

April 26, 2016
 * Final Exam - Monday May 2
 • Covers Everything! @ 10:20

Apr 26-9:52 AM

7.4 Solving Rational Equations
Key Ideas
 * Finding LCD
 * Distributive Tool
 * Factoring

Apr 26-10:10 AM

Steps

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

- 1 Find LCD (12)
- 2 Distribute LCD through whole equation to clear fractions
- 3 Solve
- 4 Check

$$\left[\frac{12}{1} \cdot \frac{1}{2}x \right] + \left[\frac{12}{1} \cdot \frac{1}{3} \right] = \left[\frac{12}{1} \cdot \frac{1}{4} \right]$$

$$6x + 4 = 3$$

$$6x = -1$$

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

ck

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

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

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

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

$$\frac{1}{4} = \frac{1}{4} \checkmark$$

Apr 26-10:13 AM

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

$$3x + 16 = 1$$

$$3x = -15$$

$$x = -5$$

Apr 26-10:22 AM

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

$$\frac{x^2}{x} - \frac{2x^2}{x} = \frac{3x^2}{x^2}$$

$$x - 2x = 3 \leftarrow \text{set one side equal to zero.}$$

$$x^2 - 2x - 3 = 0 \text{ factor}$$

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

Zero Product Property
 $ab=0$

$$x-3=0$$

$$x=3$$

$$x+1=0$$

$$x=-1$$

Apr 26-10:32 AM

$$\frac{11}{2x} + \frac{2}{3} = \frac{7}{2x}$$

$$\frac{11}{2(-3)} + \frac{2}{3} = \frac{7}{2(-3)} \quad x = -3$$

$$\frac{11}{-6} + \frac{2}{3} = -\frac{7}{6}$$

$$\frac{-11 + 4}{6} = -\frac{7}{6}$$

$$-\frac{7}{6} = -\frac{7}{6}$$

Apr 26-10:40 AM

Do 7.4 #1 - #15 odd

Apr 26-10:51 AM