

# Algebra

1. The letters which are used to represent numbers are called literal numbers or literals.
2. The literal numbers themselves as well as the combinations of literal numbers and numbers obey all the rules (and signs) of addition, subtraction, multiplication and division of numbers along with the properties of these operations.
3.  $x \times y = xy$ ,  $5 \times x = 5x$ ,  $1 \times x = x$ ,  $x \times 3 = 3x$
4.  $a \times a \times \dots \times 12 \text{ times} = a^{12}$ ,  $y \times y \times \dots \times 15 \text{ times} = y^{15}$ .
5. In  $x^9$ , 9 is called the index or exponent and  $x$  is called the base. In  $a^5$ , the index or exponent is 5 and the base is  $a$ .
6. A symbol having a fixed numerical value is called a constant.