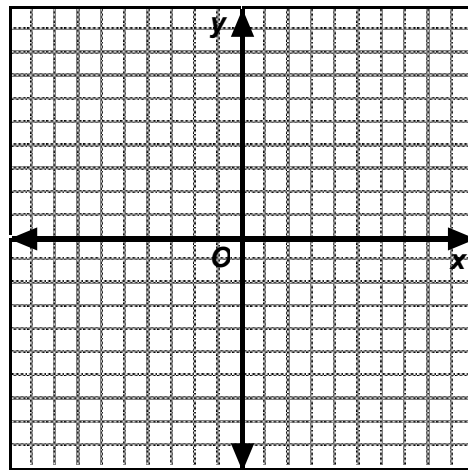


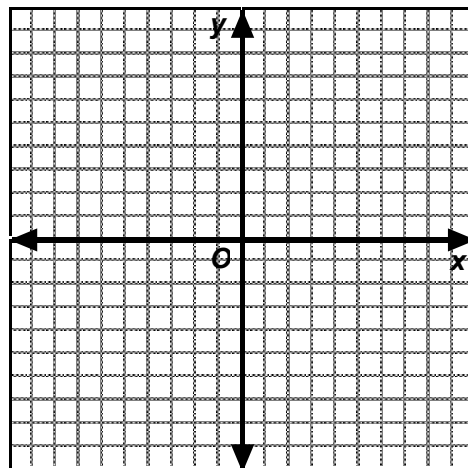
Name: \_\_\_\_\_ Date: \_\_\_\_\_ Block: \_\_\_\_\_ # \_\_\_\_\_

**10.2 - 10.5 Review**  
**Station #1**

1. The point  $(4,-5)$  is on a circle whose center is the origin. Write the standard form of the equation of the circle.
2. Write the equation of a circle with center  $(-6,5)$  and radius 4.
3. Determine the center and radius of the circle. Then sketch the graph of  $x^2 + y^2 = 20$  .



4. Determine the center and radius of the circle. Then sketch the graph of  $(x - 3)^2 + (y + 4)^2 = 36$

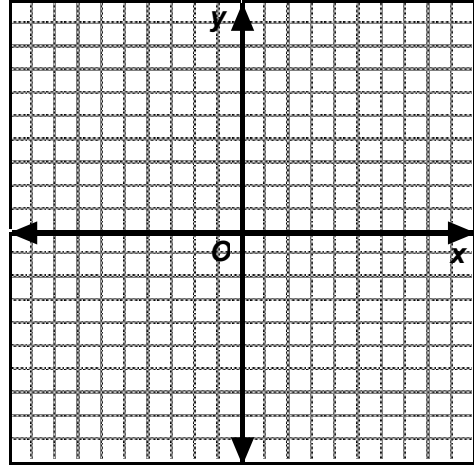


### Station #3

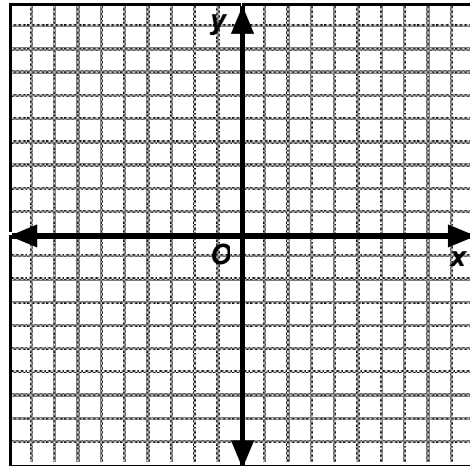
1. Write the standard form of the equation of a parabola with the focus  $\left(0, \frac{1}{4}\right)$  and vertex at  $(0,0)$ .
2. Write the standard form of a parabola with directrix  $x = -3$  and vertex at the origin.
3. Determine the equation of the directrix of the parabola:  $y = -8x^2$
4. Determine the coordinates of the focus of the parabola:  $x = -\frac{1}{2}y^2$

## Station #2

1. Sketch the graph of the parabola:  $y = -\frac{1}{8}x^2$  State the coordinates of the focus and the equation of the directrix.



2. Sketch the graph of the parabola:  $x = 2y^2$  State the coordinates of the focus and the equation of the directrix.

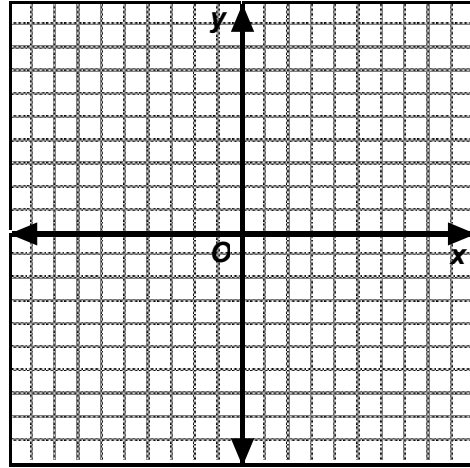


### Station #5

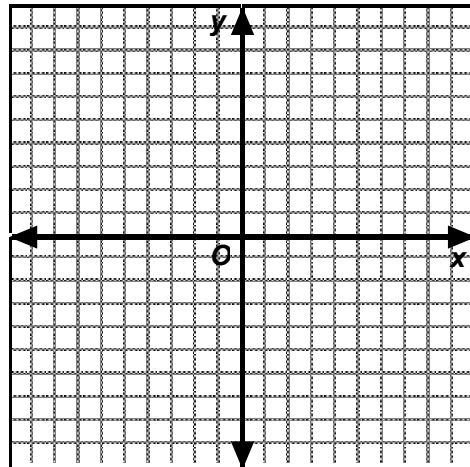
1. Write an equation of an ellipse with center at  $(0,0)$  , vertices at  $(\pm 9,0)$  , and co-vertices at  $(0,\pm 6)$ .
  
2. Write an equation of an ellipse with center at  $(0,0)$  , vertices at  $(0,\pm 8)$  , and foci at  $(0,\pm 5)$  .
  
3. Write an equation of an ellipse with center at  $(0,0)$  , co-vertices at  $(0,\pm 4)$  , and foci at  $(\pm 10,0)$  .

### Station #4

1. Sketch the graph of the ellipse:  $\frac{x^2}{16} + \frac{y^2}{64} = 1$ . State the coordinates of the vertices, co-vertices, and foci.

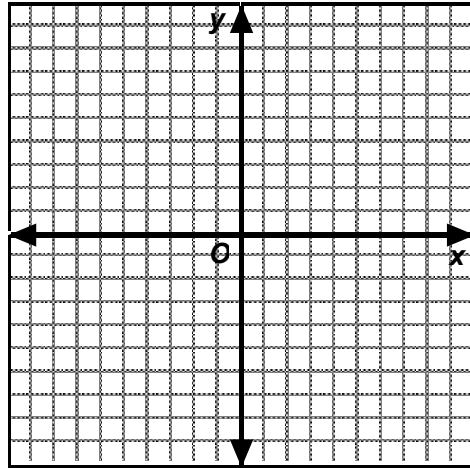


2. Sketch the graph of the ellipse:  $\frac{x^2}{25} + \frac{y^2}{9} = 1$ . State the coordinates of the vertices, co-vertices, and foci.



### Station #6

Sketch the graph of the hyperbola:  $\frac{x^2}{25} - \frac{y^2}{16} = 1$ . State the coordinates of the vertices, and foci.



2. Sketch the graph of the hyperbola:  $\frac{y^2}{36} - \frac{x^2}{64} = 1$ . State the coordinates of the vertices, and foci.

