KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS & STATISTICS
MATH 201-16
Quiz # 1
Sept 16, 2014

NAME:	ID#:

SHOW ALL YOUR WORK

1. **(4points)** Find the Cartesian equation of the curve $x = 1+2\cos t,\ y = \sin t,\ 0 \le t \le \pi$. Sketch the curve and indicate with an arrow the direction in which the curve is traced.

2. **(3points)** Find the equation of the tangent to the curve $x = \sec t$, $y = \tan t$ at $t = \frac{\pi}{4}$.

3. **(3points)** Find the polar coordinates of the point $\left(\sqrt{3}, -1\right)$ with $r \le 0$ and $0 \le \theta \le 2\pi$.