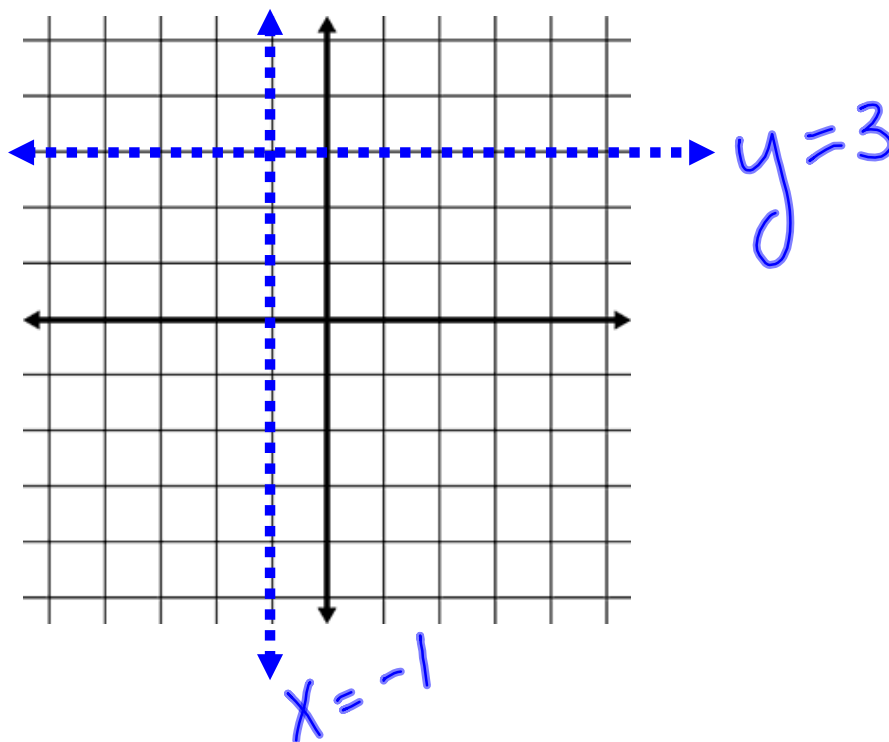
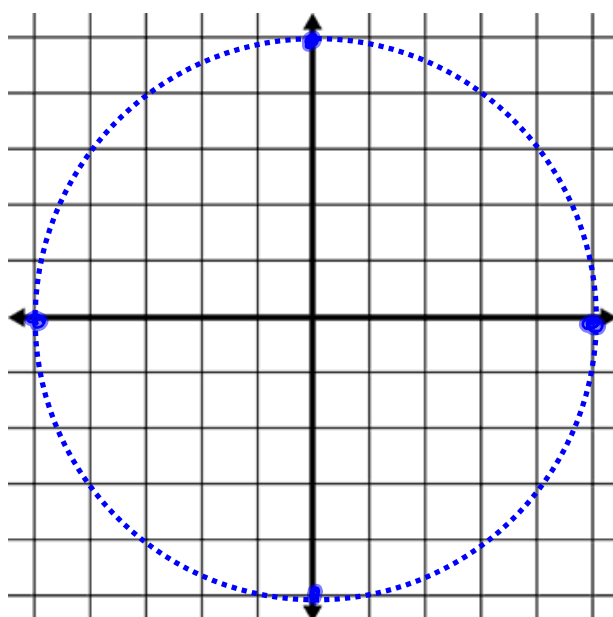


Do-now: Graph the lines  $x = -1$  and  $y = 3$ .



Graph the locus of points 5 units away from the origin.



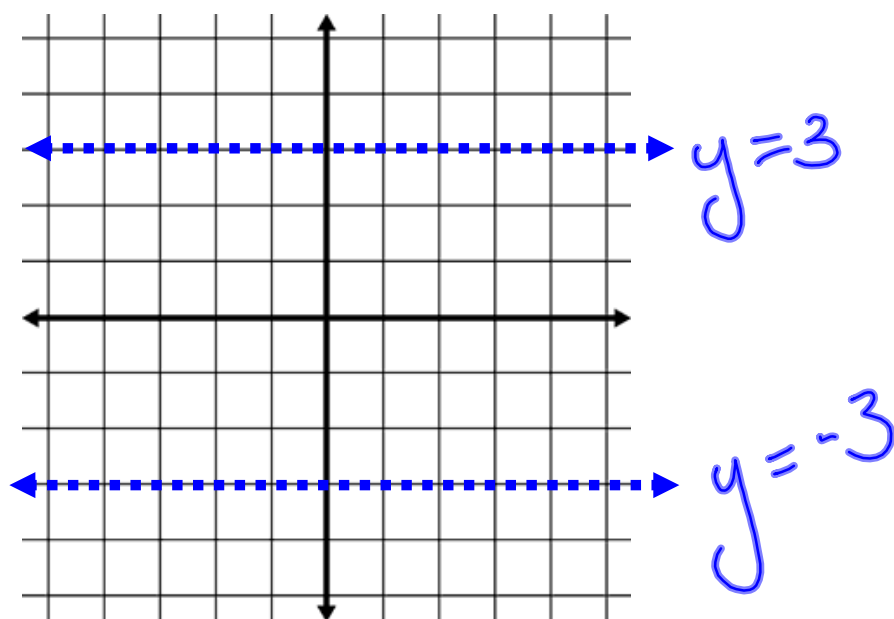
$$\text{center} = (0, 0)$$

$$\text{radius} = 5$$

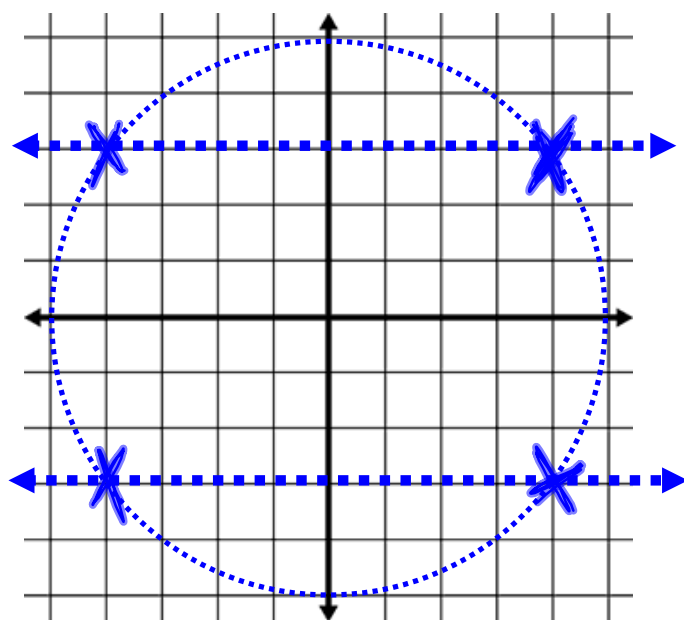
$$(x-h)^2 + (y-k)^2 = r^2$$

$$x^2 + y^2 = 25$$

Graph the locus of points 3 units from the x-axis.

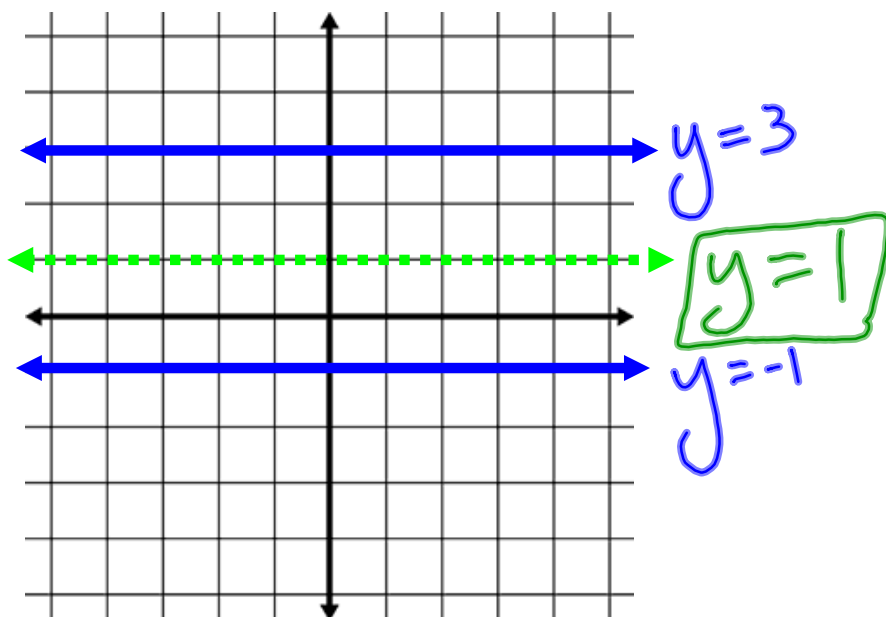


How many points are both 5 units from the origin and 3 units from the x-axis? Identify the coordinates of the points of intersection.

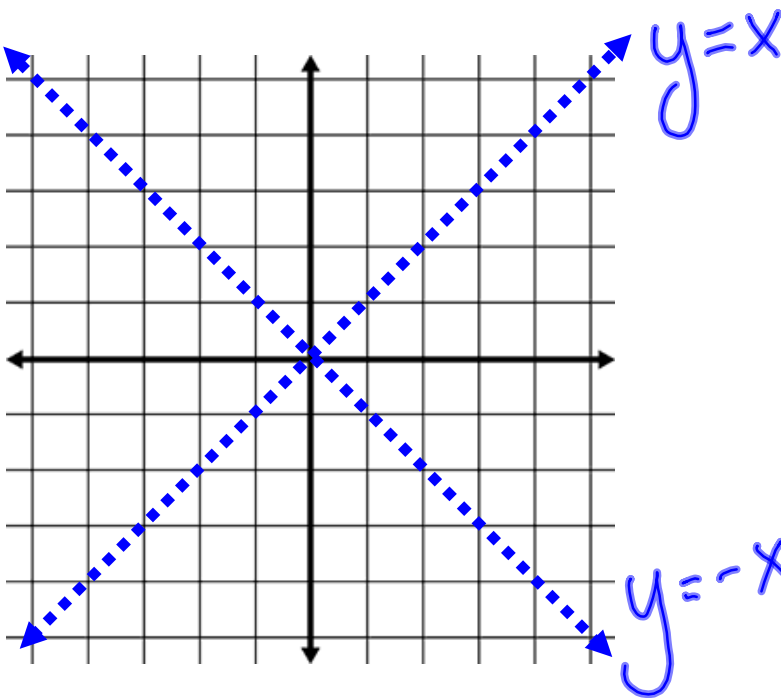


$(4, 3)$   
 $(-4, 3)$   
 $(-4, -3)$   
 $(4, -3)$

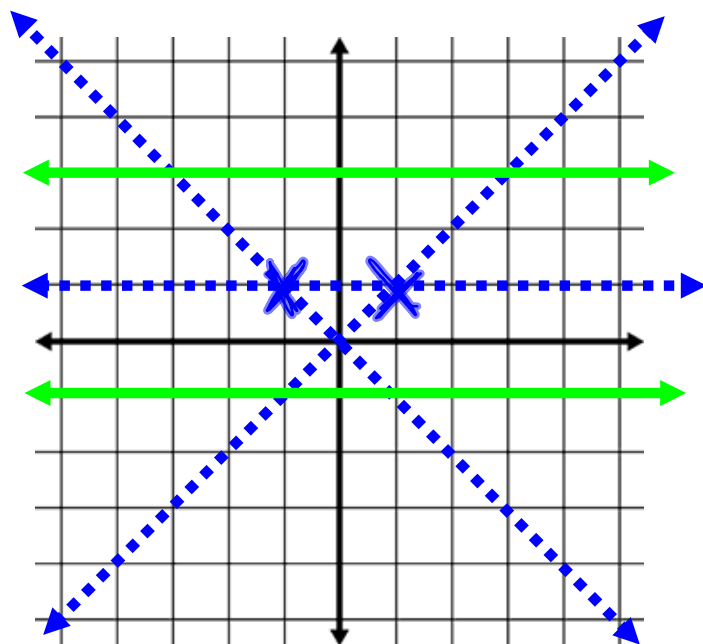
What is the locus of points equidistant from the lines  $y = 3$  and  $y = -1$ ?



What is the locus of points equidistant from the  $x$  and  $y$  axes?



Graph the locus of points equidistant from the  $x$  and  $y$  axes AND equidistant from the lines  $y = 3$  and  $y = -1$ ?



2 points  
 $(1, 1)$   
 $(-1, 1)$

