Rational Expression

a fraction of polynomials $\dfrac{\text{polynomial}}{\text{polynomial}}$

$$\dfrac{2x^2 + 3x + 2}{x^2 - 4x + 6} \qquad \dfrac{x^2 - 4}{2x} \qquad \dfrac{27x^3 + 8}{x^2 - x - 20}$$

To add or subtract rational expressions with unlike denominators...

Step 1: Find the least common denominators of both rational expressions

Step 2: Create like denominators of both rational expressions

Step 3: Add or subtract rational expressions with like denominators

Add or subtract the following rational expressions

$$\dfrac{4}{5x^3y} + \dfrac{1}{2xy^2}$$

Add or subtract the following rational expressions

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

Add or subtract the following rational expressions

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

Add or subtract the following rational expressions

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

Add or subtract the following rational expressions

$$\frac{x+1}{x^2-x-6} - \frac{x+4}{x^2+5x+6}$$

Adding and Subtracting Rational Expressions without Like Denominators