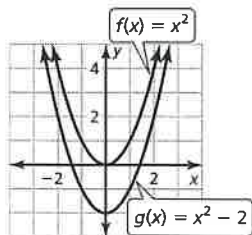


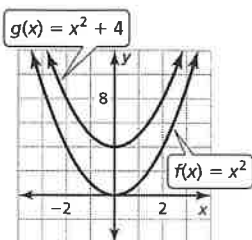
# Answers

## 2.1 Reteach

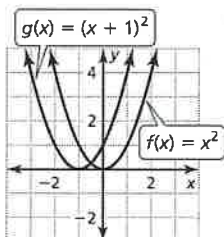
1. The graph of  $g$  is a translation 2 units down of the graph of  $f$ .



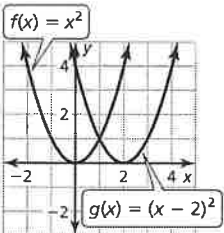
2. The graph of  $g$  is a translation 4 units up of the graph of  $f$ .



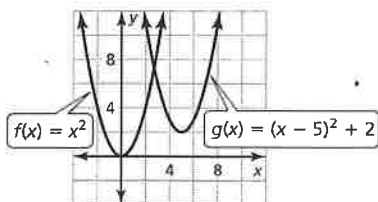
3. The graph of  $g$  is a translation 1 unit left of the graph of  $f$ .



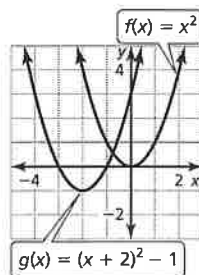
4. The graph of  $g$  is a translation 2 units right of the graph of  $f$ .



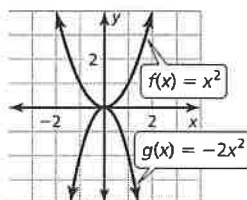
5. The graph of  $g$  is a translation 5 units right and 2 units up of the graph of  $f$ .



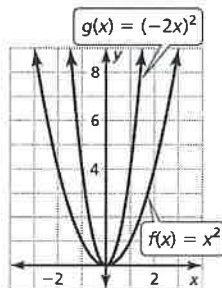
6. The graph of  $g$  is a translation 2 units left and 1 unit down of the graph of  $f$ .



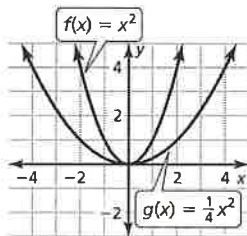
7. The graph of  $g$  is a reflection in the  $x$ -axis followed by a vertical stretch by a factor of 2 of the graph of  $f$ .



8. The graph of  $g$  is a reflection in the  $y$ -axis followed by a horizontal shrink of the graph of  $f$  by a factor of  $\frac{1}{2}$ .



9. The graph of  $g$  is a vertical shrink by a factor of  $\frac{1}{4}$  of the graph of  $f$ .



10.  $g(x) = -3x^2 - 3$ ;  $(0, -3)$

11.  $g(x) = -\frac{1}{2}(x + 6)^2$ ;  $(-6, 0)$

## 2.1 Enrichment and Extension

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

$y = -3(x + 1)^2 - 1$ ;  $y = 3(x - 4)^2 - 2$ ;

$y = -3(x - 2)^2 + 2$ ;  $y = -3(x + 2)^2 + 2$