

2.6

Name _____ Date _____ Period _____

Adding and Subtracting Rational Expressions

Find the least common denominator.

1. $\frac{2}{5} + \frac{1}{15}$

2. $\frac{5}{12} - \frac{3}{8}$

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

4. $\frac{3}{x+2} - \frac{2}{3x+6}$

5. $\frac{4}{x^2-x} + \frac{6}{x^2-4x+3}$

Perform the indicated operation. If possible, simplify your answer.

6. $\frac{27}{11x} - \frac{5}{11x}$

7. $\frac{14x}{2x-3} - \frac{21}{2x-3}$

8. $\frac{2x}{x+1} + \frac{2}{x+1}$

9. $\frac{3x}{x^2+6x+9} + \frac{9}{x^2+6x+9}$

10. $\frac{5x}{25x^2-49} - \frac{7}{25x^2-49}$

11. $\frac{3}{x+2} - \frac{2}{3x+6}$

12. $\frac{5}{4x-2} + \frac{1}{10x-5}$

$$13. \frac{7}{6x-30} + \frac{2}{3x-15}$$

$$14. \frac{2}{5x} - \frac{3}{20x^2}$$

$$15. \frac{x^2+5x-34}{x^2-9x+8} - \frac{10}{x-8}$$

$$16. \frac{1}{x+4} - \frac{3}{x^2+11x+28}$$

$$17. \frac{2x}{x+5} - \frac{x}{x+8}$$

$$18. \frac{4}{x^2-x} + \frac{6}{x^2-4x+3}$$

$$19. \frac{3}{x^2-4} + \frac{2}{x^2+5x+6}$$

$$20. \frac{3}{2x^2-14x} + \frac{2}{x^2-8x+7}$$

$$21. \frac{8}{2x+3} + \frac{4}{x-2} - \frac{3x}{2x^2-x-6}$$

Simplify.

$$22. \frac{x^2-4x-5}{x+1}$$

$$23. \frac{-4x^3-10x^2+2x}{2}$$

$$24. (x-6)^2$$

$$25. (-3x^2)^4$$