

Example 6.
Graph the following quadratic function.

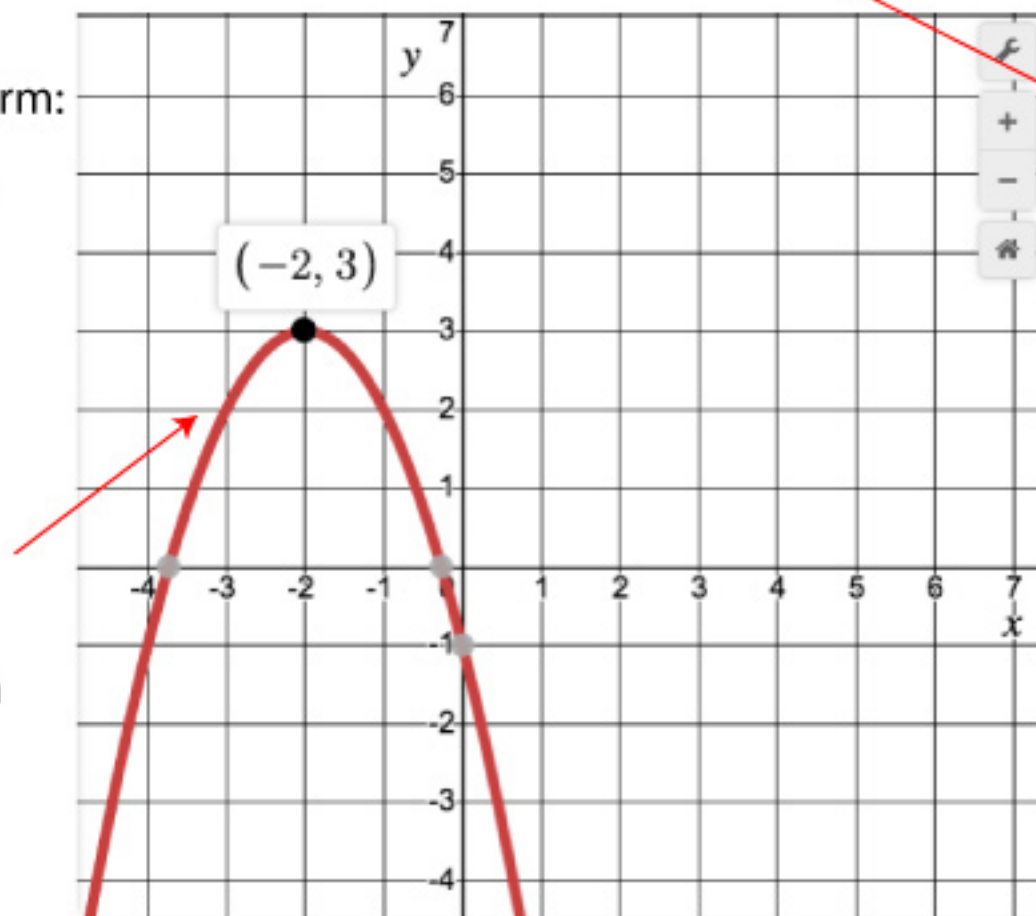
$$y = -(x + 2)^2 + 3$$

Solution.

Quadratic in vertex form:

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

Because in this equation $a < 0$, the graph of the parabola opens down.



The coordinates of the vertex align with the values shown in the equation.
Note: The "+ 2" is the same as "- (-2)".