KFUPM Term (142) Name_____Serial#_____

MATH 201 Quiz # 1(a) ID#_____ Section 9

Time: 20 Minutes Marks : /8

---

1) Describe motion of the particle with position (x, y) where $x = 2\sin t, y = 5\cos t$ and $0 \leq t \leq 2\pi$.

2) Replace the Cartesian equation $(x^2 + y^2)^3 = 4x^2y^2$ with equivalent polar equation.

3) Set up integral (do not evaluate it) to find area of the surface generated by revolving $x = r\cos t,\ y = r\sin t\ (0 \leq t \leq \pi)$ about the x-axis.

KFUPM Term (142) Name_____Serial#_____

MATH 201 Quiz # 1(b) ID#_____ Section 9

Time: 20 Minutes Marks: /8

---

1) Find a parametrization for lower half of the parabola $x - 1 = y^2$.

2) Find interval on which the parametric curve $x = t^2, y = t^3 - 3t$ is concave upward.

3) For $0 \leq \theta \leq \pi/2$ and $1 \leq |r| \leq 3$, draw the graph.