Algebra 1 9.3

Apply transformations to quadratic functions

Apply dilations and reflections to quadratic functions

parent graph

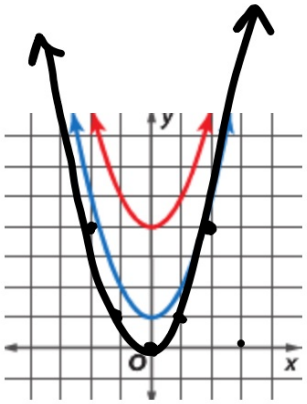
transformation

translation

reflection

dilation

activity: whiteboards

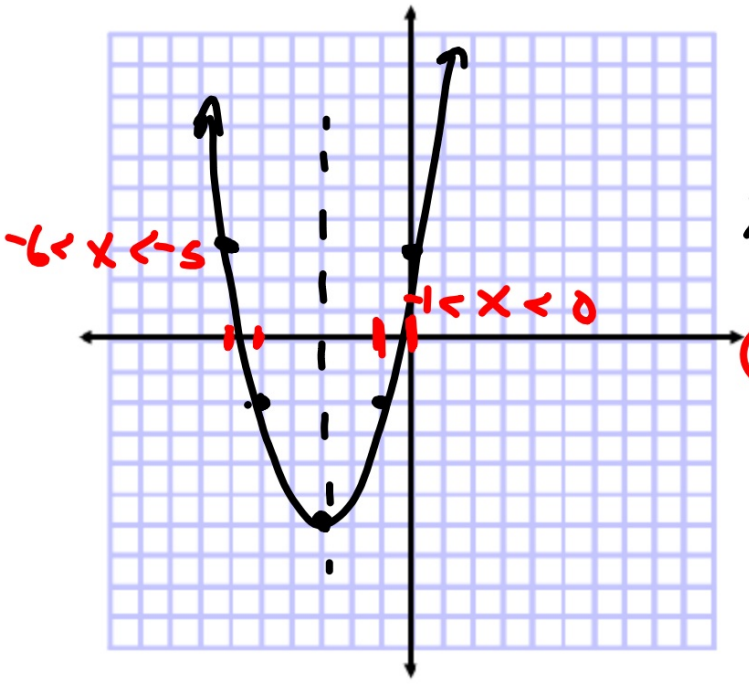


Whiteboards: Graph

GuidedPractice

3A. $g(x) = (x + 2)^2 + 3$

3B. $g(x) = (x - 4)^2 - 4$



$y = 1x^2 + 6x + 3$

$x = \frac{-b}{2a} = \frac{-6}{2} = -3$

-3	9 + -18 + 3	-6
-1	1 + -6 + 3	-2
0	0 + 0 + 3	3

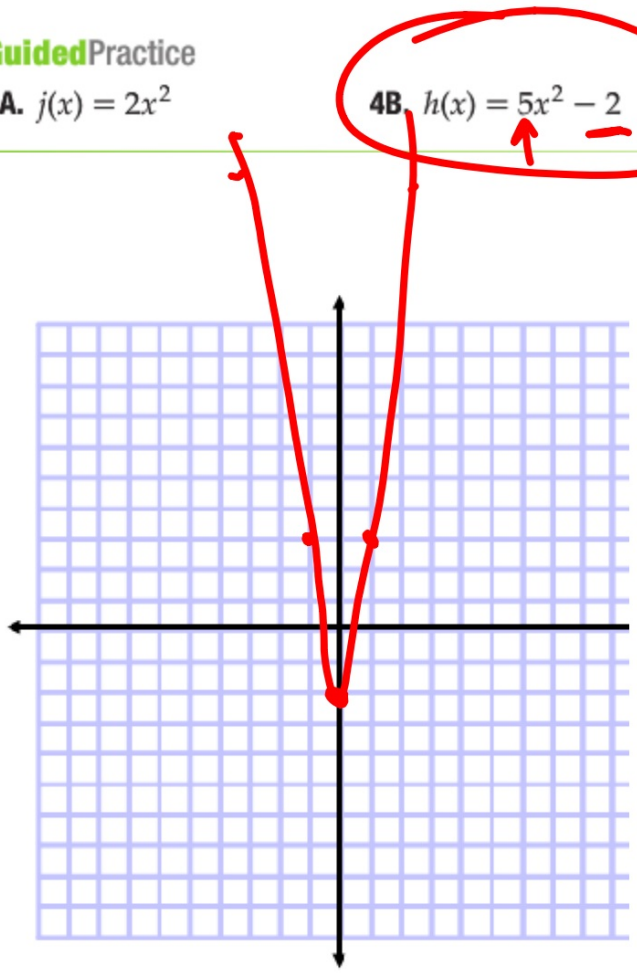
Graph

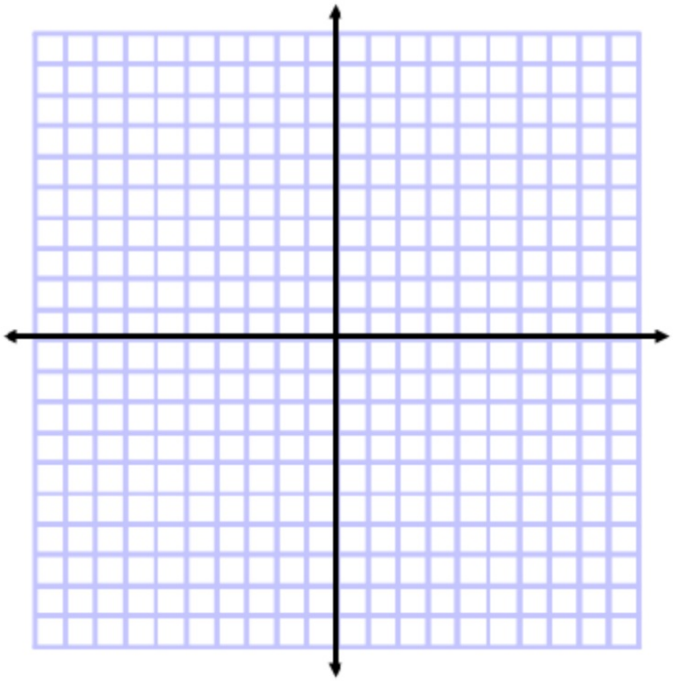
GuidedPractice

4A. $j(x) = 2x^2$

4B. $h(x) = 5x^2 - 2$

4C. $g(x) = \frac{1}{3}x^2 + 2$



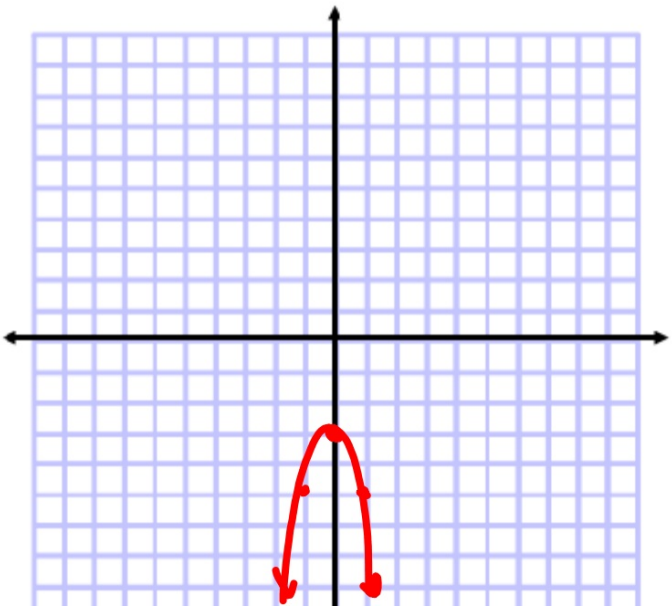


Example 5 Describe and Graph Reflections

Describe how the graph of each function is related to the graph of $f(x) = x^2$.

a. $g(x) = -2x^2 - 3$

b. $h(x) = -4(x + 2)^2 + 1$



Graph
parent graph (change vertex first)

ICE WS