

King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
Math 201, Section: 8 (062)
Quiz 1(a)

Time: 15 Minutes

Marks: _____/9

Name: _____ Serial #: _____

ID #: _____

1. For the parametric curve $x = t^3 - 12t, y = t^2 - 7$, find $\frac{d^2y}{dx^2}$. For what values of t , the curve is concave upwards.

2. Sketch the polar curve: $r = \sin \theta$.

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Quiz 1(b)

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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. Identify the curve $(x^2 + y^2)^3 = 4x^2y^2$ by finding the polar equation. Make a rough sketch (do not include details) of the curve.