

Adding & Subtracting Rational Expressions

Find the sum or difference.

7 $\frac{3}{5x^2} + \frac{7}{15x^3}$

8 $\frac{11}{28x} - \frac{5}{7x^2}$

9 $\frac{7}{3x} + \frac{4x}{x-5}$

Find the sum or difference.

1 $\frac{4}{7x} + \frac{2}{7x}$

2 $\frac{5x}{x+3} - \frac{x+1}{x+3}$

Common Denominator

Rule for Adding & Subtracting Rational Expressions:

Let a , b , and c be polynomials where $c \neq 0$.

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

$$\frac{\quad}{\quad} - \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

10 $\frac{x}{x^2 - x - 6} + \frac{4}{x^2 - 8x + 15}$

11 $\frac{2x}{x^2 + 6x - 7} - \frac{3}{x^2 + 2x - 3}$

Different Denominator

Find the LCD of the rational expressions.

3 $\frac{2}{3x^3}, \frac{x+1}{12x^2}$

4 $\frac{6x}{3x+12}, \frac{x-3}{x+4}$

5 $\frac{7}{x^2-16}, \frac{x}{x^2-x-12}$

6 $\frac{5}{x+1}, \frac{2x}{3x-2}$

Least Common Denominator

Answer Key!

Adding & Subtracting Rational Expressions

Find the sum or difference.

$$7 \quad \frac{3}{5x^2} + \frac{7}{15x^3} \quad \frac{9x + 7}{15x^3}$$

$$8 \quad \frac{11}{28x} - \frac{5}{7x^2} \quad \frac{11x - 20}{28x^2}$$

$$9 \quad \frac{7}{3x} + \frac{4x}{x-5} \quad \frac{12x^2 + 7x - 35}{3x(x-5)}$$

Find the sum or difference.

$$1 \quad \frac{4}{7x} + \frac{2}{7x} \quad \frac{6}{7x}$$

$$2 \quad \frac{5x}{x+3} - \frac{x+1}{x+3} \quad \frac{4x-1}{x+3}$$

Common Denominator

Rule for Adding & Subtracting Rational Expressions:

Let a , b , and c be polynomials where $c \neq 0$.

$$\frac{a}{c} + \frac{b}{c} = \frac{a + b}{c}$$
$$\frac{a}{c} - \frac{b}{c} = \frac{a - b}{c}$$

10 $\frac{x}{x^2 - x - 6} + \frac{4}{x^2 - 8x + 15}$

$$\frac{x^2 - x + 8}{(x - 3)(x + 2)(x - 5)}$$

11 $\frac{2x}{x^2 + 6x - 7} - \frac{3}{x^2 + 2x - 3}$

$$\frac{2x^2 + 3x - 21}{(x + 7)(x - 1)(x + 3)}$$

Different Denominator

Find the LCD of the rational expressions.

3 $\frac{2}{3x^3}, \frac{x + 1}{12x^2}$ $12x^3$

4 $\frac{6x}{3x + 12}, \frac{x - 3}{x + 4}$ $3(x + 4)$

5 $\frac{7}{x^2 - 16}, \frac{x}{x^2 - x - 12}$

$$(x - 4)(x + 4)(x + 3)$$

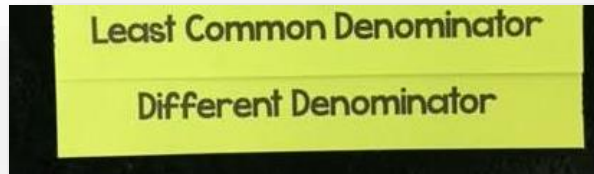
6 $\frac{5}{x + 1}, \frac{2x}{3x - 2}$ $(x + 1)(3x - 2)$

Least Common Denominator

Directions

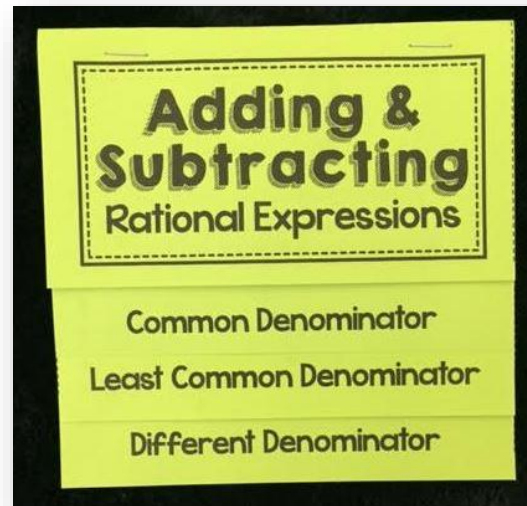
Print pages 1 & 2 front-to-back (3 & 4 for the answer key). On my printer, I use the option to print **double-sided and to flip along the long edge**.

Have students cut the page in half (along the dashed line). Then they will line up the bottom of the two pieces as shown:



Next, fold over the top portion and secure with a few staples.

The final product should look like this:



Credits:  Fonts provided by: KG Fonts (Kimberly Geswein)

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Please email me at [ljudd1@gmail.com](mailto:ljud1@gmail.com) with questions, concerns, or requests.