

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.

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[1]

$$10.6m + 17 = 123$$

[2]

$$9.9m + 23 = 92.3$$

[3]

$$73.6 = 12.9m + 22$$

[4]

$$3m - 17 = 13.9$$

[5]

$$5m - 22 = 53.5$$

[6]

$$101.8 = 7m - 20$$

[7]

$$-8.7m + 13 = -74$$

[8]

$$6.8m + 23 = -36.6$$

[9]

$$-45.8 = -9.4m + 20$$

[10]

$$5m - 21.3 = -41.3$$

[11]

$$7m - 18 = -125.8$$

[12]

$$138 = 10m - 23$$

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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$$\begin{aligned} [1] \quad 10.6m + 17 &= 123 \\ -17 \quad -17 \end{aligned}$$

$$\begin{aligned} 10.6m &= 106 \\ \div 10.6 \quad \div 10.6 \end{aligned}$$

$$m = 10.0$$

$$\begin{aligned} [2] \quad 9.9m + 23 &= 92.3 \\ -23 \quad -23 \end{aligned}$$

$$\begin{aligned} 9.9m &= 69.3 \\ \div 9.9 \quad \div 9.9 \end{aligned}$$

$$m = 7.0$$

$$\begin{aligned} [3] \quad 73.6 &= 12.9m + 22 \\ -22 \quad -22 \end{aligned}$$

$$\begin{aligned} 51.6 &= 12.9m \\ \div 12.9 \quad \div 12.9 \end{aligned}$$

$$4.0 = m$$

$$m = 4.0$$

$$\begin{aligned} [4] \quad 3m - 17 &= 13.9 \\ +17 \quad +17 \end{aligned}$$

$$\begin{aligned} 3m &= 30.9 \\ \div 3 \quad \div 3 \end{aligned}$$

$$m = 10.3$$

$$\begin{aligned} [5] \quad 5m - 22 &= 53.5 \\ +22 \quad +22 \end{aligned}$$

$$\begin{aligned} 5m &= 75.5 \\ \div 5 \quad \div 5 \end{aligned}$$

$$m = 15.1$$

$$\begin{aligned} [6] \quad 101.8 &= 7m - 20 \\ +20 \quad +20 \end{aligned}$$

$$\begin{aligned} 121.8 &= 7m \\ \div 7 \quad \div 7 \end{aligned}$$

$$17.4 = m$$

$$m = 17.4$$

$$\begin{aligned} [7] \quad -8.7m + 13 &= -74 \\ &\quad -13 \quad -13 \end{aligned}$$

$$\begin{aligned} -8.7m &= -87 \\ &\quad \div -8.7 \quad \div -8.7 \end{aligned}$$

$$m = 10.0$$

$$\begin{aligned} [8] \quad 6.8m + 23 &= -36.6 \\ &\quad -23 \quad -23 \end{aligned}$$

$$\begin{aligned} 6.8m &= -59.6 \\ &\quad \div 6.8 \quad \div 6.8 \end{aligned}$$

$$m = -8.8$$

$$\begin{aligned} [9] \quad -45.8 &= -9.4m + 20 \\ &\quad -20 \quad -20 \end{aligned}$$

$$\begin{aligned} -66 &= -9.4m \\ &\quad \div -9.4 \quad \div -9.4 \end{aligned}$$

$$7.0 = m$$

$$m = 7.0$$

$$\begin{aligned} [10] \quad 5m - 21.3 &= -41.3 \\ &\quad +21.3 \quad +21.3 \end{aligned}$$

$$\begin{aligned} 5m &= -20 \\ &\quad \div 5 \quad \div 5 \end{aligned}$$

$$m = -4.0$$

$$\begin{aligned} [11] \quad 7m - 18 &= -125.8 \\ &\quad +18 \quad +18 \end{aligned}$$

$$\begin{aligned} 7m &= -107.8 \\ &\quad \div 7 \quad \div 7 \end{aligned}$$

$$m = -15.4$$

$$\begin{aligned} [12] \quad 138 &= 10m - 23 \\ &\quad +23 \quad +23 \end{aligned}$$

$$\begin{aligned} 161 &= 10m \\ &\quad \div 10 \quad \div 10 \end{aligned}$$

$$16.1 = m$$

$$m = 16.1$$