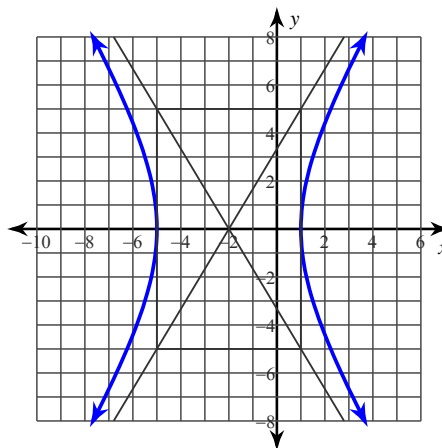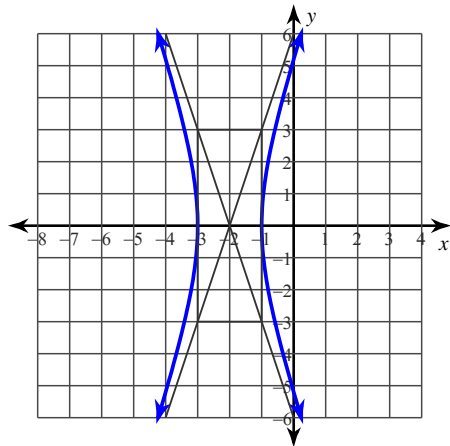Name_____

11.3 Corrective Assignment - Hyperbolas

Period_____

Use the information provided to write the standard form equation of each hyperbola.
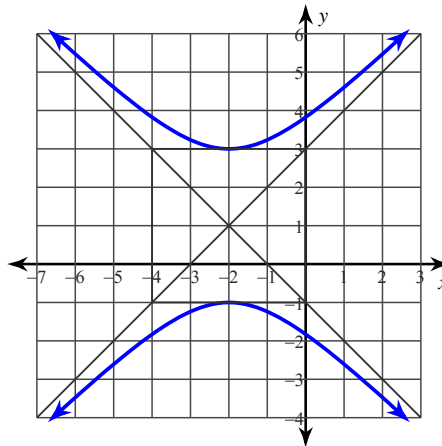
1) Vertices: $(0, 11), (0, -11)$
   Endpoints of Conjugate Axis: $(14, 0)$
   $\qquad\qquad\qquad\qquad\qquad\quad (-14, 0)$

2) Vertices: $(0, 4), (0, -4)$
   Endpoints of Conjugate Axis: $(9, 0)$
   $\qquad\qquad\qquad\qquad\qquad\quad (-9, 0)$

3) Vertices: $(8, 0), (-8, 0)$
   Endpoints of Conjugate Axis: $(0, 10)$
   $\qquad\qquad\qquad\qquad\qquad\quad (0, -10)$

4) Center at $(0, 0)$
   Transverse axis is vertical; central rectangle
   is 22 units wide and 14 units tall

5) Center at $(0, 0)$
   Transverse axis is horizontal; central rectangle
   is 20 units wide and 6 units tall

6) Center at $(0, 0)$
   Transverse axis is horizontal; central rectangle
   is 8 units wide and 12 units tall

7) Vertices: $(5, -2), (5, -16)$
   Conjugate Axis is 16 units long

8) Vertices: $(2, -4), (-8, -4)$
   Conjugate Axis is 30 units long

9) Vertices: $(-4, 8), (-4, -12)$
   Conjugate Axis is 16 units long

10)

11)

12)

13) Center at $(-9, 4)$
    Transverse axis is vertical; central rectangle
    is 2 units wide and 26 units tall

14) Center at $(-10, -7)$
    Transverse axis is horizontal; central rectangle
    is 26 units wide and 16 units tall

15) Center at $(1, 8)$
    Transverse axis is horizontal; central rectangle
    is 8 units wide and 10 units tall

Answers to 11.3 Corrective Assignment - Hyperbolas (ID: 2)

1) $\dfrac{y^2}{121} - \dfrac{x^2}{196} = 1$

2) $\dfrac{y^2}{16} - \dfrac{x^2}{81} = 1$

3) $\dfrac{x^2}{64} - \dfrac{y^2}{100} = 1$

4) $\dfrac{y^2}{49} - \dfrac{x^2}{121} = 1$

5) $\dfrac{x^2}{100} - \dfrac{y^2}{9} = 1$

6) $\dfrac{x^2}{16} - \dfrac{y^2}{36} = 1$

7) $\dfrac{(y+9)^2}{49} - \dfrac{(x-5)^2}{64} = 1$

8) $\dfrac{(x+3)^2}{25} - \dfrac{(y+4)^2}{225} = 1$

9) $\dfrac{(y+2)^2}{100} - \dfrac{(x+4)^2}{64} = 1$

10) $\dfrac{(x+2)^2}{9} - \dfrac{y^2}{25} = 1$

11) $(x+2)^2 - \dfrac{y^2}{9} = 1$

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

13) $\dfrac{(y-4)^2}{169} - (x+9)^2 = 1$

14) $\dfrac{(x+10)^2}{169} - \dfrac{(y+7)^2}{64} = 1$

15) $\dfrac{(x-1)^2}{16} - \dfrac{(y-8)^2}{25} = 1$