

Adding and Subtracting Rational Expressions

1. Perform the indicated operation and simplify the result:

$$\frac{x}{7x^2 + 34x - 5} + \frac{5}{7x^2 + 34x - 5}$$

2. Perform the indicated operation and simplify the result:

$$\frac{5x^2 - 9x + 30}{x^2 - 6x - 27} - \frac{4x^2 - 5x + 51}{x^2 - 6x - 27}$$

3. Add or subtract, as indicated, and simplify the result:

$$\frac{x+5}{x-3} - \frac{13x+26}{x^2 - x - 6}$$

4. Add or subtract, as indicated, and simplify the result:

$$\frac{x-4}{x^2 + 6x + 8} + \frac{x-1}{x^2 - 4}$$

5. Add or subtract, as indicated, and simplify the result:

$$\frac{y+3}{4y^2 - 21y + 5} - \frac{1}{4y^2 - 17y + 4}$$

6. Add or subtract, as indicated, and simplify the result:

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

7. Add or subtract, as indicated, and simplify the result:

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