KFUPM-----Term 151

Math 201 Quiz # 1(b) Time: 25 minutes Date: 15-09-15

Name	ID #	Sr #	Sec.	Marks:- /8

Q 1. Convert the parametric equations

$$x = 2\sec t,\ y = 2\tan t,\ \ -\frac{\pi}{2} < t < \frac{\pi}{2}$$

into Cartesian(rectangular) equation. Sketch the curve and indicate the direction in which it is traced.

Q2. Find an equation of the tangent line at t = 1 for the curve

$$x = lnt,\ y = \sqrt{t+1}\ .$$

KFUPM---Term 151

Math 201 Quiz # 1(c) Time: 20 minutes Date: 15-09-15

Name	ID #	Sr #	Sec.	Marks:- $/_8$

Q1 Convert the parametric equations

$$x = \cos 2t\,, y = \sin t,\ -\frac{\pi}{2} \le t \le \frac{\pi}{2}$$

into cartesian(rectangular) equation. Sketch the curve and indicate the direction in which it is traced.

Q2. Find the area of the surface obtained by rotating the curve (about the x-axis)

$$x = 3\cos t\,, y = 3\sin t,\ 0 \le t \le \frac{\pi}{3}.$$

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Math 201 Quiz # 1(d) Time: 25 minutes Date: 15-09-15

Name	ID #	Sr #	Sec.	Marks:- $/_8$

Q 1. Convert the parametric equations $x = t + \frac{1}{t},\ y = t - \frac{1}{t},\quad t > 0$
into Cartesian(rectangular) equation. Sketch the curve and indicate the direction in which it is traced.

Q2. Graph the set of points whose polar coordinates (r, θ) satisfy the given conditions:

(i) $\theta = -\frac{\pi}{4}, -3 \le r \le 3$ (ii) $\frac{\pi}{3} \le \theta \le \frac{2\pi}{3},\ -2 \le r \le 0$