

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS & STATISTICS
MATH 201-09
Quiz #4
Nov 23, 2014

NAME:

ID#:

SHOW ALL YOUR WORK

1. **(4points)** Show that the function $f(x, y) = \frac{2x^2y}{x^4+y^2}$ has no limit as (x, y) approaches $(0, 0)$.

2. **(3points)** Find $\frac{\partial x}{\partial z}$ at the point $(1, -1, -3)$ if $xz + y \ln x - x^2 + 4 = 0$.

3. **(3points)** Assume that $w = f(s^2 + t^2)$ and $f'(x) = e^x$. Find $\frac{\partial w}{\partial t}$.