

Graphing and Properties of Parabolas

Identify the vertex, *focus,* *directrix*

1)  $y = 2(x + 10)^2 + 1$

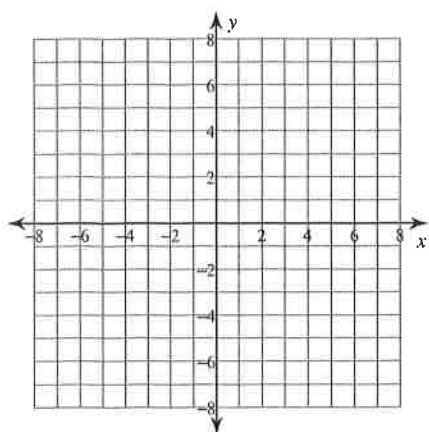
2)  $y = -\frac{1}{3}(x - 7)^2 + 1$

5)  $y = x^2 + 4x - 5$

6)  $y = 2x^2 + 8x + 16$

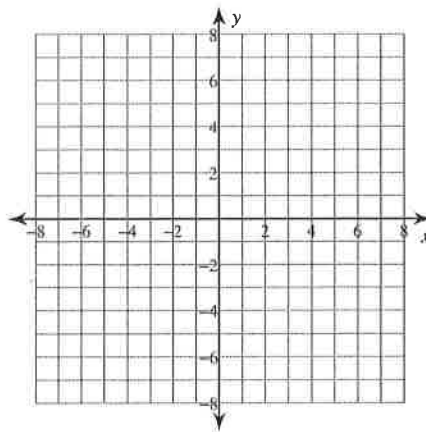
Graph each equation.

7)  $y = 2x^2$



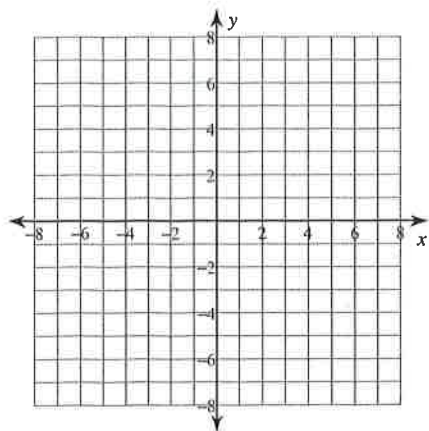
*vertex*  
*focus*  
*directrix*

8)  $x = \frac{1}{4}y^2$



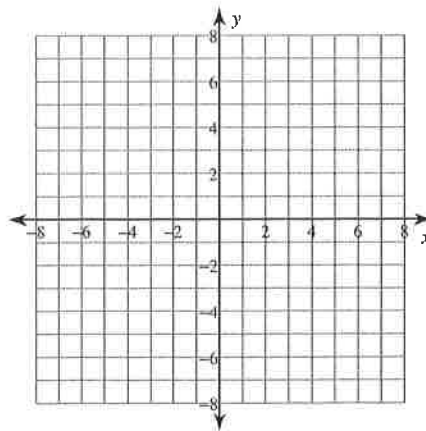
*Vertex*  
*focus*  
*directrix*

9)  $y = -(x - 3)^2 - 1$



*Vertex*  
*focus*  
*directrix*

10)  $x = -(y + 3)^2 + 4$



*Vertex*  
*focus*  
*directrix*