

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

MATH - 102-08

Semester 122

Quiz - 3

Name: _____ ID# _____

Problem 1. Find the volume of the solid that lies between the planes perpendicular to the x-axis at $x = 0$ and $x = 4$. The cross-sections of the solid perpendicular to the x-axis between these planes are circular disks whose diameter run from the curve $x^2 = 4y$ to the curve $y^2 = 4x$.

Problem2. Find

$$\frac{d}{dx} \left[\ln \left(\frac{(x \cos x + e^{\cos x})^3}{x^7 e^{x \sin x}} \right) \right]$$