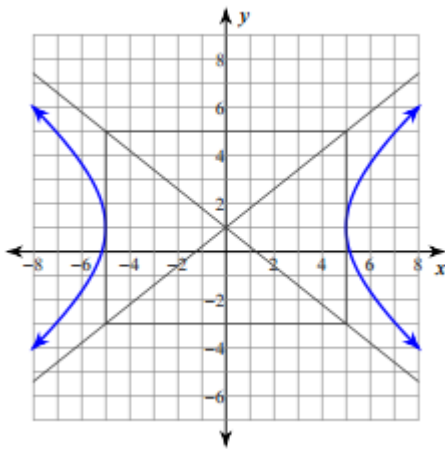


Rewrite each hyperbola in standard form.

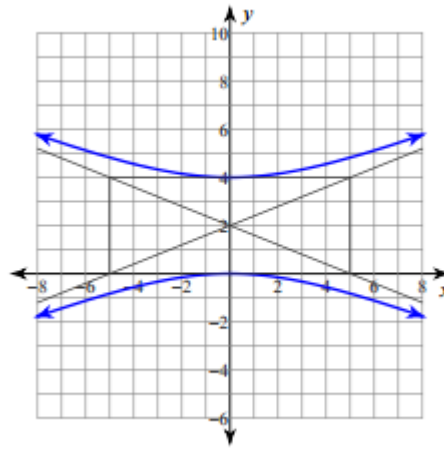
1.) $9x^2 - 4y^2 - 90x + 32y - 163 = 0$

2.) $-16x^2 + 9y^2 + 32x + 144y - 16 = 0$

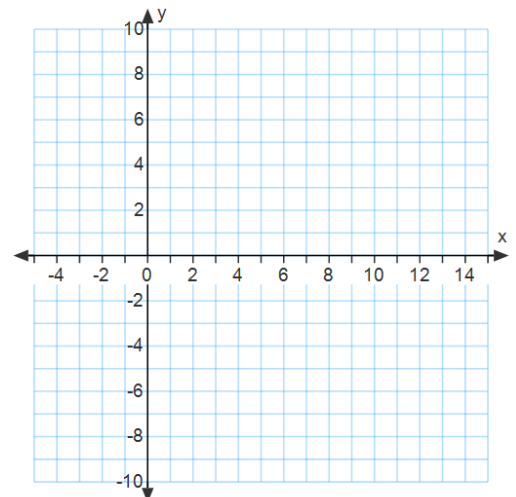
3.)



4.)



5.) Vertices: (15, 1) and (-1, 1)
 Endpoints of Conjugate Axis:
 (7, 7) and (7, -5)



6.) Vertices: $(-5, 1)$ and $(-5, -7)$
Foci: $(-5, -3 \pm \sqrt{97})$

7.) Vertices: $(-5, 22)$ and $(-5, -4)$
Distance from Center to Focus: $\sqrt{218}$

8.) Foci: $(2, -6 \pm \sqrt{157})$
Asymptotes: $y + 6 = \pm \frac{6}{11}(x - 2)$

9.) Foci: $(\pm 6\sqrt{5}, 10)$
Asymptotes: $y - 10 = \pm \frac{6}{12}x$

10.) $\frac{(y+3)^2}{144} - \frac{(x+2)^2}{16} = 1$

Center:

Lines Containing Axes:

Vertices:

Foci:

Equations of Asymptotes:

