

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

MATH - 102

Semester 112

Quiz - 3

Name: \_\_\_\_\_ ID# \_\_\_\_\_

**Problem 1.**

Evaluate

$$\int x^4 \ln x dx, \quad \int \frac{9x^2}{(9+x^2)^{3/2}} dx \quad .$$

**Problem 2** Find the volume of the solid obtained by rotating the region bounded by

$$y = -x^2 + 6x - 8 \text{ and } y = 0$$

about the line  $x = -1$ .