Name _____ Date _____

In Exercises 1–4, write a function *g* whose graph represents the indicated transformation of the graph of *f*. Use a graphing calculator to check your answer.

1. $f(x) = 5x - 2$; translation 5 units right

2. $f(x) = 3x + 6$; translation 4 units up

3. $f(x) = 3 - |x - 2|$; translation 2 units left

4. $f(x) = |2x| + 3$; translation 2 units down

In Exercises 5–8, write a function *g* whose graph represents the indicated transformation of the graph of *f*. Use a graphing calculator to check your answer.

5. $f(x) = -x + 3$; reflection in the *y*-axis

6. $f(x) = \frac{2}{3}x - 4$; reflection in the *x*-axis

7. $f(x) = -5 + |x - 8|$; reflection in the *y*-axis

8. $f(x) = |4x - 1| + 2$; reflection in the *y*-axis

In Exercises 9–12, write a function *g* whose graph represents the indicated transformation of the graph of *f*. Use a graphing calculator to check your answer.

9. $f(x) = 3 - x$; horizontal stretch by a factor of 2

10. $f(x) = 3x + 5$; vertical shrink by a factor of $\frac{1}{3}$

11. $f(x) = |3x| + 2$; horizontal shrink by a factor of $\frac{1}{3}$

12. $f(x) = -2|x - 2| + 4$; vertical stretch by a factor of 2

In Exercises 13 and 14, write a function *g* whose graph represents the indicated transformation of the graph of *f*.

13. $f(x) = x$; translation 5 units up followed by a vertical shrink by a factor of $\frac{1}{4}$

14. $f(x) = |x|$; reflection in the *x*-axis followed by a translation 2 units left