

Adding and Subtracting Rational Expressions

Like Denominators:

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

$$\frac{4x-7}{(x+4)(x-3)}$$

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

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

$$\frac{4x^2}{x^2-16} + \frac{16x}{x^2-16}$$

$$\frac{4x^2+16x}{x^2-16}$$

$$\frac{4x(x+4)}{(x+4)(x-4)} = \frac{4x}{x-4}$$

$$\frac{3x}{x+4} + \frac{12}{x+4}$$

$$\frac{3x+12}{x+4}$$

$$\frac{3(x+4)}{x+4} = 3$$

$$\frac{4x}{x^2-y^2} + \frac{-4y}{x^2-y^2}$$

$$\frac{4x-4y}{x^2-y^2}$$

$$\frac{4(x-y)}{(x-y)(x+y)} = \frac{4}{x+y}$$

$$\frac{6x^2}{x-2} + \frac{-12x}{x-2}$$

$$\frac{6x^2-12x}{x-2}$$

$$\frac{6x(x-2)}{x-2} = 6x$$

Unlike Denominators:

$$5 - 2 - 2x$$

$$2 - 5 - 3 - 3$$

$$4 - 7$$

$$5 - 8$$