

# Solving One-Step Equations

Ch. 7  
Lessons 1-5  
Pg.  
6.EE.

\*An Equation is a mathematical sentence with an equal sign ex.  $4 + b = 8$ ;  $2 + 2 = 4$

## \*Steps to Solve One-Step Equations...

- 1.) Write the Problem down  $2 + x = 5$
- 2.) Identify the Operation being used. Then find the inverse Operation (opposite)  $+$   
 $-$
- 3.) Take the inverse operation and number with the variable to both sides and solve for X. (what you do to one side you MUST do to the other side!)  $2 + x = 5$   
 $-2 \quad -2$   
 $x = 3$
- 4.) Replace the variable and check your Answer Always!  $2 + 3 = 5$   
 $5 = 5 \checkmark$   
 $x = 3$

### Inverse Operations

Operation	Opposite	Example
* Addition	Subtraction	$n + 5 = 17$ ( $-5$ to both sides)
* Subtraction	Addition	$y - 3 = 10$ ( $+3$ to both sides)
* Multiplication	Division	$4h = 16$ ( $\div 4$ to both sides)
* Division	Multiplication	$\frac{k}{8} = 64$ ( $\times 8$ to both sides)

# One-Step Equations Cont...

## Addition

$15 + x = 24$   
? What can I add to 15 to get 24?

$$\begin{array}{r} 15 + x = 24 \\ -15 \quad -15 \text{ (inverse operation)} \\ \hline x = 9 \end{array}$$

\* Check  $15 + 9 = 24$   
 $24 = 24 \checkmark$

\* Inverse operation of Addition is Subtraction

## Subtraction

$m - 94 = 13$   
? What can I subtract from 94 to get 13?

$$\begin{array}{r} m - 94 = 13 \\ + 94 \quad + 94 \text{ (Inverse Operation)} \\ \hline m = 107 \end{array}$$

\* Check  $107 - 94 = 13$   
 $13 = 13 \checkmark$

\* Inverse Operation of Subtraction is Addition

## Multiplication

$37d = 111$   
? What can I multiply 37 by to get 111?

$$\begin{array}{r} 37d = 111 \\ \div 37 \quad \div 37 \text{ (inverse operation)} \\ \hline d = 3 \end{array}$$

\* Check  $37 \cdot 3 = 111$   
 $111 = 111 \checkmark$

\* Inverse operation of Multiplication is Division

## Division

$\frac{h}{6} = 8$   
? What do I divide h into to get 8?

$$\begin{array}{r} \frac{h}{6} = 8 \\ \times 6 \quad \times 6 \text{ (Inverse Operation)} \\ \hline h = 48 \end{array}$$

\* Check  $\frac{48}{6} = 8$   
 $8 = 8 \checkmark$

\* Inverse Operation of Division is Multiplication