NAME:

DATE:

A2.Q2.BERMELLEMBO: THE QUADRATIC FUNCTION'S GRAPH

DAY G3

(GRAPHING AND ANALYSIS)

REVIEW-MASTERY PRACTICE

1. $f(x)=(x+2)^2-9$ ***a* = ___1___**

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

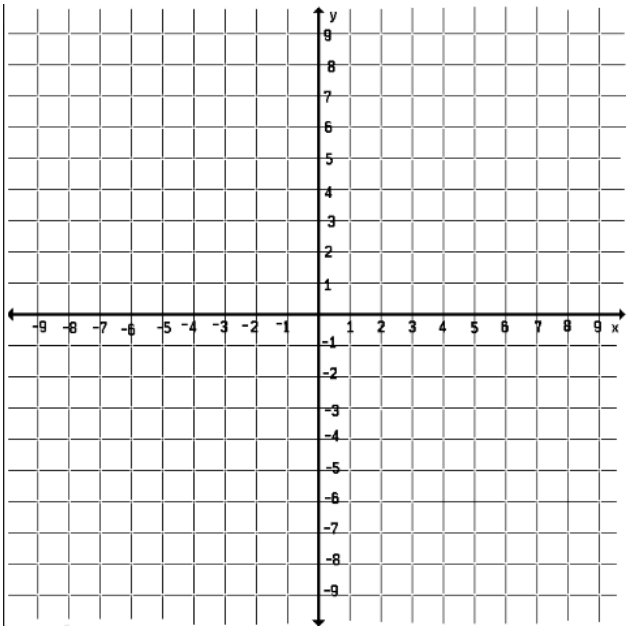
Equation for Axis of Symmetry:

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. $f(x) = -2x^2 + 12x - 10$ **a = _____ b = _____ c = _____**

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

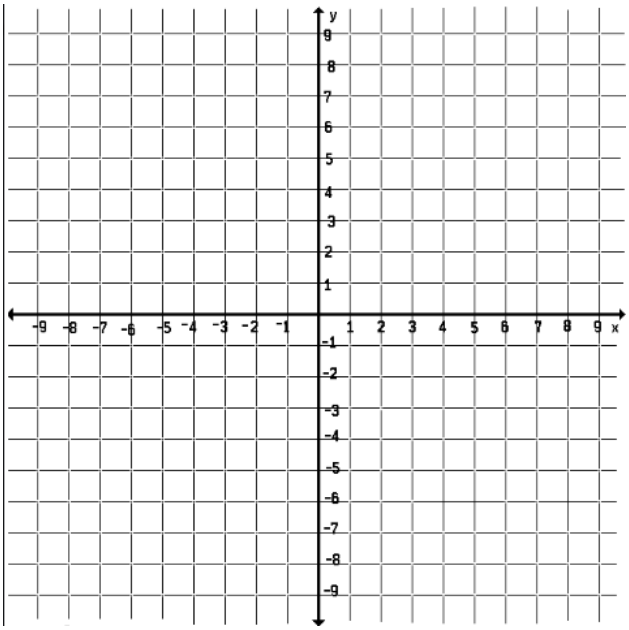
Equation for Axis of Symmetry:

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

3. The height (in feet) of an object shot into the air after t seconds is modeled by the function $h(t) = -16(t - 2.3)^2 + 178$

State the Function Type and Shape:

State the vertex:

State the concavity:

A. Determine the amount of time it took the object to reach its maximum height.
Include Units of Measure

B. Determine the maximum height of the object in flight.
Include Units of Measure

C. What was the height of the object the instant it was fired?
Include Units of Measure

D. Draw a quick sketch of the object in flight. Label your graph with the elements from parts A, B, and C

4. The height (in feet) of a ball kicked in the air after t seconds is modeled by the function $h(t) = -16t^2 + 48t + 1.75$

STATE THE VERTEX:

ROUND ANSWERS TO THE NEAREST HUNDREDTHS AND INCLUDE UNITS OF MEASURE.

A. Determine the height of the ball after $t = 1.68$ seconds. *Include Units*

B. Determine the amount of time it took the ball to reach its maximum height. *Include Units*

C. Determine the maximum height of the ball in flight. *Include Units*

D. Determine how long it took for the ball to reach the ground. *Include Units*

E. Draw a quick sketch of the ball in flight. Label key points.