Algebra I

Name:_____

Period:_____ Date:_____

Worksheet 10.2

Find the equation of the axis of symmetry and the coordinates of the vertex of the graph of each function.

1. $y = x^2 - 10x + 2$

Axis of symmetry:_____

Vertex:_____

2. $y = x^2 + 12x - 9$

Axis of symmetry:_____

Vertex:_____

3. $y = -x^2 + 2x + 1$

Axis of symmetry:_____

Vertex:_____

4. $y = 3x^2 + 18x + 9$

Axis of symmetry:_____

Vertex:_____

5. $y = 3x^2 + 3$

Axis of symmetry:_____

Vertex:_____

6. $y = 16x - 4x^2$

Axis of symmetry:_____

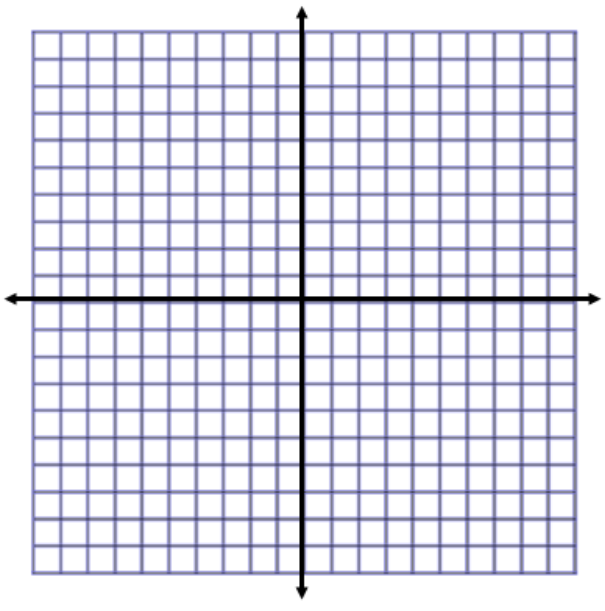
Vertex:_____

Graph each quadratic equation. Make sure you find the vertex and axis of symmetry first.

7. $y = x^2 - 6x + 4$

Axis of symmetry:_____

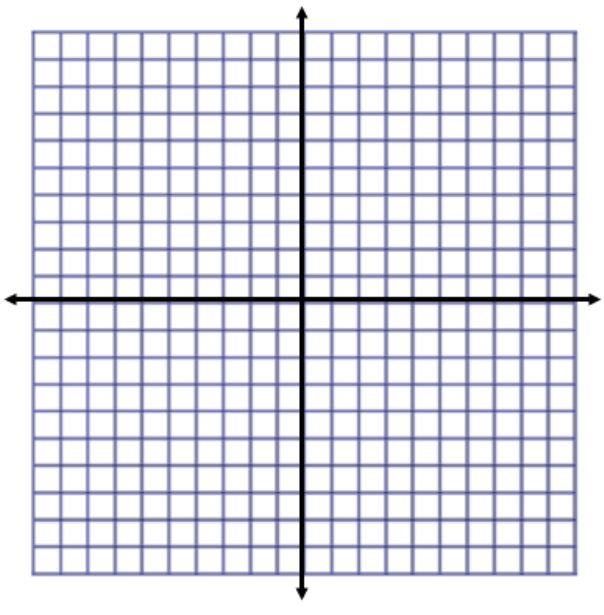
Vertex:_____



8. $y = x^2 + 4x - 1$

Axis of symmetry:_____

Vertex:_____

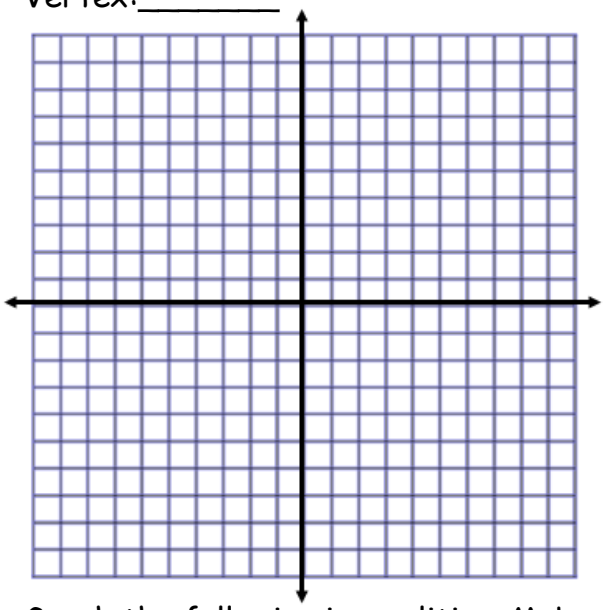


Graph each quadratic equation. Make sure you find the vertex and axis of symmetry first.

9. $y = -2x^2 - 8x + 5$

Axis of symmetry:_____

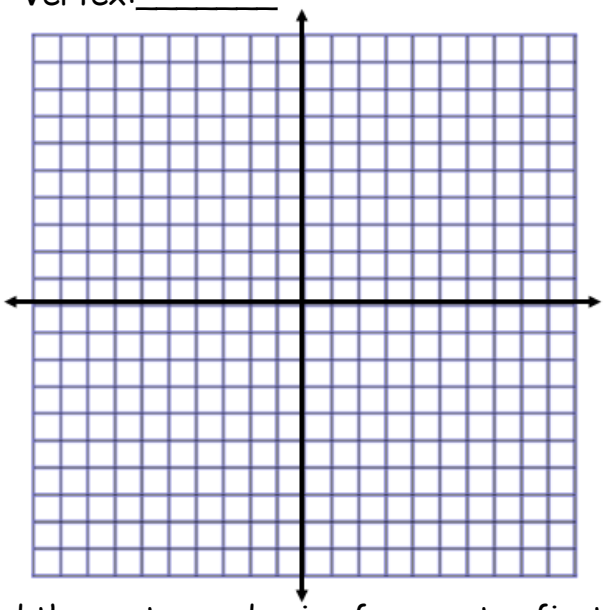
Vertex:_____



10. $y = -3x^2 + 6$

Axis of symmetry:_____

Vertex:_____

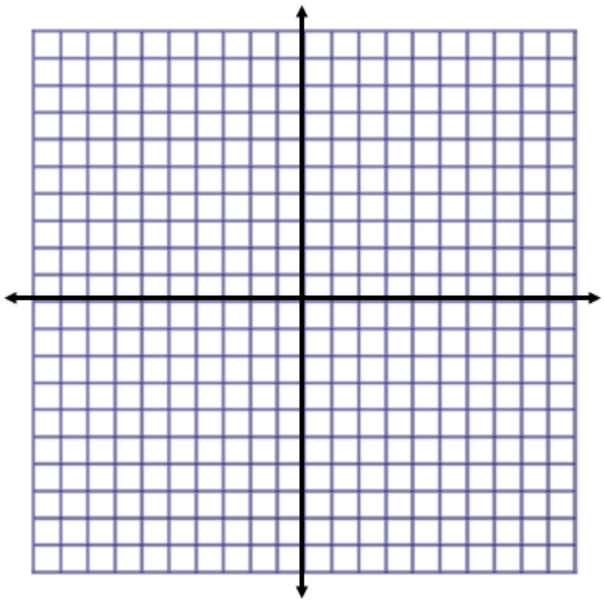


Graph the following inequalities. Make sure you find the vertex and axis of symmetry first.

11. $y > x^2 + 6x + 3$

Axis of symmetry:_____

Vertex:_____



12. $y \leq -3x^2 + 6x + 1$

Axis of symmetry:_____

Vertex:_____