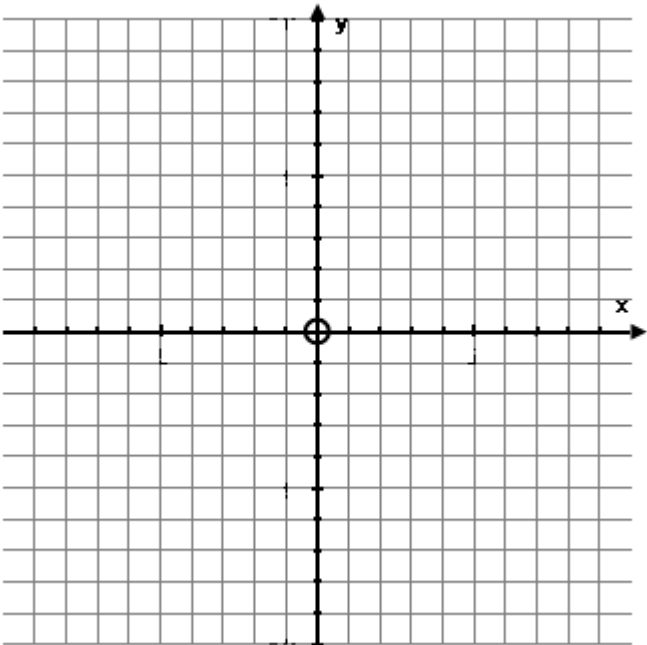


1. Graph the equation $y = -x^2 + 2x + 3$. Be sure to include the vertex, intercepts, and at least two other specific points.

x	y	(x, y)

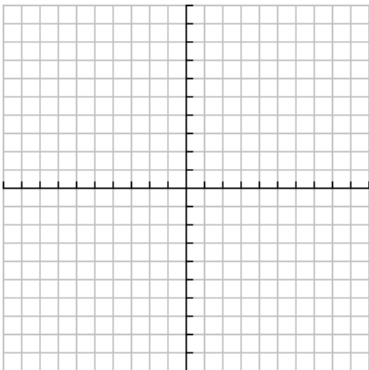


Now answer the following questions about the function:

- a. What is the name of the graph of this function? _____
- b. What is the orientation (direction of opening) of the graph of this function? _____
- c. Does this function have a minimum or maximum value (select one)? _____
- d. What is the minimum or maximum value of this function? _____
- e. What is the y-intercept of this function? _____
- f. What are the coordinates of the vertex of this function? _____
- g. What is the equation of the axis of symmetry of this function? _____
- h. How many solutions/roots/zeros does this function have? _____
- i. What are the x-intercepts or the solutions/roots/zeros of this function? _____

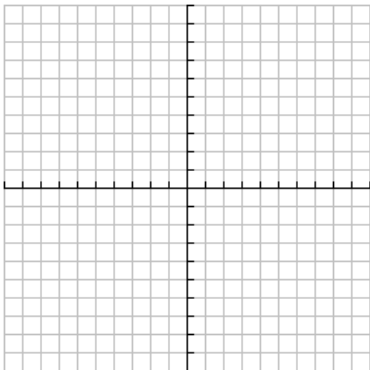
Graph the following functions.

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



Axis of Symmetry:
Vertex:

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



X-intercepts:
Axis of Symmetry:
Vertex:

Write the following quadratic functions in standard form.

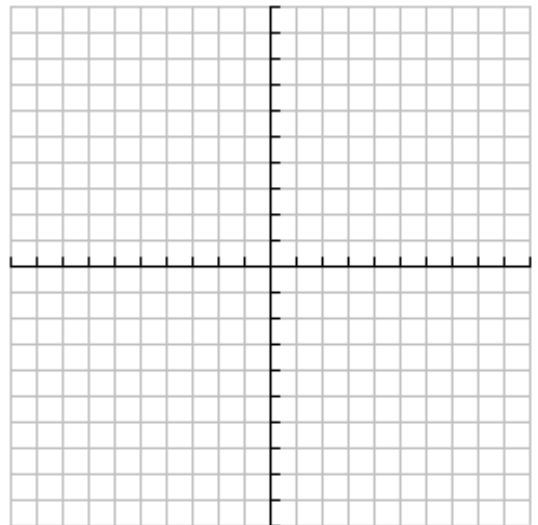
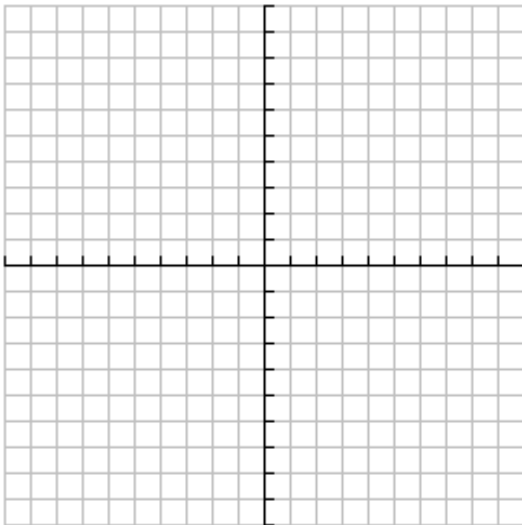
4. $y = 2(x + 3)(x - 1)$

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

Graph the following quadratic inequalities. Be sure to include the vertex, intercepts, and at least two other specific points.

6. $y < -x^2 + 4x + 5$

7. $y \geq x^2 + 2x - 3$
 $y < x^2 + 2x + 1$



Write a quadratic function whose graph has the given characteristics.

8. x-intercepts: -3, 2 and point: (3, 12)

9. vertex: (2, 7) and point: (4, 2)

10. passes through the points (5, 2), (0, 2), and (8, -6)