

King Fahd Univ. of Petroleum and Minerals  
Faculty of Sciences  
Department of Mathematical Sciences

QUIZ No. 2  
(MATH. 102-042 Sections 1 & 2)

**Name:**

**ID:**

**Prob. 1**

Evaluate

a)

$$\int \frac{dx}{\sqrt{x}(\sqrt{x} + 1)}$$

b)

$$\int \frac{\sin(\ln x^3) dx}{x}$$

**Prob. 2**

Let  $R$  be the region bounded by  $y = 9 - x^2$  and  $y = 0$ . Find the volume of the solid obtained by revolving  $R$  about

a)  $y = 13$

b)  $x = 5$