

**King Fahd University of Petroleum and Minerals**

**MATH-201**

**Dr. Ahmad Al-Dweik**

**Quiz 1**

**Name:-**

**ID:-**

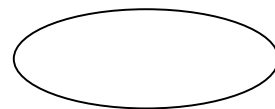
**Sec.:-**

**S.N.:-**

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Q.1a) Find the Cartesian equation of the curve whose parametric equations are given by  $x = \sqrt{t}$  and  $y = 1 - t^2$ , where  $0 \leq t \leq 1$ .

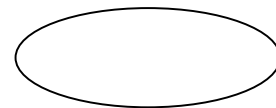
(4 points)



b) Find the slope and concavity for the curve given in part (a) at

$$\left( \frac{1}{\sqrt{2}}, \frac{3}{4} \right).$$

(4 points)



c) Set up the area's formula of the surface obtained by rotating the curve with the above parametric equations about the x-axis.

(4 points)

