Name _____ Date _____

1.2 Practice A

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

2. $f(x) = x + 1$; translation 4 units right

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

4. $f(x) = 4x - 5$; translation 3 units up

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. $f(x) = -3x + 7$; reflection in the x-axis

6. $f(x) = \frac{1}{3}x - 2$; reflection in the x-axis

7. $f(x) = |4x| - 6$; reflection in the y-axis

8. $f(x) = |3x - 5| + 3$; 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. $f(x) = x + 3$; vertical stretch by a factor of 4

10. $f(x) = 4x + 3$; vertical shrink by a factor of $\frac{1}{3}$

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

12. $f(x) = |x + 1|$; horizontal stretch by a factor of 3

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

13. $f(x) = x$; vertical shrink by a factor of $\frac{1}{3}$ followed by a translation 4 units down

14. $f(x) = |x|$; translation 3 units left followed by a horizontal shrink by a factor of $\frac{1}{2}$