

Quiz 9

Complex Analysis

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

Date: \_\_\_\_\_

Time Begun: \_\_\_\_\_

Time Ended: \_\_\_\_\_

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Friday April 2  
Ron Buckmire

**Topic :** The Generalized Cauchy Integral Formula

The point of this quiz is to give you an opportunity to illustrate your application of the Generalized Cauchy Integral Formula to various contour integrals.

**Reality Check:**

EXPECTED SCORE : \_\_\_\_\_/10

ACTUAL SCORE : \_\_\_\_\_/10

**Instructions:**

0. Please look for a hint on this quiz posted to [blackboard.oxy.edu](http://blackboard.oxy.edu)
1. Once you open the quiz, you have **30 minutes** to complete, please record your start time and end time at the top of this sheet.
2. You may use the book or any of your class notes. You must work alone.
3. If you use your own paper, please staple it to the quiz before coming to class. If you don't have a stapler, buy one.
4. After completing the quiz, sign the pledge below stating on your honor that you have adhered to these rules.
5. Your solutions must have enough details such that an impartial observer can read your work and determine HOW you came up with your solution.
6. Relax and enjoy...
7. **This quiz is due on Monday, April 5**, in class. NO LATE QUIZZES WILL BE ACCEPTED.

**Pledge:** I, \_\_\_\_\_, pledge my honor as a human being and Occidental student, that I have followed all the rules above to the letter and in spirit.

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1. Consider the contour integral  $\oint_C \frac{3z+1}{z(z-2)^2} dz$  and evaluate it for the various contours.

(a) (3 points.)  $C$  is the contour  $|z| = 1$  traversed **twice** clockwise.

(b) (3 points.)  $C$  is the contour  $|z| = 3$  traversed once counter-clockwise.

(c) (4 points.)  $C$  is the contour shaped like the symbol  $\infty$  intersecting the  $x$ -axis at the points  $z = -1, z = 1$  and  $z = 3$  and where the right segment is traversed once counter-clockwise and the left segment is traversed once clockwise.