

Name: _____

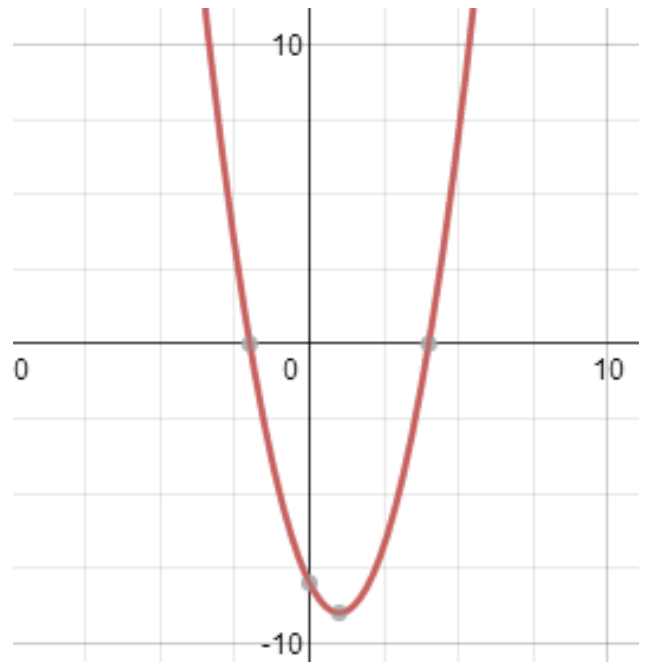
Date: _____

Recall A quadratic function can be written in

- Standard Form
- Factored Form
- Vertex Form

Example On the following graph identify the following features:

- a. vertex,
- b. axis of symmetry,
- c. x -intercept, and
- d. y -intercept.
- e. Predict whether a , b , and c are positive, negative or zero.
- f. Does the function have a maximum or a minimum value? What is it?



Example Consider the quadratic function $y = x^2 - 6x + 5$.

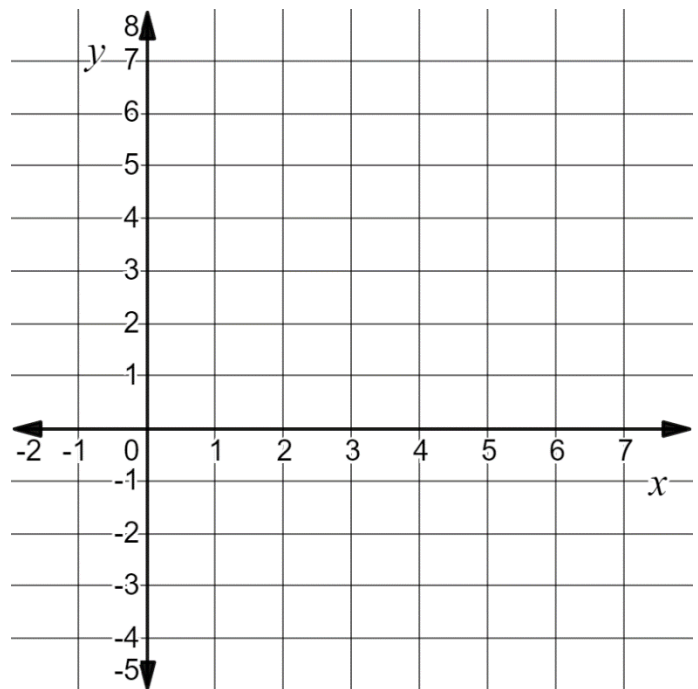
- From this form of the equation we know the
- If we factor this equation, we will know the
- We can find the vertex by
- The axis of symmetry

Complete the table of values (if necessary) and then graph the function.

x	0	1	2	3	4	5	6
y							

Determine the following features.

- y -intercept,
- x -intercept,
- vertex, and
- axis of symmetry.
- Does the function have a maximum or a minimum value? What is it?
- Domain
- Range



Example Show that points $(3, 24)$ and $(-5, 24)$ lie on the parabola defined by the function

$$f(x) = 2x^2 + 4x - 6$$

- Does $f(x)$ have a maximum or minimum value?
- Determine the coordinates of the vertex.

Example Factor the equation below. From your factorization, find the equation of the axis of symmetry, and through that, the vertex. State the domain and range of the function.

a. $y = -x^2 - 2x + 3$

Axis of symmetry	
Domain	
Range	
Coordinates of the vertex	

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

Axis of symmetry	
Domain	
Range	
Coordinates of the vertex	