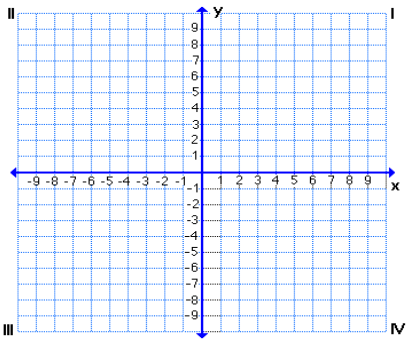
Pre-Calculus **Parabolas HW Worksheet** **Name**_____
Day 1

Graph the parabola and identify the vertex, directrix, focus, and axis of symmetry.

1. $y^2 = 16x$



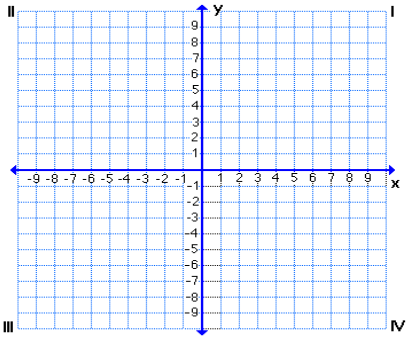
Vertex

Focus

Directrix

Axis of Symmetry

2. $y^2 = -8x$



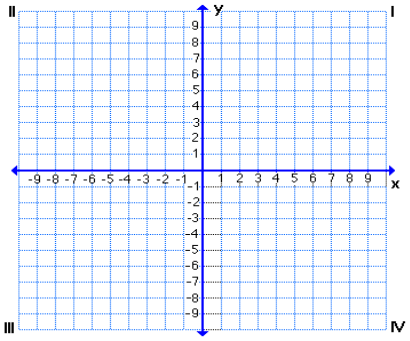
Vertex

Focus

Directrix

Axis of Symmetry

3. $x^2 = 12y$



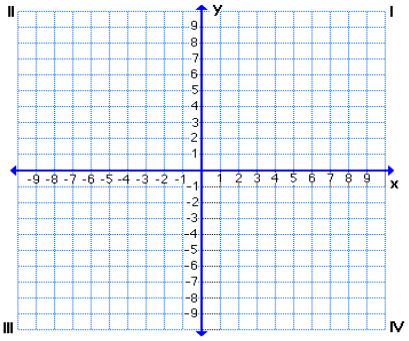
Vertex

Focus

Directrix

Axis of Symmetry

4. $x^2 + 16y = 0$



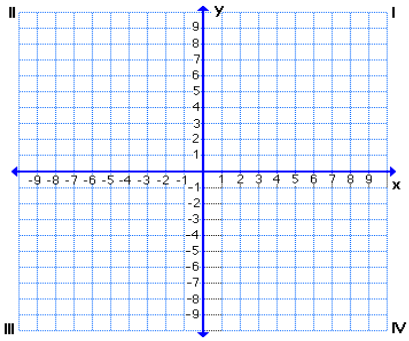
Vertex

Focus

Directrix

Axis of Symmetry

5. $(x-2)^2 = 8(y-1)$



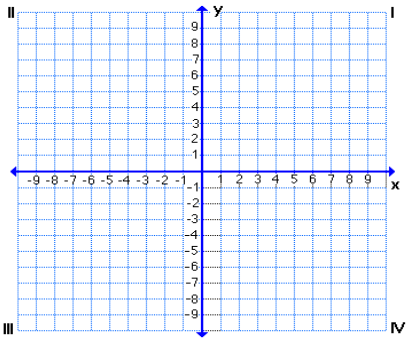
Vertex

Focus

Directrix

Axis of Symmetry

6. $(x+1)^2 = -8(y+1)$



Vertex

Focus

Directrix

Axis of Symmetry

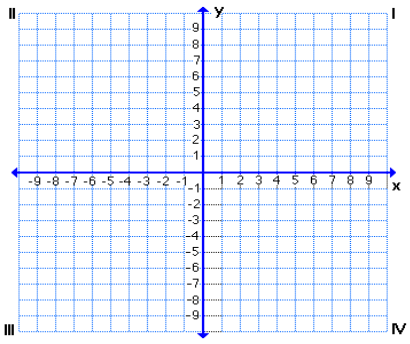
7. $(y+3)^2 = 12(x+1)$

Vertex

Focus

Directrix

Axis of Symmetry



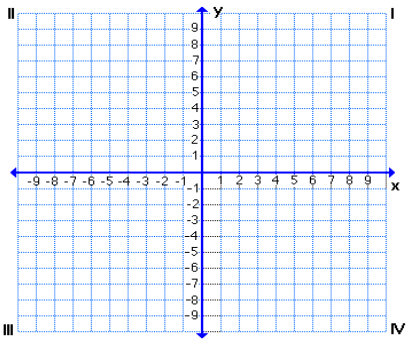
8. $(y+1)^2 = -8x$

Vertex

Focus

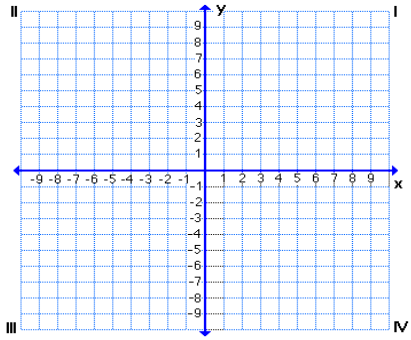
Directrix

Axis of Symmetry

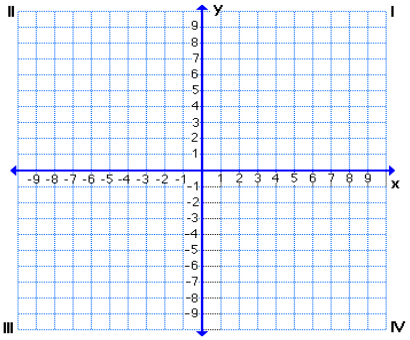


Write an equation in standard form for the parabola satisfying the given conditions.

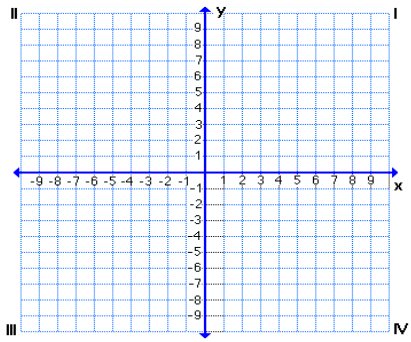
9. Focus: $(7,\ 0)$; Directrix: $x = -7$



10. Focus: $(-5,\ 0)$; Directrix: $x = 5$



11. Focus : $(0,\ 15)$; Directrix: $y = -15$



12. Focus: $(0, -25)$; Directrix: $y = 25$