

10.1 Day 2 - Graphing Quadratics in Vertex Form**VERTEX FORM OF A QUADRATIC:**

The vertex is \_\_\_\_\_, The axis of symmetry is \_\_\_\_\_

When  $a > 0$ , the parabola opens \_\_\_\_\_. When  $a < 0$ , the parabola opens \_\_\_\_\_

Steps to graph a quadratic in vertex form:

- 1) Identify  $a$ ,  $h$ , and  $k$
- 2) Draw the axis of symmetry,  $x=h$
- 3) Plot the vertex,  $(h,k)$
- 4) Plot 2 points on either side of the vertex, then draw a parabola through the points.

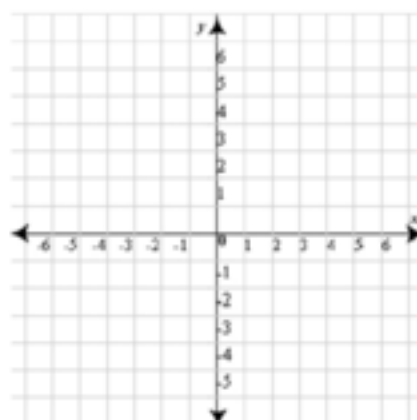
Example 1: Graph  $y = -2(x - 2)^2 + 1$

$a = \underline{\hspace{1cm}}$     $h = \underline{\hspace{1cm}}$     $k = \underline{\hspace{1cm}}$

Opens: UP or DOWN

Axis of Symmetry:

Vertex:



( ) \_\_\_\_\_ as  $f(x)$

$x \rightarrow$

( ) \_\_\_\_\_ as  $f(x)$

$x \rightarrow$