

**King Fahd University of Petroleum & Minerals**  
**Department of Mathematics & Statistics**  
**MATH 201-16 Quiz # 1:**

Name:.....ID#.....

1) Find the distance between the points whose polar coordinates are  $(1, \frac{\pi}{3})$  and  $(2, \frac{2\pi}{3})$ .

2) Find the polar equation for

a)  $y = x^2$

b)  $x^2 + y^2 = 2x$

3) Plot the polar equation  $r = \cos \vartheta$ ,  $0 \leq \vartheta \leq \frac{2\pi}{3}$