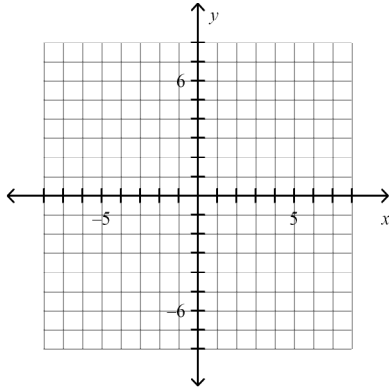


## A2- Hyperbolas

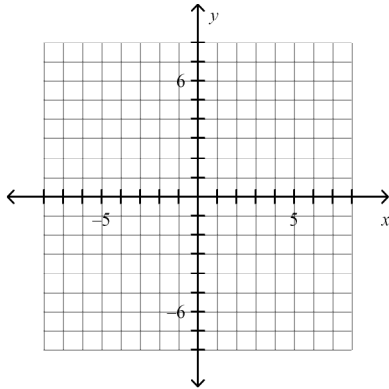
### Short Answer

**Graph the following hyperbolas whose equations are given in standard form.**

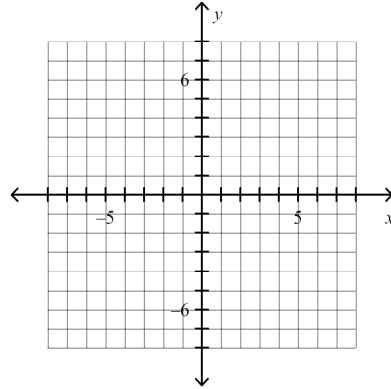
1.  $\frac{x^2}{4} - \frac{y^2}{9} = 1$



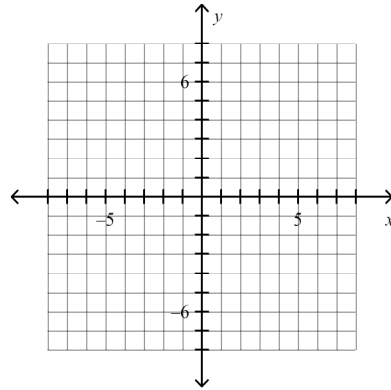
2.  $y^2 - \frac{x^2}{16} = 1$



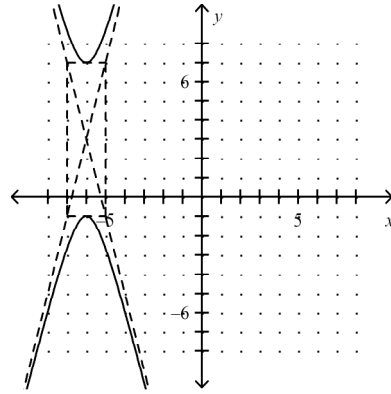
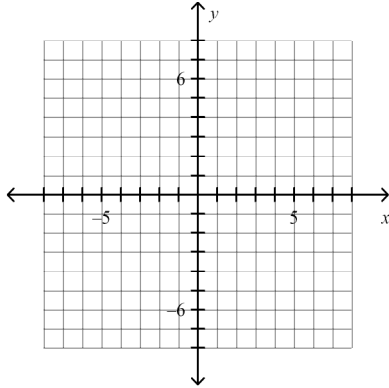
3.  $(x-4)^2 - (y-3)^2 = 1$



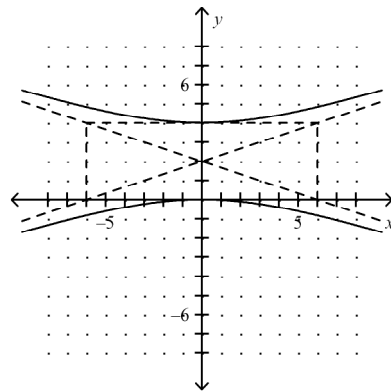
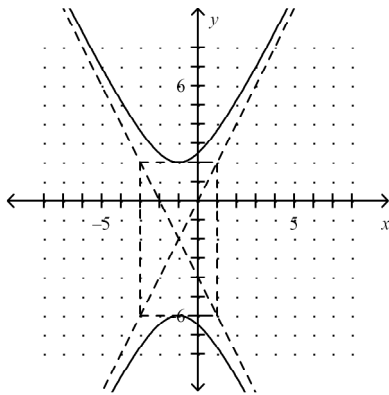
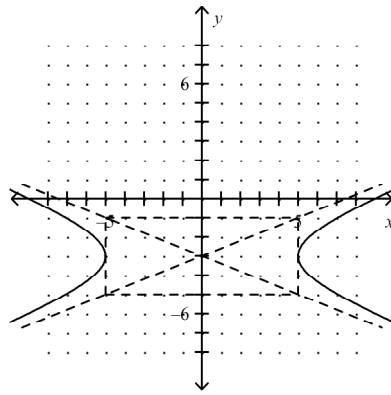
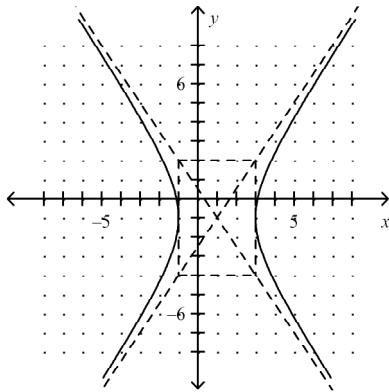
4.  $\frac{(y-1)^2}{4} - \frac{(x+2)^2}{25} = 1$



5. 
$$\frac{(x+2)^2}{25} - \frac{(y-1)^2}{4} = 1$$

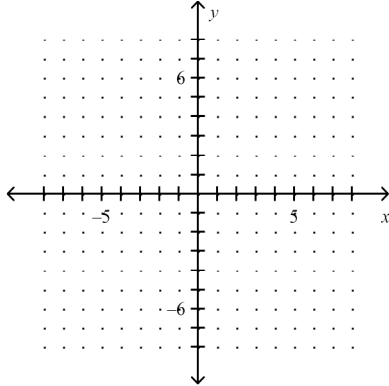


**Give an equation in standard form for the given hyperbolas.**

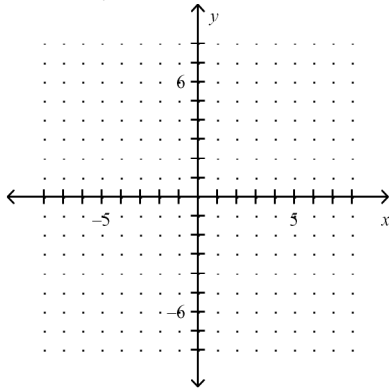


**Solve the equation given from general form to standard form. Then graph the hyperbola.**

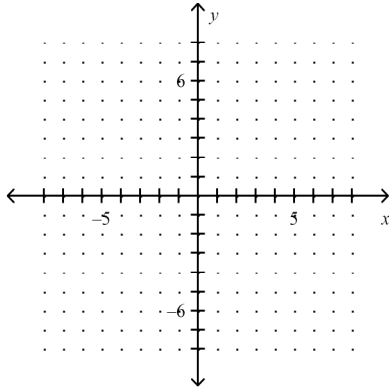
11.  $9x^2 - y^2 - 36x - 6y + 18 = 0$



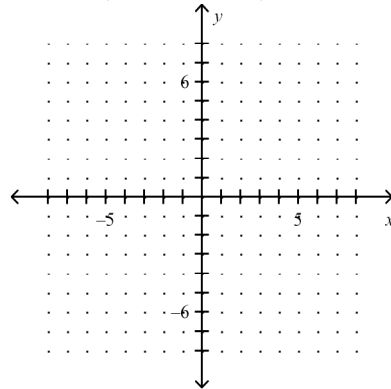
12.  $9x^2 - 16y^2 + 144 = 0$



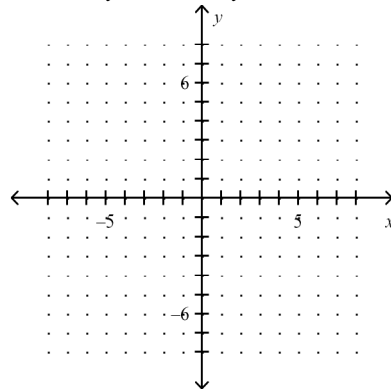
13.  $-25x^2 + 9y^2 - 150x - 36y + 36 = 0$



14.  $3x^2 - 12y^2 - 18x - 24y + 12 = 0$



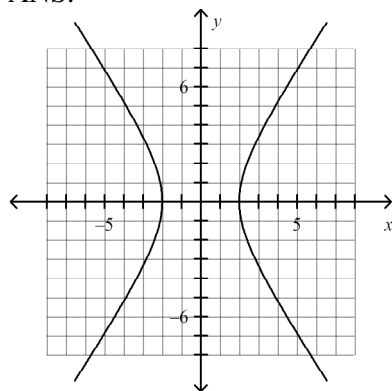
15.  $9x^2 - 16y^2 - 8x - 6y - 7 = 0$



## A2- Hyperbolas Answer Section

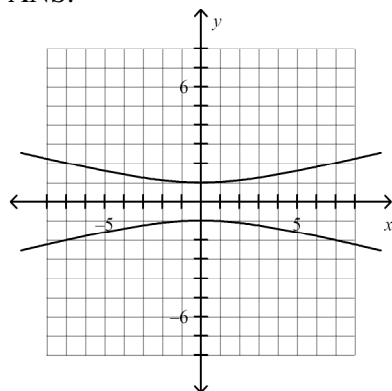
### SHORT ANSWER

1. ANS:



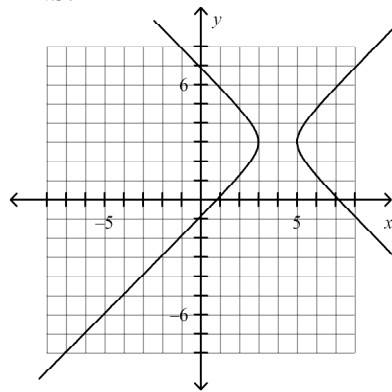
PTS: 1

2. ANS:



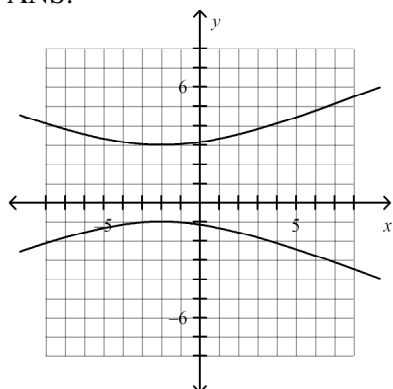
PTS: 1

3. ANS:



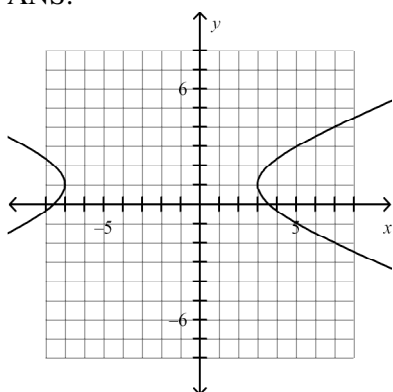
PTS: 1

4. ANS:



PTS: 1

5. ANS:



PTS: 1

6. ANS:

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

PTS: 1

7. ANS:

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

PTS: 1

8. ANS:

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

PTS: 1

9. ANS:

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

PTS: 1

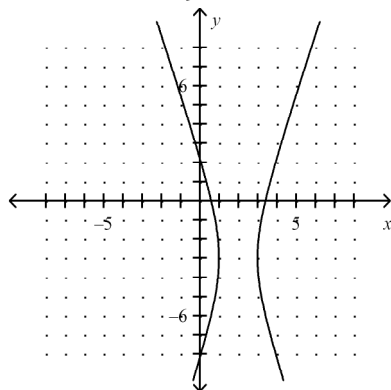
10. ANS:

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

PTS: 1

11. ANS:

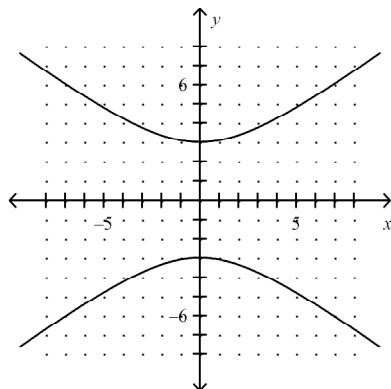
$$\frac{(x-2)^2}{1} - \frac{(y+3)^2}{9} = 1$$



PTS: 1

12. ANS:

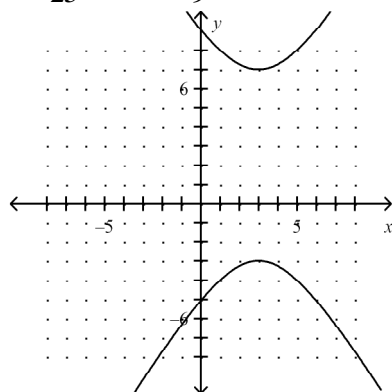
$$\frac{y^2}{9} - \frac{x^2}{16} = 1$$



PTS: 1

13. ANS:

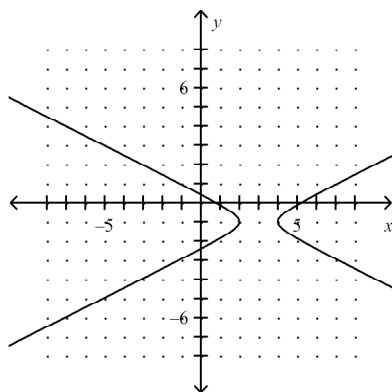
$$\frac{(y-2)^2}{25} - \frac{(x-3)^2}{9} = 1$$



PTS: 1

14. ANS:

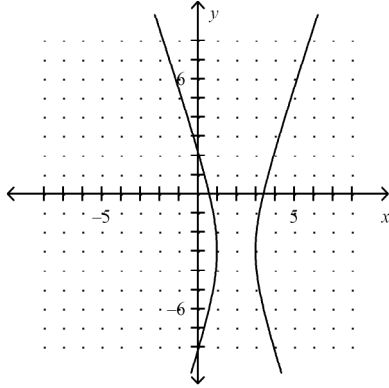
$$(x-3)^2 - 4(y+1)^2 = 1 \quad \text{--- OR (EASIER TO GRAPH)---} \quad (x-3)^2 - \frac{(y+1)^2}{1/4} = 1$$



PTS: 1

15. ANS:

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



PTS: 1