

CLASS- 5

SUB- MATHS

CHAPTER 1- KNOWING OUR NUMBERS

Number

A number is a mathematical object used to count, measure, and also label.

[OBJ]

Comparing Numbers

1. Compare 4978 and 5643.....

5643 is greater as the digit at the thousands place in 5643 is greater than that in 4978.

2. Compare 9364,8695,8402 and 7924

9364 is the greatest as it has the greatest digit at the thousands place in all the numbers.

Whereas 7924 is the smallest as it has the smallest digit at the thousands place in all the numbers.

3. Special case

Compare 56321 and 56843

Here, we will start by checking the thousands place. As the digit 5 at ten thousand place is same so we will move forward and see the thousands place. The digit 6 is also same so we will still move on further to check the hundreds place.

The digit at the hundreds place in 56843 is greater than that in 56321

Thus 56843 is greater than 56321

Proper Order

If we arrange the numbers from the smallest to the greatest then it is said to be an Ascending order.

If we arrange the numbers from the greatest to the smallest then it is said to be Descending order.

Example

Arrange the following heights in ascending and descending order.

[OBJ]

Ascending order – $90 < 160 < 170 < 185 < 230$

Descending order – $230 > 185 > 170 > 160 > 90$

Number Formations

Form the largest and the smallest possible numbers using 3,8,1,5 without repetition

Largest number will be formed by arranging the given numbers in descending order – 8531

The smallest number will be formed by arranging the given numbers in ascending order – 1358

Introducing 10,000

99 is the greatest 2-digit number.

999 is the greatest 3-digit number

9999 is the greatest 4-digit number

Observation

If we add 1 to the greatest single digit number then we get the smallest 2-digit number

$$(9 + 1 = 10)$$

If we add 1 to the greatest 2- digit number then we get the smallest 3-digit number

$$(99 + 1 = 100)$$

If we add 1 to the greatest 3- digit number then we get the smallest 4-digit number

$$(999 + 1 = 1000)$$

Moving forward, all the above situations are same as adding 1 to the greatest 4-digit number is the same as the smallest 5-digit number. $(9999 + 1 = 10,000)$, and it is known as ten

thousand.

Place Value

It refers to the positional notation which defines a digit's position.

Example

6931

Here, 1 is at one's place, 3 is at tens place, 9 is at hundreds place and 6 is at thousands place

Expanded form

It refers to expanding the number to see the value of each digit.

Example

$$\begin{aligned} 6821 &= 6000 + 800 + 20 + 1 \\ &= 6 \times 1000 + 8 \times 100 + 2 \times 10 + 1 \times 1 \end{aligned}$$

Introducing 1,00,000

As above pattern if we add 1 to the greatest 5-digit number then we will get the smallest 6-digit number

$$(99,999 + 1 = 1,00,000)$$

This number is called one lakh.

Larger Numbers

To get the larger numbers also, we will follow the same pattern.

We will get the smallest 7-digit number if we add one more to the greatest 6-digit number, which is called Ten Lakh.

Going forward if we add 1 to the greatest 7-digit number then we will get the smallest 8-digit number which is called One Crore.

Remark

1 hundred = 10 tens

1 thousand = 10 hundreds

= 100 tens

1 lakh = 100 thousands

= 1000 hundreds

1 crore = 100 lakhs

= 10,000 thousands

Pattern

$$9 + 1 = 10$$

$$99 + 1 = 100$$

$$999 + 1 = 1000$$

$$9,999 + 1 = 10,000$$

$$99,999 + 1 = 1,00,000$$

$$9,99,999 + 1 = 10,00,000$$

$$99,99,999 + 1 = 1,00,00,000$$

Reading and Writing Large Numbers

We can identify the digits in ones place, tens place and hundreds place in a number by writing them under the tables O, T and H.

AS:

CroresLakhsThousandsOnes

Ten Crores (TC)

Crores (C)

Ten Lakhs (TL)

Lakhs (L)

Ten Thousands (TTh)

Thousands (Th)

Hundreds (H)

Tens (T)

Ones (O)

(10, 00, 00, 000)

(1,00,00,000)

(10, 00, 000)

(1,00,000)

(10,000)

(1000)

(100)

(10)

(1)

Example

Represent the number 5, 21, 05, 747

[OBJ]

Use of Commas

We use commas in large numbers to ease reading and writing. In our Indian System of Numeration, we use ones, tens, hundreds, thousands and then lakhs and crores.

We use the first comma after hundreds place which is three digits from the right. The second comma comes after two digits i.e. five digits from the right. The third comma comes after another two digits which is seven digits from the right.

Example

5,44,12,940

Remark: We do not use commas while writing number names

International System of Numeration

Millions	Thousands	Ones	Hundred	Million	Ten
Million	Million	Hundred	Thousands	Ten	
Thousands	Thousands	Hundred	Tens	Ones	100,000,000
10,000,000	100,000	10,000	1,000	100	10
10	1				

Example

341,697,832

Expanded form: $3 \times 100,000,000 + 4 \times 10,000,000 + 1 \times 1,000,000 + 6 \times 100,000 + 9 \times 10,000 + 7 \times 1,000 + 8 \times 100 + 3 \times 10 + 2 \times 1$

Remark: If we have to express the numbers larger than a million then we use a billion in the International System of Numeration:

1 billion = 1000 million

Large Numbers in Practice

10 millimeters = 1 centimeter

1 meter = 100 centimeters

= 1000 millimeters

1 kilometer = 1000 meters

1 kilogram = 1000 grams.

1 gram = 1000 milligrams

. 1 litre = 1000 millilitres

1 litre = 1000 millilitres

Now Solve these Problems:-

Q.1) To fill an order, the factory dyed 336 yards of silk in yellow and 37 yards in pink. How many yards of silk did it dye for that order?

Q.2)\$5,876 is distributed equally among 26 men. How much money will each person get?

Q.3)Estimate: 73×18

Q.4)Estimate: $3,210 + 12,884$

Q.5)There are 8797 children in a town, 6989 go to school. How many children do not go to school?