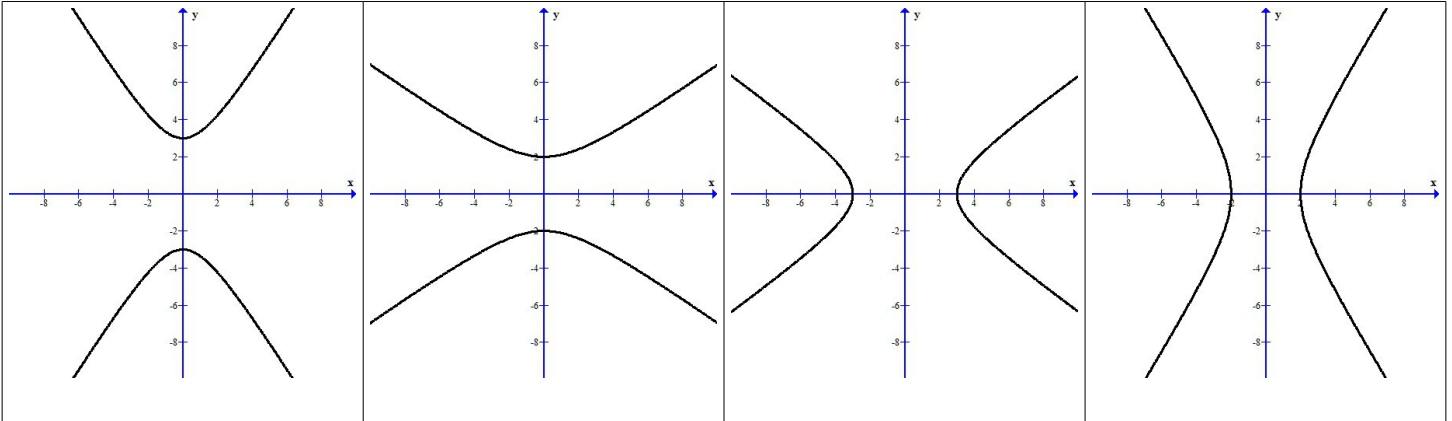


### 7.4 Practice Problems

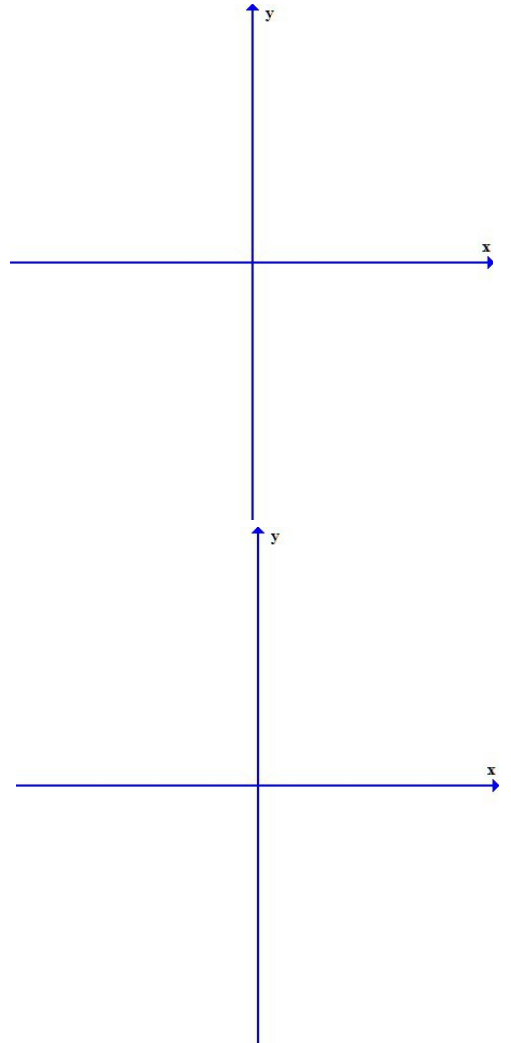
Match the equation with the graph.

1. $\frac{x^2}{9} - \frac{y^2}{4} = 1$	2. $\frac{y^2}{9} - \frac{x^2}{4} = 1$
3. $\frac{x^2}{4} - \frac{y^2}{9} = 1$	4. $\frac{y^2}{4} - \frac{x^2}{9} = 1$



5. Find an equation of the hyperbola described. Graph the equation by hand.

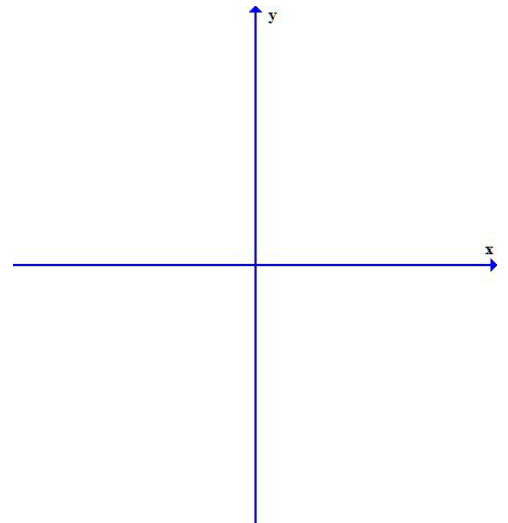
Center at  $(0,0)$ ; focus at  $(0,4)$ ; vertex at  $(0,3)$



6. Find an equation of the hyperbola described. Graph the equation by hand. Center at  $(-3,1)$ ; focus at  $(-3,6)$ ; vertex at  $(-3,4)$

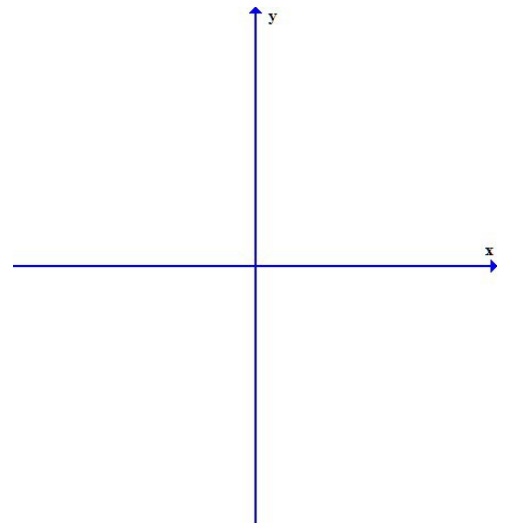
7. Find the information from the given equation.  $\frac{(y-2)^2}{49} - \frac{(x+3)^2}{4} = 1$

- Find the center.
- Find the transverse axis.
- Find the vertices.
- Find the foci.
- Find the asymptotes.
- Graph the equation by hand.



8. Find the information from the given equation.  $4y^2 - x^2 = 16$

- Rewrite the equation in the proper form.
- Find the center.
- Find the transverse axis.
- Find the vertices.
- Find the foci.
- Find the asymptotes.
- Graph the equation by hand.



9. Write an equation for the hyperbola.

