

# King Fahd University of Petroleum and Minerals

MATH 201 Section 19 QUIZ #2 Term 151

Dr. A. Khalfallah

Name:

ID:

**Q1.** Sketch the curves  $C_1: r = 2$  and  $C_2: r = 2(1 - \cos \theta)$ . Find the area of the region shared between  $C_1$  and  $C_2$ .

**Q2** Consider the polar curve  $C$  given by  $r = 1 - \cos \theta$ .  
Find the *slope* of  $C$  at  $\theta = \frac{\pi}{2}$  and the *total length* of  $C$ .