KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS AND STATISTICS
MATH 201 - QUIZ 4

Name:
Student ID #:

Question 1. Find an equation of the tangent plane to the surface $z = \tan^{-1}(xy^2)$ at $(-1, 1)$.

Question 2. Let $z = e^{2x-y^2}$, $x = \dfrac{u}{v}$, $y = \sqrt{uv}$. Using branch diagrams, find $\dfrac{\partial z}{\partial v}$ at $(u, v) = (2, 1)$.

Question 3. If $z = \sin(xy)$, then find $\dfrac{\partial^{100} z}{\partial^{99} y \partial x}$.
Your Solution.