

# King Fahd University of Petroleum and Minerals

MATH 201 QUIZ #2 Term 182

Name:

Sec:

ID:

**Q1.** Graph  $r = \sin\left(\frac{\theta}{2}\right)$

**Q2.** Find the points of the curve  $r = 1 + \cos(\theta)$  where the tangent line is horizontal.

**Q3** Find the area of the region that lies inside  $r = 4 \sin \theta$  and outside  $r = 2$ .

**Q4.** Find the scalar projection and the vector projection of  $\mathbf{b} = \langle 1, 1, 2 \rangle$  onto  $\mathbf{a} = \langle -2, 3, 1 \rangle$ .