

Quiz 8

Complex Analysis

Name: _____

ASSIGNED: Friday April 1

DUE: Monday April 4

Time Begun: _____

Time Ended: _____

Prof. Ron Buckmire

Topic : Cauchy Integral Formula(s)

The **learning goal** of this quiz is to provide an opportunity to demonstrate your understanding of Cauchy's Integration Formula(s).

Reality Check:

EXPECTED SCORE : _____/10

ACTUAL SCORE : _____/10

Instructions:

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. **QUIZZES WITH UNSTAPLED SHEETS WILL NOT BE GRADED.**
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 4**, in class. **NO LATE OR UNSTAPLED 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.

**SHOW ALL YOUR WORK
& EXPLAIN EVERY ANSWER**

1. Consider the following contour integral and evaluate it for the various contours.

$$\oint_C \frac{3z + 1}{z(z - 2)^2} dz$$

(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 ∞ 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.

