

**Instructions to Students:** The notes provided must be copied to the math's copy & then do the Homework in the same copy.

### Fundamental Concepts Of Algebra

**Algebra** : It is generalized arithmetic , in which number are represented by letters a, b, c, x, y, z etc; called **literal numbers** or simply **literals**.

There are two types of symbols , namely constants & variables.

**Constants** : A symbol having a fixed value is called is called a **constant**.

For example , each of the symbol 4 , -5 ,  $\frac{1}{3}$  ,  $\frac{4}{7}$  etc is a constant.

**Variable** : A symbol which can be assigned various values , is called a **variable**.

**Examples** : We know the diameter of a circle is twice its radius

$$\Omega \text{ diameter} = 2 \times \text{radius}$$

We write ,  $d = 2 \times r$  , where d is the diameter & r is the radius

Here , 2 is constant. But the values of r & d are not fixed.

When  $r = 3$ , we get  $d = 2 \times 3 = 6$

When  $r = 4$ , we get  $d = 2 \times 4 = 8$  & so on.

Thus r & d are variable

These variable are known as **literals**

We use small letters a, b, c, x, y, z etc ., to denote literals .

**Note** : In  $3X$  , we have constant = 3 & variable = X

## Home Work

Exercise 9.1  {Question No. 1, 2, 3, 4, 5, 6, 7, 8}

