

7.4 Adding and Subtracting Rational Expressions: Part I

Review:

$$\frac{5 \times 2}{5 \times 3} + \frac{4 \times 3}{5 \times 3}$$

All fractions **MUST** have a common denominator **before** you can add or subtract them

$$\frac{10}{15} + \frac{12}{15}$$

$$\frac{22}{15}$$

Keep the denominator the same and **ONLY** add or subtract the numerators

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Write an expression equivalent to $\frac{2+3b}{b}$ with each denominator

denominator = a^2b

$$\frac{a^2 \times 2 + 3b}{a^2 \times b} \rightarrow \frac{2a^2 + 3a^2b}{a^2 b}$$

denominator = $b(2+b)$

$$\frac{(2+3b) \times (2+b)}{(2+b) \times b} \rightarrow \frac{4 + 2b + 6b + 3b^2}{b(2+b)} = \frac{4 + 8b + 3b^2}{b(2+b)}$$

Pg.421 2 odds

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$$\frac{2 \times 3}{2 \times 2x} - \frac{5 \cdot x}{4 \cdot x}$$

$$\frac{6}{4x} - \frac{5x}{4x}$$

$$\frac{(6 - 5x)}{4x} \checkmark$$

* NEVER simplify until you have formed a single fraction *

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$$\frac{3y \times 7}{3y \times 10y} + \frac{1 \times 2}{15y^2 \times 2}$$

$$\frac{21y}{30y^2} + \frac{2}{30y^2}$$

$$\frac{(21y + 2)}{30y^2} \checkmark$$

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$$\frac{2m}{n} + \frac{3n}{m^2} - \frac{2n-3}{5m} \quad (mn)$$

$$\frac{10m^3}{5m^2n} + \frac{15n^2}{5m^2n} - \frac{(2mn^2-3mn)}{5m^2n}$$

$$\frac{10m^3 + 15n^2 - 2mn^2 + 3mn}{5m^2n}$$

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$$\frac{\frac{2}{3} - a}{\frac{1}{4} + a} \quad \times \frac{12}{1}$$

Find a common demoninator for the fractions that are in the numerator and denominator

$$\frac{(8 - 12a)}{(3 + 12a)}$$

$$= \frac{4(2 - 3a)}{3(1 + 4a)}$$

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$$\begin{array}{r} 3 + \frac{1}{b} \\ \hline 2 - \frac{1}{b} \end{array} \times b$$
$$\frac{1}{b} \times b$$
$$\frac{b}{b} = 1$$
$$\frac{3b + 1}{2b - 1}$$

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Assignment:

Pg. 421 5-7 odds
11 and 14 odds
18 odds

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