King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (163) Sec 08 - Quiz 2

Name: ID: Serial No.:

1. If the velocity of a particle moving in a straight line is given by

$$v(t) = \frac{1}{2} - \cos t, \quad t \geq 0$$

then the distance traveled during the time interval $\left[0, \frac{\pi}{2}\right]$ is

2. $\displaystyle\int_0^{\pi/12} \frac{\sin(6x)}{1+\cos^2(3x)} dx =$

3. Find the area of the region enclosed by the curves $y^2 - x = 4$ and $x = 2 - y^2$

4. If the region enclosed by the curves $y = x$ and $y = x^2$ is rotated about the line $x = -1$, then the volume of the obtained solid is