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# Complex Analysis

Math 312 Spring 2016

Fowler 309 MWF 11:45am-12:40pm

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<http://sites.oxy.edu/ron/math/312/16/>

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## *Class 16: Friday February 26*

**TITLE** Reviewing For Exam 1

**CURRENT READING** Zill & Shanahan, §1.1, §1.2, §1.3, §1.4 §1.5, §1.6, §2.1, §2.2, §2.3, §2.4, §2.5, §2.6, §3.1, §3.2, §3.3, §3.4, §3.5, §3.6. (All of Chapters 1-3)

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### SUMMARY

We will review the material from the first three chapters of the textbook!

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### WORKSHEETS

**Class 1: Properties of Complex Numbers**

**Class 2: Graphical Representation of Complex Numbers and Inequalities**

**Class 3: Polar and Exponential Forms of Complex Numbers**

**Class 4: Polynomial Equations of a Complex Variable & Roots of a Complex Numbers**

**Class 5: Points Sets in the Complex Plane**

**Class 6: Complex Functions of a Complex Variable**

**Class 7: Graphical Interpretations Of Complex Functions**

**Class 8: Power Functions, the Reciprocal Function and the Point at Infinity**

**Class 9: Limits and Continuity of Complex Functions**

**Class 10: Differentiability of Complex Functions**

**Class 11: Analyticity, the Cauchy-Riemann Equations and Harmonic Functions**

**Class 12: Application of Harmonic Functions**

**Class 13\*: The Complex Exponential**

**Class 14\*: The Complex Logarithm**

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

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

### QUIZZES

**Quiz 1: Arithmetic and Algebra with Complex Numbers**

**Quiz 2: Solutions of a Complex Polynomial Equation**

**Quiz 3: Understanding Linear Complex Mappings**

**Quiz 4: Harmonic Conjugates of Analytic Functions**

**BONUS Quiz 1: Mappings and Points Sets in the Extended Argand Plane**

**Quiz 5: The Complex Exponential\***

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

**Exercise**

Write down the topic(s) that you understand the most:

Write down the topic(s) that you understand the least:

Write down a question you would like answered before the test: