KFUPM Term 181 Date: 20/9/2018
Mathematics & Statistics MATH 201 Duration: 15 minutes

Quiz# 1

ID #:

Q1. Let C be the parametric curve $x = \sin 2t$, $y = \sin t - \cos t$, $0 \le t \le \frac{3\pi}{4}$.

Name:

a. Eliminate the parameter to find a Cartesian equation of the curve C and identify it.

Section:

Q2: Let C be the parametric curve $x = 3 - t^3$, $y = 2t^2$, $-\infty < t < \infty$. Find the points, if they exist, on the curve C at which there exists a vertical tangent line or a horizontal tangent line.

Q3: Let R be the region outside the circle $r=3$ and inside the cardioid $r=3$ -3 cos θ. Sketch R and find its area.