

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 201 – Term 182 – Quiz 5

Name:

Student ID #:

Section #: 4

Question 1. Use Lagrange multipliers to find maximum and minimum values of the function

$$f(x, y, z) = y^2 - x^2$$

on the ellipse $\frac{x^2}{4} + y^2 = 1$

SEE BACK OF THE PAGE FOR QUESTION 2

Question 2. Evaluate $\int_0^4 \int_{1-y/4}^1 \cos(x^2) dx dy$.