## 3.1: Solve 1-step Equations

Goals: *Use inverse operations to solve 1-step equations *Check solutions to 1 -step equations

Inverse operations: operations that $\qquad$ each other
$\qquad$ and $\qquad$ are inverse operations
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Solution: the $\qquad$ of the variable that makes an equation

Ex: Is $x=2$ a solution to $x+4=6$ ?

## STEPS TO SOLVE AN EQUATION: <br> **GOAL: ISOLATE THE VARIABLE!

1. Identify the $\qquad$
2. Ask: "What's $\qquad$ the variable?"
3. Ask: "__ is it bothering the variable?"
4. Use $\qquad$ to undo what is happening to the variable.
**REMEMBER THAT WHATEVER YOU DO TO ONE SIDE YOU MUST DO TO THE OTHER!!

Ex: Solve the equation using the steps provided:

$$
x+3=10
$$

Now we must check to see that our answer is correct:

## TO CHECK YOUR ANSWER:

1. REWRITE THE $\qquad$ PROBLEM
2. $\qquad$ THE VALUE OF THE VARIABLE YOU ARE CHECKING
3. DO OUT WORK ON $\qquad$ SIDES $\qquad$ .

Check your answer for the equation you just solved using the steps above:

$$
x+3=10
$$

Solve and check the following equations:
Ex: $x+7=4$
Ex: $x-12=3$

Ex: $x+9=3$
Ex: $x-2=11$

Ex: $q-11=-5$
Ex: $6 x=48$

Ex: $-5 x=10$
Ex: $-4 x=-28$

Ex: $-65=-5 y$
Ex: $\frac{x}{4}=5$

Ex: $\frac{x}{3}=-7$
Ex: $\frac{t}{-3}=9$

Ex: $6=\frac{c}{7}$
Ex: $13=\frac{z}{-2}$

Solve the following equations by multiplying by the reciprocal.
Ex: $\frac{2}{3} x=8$
Ex: $-\frac{3}{4} a=9$

Ex: $\frac{3}{5} y=12$
Ex: $16=-\frac{1}{2} x$

Solve the following equations. Be careful about how to isolate the variable.

Ex: $7-x=5$
Ex: $-8=3-x$

Ex: $-1-x=-10$
Ex: $-4=5-x$

