

**Algebra 1**  
**8.3 Worksheet #2**

Name \_\_\_\_\_

**In 1 and 2, find the coordinates of the vertex.**

1.  $y = \frac{3}{4}x^2 + 6x - 5$

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

**In 3 and 4, state whether the function has a minimum or maximum value. Then find the value. (Hint: Find the vertex!)**

3.  $y = 3x^2 + 12x - 4$

4.  $y = -\frac{3}{5}x^2 - 30x$

**In 5 - 7, sketch a graph of the following functions. Label the vertex.**

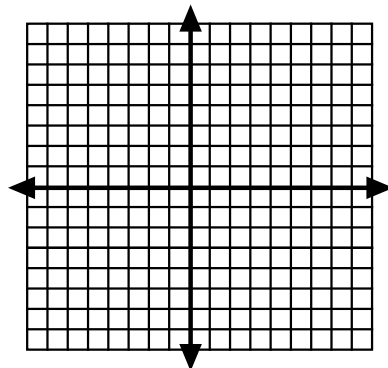
5.  $y = x^2 - 6x + 3$

a. Identify the values of a, b, and c in the function.

b. Find the x-coordinate of the vertex.

c. Make a table of values.

d. Graph the function.



e. Describe the domain and range in interval notation.

f. AOS = \_\_\_\_\_

g. max or min value: \_\_\_\_\_

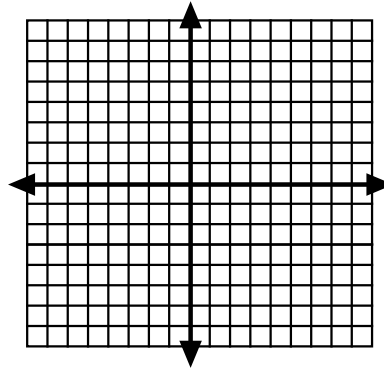
6.  $y = 2x^2 - 2x + 1$

a. Identify the values of a, b, and c in the function.

b. Find the x-coordinate of the vertex.

c. Make a table of values.

d. Graph the function.



e. Describe the domain and range in interval notation.

f. AOS = \_\_\_\_\_

g. max or min value: \_\_\_\_\_

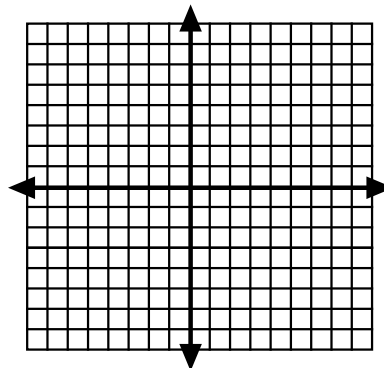
7.  $y = -\frac{1}{2}x^2 - 2x + 1$

a. Identify the values of a, b, and c in the function.

b. Find the x-coordinate of the vertex.

c. Make a table of values.

d. Graph the function.



e. Describe the domain and range in interval notation.

f. AOS = \_\_\_\_\_

g. max or min value: \_\_\_\_\_