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 $z = \sin^{-1}(x^2y)$ at $(\frac{1}{\sqrt{2}}, -\sqrt{2})$.

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

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

Your Solution.