Quiz #10

Monday, December 12 2016

Duration: 15 min

NAME: _____

Please write clearly and properly. Always explain your answers.

Problem	Grade
1	
2	
Total	

Problem 1 (~ 3 points.)**.**
State Cauchy's integral formula in the most general version that you know. *Do not forget to write all the requirements that apply*.
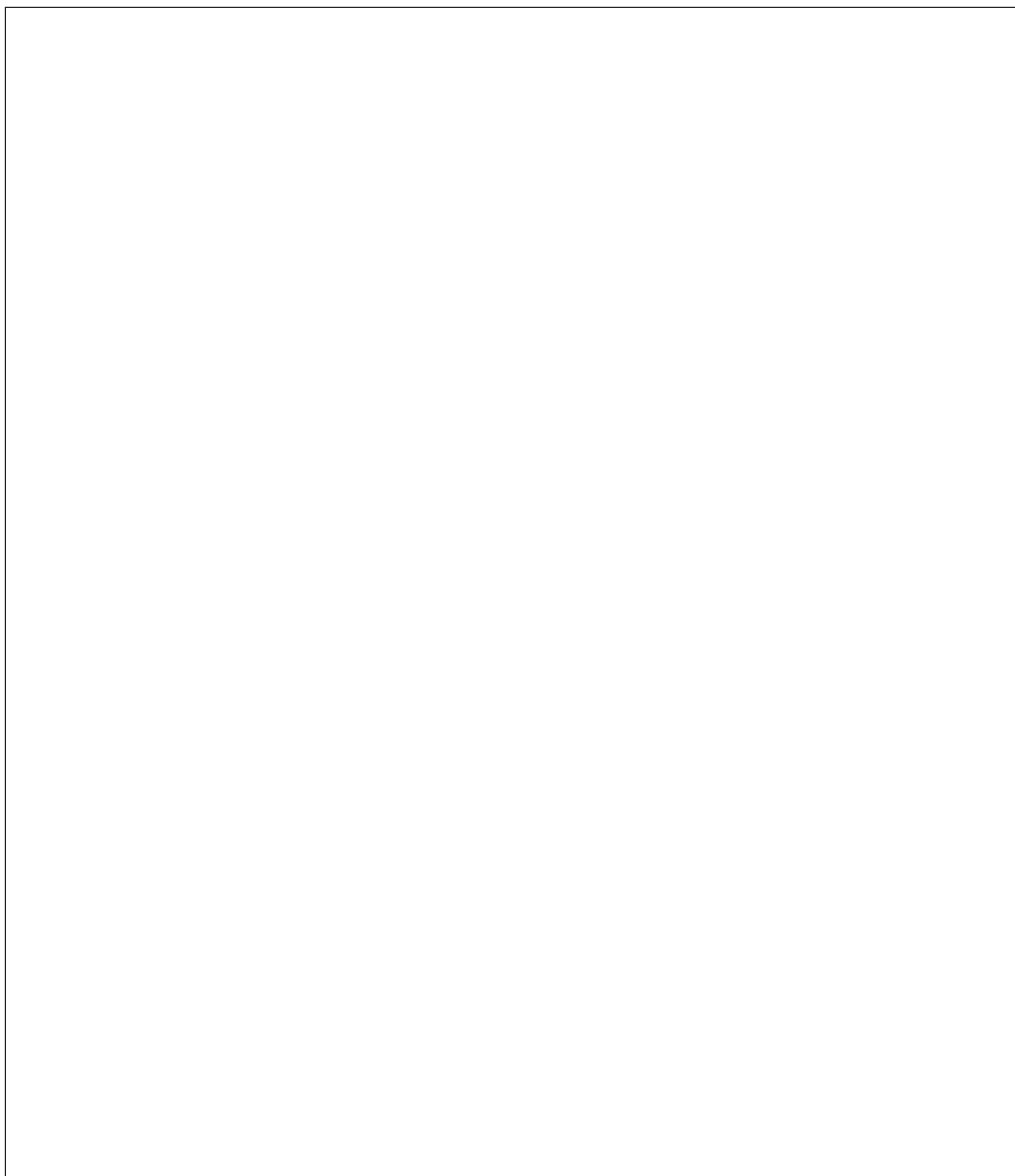
Problem 2 (~ 6 points.)**.**
In this exercise, we let $C(0, r)$ denote a positively oriented parametrization of the circle with center 0 and radius r. Compute the following integrals. *Carefully explain your computations*.

(1)
$$\int_{C\left(0, \frac{1}{2}\right)} \frac{(1 + z + z^2)\, e^{1+iz}}{z - i}\, dz$$

(2)

$$\int_{C(0,2)} \frac{(1 + z + z^2)\, e^{1+iz}}{z - i}\, dz$$