

MATHEMATICS

CLASS-4

Chapter - 1

NUMBERS

Introduction -

- We use symbol to represent a number. This symbol is called **NUMERAL**.

eg. Numeral = 7
Number name = Seven.

* PLACE VALUE -

The same digit represents the different values in different positions.

eg. Write the place value of 8

Number	Place Value
8752	8000 Thousand
7852	800 Hundred
7582	80 Tens
7528	8 ones

* Periods -

A number is split into groups called periods.



NOTE: Place value & face value at unit place is same.

Periods ↓ places	Crores		Lakh		Thousands		ones		
	Tcr	cr	TL	L	TTh	Th	H	T	O
	Ten Crores	Crores	Ten Lakh	Lakh	Ten Thousand	Thousand	Hundred	Tens	ones
<u>Eq:</u> ↓ <u>Number</u> 124985				1	2	4	9	8	5
<u>Place value</u>				100000	20000	4000	900	80	5
<u>Face value</u>				1	2	4	9	8	5
<u>No. name</u>	one Lakh twenty four thousand nine hundred eighty five.								

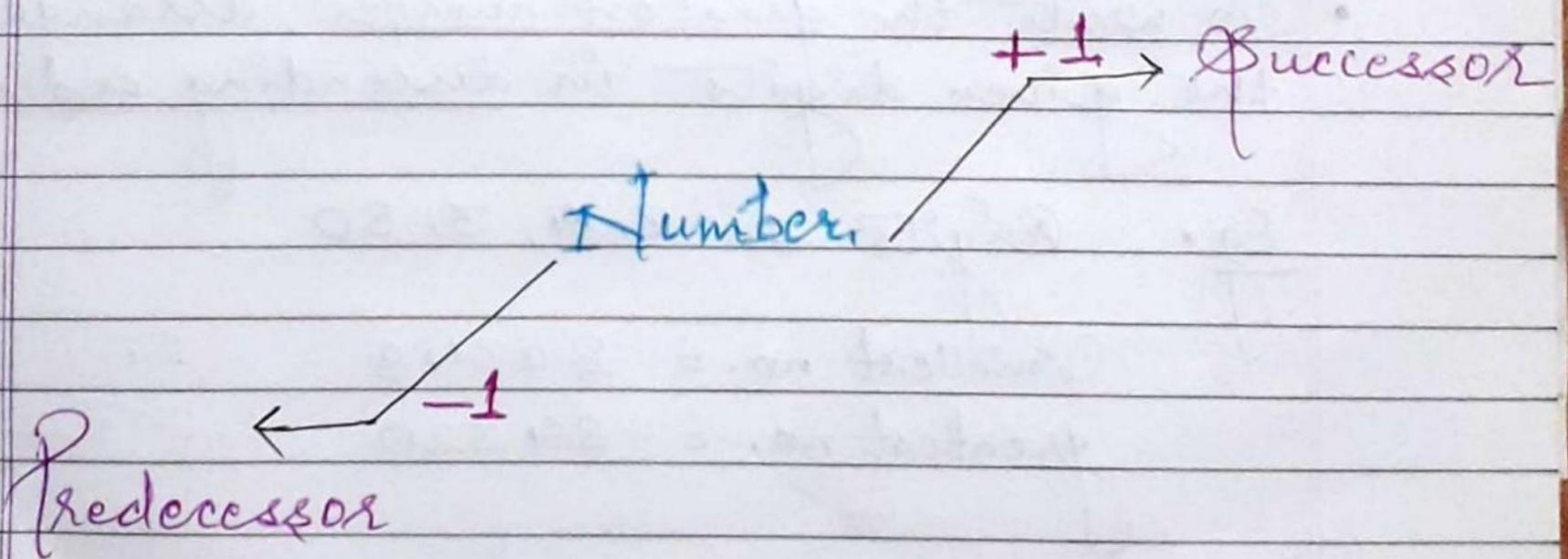
Remember

- 10 → 10 ones
- 100 → 10 tens → 100 ones
- 1000 → 10 Hundreds → 100 tens → 1000 ones
- 10,000 → 10 thousand → 100 Hundreds → 1000 tens → 10,000 ones
- 1,00,000 → 10 ten thousands → 100 thousands → 1000 H → 1,00,000 ones ← 10,000 tens ←

* Greatest And Smallest Number -

Greatest Number		Smallest no.	
1 digit	9	+1	= 10 2 digit
2 digit	99	+1	= 100 3 digit
3 digit	999	+1	= 1000 4 digit
4 digit	9999	+1	= 10000 5 digit

* Successor And Predecessor



- The number one less than a given number is called its predecessor.
- The no. one more than a given no. is called its successor.

eg. i) 275

$$274 = \xleftarrow{-1} 275 \xrightarrow{+1} = 276$$

(Predecessor) (Successor)

ii) 342

$$\text{Successor} = 342 + 1 = 343$$

$$\text{Predecessor} = 342 - 1 = 341$$

* Formation of Numbers -

- To write the smallest number, arrange the given digits in ascending order.
- To write the greatest number, arrange the given digits in descending order.

eg. Digits = 2, 4, 3, 8, 0

$$\text{Smallest no.} = 20348$$

$$\text{greatest no.} = 84320$$

NOTE →

While forming the smallest number zero (0) always comes on the 2nd position.

* Ascending order

means →



going up
(smaller to bigger)

* Descending order

means →

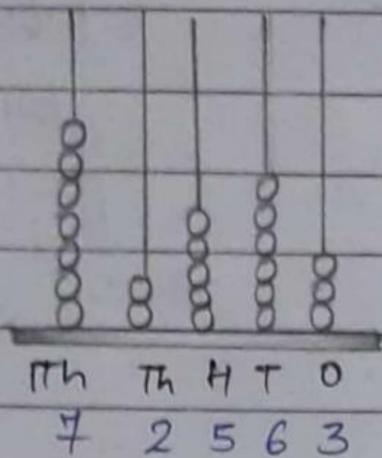


Coming down
(Bigger to smaller)

Exercise - 1.2

81. Write the numeral and the number names shown on the abacus:

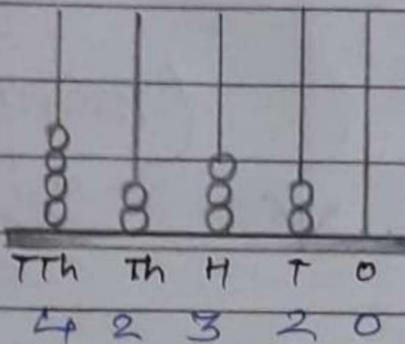
a)



Numeral \rightarrow 72,563

No. name \rightarrow Seventy two thousand five hundred sixty three.

b)



Numeral \rightarrow 42,320

No. name \rightarrow Forty two thousand three hundred.

85. If 3 and 5 are replaced by zeroes in the number 23,485, write the new number in words and figures.

Solve

Original number = 23,485

Replace 3 & 5 by 0 = 20,480

No. name \rightarrow Twenty thousand four hundred eighty.

Q6. If 7 and 8 are interchanged in the number 73,085, write the new number in figure and words.

Sol.
→

Given number = 73,085
7 and 8 interchanged then, = 83,075

No. name → eighty three thousand seven
five.

Q8. Write the smallest 5-digit number.

Ans. 10000 (Ten thousand).

Exercise 1.4

Q1. Write the following numbers in expanded form:

a) $58,519 = 50,000 + 8,000 + 500 + 10 + 9$

b) $31,709 = 30,000 + 1,000 + 700 + 0 + 9$

c) $6,28,487 = 6,00,000 + 20,000 + 8,000 + 400 + 80 + 7$

d) $9,89,459 = 9,00,000 + 80,000 + 9,000 + 400 + 50 + 9$

Q2. Write the numbers in compact form:

a) $20,000 + 9,000 + 600 + 80 + 8 = 29,688$

b) $60,000 + 8,000 + 800 + 5 = 68,805$

c) $7,00,000 + 70,000 + 700 + 5 = 7,70,705$

d) $8,00,000 + 8,000 + 800 + 8 = 8,08,808$

e) $6,00,000 + 70,000 + 500 + 80 + 7 = 6,70,587$

Exercise - 1.5

Q1. Write the face value of :

a) 3 in 7,65,340
 Ans = 3.

b) 1 in 35,105
 Ans = 1

c) 8 in 8,64,513
 Ans = 8

d) 2 in 3,26,175
 Ans = 2

Q2. Find the place value of the encircled digit:

a) (8)7,553

Sol.

8	7	5	5	3
TTh	Th	H	T	O

The digit 8 is in ten thousands place.

So, its place value = 8, ten thousand

$$= \boxed{80,000} \left\{ \begin{array}{l} \text{eighty} \\ \text{thousand} \end{array} \right\}$$

b) 1,72,407

1	7	2	4	0	7
L	Th	Th	H	T	O

place value = $\boxed{400}$

= 4 hundred.

c) 7,45,876

7	4	5	8	7	6
L	Th	Th	H	T	O

place value = $\boxed{7,00,000}$

= Seven Lakh

d) 8,08,942

8	0	8	9	4	2
L	Th	Th	H	T	O

Place value = $\boxed{8,000}$

= Eight thousand.

e) 3,82,493

3	8	2	4	9	3
L	Th	Th	H	T	O

Place value = 3

= 3 ones.

= three ones.

Q4. Find the difference between the place value & face value of '2' in 42,507.

Sol.

Place value of 2 = 2,000

Face value of 2 = - 2

Difference = $\boxed{1,998}$ Ans

Q5. Find the sum of the place values of these '4s' in 4,34,402?

Sol.

$$\begin{array}{r}
 4,00,000 \\
 \quad 4,000 \\
 + \quad 400 \\
 \hline
 4,04,400 \quad \underline{\text{Ans}}
 \end{array}$$

Q6. How many times is the second 5 from the first 5 in 2,53,524?

Sol.

	II		I			
2	5	3	5	2	4	
	L	T	H	T	H	O

place value of 1st 5 = 500
place value of 2nd 5 = 500

$50,000 = 500 \times 100$

So, second 5 is 100 times than first 5

Exercise - 1.6

Q1. Write >, < or = in the \square :

a) 8,542 \square 16,486

b) 91,101 \square 91,111

c) 8,48,609 \square 8,48,609

d) 7,29,823 \square 7,29,832

e) 8,84,684 \square 7,84,682

Q2. Which has greater value; 87,456 one rupee notes or eighty seven thousand four hundred fifty six rupees?

Sol. 87,456 one rupee notes = 87,456
 \therefore Equal.

Q3. Sunil's father earns ₹ 1,96,580 annually. Sunil's friend's father earns ninety nine thousand five hundred eighty rupees per year. Whose father gets more money in one year?

Sol. Sunil's father earns = ₹ 1,96,580
 Sunil's friend's father earns = ₹ 99,580

$$₹ 1,96,580 > ₹ 99,580$$

Hence, Sunil's father earns more money in one year.

Exercise 1.7

Q1. Circle the greatest no. and cross the smallest no.!

a) 35,418, 40,000, 4,308, 6,145

b) 8,118, 16,709, 76,425, 7,88,808

c) 31,417, 21,999, 3,45,728, 5,45,427

Chapter - 2

Roman Numerals

* Introduction -

- Roman numeral is the numeral system of ancient Rome based on letters of the English alphabet which are combined to signify their values.
- Roman numerals are used in watches, ranking etc.
- There are 7 English letters used as basic symbols by Roman's to write the numerals.

Symbol	I	V	X	L	C	D	M
Hindu-Arabic no.	1	5	10	50	100	500	1000

* NOTE TO REMEMBER -

- Only the symbols I, X, C & M can be repeated.
- The numeral V, L, D cannot be repeated.
- No symbol can be repeated more than 3 times.
- I, V, X are three basic numerals.
- V is never subtracted.
- I can be subtracted from V and X.

* Rules for Writing Roman Numerals:

① Repetition of a Roman numeral means addition.

eg: $XXX = 10 + 10 + 10 = 30$

② A smaller numeral written to the right of bigger numeral is always added to the bigger numeral.

eg. • VI
 $5 + 1 = 6$

• XXI
 $10 + 10 + 1 = 21$

③ A smaller numeral written to the left of a bigger numeral is always subtracted from the bigger numeral.

eg: • IX
 $10 - 1 = 9$

• IV
 $5 - 1 = 4$

④ When a smaller numeral is placed between two bigger numerals, it is always subtracted from the bigger numeral immediately following it.

eg. • XIV = $10 + (5 - 1) = 10 + 4 = 14$.

Exercise - 2.1

Q2. Write the Roman numerals for the following

$$\begin{aligned} \text{a) } 18 &= 10 + 8 \\ &= X + VIII \\ &= XVIII \end{aligned}$$

$$\begin{aligned} \text{f) } 38 &= 10 + 10 + 10 + 8 \\ &= X + X + X + VIII \\ &= XXXVIII \end{aligned}$$

$$\begin{aligned} \text{b) } 27 &= 20 + 7 \\ &= 10 + 10 + 7 \\ &= X + X + VII \\ &= XXVII \end{aligned}$$

$$\begin{aligned} \text{g) } 14 &= 10 + 4 \\ &= X + IV \\ &= XIV \end{aligned}$$

$$\text{c) } 3 = III$$

$$\begin{aligned} \text{h) } 19 &= 10 + 9 \\ &= X + IX \\ &= XIX \end{aligned}$$

$$\begin{aligned} \text{d) } 21 &= 10 + 10 + 1 \\ &= X + X + I \\ &= XXI \end{aligned}$$

$$\begin{aligned} \text{i) } 22 &= 10 + 10 \\ &= X + X \\ &= XX \end{aligned}$$

$$\begin{aligned} \text{e) } 29 &= 10 + 10 + 9 \\ &= X + X + IX \\ &= XXIX \end{aligned}$$

Q3. Write the Hindu Arabic numeral for each Roman numeral:

$$\text{a) } IV = 4$$

$$\text{e) } XIII = 10 + 3 = 13$$

$$\text{b) } IX = 9$$

$$\text{f) } XXIV = 10 + 10 + 4 = 24$$

$$\text{c) } XX = 10 + 10 = 20$$

$$\text{g) } XXXIV = 10 + 10 + 10 + 4 = 34$$

$$\text{d) } XVI = 10 + 6 = 16$$

$$\text{h) } XXXIII = 10 + 10 + 10 + 3 = 33$$

Q8. Write > or < in the boxes.

- a) XVI > V
 b) XXXIX > XXIX
 c) VIII < XV
 d) IX < XII
 e) XXIII < XXIX

Q7. Write the Roman numerals from 1 to 39

1 — I	11 — XI	21 — XXI	31 — XXXI
2 — II	12 — XII	22 — XXII	32 — XXXII
3 — III	13 — XIII	23 — XXIII	33 — XXXIII
4 — IV	14 — XIV	24 — XXIV	34 — XXXIV
5 — V	15 — XV	25 — XXV	35 — XXXV
6 — VI	16 — XVI	26 — XXVI	36 — XXXVI
7 — VII	17 — XVII	27 — XXVII	37 — XXXVII
8 — VIII	18 — XVIII	28 — XXVIII	38 — XXXVIII
9 — IX	19 — XIX	29 — XXIX	39 — XXXIX
10 — X	20 — XX	30 — XXX	40 — XL

Note:-

**Start all the EXERCISES
from fresh page.**