

Subject - Maths. Chapter - Number System.

Natural number \rightarrow All counting numbers are called natural numbers.

Natural numbers have been used by man for counting for over 4000 years. Different people have written different symbols for the natural numbers.

Roman symbols for the natural number are: I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII.

Hindi symbols for natural number are: १, २, ३, ४, ५, ६, ७, ८, ९, १०, ११, १२

Hindu-Arabic symbols for the natural numbers are:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Hindu-Arabic Number System.

In this system, any number can be written with the help of symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. These symbols are called digits.

As we already know that number is an idea or concept but the representation of a number by group of digit is called a numeral. Expressing a number in numerals are called numeration.

Our numeration system uses ten basic symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and the idea of place value. Each place represent ten times the one which is immediately to its right. The following table illustrates the pattern of value assigned to symbols in the various place value position.

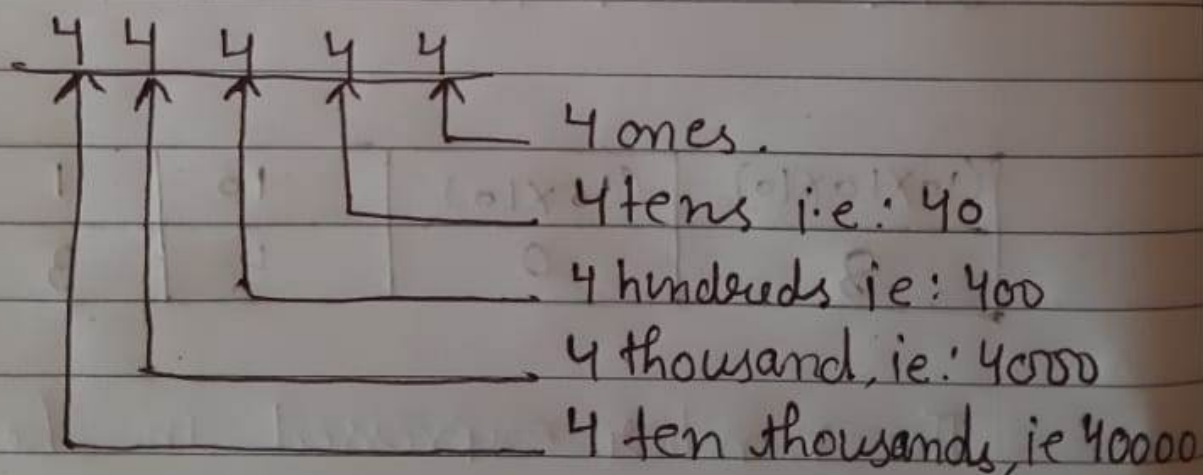
$(10 \times 10 \times 10)$	(10×10)	10	1
8	0	4	3

The number expressed in the above table is.

$$\begin{aligned}
 & 8 \times 1000 + 0 \times 100 + 4 \times 10 + 3 \times 1 \\
 = & 8000 + 0 + 40 + 3 \\
 = & 8043.
 \end{aligned}$$

1- In the numeral 44.444, the first 4 at the right represent 4 ones or 4 units. The value of the 4 in tens place is

ten times as great as the value of 4 in the unit place. It means 4 tens. The third 4 from the right means 4 hundreds. The value of 4 in hundreds place is ten times as great as the value of 4 in tens place. The fourth 4 means 4 thousand. The value of 4 in the thousand place is ten times the value of the 4 in hundreds place. The value of 4 in ten thousand place is ten times the value of the four in the thousand place.



44444 - The number is read as.
 "Forty four thousand four hundred forty four"

Q. ∴ Write the following numbers in words.

(a) 96345 (b) 24567 (c) 37801

(d) 98600 (e) 55555 (f) 3678

(g) 98543 (h) 23670 (i) 89546

Q. 2 Write the following numbers in numerals.

- [I] Six thousand six hundred sixteen.
 [II] Eighteen thousand two hundred fifty four.
 [III] Fifty seven thousand eight hundred forty three.
 [IV] Sixty seven thousand four hundred eleven.
 [V] Sixty four thousand eight.
 [VI] Ninety thousand eight.
 [VII] Seventy thousand four hundred three.
 [VIII] Ten thousand one hundred.
 [IX] Four thousand four hundred forty four.
 [X] Ninety thousand four hundred fifty seven.

Comparing and ordering large number

To put large number in order we check the number of digit in them. The smallest having the least number of digit and the greatest having the maximum of digit.

Ex) Find the greatest and the smallest number.

2856, 69345, 101, 4533, 620, 18

Soln, Looking at the number of digit in the given number we can see that 18 is the smallest and 69245 is the largest.

Q. 3. Find the greatest and smallest numbers each of the following.

[i] 6342, 8956, 378542, 242, 67000

[ii] 869, 9632, 54000, 372, 8954,

[iii] 67895, 3400, 54009, 80645, 7890

[iv] 7000, 70000, 700, 70, 700000.

[v] 85432, 896426, 796, 854, 38954,

Successor and Predecessor.

[i] Successor \rightarrow The successor of a given number is obtained by adding 1 to the given number.

Ex. The successor of 16 is.

$$16 + 1 = 17$$

[ii] $500 = 500 + 1 = 501$

[iii] $291 = 291 + 1 = 292$

[iv] 1000

$$1000 + 1 = 1001$$

[ii] Predecessor

The predecessor of a number is the number just before it and it is obtained by subtracting 1 from it.

Ex. 250

[ii] 474

$$= 250 - 1 = 249$$

$$474 - 1 = 473$$

Q:4 Write the successor of:

- (i) 197 (ii) 284 (iii) 5976 (iv) 8543
- (v) 2967 (vi) 8431 (vii) 2895 (viii) 6000
- (ix) 78321 (x) 79 (xi) 845 (xii) 89671

Q:5 Write the predecessor of:

- (i) 6798 (ii) 9999 (iii) 895 (iv) 3421
- (v) 6001 (vi) 8543 (vii) 2969 (viii) 8376
- (ix) 5496 (x) 370 (xi) 285 (xii) 8364

Q:6 Fill in the blanks with < or > sign

- (i) 34512 — 5451 (ii) 63458 63548
- (iii) 96785 95793 (iv) 58934 58943
- (v) 9413 24007 (vi) 40017 400178

Q:7 Arrange the following number in ascending order.

- (i) 31586, 35816, 3581, 36819
- (ii) 29435, 43592, 29463, 54396
- (iii) 12345, 42315, 23145, 13425
- (iv) 6321, 2136, 4325, 6789

Q:8 Arrange the following number in descending order.

- (i) 6234, 6324, 6432, 632
- (ii) 90403, 90304, 90406, 90046
- (iii) 82416, 84126, 86142, 82611
- (iv) 9854, 38672