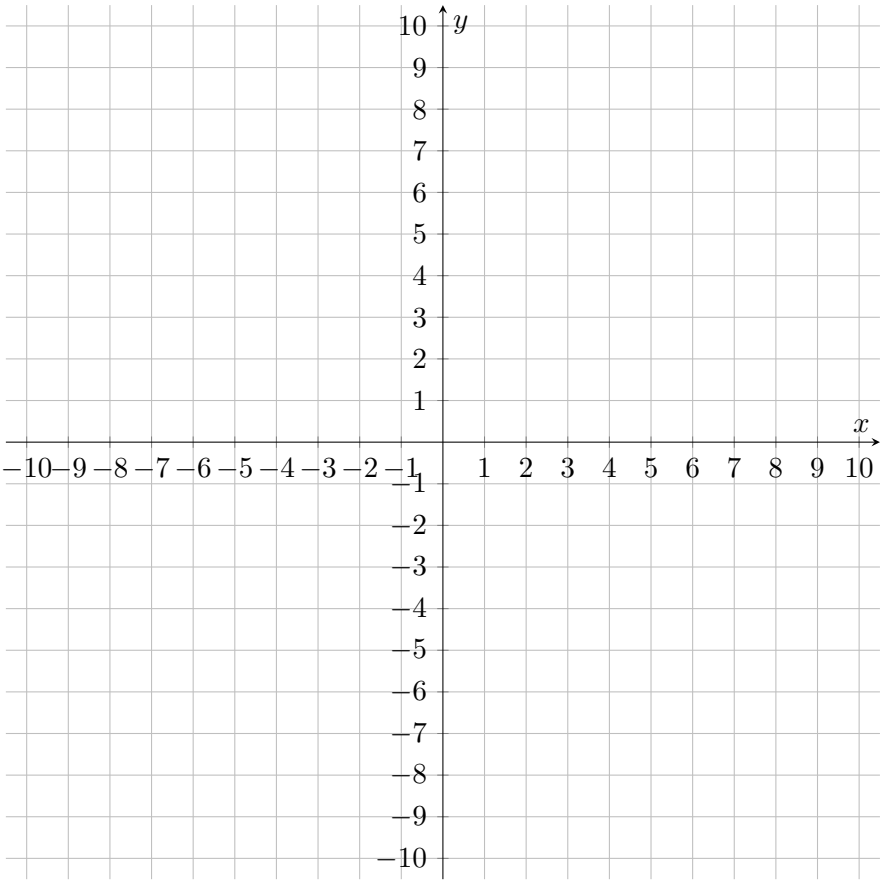
Name: _____

1. Consider the region bounded by the parabola $x = -y^2$ and the line $y = x + 6$.

   (a) Sketch the region. Make sure the intersection points are in the correct places.

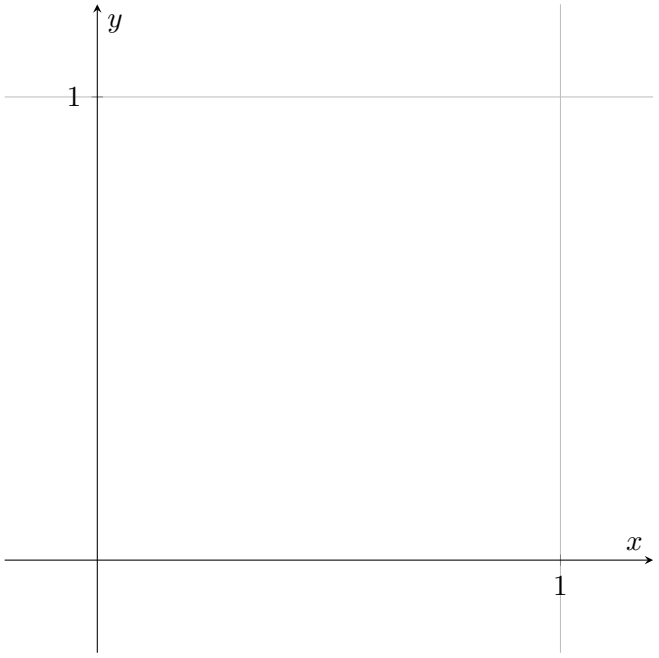


   (b) Use double integration to find the area of the region.

2. Consider the integral

$$\int_0^1 \int_0^y x \, dx \, dy.$$

(a) Sketch the region of integration.



(b) Convert the integral to an equivalent polar integral. You do not need to evaluate the integral.