## Section 7.2 Properties of Graphs Of Quadratic Functions

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

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

**Recall** A quadratic function can be written in one of three forms:

1.

2.

3.

**Example** On the following graph identify the following features:



| 1. <i>y</i> -intercept       | 2. <i>x</i> -intercept(s)      | 3. Equation of the axis of symmetry |
|------------------------------|--------------------------------|-------------------------------------|
| 4. Coordinates of the vertex | 5. Maximum or minimum<br>value | 6. Domain and range                 |

## Section 7.2 Properties of Graphs Of Quadratic Functions

**Example** Consider the quadratic function  $y = x^2 - 4x + 4$ . Find the *y*-intercept, then factor to find the *x*-intercept(s). Graph the function either by using these coordinates, or by completing the table of values.



## Determine the:

| 1. <i>y</i> -intercept       | 2. <i>x</i> -intercepts        | 3. Equation of the axis of symmetry |
|------------------------------|--------------------------------|-------------------------------------|
| 4. Coordinates of the vertex | 5. Maximum or minimum<br>value | 6. Domain and range                 |

Ex. #1 Consider the quadratic function  $y = -x^2 + 7x - 10$ . Find the *y*-intercept, then factor to find the *x*-intercept(s). Graph the function either by using these coordinates, or by completing the table of values.



## Determine the:

| 1. <i>y</i> -intercept       | 2. <i>x</i> -intercepts        | <ol> <li>Equation of the axis of<br/>symmetry</li> </ol> |
|------------------------------|--------------------------------|--|
| 4. Coordinates of the vertex | 5. Maximum or minimum<br>value | 6. Domain and range                                      |