

**Starter #4**  
**3.1 Homework Questions**  
**Calendar Math**  
**Lesson Objective:** Show understanding of adding and subtracting rational expressions by completing the activity, scoring an 80% on the 3.2 homework and a 3 out of 5 on the 3.2 quiz next class period.  
**3.2 Adding and Subtracting Rational Expressions**

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3.1 homework questions

$$\frac{x^2 + 3x + 2}{3x - 18} \div \frac{x^2 - 1}{x^2 - x + 30}$$

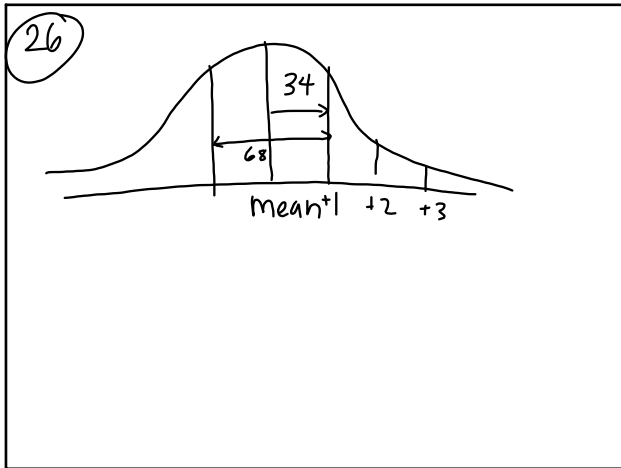
$$\frac{x^2 + 3x + 2}{3x - 18} \cdot \frac{x^2 - x + 30}{x^2 - 1}$$

$$\frac{(x+2)(x+1)}{3(x-6)} \cdot \frac{x^2 - x + 30}{(x+1)(x-1)}$$

$$\frac{(x+2)(x^2 - x + 30)}{3(x-6)(x-1)}$$

Handwritten cancellation notes:  
 $\frac{2}{2} \cdot \frac{1}{1}$   
 $\frac{30}{-6} \cdot \frac{5}{-1}$

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$$\frac{4x^2 - 9}{8x^3 - 27} \cdot \frac{4x^2 + 6x + 9}{4x^2 - 8x + 3} \div \frac{4x + 6}{3x - 9}$$

$$\frac{4x^2 - 9}{8x^3 - 27} \cdot \frac{4x^2 + 6x + 9}{4x^2 - 8x + 3} \cdot \frac{3x - 9}{4x + 6}$$

$$\frac{(2x-3)(2x+3)}{(2x-3)(4x^2+6x+9)} \cdot \frac{4x^2+6x+9}{(2x-3)(2x-1)} \cdot \frac{3(x-3)}{2(2x+3)}$$

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

Handwritten cancellation notes:  
 $\frac{12}{-6} \cdot \frac{2}{-8}$   
 $\frac{(4x-6)(4x-2)}{(2x-3)(2x-1)}$

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Calendar Math

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3.2 PowerPoint

Examples

$$\frac{3}{5} \cdot \frac{7}{7} + \frac{1}{7} \cdot \frac{5}{5}$$

$$\frac{21}{35} + \frac{5}{35} = \frac{26}{35}$$

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ex1)  $\frac{4}{13x} + \frac{7}{13x} \quad x \neq 0$   $\frac{1}{x+2}$   
 $x \neq -2$

$$\frac{4+7}{13x} = \frac{11}{13x}$$

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ex2)  $\frac{t}{t^2+2t-15} + \frac{5}{t^2+2t-15}$

$$5 \begin{array}{r} -15 \\ \times -3 \\ \hline 2 \end{array} \quad \frac{t}{(t+5)(t-3)} + \frac{5}{(t+5)(t-3)}$$

$$x \neq -5, 3 \quad \frac{\cancel{t+5}}{(t+5)(t-3)} = \frac{1}{t-3}$$

$t \neq -5, 3$

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### Adding and Subtraction Rationals Scavenger Hunt

Desk partners you will be given a letter to start with. Solve that expression and look around the room to find the next letter. You will be given a new expression to solve. Once you complete the circle sit back in your desks.

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### Review objective

Next lesson is **3.3 Solving Rational Expressions**, you will use your simplifying to be able to solve the rational expressions as well as your factoring and finding zeros from Unit 2.

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