M8 - 10.7 - LCD "$x + \frac{b}{c} = \frac{d}{e}$" HW

Solve for x by multiplying each term by the LCD

$$x - 1 = \frac{1}{2}$$

$$2 \times (x - 1) = \frac{1}{2} \times 2$$

$$2x - 2 = 1$$

$$+2 \quad +2$$

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

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

$$x - 1 = \frac{1}{2}$$

$$(\frac{3}{2}) - 1 = \frac{1}{2}$$

$$\frac{3}{2} - \frac{2}{2} = \frac{1}{2}$$

$$\frac{1}{2} = \frac{1}{2}$$ ✓

$$x - 1 = \frac{1}{4}$$

$$\frac{1}{5} = x + 1$$

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

$$x + \frac{1}{6} = \frac{1}{3}$$

$$6 \times \left(x + \frac{1}{6}\right) = \frac{1}{3} \times 6$$

$$6x + \frac{6}{6} = \frac{6}{3}$$

$$6x + 1 = 2$$

$$-1 \quad -1$$

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

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

$$x + \frac{1}{6} = \frac{1}{3}$$

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

$$\frac{2}{6} = \frac{1}{3}$$

$$\frac{1}{3} = \frac{1}{3}$$ ✓

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

$$x - \frac{1}{4} = \frac{1}{2}$$

$$x - \frac{5}{6} = -\frac{1}{3}$$

$$2 = x - \frac{3}{4}$$

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

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

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

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

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