Algebra 1: 11.7 HW **Name** _____ **Period** _____

1. How do the constants a, h, and k affect the graph of the quadratic function $g(x) = a(x - h)^2 + k$?

   a –

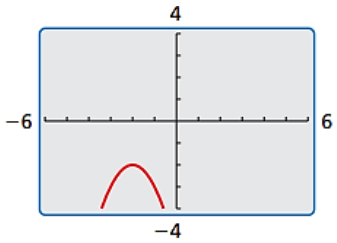
   h -

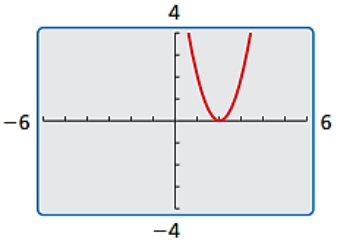
   k –

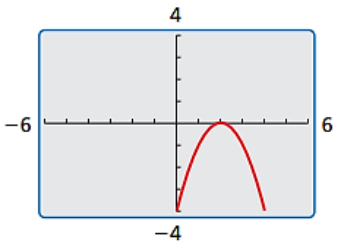
2. Match each quadratic function with its graph.

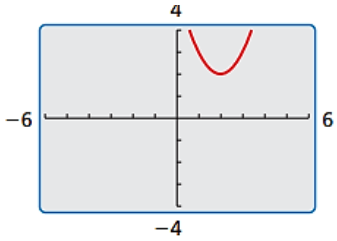
   a. $g(x) = -(x - 2)^2$ **b.** $g(x) = (x - 2)^2 + 2$ **c.** $g(x) = -(x + 2)^2 - 2$

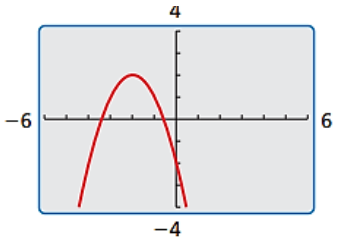
   d. $g(x) = 0.5(x - 2)^2 - 2$ **e.** $g(x) = 2(x - 2)^2$ **f.** $g(x) = -(x + 2)^2 + 2$

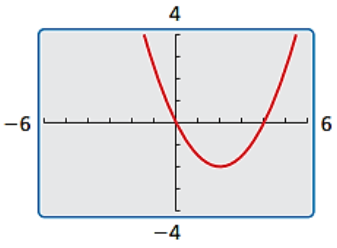












3. Describe the transformation performed on each function f(x) to result in g(x).

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

   b. $g(x) = -(x - 2)^2 - 2$

   c. $g(x) = (x + 5)^2 + 1$

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

   e. $g(x) = -x^2 + 1$

   f. $g(x) = 2(x + 2)^2$

   g. $g(x) = \frac{1}{2}(x - 4)^2$

   h. $g(x) = -3(x - 1)^2$

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

   j. $g(x) = 0.5(x + 6)^2 - 2$