

16.) $10^* [0.5m - 30 = 1.1m]$

* multiply the equation by 10 to get rid of the decimal

$$\begin{array}{r} 5m - 300 = 11m \\ -5m \quad -5m \\ \hline -300 = 6m \end{array}$$

$m = -50$

28.) distributive prop.

$$\begin{array}{r} x - 3(1-x) = 47 - x \\ x - 3 + 3x = 47 - x \\ 4x - 3 = 47 - x \\ +x \quad +x \\ \hline 5x - 3 = 47 \\ +3 \quad +3 \\ \hline 5x = 50 \\ \frac{5x}{5} = \frac{50}{5} \end{array}$$

$x = 10$

19.) $4y + 20 = 5y + 9$

$$\begin{array}{r} 4y + 20 = 5y + 9 \\ -4y \quad -4y \\ \hline 20 = y + 9 \\ -9 \quad -9 \\ \hline 11 = y \end{array}$$

$11 = y$

31.)

$$\begin{array}{r} 18 - 4n = 8 - 2(1 + 8n) \\ 18 - 4n = 8 - 2 - 16n \\ 18 - 4n = 6 - 16n \\ +16n \quad +16n \\ \hline 18 + 12n = 6 \\ -18 \quad -18 \\ \hline 12n = -12 \\ \frac{12n}{12} = \frac{-12}{12} \end{array}$$

$n = -1$

22.) $9x - 3 = 2x + 46$

$$\begin{array}{r} 9x - 3 = 2x + 46 \\ -2x \quad -2x \\ \hline 7x - 3 = 46 \\ +3 \quad +3 \\ \hline 7x = 49 \\ \frac{7x}{7} = \frac{49}{7} \end{array}$$

$x = 7$

25.) $2d + 36 = -3d - 54$

$$\begin{array}{r} 2d + 36 = -3d - 54 \\ +3d \quad +3d \\ \hline 5d + 36 = -54 \\ -36 \quad -36 \\ \hline 5d = -90 \\ \frac{5d}{5} = \frac{-90}{5} \end{array}$$

$d = -18$

33.)

$$\begin{array}{r} 8a - 3(5 + 2a) = 85 - 3a \\ 8a - 15 - 6a = 85 - 3a \\ 2a - 15 = 85 - 3a \\ +3a \quad +3a \\ \hline 5a - 15 = 85 \\ +15 \quad +15 \\ \hline 5a = 100 \\ \frac{5a}{5} = \frac{100}{5} \end{array}$$

$a = 20$

$$35.) \quad 3m - 5m - 12 = 7m - 88 - 5$$

$$-2m - 12 = 7m - 93$$

$$\begin{array}{r} +2m \quad \quad +2m \\ \hline \end{array}$$

$$-12 = 9m - 93$$

$$\begin{array}{r} +93 \quad \quad +93 \\ \hline \end{array}$$

$$\frac{81}{9} = \frac{9m}{9}$$

$$m = 9$$