

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

Name:

Student ID #:

Question 1. Find and sketch the domain of $f(x, y) = \frac{\sqrt{1 - x^2 - y^2}}{\ln(x^2 - y)}$.

Question 2. Determine if $f(x, y) = \begin{cases} \frac{xy}{\sqrt{x^2 + y^2}} & (x, y) \neq (0, 0) \\ 1 & (x, y) = (0, 0) \end{cases}$ is continuous at $(0, 0)$.

Question 3. Find the tangent plane to the surface $z = \tan^{-1}(xy)$ at $(1, -1)$.

Your Solution.