Adding and Subtracting Rational Expressions

Learning Goal: By the end of today, I will be able to add and subtract rational expressions with monomial denominators.

Learning Goal: By the end of today, I will be able to add and subtract rational expressions with binomial and trinomial denominators.

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Reminder: Restrictions always come from the expression BEFORE it is simplified.

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When adding/subtracting fractions, we needed a common denominator, we will need the same for rational expressions.

$$\frac{3}{8} + \frac{5}{12}$$

To find the lowest common multiple (LCM) we can look at the factors of both denominators for what we need.

Simplify   LCM

$$\frac{a}{6} + \frac{2b}{5}$$

$$\frac{5a}{16} + \frac{2}{m}$$

Simplify

LCM

$$\frac{a-2}{9} + \frac{a-5}{5}$$

$$\frac{3a}{2x} + \frac{9a}{3x}$$

$$\frac{5x}{3xy} + \frac{2y}{9x^3}$$

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Simplify

LCM

$$\frac{7}{2a-1} + \frac{2}{2a-1}$$

$$\frac{3}{a+6} + \frac{2}{a+5}$$

$$\frac{5}{2a-4} + \frac{2}{3a-6}$$

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Simplify   LCM

$$\frac{a-2}{9(a-1)} + \frac{a-5}{5(a+3)}$$

$$\frac{3a}{a^2+2a+1} + \frac{9a}{a^2-1}$$

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Simplify - state any restrictions

$$\frac{3a+1}{a^2+8a+12} + \frac{a}{a^2-4}$$

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Simplify - state any restrictions

$$\frac{a+1}{a^2+9a+20} + \frac{2a-8}{a^2-6a+8} \times \frac{-3a+6}{5a+20}$$

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Homework:

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