

12-5 Day 2

Same lesson, so just add the new essential question:

EQ: How do you create common denominators when adding or subtracting rational expressions?

Apr 23-3:52 PM

Add or Subtract

$$\cancel{3} \cdot \frac{1}{4} + \frac{2 \cdot 4}{\cancel{3} \cdot 4}$$

$$\frac{3}{12} + \frac{8}{12} = \frac{11}{12}$$

$$\cancel{25} \cdot \frac{7}{9} - \frac{1 \cdot 9}{\cancel{25} \cdot 9}$$

$$\frac{35}{45} + \frac{-9}{45} = \frac{26}{45}$$

May 7-10:01 AM

Creating common Denominators in Rational Expressions:

***MONOMIAL**

- LCM of coefficients
- highest exponent of each variable

$$\frac{3}{4x} \text{ and } \frac{5x}{2x^3}$$

Common denominator: $4x^3 \cdot 4x^3$

***BINOMIAL(S) -**

- One of each binomial
- LCM of coefficient if there is one

$$\frac{(x-2) \cdot 3}{(x-2)2(x+1)} \text{ and } \frac{2x}{x-2}$$

Common denominator: $2(x+1)(x-2)$

Find the least common denominator.

$$\frac{5}{2m^3} \quad \frac{9}{4m} \cdot m^2 \quad \frac{(m-2) \cdot 5}{(m-2)m+9} \quad \frac{9}{m-2(m+9)}$$

$4m^3$ $(m+9)(m-2)$

$$\frac{5}{3(k+9)} \quad \frac{9}{3k-12}$$

$3(k+9)(k-4)$

Apr 19-11:01 AM

Apr 27-10:41 AM

Add. Make sure you are working with common denominators!

$$3. \frac{2 \cdot 2n}{25n^3} + \frac{4n \cdot 5n}{2n^2 \cdot 5n}$$

$$\frac{4n}{10n^3} + \frac{20n^2}{10n^3}$$

$$\frac{20n^2 + 4n}{10n^3}$$

$$\frac{2n(5n+1)}{5 \cdot 10n^3 n^2}$$

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

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

$$\frac{2x^2 - x + 6}{(x-2)(x+1)}$$

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

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

Apr 19-11:00 AM

$$5. \frac{x}{x+3} + \frac{2x+6}{x^2+6x+9}$$

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

May 7-11:59 AM

$$7. \frac{12}{x^2-9} + \frac{x+5}{x+3} \cdot \frac{(x-3)}{(x-3)}$$

$$\frac{12 + x^2 - 3x + 5x - 15}{(x+3)(x-3)} = \frac{x^2 + 2x - 3}{(x+3)(x-3)}$$

$$8. \frac{2}{5-w} + \frac{5}{w-5}$$

$$\boxed{\frac{x-1}{x-3}}$$

May 7-12:49 PM

Assignment
WS 12-5 Day 2

May 7-1:02 PM

$$7. \frac{y^2 + 4y}{y^2 + y + 8} + \frac{3}{y+2} \cdot \frac{(y+4)}{(y+4)}$$

$$\frac{y^2 + (4y + 3y) + 12}{(y+4)(y+2)} = \frac{(y+3)(y+4)}{(y+4)(y+2)}$$

$$\boxed{\frac{y+3}{y+2}}$$

May 2-9:53 AM