

# Math 4213 - Complex Analysis

Quiz #15 - 2012.03.09

Name: \_\_\_\_\_

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1. What is the relationship between the residue of a function  $f(z)$  at  $z_0$  and it's Laurent series at  $z_0$ ?

2. Compute the following integral:

$$\int_{C_2^+(0)} \frac{e^z + 1}{(z - 3i)^2(z^2 + 1)} dz$$