Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Algebra 2/Honors Algebra 2

May 13, 2020

Lesson: May 13, 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 this website to quiz yourself solving rational equations.

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

Extra Help:

- Quiz yourself solving rational equations
- Work through the entire quiz (5 questions total)
- You will get a score at the end
- Check your answers, do you know why you got it right or wrong?
- Use a calculator if you need it

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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What Sound Did the Sheep Hear When Her Sister Exploded?

Solve each equation and find your answer in the rectangle below. Cross out the box that contains your answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

① $\frac{2}{x+3}+\frac{3}{x+4}=\frac{7}{x^2+7x+12}$

② $\frac{4}{x-5}+\frac{1}{x+2}=\frac{2x+7}{x^2-3x-10}$

③ $\frac{a-30}{a^2+4a-21}=\frac{5}{a+7}-\frac{2}{a-3}$

④ $\frac{x}{x+4}=\frac{3}{x-1}$

⑤ $\frac{6}{y+2}+\frac{1}{y-2}=1$

⑥ $\frac{3}{n}+\frac{2}{n-1}=2$

⑦ $2=\frac{x}{x+3}-\frac{3}{x-5}$

⑧ $\frac{1}{d-7}+\frac{d}{d-2}=\frac{5}{d^2-9d+14}$

⑨ $\frac{x-1}{x+1}-\frac{6}{x-3}=3$

YE	SI	CK	SB	AM	SH	OO	FR	KO	MB	IG	UP	AH	ER
6, 1	−5, 2	−1	−9	−3, 1	$-\frac{1}{2}$	2, 8	−7, 3	−2	$\frac{1}{4}$, −1	$\frac{1}{2}$, 3	$\frac{4}{3}$	$\frac{1}{3}$, 5	6, −2

OBJECTIVE 3–h: To solve fractional equations (solving a quadratic equation may be required).

Solving Rational Equations Answer Key:

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

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Solve each equation and find your answer in the rectangle below. Cross out the box that contains your answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

① $\frac{2}{x+3}+\frac{3}{x+4}=\frac{7}{x^2+7x+12}$ $x=-2$

② $\frac{4}{x-5}+\frac{1}{x+2}=\frac{2x+7}{x^2-3x-10}$ $x=4/3$

③ $\frac{a-30}{a^2+4a-21}=\frac{5}{a+7}-\frac{2}{a-3}$ $a=-1/2$

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

⑤ $\frac{6}{y+2}+\frac{1}{y-2}=1$ $y=6$ and $y=1$

⑥ $\frac{3}{n}+\frac{2}{n-1}=2$ $n=1/2$ and $n=3$

⑦ $2=\frac{x}{x+3}-\frac{3}{x-5}$ $x=3$ and $x=-7$

⑧ $\frac{1}{d-7}+\frac{d}{d-2}=\frac{5}{d^2-9d+14}$ $d=-1$

⑨ $\frac{x-1}{x+1}-\frac{6}{x-3}=3$ $x=-3$ and $x=1$

OBJECTIVE 3–h: To solve fractional equations (solving a quadratic equation may be required).

YE	SI	CK	SB	AM	SH	OO	FR	KO	MB	IG	UP	AH	ER
6, 1	−5, 2	−1	−9	−3, 1	$-\frac{1}{2}$	2, 8	−7, 3	−2	$\frac{1}{4}$, −1	$\frac{1}{2}$, 3	$\frac{4}{3}$	$\frac{1}{3}$, 5	6, −2

Additional Practice:

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

Solving Rational Equations:
Notes, Practice, & Answer Key

Solving Rational Equations Website - Practice Problems