SOLVING EQUATIONS

One Step Equations isolate the variable by doing the opposite on both sides of the equal sign.

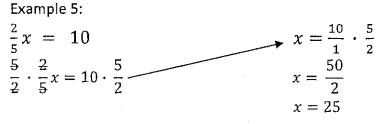
Example 1: The opposite of
adding 4 is subtracting 4.Example 2: The opposite of
subtracting 8 is adding 8.x + 4 = 7
-4 - 4
x = 3x - 8 = 15
-8 = 15
x = 23

Example 3: The opposite of multiplying 5 is dividing 5.

5x = 15 $\frac{5}{5}x = \frac{15}{5}$ x = 3

Example 4: The opposite of dividing -3 is multiplying -3 $\frac{x}{-3} = -8$ $(-3)\frac{x}{-3} = -8 \cdot (-3)$ x = 24

*With Fractions \Rightarrow Multiply both sides by the reciprocal of the coefficient of x.



- > Two Step Equations \Rightarrow Isolate the x by:
 - 1. Moving the constant to the other side of the equal sign.
 - 2. Getting rid of the coefficient on the variable.

Example 1:	Example 2:
5x - 7 = 13	$\frac{1}{2}x - 8 = 3$
\downarrow +7 +7	+8 +8
5x = 20	$\frac{1}{2}x = 11$
$\frac{5x}{5} = \frac{20}{5}$	$\frac{2}{1} \cdot \frac{1}{2}x = \frac{11}{1} \cdot \frac{2}{1}$
x = 4	x = 22