

Name:

Date:

Period:

# Practice Worksheet: Graphing Quadratic Functions in Vertex Form

For #1-6, label the axis of symmetry, vertex, y-intercept, and at least three more points on the graph.

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

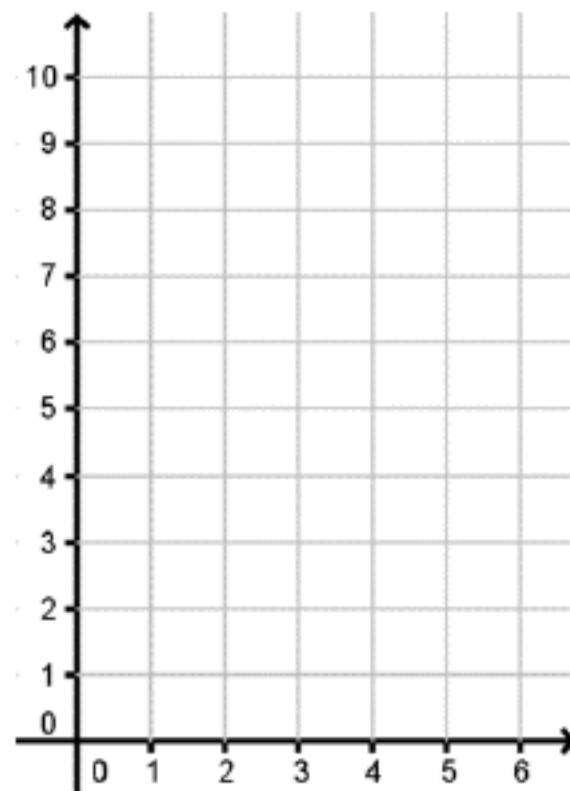
Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$



2]  $y = -(x + 3)^2 + 5$

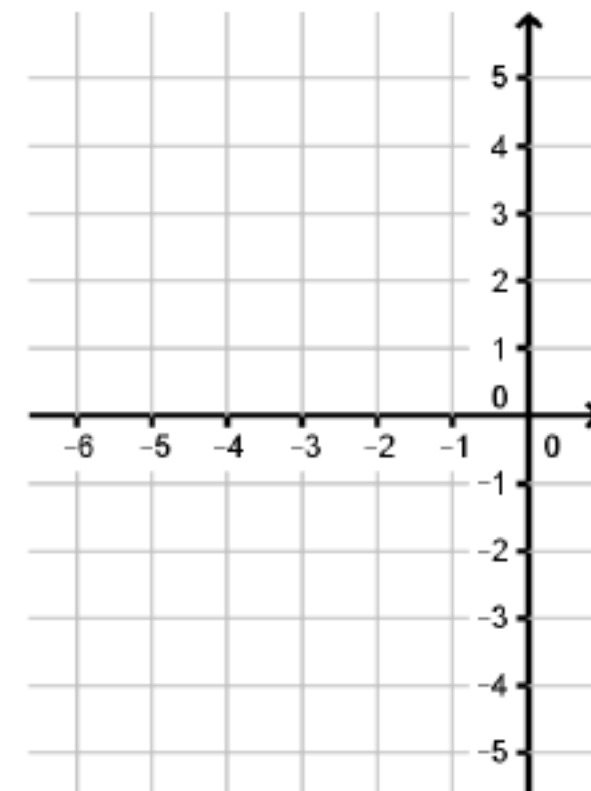
Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$



3]  $y = 2(x + 1)^2 - 3$

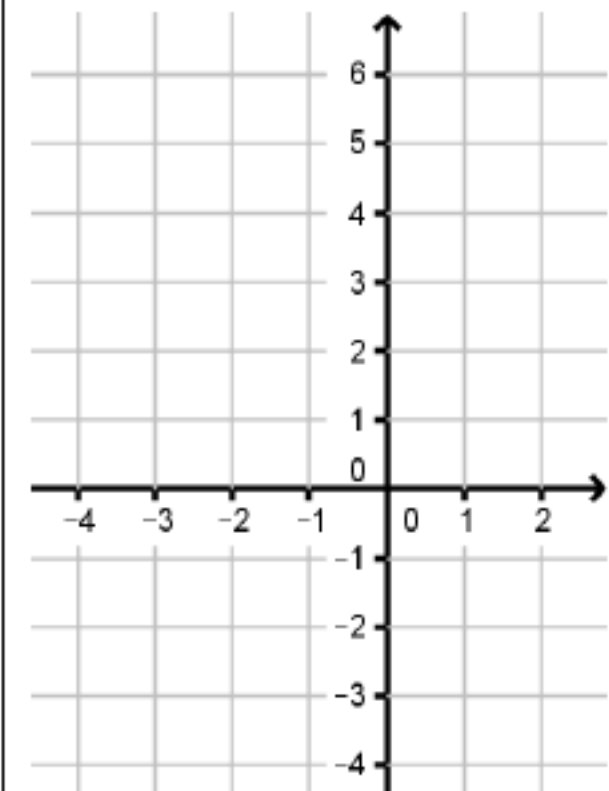
Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$



4]  $y = -2(x - 2)^2 - 1$

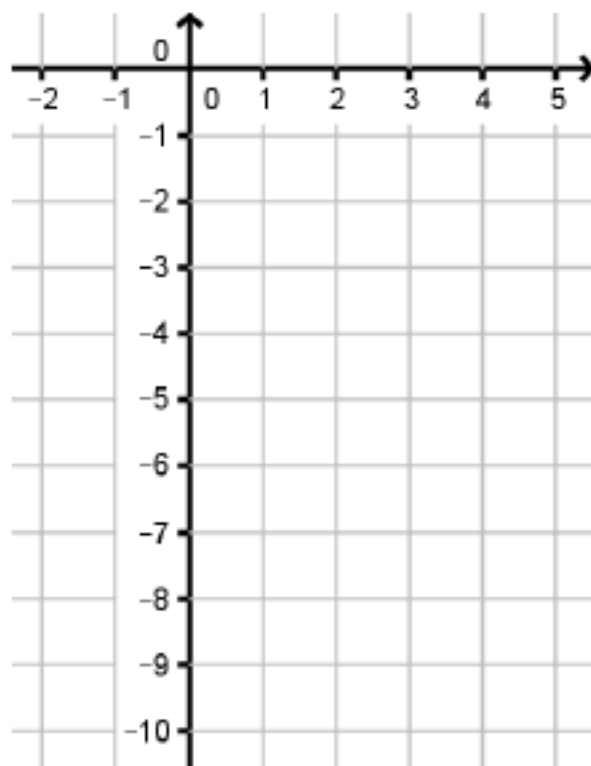
Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$



5]  $y = \frac{1}{2}(x - 3)^2 + 2$

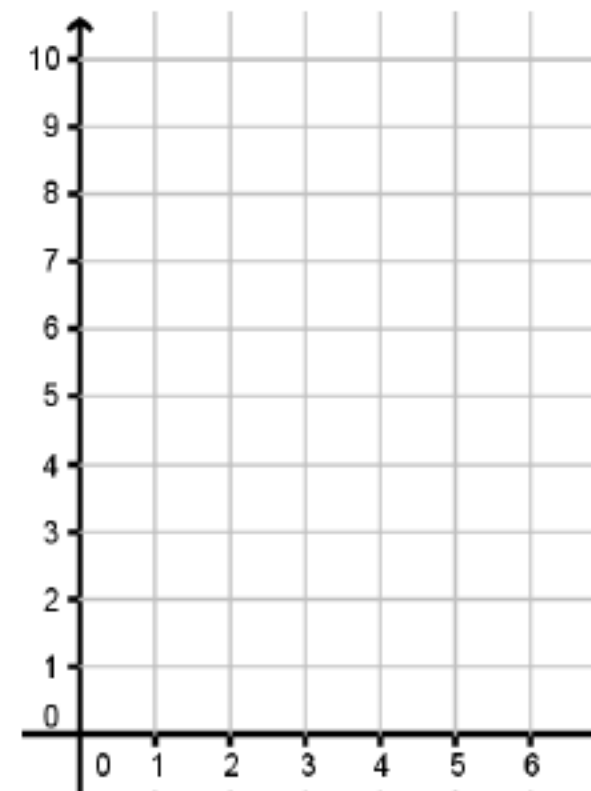
Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$



6]  $y = -\frac{1}{4}(x + 2)^2 + 1$

Axis of Symmetry is  $x = \underline{\hspace{2cm}}$

Vertex:  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Opens up or down?

Slope to point one unit from the vertex is  $\underline{\hspace{2cm}}$ .

y-intercept:  $(0, \underline{\hspace{1cm}})$

