# Math 312 Spring 98

## Quiz 6 — Complex Analysis

Name: _____

Date: _____     **Wednesday March 4**

Time Begun: _____     Ron Buckmire

Time Ended: _____

**Topic :** Contour Integration

The point of this quiz is for you to indicate your facility with basic computing contour integrals.

## Instructions:

1. Once you open the quiz, you have as much time as you need to complete it, but 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. Sometime over the weekend I will post a hint on solving this quiz on the Complex Analysis wwwboard at `http://abacus.oxy.edu/wwwboard/complex` . You can access the board by using the login and password `complex`. If you do not understand the hint or have any other questions you should post a response on the wwwboard.

7. Relax and enjoy...

8. **This quiz is due on Monday March 9**, 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.

Consider the integral $\int_C x^2 - y^2 + 3xyi \, dz$

(a) (*4 points*) Compute the value of the integral where $C$ consists of line segments going from 1 to $i$ by going along the $x$ axis and then the $y$ axis. Sketch the contour and write down the parametrization(s) used.

(b) (*4 points*) Compute the value of the integral where $C$ consists of one line segment going from 1 to $i$ directly. Sketch the contour and write down the parametrization(s) used.

(c) (*2 points*) Do you get the same answer for evaluating this function along the two different contours? Do you expect to get the same answer? Give a short reason to support your answer(s)