Graph each parabola and compute the coordinates of the vertex and focus and the equations for the axis of symmetry and directrix.

1. 2. 3.

 

Identify the coordinates of the focus & vertex and identify equations for the line of symmetry and directrix for each parabola. Then sketch a graph of each parabola.

4. 5.

 

Write an algebraic equation for each parabola defined by the given information. Then sketch a graph of each parabola.

6. Vertex at (0,1); Focus at (0, -1).



7. Focus at (5,2); Directrix at x = 0



Determine the equation of the parabola defined by the given focus or directrix with the vertex at the origin.

8. Focus at (12, 0) 9. Directrix at x = 5 10. Focus at (0, 1.5)