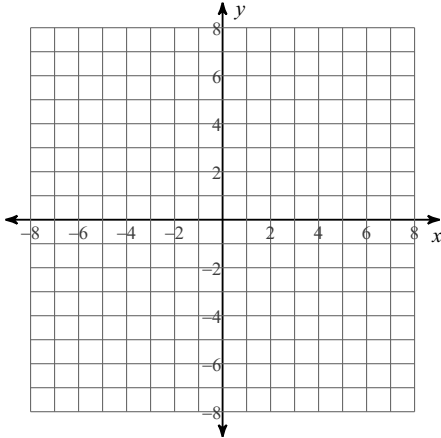


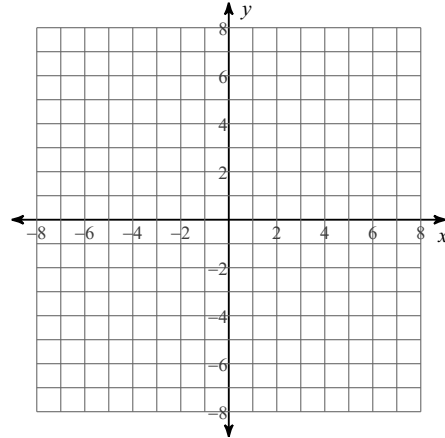
Hyperbola Practice #2

Identify the direction of opening of each. Then sketch the graph.

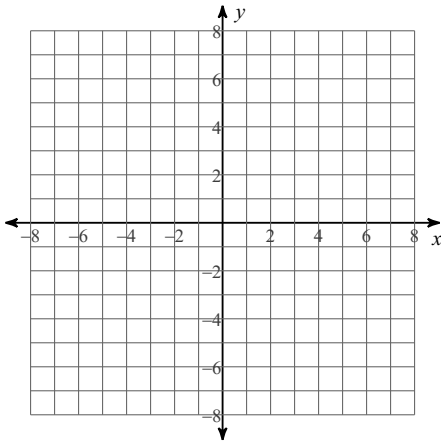
$$1) \frac{x^2}{25} - \frac{y^2}{25} = 1$$



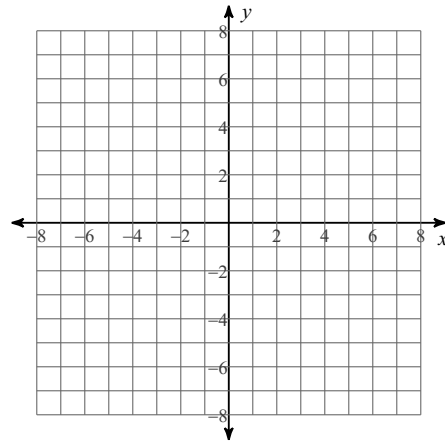
$$2) \frac{(y+1)^2}{16} - \frac{x^2}{16} = 1$$



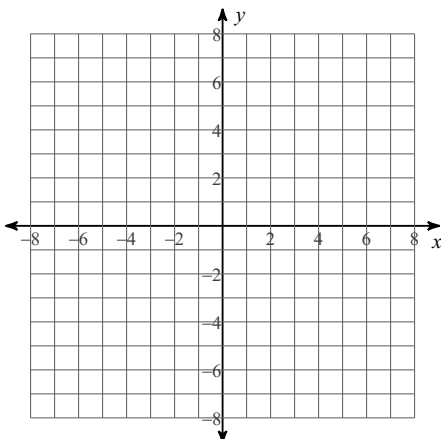
$$3) -x^2 + y^2 + 2y - 15 = 0$$



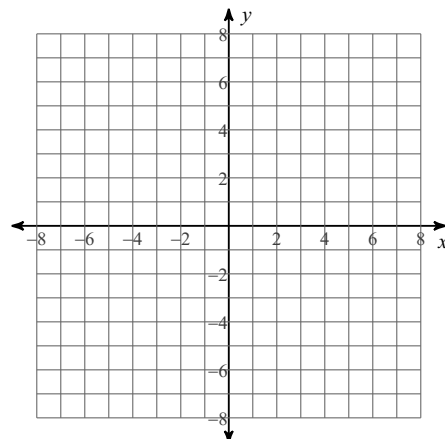
$$4) -16x^2 + y^2 - 96x - 2y - 159 = 0$$



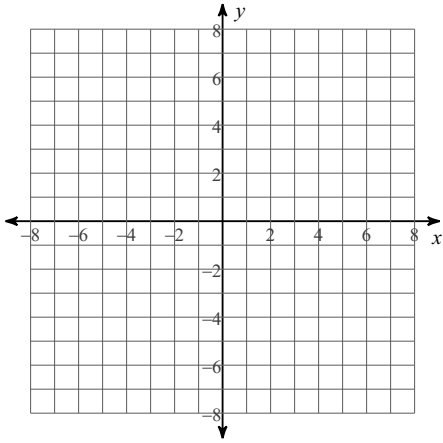
$$5) -4x^2 + 25y^2 - 100 = 0$$



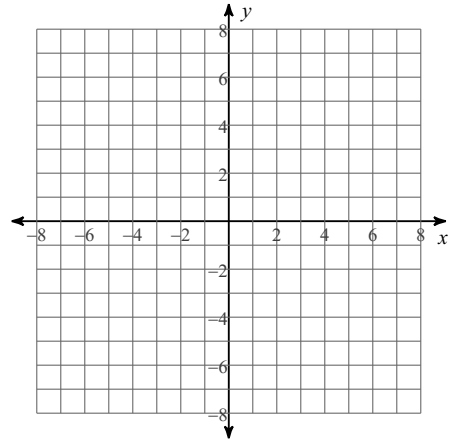
$$6) -x^2 + y^2 - 25 = 0$$



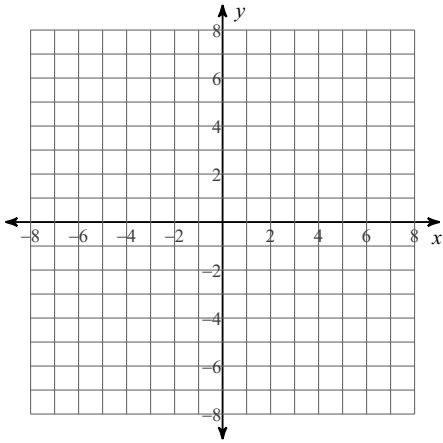
7) $-16x^2 + y^2 - 32x + 2y - 31 = 0$



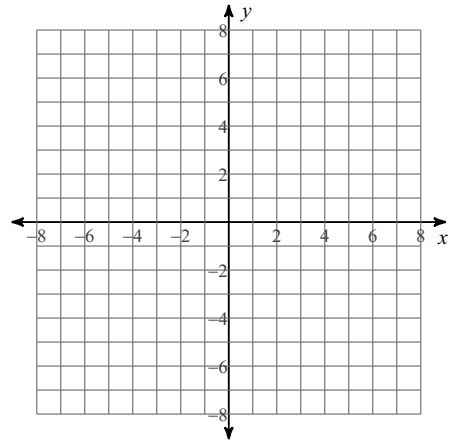
8) $x^2 - 25y^2 + 100y - 125 = 0$



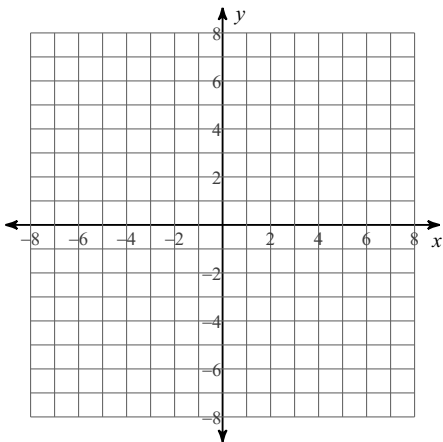
9) $x^2 - y^2 - 16 = 0$



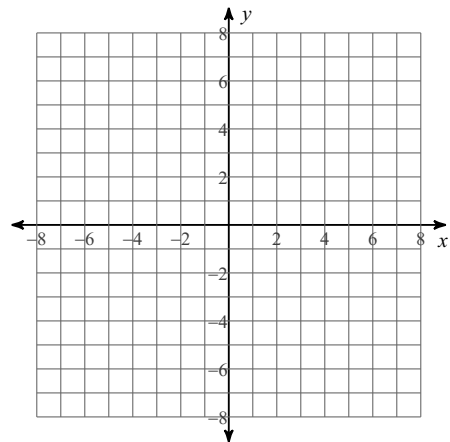
10) $25x^2 - y^2 + 100x + 75 = 0$



11) $16x^2 - 25y^2 + 50y - 425 = 0$



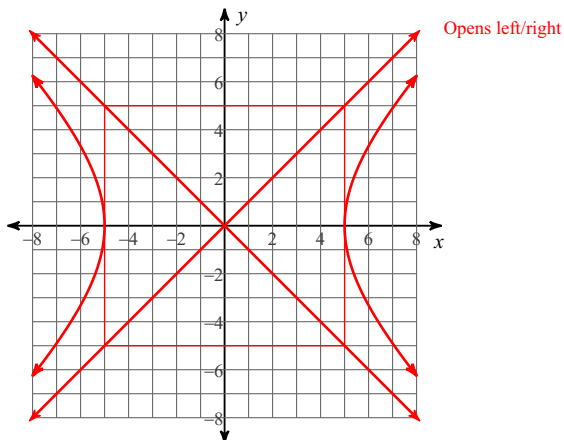
12) $x^2 - 4y^2 + 24y - 40 = 0$



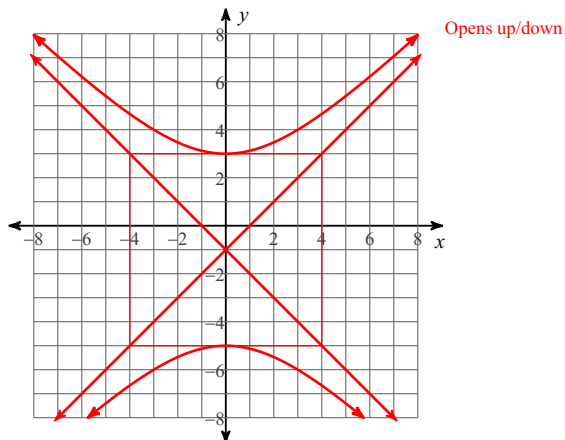
Hyperbola Practice #2

Identify the direction of opening of each. Then sketch the graph.

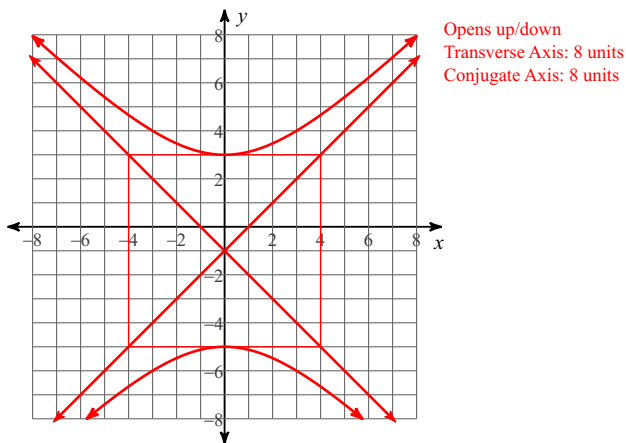
1) $\frac{x^2}{25} - \frac{y^2}{25} = 1$



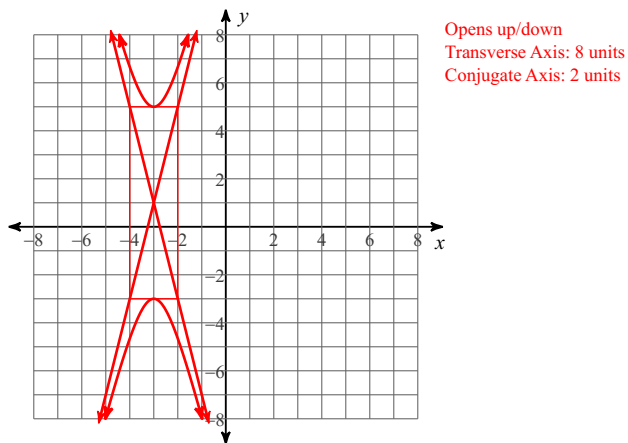
2) $\frac{(y+1)^2}{16} - \frac{x^2}{16} = 1$



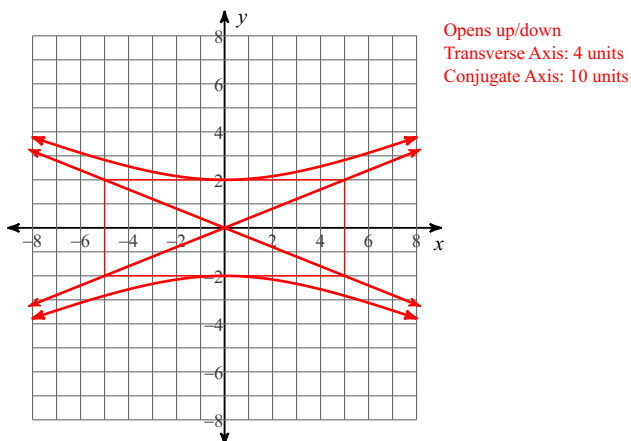
3) $-x^2 + y^2 + 2y - 15 = 0$



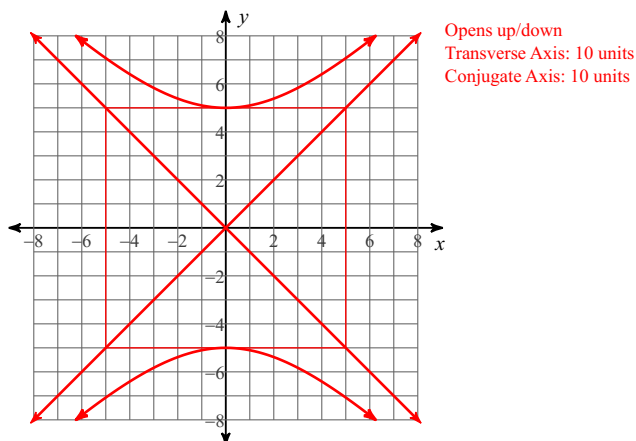
4) $-16x^2 + y^2 - 96x - 2y - 159 = 0$



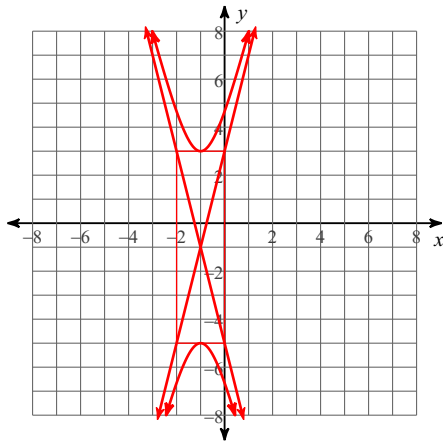
5) $-4x^2 + 25y^2 - 100 = 0$



6) $-x^2 + y^2 - 25 = 0$

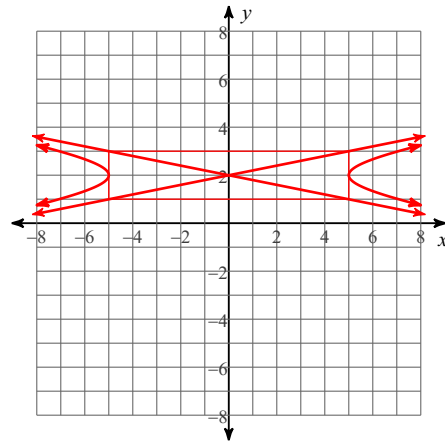


7) $-16x^2 + y^2 - 32x + 2y - 31 = 0$



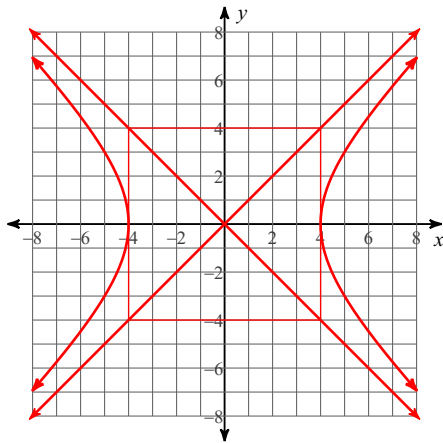
Opens up/down
Transverse Axis: 8 units
Conjugate Axis: 2 units

8) $x^2 - 25y^2 + 100y - 125 = 0$



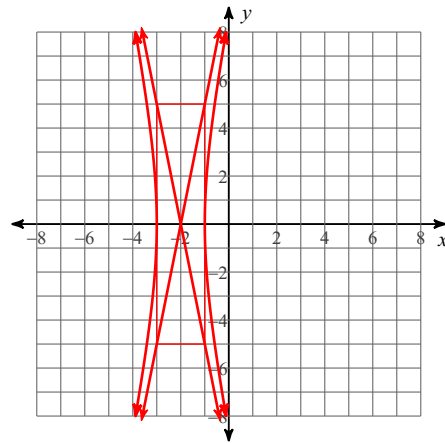
Opens left/right
Transverse Axis: 10 units
Conjugate Axis: 2 units

9) $x^2 - y^2 - 16 = 0$



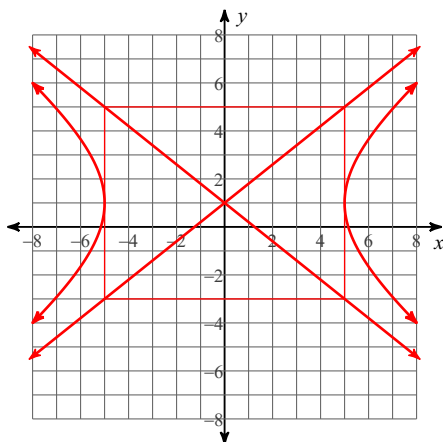
Opens left/right
Transverse Axis: 8 units
Conjugate Axis: 8 units

10) $25x^2 - y^2 + 100x + 75 = 0$



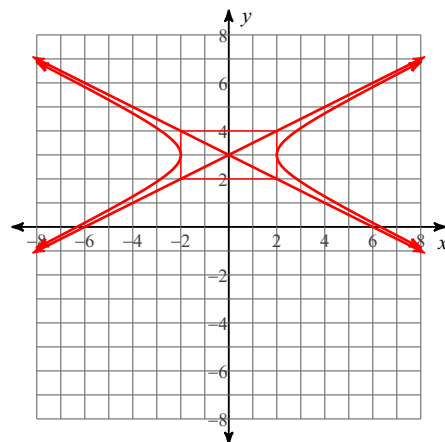
Opens left/right
Transverse Axis: 2 units
Conjugate Axis: 10 units

11) $16x^2 - 25y^2 + 50y - 425 = 0$



Opens left/right
Transverse Axis: 10 units
Conjugate Axis: 8 units

12) $x^2 - 4y^2 + 24y - 40 = 0$



Opens left/right
Transverse Axis: 4 units
Conjugate Axis: 2 units