

NOTES

Algebraic Expressions and Identities

Algebraic expressions are expressions formed from the variables and the constants. A variable can take any value. The value of an expression changes with the value chosen for variables it contains.

A number line has infinite number of points. A variable can take position on number line.

Expressions containing one, two or three terms are called monomial, binomial and trinomial respectively.

Any expression having one or more terms is called polynomial.

A monomial is obtained on multiplying any monomial with another monomial.

The numerical factor of a term is called its coefficient.

An identity is a standard equality which is true for all the values of the variables in the equality.

Few commonly used identities are

- I.  $(a + b)^2 = a^2 + b^2 + 2ab$
- II.  $(a - b)^2 = a^2 + b^2 - 2ab$
- III.  $(a + b)(a - b) = a^2 - b^2$
- IV.  $(x + a)(x + b) = x^2 + (a+b)x + ab$

Note – Mainly the above formulas are used to solve all the problems of this chapter.