

Lesson 7.3-7.4_{SU 09}

Objective: To add or subtract rational expressions.

RULE: If a , b , and c are integers and b is not zero, then

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

To add or subtract rational expressions. (with the same denominator).

1. Add or subtract the numerators and keep the same denominator
2. Simplify to lowest terms.

Add or subtract

1. $\frac{4}{9} + \frac{2}{9}$

2. $\frac{7}{8} + \frac{5}{-8}$ (remember this is equal to $\frac{-5}{8}$)

3. $\frac{7}{y} - \frac{5}{y}$

4. $\frac{y}{y+6} - \frac{3}{y+6}$

$$5. \frac{10}{x+3} + \frac{3x-1}{x+3}$$

$$6. \frac{x}{x^2-36} - \frac{6}{x^2-36}$$

$$7. \frac{x^2+6}{x^2-3x+10} - \frac{2x+14}{x^2-3x+10}$$

Class work #1- 5

What if the denominators are different?

We must first find the LCD.

Find the LCD of each pair of polynomials.

1. $6x^3$ and $21x^4$

2. $4x - 8$ and $5x - 10$

3. $x^2 + 12x + 35$ and $x^2 - 3x - 40$

To add or subtract rational expressions with different denominators:

1. Find the LCD.
2. Write each rational expression as an equivalent expression with the LCD.
3. Add or subtract the numerators and keep the LCD.
4. Simplify,

1. $\frac{7}{16} + \frac{11}{12}$

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

3. $\frac{x-2}{2} - \frac{x-6}{6}$

4. $\frac{7}{12a^2} - \frac{5}{16a}$

$$5. \frac{x}{x+2} + \frac{7}{x}$$

$$6. \frac{a}{a^2-1} + \frac{2}{a^2-a}$$

$$7. \frac{2a}{6a^2+11a-10} + \frac{a}{2a^2-3a-20}$$

Class work Worksheet 7.3-7.4

Homework Math XL sections 7.3-7.4

DUE BY _____