

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Topic: \_\_\_\_\_

Class: \_\_\_\_\_

Main Ideas/Questions	Notes/Examples
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Steps to Graph a  
**QUADRATIC EQUATION**

- |          |   |
|----------|---|
| <b>1</b> | Find the <b>axis of symmetry</b> .  |
| <b>2</b> | Find the <b>vertex</b> .  |
| <b>3</b> | Put the vertex in the middle row of the table. Fill in a table of values using your calculator. |
| <b>4</b> | Plot the points and connect them into a smooth parabola!  |

EXAMPLES

**Directions:** Graph each quadratic equation using a table. Identify the axis of symmetry, vertex, domain, and range.

1.  $y = x^2$

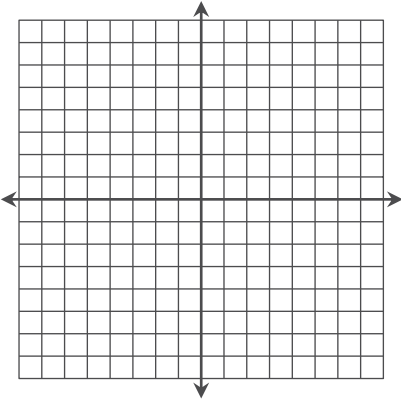
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

x	y



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

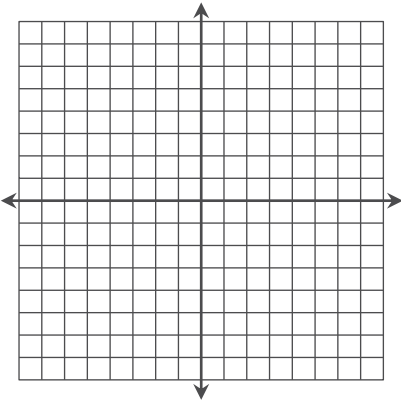
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

x	y



3.  $y = -x^2 - 8x - 17$

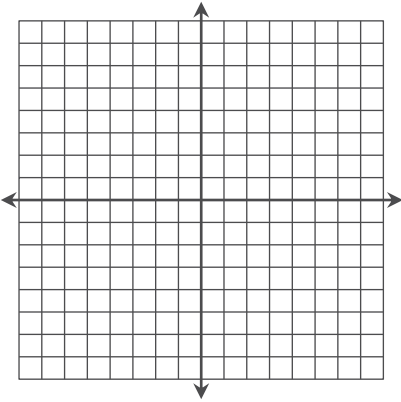
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

x	y



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

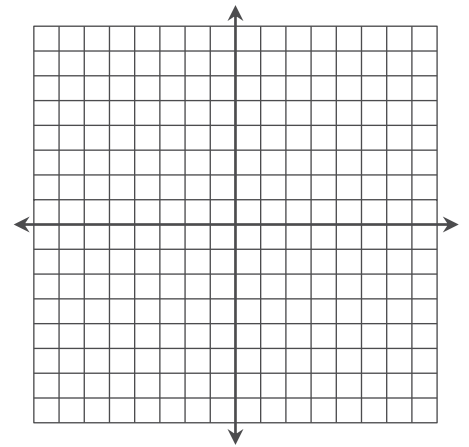
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



5.  $y = x^2 - 6x + 11$

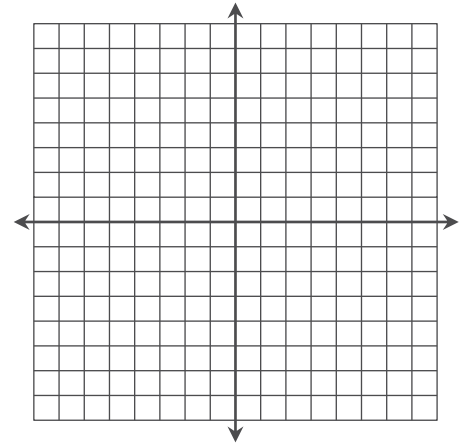
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



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

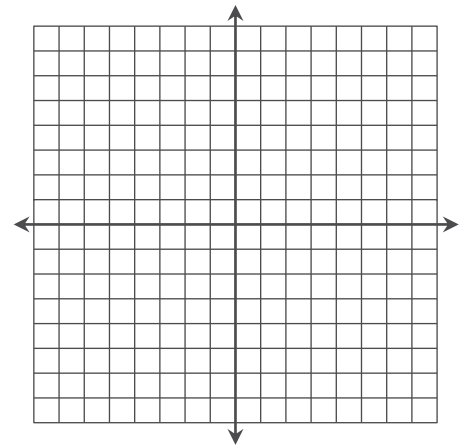
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



7.  $y = 2x^2 + 8x$

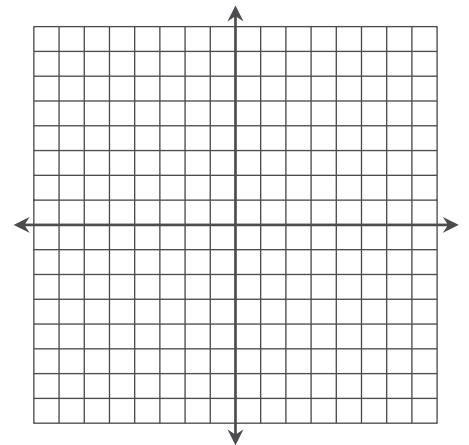
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



8.  $y = -x^2 + 4x + 3$

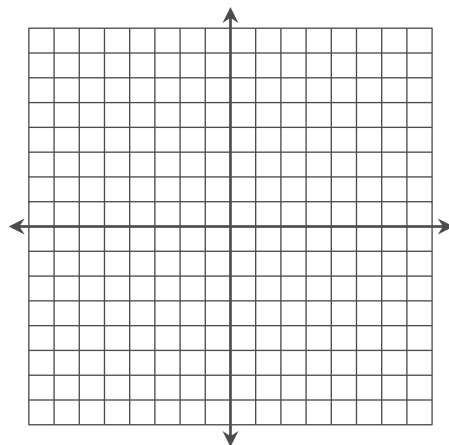
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



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

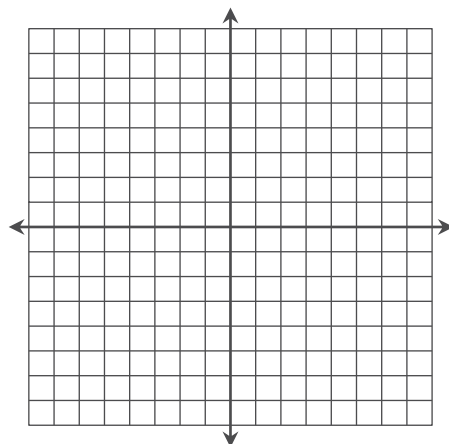
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



10.  $y = -3x^2 - 18x - 20$

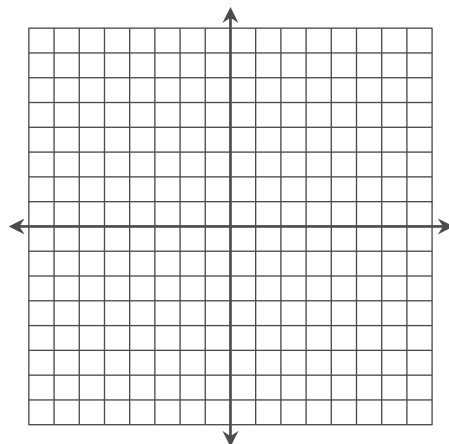
Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$



11.  $y = \frac{1}{2}x^2 - 6x + 11$

Axis of Symmetry: \_\_\_\_\_

Vertex: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

$x$	$y$

