

Adding and Subtracting Rational Expressions

Adding and Subtracting Rational Expressions With the Same Denominators

Step 1: Combine fractions.

Step 2: Factor and simplify.

Adding and Subtracting Rational Expressions With Different Denominators

Step 1: Factor all numerators and denominators completely.

Step 2: Find the least common denominator (LCD).

Step 3: Multiply each fraction by what is missing in the LCD.

Step 4: Combine fractions.

Step 5: Factor and simplify.

Directions: Add or subtract and express your answer in simplest form.

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

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

$$3. \frac{x^2 - 2x + 3}{x^2 + 7x + 12} - \frac{x^2 - 4x - 5}{x^2 + 7x + 12}$$

$$4. \frac{5}{12x^4y} - \frac{1}{5x^2y^3}$$

$$5. \frac{x}{x^2 - xy} - \frac{y}{xy - x^2}$$

$$6. \frac{5}{(x+4)^2} + \frac{2}{x+4}$$

$$7. \frac{x}{5x^2 - 9x - 2} - \frac{2}{3x^2 - 7x + 2}$$