Linear Equation in One Variable

Hello students, I am the author of class 9 or 10 science.co & welcome to our website. If you want to learn science, mathematics then, you are in 100% right place.

Introduction:

Today we will discuss the class 9 mathematics, where we will learn about the linear equation in one variable. In this class we will learn, all about the linear equation in one variable, like what is the meaning of linear equation, solution of linear equation in one variable etc. So keep staying.

Topic Covered:

Students, before starting any topic, you have to know about the all topics very well. That's help you to proper learning.

Topics:-

1. Variable (short description)

2. Equation

3. Linear Equation

4. Linear Equation in one variable

5. Solution of linear equation

6. Parallel line of x-axis

7. Parallel line of y-axis

8. Exercise

Let's start,

1. Variable - Variable basically a quantity in an equation or any relation, which may be changed in further with respect to other quantity.

Let's take example to better understanding,

A relation $y = 5x + 2$, in this relation (assume x and y can be changed) if increase x then y must be increased or if we decrease the y then x must be decreased.

(If, does not get clear then, comment please, according to your needs I will take video illustration)

Representing the variable - In general we represent the variable by x, y and z.

2. Equation - If a condition represents or writes in mathematically, then it is called equation.

Let's take an example-

If you multiply 3 with x and substract 1 then it will be 5.

Now if we write this in mathematically, it will be - 3.x - 1 = 5.

3. Linear Equation - Now we will try to understand, that what is the meaning of linear equation?

Linear Equation means an equation with degree one, like 5/3x +5 = 8, 2y - 7 = 15 etc.

* An equation with degree two is called 2nd degree equation or quadratic equation.

* An equation with degree 3 is called 3rd degree or

4. Linear equation in one variable -

Let's try to understand, what is the meaning of Linear Equation in one variable?

 An equation with just only one variable (with x or y or z) is called linear equation in one variable, like 2x + 1 = 0

Q. Write the example of linear equation.

Ans. 2/3y + 9 = 0, 1/5 - z = 10 etc.

5. Solution of Linear Equation in one variable -

 Now, question is how to solve the Linear Equation in one variable?

Ans. Before start solving the any equation, always you have to remember some fundamentals of mathematics.

Rule - 1. During solving the given equation, first you have to separate the variable and the numbers with respect to equal sign.

Like, 1/5 = Z, z and 1/5 are in different side of equal sign.

Rule - 2. For separating the variable and numbers you need to change side of both of them. In this case you have to remember one thing, **if you change the side of a variable or number then, you must have done the change sign of them.**

Like, 1/5 - Z =0, now if change the side of z, then the equation will be, 1/5 = + Z, - Z change in + Z. Hence Z = 1/5.

In the next class we will see some sample paper on this topic Linear Equation in one variable.

Parallel line of x - axis **-** Y = C [where c is any constant number]

Parallel line of y - axis - X = C [where c is any constant number].