MORE PRACTICE: Hyperbolas

For the following hyperbolas, find the following:

1. $\frac{(y+2)^2}{64} - \frac{x^2}{81} = 1$

h = _____, k = _____, a = _____, b =_____

Vertices _____

Foci _____

EQ of Asymptotes _____

2. $\frac{(x-3)^2}{169} - \frac{(x-1)^2}{9} = 1$

h = _____, k = _____, a = _____, b = _____

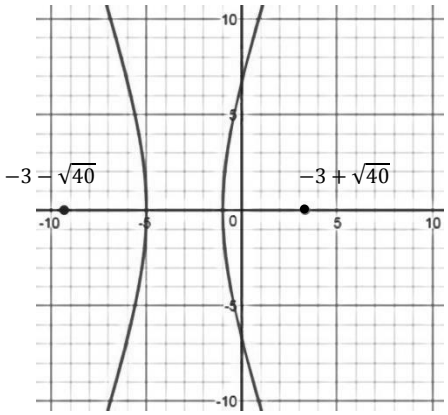
Vertices _____

Foci _____

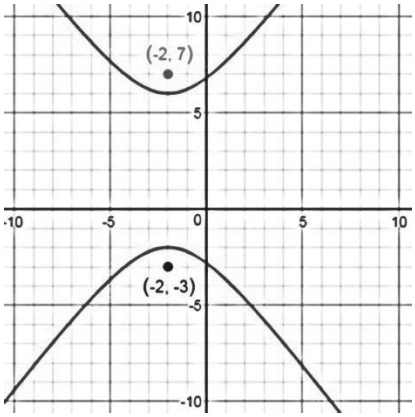
EQ of Asymptotes _____

Write the equation of the hyperbola:

3.

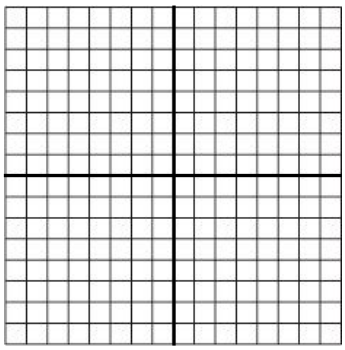


4.



Given the following properties, graph and write an equation for the hyperbolas.

6. The vertices are (–1, 3) and (1, 3), and the slopes of the asymptotes are ± 3.



7. The vertices are (2, 3) and (2, 5). The foci are (2, 0) and (2, 8).