

Name:
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MAC 2313.3122
Cyr

Quiz 5

You must show all work to receive full credit!!

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

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

(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) What can you conclude about $\lim_{(x,y) \rightarrow (0,0)} g(x, y)$? Explain your answer.