IDE 50-Statics - Fall 2005
Exam 4 - Centroids, Moment of Inertia

1. Determine the location $(\boldsymbol{x}, \boldsymbol{y})$ of the centroid.

2. Determine the volume created by revolving the area shown $360^{\circ}$ about the $y$-axis. The units are in inches.

3. Determine $\mathbf{I}_{\mathbf{y}}$ of the shaded area with respect to the $y$-axis.

4. Determine the angle $\theta_{p}$ of the principal axes with respect to the $x-y$ axes. Hint: You will need $\mathrm{I}_{\mathrm{x}}, \mathrm{I}_{\mathrm{y}}$, and $\mathrm{I}_{\mathrm{xy}}$.

