

Daily Agenda

Learning Targets: I can simplify rational expressions. I can solve rational equations.

Homework	Assessments
5.1 to 5.2 Review	5.1 to 5.2 Quiz 11/21 Unit 5 Test 12/1

Friendship...is not something you learn in school. But if you have learned the meaning of friendship, you really haven't learned any

-Muhammad Ali

Nov 15-8:24 PM

Solve for x.

$$\frac{2}{x+2} - \frac{x}{2-x} = \frac{x^2+4}{x^2-4}$$

Factor out negative

$$\frac{2}{x+2} - \frac{x}{-(-2+x)} = \frac{x^2+4}{x^2-4}$$

$$\frac{2}{x+2} + \frac{x}{x-2} = \frac{x^2+4}{x^2-4}$$

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Solve for x.

$$\frac{2}{x+2} - \frac{x(-1)}{(2-x)^{-1}} = \frac{x^2+4}{(x+2)(x-2)}$$

$$\frac{2}{x+2} - \frac{-x}{x-2} = \frac{x^2+4}{x^2-4}$$

$$\frac{2}{x+2} + \frac{x}{x-2} = \frac{x^2+4}{x^2-4}$$

Mult. by  $\frac{-1}{-1}$

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Solve for x.

$$\left( \frac{2}{x+2} - \frac{x}{2-x} = \frac{x^2+4}{x^2-4} \right) \cdot (-1)(x+2)(x-2)$$

Using -1 in comm. den.

$$2(-1)(x-2) - x(x+2) = -(x^2+4)$$

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Solve for x.

$$\frac{2}{x+2} - \frac{x}{2-x} = \frac{x^2+4}{x^2-4} \quad D: x \neq \pm 2$$

$$\left( \frac{2}{x+2} + \frac{x}{x-2} = \frac{x^2+4}{(x+2)(x-2)} \right) (x+2)(x-2)$$

$$2(x-2) + x(x+2) = x^2+4$$

$$2x-4 + x^2+2x = x^2+4$$

$$x^2+4x-4 = x^2+4$$

$$\begin{array}{r} x^2+4x-4 = x^2+4 \\ -x^2 \quad +4 \quad -x^2+4 \\ \hline 4x=8 \quad x=2 \end{array}$$

2 is extraneous  
No Sol.

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