Factoring:

When factoring we want to find numbers that_____

that also _____

Example: $x^2 - 2x - 8$

(   ) (   )

Factor the following quadratics:

1. $x^2 + 8x + 12$ 2. $x^2 - x - 12$

(   ) (   )   (   ) (   )

3 $x^2 + 6x - 16$ 4. $x^2 + 8x + 15$

(   ) (   )   (   ) (   )

5. $x^2 - 11x + 24$ 6. $x^2 + 5x - 14$

(   ) (   )   (   ) (   )

Complete the Square:

When completing the square we want to_____

Next we want to._____.

Example: $y = x^2 - 12x + 28$

$($ $)^2$ _____

Complete the square for the following quadratics:

1. $y = x^2 + 12x + 20$ 2. $y = x^2 + 8x + 16$

$($ $)^2$ _____ $($ $)^2$ _____

2. $y = x^2 - 10x - 15$ 4. . $y = x^2 - 18x + 80$

$($ $)^2$ _____ $($ $)^2$ _____

5. $y = x^2 + 4x + 3$ 6. $y = x^2 - 16x + 200$

$($ $)^2$ _____ $($ $)^2$ _____

Vertex Form: We can describe transformations given the vertex form equation by using the following rules.

$$- a (x - h)^2 + k$$

Vertex: (,   )   LOS: x =

State the transformations given the following quadratics:

1. $y = -2(x - 1)^2 + 1$ 2. $y = .25 (x + 3)^2 - 5$

3. $y = -(x + 6)^2 + 4$ 4. $y = 3(x - 1)^2 - 2$

5. $y = .5x^2 - 7$ 6. $y = -(x + 4)^2$

Write the equation of the quadratic where the parent function has been translated:

1. Up 3, Left 6, Reflected over the x-axis: _____

2. Vertical Stretch by 5, Down 6, Right 2: _____

3. Left 2, Reflect over the x-axis, Up 4: _____

4. Vertical Shrink of .75, Reflect over the x-axis, Up 7: _____

State the vertex and line of symmetry of the following:

1. $y = -2(x - 1)^2 + 1$ 2. $y = .25\,(x + 3)^2 - 5$

Vertex:_____ LOS:_____   Vertex:_____ LOS:_____

3. $y = -(x + 6)^2 + 4$ 4. $y = 3(x - 1)^2 - 2$

Vertex:_____ LOS:_____   Vertex:_____ LOS:_____

5. $y = .5x^2 - 7$ 6. $y = -(x + 4)^2$

Vertex:_____ LOS:_____   Vertex:_____ LOS:_____

Graphing Quadratics: We can determine a quadratic function easily by looking at a graph!

Quadratic Functions in Vertex Form:

First we want to identify the location of the vertex (_____)!

When putting it in the equation don't forget to_____.

Next we want to determine if there have been any_____!

We can do this by_____

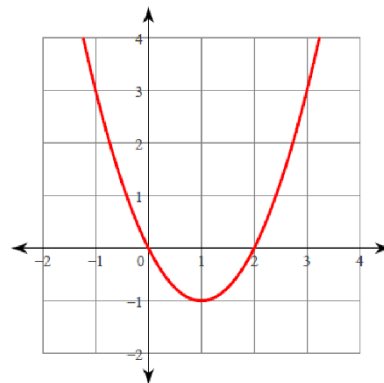Lastly, check for _____by looking to see if your graph is _____.

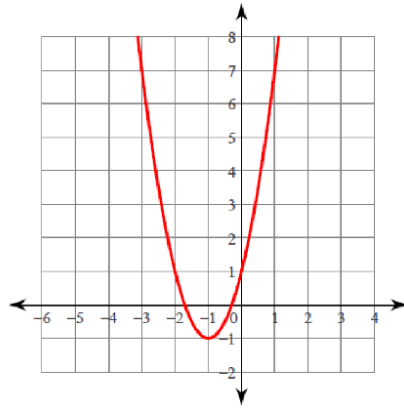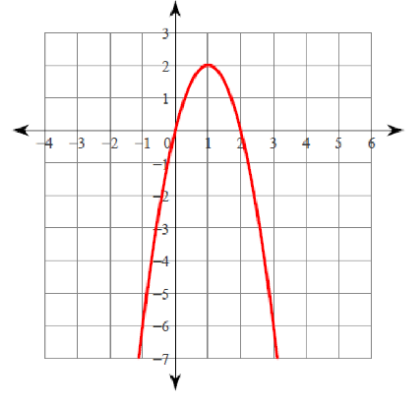*State the quadratic function for the following in Vertex Form:*

1.

$($ $)^2$ _____

2.

$($ $)^2$ _____

3.

4.

(   )²   _____   (   )²   _____
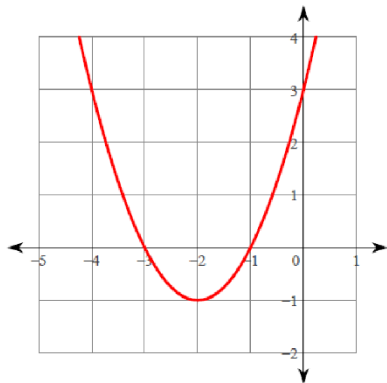
Quadratic Functions in Factored Form:

First we want to identify where the function _____!

When putting it in factored form don't forget to_____.

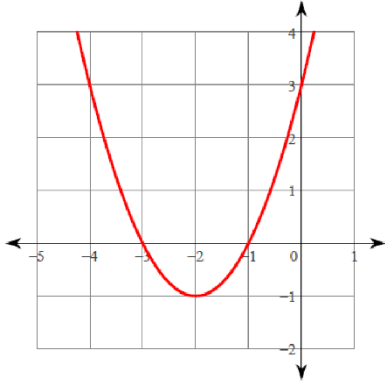Next we want to determine if there have been any_____!

We can do this by_____

Lastly, check for _____by looking to see if your graph is _____.

State the quadratic function for the following in Vertex Form:
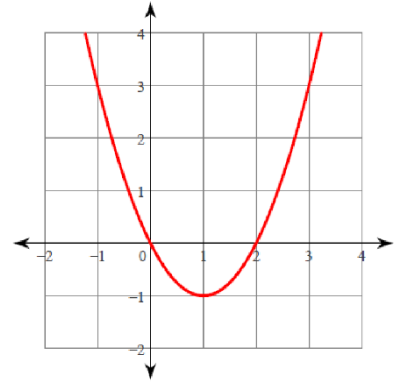
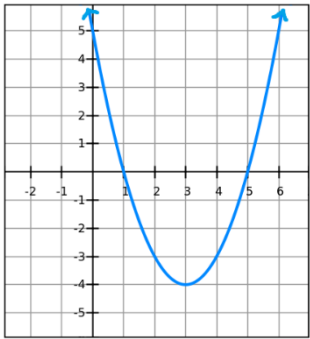Quadratics Functions Review   Name:_____
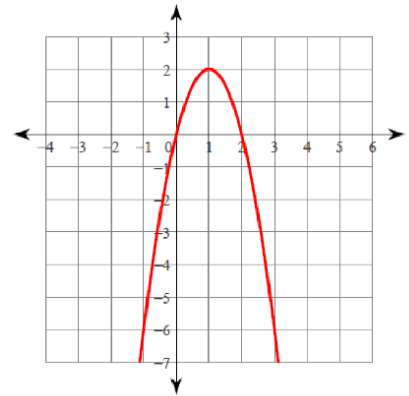
1.

(   ) (   )

2.

(   ) (   )

3.

(   ) (   )

4.

(   ) (   )