

Are there any Homework Questions you would like to see on the board?

Last day's work: READ pp.124-127

p. 128

p. 128 #1 - 5

3. Simplify. State any restrictions on the variables.

a) $\frac{3}{x-3} - \frac{7}{5x-1}$

b) $\frac{2}{x+3} + \frac{7}{x^2-9}$

c) $\frac{5}{x^2-4x+3} - \frac{9}{x^2-2x+1}$ LCD = $(x-1)(x-3)(x-1)$

$$= \frac{5}{(x-1)(x-3)} - \frac{9}{(x-1)(x-1)}$$

$$= \frac{5(x-1)}{(x-1)(x-3)(x-1)} - \frac{9(x-3)}{(x-1)(x-3)(x-1)}$$

$$= \frac{5x-5-9x+27}{(x-1)(x-3)(x-1)}$$

$$= \frac{-4x+22}{(x-1)(x-3)(x-1)}$$

$$= \frac{-2(2x-11)}{(x-1)^2(x-3)}$$

Restrictions: $x \neq 3, 1$

p. 128 5. Simplify. State any restrictions on the variables.

a) $\frac{2x}{3} + \frac{3x}{4} - \frac{x}{6}$

c) $\frac{2x}{3y} - \frac{x^2}{4y^3} + \frac{3}{5y^4}$

b) $\frac{3}{t^4} + \frac{1}{2t^2} - \frac{3}{5t}$

d) $\frac{n}{m} + \frac{m}{n} - m$ LCD = mn

LCD = 12

$$= \frac{2x(4)}{12} + \frac{3x(3)}{12} - \frac{x(2)}{12}$$

$$= \frac{8x+9x-2x}{12}$$

$$= \frac{5x}{4}$$

Restrictions: NONE

$$= \frac{n(n)}{mn} + \frac{m(m)}{mn} - \frac{m(mn)}{mn}$$

$$= \frac{n^2+m^2-m^2n}{mn}$$
 R: $m \neq 0, n \neq 0$

Today's Learning Goal(s):

Date: Feb. 19/19

(Every lesson)

By the end of the class, I will be able to:

- a) add or subtract rational expressions and state any restrictions.

2.7 Adding and Subtracting Rational Expressions Day 2

Ex.1 Simplify. State any restrictions on the variables.

$$\text{a) } \frac{5}{a^2 - 2a} + \frac{7}{4a - 8} \quad \text{LCD} = 4a(a-2)$$

$$= \frac{5}{a(a-2)} + \frac{7}{4(a-2)}$$

$$= \frac{5(4)}{4a(a-2)} + \frac{7(a)}{4a(a-2)}$$

$$= \frac{20 + 7a}{4a(a-2)}$$

Restrictions: $a \neq 0, 2$

Don't forget restrictions!

$$\text{b) } \frac{5}{x^2 - 2x - 3} - \frac{2}{2x^2 - 3x - 5} \quad \text{LCD} = (x-3)(x+1)(2x-5)$$

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

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

$$= \frac{10x - 25 - 2x + 6}{(x-3)(x+1)(2x-5)}$$

$$= \frac{8x - 19}{(x-3)(x+1)(2x-5)}$$

R: $x \neq 3, -1, \frac{5}{2}$

$$\text{c) } \frac{3}{x^2 + 8x + 15} - \frac{2x - 8}{x^2 - 25} \div \frac{x^2 - 2x - 8}{3x - 15}$$

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

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

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

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

$$= \frac{3x + 6 - 6x - 18}{(x+5)(x+3)(x+2)}$$

$$= \frac{-3x - 12}{(x+5)(x+3)(x+2)}$$

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

Restrictions: $x \neq -5, -3, -2, 5, 4$ LCD = $(x+5)(x+3)(x+2)$

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Last day's work: p. 128 #1 – 5

Today's Homework Practice includes:

pp. 128-129 #(6 – 10)ace