

**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]**

$$4m + 17 = 37$$

**[2]**

$$\frac{n}{4} + 16 = 20$$

**[3]**

$$109 = 11m + 21$$

**[4]**

$$4m - 14 = 26$$

**[5]**

$$8m - 19 = 109$$

**[6]**

$$55 = 6m - 17$$

**[7]**

$$-4m + 18 = -22$$

**[8]**

$$\frac{c}{8} - 16 = -11$$

**[9]**

$$-98 = -12m + 22$$

**[10]**

$$7m - 11 = -67$$

**[11]**

$$10m - 20 = -230$$

**[12]**

$$44 = 5m - 21$$

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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$$\begin{aligned} [1] \quad 4m + 17 &= 37 \\ -17 \quad -17 & \\ 4m &= 20 \\ \div 4 \quad \div 4 & \end{aligned}$$

$$m = 5$$

$$\begin{aligned} [2] \quad \frac{n}{4} + 16 &= 20 \\ -16 \quad -16 & \\ \frac{n}{4} &= 4 \\ \times 4 \quad \times 4 & \end{aligned}$$

$$n = 16$$

$$\begin{aligned} [3] \quad 109 &= 11m + 21 \\ -21 \quad -21 & \\ 88 &= 11m \\ \div 11 \quad \div 11 & \\ 8 &= m \end{aligned}$$

$$m = 8$$

$$\begin{aligned} [4] \quad 4m - 14 &= 26 \\ +14 \quad +14 & \\ 4m &= 40 \\ \div 4 \quad \div 4 & \end{aligned}$$

$$m = 10$$

$$\begin{aligned} [5] \quad 8m - 19 &= 109 \\ +19 \quad +19 & \\ 8m &= 128 \\ \div 8 \quad \div 8 & \end{aligned}$$

$$m = 16$$

$$\begin{aligned} [6] \quad 55 &= 6m - 17 \\ +17 \quad +17 & \\ 72 &= 6m \\ \div 6 \quad \div 6 & \\ 12 &= m \end{aligned}$$

$$m = 12$$

$$\begin{aligned}
 [7] \quad -4m + 18 &= -22 \\
 -18 &\quad -18 \\
 -4m &= -40 \\
 \div -4 &\quad \div -4
 \end{aligned}$$

$$m = 10$$

$$\begin{aligned}
 [8] \quad \frac{c}{8} - 16 &= -11 \\
 &\quad +16 \quad +16 \\
 \frac{c}{8} &= 5 \\
 \times 8 &\quad \times 8
 \end{aligned}$$

$$c = 40$$

$$\begin{aligned}
 [9] \quad -98 &= -12m + 22 \\
 -22 &\quad -22 \\
 -120 &= -12m \\
 \div -12 &\quad \div -12 \\
 10 &= m
 \end{aligned}$$

$$m = 10$$

$$\begin{aligned}
 [10] \quad 7m - 11 &= -67 \\
 +11 &\quad +11 \\
 7m &= -56 \\
 \div 7 &\quad \div 7
 \end{aligned}$$

$$m = -8$$

$$\begin{aligned}
 [11] \quad 10m - 20 &= -230 \\
 +20 &\quad +20 \\
 10m &= -210 \\
 \div 10 &\quad \div 10
 \end{aligned}$$

$$m = -21$$

$$\begin{aligned}
 [12] \quad 44 &= 5m - 21 \\
 +21 &\quad +21 \\
 65 &= 5m \\
 \div 5 &\quad \div 5 \\
 13 &= m
 \end{aligned}$$

$$m = 13$$