

Solving Two Step Equations $ax + b = c$

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* For $ax + b = c$ we use 2 steps to solve for variable:

1ST • Add / subtract

2ND • Multiply / divide

(Reverse BEDMAS)

⊗ Still use opposite operations to cancel

⊗ same thing to BOTH sides

Ex. Solve for x . Check!

$$\begin{array}{r} \textcircled{1} \quad 3x - 2 = 19 \\ \quad \quad \quad + 2 \quad \quad + 2 \\ \hline 3x = 21 \\ \quad \quad \quad \div 3 \quad \quad \div 3 \\ \hline x = 7 \end{array}$$

check:

$$\begin{array}{l} \text{LS} \quad \text{RS} \\ 3x - 2 = 19 \\ 3(7) - 2 = 19 \quad \leftarrow \text{sub for } x \\ 21 - 2 = 19 \quad \leftarrow \text{follow BEDMAS} \\ 19 = 19 \quad \leftarrow \text{LS} = \text{RS} \\ \checkmark \quad \checkmark \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad 14 = -5x + 1 \\ \quad \quad \quad - 1 \quad \quad \quad - 1 \\ \hline 13 = -5x \\ \quad \quad \quad \div -5 \quad \quad \div -5 \\ \hline -2.6 = x \end{array}$$

check:

$$\begin{array}{l} 14 = -5x + 1 \\ 14 = -5(-2.6) + 1 \\ 14 = 13 + 1 \\ 14 = 14 \\ \checkmark \quad \checkmark \end{array}$$

$$\begin{array}{r} \textcircled{3} \quad 3 - 4m = 11 \\ \quad \quad \quad - 3 \quad \quad \quad - 3 \\ \hline -4m = 8 \\ \quad \quad \quad \div -4 \quad \quad \div -4 \\ \hline m = -2 \end{array}$$

check:

$$\begin{array}{l} 3 - 4m = 11 \\ 3 - 4(-2) = 11 \\ 3 - -8 = 11 \\ 3 + 8 = 11 \\ 11 = 11 \\ \checkmark \quad \checkmark \end{array}$$

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