

King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics
Math102/Calculus II
Quiz 2
Three Problems ¹

Problem 1 (5 points)

Use substitution to evaluate the indefinite integral.

$$\int_e^{e^4} \frac{dx}{x\sqrt{\ln x}}. \quad (\text{B level})$$

Problem 2 (5 points)

Sketch the region enclosed by the given curves and find its area.

$$y = 2x^2, y = 4 + x^2 \quad (\text{C level})$$

Problem 3 (5 points)

Sketch the region enclosed by the given curves and find the volume of the solid obtained by rotating the region about the y -axis.

$$x = y^2, x = 2y \quad (\text{A level})$$

¹The quiz lasts 30 minutes.