**6.1 – Solving One-Step Equations**

When we are asked to **solve** an equation, we need to find for what values of the variable the equation is "true". We can check to see if a given value is a **solution** by substituting it into the equation and seeing if it is in fact "true".

Ex. 1: Determine whether or not the given value is a solution of the equation.

1. Is $x=4$ a solution to $2x-3=5$ ? (b) Is $y=-16$ a solution to $\frac{y}{4}+3=2y+30$ ?

We can solve an equation by "undoing" whatever is being done to the variable. Inverse operations allow us to do this:

* The inverse of addition is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and vice versa.
* The inverse of multiplication is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and vice versa.

Remember that whatever you do to the left-hand side of the equation, you must also do to the right-hand side and vice versa.

Ex. 2: Solve the following equations. Verify your solutions.

1. $x-5=21$ (b) $2.4+p=8.9$ (c) $3n=-3.6$

(d) $\frac{m}{4}=1.6$ (e) $-2.6q=-0.78$