

King Fahd University of Petroleum and Minerals  
Department of Mathematics and Statistics  
Math 102 - Quiz 4

Name:

Student ID #:

**Question 1.** Find the length of the curve  $y = \frac{1}{4}x^2 - \frac{1}{2}\ln x$  on the interval  $[1, e]$ .

**QUESTION 2 IS ON THE BACK OF THE PAGE.**

**Question 2.** Find the surface area of the solid obtained by rotating the curve  $y = (4 - x^{2/3})^{3/2}$ ,  $1 \leq x \leq 8$  about the  $y$ -axis.