

Name : _____

Score : _____

Teacher : _____

Date : _____

Writing Hyperbolas Equations

Use the given information to write the standard form equation of the hyperbolas.

1) Vertices: $(-4, 13)$; $(-4, -9)$

Conjugate Axis Length: 14 units

5) Vertices: $(15, 0)$; $(-5, 0)$

Conjugate Axis Length: 8 units

2) Vertices: $(-4, 0)$; $(-4, -16)$

Conjugate Axis Length: 4 units

6) Vertices: $(12, -2)$; $(-12, -2)$

Conjugate Axis Endpoints: $(0, -10)$; $(0, 6)$

3) Vertices: $(11, 5)$; $(-3, 5)$

Conjugate Axis Endpoints: $(4, -1)$; $(4, 11)$

7) Vertices: $(16, 8)$; $(-4, 8)$

Conjugate Axis Endpoints: $(6, 6)$; $(6, 10)$

4) Vertices: $(11, -6)$; $(-5, -6)$

Conjugate Axis Length: 8 units

8) Vertices: $(6, 15)$; $(6, -1)$

Conjugate Axis Endpoints: $(3, 7)$; $(9, 7)$



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Writing Hyperbolas Equations

Use the given information to write the standard form equation of the hyperbolas.

- 1) Vertices: (-4 , 13) ; (-4 , -9)

Conjugate Axis Length: 14 units

$$\frac{(y - 2)^2}{121} - \frac{(x + 4)^2}{49} = 1$$

- 5) Vertices: (15 , 0) ; (-5 , 0)

Conjugate Axis Length: 8 units

$$\frac{(x - 5)^2}{100} - \frac{y^2}{16} = 1$$

- 2) Vertices: (-4 , 0) ; (-4 , -16)

Conjugate Axis Length: 4 units

$$\frac{(y + 8)^2}{64} - \frac{(x + 4)^2}{4} = 1$$

- 6) Vertices: (12 , -2) ; (-12 , -2)

Conjugate Axis Endpoints: (0,-10); (0,6)

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

- 3) Vertices: (11 , 5) ; (-3 , 5)

Conjugate Axis Endpoints: (4,-1); (4,11)

$$\frac{(x - 4)^2}{49} - \frac{(y - 5)^2}{36} = 1$$

- 7) Vertices: (16 , 8) ; (-4 , 8)

Conjugate Axis Endpoints: (6,6); (6,10)

$$\frac{(x - 6)^2}{100} - \frac{(y - 8)^2}{4} = 1$$

- 4) Vertices: (11 , -6) ; (-5 , -6)

Conjugate Axis Length: 8 units

$$\frac{(x - 3)^2}{64} - \frac{(y + 6)^2}{16} = 1$$

- 8) Vertices: (6 , 15) ; (6 , -1)

Conjugate Axis Endpoints: (3,7); (9,7)

$$\frac{(y - 7)^2}{64} - \frac{(x - 6)^2}{9} = 1$$



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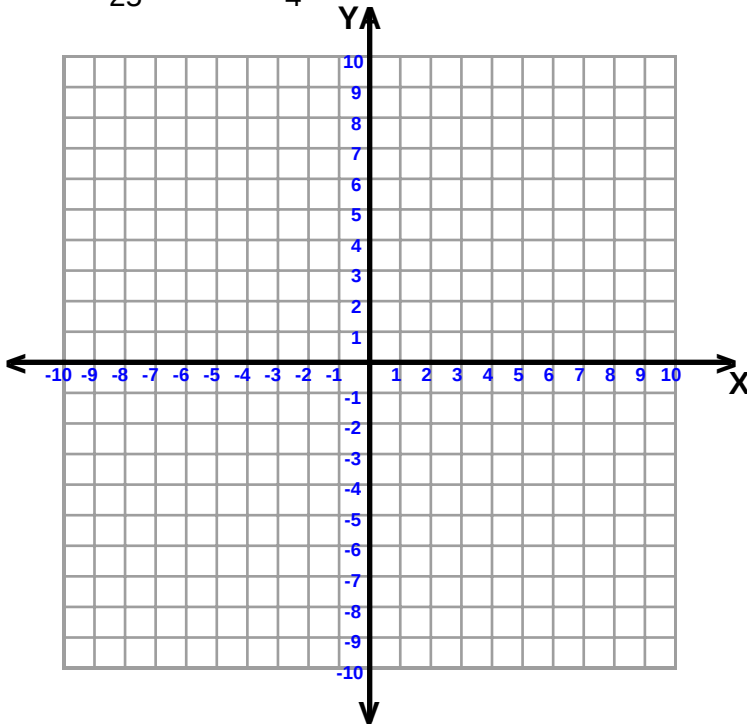
Teacher : _____

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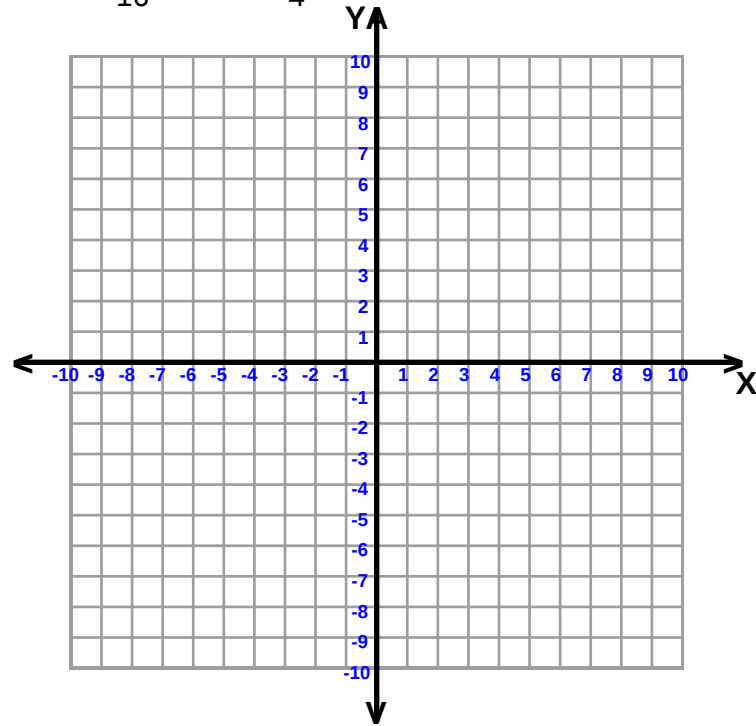
Graphing Hyperbolic Equations

Graph the given equation.

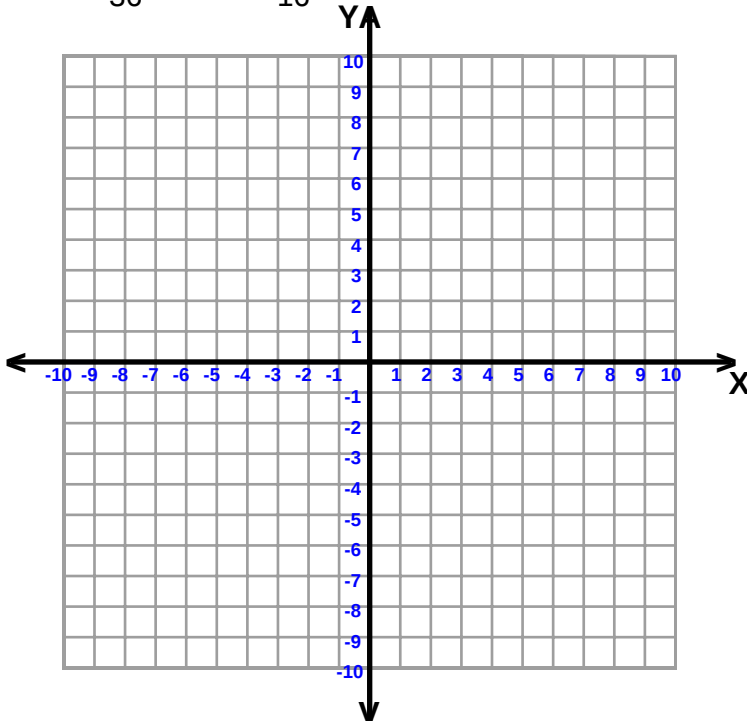
1) $\frac{(y + 1)^2}{25} - \frac{(x + 2)^2}{4} = 1$



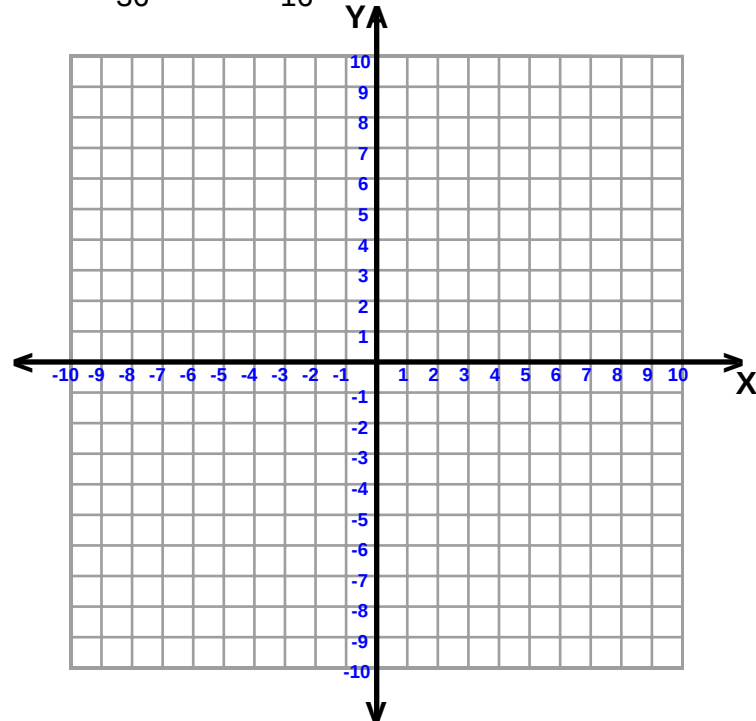
2) $\frac{(y + 2)^2}{16} - \frac{(x - 2)^2}{4} = 1$



3) $\frac{(x + 1)^2}{36} - \frac{(y + 2)^2}{16} = 1$



4) $\frac{(y + 2)^2}{36} - \frac{(x - 2)^2}{16} = 1$



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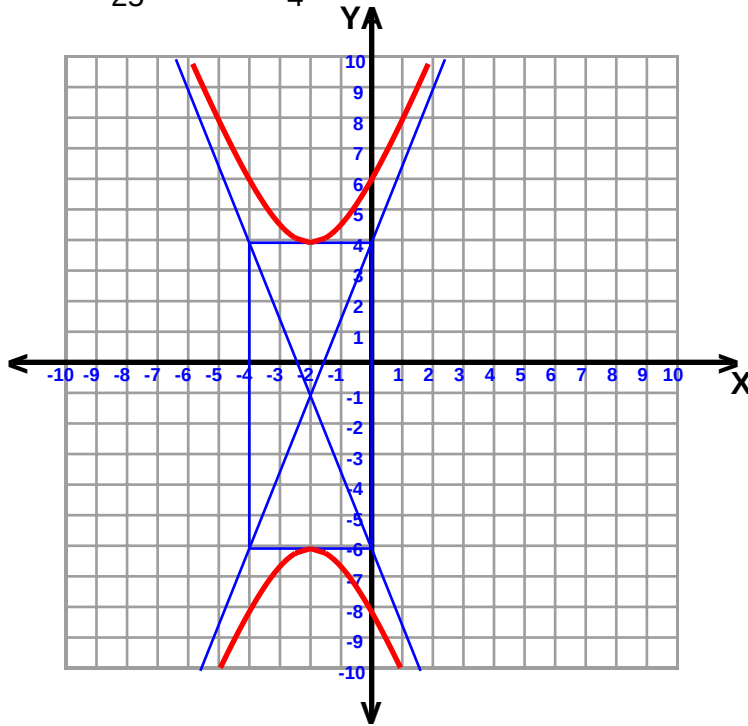
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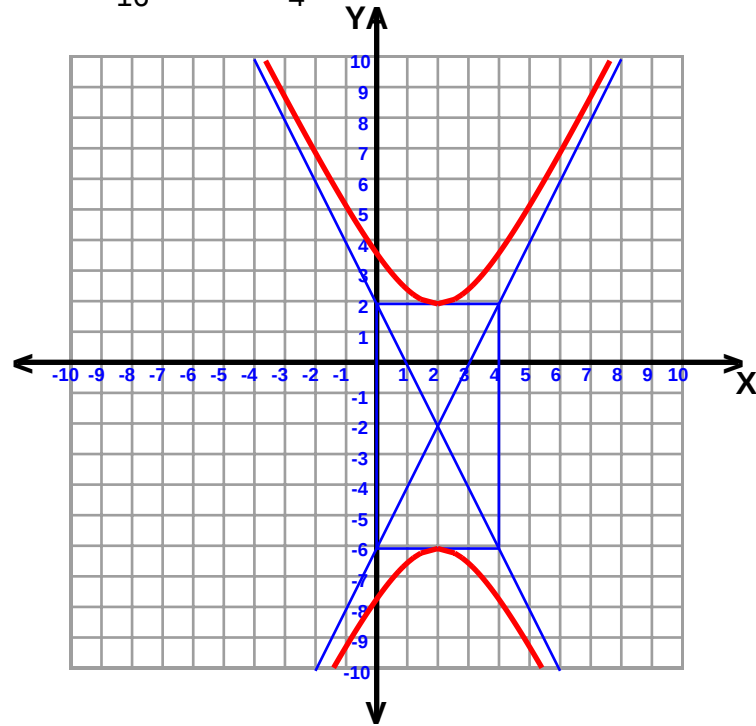
Graphing Hyperbolic Equations

Graph the given equation.

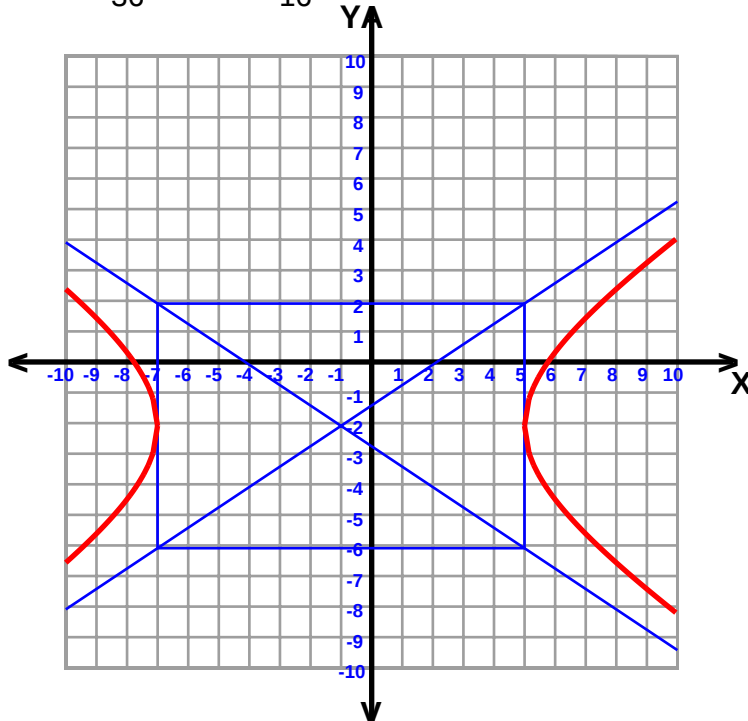
1) $\frac{(y + 1)^2}{25} - \frac{(x + 2)^2}{4} = 1$



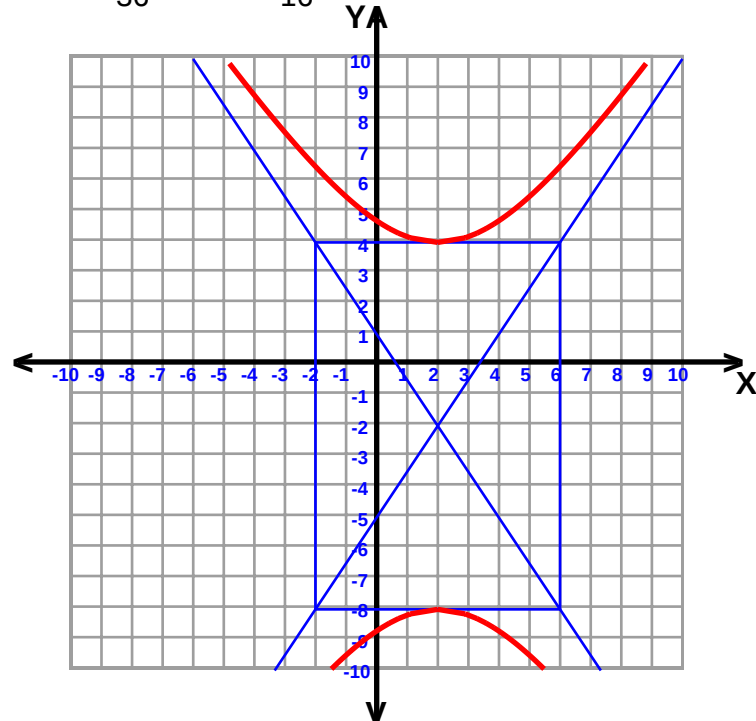
2) $\frac{(y + 2)^2}{16} - \frac{(x - 2)^2}{4} = 1$



3) $\frac{(x + 1)^2}{36} - \frac{(y + 2)^2}{16} = 1$



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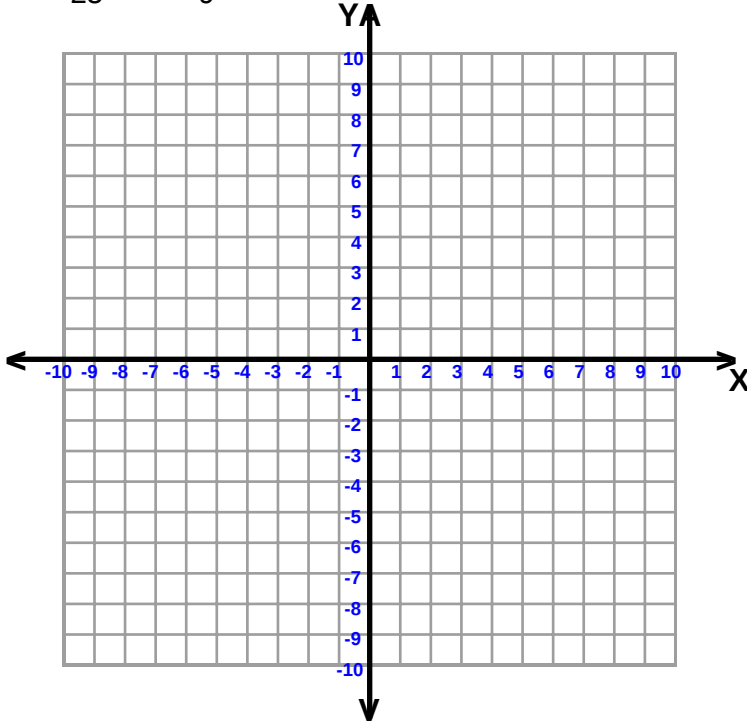
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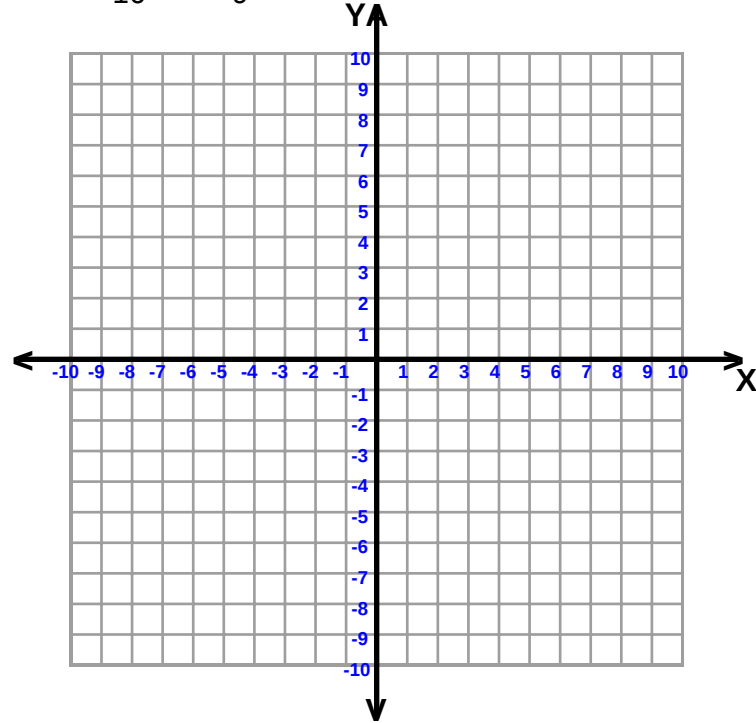
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Graph the given equation.

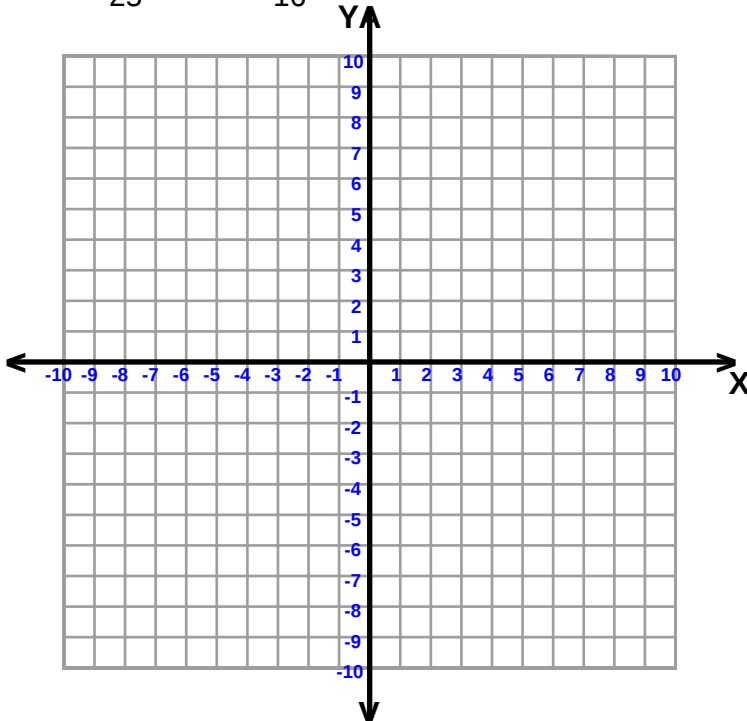
1) $\frac{y^2}{25} - \frac{(x - 1)^2}{9} = 1$



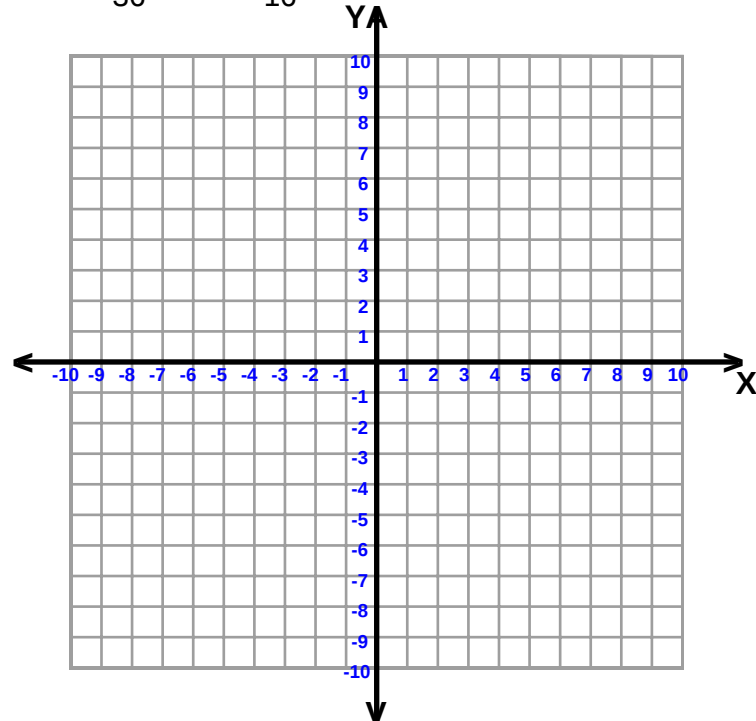
2) $\frac{(x - 1)^2}{16} - \frac{y^2}{9} = 1$



3) $\frac{(x + 1)^2}{25} - \frac{(y - 1)^2}{16} = 1$



4) $\frac{(y - 1)^2}{36} - \frac{(x - 2)^2}{16} = 1$



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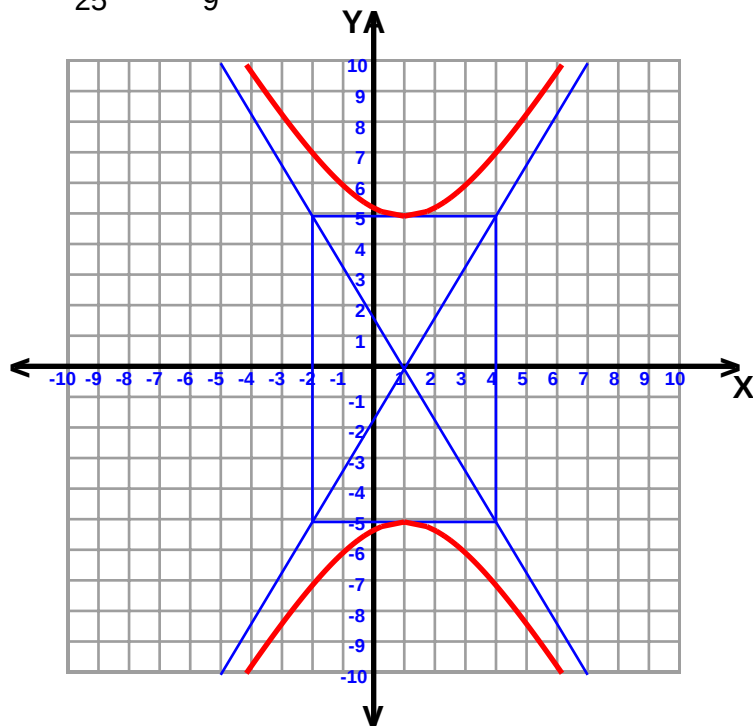
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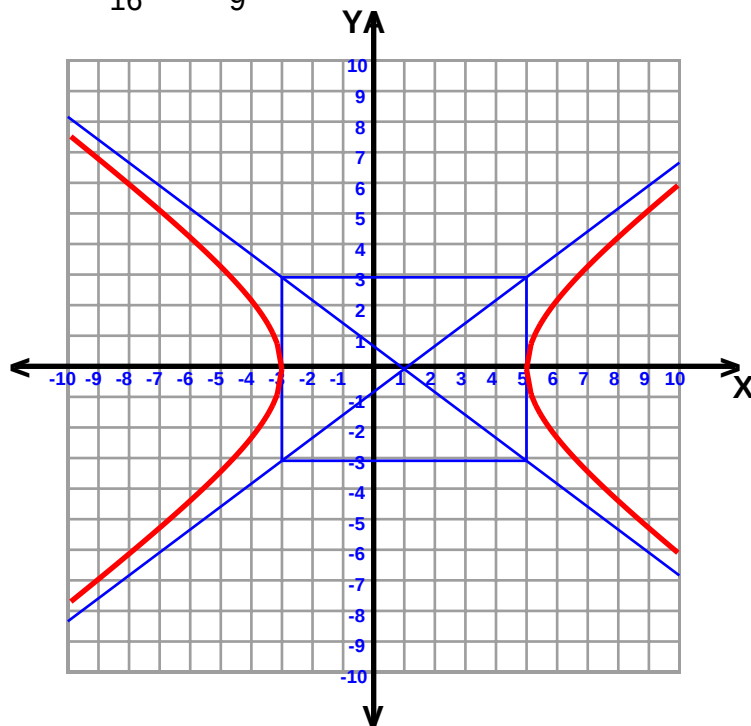
Graphing Hyperbolic Equations

Graph the given equation.

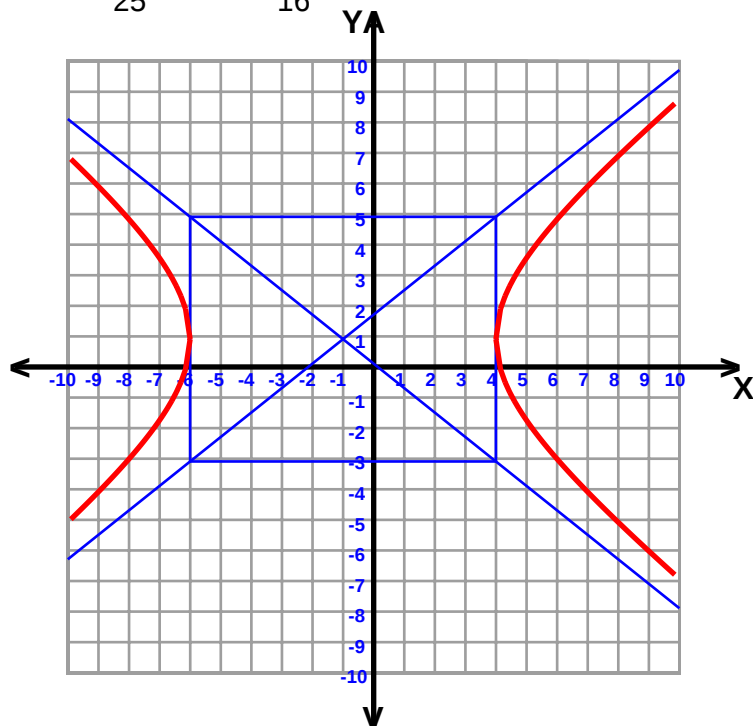
1) $\frac{y^2}{25} - \frac{(x - 1)^2}{9} = 1$



2) $\frac{(x - 1)^2}{16} - \frac{y^2}{9} = 1$



3) $\frac{(x + 1)^2}{25} - \frac{(y - 1)^2}{16} = 1$



4) $\frac{(y - 1)^2}{36} - \frac{(x - 2)^2}{16} = 1$

