

Math 253, Section 102, Fall 2006

Quiz 3, October 4

Name:

SID:

Instructions

- The total time is 20 minutes.
- The total score is 25 points.
- Use the reverse side of each page if you need extra space.
- Show all your work. A correct answer without intermediate steps will receive no credit.
- Calculators and cheat sheets are not allowed.

Problem	Points	Score
1	8	
2	7	
3	10	
TOTAL	25	

2

1. Let $f(x, y) = \ln(x + y - 1)$. Answer the following two questions.

(2 + 6 = 8 points)

(a) Evaluate $f(e, 1)$

(b) Find and sketch the domain of f .

2. Find the limit if it exists, or show that the limit does not exist:

$$\lim_{(x,y) \rightarrow (0,0)} \frac{6x^3y}{2x^4 + y^4}.$$

(7 points)

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3. Use implicit differentiation to find $\partial z/\partial x$ and $\partial z/\partial y$:

$$\sin(xyz) = x + 2y + 3z.$$

(5 + 5 = 10 points)