Math 212 Fall 2005

Quiz 10 — Multivariable Calculus

Name: _____

Date: _____
Time Begun: _____
Time Ended: _____

Monday November 21
Ron Buckmire

Topic : Multiple Integration

The idea behind this quiz is to provide you with an opportunity to illustrate your ability to set up, visualize and then evaluate triple integrals.

Reality Check:

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

Instructions:

0. Before you open the quiz, check the course website or Blackboard for a hint.

1. Once you open the quiz, **you have 30 minutes to complete it**.

2. You may not use your text or any other source, including course materials. You may use a calculator. You must work alone. Do not discuss the contents of this quiz with anyone.

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 or borrow one. UNSTAPLED PAPERS 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. **This quiz is due on Monday, November 28**, 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.

1. Consider the iterated integral for $V = \int_{-1}^{1} \int_{y^2}^{1} \int_{0}^{1-x} dz\ dx\ dy$

(a) Write down the 5 other possible iterated integrals which represent the exact same value V (**HINT: Sketch 2-D slices of the volume that is being integrated; first holding x constant, then y constant, and then z constant. This will help you decide on the limits of integration.**)

(b) Evaluate any of your equivalent iterated integrals to obtain V.