Name: _____ Per: _____ Date: _____
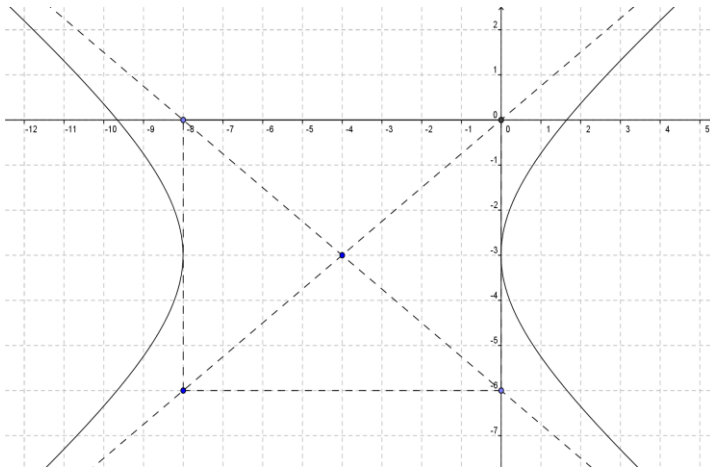
Serafino ▪ Precalculus S2
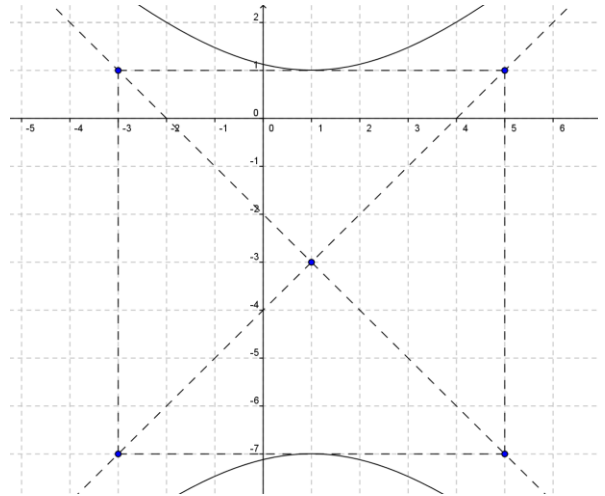
**10D** **Equations of Hyperbolas**

Practice Skills Check / Review

**Write the equation of the graphs below. Also plot and provide the coordinates of the foci.**
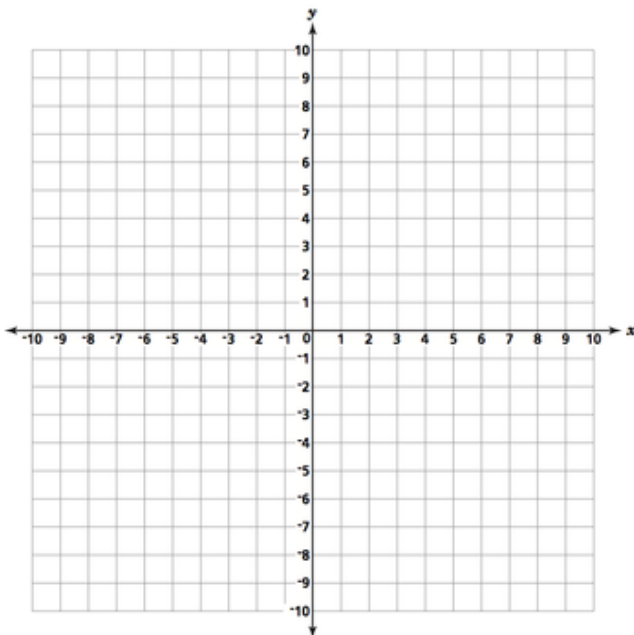
1.



2.



3. $\dfrac{(y-4)^2}{4} - (x-2)^2 = 1$ 　　Graph below and provide all critical info:



Center: 　　　　　　　Vertices:

Covertices: 　　　　　　Foci:

Domain: 　　　　　　　Range:

Equations of Asymptotes (in point–slope form):

**Use the information provided to write the equation of the hyperbola. Provide any critical info that is not given: Center, Vertices, Covertices, Foci, Domain, Range, Equations of Asymptotes (in point–slope form). Simplify/rationalize all fractions & radicals. No calculator.**

4. Center: (2,1), Vertical Transverse Axis length: 14, Conjugate Axis length: 26.

5. Domain: $x \in (-\infty, -10] \cup [-4, \infty)$. Transverse Axis: $y = -1$, length: 6, Conjugate Axis of length 14.

6. Foci: (-5,2) and (5,2), Transverse Axis length: 4.

7. Vertices: (6,-5) and (2,-5), Covertices: (4,-1) and (4,-9).

8. Vertices at (2,-3) and (2,11), Foci: (2,-5) and (2,13)

9. Equations of Asymptotes     One vertex: (-3, -3)
   $y = -x - 2$
   $y = x - 4$