

ANSWER KEY

I. 1. $2x - 3 = 7$

$2x = 7 + 3$

$2x = 10$

$x = 5$

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

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

$\frac{x}{3} = -\frac{8}{2}$

$x = \frac{8}{3} \times \cancel{3}$

$x = -8$

II. 1. $4z + 3 = 6 + 2z$

$4z - 2z = 6 - 3$

$2z = 3$

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

2. $5t - 3 = 3t - 5$

$5t - 3t = -5 + 3$

$2t = -2$

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

3. $3m = 5m - \frac{8}{5}$

$3m - 5m = -\frac{8}{5}$

$-2m = -\frac{8}{5}$

$\cancel{2}m = \cancel{2} \times \frac{1}{2} \times \frac{8}{5}$

$m = \frac{4}{5}$

III. 1. $x + (x + 11) + x + 22 = 363$

$x + x + 11 + x + 22 = 363$

$3x + 33 = 363$

$3x = 363 - 33$

$3x = 330$

$x = \frac{330}{3}$

$x = 110$

2. $x + \left(\frac{-14}{3}\right) = \frac{3}{7}$

$x - \frac{14}{3} = \frac{3}{7}$

$x = \frac{3}{7} + \frac{14}{3}$

$x = \frac{9+98}{21}$

$x = \frac{107}{21}$