KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS AND STATISTICS
MATH 102 - QUIZ 2

Name:
Student ID #:

Question 1. Set up, but do not evaluate, an integral for the volume of the solid obtained by rotating the region bounded by $y = \sin(x^2)$, $y = \cos(x^2)$, $x = -\frac{\sqrt{\pi}}{2}$, and $x = \frac{\sqrt{\pi}}{2}$ about the line $x = \frac{\sqrt{\pi}}{2}$.

Question 2. Let S be a solid whose base is the region bounded by the curve $9x^2 + 4y^2 = 36$. If the cross sections perpendicular to the x-axis are squares then find the volume of this solid.

Your Solution.