

Algebra 2
4-1b Quadratic Functions
& Transformations

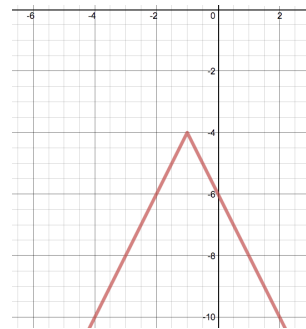
Name _____
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Goal: To identify and graph quadratic functions

Review: Identify the vertex, axis of symmetry, the domain and range of the following function:

$y = -2|x + 1| - 4$. How can you determine these without the graph?

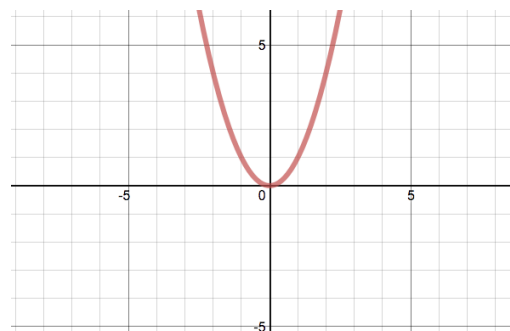


Interpreting Vertex Form: For $y = -2(x + 1)^2 - 4$, identify the vertex, axis of symmetry, the domain and range, and the maximum or minimum of the function.

Practice: For $y = 3(x - 4)^2 - 2$, identify the vertex, axis of symmetry, the domain and range, and the maximum or minimum of the function.

Using Vertex Form: What is the graph of $g(x) = -2(x + 2)^2 + 3$

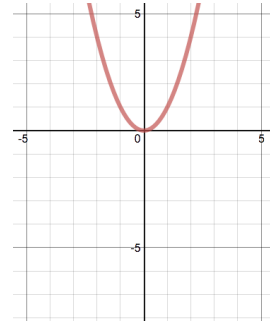
1. Interpret the function
2. Plot vertex and axis of symmetry
3. Use pattern to plot two more points
4. Sketch curve



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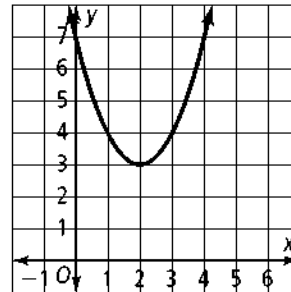
Practice: What is the graph of $g(x) = -4(x - 3)^2 + 2$



Writing a Quadratic Function: Write the quadratic function in vertex form of the graph.

1. What is the vertex? _____
2. Choose another point and substitute into vertex form to find a
3. Substitute a and vertex into vertex form

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



Practice. Write the quadratic function in vertex form of the graph.

