

Do Now

Solve and check the following:

$$1) 12 = b - 15$$

$$\begin{array}{r} +15 \quad +15 \\ \hline 27 = b \end{array}$$

Check

$$12 = b - 15$$

$$12 = (27) - 15$$

$$12 = 12 \checkmark$$

$$2) -7n = 42$$

$$\begin{array}{r} -7 \quad -7 \\ \hline n = -6 \end{array}$$

Check

$$-7n = 42$$

$$-7(-6) = 42$$

$$42 = 42 \checkmark$$

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Homework Answers

1) $m = 8$

2) $m = -44$

3) $y = 60$

4) $x = 48$

5) $x = -10$

6) $y = -396$

$$6) \frac{n}{6} = -66(6)$$

$$n = -396$$

Check

$$\frac{n}{6} = -66$$

$$\frac{(-396)}{6} = -66$$

$$-66 = -66 \checkmark$$

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Solving Two-Step Equations

When Solving Two-Step Equations:

Start working from farther
away from the variable to closer

ex) $5x - 7 = 13$

2nd 1st

$$\begin{array}{r} 5x - 7 = 13 \\ +7 \quad +7 \\ \hline 5x = 20 \\ \div 5 \quad \div 5 \\ \hline x = 4 \end{array}$$

check

$$\begin{array}{l} 5x - 7 = 13 \\ 5(4) - 7 = 13 \\ 20 - 7 = 13 \\ 13 = 13 \checkmark \end{array}$$

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Solving Two-Step Equations

Solve:

1) $10 = 7 - m$

$$\begin{array}{r} 10 = 7 - m \\ -7 \quad -7 \\ \hline 3 = -m \\ \div -1 \quad \div -1 \\ \hline -3 = m \end{array}$$

Check:

$$\begin{array}{l} 10 = 7 - m \\ 10 = 7 - (-3) \\ 10 = 10 \checkmark \end{array}$$

2) $19 + \frac{n}{3} = 25$

$$\begin{array}{r} 19 + \frac{n}{3} = 25 \\ -19 \quad -19 \\ \hline \frac{n}{3} = 6 \\ \left(\frac{3}{1}\right) \frac{n}{3} = \left(\frac{3}{1}\right) 6 \\ \hline n = 18 \end{array}$$

check

$$\begin{array}{l} 19 + \frac{n}{3} = 25 \\ 19 + \frac{(18)}{3} = 25 \\ 19 + 6 = 25 \\ 25 = 25 \checkmark \end{array}$$

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Solving Two-Step Equations

Solve:

$$3) -22 = 4n + 6$$

$$\begin{array}{r} -6 \\ -22 = 4n + 6 \\ \hline -28 = 4n \\ \hline -7 = n \end{array}$$

$$4) \frac{y}{5} - 12 = -9$$

$$\begin{array}{r} +12 \\ \frac{y}{5} - 12 = -9 \\ \hline \frac{y}{5} = 3 \end{array}$$

$$\begin{array}{r} \times 5 \\ \frac{y}{5} = 3 \\ \hline y = 15 \end{array}$$

Check:

$$\begin{array}{l} -22 = 4n + 6 \\ -22 = 4(-7) + 6 \\ -22 = -28 + 6 \\ -22 = -22 \checkmark \end{array}$$

check

$$\begin{array}{l} \frac{y}{5} - 12 = -9 \\ \frac{(15)}{5} - 12 = -9 \\ 3 - 12 = -9 \\ -9 = -9 \checkmark \end{array}$$

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Solving Two-Step Equations

Solve:

$$5) \frac{2}{3}x + 5 = 15$$

$$\begin{array}{r} -5 \\ \frac{2}{3}x + 5 = 15 \\ \hline \frac{2}{3}x = 10 \end{array}$$

$$\begin{array}{r} \times \frac{3}{2} \\ \frac{2}{3}x = 10 \\ \hline x = 15 \end{array}$$

Check:

$$\begin{array}{l} \frac{2}{3}x + 5 = 15 \\ \frac{2}{3}(15) + 5 = 15 \\ 10 + 5 = 15 \\ 15 = 15 \checkmark \end{array}$$

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