Example 1.
Graph the following quadratic function.

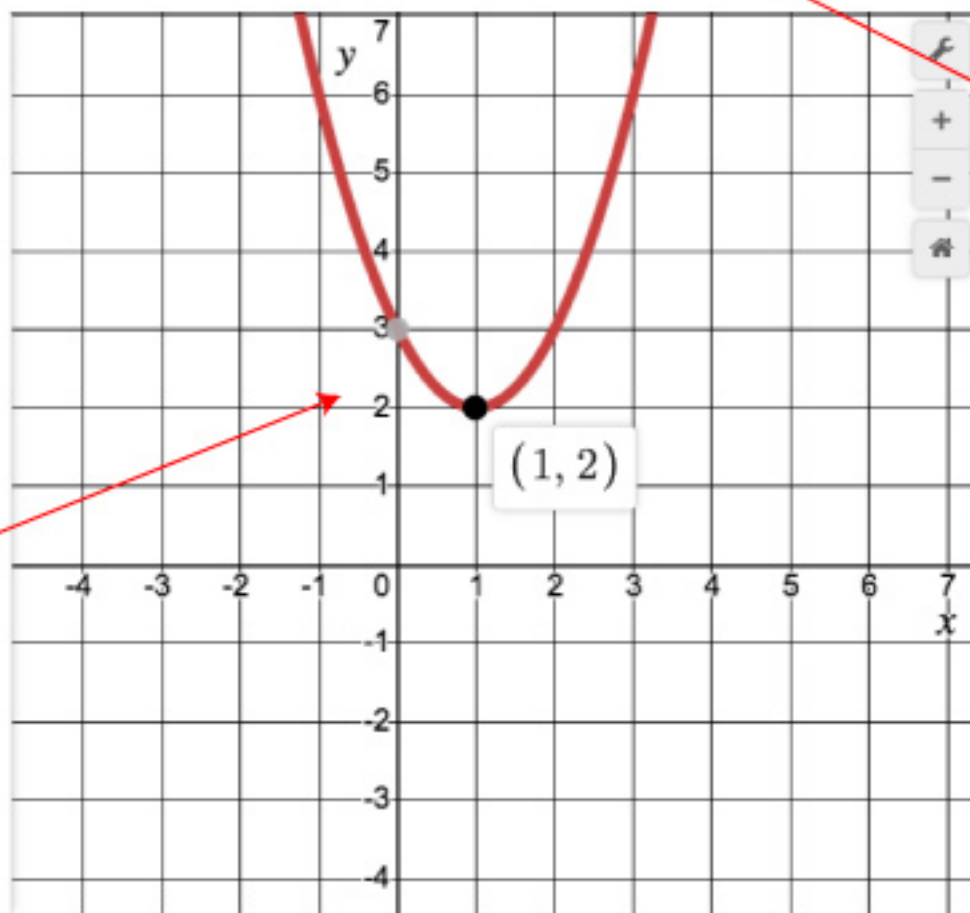$$y = (x-1)^2 + 2$$

Solution.

Quadratic in vertex form:

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

The coordinates of the vertex align with the values shown in the equation.

Because in this equation $a > 0$, the graph of the parabola opens up.