

# ANSWER PRESENTATION TOOL

Algebra 2 - Student Edit

2

1 - Practice

2,4,6,8,10,1

ALL EVEN

Show Solu

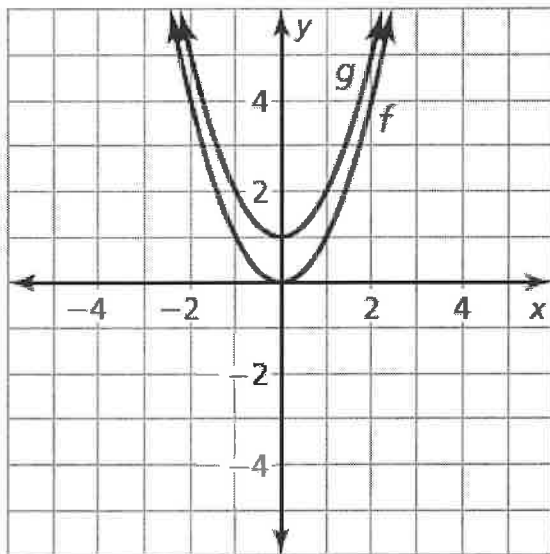
ODD

2. Notice that the function is of the form  $g(x) = (x - h)^2 + k$ .

Rewrite the function to identify  $h$  and  $k$ .

$$g(x) = (x - (0))^2 + (1)$$

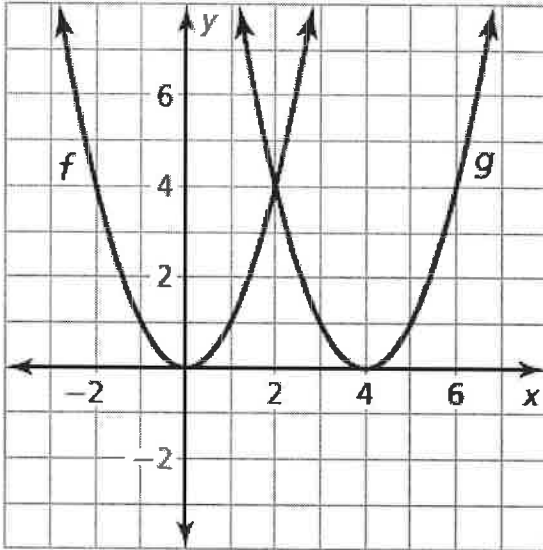
Because  $h = 0$  and  $k = 1$ , the graph of  $g$  is a translation 1 unit up of the graph of  $f$ .



4. Notice that the function is of the form  $g(x) = (x - h)^2 + k$ . Rewrite the function to identify  $h$  and  $k$ .

$$g(x) = (x - (4))^2 + (0)$$

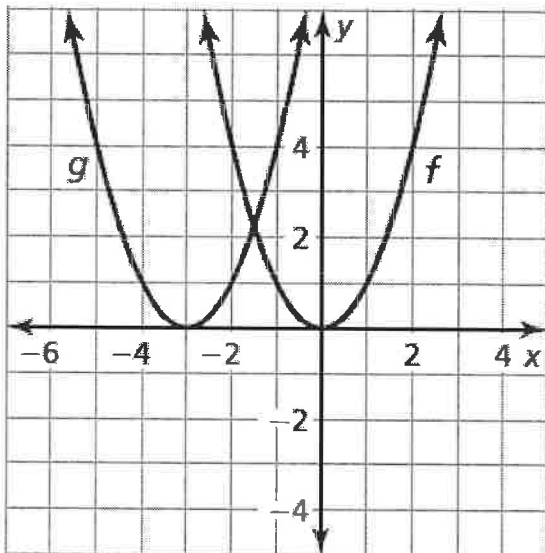
Because  $h = 4$  and  $k = 0$ , the graph of  $g$  is a translation 4 units right of the graph of  $f$ .



6. Notice that the function is of the form  $g(x) = (x - h)^2 + k$ . Rewrite the function to identify  $h$  and  $k$ .

$$g(x) = (x - (-3))^2 + (0)$$

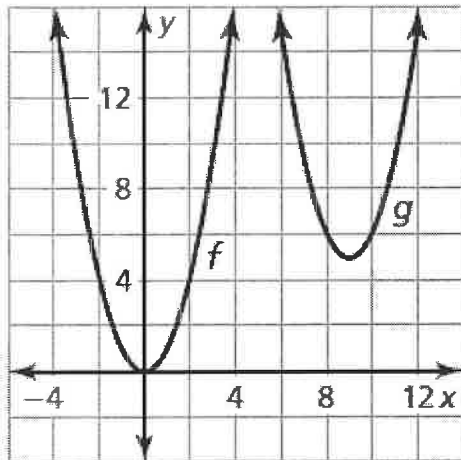
Because  $h = -3$  and  $k = 0$ , the graph of  $g$  is a translation 3 units left of the graph of  $f$ .



8. Notice that the function is of the form  $g(x) = (x - h)^2 + k$ . Rewrite the function to identify  $h$  and  $k$ .

$$g(x) = (x - (9))^2 + (5)$$

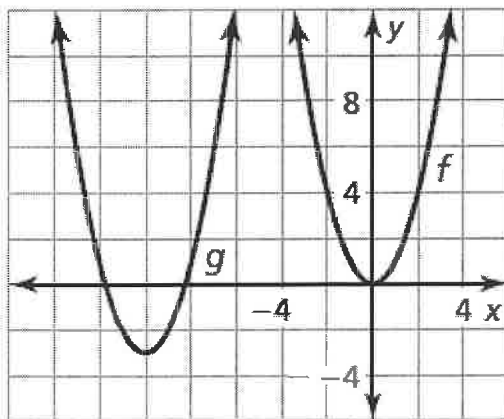
Because  $h = 9$  and  $k = 5$ , the graph of  $g$  is a translation 9 units right and 5 units up of the graph of  $f$ .



10. Notice that the function is of the form  $g(x) = (x - h)^2 + k$ . Rewrite the function to identify  $h$  and  $k$ .

$$g(x) = (x - (-10))^2 + (-3)$$

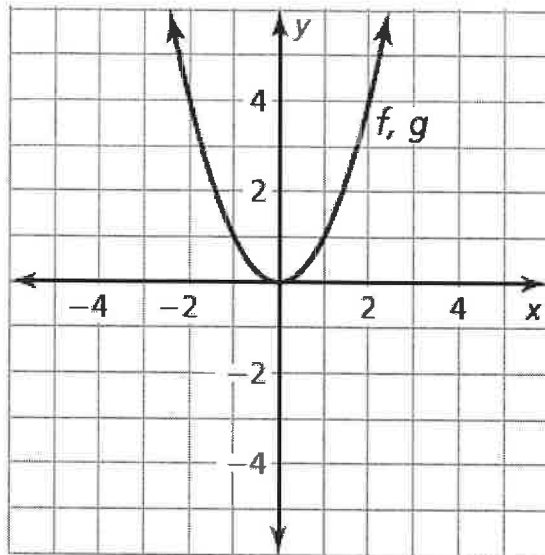
Because  $h = -10$  and  $k = -3$ , the graph of  $g$  is a translation 10 units left and 3 units down of the graph of  $f$ .



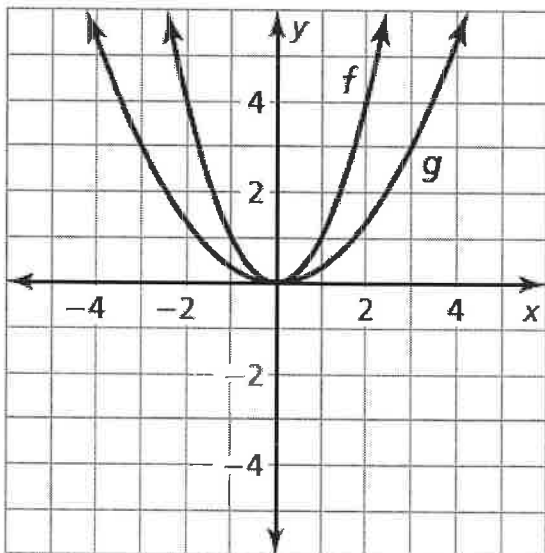
12. D; The graph is the original graph translated 1 unit up.

14. B; The graph is the original graph translated 1 unit down and 1 unit left.

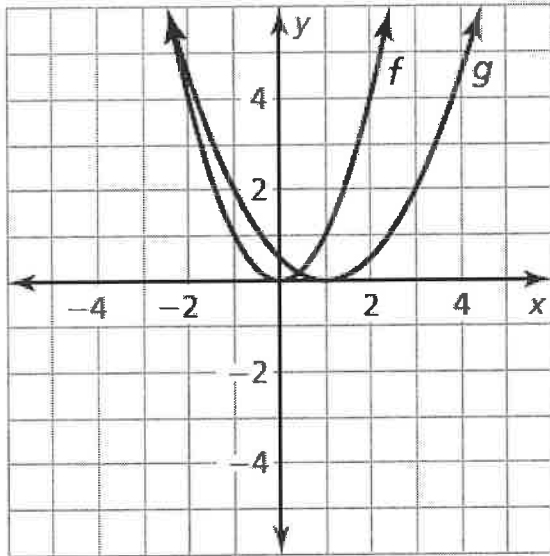
16. Notice that the function is of the form  $g(x) = (-x)^2$ . So, the graph of  $g$  is a reflection in the  $y$ -axis of the graph of  $f$ .



18. Notice that the function is of the form  $g(x) = ax^2$ , where  $a = \frac{1}{3}$ . So, the graph of  $g$  is a vertical shrink by a factor of  $\frac{1}{3}$  of the graph of  $f$ .



22. Notice that the function is of the form  $g(x) = a(x - h)^2$ , where  $a = \frac{1}{2}$  and  $h = 1$ . So, the graph of  $g$  is a vertical shrink by a factor of  $\frac{1}{2}$  followed by a translation 1 unit right of the graph of  $f$ .



24. The order of the transformation is not correct; The graph is a vertical stretch by a factor of 6 and a reflection in the  $x$ -axis, followed by a translation 4 units up of the graph of the parent quadratic function.

26. The transformation is a horizontal translation to the left 1 unit, followed by a vertical stretch by a factor of 4 and a reflection in the  $x$ -axis, then a vertical translation 5 units down; The vertex is  $(-1, -5)$ .

28. The transformation is a horizontal translation to the right 1 unit, followed by a vertical shrink by a factor of  $\frac{1}{2}$ ; The vertex is  $(1, 0)$ .

**30.** Write the transformation.

$$\begin{aligned}g(x) &= a(x - h)^2 + k \\ &= \frac{1}{3}(x - 3)^2 + 0 \\ &= \frac{1}{3}(x - 3)^2\end{aligned}$$

The vertex is (3, 0).

**34. B;** This is a vertical shrink by a factor of  $\frac{1}{2}$  with a translation 1 unit left and 2 units down.

**36. E;** This is a vertical stretch by a factor of 2 with a translation 1 unit left and 2 units up.

**38. A;** This is a vertical stretch by a factor of 2 with a translation 1 unit right and 2 units up.