exam 1\***

**Class 17: Introduction to Complex Integration**

**Class 18: Introduction to Contour Integration**

**Class 19: The Cauchy-Goursat Theorem**

**Class 20: The Implications of the Cauchy-Goursat Theorem\*\***

**Class 21: The Cauchy Integral Formula(s)**

**Class 22: The Many, Many, Implications of the Cauchy Integral Formula(s)**

**Class 23: Poles, Zeroes and Residues\*\***

**Class 24: Classifying Singularities (And Computing Residues) Using Laurent Series**

**Class 25: Using Complex Integrals To Evaluate Real (Trigonometric) Integrals**

**Class 26: Evaluating Improper Integrals Using Contour Integration**

\* indicates you are not responsible for this on Exam 1.

## QUIZZES

**Quiz 5: The Complex Exponential**

**Quiz 6: Complex Integration**

**Quiz 7: Cauchy Integral Formula(s)\*\***

**BONUS Quiz 2: Using Contour Integration To Find Area**

**Quiz 8: Applications of Contour Integration to Real Trigonometric Integration\*\***

**BONUS Quiz 3: Applications of Cauchy's Residue Theorem\*\***

\*\* Key Material For Exam #2.