

## Linear Equation and Solution of an equation

A linear equation is defined as an equation that is written in the form of  $ax + by = c$ . It is the combination of two variables and a constant value present in them. When solving the system of linear equations, we will get the values of the variable, which is called the solution of a linear equation.

### ⇒ Solution of an Equation:

The solution of a linear equation in one variable can be easily found by keeping the variable on the one side and constant on the other side of an equation.

**Let us understand with an example:**

**Example:** Find the solution of  $3x + 2 = 11$

**Solution:** Keep  $3x$  on the left-hand side and bring 2 to the right hand side.

Thus, the given equation becomes,

$$3x = 11 - 2$$

$$3x = 9$$

$$x = 9/3$$

$$x = 3$$

Thus, the unique solution of the given linear equation is  $x = 3$ .

### ⇒ Verification:

If we substitute  $x = 3$  in the given equation, L.H.S should be equal to R.H.S

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$$3(3) + 2 = 11$$

$$9 + 2 = 11$$

$$11 = 11$$

Hence, the solution  $x = 3$  satisfies the given equation.