QUIZ 2 - MATH 251 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Compute the length of the equiangular spiral $r = e^{\theta}$ for $0 \le \theta \le 2\pi$.



2. Consider the polar equation $r = \frac{12}{4 + 3\cos\theta}$. Identify the conic it represents, find its eccentricity, its focus and the equation of its directrix.

- 3. Consider the equation $4x^2 3y^2 + 8x + 30y = 215$.
 - (a) Put in the standard form and identify the conic.

(b) Gather the following information:

Center:

Focal Vertices:

Foci:

Eccentricity:

Directrix:

Asymptotes (if it happens to be a hyperbola):