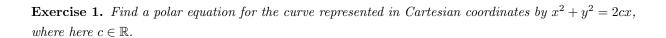
## Math 53 - Multivariable Calculus

## Quiz # 2

## January 25th, 2012



**Exercise 2.** Show that the polar equation  $r = a\sin(\theta) + b\cos(\theta)$ , where  $ab \neq 0$ , represents a circle, and find its center and radius.

**Exercise 3.** find the area of the region that lies inside the curves  $r = \sin(2\theta)$  and  $r = \cos(2\theta)$ . (Hint:  $2\sin^2(2\theta) = 1 - \cos(4\theta)$ )