Name _____ Date _____

7.4 Practice A

In Exercises 1–3, find the sum or difference.

1. $\frac{12}{5x} + \frac{3}{5x}$

2. $\frac{x}{9x^2} - \frac{3}{9x^2}$

3. $\frac{7}{x-2} - \frac{3x}{x-2}$

In Exercises 4–7, find the least common multiple of the expressions.

4. $3x^2,\ 6x - 18$

5. $5x,\ 5x(x+2)$

6. $x^2 - 9,\ x + 3$

7. $x^2 - 3x - 10,\ x + 2$

8. Describe and correct the error in finding the sum.

$$\frac{x}{x+3} - \frac{2}{x-1} = \frac{x-2}{(x+3)(x-1)}$$

In Exercises 9–12, find the sum or difference.

9. $\frac{7}{2x^2} - \frac{4}{3x}$

10. $\frac{2}{x-1} + \frac{4}{x+2}$

11. $\frac{6}{x+4} - \frac{5x}{x-3}$

12. $\frac{14}{x^2 + 7x - 18} + \frac{6}{x+9}$

In Exercises 13 and 14, tell whether the statement is *always*, *sometimes*, or *never* true. Explain.

13. The LCD of two rational functions is the sum of the denominators.

14. The LCD of two rational functions is equal to one of the denominators.

In Exercises 15–18, rewrite the function g in the form $g(x) = \frac{a}{x-h} + k$. Graph the function. Describe the graph of g as a transformation of the graph of $f(x) = \frac{a}{x}$.

15. $g(x) = \frac{4x - 5}{x - 2}$

16. $g(x) = \frac{5x + 3}{x + 4}$

17. $g(x) = \frac{10x}{x - 3}$

18. $g(x) = \frac{3x + 4}{x}$