

# **Math Virtual Learning**

# Algebra 2/Honors Algebra 2

May 11, 2020



# Lesson: May 11, 2020

# **Objective/Learning Target:** Students will practice solving rational equations.

#### Let's Review:

#### Here are the steps to solve a rational equation.

(write this down, if you haven't already!)

- Factor the denominators
- Find the LCD
- Identify the domain
- Multiply each term by ALL of the LVCD
- Cancel and solve
- Check for extraneous solutions

#### Let's Get Started:

Go to the <u>Khan Academy website</u> to practice solving rational equations.

### You will want a sheet of paper to be able to work out the problems.

#### Extra Help:

- Practice solving rational equations
- Do at least 4 problems
- Use the "Check" if you get stuck
- Use a calculator if you need it

Example question you might see!

Find all solutions to the equation.

$$\frac{x-3}{x+1} = \frac{4x-6}{(x+1)(x+2)}$$

# Solving Rational Equations Practice:

On the same sheet of paper, solve the following practice problems. Remember to check if your solutions work or are extraneous.

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not required).

A	В	С	D	E	F	
G	н	1	J	к	L	?
11 WAN	TED Solve ea	Solve each equation below. Find your answer in one of the answer columns and notice the word next to it. Write this word in the box				PROFESSOR
-8 HAD	above th will hear	above that contains the letter of that exercise. Keep working and you will hear about a college "eye deal."			3 4	EYED
-6 STU	DENTS (A) $\frac{1}{9}$ +	$\frac{1}{\mathbf{x}} = \frac{4}{9}$	$G \frac{x}{2x+6}$	$-\frac{1}{x+3}=1$	$-\frac{2}{9}$	SUBJECTS
3 THE	(B) $\frac{2}{5}$ +	(B) $\frac{2}{5} + \frac{1}{5} = \frac{1}{2}$		$(H) \frac{1}{m+5} = \frac{2}{m^2 - 25}$		OVER
$-\frac{11}{3}$ CON	TROL 5	x 2	m + 5	m <sup>2</sup> - 25	7	NO
	SON C 4x	$\frac{1}{x} = 3$	$(1) \frac{1}{y+3} =$	$\overline{y-3} - \overline{y^2-9}$	9 5	A
10 CRO	ss $\boxed{D} \frac{7}{n}$	$\overline{3} = \frac{4}{n}$		$=\frac{\mathbf{x}}{\mathbf{x}-2}+2$	$-\frac{1}{2}$	WHO
8 3 HIS	€ <sup>8</sup> / <sub>5x</sub>	$-\frac{2}{3x} = \frac{4}{15}$	$\bigotimes \frac{\mathbf{x}+5}{\mathbf{x}^2-\mathbf{x}}$	$-\frac{3}{x}=\frac{1}{x-1}$	-2	PUPILS
-4 COLL	EGE $(F) \frac{a+}{4a}$	$\frac{5}{12} + \frac{11}{12} = \frac{2}{3a}$	$\bigcirc \frac{n+3}{n} -$	$\frac{n+2}{n+5} = \frac{1}{n}$	<u>5</u> 12	THAT

# Solving Rational Equations Answer Key:

Once you have completed the problems, check your answers here.

建昌县 建 Solving **Did You Hear About...** 57 TIVE 3-g: To solve a quadratic equation C D E A В G ĸ н J L 72 Solve each equation below. Find your answer in one of the answer PROFESSOR WANTED 11 columns and notice the word next to it. Write this word in the box above that contains the letter of that exercise. Keep working and you  $\frac{3}{4}$ will hear about a college "eye deal." EYED -8HAD -29 (A)  $\frac{1}{9} + \frac{1}{x} = \frac{4}{9} \times -3$  $G \frac{x}{2x+6} - \frac{1}{x+3} = 1 X^{-5}$ SUBJECTS STUDENTS -6OVER THE з  $H = \frac{1}{m+5} = \frac{2}{m^2 - 25} M = 7$ (B)  $\frac{2}{5} + \frac{1}{x} = \frac{1}{2} \times = 0$  $-\frac{11}{3}$ CONTROL NO 7  $(1) \frac{1}{y+3} = \frac{7}{y-3} - \frac{2}{y^2-9}$  $\bigcirc \frac{5}{4x} + \frac{1}{x} = 3 \times \frac{3}{2}$ 9 5 © Creative Publications REASON 8 (D)  $\frac{7}{n-3} = \frac{4}{n} = -4$  $( ) \frac{x-3}{2x-4} = \frac{x}{x-2} + 2$  $-\frac{1}{2}$ CROSS WHO 10 (E)  $\frac{8}{5x} - \frac{2}{3x} = \frac{4}{15} \times = \frac{7}{2}$  (K)  $\frac{x+5}{x^2-x} - \frac{3}{x} = \frac{1}{x-1} \times = \frac{1}{x}$ 83 -2 PUPILS HIS  $(F) \frac{a+5}{4a} + \frac{11}{12} = \frac{2}{3a} + \frac{11}{12} = \frac{2}{3a} + \frac{11}{12} = \frac{2}{3a} + \frac{11}{12} = \frac{1}{2} + \frac{11}{12} + \frac{11}{12} = \frac{1}{2} + \frac{11}{12} + \frac{11}{12} = \frac{1}{2} + \frac{11}{12} + \frac{11}{12$ 5 THAT COLLEGE -4

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#### **Additional Practice:**

Click on the links below to get additional practice and to check your understanding!

#### Solving Rational Equations: <u>Notes</u>, <u>Practice</u>, & <u>Answer Key</u>

Solving Rational Equations <u>Website - Practice Problems</u>