

Show your work!

1. Solve the equation $\frac{2}{3}x - \frac{1}{6} = -\frac{5}{12}x + \frac{3}{2} - \frac{1}{6}x$.

$$12 \left[\frac{2}{3}x - \frac{1}{6} \right] = 12 \left[-\frac{5}{12}x + \frac{3}{2} - \frac{1}{6}x \right]$$

$$8x - 2 = -5x + 18 - 2x$$

$$15x = 20$$

$$x = \frac{20}{15}$$

$$\boxed{x = \frac{4}{3}}$$

2. Solve the equation $3[w - (10 - w)] = 7(w + 1)$.

$$3w - 3(10 - w) = 7w + 7$$

$$3w - 30 + 3w = 7w + 7$$

$$-37 = w$$

$$\boxed{w = -37}$$

3. The sum of three consecutive integers is -57. Find the integers.

Let x denote the least of the three integers.

$$x + (x + 1) + (x + 2) = -57$$

$$3x + 3 = -57$$

$$3x = -60$$

$$x = \frac{-60}{3}$$

$$x = -20$$

The integers are $-20, -19,$ and -18 .