Name _____ Date _____

7.4 Notetaking with Vocabulary (continued)

Simplifying Complex Fractions

Method 1 If necessary, simplify the numerator and denominator by writing each as a single fraction. Then divide by multiplying the numerator by the reciprocal of the denominator.

Method 2 Multiply the numerator and the denominator by the LCD of *every* fraction in the numerator and denominator. Then simplify.

Notes:

Extra Practice

In Exercises 1–4, find the sum or difference.

1. $\frac{1}{x-1} - \frac{5}{x-1}$

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

3. $\frac{6x}{x+4} + \frac{24}{x+4}$

4. $\frac{2x^2}{x-7} - \frac{14x}{x-7}$

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7.4 Notetaking with Vocabulary (continued)

In Exercises 5–7, find the least common multiple of the expressions.

5. $9x^3, 3x^2 - 21x$

6. $x + 5, 2x^2 + 11x + 5$

7. $x^2 + 5x + 6, x^2 - 3x - 18$

In Exercises 8–11, find the sum or the difference.

8. $\frac{3}{2x} + \frac{11}{5x}$

9. $\frac{15}{x - 2} + \frac{3}{x + 8}$

10. $\frac{3x}{2x + 1} + \frac{10}{2x^2 - 5x - 3}$

11. $\frac{x}{x - 7} - \frac{2}{x + 1} - \frac{8x}{x^2 - 6x - 7}$

In Exercises 12 and 13, simplify the complex fraction.

12. $\dfrac{\frac{x}{10} - 3}{5 + \frac{1}{x}}$

13. $\dfrac{\frac{12}{x^2 - 7x - 44}}{\frac{2}{x - 11} + \frac{1}{x + 4}}$