

Balancing Two-Step Equations (3-1)

<i>solution of an equation</i>	Decode
Definition any # that makes an equation true	Example $2x + 7 = 13$ $x = 3$ $2(3) + 7 = 13$ $6 + 7 = 13$ $13 = 13$ ✓ yes

Example 1: Tell whether the given value of the variable is a solution of the equation. $x = -4$ or $y = 3$

I Do	We Do
$12 = -3x + 7$ $12 = -3(-4) + 7$ $12 = 12 + 7$ $12 \neq 19$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">No</div>	$4y - 15 = -3$ $4 \cdot 3 - 15 = -3$ $12 - 15 = -3$ $-3 = -3$ ✓ <div style="border: 1px solid black; padding: 2px; display: inline-block;">yes</div>

Example 2: Solve the equation.

$$\begin{array}{r} -53 \\ -17 \\ \hline + \end{array}$$

$$\begin{array}{r} -53 \\ -17 \\ \hline 70 \end{array}$$

I Do	We Do	You Do
$\begin{array}{l} \textcircled{1} \quad 3x - 7 = 17 \\ \quad \quad \downarrow +7 \\ \textcircled{2} \quad 3x = 24 \\ \quad \quad \downarrow \div 3 \\ \boxed{x = 8} \end{array}$	$\begin{array}{l} \textcircled{1} \quad 8 + \frac{x}{5} = 10 \\ \quad \quad \downarrow -8 \\ \textcircled{2} \quad \frac{x}{5} = 2 \\ \quad \quad \downarrow \cdot 5 \\ \boxed{x = 10} \end{array}$	$\begin{array}{l} -53 = 15 + 10y \\ -17 = 15 + 10y \\ \quad \quad \downarrow -15 \\ -70 = 10y \\ \quad \quad \downarrow \div 10 \\ \boxed{-7 = y} \end{array}$

Example 3: Write an equation from each verbal sentence.

I Do $n =$	We Do $\div =$
<p>The product of 4 and a number is 56</p> $4 \cdot n = 56$ $\boxed{4n = 56}$	<p>The quotient of a number and twelve increased by thirteen is 18</p> $n \div 12 + 13 = 18$ $\boxed{\frac{n}{12} + 13 = 18}$

3-1 WS

⑦

⑦x

$$\frac{7x}{2} = \frac{26}{-12}$$

$$\frac{7x}{7} = \frac{14}{7}$$

$$x = 2$$