Quiz **6**

DUE: MON. MAR. 10

Name: _____

Date: _____ **Friday March 7**
Time Begun: _____ Ron Buckmire
Time Ended: _____

Topic covered: Integration by Parts and/or Intergration by Substitution

The point of this quiz is for you to demonstrate your facility with using integration techniques to evaluate an indefinite integral, and to check your answer.

Reality Check:

EXPECTED SCORE : _____**/10** ACTUAL SCORE : _____**/10**

Instructions:

1. Once you open the quiz, you have 30 minutes to complete it. Before you open the quiz you should check Blackboard.oxy.edu for any hints.
2. You **may not** use the book or any of your class notes, but you may use a calculator. You must work alone.
3. If you use extra 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. Complete the reality check to give yourself a sense of how well you think you did on the quiz.
5. Relax and enjoy....
6. **This quiz is due on Monday, March 10**, at the beginning of 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.

SHOW ALL YOUR WORK

(a) *(2 points)* Show that if $F(x) = \frac{x^3}{3}\ln(x^3) - \frac{x^3}{3}$ then $F'(x) = x^2\ln(x^3) = f(x)$

(b) *(4 points)* Evaluate the integral $\int x^2\ln(x^3)dx =$ using integration by parts. (Check your answer!)

(c) *(4 points)* Evaluate the integral $\int x^2\ln(x^3)dx =$ using integration by substitution. (Check your answer!)