

NAME:

DATE:

**A2.Q2.BERMELLEEMBO: THE QUADRATIC FUNCTION'S GRAPH**

**DAY G1  
(GRAPHING AND ANALYSIS)**

**MASTERY PRACTICE**

**INTENTIONALLY BLANK**

1.  $f(x) = (x+4)^2 - 9$        $a = \underline{\underline{1}}$

Is the graph of  $y = f(x)$  concave up or concave down? How do you know?

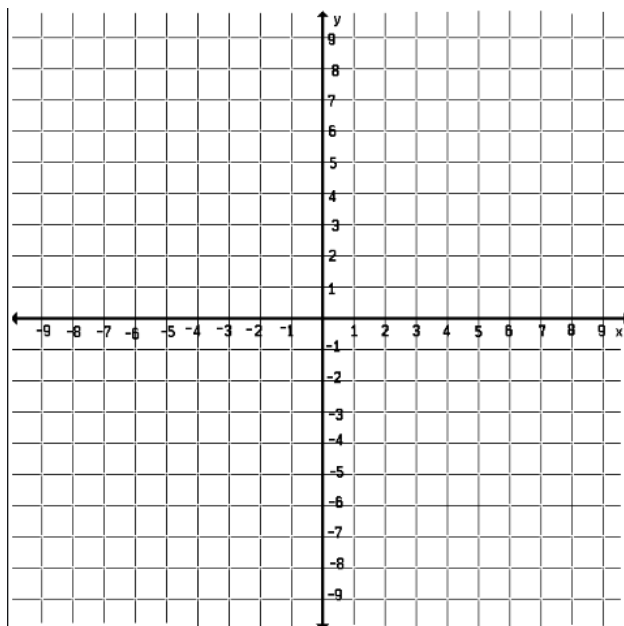
Equation for Axis of Symmetry:

Coordinates of Vertex:

Table of Values:

| $x$ | $y$ |
|-----|-----|
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |

Graph. Label the axis of symmetry and vertex.



What are the zero(s) of the function?

Is the vertex a maximum or a minimum?

State the Domain

State the Range

2.  $f(x) = -2(x-5)^2 + 8$        $a = \underline{\hspace{2cm}}$

Is the graph of  $y = f(x)$  concave up or concave down? How do you know?

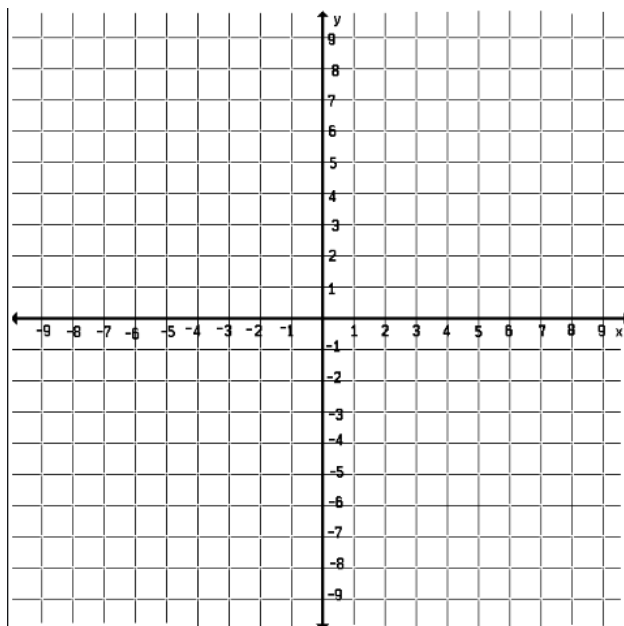
Equation for Axis of Symmetry:

Coordinates of Vertex:

Table of Values:

Graph. Label the axis of symmetry and vertex.

| $x$ | $y$ |
|-----|-----|
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |



What are the zero(s) of the function?

Is the vertex a maximum or a minimum?

State the Domain

State the Range

3.  $f(x) = 3x^2 + 12x + 9$        $a = \underline{\hspace{2cm}}$      $b = \underline{\hspace{2cm}}$      $c = \underline{\hspace{2cm}}$

Is the graph of  $y = f(x)$  concave up or concave down? How do you know?

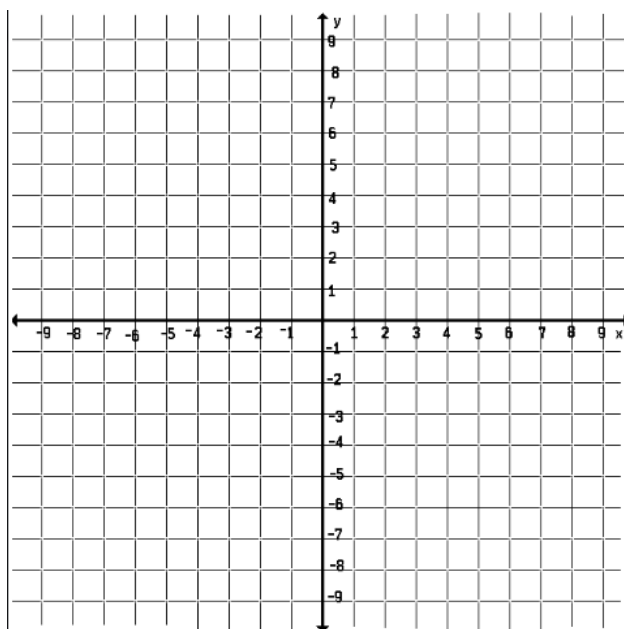
Equation for Axis of Symmetry:

Coordinates of Vertex:

Table of Values:

Graph. Label the axis of symmetry and vertex.

| $x$ | $y$ |
|-----|-----|
|     |     |
|     |     |
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|     |     |
|     |     |
|     |     |



What are the zero(s) of the function?

Is the vertex a maximum or a minimum?

State the Domain

State the Range

4.  $f(x) = -2x^2 + 24x - 70$        $a = \underline{\hspace{2cm}}$      $b = \underline{\hspace{2cm}}$      $c = \underline{\hspace{2cm}}$

Is the graph of  $y = f(x)$  concave up or concave down? How do you know?

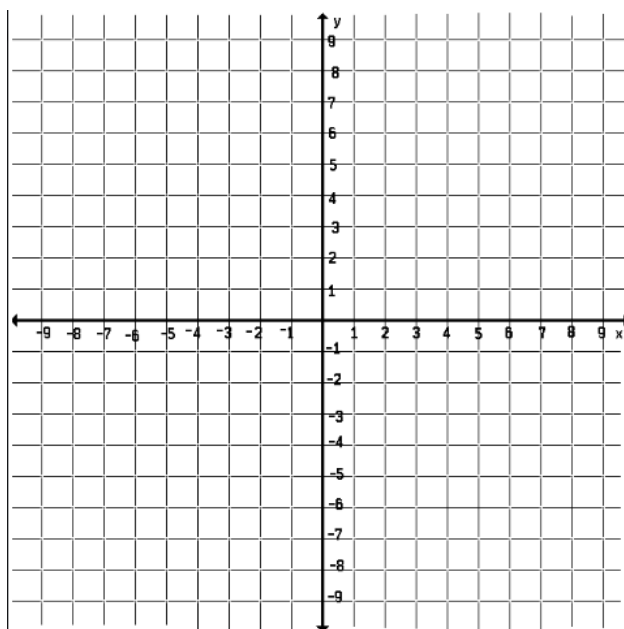
Equation for Axis of Symmetry:

Coordinates of Vertex:

Table of Values:

| $x$ | $y$ |
|-----|-----|
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |
|     |     |

Graph. Label the axis of symmetry and vertex.



What are the zero(s) of the function?

Is the vertex a maximum or a minimum?

State the Domain

State the Range