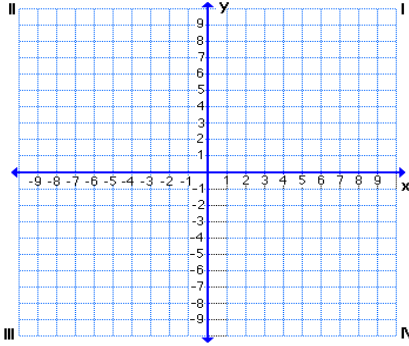


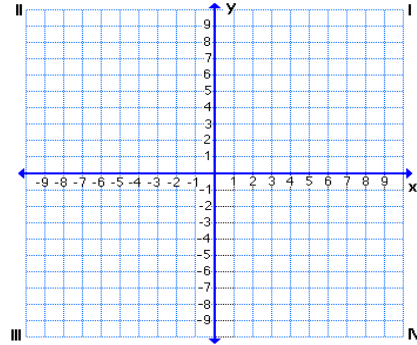
Graph the hyperbola and identify the center, vertices, foci, and asymptotes.

1. $\frac{x^2}{16} - \frac{y^2}{25} = 1$



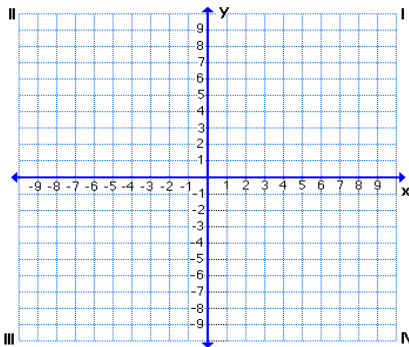
Center: _____
Vert: _____
Foci: _____
Asym: _____

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



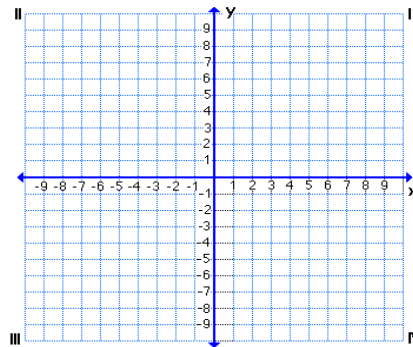
Center: _____
Vert: _____
Foci: _____
Asym: _____

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



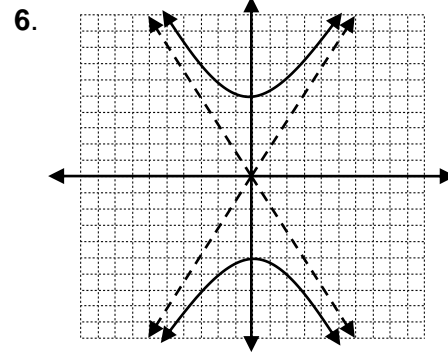
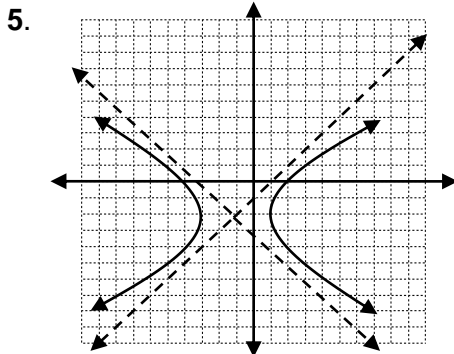
Center: _____
Vert: _____
Foci: _____
Asym: _____

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



Center: _____
Vert: _____
Foci: _____
Asym: _____

Find the standard form of the equation of each hyperbolas.



Find the standard form of the equation of each hyperbola satisfying the given conditions.

7. Center: (4, -2); Focus: (7, -2); Vertex: (6, -2)

8. Center: (-2, 1); Focus: (-2, 6); Vertex: (-2, 4)

Convert each equation to standard form by completing the square.

9. $x^2 - y^2 - 2x - 4y - 4 = 0$

10. $16x^2 - y^2 + 64x - 2y + 67 = 0$

11. $4x^2 - 9y^2 - 16x + 54y - 101 = 0$

12. $4x^2 - 25y^2 - 32x + 164 = 0$

Please also do the four completing the square problems from the ELLIPSE Homework Worksheet!