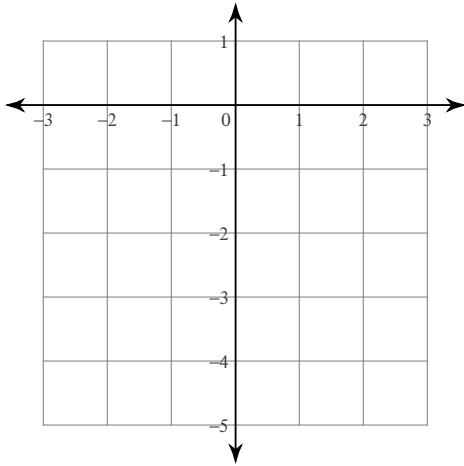


Graphing Quadratic Functions

Identify the line of symmetry and vertex for each quadratic equation. Then, sketch the graph.

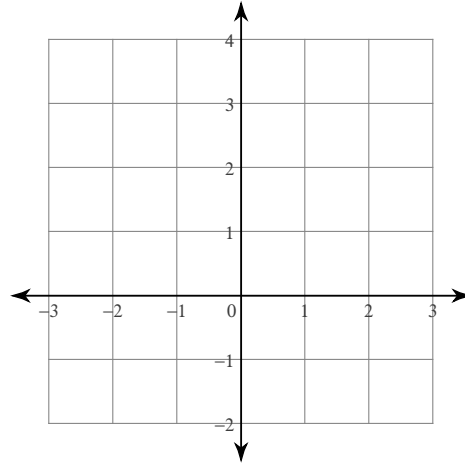
1) $y = -x^2$



line of symmetry _____

vertex _____

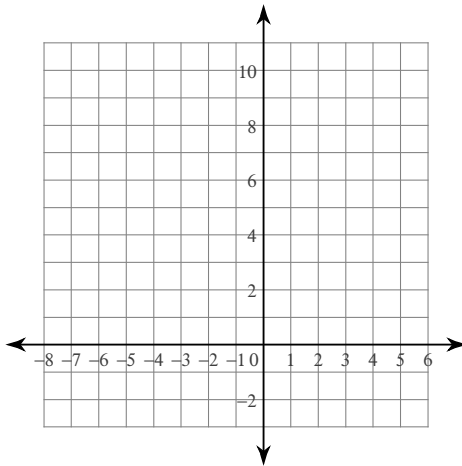
2) $y = \frac{1}{2}x^2$



line of symmetry _____

vertex _____

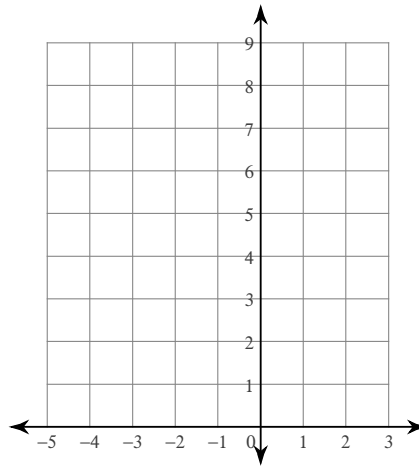
3) $y = 3x^2 + 6x + 1$



line of symmetry _____

vertex _____

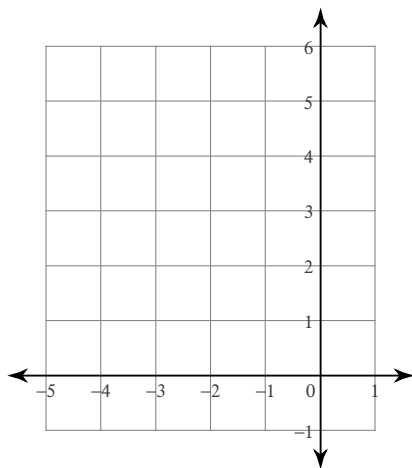
4) $y = x^2 + 2x + 5$



line of symmetry _____

vertex _____

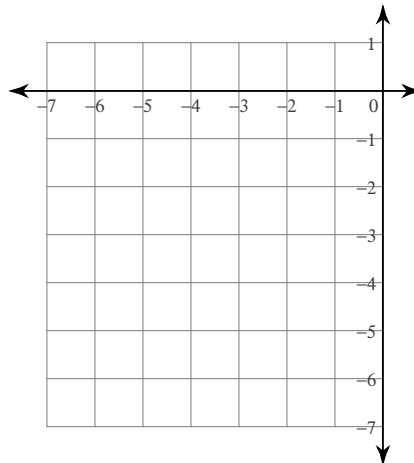
5) $y = \frac{1}{2}x^2 + 2x + 4$



line of symmetry _____

vertex _____

6) $y = -x^2 - 8x - 17$



line of symmetry _____

vertex _____

Circle the correct answer. For the incorrect answer, explain why it is incorrect.

7. Which of the following is the vertex of $y = x^2 - 2x - 1$? For the incorrect answers, explain what part of the graph it is.

a. (1, -2) _____ b. (0, -1) _____

c. (2.41, 0) _____ d. x=1 _____

8. What is the axis of symmetry of $y = x^2 - 3x - 4$? For the incorrect answers, explain what that number represents in the equation.

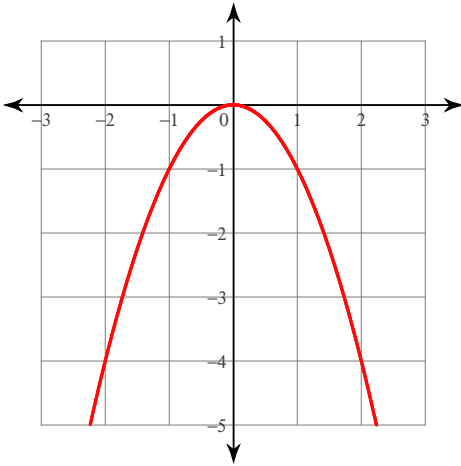
a. x = 4 _____ b. x = -1 _____

c. x = -4 _____ d. x = 1.5 _____

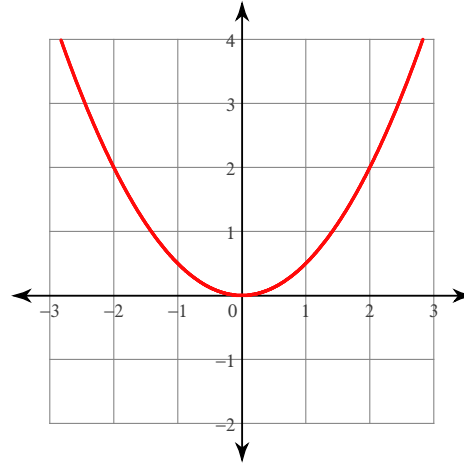
Graphing Quadratic Functions

Sketch the graph of each function.

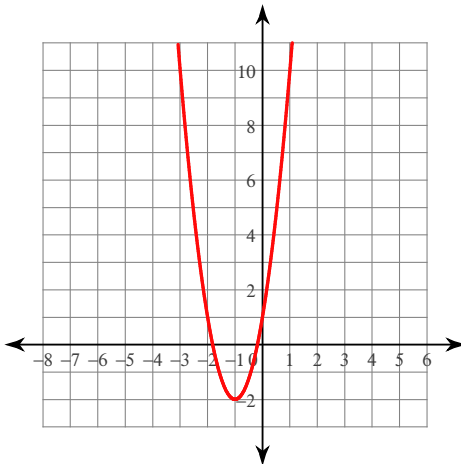
1) $y = -x^2$



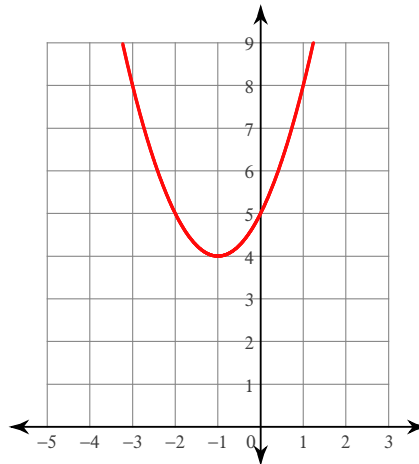
2) $y = \frac{1}{2}x^2$



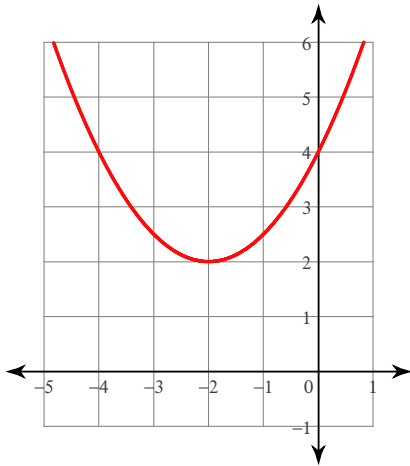
3) $y = 3x^2 + 6x + 1$



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



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



6) $y = -x^2 - 8x - 17$

