

Section 10 - 4: The Hyperbola

Name _____

Find the center of the Hyperbola and the value of a and b. Is it Vertical or Horizontal?

1. $\frac{x^2}{49} - \frac{y^2}{64} = 1$

Center: _____

a = _____ b = _____

Vertex on x or y axis?

2. $\frac{y^2}{25} - \frac{x^2}{4} = 1$

Center: _____

a = _____ b = _____

Vertex on x or y axis?

3. $\frac{(x+2)^2}{4} - \frac{y^2}{16} = 1$

Center: _____

a = _____ b = _____

Vertex on x or y axis?

4. $\frac{(y+2)^2}{25} - \frac{x^2}{9} = 1$

Center: _____

a = _____ b = _____

Vertex on x or y axis?

5. $\frac{(x-3)^2}{25} - \frac{(y+2)^2}{36} = 1$

Center: _____

a = _____ b = _____

Vertex on x or y axis?

6. $\frac{(y-1)^2}{16} - \frac{(x-2)^2}{9} = 1$

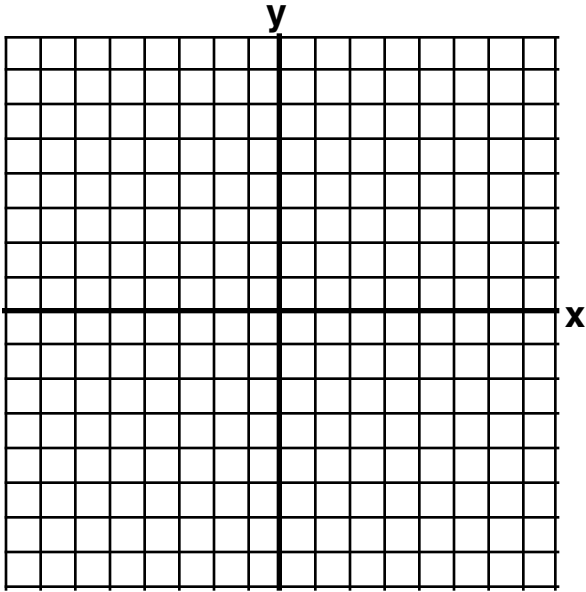
Center: _____

a = _____ b = _____

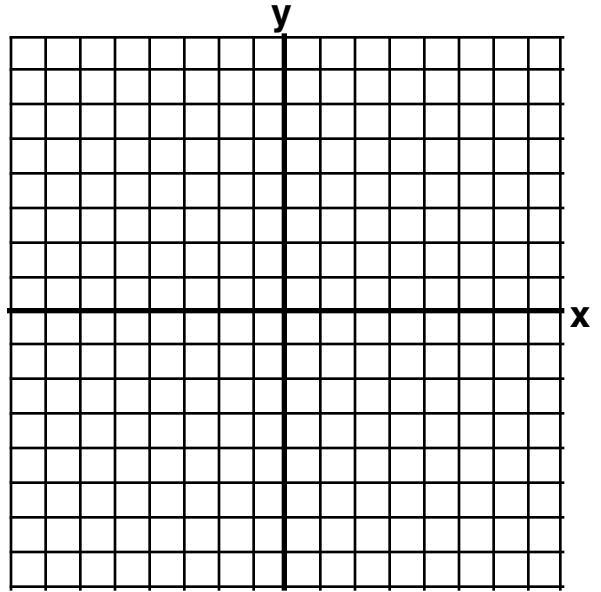
Vertex on x or y axis?

Graph each relation.

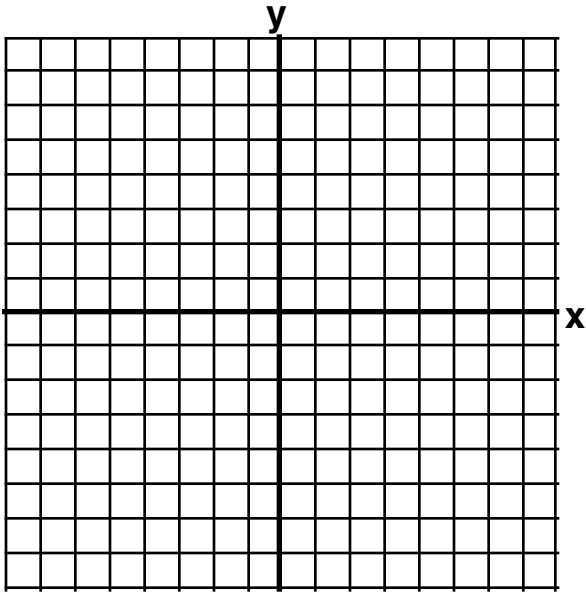
7. $\frac{x^2}{9} - \frac{y^2}{25} = 1$



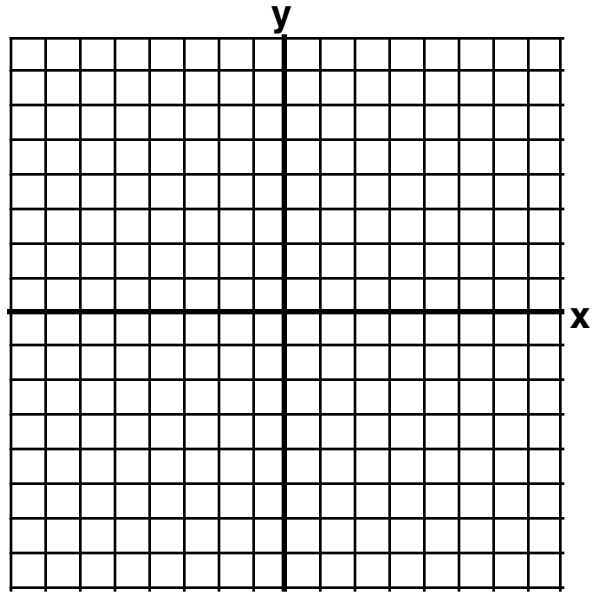
8. $\frac{y^2}{25} - \frac{x^2}{4} = 1$



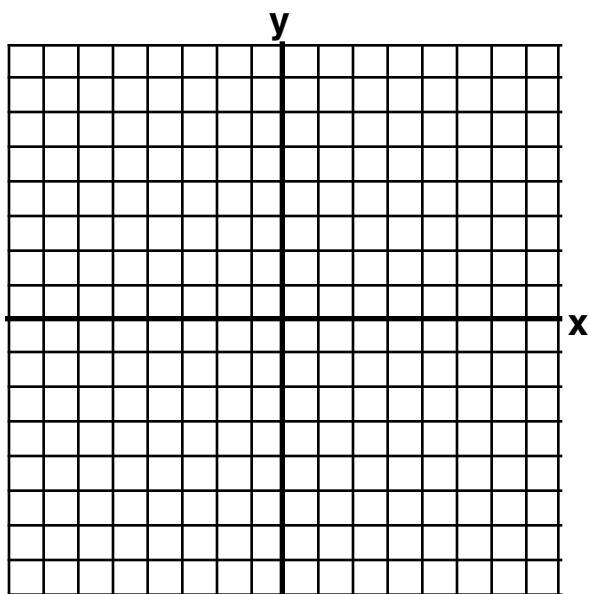
9. $\frac{x^2}{4} - \frac{y^2}{9} = 1$



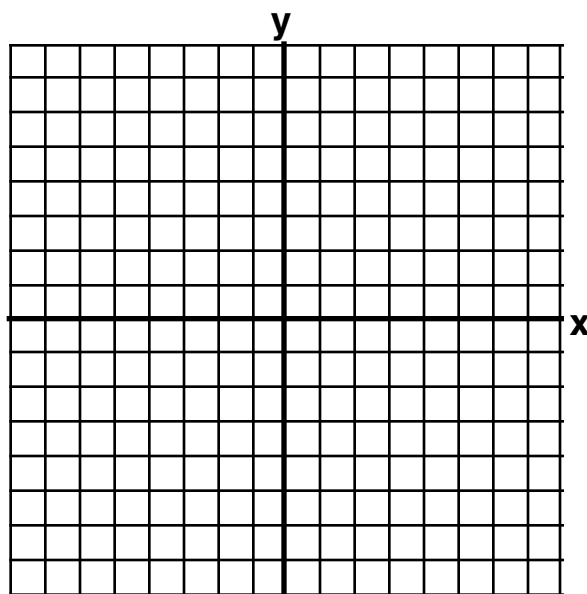
10. $\frac{y^2}{36} - \frac{x^2}{16} = 1$



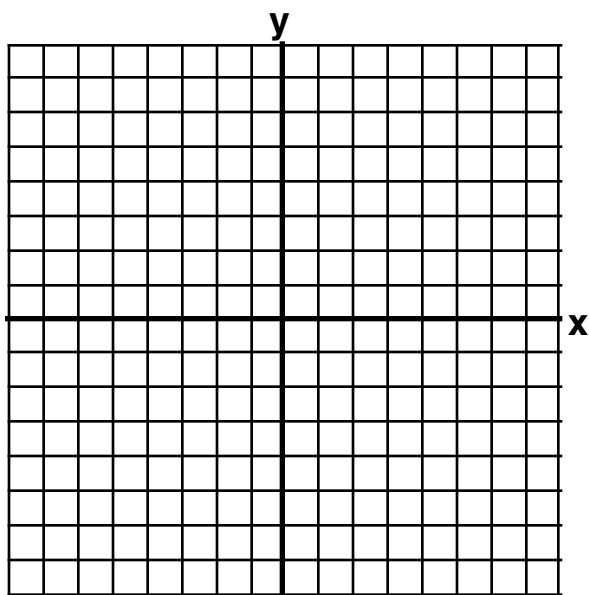
11. $\frac{(x-2)^2}{4} - \frac{y^2}{16} = 1$



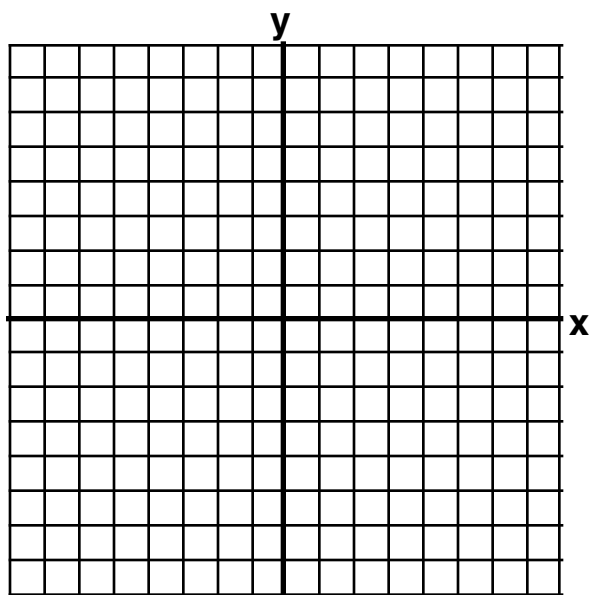
12. $\frac{(y+1)^2}{25} - \frac{x^2}{4} = 1$



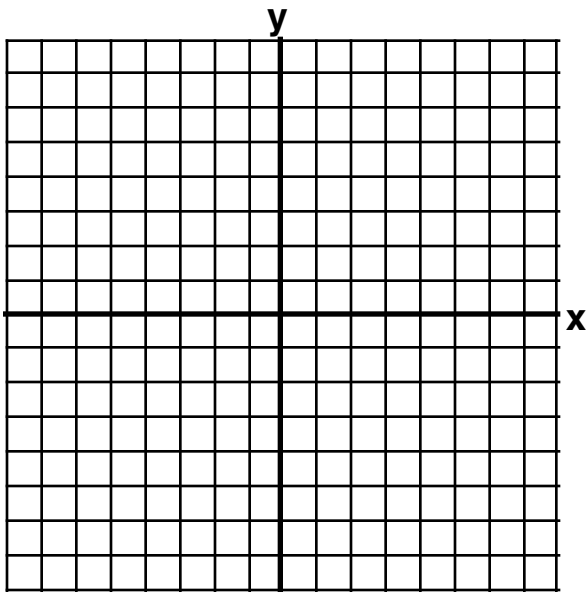
13. $\frac{(x-3)^2}{9} - \frac{(y+2)^2}{36} = 1$



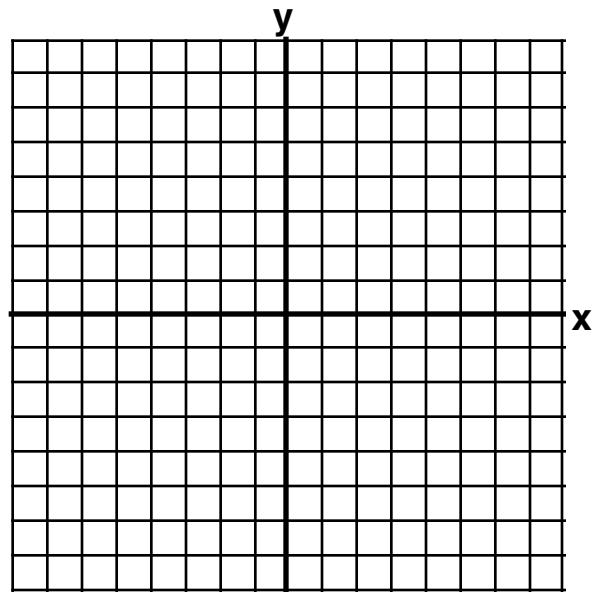
14. $\frac{(y-1)^2}{16} - \frac{(x+2)^2}{9} = 1$



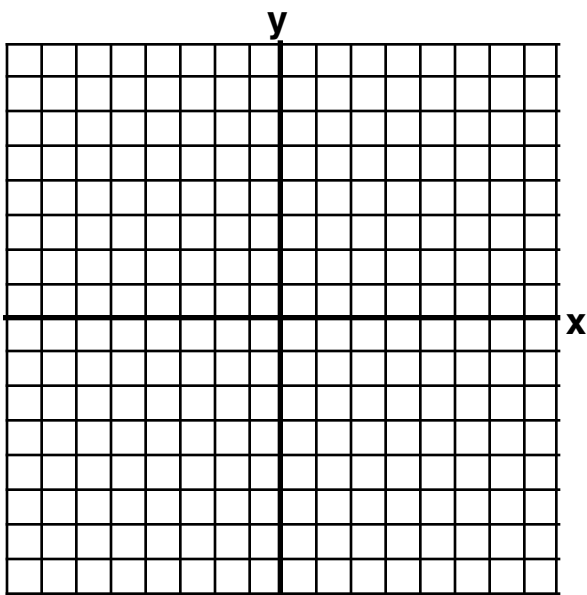
15. $9y^2 - 4x^2 = 36$



16. $\frac{(x+2)^2}{4} - \frac{(y+1)^2}{9} = 1$



17. $25y^2 - 4x^2 = 100$



18. $25(x-2)^2 - 9y^2 = 225$

