

1. Solve.

[5]

a) $\frac{x}{3} = -9$

$$x = -9(3)$$

$$= -27$$

b) $\frac{1}{2}x + 3 = -2$

$$(2) \frac{1}{2}x = -5(2)$$

$$x = -10$$

c) $\frac{x+2}{5} = 3(5)$

$$x+2 = 3(5)$$

$$x+2 = 15$$

$$x = 13$$

2. Solve. No decimals.

[6]

a) $\frac{w}{2} + \frac{w}{5} = -3$

$$5 \left(\frac{w}{2} \right) + 2 \left(\frac{w}{5} \right) = 10(-3)$$

$$5w + 2w = -30$$

$$7w = -30$$

$$w = \frac{-30}{7}$$

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

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

$$4(2x) - 3(1) + 36x = -6x$$

$$8x - 3 + 36x = -6x$$

$$-3 + 44x = -6x$$

$$-3 + 44x + 6x = 0$$

$$50x = 3$$

$$x = \frac{3}{50}$$

3. Dance tickets cost \$5 for juniors and \$8 for seniors. Organizers sold 267 tickets worth a total of \$1686. How many junior tickets were sold?

Let t be the number of junior tickets

Let $267-t$ be the # of senior tickets

$$5t + 8(267-t) = 1686$$

$$5t + 2136 - 8t = 1686$$

$$-3t = -450$$

$$t = 150$$

\therefore 150 junior tickets were sold

[5]