

Math 181
Fall 2009

Name _____

Homework #14
Due Monday October 26
No late papers accepted! No excuses!

1. Find the length of the arc from $\theta = 0$ to $\theta = 2\pi$ for the cardioid $r = 2 - 2\cos\theta$.

2. Find the area of the region common to the two regions bounded by

$$r = -6\cos\theta$$

$$r = 2 - 2\cos\theta$$

3. Find a parametric representation of the circle centered at $(5, 3)$ with radius 2.

4. True False

There is a unique polar coordinate representation of each point in the plane. Explain.

4. Find the area of one petal of $r = \cos(5\theta)$.