ING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICAL SCIENCES
MATH 201-6
Quiz # 2
March 12, 2008

NAME:	ID#:

SHOW ALL YOUR WORK

1. (a) **(2points)**Identify the curve $r = \sec\theta \tan\theta$ by changing to cartisian coordinates.
   (b) **(2points)** Find a polar equation, in simplified form for the curve represented by the rectangular equatoin $x^2 - y^2 = 1$.

2. **(3points)** Set up an integral to compute the area inside both of the curves $r = \sin 2\theta$ and $r = \sin\theta$.

3. **(3points)** Find a vector that is orthogonal to the vector between the two points $P(1,-1)$, $Q(2,3)$ and has length 3.