



3-3 Additional Practice

Transforming Linear Functions

Suppose $f(x) = 3x + 5$. Describe how the graph of each function compares to f .

1. $g(x) = f(x) + 12$

2. $h(x) = f(x) - 7$

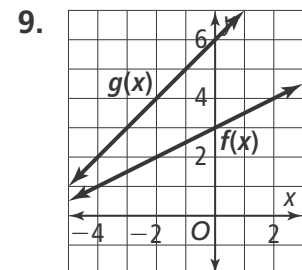
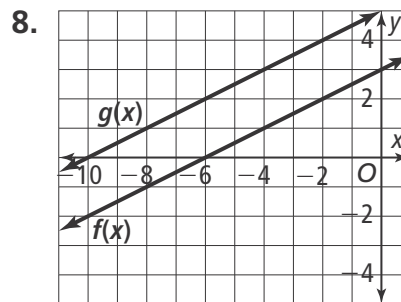
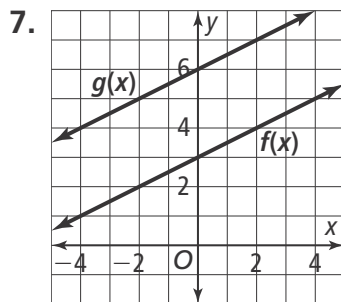
3. $g(x) = f(x + 8)$

4. $h(x) = f(x - 14)$

5. $g(x) = 4f(x)$

6. $g(x) = f(5x)$

What value of k transforms the graph of $f(x) = 0.5x + 3$ into graph g ? Describe the transformation.



10. When $-1 < k < 1$, describe the effect of k on $f(kx)$ and $kf(x)$.

11. An athletic club has an application fee of \$25 and a monthly membership fee of \$15. The function f models the total cost of a membership for x months. The function g represents the cost of the membership if the application fee is waived. Write each function and compare the slopes and y -intercepts of the functions.