April 26, 2016

* Final Exam – May 6 @ 8:00 am !

* Covers Everything!

Apr 26-9:06 AM

7.4 Solving Rational Equations

Key Ideas

- Finding the LCD
- Distributive Prop
- Factoring

Apr 26-9:15 AM

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

Steps
① Find LCD: 12
② Distribute LCD through the whole equation to clear fractions
③ Solve
④ Check

$\frac{12}{1}\left(\frac{1}{2}x + \frac{1}{3} = \frac{1}{4}\right)$

$\left[\frac{6}{1}\cdot\frac{1}{2}x\right] + \left[\frac{4}{1}\cdot\frac{1}{3}\right] = \left[\frac{3}{1}\cdot\frac{1}{4}\right]$

$6x + 4 = 3$

$6x = -1$

$x = -\frac{1}{6}$

Ck

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

$-\frac{1}{12} + \frac{1}{3} = \frac{1}{4}$

$\frac{-1+4}{12}$

$\frac{3}{12} = \frac{1}{4}$

$\frac{1}{4} = \frac{1}{4}$ ✓

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$6\left(\frac{x}{2} + \frac{8}{3} = \frac{1}{6}\right)$ LCD: 6

$3x + 16 = 1$

$3x = -15$

$\boxed{x = -5}$

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$\frac{x^2}{1}\left(\frac{1}{1} - \frac{2}{x} = \frac{3}{x^2}\right)$ LCD: x^2

$\frac{x^2}{x} = x$; $\frac{x^2}{x^2} = 1$

$\left[\frac{x^2}{1}\cdot\frac{1}{1}\right] - \left[\frac{x^2}{1}\cdot\frac{2}{x}\right] = \left[\frac{x^2}{1}\cdot\frac{3}{x^2}\right]$

$x^2 - 2x = 3$ * Set equal to zero.

$x^2 - 2x - 3 = 0$ $ac = -3$ $b = -2$

$\frac{-}{3}\,\big|\,\frac{+}{1}$

$(x-3)(x+1) = 0$

① $x = 3$

② $x = -1$

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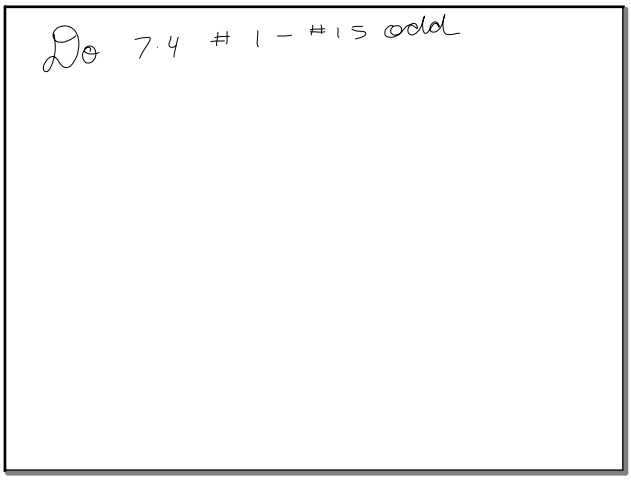
$6x\left(\frac{11}{2x} + \frac{2}{3} = \frac{7}{2x}\right)$ LCD: $6x$

$33 + 4x = 21$

$4x = -12$

$x = -3$

Apr 26-9:40 AM



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