

Warm Up: Lesson 12: Common Denominators and Decimals

Find the least common denominator (LCD) for each of the following fractions:

1.) $\frac{1}{2}$ and $\frac{3}{4}$

2.) $\frac{1}{5}$ and $\frac{1}{3}$

3.) $\frac{1}{6}$ and $\frac{3}{10}$

LCD = _____

LCD = _____

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Multiply.

4.) $7\left(\frac{1}{7}\right)$

5.) $9\left(\frac{3}{9}\right)$

6.) $12\left(\frac{x}{12}\right)$

7.) $4\left(\frac{x}{2}\right)$

8.) $20\left(\frac{3}{5}\right)$

9.) $15\left(\frac{2}{3}\right)$

Simplify:

10.) $8\left(\frac{3}{4}\right) + 8\left(\frac{2x}{8}\right)$

11.) $12\left(\frac{2n}{3}\right) + 12\left(\frac{n}{12}\right)$

Lesson 12: Equations with Fractions

Steps: 1. Make sure every term is written as a fraction.

2. Multiply each term by least common denominator (LCM)

3. Solve resulting equation for the variable.

Examples:

$$1. \quad \frac{2y}{5} + \frac{3}{5} = -\frac{1}{5}$$

$$2. \quad \frac{x}{8} - \frac{3}{4} = \frac{5}{4}$$

$$3. \quad \frac{1}{2}x - \frac{5x}{6} = \frac{1}{9}$$

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

$$5. \frac{x-1}{3} + 5 = \frac{x}{2}$$

$$6. \frac{x-1}{4} = \frac{x}{7}$$

$$7. \frac{1}{3} + \frac{1}{x} = \frac{1}{2}$$

$$8. \frac{15}{y} - \frac{3}{y} = 4$$

$$9. \frac{30}{x} = 7 + \frac{18}{2x}$$

Equations with Decimals:

How do we solve these?

1.) Solve for m : $0.6m + 3 = 2m + 0.2$

2.) Solve for x : $3.3 - x = 3(x - 1.7)$