

Basic Two-step Equations with Unknown on One Side

Date:

Name:

Through your working, show how you are keeping the equation balanced as you solve for the variable. Round to 1 d.p. if necessary.

<http://www.learnersgrid.com>**[1]**

$$10.5m + 20 = 104$$

[2]

$$\frac{c}{6} + 190.8 = 196.8$$

[3]

$$64.2 = 12.3m + 15$$

[4]

$$12m - 9 = 124.2$$

[5]

$$10m - 11 = 180$$

[6]

$$211.3 = 11m - 12$$

[7]

$$-9.3m + 14 = -79$$

[8]

$$\frac{h}{4} - 12 = 58.08$$

[9]

$$-4.9 = -8.3m + 20$$

[10]

$$11m - 8.4 = -52.4$$

[11]

$$10m - 11 = -176$$

[12]

$$44.8 = 4m - 10$$

Through your working, show how you are keeping the equation balanced as you solve for the variable. Round to 1 d.p. if necessary.

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$$\begin{aligned} [1] \quad 10.5m + 20 &= 104 \\ - 20 & \quad - 20 \end{aligned}$$

$$\begin{aligned} 10.5m &= 84 \\ \div 10.5 & \quad \div 10.5 \end{aligned}$$

$$m = 8.0$$

$$\begin{aligned} [2] \quad \frac{c}{6} + 190.8 &= 196.8 \\ - 190.8 & \quad - 190.8 \end{aligned}$$

$$\begin{aligned} \frac{c}{6} &= 6 \\ \times 6 & \quad \times 6 \end{aligned}$$

$$c = 36$$

$$\begin{aligned} [3] \quad 64.2 &= 12.3m + 15 \\ - 15 & \quad - 15 \end{aligned}$$

$$\begin{aligned} 49.2 &= 12.3m \\ \div 12.3 & \quad \div 12.3 \end{aligned}$$

$$4.0 = m$$

$$m = 4.0$$

$$\begin{aligned} [4] \quad 12m - 9 &= 124.2 \\ + 9 & \quad + 9 \end{aligned}$$

$$\begin{aligned} 12m &= 133.2 \\ \div 12 & \quad \div 12 \end{aligned}$$

$$m = 11.1$$

$$\begin{aligned} [5] \quad 10m - 11 &= 180 \\ + 11 & \quad + 11 \end{aligned}$$

$$\begin{aligned} 10m &= 191 \\ \div 10 & \quad \div 10 \end{aligned}$$

$$m = 19.1$$

$$\begin{aligned} [6] \quad 211.3 &= 11m - 12 \\ + 12 & \quad + 12 \end{aligned}$$

$$\begin{aligned} 223.3 &= 11m \\ \div 11 & \quad \div 11 \end{aligned}$$

$$20.3 = m$$

$$m = 20.3$$

$$\begin{aligned}
 [7] \quad -9.3m + 14 &= -79 \\
 \quad \quad -14 \quad \quad -14 \\
 -9.3m &= -93 \\
 \quad \quad \div -9.3 \quad \quad \div -9.3
 \end{aligned}$$

$$m = 10.0$$

$$\begin{aligned}
 [8] \quad \frac{h}{4} - 12 &= 58.08 \\
 \quad \quad \quad +12 \quad \quad +12
 \end{aligned}$$

$$\begin{aligned}
 \frac{h}{4} &= 70.075 \\
 \quad \quad \times 4 \quad \quad \times 4
 \end{aligned}$$

$$h = 280.3$$

$$\begin{aligned}
 [9] \quad -4.9 &= -8.3m + 20 \\
 \quad \quad -20 \quad \quad \quad -20 \\
 -25 &= -8.3m \\
 \quad \quad \div -8.3 \quad \quad \div -8.3
 \end{aligned}$$

$$3.0 = m$$

$$m = 3.0$$

$$\begin{aligned}
 [10] \quad 11m - 8.4 &= -52.4 \\
 \quad \quad +8.4 \quad \quad \quad +8.4 \\
 11m &= -44 \\
 \quad \quad \div 11 \quad \quad \div 11
 \end{aligned}$$

$$m = -4.0$$

$$\begin{aligned}
 [11] \quad 10m - 11 &= -176 \\
 \quad \quad +11 \quad \quad \quad +11 \\
 10m &= -165 \\
 \quad \quad \div 10 \quad \quad \div 10
 \end{aligned}$$

$$m = -16.5$$

$$\begin{aligned}
 [12] \quad 44.8 &= 4m - 10 \\
 \quad \quad +10 \quad \quad \quad +10 \\
 54.8 &= 4m \\
 \quad \quad \div 4 \quad \quad \div 4
 \end{aligned}$$

$$13.7 = m$$

$$m = 9.0$$