

★
**EVERY
ACCOMPLISHMENT
STARTS WITH
THE DECISION
TO TRY.**
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Today You Need:

*Comp book

*Pencil

Two Step Equations

Aug 28

LT: How is the concept of order of operations used in solving equations?

HW: Wednesday's Practice

Warm Up

Simplify and solve

$$\begin{array}{r} -3 + x = 5 \\ +3 \quad +3 \\ \hline \end{array}$$

$x = 8$

$$4b - 3(2 - 5b) + 1$$

$4b - 6 + 15b + 1$

$19b - 5$

$$4 \cdot -7 = \frac{y}{4} \cdot 4$$

$-28 = y$

First Thinking

$$2(n+5) = -2$$
$$\begin{array}{rcl} 2n + 10 & = & -2 \\ -10 & & -10 \\ \hline 2n & = & -12 \\ \frac{2n}{2} & & \frac{-12}{2} \\ n & = & -6 \end{array}$$

Solve

$$\begin{array}{r} -6 + \frac{x}{4} = -5 \\ +6 \quad \downarrow \quad +6 \\ \hline 4 \cdot \frac{x}{4} = 1 \cdot 4 \\ x = 4 \end{array}$$

Verify

rewrite + plug-in $x=4$

$$\begin{array}{r} -6 + \frac{x}{4} = -5 \\ -6 + \frac{4}{4} = -5 \\ -6 + 1 = -5 \\ -5 = -5 \end{array}$$

$$\begin{array}{r} -9x + 1 = -80 \\ \downarrow \quad -1 \quad -1 \\ \hline -9x = -81 \\ \frac{-9x}{-9} = \frac{-81}{-9} \\ x = 9 \end{array}$$

More Practice

$$\begin{array}{r} 2x - 1 = 5 \\ +1 \quad +1 \\ \hline 2x = 6 \\ \frac{2x}{2} = \frac{6}{2} \\ x = 3 \end{array}$$

$$\begin{array}{r} \frac{b}{4} + 5 = 11 \\ -5 \quad -5 \\ \hline 4 \cdot \frac{b}{4} = 6 \cdot 4 \\ b = 24 \end{array}$$

$$\begin{array}{r} 4x + 3 = -5 \\ -3 \quad -3 \\ \hline 4x = -8 \\ \frac{4x}{4} = \frac{-8}{4} \\ x = -2 \end{array}$$

$$\begin{array}{r} 7 = -3 + \frac{z}{4} \\ +3 \quad +3 \\ \hline 4 \cdot 10 = \frac{z}{4} \cdot 4 \\ 40 = z \end{array}$$

$$\begin{array}{r} -5 = 4 - 3x \\ -4 \quad -4 \quad \downarrow \\ \hline -9 = -3x \\ \frac{-9}{-3} = \frac{-3x}{-3} \\ 3 = x \end{array}$$

$$\begin{array}{r} -6 + \frac{w}{3} = 2 \\ +6 \quad +6 \\ \hline 3 \cdot \frac{w}{3} = 8 \cdot 3 \\ w = 24 \end{array}$$

Practice

$$\begin{array}{r} -3z + 1 = 7 \\ \hline -3z = 6 \\ \hline z = -2 \end{array}$$

$$\begin{array}{r} 23 = -4n - 8n + 17 \\ \hline 23 = -12n + 17 \\ -17 \quad -17 \\ \hline 6 = -12n \\ \hline -12 \quad -12 \\ \hline \frac{1}{-2} = \frac{6}{-12} = n \quad \text{reduce} \\ \hline -\frac{1}{2} = n \end{array}$$

Need a challenge?

$$\begin{array}{r} -12(x + 5) = 144 \\ \hline -12x - 60 = 144 \\ +60 \quad +60 \\ \hline -12x = 204 \\ \hline -12 \quad -12 \\ \hline x = -17 \end{array}$$