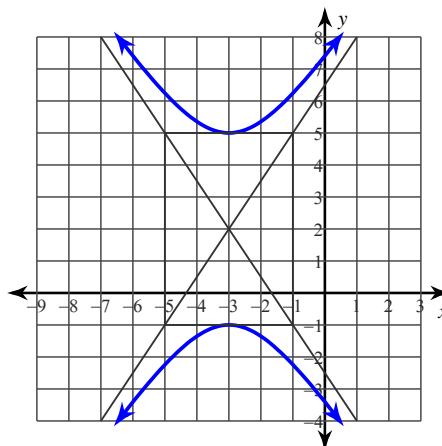


## 11.5 Corrective Assignment - Hyperbolas

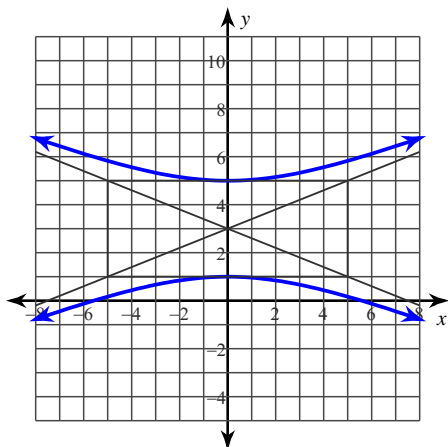
Use the information provided to write the standard form equation of each hyperbola.

- 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

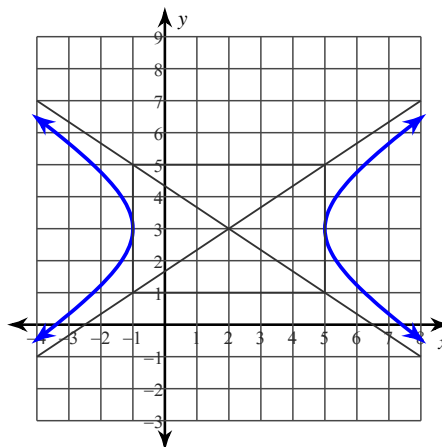
10)



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