

SESSION : 4

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 2

CHAPTER NAME : INDIAN NUMBER SYSTEM

SUBTOPIC : Expanded form and compact form, example 3 and 4

Discussion of exercise 2 - A : Q. No 3 and 4

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE :

Enable the students

- To know about Expanded notation of larger numbers.
- To know about the compact/standard form.
- It increases their practical knowledge more about the place value system.

Expanded form of large numbers

What is a Expanded form ?

Expressing the number as the sum of the place value of each digit in that number.

You already know how to write a number in the expanded form. Let us see one example,

$$53,856 = 50,000 + 3,000 + 800 + 50 + 6$$

Expanded form of large numbers

Larger numbers are written in the expanded form in the same way as the smaller numbers.

Let us write this number 42,27,35,842 in expanded form.

Step-1

TC	C	TL	L	TTh	Th	H	T	O
4	2	2	7	3	5	8	4	2

Step-2

TC	C	TL	L	TTh	Th	H	T	O
4	2	2	7	3	5	8	4	2
40,00,00,000	2,00,00,000	20,00,000	7,00,000	30,000	5,000	800	40	2

Expanded form of large numbers

Step-3

Now write 42,27,35,842 as the sum of its place value of its digits. That is

42,27,35,842

$$=40,00,00,000+2,00,00,000+20,00,000+7,00,000+30,000+5,000+800+40+2$$

Compact form of large numbers

Compact form/Standard form is, writing the numeral from the expanded notation.

Lets see an example:

$$90,00,00,000 + 5,00,00,000 + 60,00,000 + 1,00,000 + 90,000 + 7,000 + 0 + 50 + 3$$

TC	C	TL	L	TTh	Th	H	T	O
9	5	6	1	9	7	0	5	3
90,00,00,000	5,00,00,000	60,00,000	1,00,000	90,000	7,000	0	50	3

So the compact form is-

95,61,97,053

Q.No,3) Give the expanded form of the following numbers(Ex-2-A)

a) 1,28,14,601

Solution:

	C	TL	L	TTh	Th	H	T	O
	1	2	8	1	4	6	0	1
	1,00,00,000	20,00,000	8,00,000	10,000	4,000	600	0	1

Ans-1,00,00,000 + 20,00,000 + 8,00,000 + 10,000 + 4,000 + 600 + 1

b) 16,22,81,946

<u>Tc</u>	<u>C</u>	<u>TL</u>	<u>L</u>	<u>TTh</u>	<u>Th</u>	<u>H</u>	<u>T</u>	<u>O</u>
1	6	2	2	8	1	9	4	6
10,00,00,000	6,00,00,000	20,00,000	2,00,000	80,000	1,000	900	40	6

Ans-10,00,00,000 +6,00,00,000+20,00,000+2,00,000+80,000+1,000+900+40+6

Q.No-4) Give the compact form of the following numbers(Ex-2-A)

a) $20,00,00,000 + 6,00,00,000 + 80,00,000 + 4,00,000 + 20,000 + 7,000 + 300 + 50 + 6$

Solution:

Tc	C	TL	L	TTh	Th	H	T	O
2	6	8	4	2	7	3	5	6
20,00,00,000	6,00,00,000	80,00,000	4,00,000	20,000	7,000	300	50	6

Ans- $268427356 = 26,84,27,356$

b) $30,00,00,000 + 8,00,00,000 + 40,00,000 + 6,00,000 + 40,000 + 2,000 + 300 + 40 + 6$

Ans- 384642346

c) $50,00,00,000 + 7,00,00,000 + 50,00,000 + 6,00,000 + 80,000 + 3,000 + 100 + 90 + 2$

Ans- $575683192 = 57,56,83,192$

LEARNING OUTCOME:

- ❖ **Students are able to use the expanded form and compact form while solving problems.**

HOME WORK-

Complete exercise 2 A Q. No 3 and 4 in the notebook.

THANKING YOU
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