KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS AND STATISTICS
MATH 201 - QUIZ 2

Name:
Student ID #:

Question 1. Let $f(x, y) = \tan^{-1}(x^y)$. Calculate f_x, f_y, and f_{xy}.

Question 2. Find $\dfrac{\partial w}{\partial r} + \dfrac{\partial w}{\partial s}$ when $r = -1/2$, $s = 1$ if $w = \ln q$ and $q = \sqrt{s+3}\sin^{-1} r$.
(Hint: $\dfrac{d}{dx}\sin^{-1} x = \dfrac{1}{\sqrt{1-x^2}}$.)

Question 3. Find $\dfrac{\partial z}{\partial y}(e, 0, 1)$ if $\ln(\dfrac{x+y}{z}) = z^2$.

Your Solution.