12-5 Adding and Subtracting Rational Expressions.....#

$\frac{1}{5} \cdot \frac{2}{3} = \frac{2}{15}$

EQ: How are rational expressions added or subtracted ?

$\frac{3 \cdot 1}{3 \cdot 5} + \frac{2 \cdot 5}{3 \cdot 5}$

$\frac{3}{15} + \frac{10}{15} = \frac{13}{15}$

Apr 21-4:20 PM

How are fractions added or subtracted?

*need common denominator
*add or subtract numerators
*denominator stays the same

ADD or SUBTRACT

1. $\frac{2}{5} + \frac{-4}{5} = \frac{-2}{5}$
2. $\frac{6}{7} + \frac{1}{7} = \frac{7}{7} = 1$
3. $\frac{4}{3} + \left(+\frac{1}{3}\right) = \frac{5}{3}$

Simplify by adding or subtracting

4. $(x+9) + (2x^2 + 3x + 6)$

$2x^2 + 4x + 15$

May 5-11:54 AM

Add and Subtracting RATIONAL EXPRESSIONS

*same as fractions!
-common denominator ✓
-add/subtract numerators ✓
-denominator stays the same ✓
-simplify if possible ✓

1. $\frac{2x}{x^4} + \frac{4x}{x^4} = \frac{6x}{x^4} = \frac{6}{x^3}$

Apr 17-11:37 AM

Add. Simplify your answer.

2. $\frac{m^2+2m}{m+4} + \frac{3m+4}{m+4} = \frac{(m+4)(m+1)}{m+4} = m+1$

3. $\frac{3k-18}{k^2-16} + \frac{6}{k^2-16} = \frac{3k-12}{k^2-16} = \frac{3(k-4)}{(k+4)(k-4)} = \frac{3}{k+4}$

4. $\frac{3y^2}{y+1} + \frac{3y}{y+1}$

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Subtract. Simplify your answer.

Caution

Make sure you add the opposite of all the terms in the numerator of the second expression when subtracting rational expressions.

5. $\frac{6y-6}{y^2+4y-12} - \frac{y+4}{y^2+4y-12}$

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

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Subtract. Simplify your answer.

6. $\frac{5a+2}{a^2-4} + \frac{-2a+4}{a^2-4}$

$\frac{3(a+2)}{(a+2)(a-2)} = \frac{3}{a-2}$

7. $\frac{2b+14}{b^2+3b-4} - \frac{-2b+2}{b^2+3b-4}$

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Assignment

p. 889
#1-6, 14-19, 34,
35, 60-65

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