

**King Fahd University Of Petroleum and Minerals**

MATH 201 Instructor Dr. A. Khalfallah Term 121

**QUIZ # 1**

---

Name:

ID:

---

**Q1:** Sketch the curve  $r^2 = \cos(\theta)$  and find the area that it encloses.

**Q2** Sketch the two curves and find the area of the region that lies inside both curves.

$$r = \sin \theta \quad ; \quad r = 1 - \sin \theta$$

**Q3** Find the area inside the larger loop and outside the smaller loop of the limaçon

$$r = 1 + 2 \cos \theta$$