

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

Math 101 (Term 051) Quiz # 4

Name

ID#

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Q1) Use implicit differentiation to find  $\frac{dy}{dx}$

$$\sec^2(x^2y + y^2) = 2x$$

Q2) A point moves on a line  $y = 2x + 1$ . Write a formula for distance of point  $P$  on this line from  $Q(3,0)$ . If the distance of  $P$  from  $Q(3,0)$  changes at a rate of 3 units/sec., at what rate is the x-coordinate of  $P$  changing when  $P$  is at  $(-3,-5)$ .