

Solving Two-Step Equations Graphic Organizer

Example

$$3x + 2 = -7$$

$$\frac{1}{2}x + 1 = 3$$

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

Add or subtract the same number from both sides of the equation.

$$\begin{array}{r} 3x + 2 = -7 \\ \hline \cancel{-2} \quad \cancel{-2} \\ \hline 3x = -9 \end{array}$$

$$\begin{array}{r} \frac{1}{2}x + 1 = 3 \\ \hline \cancel{-1} \quad \cancel{-1} \\ \hline \frac{1}{2}x = 2 \end{array}$$

② $x + 5 = 3 \cdot 2$

$$\begin{array}{r} x + 5 = 6 \\ \hline \cancel{-5} \quad \cancel{-5} \\ \hline x = 1 \end{array}$$

Multiply or divide both sides of the equation by the same number.

$$\cancel{3}x = -9$$

$$\frac{-9}{3}$$

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

① $\cancel{2} \cdot \frac{x+5}{2} = 3 \cdot 2$

Write your solution as $x = \underline{\quad}$

$$x = -3$$

$$x = 4$$

$$x = 1$$

Check your solution

$$3(-3) + 2 = -7$$

$$-9 + 2 = -7$$

$$-7 = -7 \quad \checkmark$$

$$\frac{1}{2}(4) + 1 = 3$$

$$2 + 1 = 3$$

$$3 = 3 \quad \checkmark$$

$$\frac{(1)+5}{2} = 3$$

$$\frac{6}{2} = 3$$

$$3 = 3 \quad \checkmark$$