

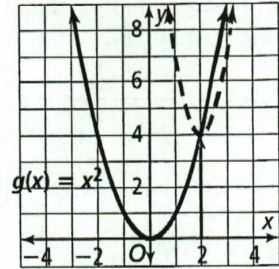
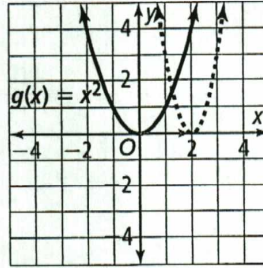
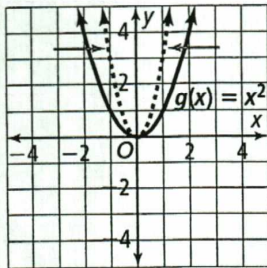


Name _____

8-2 Reteach to Build Understanding

Vertex Form of a Quadratic Function

1. a. These graphs show how the values of a , h , and k in the function $f(x) = 3(x - 2)^2 + 4$ relates to the parent function $g(x) = x^2$. Draw lines from each statement to the graph it describes.



The value of k is 4, so the graph translates 4 units up.

The value of h is 2, so the graph translates 2 units right.

The value of a is 3, so the parabola is narrower.

- b. Write numbers in the blanks to complete each statement about $f(x)$.

The vertex of a parabola is (h, k) . The vertex is located at (_____, _____).

The axis of symmetry is at $x = h$. The axis of symmetry is at $x =$ _____.

2. Martin incorrectly identified two of the key features of the graph of $f(x) = -6(x + 2)^2 - 4$. Put an X next to any incorrect statements. Correct his errors.
- The value of a is -6 , so the graph opens down.
 - The value of h is -2 , so the graph is translated 2 units left from the graph of the parent function.
 - The value of k is 4, so the graph is translated 4 units up from the graph of the parent function.
 - The vertex of $f(x)$ is located at $(-2, 4)$.
 - The axis of symmetry of $f(x)$ is at $x = -2$.
 - The value of a is -6 , so the graph of the function is very narrow.