Math 110 Fall 2000

Quiz **9** — Basic Calculus I

Name: _____

Date: _____
Time Begun: _____
Time Ended: _____

Math 110
Wednesday, November 29, 2000
Ron Buckmire
Alan Knoerr

Topic: Partial Derivatives

This quiz is intended to further your understanding of partial derivatives and their applications.

Instructions:

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.
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.
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 Friday, December 1**, 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.

Math 110 Fall 2000 Quiz **Nine**

SHOW ALL YOUR WORK

1. *(4 points).* Suppose $f(x,y) = x^2y^3 + y\sin(2x) + 4x + \ln(y)$. Compute $f_x(0,1)$ and $f_y(0,1)$

2. Consider $G(p,q) = p^q, p > 0$. You might want to think of this as $G(p,q) = e^{q\ln(p)}$. *NOTE: G is dependent on p and q only, p and q are completely independent.*

(a) *(2 points).* Find $\dfrac{\partial G}{\partial p}$.

(b) *(2 points).* Find $\dfrac{\partial G}{\partial q}$.

(c) *(2 points).* Find $\dfrac{\partial G}{\partial x}$.