

Graphing a Quadratic Function: Standard form

1. Plot the vertex
2. Find and plot two points to the right of vertex.
3. Plot the point across axis of symmetry.
4. Sketch the curve.

Axis of Symmetry: $x = -1$

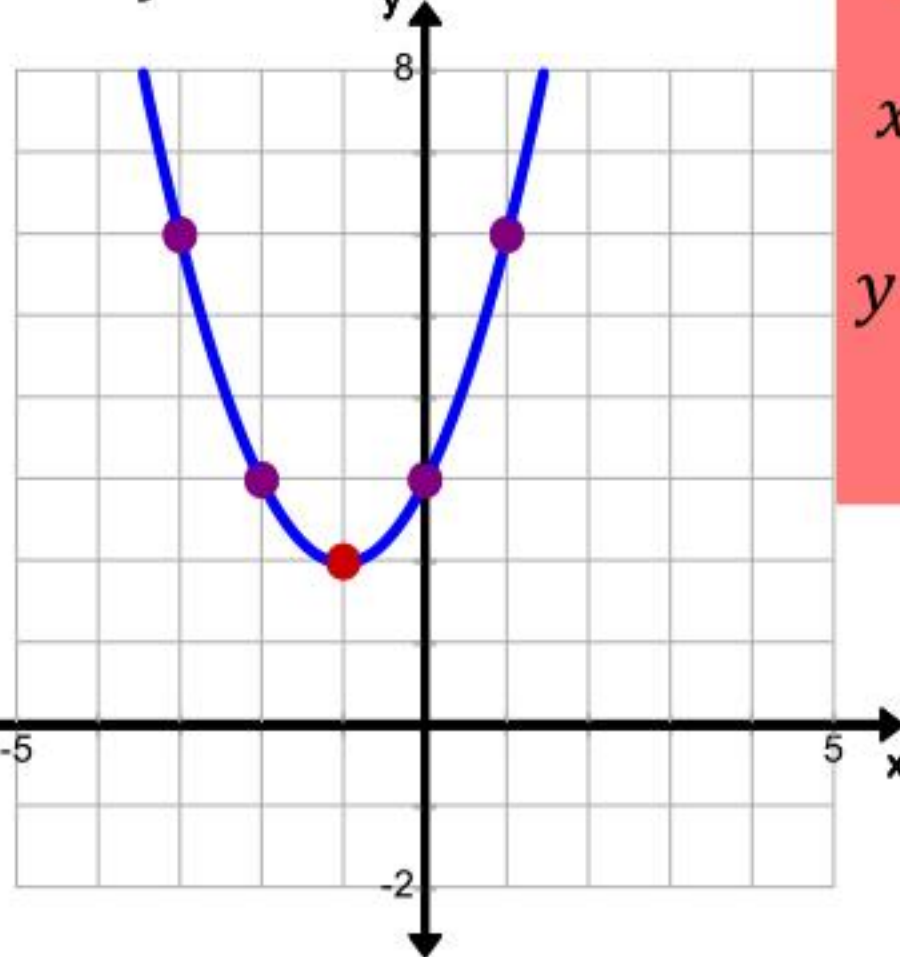
Domain:

All Real Numbers

Range:

$$y \geq 2$$

$$y = x^2 + 2x + 3$$



Vertex: $(-1, 2)$

$$x = \frac{-b}{2a} = \frac{-2}{2(1)} = -1$$

$$y = (-1)^2 + 2(-1) + 3 = 2$$

Units right of vertex x	Units up from vertex x^2
1	1
2	4