Algebra with Deborah Joya

Clearing Fractions in Equations.

1. Find the LCD (Least Common Denominator)
   → multiple of all denominators
   i) check to see if all of the denominators "go into" the biggest denominator. If not;
   ii) Multiply the biggest one by 2, 3, 4, etc. until you have an LCD.
2. Multiply ALL TERMS on both sides of the equation by the LCD.
   → cancel denominators
3. Solve for the variable.
4. Check by substituting the answer for the variable in the ORIGINAL EQUATION

$$\frac{3}{4}x + \frac{2}{3} = \frac{5}{6}$$

$$6 \times 2 = 12 = LCD$$

$$\frac{\cancel{12}^{3}}{1}\left(\frac{3}{\cancel{4}}x\right) + \frac{\cancel{12}^{4}}{1}\left(\frac{2}{\cancel{3}}\right) = \frac{\cancel{12}^{2}}{1}\left(\frac{5}{\cancel{6}}\right)$$

$$9x + 8 = 10$$
$$-8 \qquad -8$$

$$\frac{9x}{9} = \frac{2}{9}$$

$$x = \frac{2}{9}$$

$$\frac{\cancel{3}}{\cancel{4}_{2}}\left(\frac{\cancel{2}}{\cancel{9}_{3}}\right) + \frac{2}{3} \stackrel{?}{=} \frac{5}{6}$$

$$\frac{1}{6} + \frac{2}{3} \stackrel{?}{=} \frac{5}{6}$$

$$\frac{1}{6} + \frac{2}{3}\left(\frac{2}{2}\right) \stackrel{?}{=} \frac{5}{6}$$

$$\frac{1}{6} + \frac{4}{6} \stackrel{?}{=} \frac{5}{6}$$

✓

Multiply fraction

multiply across top

multiply across bottom

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