

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]

$$4m + 23 = 63$$

[2]

$$9m + 14 = 41$$

[3]

$$43 = 8m + 11$$

[4]

$$8m - 16 = 96$$

[5]

$$11m - 21 = 243$$

[6]

$$155 = 11m - 10$$

[7]

$$-7m + 13 = -36$$

[8]

$$4m + 13 = -53$$

[9]

$$4 = -3m + 16$$

[10]

$$9m - 17 = -62$$

[11]

$$3m - 14 = -86$$

[12]

$$148 = 9m - 14$$

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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$$\begin{array}{r} 4m + 23 = 63 \\ -23 \quad -23 \\ \hline 4m = 40 \\ \div 4 \quad \div 4 \\ \hline \boxed{m = 10} \end{array}$$

$$\begin{array}{r} 9m + 14 = 41 \\ -14 \quad -14 \\ \hline 9m = 27 \\ \div 9 \quad \div 9 \\ \hline \boxed{m = 3} \end{array}$$

$$\begin{array}{r} 8m + 11 = 8m + 11 \\ -11 \quad -11 \\ \hline 32 = 8m \\ \div 8 \quad \div 8 \\ \hline 4 = m \\ \boxed{m = 4} \end{array}$$

$$\begin{array}{r} 8m - 16 = 96 \\ +16 \quad +16 \\ \hline 8m = 112 \\ \div 8 \quad \div 8 \\ \hline \boxed{m = 14} \end{array}$$

$$\begin{array}{r} 11m - 21 = 243 \\ +21 \quad +21 \\ \hline 11m = 264 \\ \div 11 \quad \div 11 \\ \hline \boxed{m = 24} \end{array}$$

$$\begin{array}{r} 11m + 10 = 11m - 10 \\ +10 \quad +10 \\ \hline 165 = 11m \\ \div 11 \quad \div 11 \\ \hline 15 = m \\ \boxed{m = 15} \end{array}$$

$$\begin{array}{r}
 -7m + 13 = -36 \\
 -13 \quad -13 \\
 -7m = -49 \\
 \div -7 \quad \div -7
 \end{array}$$

$$m = 7$$

$$\begin{array}{r}
 4m + 13 = -53 \\
 -13 \quad -13 \\
 4m = -66 \\
 \div 4 \quad \div 4
 \end{array}$$

$$m = -16.5$$

$$\begin{array}{r}
 -3m + 16 = 4 \\
 -16 \quad -16 \\
 -3m = -12 \\
 \div -3 \quad \div -3 \\
 4 = m
 \end{array}$$

$$m = 4$$

$$\begin{array}{r}
 -5 \quad 9m + 17 = -62 \\
 +17 \quad +17 \\
 9m = -45 \\
 \div 9 \quad \div 9
 \end{array}$$

$$m = -5$$

$$\begin{array}{r}
 -24 \quad 3m + 14 = -86 \\
 +14 \quad +14 \\
 3m = -72 \\
 \div 3 \quad \div 3
 \end{array}$$

$$m = -24$$

$$\begin{array}{r}
 18 \quad 9m + 14 = 148 \\
 +14 \quad +14 \\
 9m = 162 \\
 \div 9 \quad \div 9 \\
 18 = m
 \end{array}$$

$$m = 18$$