ID: 1

Name_____

11.3 Corrective Assignment - Hyperbolas

Period____

Use the information provided to write the standard form equation of each hyperbola.

1) Vertices: $(10, 0), (-10, 0)$
Endpoints of Conjugate Axis: $(0, 8)$
$(0, -8)$

2) Vertices: $(0, 10), (0, -10)$
Endpoints of Conjugate Axis: $(3, 0)$
$(-3, 0)$

3) Vertices: $(2, 0), (-2, 0)$
Endpoints of Conjugate Axis: $(0, 11)$
$(0, -11)$

4) Center at $(0, 0)$
Transverse axis is horizontal; central rectangle is 10 units wide and 12 units tall

5) Center at $(0, 0)$
Transverse axis is vertical; central rectangle is 18 units wide and 14 units tall

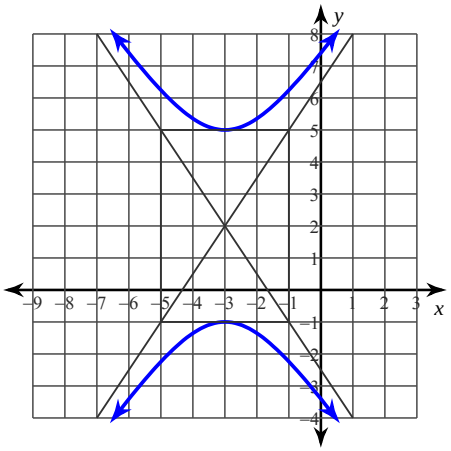
6) Center at $(0, 0)$
Transverse axis is vertical; central rectangle is 18 units wide and 16 units tall

7) Vertices: $(0, -5), (0, -15)$
Conjugate Axis is 14 units long

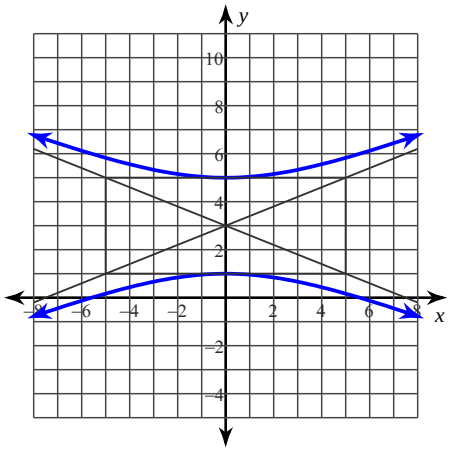
8) Vertices: $(-8, 4), (-8, -14)$
Conjugate Axis is 22 units long

9) Vertices: $(20, -8), (-4, -8)$
Conjugate Axis is 16 units long

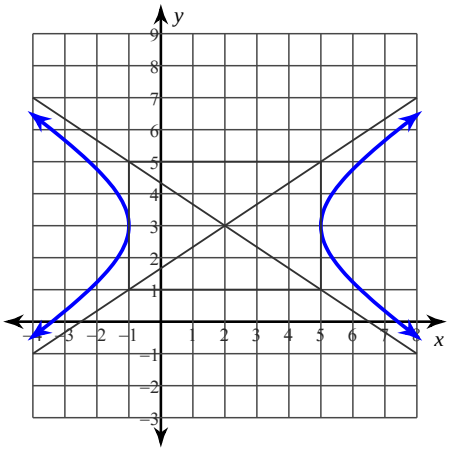
10)



11)



12)



13) Center at $(-8, 5)$
Transverse axis is vertical; central rectangle is 18 units wide and 24 units tall

14) Center at $(9, 1)$
Transverse axis is vertical; central rectangle is 26 units wide and 24 units tall

15) Center at $(-6, -4)$
Transverse axis is horizontal; central rectangle is 20 units wide and 28 units tall

Answers to 11.3 Corrective Assignment - Hyperbolas (ID: 1)

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

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

3) $\frac{x^2}{4} - \frac{y^2}{121} = 1$

4) $\frac{x^2}{25} - \frac{y^2}{36} = 1$

5) $\frac{y^2}{49} - \frac{x^2}{81} = 1$

6) $\frac{y^2}{64} - \frac{x^2}{81} = 1$

7) $\frac{(y+10)^2}{25} - \frac{x^2}{49} = 1$

8) $\frac{(y+5)^2}{81} - \frac{(x+8)^2}{121} = 1$

9) $\frac{(x-8)^2}{144} - \frac{(y+8)^2}{64} = 1$

10) $\frac{(y-2)^2}{9} - \frac{(x+3)^2}{4} = 1$

11) $\frac{(y-3)^2}{4} - \frac{x^2}{25} = 1$

12) $\frac{(x-2)^2}{9} - \frac{(y-3)^2}{4} = 1$

13) $\frac{(y-5)^2}{144} - \frac{(x+8)^2}{81} = 1$

14) $\frac{(y-1)^2}{144} - \frac{(x-9)^2}{169} = 1$

15) $\frac{(x+6)^2}{100} - \frac{(y+4)^2}{196} = 1$