

2-Step Equations

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Step 1: Add or Subtract the Constant (Do the opposite of what's there)

Step 2: Divide or Multiply
 ↓
 by Coefficient ↳ by the Denominator

* Remember to do the same thing to BOTH Sides of the equation.

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Examples

① $2x - 5 = 13$

$$\begin{array}{r} 2x - 5 = 13 \\ +5 \quad +5 \\ \hline 2x = 18 \\ \frac{2x}{2} = \frac{18}{2} \\ x = 9 \end{array}$$

② $-4x + 8 = -20$

$$\begin{array}{r} -4x + 8 = -20 \\ -8 \quad -8 \\ \hline -4x = -28 \\ \frac{-4x}{-4} = \frac{-28}{-4} \\ x = 7 \end{array}$$

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$$\begin{aligned} \textcircled{3} \quad & -3 + 5x = 17 \leftarrow \\ & \quad \quad \quad +3 \leftarrow \\ \hline & 5x = 20 \leftarrow \\ & \quad \quad \quad \frac{5}{5} \leftarrow \\ & \boxed{x = 4} \leftarrow \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & -6x + 2 = -22 \\ & \quad \quad \quad -2 \quad -2 \\ \hline & -6x = -24 \\ & \quad \quad \quad \frac{-6}{-6} \quad \frac{-24}{-6} \\ & \boxed{x = 4} \end{aligned}$$

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$$\begin{aligned} \textcircled{5} \quad & \frac{x}{2} + 3 = -6 \\ & \quad \quad \quad -3 \quad -3 \\ \hline & \frac{x}{2} = -9 \\ & 2 \cdot \frac{x}{2} = -9 \cdot 2 \\ & \boxed{x = -18} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & 2 - \frac{x}{5} = 4 \\ & \quad \quad \quad -2 \quad -2 \\ \hline & -\frac{x}{5} = 2 \\ & -5 \cdot -\frac{x}{5} = 2 \cdot -5 \\ & \boxed{x = -10} \end{aligned}$$

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$$\textcircled{7} \quad \boxed{\frac{x}{2}} - 7 = -8$$
$$\quad \quad \quad +7 \quad +7$$

$$2 \cdot \frac{x}{2} = -1 \cdot 2$$

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$$\boxed{x = -2}$$

$$\frac{3x}{3} = \frac{12}{3}$$

$$\boxed{x = 4}$$

$$\frac{3}{4}x = 12$$
$$\frac{3}{4} \quad \frac{3}{4}$$

$$\boxed{x = 16}$$

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