

Warm up

Label quadratic, linear or exponential.

Identify the Domain and range.

Evaluate

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

quadratic

$$D: (-\infty, \infty)$$

$$R: [3, \infty)$$

$$f(x) = x^2 - 1;$$

Find $f(-4)$

$$(-4)^2 - 1 = 15$$

Describe the Transformation and identify the vertex.

$$f(x) = (x + 3)^2 - 1$$

$V = (-3, -1)$
 left = 3
 down = 1

More Transformations

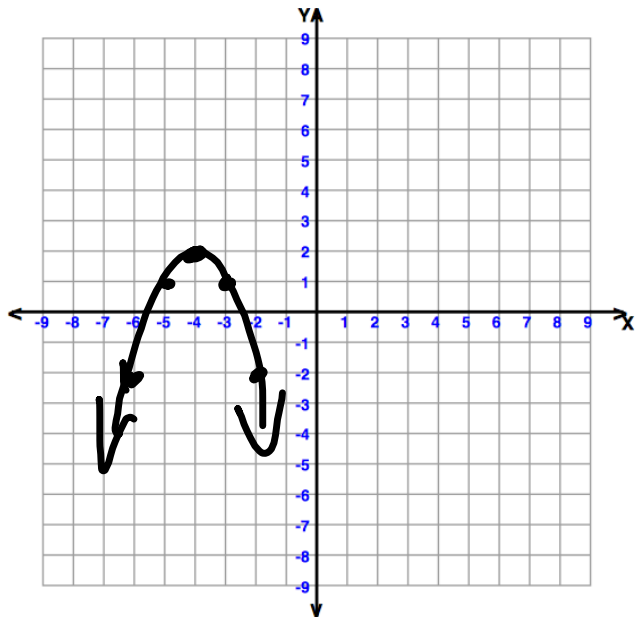
Objectives:

- I can identify transformation from an equation and graph
- I can graph an absolute value function

Sketch the graph of each function. State the Vertex.

$$f(x) = -1(x + 4)^2 + 2$$

$$V: (-4, 2)$$

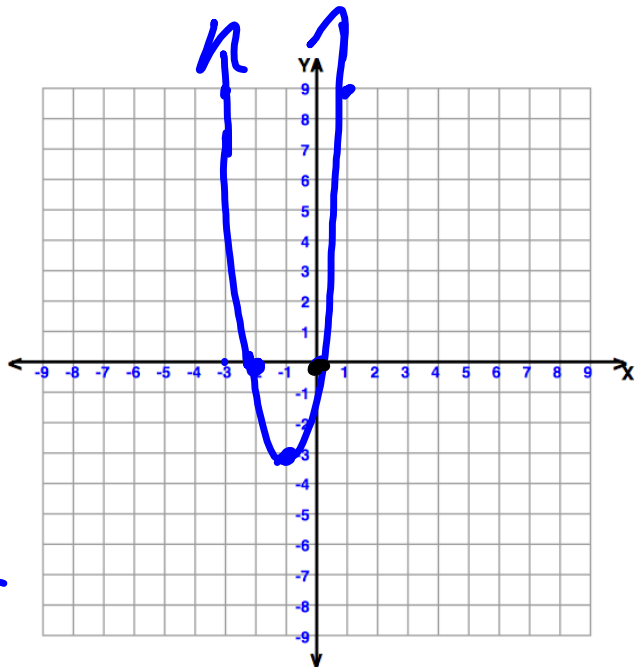


Sketch the graph of each function. State the Vertex.

$$f(x) = 3(x + 1)^2 - 3$$

$$V: (-1, -3)$$

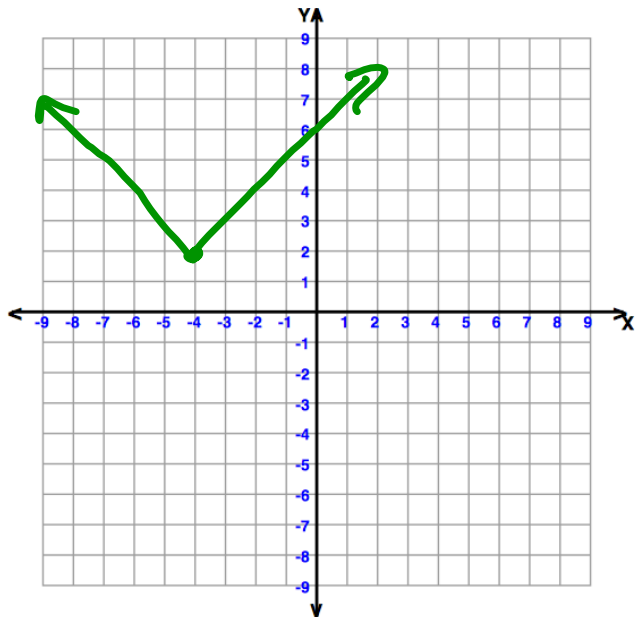
$$3 \cdot \frac{4}{2}$$



Sketch the graph of each function. State the Vertex.

$$f(x) = |x + 4| + 2$$

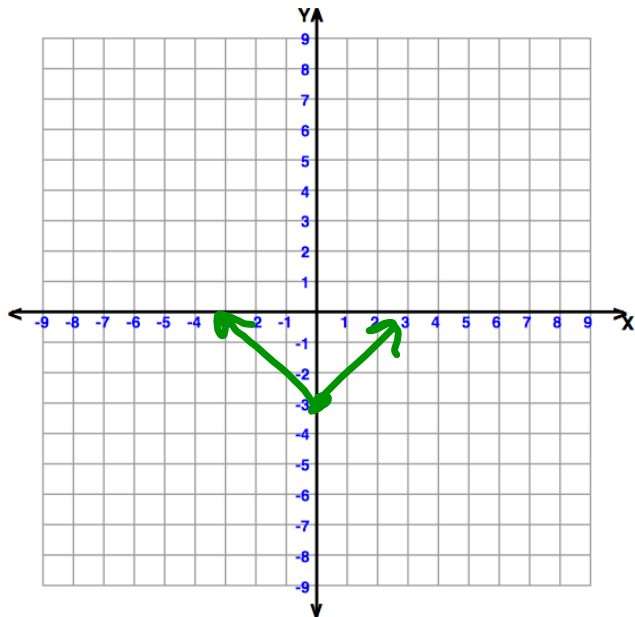
$$V: -4, 2$$



Sketch the graph of each function. State the Vertex.

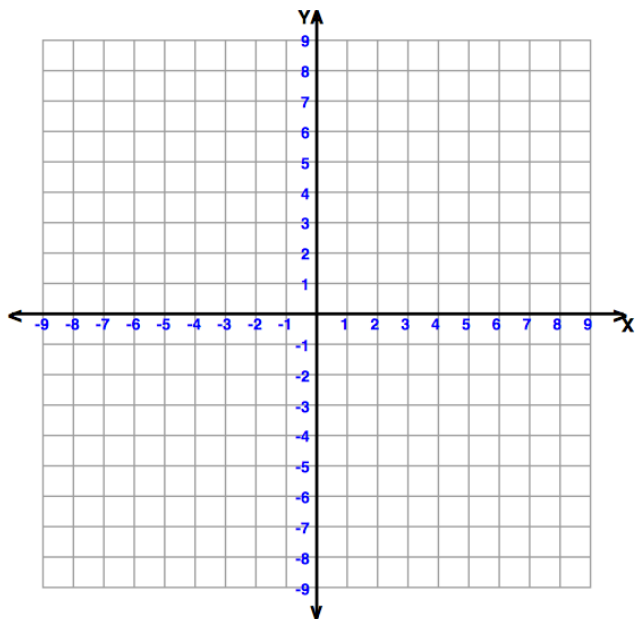
$$f(x) = |x| - 3$$

V: 0, -3



Sketch the graph of each function. State the Vertex.

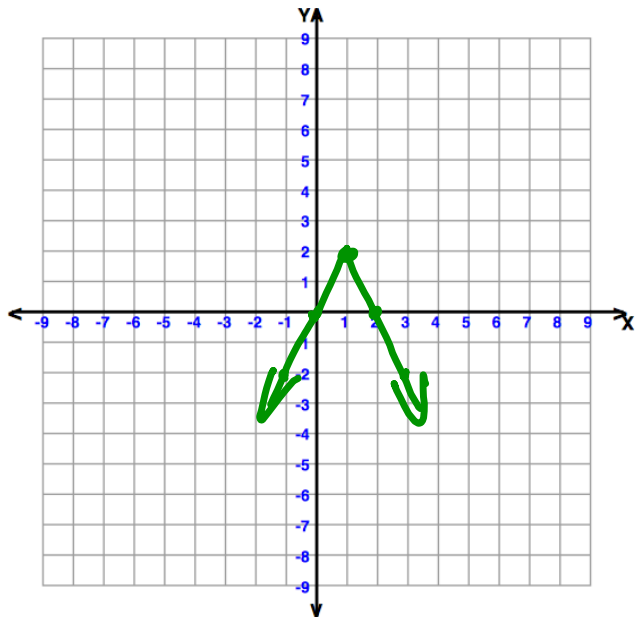
$$f(x) = |x - 4|$$



Sketch the graph of each function. State the Vertex.

$$f(x) = -2|x - 1| + 2$$

V: 1, 2



Quiz

Sketch the graph of the function.

State the domain and range.

State if the function is linear, quadratic, exponential.

1) $f(x) = (x - 4)^2 + 1$

