

Name:
February 12, 2015
MAC 2313.3118
Cyr

Quiz 5

You must show all work to receive full credit!!

Problem 1. (4 pts) Let $f(x, y) = \ln(x^3 + y^3)$. Evaluate $f_x(2, 4)$ and $f_{xy}(-1, -2)$.

Problem 2. (6 pts) Let $g(x, y) = \frac{xy}{x^2 + y^2}$.

(a) Evaluate $\lim_{(x,y) \rightarrow (0,0)} g(x, y)$ along the x -axis.

(b) Evaluate $\lim_{(x,y) \rightarrow (0,0)} g(x, y)$ along the y -axis.

(c) Can you conclude that $\lim_{(x,y) \rightarrow (0,0)} g(x, y)$ exists? Why or why not?