

Agenda

Homework:

- Two Step Equations Worksheet

Materials:

- Notebook
- Whiteboard

DO NOW

- Take out homework
- Set up Cornell Notes



Topic: Solving One & Two Step Equations

EQ: How do you solve one and two step equations?

Define inverse operations and give examples.



- **Inverse operations** are operations that UNDO each other.

Addition (give)		Subtraction (take away)
Multiplication (group)		Division (distribute)

Brain Break

- On your whiteboard: Write the **inverse operations** for each of the following operations as fast as you can.



How do you solve for a variable?

Goal: ISOLATE the variable (get the variable by itself)

1. Locate the variable
2. Identify the number on the SAME SIDE as the VARIABLE (Be sure to grab the sign in front)
3. Get rid of it by using the inverse operation on BOTH sides of the equation

Inverse:
Addition!

$$\begin{array}{r} x - 5 = 6 \\ +5 \quad +5 \\ \hline x = 11 \end{array}$$

How do you solve for a variable?

Inverse:
Subtraction!

$$\begin{array}{r|l} x + 2 & = 8 \\ -2 & -2 \\ \hline x & = 6 \end{array}$$

Inverse:
Multiplication!

$$\begin{array}{r|l} 3 \left(\frac{x}{3} \right) & = (5) 3 \\ \hline x & = 15 \end{array}$$

Inverse:
Division!

$$\begin{array}{r|l} -4x & = 12 \\ -4 & -4 \\ \hline x & = -3 \end{array}$$

How do you solve a two step equation?

Goal: ISOLATE the variable
(get the variable by itself)

1. Identify the number on the **SAME SIDE**, but **FARTHEST** from the **VARIABLE (Reverse PEMDAS)**
2. Get rid of it by using the inverse operation
3. Solve the remaining one step equation using inverse operations

$$\begin{array}{r} 2x - 3 = 9 \\ \quad +3 \quad +3 \\ \hline 2x = 12 \\ \quad \underline{2} \quad \underline{2} \\ x = 6 \end{array}$$