

Class 7-Mathematics

Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 4

EXPONENTS

USES OF EXPONENTS

Scientific Notation: It is a way of writing numbers that are too large to be conveniently written in standard form.

In **Scientific Notation** all numbers are written as $k \times 10^n$ Where 'k' is a decimal number such that $1 \leq k < 10$.

The decimal number 'k' is known as the **significand**.

Scientific Notation is also known as **Standard form**.

Example:

Ordinary Decimal notation	Scientific Notation
5600	5.6×10^3
234.09	2.3409×10^2

Exercise 4.3

3. Express the numbers appearing in the following statements in standard form.

i) The distance between the earth and moon = 384,000,000 m

$$= 3.84000000 \times 10^8$$
$$= 3.84 \times 10^8$$

iv) In a galaxy there are on an average 100,000,000,000 stars.

$$\text{Number of stars on average} = 1 \times 10^{11}$$

vi) A light year = 9,467,500,000,000 km

$$= 9.467500000000 \times 10^{12}$$
$$= 9.4675 \times 10^{12}$$

5. Write in the expanded exponential form.

$$\begin{aligned} \text{iii) } 28061906 &= 2 \times 10000000 + 8 \times 1000000 + 6 \times 10000 + 1 \times 1000 + 9 \times 100 + 6 \times 1 \\ &= 2 \times 10^7 + 8 \times 10^6 + 6 \times 10^4 + 1 \times 10^3 + 9 \times 10^2 + 6 \times 10^0 \end{aligned}$$

Home Work: Complete Exercise 4.3 in the Maths Copy.

Practise Ch-4

Class 7 Maths