Name:
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MAC 2313.8443
Cyr

Quiz 5
You must show all work to receive full credit!!

Problem 1. (6 pts) Let $f(x,y) = \dfrac{x}{x+4y}$. Evaluate $f_y(3, \frac{1}{4})$ and $f_{yy}(1, \frac{1}{4})$.

Problem 2. (4 pts) Let $g(x,y) = \dfrac{x^2}{x^2+y^2}$.

(a) Evaluate $\lim\limits_{(x,y)\to(0,0)} g(x,y)$ along the x-axis.

(b) Evaluate $\lim\limits_{(x,y)\to(0,0)} g(x,y)$ along the line $y = x$.

(c) What can you conclude about $\lim\limits_{(x,y)\to(0,0)} g(x,y)$? Explain your answer.