



Master Lesson Plan

For

Knowing Our Numbers

Board	Standard	Subject	Chapter	Language	Reference Link	Creation
CBSE	STD VI	Mathematics	Knowing Our Numbers	English	Knowing Our Numbers	2020-12

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Knowing Our Numbers

1. MS_Objectives - Knowing Our Numbers

Notes to the teacher: *This asset lays down the proposed plan for transacting this chapter.*

It states the asset objectives of Knowing Our Numbers.

This asset is for teacher's reference and need not be taught to the students.

Students will be able

- 1) To identify the answers for the given questions.
- 2) To explain the concept of comparing numbers and ordering of numbers with examples.
- 3) To describe the method of forming smallest and largest numbers with the given digits.
- 4) To enumerate the different systems of numbers and place value with commas.
- 5) To explain the expanded form for Indian and International Systems.
- 6) To respect an individual based on their place value and not on their face value.
- 7) To find the answers for the objective type questions and short answer questions.
- 8) To identify the situations of the usage of Larger Numbers in real life.
- 9) To explain the steps of getting larger numbers by adding one.
- 10) To enhance the concept of Larger Numbers with the help of interesting facts and solve the questions using the concept of numbers.
- 11) To apply the concept of comparing and ordering of larger numbers.
- 12) To define the different units of measurement with examples.
- 13) To solve the different types of questions based on fundamental and mixed operations.
- 14) To explain the estimation of numbers to the nearest 10's, 100's and 1000's.
- 15) To explain estimated sum, difference and product with the help of examples. Also to show the actual sum, difference and product.
- 16) To simplify the questions and evaluate the answers on the concept of Estimation of Numbers.
- 17) To explain how to solve the problems when brackets are used.
- 18) To define the value for each Roman numeral and to show the basic operations with examples and solve the problems on Roman Numerals.

Time to teach	Asset Type	Theme	SubTheme
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5 Minutes	Main Script	Numbers	Writing numbers in expanded value, Indian numeration system of commas in place value, Estimating numbers in daily life (by rounding off), Estimating sum, difference and product of numbers, Digits (forming numbers), Comparing numbers, Ordering numbers, Building Biggest and Smallest, Ascending and descending order, Arranging numbers in order, Writing numbers in expanded value, Indian numeration system of commas in place value, Importance of commas in place value, Estimation of numbers in daily life (by rounding off), Estimating sum, difference and product of numbers, Digits (forming numbers with given digits), Comparing and Ordering numbers, Biggest and Smallest, Ascending and descending order of numbers in order
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2. IQ_Numbers and Digits

Choose the answers from the box and fill in the corresponding letters in the blanks given below.

10002(R) 21000(U) 12111(Q) 11112(J)
 22221(S) 10102(X) 12002(M) 100000(N)
 10201(Y) 12021(P)

- The smallest 5 – digit number that can be formed using the digits 0,1,2 is --R--.
- 100 less than 12211 is --Q--.
- The even number just greater than 12000 is --M--.
- The short form of $10000 + 100 + 2$ is ---X---.
- The smallest 6-digit number divisible by 2 is ---N---.
- The shortest form of $20000+1000$ is --U --.
- The greatest 5-digit number that can be formed using 1 and 2 is ----S----.
- Using 0, 1 and 2 the smallest 5-digit number which remains the same when read forwards or backwards is -
----Y-----.
- Using 1 and 2 the smallest 5 – digit number that can be formed is --J --.
- 21 more than 12000 is --- P--.

What do you analyse from the above questions?

Different numbers can be formed or arranged in order, with the given digits.

Time to teach	Asset Type	Theme	SubTheme
7 Minutes	Inquisitive Questions	Numbers	Digits(forming numbers with Digits(forming numbers with

3. MS_Building of Larger Digit Numbers

The largest single digit number is 9. Similarly, the greatest two digit number is 99.

If we add 1 to the above number, we get the number 10 which is the smallest 2 digit number.

Similarly, the greatest two digit number is 99.

If we add 1 to that, we get 100 which is the smallest 3 digit number.

When we observe the pattern, we find that all the greatest numbers are formed by using the number 9 and smallest numbers, by using one followed by zeroes.

The table given below illustrates the larger digit numbers.

Largest	Largest Number	Name of the smallest number	Smallest
1 - digit	9	$9 + 1 = 10$ [Ten]	2 - digit
2 - digit	99	$99 + 1 = 100$ [Hundred]	3 - digit
3 - digit	999	$999 + 1 = 1000$ [Thousand]	4 - digit
4 - digit	9999	$9999 + 1 = 10,000$ [Ten thousand]	5 - digit
5 - digit	99999	$99999 + 1 = 1,00,000$ [1 Lakh]	6 - digit

Largest	Largest Number	Name of the smallest number	Smallest
6 - digit	999999	$999999 + 1 = 1,000,000$ [10 Lakh] = [1 Million]	7 - digit
7 - digit	9999999	$9999999 + 1 = 10,000,000$ [1 crore] = 10 Million	8 - digit
8 - digit	99999999	$99999999 + 1 = 100,000,000$ [10 crore] = 100 Million	9 - digit
9 - digit	999999999	$999999999 + 1 = 1,000,000,000$ [1 Billion]	10 - digit

(Teacher can explain the above table with the help of the ppt)

Examples of 2, 3, 4, 5, 6, 7, 8, 9 digits numbers.

Digits	Example
2	81
3	504
4	4,321
5	51,467
6	8,17,632
7	91,23,456
8	8,26,34,519
9	12,34,56,789

(Teacher can ask some of the children to write on the board or give some more examples).

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	Numbers	Building larger numbers, Bu numbers

4. MS_Representation of Different Numeration Systems and Place Value.

Place value of a number helps us to know the value of the number.

Write 876 on the board, ask the students to arrange them in the place value chart. The place of 6 is ones, 7 is tens and 8 is hundreds.

Hundreds	Tens	Ones
8	7	6

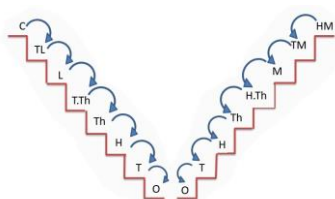
When we move from the right most digit to the left, the place value of tens is ten times the place value of ones, the place value of hundreds is 10 times the place value of tens, the place value of thousand is ten times the place value of hundred.

Indian System	HC	TC	C	TL	L	TTH	TH	H	T	O
International	B	HM	TM	M	HTH	TTH	TH	H	T	O
Number	5	4	2	3	4	1	9	2	8	6

Each step on the ladder moves one place down on the place value ladder chart which moves from left to right.

Indian system

International System



Place Value Chart of Indian System

Example 1

Ten Crore	Crore	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
2	9	8	6	7	5	4	3	1

The above chart is called the Indian Place value chart. In Indian place value chart, One, tens and hundreds are grouped in one; thousands and ten thousands are grouped in thousands place; lakhs and ten lakhs are grouped in lakhs place; crore and ten crore are grouped in crores place, which are separated by commas.

Place Value Chart of International System

Example 2

298,675,431

Millions			Thousands			Ones		
Hundred Millions- HM	Ten Millions-TM	Millions- M	Hundred Thousands- HTH	Ten Thousands- TTH	Thousands- TH	Hundred- H	Tens - T	Ones- O
2	9	8	6	7	5	4	3	1

Some countries use International system of Numeration. In the international system, till ones, tens, hundreds, thousands and ten thousands are the same as Indian system. Lakh in Indian system is hundred thousand in International system. Ten lakh in Indian system is one million in International system. One crore is Ten Million in International system. Ten crore in Indian system is hundred million in International system.

Find the comparison table below

Indian System of Numeration								
Ten Lakhs		Lakhs		Thousand		Ones		
Ten Crores (TC)	Crores (C)	Ten Lakhs (TL)	Lakhs (L)	Ten Thousands (TTTh)	Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
10,00,00,000	1,00,00,000	10,00,000	1,00,000	10,000	1,000	100	10	1

International System of Numeration								
Millions			Thousands			Ones		
Hundred Millions (HM)	Ten Millions (TM)	Millions (M)	Hundred Thousands (HTTh)	Ten Thousands (TTTh)	Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
100,000,000	10,000,000	1,000,000	100,000	10,000	1,000	100	10	1

In the International system of Numeration commas are used after ones, thousands and millions.

Commas:

Commas are used while writing the large numbers. It helps us to read and write the number name. In Indian system we use comma after hundreds place, then to show thousands, lakhs and crore.

Ex: 65, 82, 71, 053

This is read as sixty five crore eighty two lakhs seventy one thousand and fifty three.

98, 31, 46, 291

This is read as ninety eight crore thirty one lakhs forty six thousand two hundred ninety one.

Example:

Write the number names and commas for the given number 764527459 in Indian system and International System.

System	Number	Number using comma	Number name
Indian System	764527459	76,45,27,459	Seventy six crore forty five lakhs twenty seven thousand four thousand fifty nine
International System	764527459	764,527,459	Seven hundred sixty four million five hundred twenty seven thousand four hundred fifty nine.

All images are original (girijashankaran@gmail.com)

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Numbers	Writing numbers in expanded form, Indian numeration system, Use of commas in place value, Value of digits in expanded form, Place value in expanded form, Place value in numeration system, Importance of place value

5. MS_Systems of Numbers and its Expanded Form

Expanded Number Form

Expanded form is a way to write a number that shows the sum of values of each digit of a number.

When we form a number, each digit has a specific value, given to it by the place it is in the number.

Here, let us take an example.

3,951

> The digit 5 is in the tens place. That means the digit 5 represents 5 groups of 10 or 50.

> The digit 3 is in the thousands place. That means the digit 3 represents 3 groups of 1,000 or 3,000.

We can represent a number in another way by expressing each digit's value in the number and connecting these values with addition signs.

The sum of all of the values of the digits is called standard form of the number.

We can change a number from standard form to expanded form or vice versa.

Ex 1: 7,561 - Standard Form --> Expanded Form

Expanded Form is a way to break up a number to show how much each digit in the number represents.

In other words, expanded form is the method of pulling a number apart and expressing it as a sum of the values of each

digit.

Example

Th	H	T	O				
7	5	6	1	=	7,000	+	500
					7 groups of thousand		5 groups of hundred
						+	60
							6 groups of ten
						+	1
							1 group of one.

Write a nine digit number, 92,86,75,413 in the expanded form.

$$9 \times 10,00,00,000 + 2 \times 1,00,00,000 + 8 \times 10,00,000 + 6 \times 1,00,000 + 7 \times 10,000 + 5 \times 1,000 + 4 \times 100 + 1 \times 10 + 3$$

$$90,00,00,000 + 2,00,00,000 + 80,00,000 + 6,00,000 + 70,000 + 5,000 + 400 + 10 + 3$$

There are 3 in ones place, 1 in tens place 4 in hundreds place, 5 in thousands place, 7 in ten thousands place, 6 in lakhs place and 8 in ten lakhs place, 2 in crores place and 9 in ten crores place.

Placing this number in the place value chart, we have the following:

Ten Crore	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
9	2	8	6	7	5	4	1

Ex 2: Write the number name, expanded form and place them in Indian place value chart of the number 3472381.

$$3 \times 10,00,000 + 4 \times 1,00,000 + 7 \times 10,000 + 2 \times 1,000 + 3 \times 100 + 8 \times 10 + 1$$

$$30,00,000 + 4,00,000 + 70,000 + 2,000 + 300 + 80 + 1$$

Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
3	4	7	2	3	8	1

It is read as Thirty four lakhs seventy two thousand three hundred eighty one.

Ex 3: Write the number name, expanded form and place them in International place value chart of the number 40,567,812.

Number Name: Forty million, five hundred and sixty seven thousand, eight hundred and twelve.

Expanded form :

$$4 \times 10,000,000 + 0 \times 1,000,000 + 5 \times 100,000 + 6 \times 10,000 + 7 \times 1,000 + 8 \times 100 + 1 \times 10 + 2$$

$$40,000,000 + 0 + 500,000 + 60,000 + 7,000 + 800 + 10 + 2$$

Ten Million	Million	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
4	0	5	6	7	8	1	2

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Numbers	Writing numbers in expanded numeration system, Writing expanded form, Indian num

6. DD_Applications of Numbers in Real Life

Applications of Smaller and Larger Numbers in our real life

Large Numbers are used in the following situations.

1. Account Numbers given for each customer may be 8 digit or 9 digits or 10 digit numbers.
2. To mention the population of a small town in a district, it will be in 5 or 6 digit numbers.
3. All mobile phone numbers are 10 digits.



4. All landline numbers are mostly 8 digits or 7 digits.
5. While purchasing the Computer from the shop, the shopkeeper will give the details of the storage capacity of the drive as 32 GB.
1 byte = 8 bits, 1 kilobyte = 1024 bytes, 1 megabyte = 1,048,576 bytes and 1 gigabyte = 1,073,741,824 bytes.
6. Credit Cards and Debit cards will have 16 digits.



Smaller numbers are used in the following situations.

1. Switching the channels of your favorite TV shows.
2. Telling time you spent on work or school.



3. Each one's year of birth is a 4 digit number.
4. Cost of TV, home theatre, fridge, gold bangles, chains will all be in rupees of 5 or 6 digit numbers.
5. Total marks scored in all subjects, number of pages in books will vary. They may be numbers of 2 digits and 3 digits.

Image Source:

Image of Mobile phone - <https://pixabay.com/vectors/smartphone-android-os-samsung-153650/>

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Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Day-to-day Relevance	Numbers	Use of Numbers, Biggest and Smallest of Numbers, Biggest and Smallest

7. QA_Practice Test On Numbers

I. Insert commas suitably and write the names according to Indian and International system.

(Please give the answers in the form of table)

- a) 5782143 _____
- b) 78167421 _____
- c) 98124738 _____

e) 94383218

- 1) Eight million seventy eight thousand nine hundred five.
- 2) Thirty four crore fifty one lakheighteen thousand nine hundred.
- 3) Eighty three lakh five hundred one.
- 4) Hundred twenty million two hundred and five thousand.
- 5) Three crore six lakh eighty four thousand fifteen.

Answers

Numbers	Indian System	International System
5782143	57,82,143	5,782,143
78167421	7,81,67,421	78,167,421
98124738	9,81,24,738	98,124,738
10010399	1,00,10,399	10,010,399
94383218	9,43,83,218	94,383,218

Numbers	Indian System
57,82,143	Fifty seven lakh eighty two thousand one hundred and forty three.
7,81,67,421	Seven crore eighty one lakh sixty seven thousand four hundred and twenty one.
9,81,24,738	Nine crore eighty one lakh twenty four thousand seven hundred and thirty eight.
1,00,10,399	One crore ten thousand three hundred and ninety nine.
9,43,83,218	Nine crore forty three lakh eighty three thousand two hundred and eighteen.

Numbers	International System
5,782,143	Five million seven hundred and eighty two thousand one hundred and forty three
78,167,421	Seventy million one hundred and sixty seven thousand four hundred and twenty one
98,124,738	Ninety eight million one hundred and twenty four thousand seven hundred and thirty eight
10,010,399	Ten million ten thousand and three hundred and ninety nine.
94,383,218	Ninety four million three hundred and eighty three thousand two hundred and eighteen.

II 1) 8,078,905 (2) 34,51,18,900 (3)83,00,501 (4)120,205,000 (5) 3,06,84,015 .

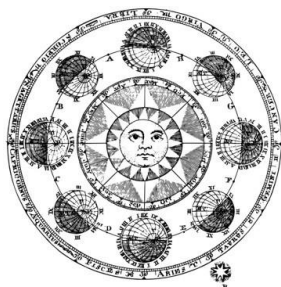
Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Assessments	Numbers	Writing numbers in expanded form, Indian numeration system, Place value, Use of commas in place value, Writing numbers in expanded form, Place value, Indian numeration system, Importance of place value

8. 1A_How far away are the stars from us?

How far away are the stars from us?

Theme: Light Year

Large numbers are mostly found in astronomy



Light year is a special number. It is a very large number used as a measure of distance in astronomy.

1 light year=9460 billion kilometers.

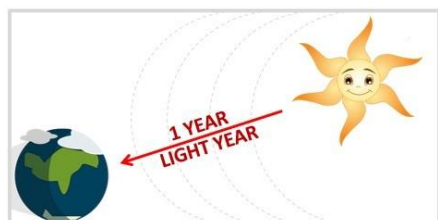
Most of the stars are billions of kilometers away from us. Billion is a number 1 followed by 9 zeroes. However, astronomers specify distance in space in a different unit called, light years, as doing calculations with too many zeroes is a problem.



A light year is the distance covered by light in one year. The speed of light is 300,000 km/s.

If we count the number of seconds in a year ($60 \times 60 \times 24 \times 365$), and multiply it with the speed of light, we get the distance covered by light in one year, 9460 billion kilometers. Proxima centauri, the star nearest to the sun, is 4.2 light years away from the earth.

One Light year – Distance travelled by light moving in a vacuum in one year, at its accepted speed of 186,282 miles / sec. It equals about 5.9 trillion miles (9.5 trillion km), which is 63,503 astronomical units, or 0.307 parsec. (Parsec and Astronomical unit are units of length which measures large distances of astronomical objects.)



Zodiac image - <https://pixabay.com/vectors/vintage-astronomy-zodiac-4167444/>

Sky star - <https://pixabay.com/illustrations/universe-sky-star-space-cosmos-2742113>

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Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Interesting Asides	Numbers	Building larger numbers, Bu numbers

9. MS_Comparing And Ordering Of Numbers

Recap : Teacher will give some examples of 2 digit and 3 digit numbers.

Digits are formed by using the numerals from 0 to 9. When digits are combined, they form numbers. For example 8, 54, 357, 486, 7456 etc.

Comparing Numbers:

Ask students whether they know what is meant by comparing numbers.

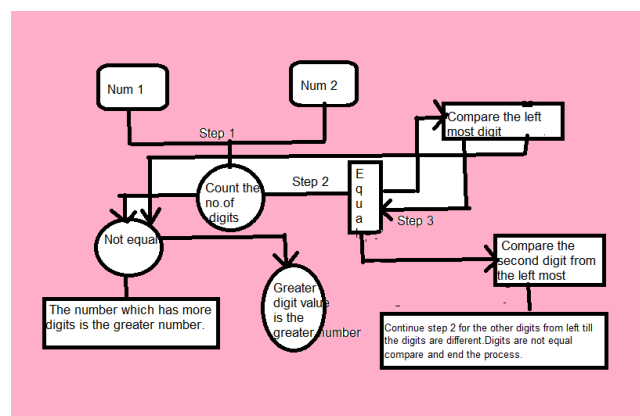
Comparing numbers means to find out whether a number is greater than (bigger), less than (smaller) or equal to (same) the other number.

We use symbols for that

Greater than	>
Less than	<
Equal to	=

How to compare two numbers?

Take 2 numbers and follow the procedure.



Example 1

Consider 2 numbers 5,142 and 31,456. The number of digits in 31,456 is greater than 5,142. Hence, 31,456 is greater. $31,456 > 5,142$

Example 2

Compare 645 and 637. Here hundred place has same number, then compare the numbers in the tens place, 4 is greater than 3. $645 > 637$

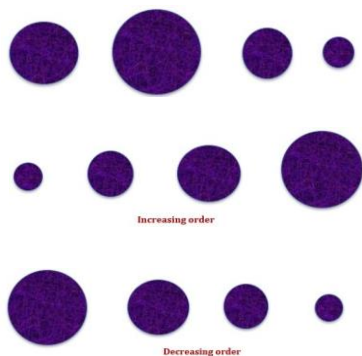
Example 3

Let us compare a four digit number. 9682 and 9341. In thousand place both the numbers are the same. Then compare the numbers in the hundred place, 6 and 3. 6 is greater than 3. Hence, $9,682 > 9,341$

Ordering of Numbers

Arranging numbers in increasing and decreasing order which are otherwise known as ascending and descending order respectively.

Can you arrange the balls in the increasing and decreasing order of their sizes?



When we arrange the number from the smallest to the greatest, it is called ascending order.

When we arrange the number from the greatest to the smallest, it is called descending order.

Example 1

In the set of numbers given below, find which is the smallest number and the greatest number.

65, 754, 4,572, 79,263

In the above example, 65 is the two digit number and the rest of the numbers are more than two digit number.

So, 65 is the smallest number.

79,263 is the five digit number and the other numbers are less than five digits.

So, 79,263 is the greatest number.

Example 2

In another set of numbers:

6,583, 6,492, 4,737, 7,493, 7,237

In the above example, all are four digit numbers. Compare the first digit that is thousands place. 4 is the smallest number. So, 4,737 is the smallest number. 7 is the greatest number. There are two numbers with 7. Since both are equal, compare the hundreds place, 4 is greater than 2. So, 7,493 is the greatest number.

Example 3

Arrange the given numbers in ascending order.

765, 7,547, 3,662, 891, 3,374

Compare the numbers according to the place value. Between 765 and 891, 765 is the smallest number. Next number is 891. Then compare the thousands place. Since two numbers are with 3 at the thousands place, compare with hundreds place. 3 is smaller than 6. So, next number is 3374 and then 3662. 7547 is the greatest number.

765, 891, 3,374, 3,662, 7,547

Example 4

Arrange the given numbers in descending order.

1,534, 5,462, 5,489, 8,243, 8,153

All are four digit numbers. The greatest number in the thousands place is 8. There are two numbers with the number 8 at the thousands place. Compare the hundreds place. 2 is greater than 1. Greatest number is 8,243. Then comes 8,153. There are two numbers with 5 at the thousands place and 4 at the hundreds place. Then compare with tens place 8 and 6. 8 is greater than 6. Next number will be 5489 and then 5462. And the smallest number is 1,534.

8243, 8153, 5489, 5462, 1534

Image Source: Original Contribution by girijashankaran@yahoo.com

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Main Script	Numbers	Comparing and Ordering numbers Comparing and Ordering numbers

10. MS_Forming Smallest And Largest Numbers

Forming smallest and greatest number using the given digits:

If we have 5 digits 8, 3, 5, 9, 1, we can make smallest and greatest number using these digits.

To form the smallest five digit number, arrange the digits in ascending order.

13,589 is the smallest five digit number formed using the digits.

To form the greatest five digit number, arrange the digits in descending order.

98,531 is the greatest five digit number formed using the digits.

If one of the numbers is 0, we can't make the smallest number by writing 0 at the beginning. Then it becomes a 4 digit number. So, it should be placed in the next place. There is no change while making the greatest number.

Example 1

a. Form the greatest and the smallest four digit number using the digits 5, 0, 7, 2.

To form the smallest number, arrange the digits in ascending order. 0257

If we write 0 in the front it becomes a three digit number. So, 0 is written as the second digit. The smallest number will be 2,057.

b. To form the greatest number, arrange the digits in descending order. 7,520

No change in placing 0 while forming the greatest number.

Note: Teacher can give some more examples.

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	Numbers	Biggest and Smallest, Bigg

11. SA_Fun with Numbers

Type of Activity : Group

Setting of Activity: Classroom

Aim: To understand both the Indian and International number systems of numeration for larger numbers.

Materials Required : 50 cards, Pen, 15 A4 sheets cut into half sheet.

Each group to be given 10 Cards which is for writing their parent's names and cell phone numbers.

Example

Mr. Rajeev Saxena 9444667700	Mrs. Reenu Saxena 9444667701
---------------------------------	---------------------------------

Method :

1. The students are divided into groups - each group consisting of 4 or 5 students.
2. They are asked to write the name and the cell phone number of their parents on the given cards.
3. Each group arranges the cards in ascending or descending order of the 10-digit cell phone number.
4. Each student to be given 1 half of A4 sheet to write smallest number and the largest number from the numbers they have in that group. They write the numbers and expanded form both in Indian system and international system.

The numbers are then written in the reverse order and once again the above tasks can be performed.

Conclusion: Children will be able write the expanded form and be fluent with the different systems.

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Suggested Activity	Numbers	Comparing and Ordering nu Comparing and Ordering nu

12. QA_Test on Numbers

I Write the least and the greatest numbers:

i) 465, 9,782, 94, 59,120, 421

The least number = _____.

The greatest number = _____.

ii) 19,473, 50,000, 570, 200, 1,588

The least number = _____.

The greatest number = _____.

iii) 3,418, 28,475, 333, 3, 222, 540

The least number = _____.

The greatest number = _____.

iv) 5,327, 9,167, 6,666, 20,120, 415

The least number = _____.

The greatest number = _____.

II Fill in the blanks:

i) The greatest two – digit number = _____.

ii) The smallest four – digit number = _____.

iii) The smallest five – digit number = _____.

iv) The greatest five – digit number = _____.

III Using all the digits 3, 0 , 4, 2 and 7 write:

i) The greatest 5 – digit number = _____.

ii) The smallest 5 – digit number = _____.

IV Using any one digit twice, fill in the blanks:

	Digits	Smallest 4 - digit number	Greatest 4 - digit number
i)	8 , 5 and 1		
ii)	3,0 and 9		
iii)	6,1, and 0		
iv)	3,4,and 5		

V Fill in the boxes with appropriate symbol > or <

i) 30,02,456 -----6,87,996

ii) 65,83,690----- 32,13,102

- iii) 5,36,72,416 ----- 5,35,92,117
- iv) 57,08,90,410 ----- 57,08,90,318
- v) 10,35,18,802 ----- 13,05,18,802
- vi) 16,876,933 ----- 1,608,688

Answers:

I (i) 94, 59,120 (ii) 200, 50,000 (iii) 3, 28,475 (iv) 415, 20,120.

II (i) 99 (ii) 1,000 (iii) 10,000 (iv) 99,999

III (i) 74,320 (ii) 20,347

IV (i) 1,158, 8,851 (ii) 3,009 , 9,930 (iii) 1,006, 6,610 (iv) 3,345 , 5,543

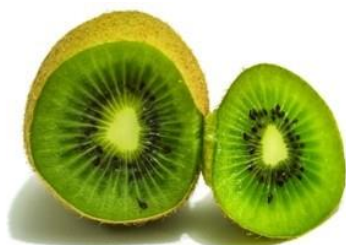
V (i) > (ii) > (iii) > (iv) > (v) < (vi) >

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Assessments	Numbers	Comparing and Ordering numbers Comparing and Ordering numbers

13. MS_Usage of Brackets

Usage of Brackets

Tanya bought 8 kiwi from the market and the cost of each kiwi was ₹30 per piece. Her husband also bought 12 kiwi for the same price. Find the total money they paid.



Student 1 calculated as

$$8 \times 30 + 12 \times 30$$

$$= 240 + 360$$

$$= ₹600$$

Student 2 calculated as

$$8 + 12 \times 30 = 20 \times 30 = ₹600$$

The above can be calculated as

$$8 + 360 = ₹368, \text{ which is wrong.}$$

To avoid this confusion of which operation to do first, we use brackets. Calculate everything inside the bracket into a single number and then do the operation outside.

The above example can be expressed using brackets as:

$$(8 + 12) \times 30 = 20 \times 30 = ₹600$$

Eg.1: Write the expression for 7 multiplied by the sum of 4 and 9.

$$7 \times (4 + 9)$$

Eg.2: Write a situation for the expression $(6 + 4) \times 20$.

Raj bought 6 pens for rupees 20 per pen and Suja bought 4 pens for the same price. Find the total cost of their purchase.

Expanding the bracket

Let us see how to expand the bracket.

$$\text{Eg.1: } 5 \times 109 = 5 \times (100 + 9) = 5 \times 100 + 5 \times 9 = 500 + 45 = 545$$

$$\text{Eg.2: } 105 \times 108$$

$$= (100 + 5) \times (100 + 8)$$

$$= (100 + 5) \times 100 + (100 + 5) \times 8$$

$$= 100 \times 100 + 5 \times 100 + 100 \times 8 + 5 \times 8$$

$$= 10,000 + 500 + 800 + 40$$

$$= 11,340.$$

Image Source:

Kiwi image - <https://pixabay.com/photos/kiwi-fruit-fresh-healthy-3420400/>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	Numbers	Using and expanding bracket expanding brackets

14. MS_Estimation and Rounding of Numbers

Teacher shall start the class by mentioning that about 30,000 spectators watched the IPL match in Rajiv Gandhi International Cricket Stadium on 2nd May 2019.

Approximately, 16,300 people died in 2004 Tsunami in India.



The above figures are only approximate figures, not exact figures.

Sometimes, you would have noticed that while buying vegetables for ₹ 399, the shopkeeper will take ₹ 400 and will not return one rupee.

These estimation values are close to the exact values.

When do we estimate in real life?

When we want to take money for shopping, we will roughly calculate how much we plan to spend?

We estimate the amount of time it takes to visit our friend's house.

We estimate the number of people attending a function.

While planning budget for the family, mother would estimate certain amount for a month.

When do we need exact figure?

While paying the bills, we need the exact number to pay the shopkeeper.

A dozen means 12, this is an example of exact number.

Number of players in a cricket team is an exact number.

Price of gold is exact.



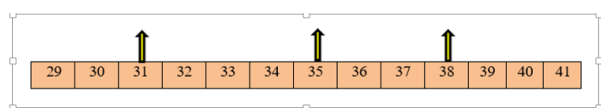
Estimating by Rounding Off

To find the estimation we normally round off to the nearest 10, 100, 1000 etc.

The rounding off number will be close to the original number.

Rounding off to nearest 10

Round off 36 to the nearest 10.



In the above image, find the arrow that are closer to 30 and arrows that are closer to 40.

The number 31 is closer to 30 and far from 40. Hence, it is rounded off to 30.

The number 38 is closer to 40 and far from 30. Hence, it is rounded off to 40.

35 is half way between 30 and 40, usually it is rounded off upwards that is 40.

From the above example we understood that number 4, 3, 2, 1 and 0 are rounded down to the nearest ten.

Numbers 5, 6, 7, 8, 9 are rounded up to the nearest ten.

Rounding off to nearest 100

1. Is 380 closer to 400 or 300?

380 is closer to 400, So it is rounded up to 400.

2. Round off the number 620 to the nearest 100.

Is 620 closer to 600 or 700?

It is closer to 600, so it is rounded down to 600.

3. Round off the number 6583 to the nearest 100.

Is 6,583 closer to 6,500 or 6,600?

583 is closer to 600, so 6,583 is rounded up to 6,600.

Rounding off to nearest 1000

1. Is 7,583 closer to 8,000 or 7,000?

By now we know that numbers from 1 to 499 are closer to 0 than to 1,000.

500 to 999 are rounded off to thousand.

583 is closer to 1,000.

7,583 is closer to 8,000, so, it is rounded up to 8,000.

2. Round off 96,233 to nearest 1,000.

233 is closer to 0, so 96,233 is rounded down to 96,000.

Image Source:

Image of Tsunami - <https://pixabay.com/photos/wave-water-sea-tsunami-giant-wave-11061/>

Image of Gold - <https://pixabay.com/nl/illustrations/goud-rijkdom-ingots-schat-4131091/>

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Numbers	Estimation of numbers in da rounding off), Estimation of life(by rounding off)

15. MS_Larger numbers and Units of Measurement

Units of Measurement:

Students will know by now that the thickness of a pencil is measured in millimeter (mm), the length of a book is in centimeter (cm), length of a towel is in meter (m) and the distance between the student's home and the school or any two places are measured in kilometer (km). These are called units of length.

10 mm = 1 cm

$$100 \text{ cm} = 1 \text{ m}$$

$$1000 \text{ m} = 1 \text{ km}$$

Short length is measured in cm and long distances are measured in km.

We use ruler, measuring tape or flexible tape to measure the length.

How many centimeter makes one kilometer?

$$100 \text{ cm} = 1 \text{ m}$$

$$1000 \text{ m} = 1 \text{ km}$$

$$1 \text{ km} = 100 \times 1000 = 1,00,000 \text{ cm}$$

One lakh centimeter makes one kilometer.

Eg:

The distance between Raj and Sushma's house are 4 km. What is the distance in millimeter?

Distance between Raj and Sushma's house is 4 km.

Therefore, the distance in millimeter =

$$1 \text{ m} = 10 \times 100 = 1000 \text{ mm}$$

$$1 \text{ km} = 1000 \times 1000 \text{ m} = 10,00,000 \text{ mm}$$

Therefore, distance between Raj and Sushma's house is $4 \times 10,00,000 = 40,00,000$. Forty lakh millimeter.

When you had accompanied your parents for grocery shopping, you must have observed that rice, dhal and wheat are bought in kilograms (kg) but items like turmeric powder, mustard seeds are bought in grams (g).

Kilograms and grams are the unit of weight.

$$1000 \text{ mg} = 1 \text{ gm}$$

$$1000 \text{ gm} = 1 \text{ kg}$$

We measure weight using different kinds of scale for different purposes.



How many milligrams make one kilogram.

Recall the table,

$$1 \text{ kg} = 1,000 \text{ gm}, 1 \text{ gm} = 1,000 \text{ mg}$$

$$1000 \times 1000 \text{ gm} = 10,00,000 \text{ mg}$$

Ten Lakh milligrams make one kilogram.

For liquids like water, oil, the maximum quantity a container can hold is called capacity.

Kiloliter, liter and milliliter are the unit of capacity.

A bucket can hold about 15 to 20 liters of water.



1000 ml = 1 liter

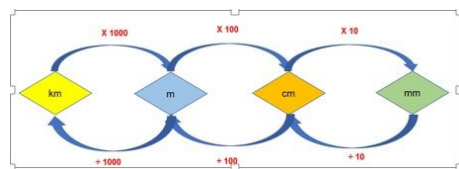
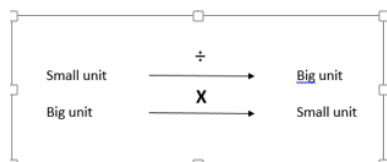
Medicines in the form of syrup are measured in milliliter (ml). Perfumes are measured in milliliter (ml).



BALANCE SCALES

Water in a tank is measured in kiloliter (kl). Large capacities are measured in kiloliter and small capacities are measured in milliliter or liter.

Conversion of unit:



When we convert small unit to big unit, we divide and to convert big unit to small unit we multiply.

For example, convert 45 km to meter.

Kilometer is a big unit and meter is a small unit. So, we need to multiply.

1 km = 1000 m

Therefore, 45 km = 45 x 1000 m = 45,000 m.

Note: Teacher can give some more examples for capacities and weight.

Image Source:

Image of Physical Balance- <https://www.maxpixel.net/Justice-Health-Weight-Measure-Scale-Balance-2634795>

Image of Bucket - <https://pixabay.com/vectors/green-bucket-household-bucket-2259947/>

Image of syrup - <https://pixnio.com/science/chemistry/laboratory-measuring-flasks-that-are-used-to-provide-units-of-liquid-measurement>

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Numbers	Numbers to measure (quantity, price and population), Numbers to measure (quantity, price and population)

16. MS_Estimation of Sum, Difference and Product.

Estimating outcomes in number situation under sum, difference and product.

Estimation is used in addition, subtraction and multiplication of numbers.

Estimate sum: When two numbers are given, we can roughly calculate the sum of the two numbers.

$$76 + 22$$

By rounding off the number to the nearest 10, we get

$$80 + 20 = 100$$

Approximately, the answer will be 100 and the exact number will be closer to this. The exact answer is 98.

Consider another set of numbers for addition.

$$6,384 + 43,562$$

First number is rounded off to nearest 1,000 and the second number is rounded off to nearest 1,000.

The estimated value should be reasonable. Which place to round off depends on the accuracy.

384 is closer to 0. So, the first number becomes 6000.

3,562 is closer to 4000. So, the second number becomes 44,000.

$$6,000 + 44,000 = 50,000$$

50,000 is the approximate answer.

Exact answer is 49,964

Eg 1: A merchant sold ₹57,538 worth of goods on Monday and ₹35,942 worth of goods on Tuesday. For how much amount did he sell the goods on both the days, approximately?

Rounding off both the numbers to nearest 1,000, we have

Amount of goods sold on Monday = ₹57,538

Amount of goods sold on Tuesday = ₹35,942

Total amount of goods sold on both the days = $58,000 + 36,000 = ₹94,000$

The number is rounded off to thousands.

Eg 2: There are 273 passengers in the first compartment and 298 passengers in the second compartment. How many passengers are there altogether?

Number of passengers in the first compartment = 273

Number of passengers in the second compartment = 298

Approximate number of passengers in both the compartments = $273 + 298$

After rounding off to nearest 100 both becomes $300 + 300 = 600$

Approximately 600 passengers were there in both the compartments.

Estimate difference:

This is similar to Estimate sum but instead of adding, we will have to subtract for this.

Estimate: $8,768 - 336$

In the above example, try rounding off to thousands.

$9,000 - 0 = 9,000$

This is not close to the exact value

Try rounding off to hundred.

$8,800 - 400 = 8,400$

This estimation is close to the exact value.

Eg 1: There are 8,563 notebooks in the factory. 4,239 notebooks are sent to the retailer. Approximately how many notebooks are left in the factory.

Round off the numbers to the nearest hundred.

$8,600 - 4,200 = 4,400$

Approximately, 4,400 notebooks are left in the factory.

Estimate product:

Estimate the product of 13×89 .

Round off both the numbers to nearest ten.

$10 \times 90 = 900$

Estimate the product of 72×175

If we round off both the numbers to nearest hundred, the product will be more. $100 \times 200 = 20,000$.

To get the product closest to the exact value, round off to nearest ten for 72 and round off to nearest hundred for 175.

$70 \times 200 = 14,000$. (There is huge difference between the actual and estimated product. So we round it to the nearest ten in both the numbers. $70 \times 180 = 12,600$)

Both the numbers should be rounded off to the greatest value. Then find the product.

Eg: 28 children are in a class. Each one has 24 colour pencils. Approximately, how many colour pencils are there in the class?

Round off to nearest 10.

Number of children in a class 28 rounded off to 30.

Number of colour pencils each one has 24, rounded off to 20.

Approximate amount of pencil = $30 \times 20 = 600$

Example

Estimate the following to the nearest 10, 100 and 1,000 for the same problem. Also find the actual values.

a. $60,459 + 23,156 = 83,615$

b. $32,745 - 23,654 = 9,091$

c) $7,654 \times 1,234 = 94,45,036$

Estimate nearest to	Sum	Difference	Product
10	$60460 + 23160 = 83620$	$32750 - 23650 = 9100$	$7650 \times 1230 = 94,09,500$
100	$60500 + 23200 = 83700$	$32700 - 23700 = 9000$	$7700 \times 1200 = 92,40,000$
1000	$60000 + 23000 = 83000$	$33000 - 24000 = 9000$	$8000 \times 1000 = 80,00,000$

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Main Script	Numbers	Estimating sum, difference & product of numbers, Estimating sum, c

17. QA_Practice Questions on Estimation of Numbers

I. Round off to nearest 10 :

a.153

b.366

c.792

d.478

II. Round off to nearest 100:

a) 4,312

b) 3,715

c) 2,166

d) 5,988

III. Round off to nearest 1000:

a. 13,562 (b) 98,173 (c) 75,412 (d) 66,680

IV. Round to the given place:

a) 8,702 ; hundreds

b) 1,850,817,349 ; hundred thousand

c) 94,665; ten thousands

d) 22,900 ; thousands

e) 738 ; tens

V. Estimate the following:

a) $786 - 421$ (To the nearest 10)

b) $384 + 236$ (To the nearest 100)

c) $2,378 + 5,601$ (To the nearest 100)

d) $89,014 - 52,478$ (To the nearest thousand)

(e) 129×387 (To the nearest hundred)

Answers

I. a. 150 (b) 370 (c) 790 (d) 480

II. a. 4,300 (b) 3,700 (c) 2,200 (d) 6,000

III. a. 14,000 (b) 98,000 (c) 75,000 (d) 67,000

IV. a. 8,700 (b) 1,850,800,000 (c) 90,000 (d) 23,000 (e) 740

V. a. $790 - 420 = 370$ (b) $400 + 200 = 600$ (c) $2,400 + 5,600 = 8,000$ (d) $89,000 - 52,000 = 37,000$ (e) $100 \times 400 = 40,000$.

Time to teach

Asset Type

Theme

SubTheme

15 Minutes	Assessments	Numbers	Estimation of numbers in da rounding off), Estimating su product of numbers, Estimat daily life (by rounding off), E difference and product of nu
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18. QA_Mixed Operations on Large Numbers

I. Simplify

a. $56,432 + 12,00,987$

(b) $310,765 + 200,054$

(c) $81,256 - 37,845$

(d) $1,118 \times 234$

(e) $2,341 \times 510$

f) $12,31,566 \div 213$

(g) $2,46,562 \div 47$

II Mixed Word Problems on the Basic operations

- 1) The sum of two number is 7,28,11,500. If one of the number is 2,56,99,297. Find the other.
- 2) What should be added to 1,80,78,975 to get 5,55,55,555?
- 3) There are 7,14,32,189 men 5,43,67,254 women and 3,50,14,678 children in a country. Find the population of the country.
- 4) Find the difference between the largest and the smallest number that can be formed using the digits 7 , 4 , 0 , 5 , 2.

III Solve the following:

1. A shopkeeper has 2,425 boxes of 24 pencils each. How many pencils do all the boxes have in all?
2. Linda bought a coat for Rs.2,265 and a sari for Rs.2,150. She gave Rs.5,000 to the shopkeeper. How much money did the shopkeeper return to her?
3. The cost of 11 TV sets is Rs.195,844. Find the cost of one TV set.
4. A factory produces 24,532 bulbs in a month. What is its annual production?
5. There are 42 rooms in a school. 1,512 students study there. How many equal number of students sit in each room?
7. 1,575 students of a school want to visit Agra by bus. If one bus can carry 75 students, how many buses are required to carry all the students?

Answers

I. a. 12,57,419. (b) 510,819 (c) 43,411 (d) 2,61,612 (e) 11,93,910 (f) 5,782 (g) 5,246

II.1) $2,56,99,297 + \text{-----} = 7,28,11,500$ (4,71,12,203) (2) 3,74,76,580 (3) 16,08,14,121 (4) 9,75,420 - 2,04,579

=7,70,841

III. 1)58,200 (2) 5,000 - (2,265 + 2,150) = 585 (3) 17,804. (4) 24,532 x 12 =2,94,384 (5) 36 students (6) 21 buses.

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Assessments	Numbers	Arithmetic Operations on Nu Arithmetic Operations on Nu

19. MS_Roman Numerals and their Values

Roman Numerals

Roman numerals originated in ancient Rome and was widely used throughout Europe till Middle age. Roman numerals are read as English writing. Roman numerals are still used in many places. It uses only seven symbols.

Symbols of Roman Numerals and their Values.

I	V	X	L	C	D	M
1	5	10	50	100	500	1000

Roman Numerals are used in

- **Clocks.**
- **They are found in monuments.**
- **While referring to world war Roman Numerals are used.**
- **Monarch's are numbered in Roman Numerals. Example. King Edward II, King Edward III etc.**
- **It is used in some books.**

Rules for Writing Roman Numerals	
1	Repeated symbols mean its value is added as many times as it repeated.
2	A symbol is not repeated more than three times.
3	Symbols V, L and D are never repeated.
	Roman numerals are read from left to right, letters are arranged from largest to the smallest.
4	If a symbol of smaller value is written to the right of a symbol of greater value, the smaller value is added to the greater value.
5	If a symbol of smaller value is written to the left of a symbol of greater value, the smaller value is subtracted from the greater value.
6	The symbol I is subtracted from V and X
7	The symbol X can be subtracted from L, M and C only

Roman numerals for all the numbers are given below.

1	I	11	XI	30	XXX
2	II	12	XII	40	XL

3	III	13	XIII	50	L
4	IV	14	XIV	60	LX
5	V	15	XV	70	LXX
6	VI	16	XVI	80	LXXX
7	VII	17	XVII	90	XC
8	VIII	18	XVIII	100	C
9	IX	19	XIX		
10	X	20	XX		

Eg 1: Write the Roman numeral for 35.

XXXV

Eg 2: What is the Roman numeral for 98?

XCVIII

Note: Teacher can give more examples.

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Numbers	

20. VC_Numbers - Place Value and Face Value

Place Value and Face Value

We just learned that every digit in a number has a face value and a place value. Actual value of the number is face value and place, or position of a number, in that is its place value.

For example, in number 59, though 5 is smaller than 9, its place value is higher than 9, due to its position on the left side of 9.

In number 95, since 5 is placed to the right of 9 the place value of 5 decreases, even though the number 95 becomes greater.

Similarly, in this world, people initially get respect, fame and popularity due to being more talented in academics, sports or physical strength, musical talents or fine arts like painting, etc. That is the face value of that person. But face value is only temporary. It will last only as long as that person's talents or power and position last.

On the contrary, if one makes use of one's special talents or position or power to help someone in need or distress, their place value will be created in the hearts of people on a permanent basis.

Now, let me narrate a famous incident.

A mother, wishing to encourage her son's progress at the piano, bought tickets to a concert by the great Polish pianist Ignace Paderewski (He later went on to become the Prime Minister of Poland). When the evening arrived, they found their seats near the front of the concert hall and waited for the concert to begin. Soon when the mother was talking to a friend, the boy slipped away and the mother didn't notice it.

At eight o'clock, the lights in the auditorium began to dim, the spotlights came on, and the mother was embarrassed to find her son up on the piano bench on the stage, innocently playing "Twinkle, Twinkle Little Star." His mother gasped in shock but, before she could retrieve her son, the master himself appeared on the stage and quickly moved to the keyboard.

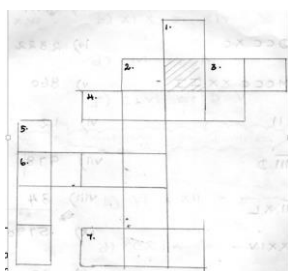
He whispered gently to the boy, "Don't quit. Keep playing." Leaning over, Paderewski reached down with his left hand and started playing. Soon his right arm reached around the other side and improvised a delightful music. Together, the old master and the young novice held the crowd mesmerized with their blended and beautiful music.

The great master had given several enthralling concerts during his life time. But this particular one forever remained etched in the memory of the Music lovers as much as it found a permanent place in the hearts of the little boy & his mother. Paderewski's act of love & kindness towards the little toddler became a great legend.

Obviously, it is only Love & kindness that ‘add value’ to the life of others less fortunate. It also increases Place value of the kind person who uses his unique talents for the benefit of others.

Time to teach	Value Type	Value Sub Type	Value Attribute
3 Minutes	Love		Stories

I. Solve the following crossword puzzle with the help of given clues (Hint: Record all your answer in Roman Numerals)



3.500 - 100 = -----

4. $27 - 5 =$

6. $72 - 8 =$

7. $50 + 9 =$

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1. $66 - 16 =$ _____

2. $31 + 6 =$ _____

5. $40 + 2 =$ _____

II. Tick the correct answer:

a) 49 = 1) XLIX 2) XXXXIX 3) XLVIII

b) 900 = 1) DCCCC 2) CM 3) IXC

c) 2125 = 1) IICXXIVI 2) MMLLXXV 3) MMCXXV

d) 403 = 1) CCCCIII 2) CDIII 3) LLCCIII

e) 14 = 1) XIV 2) IXV 3) VIXX

III. Match the following Roman Numerals with the correct Hindu – Arabic Numerals.

a) XXIX i) 1348

b) CMLXXVIII ii) 34

c) DCCLX iii) 29

d) MDCCXC iv) 2322

e) MMCCCXXII v) 760

f) XII vi) 12

g) XXXIV vii) 978

h) MCCCXLVIII viii) 1790

i) DLV ix) 91

j) XCI x) 555

IV. Multiply and write the answers as Roman numerals.

a) $IV * V =$ _____

b) $VI * XII =$ _____

c) $IV * D =$ _____

d) $C * IX =$ _____

e) $XXV * XL =$ _____

f) $XIII * VIII =$ _____

Answers

I. Across : 3) CD (4) XXII (6) LXIV (7) LIX

Down : 1) L (2) XXXVII (5) XLII

II. a.1 (b) 2 (c) 3 (d) 2 (e) 1

III.a) iii (b) vii (c) v (d)viii (e)iv (f) vi (g) ii (h)i (i) x (j) ix

IV. a. $4 \times 5 = 20 = XX$ (b) $6 \times 12 = 72 = LXXII$ (c) $4 \times 500 = 2000 = MM$ (d) $100 \times 9 = 900 = CM$ (e) $25 \times 40 = 1000 = M$ (f) $13 \times 8 = 104 = CIV$.

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Assessments	Numbers	

22. MS_Summary- Knowing Our Numbers

Summary – Knowing Our Numbers

- 1) Comparing Numbers and arranging the numbers in ascending and descending order.
- 2) Forming larger numbers when digits are given with conditions of repetition of digits and no repetition.
- 3) Representation of Indian System, International System of Numbers with Commas.

Indian System of Numeration									
Crores		Lakhs		Thousand			Ones		
Ten Crore	Crone	Ten Lakhs	Lakhs	Ten Thousand	Thousand	Hundred	Tens	Ones	
TC	C	TL	L	TTH	TH	H	T	O	
10,00,00,000	1,00,00,000	10,00,000	1,00,000	10,000	1,000	100	10	1	
International Sysytem of Numeration									
Millions			Thousands			Ones			
Hundred Million	Ten Million	Million	Hundred Thousand	Ten Thousand	Thousand	Hundred	Tens	Ones	
100,000,000	10,000,000	1,000,000	100,000	10,000	1,000	100	10	1	

- 4) Expanding the Numbers in both the systems and writing the number names.
- 5) Solving the problems based on both system of numbers, placing commas and number names.
- 6) Building larger digit of numbers from the smallest two digits, three digits going upto ten digits.
- 7) Finding the smallest, largest numbers for the given digits and ordering of numbers.
- 8) To solve and simplify the word problems with mixed operations.
- 9) Using larger units of measurement and their conversions. (Kilometer, kilogram, kiloliter)
- 10) Estimation and Rounding of Numbers to the nearest 10,100 and 1000.
- 11) Estimation and rounding of numbers involved in the basic operations of addition, subtraction and product.
- 12) Solving problems on estimation of numbers.
- 13) Using brackets to simplify the problems and finding the solution.
- 14) Roman Numerals and solving problems. Hindu Arabic Numerals and rules followed in conversion.
- 15) Importance of Place Value in Life and Face Value.

Images: Original (girijashankeran@gmail.com)

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	Numbers	Writing numbers in expanded and expanded brackets, Using Indian numeration system, commas in place value, Forming numbers, Expressing numbers in words, Estimation of numbers (by rounding off), Estimating difference and product of numbers, Comparing numbers, Ordering numbers, Building Biggest and Smallest, Ascending order, Arranging in descending order, Writing numbers in expanded form, Using and expanding brackets, Indian numeration, Importance of commas in place value, Forming 3 digit numbers, Expressing numbers in roman numerals, Numbers in daily life (by rounding off), Estimating sum, difference and product of numbers, Digits (forming numbers), Comparing numbers, Ordering numbers, Building Biggest and Smallest, Ascending order, Arranging in descending order