Lesson 2

Five and Six-Digit Numbers

Children, we have read about four-digit numbers in the previous class. Here, we will study five and six-digit numbers.

9999 is the largest 4-digit number. By adding 1 to it, we get 10,000, the smallest 5-digit number. To study the larger numbers comfortably, we divide them into sections. Each section is called a period which are separated by a comma (,). The ones, tens and hundreds together make the ones period. Thousands and ten thousands make the thousands period.

Thus, ten thousand is written as 10,000.

The numbers after 10,000 are written and read as :

Number (in figures)	Number (in words)
10,001	Tens thousand one
10,004	Tens thousand four
10,010	Ten thousand ten
10,099	Ten thousand ninety nine
10,100	Ten thousand one hundred

Number (in figures)	Number (in words)
10,199	Ten thousand one hundred ninety nine
11,000	Eleven thousand
11,999	Eleven thousand nine hundred ninety nine
50,000	Fifty thousand
99,999	Ninety nine thousand nine hundred ninety nine

Remember

- Leaving the ones period, the name of each period is read along with the digits of that period.

To Write Number-Names by Using the Indian Place Value Chart

Periods	Thousands		Ones		
Places	Ten thousands	Thousands	Hundreds	Tens	Ones
24639	2	4	6	3	9
68578	6	8	5	7	8

The number given above are written and read as :

24,639 ⇒ Twenty four thousand six hundred thirty nine.

68,578 ⇒ Sixty eight thousand five hundred seventy eight.

We can increase the numbers beyond 99,999 just as we did for the numbers from 1 to 99,999.

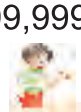
Example 1 : What will be the number immediately 1 after 99,999?

Solution : 99,999 + 1 = 1,00,000 (1 lakh)

On adding 1 in 99,999, we get the smallest 6-digit number, i.e. one lakh. In the same way, 9,99,999 is read as nine lakh ninety nine thousand nine hundred ninety nine. It is the largest 6-digit number.

9,99,999 + 1 = 10,00,000 (ten lakhs)

Now, let us learn how to write and read the largest 6-digit number and the smallest 7-digit number using Indian Place Value Chart.



Let us Know

The numbers from 1,00,000 to 9,99,999 are 6-digit numbers but 10,00,000 is the smallest 7-digit number.

Periods	Lakhs		Thousands		Ones		
Places	Ten Lakhs	Lakhs	Ten thousands	Thousands	Hundreds	Tens	Ones
9,99,999		9	9	9	9	9	9
10,00,000	1	0	0	0	0	0	0

Remember

- There is a separate period for lakhs in Indian Place Value Chart.

Place Value

The place value of a digit in a number depends on its place in that number.

Example 1 : Find the place value of each digit in 48,753.

Solution :

4 8 7 5 3

- Place value of 3 = 3
- Place value of 5 = 50
- Place value of 7 = 700
- Place value of 8 = 8 000
- Place value of 4 = 40000

Example 2 : Find the place value of each digit in 8,64,548

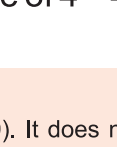
Solution :

8 6 4 5 4 8

- Place value of 8 = 8
- Place value of 4 = 40
- Place value of 5 = 500
- Place value of 4 = 4 000
- Place value of 6 = 60000
- Place value of 8 = 800000

Remember

- The place value of zero is always zero (0). It does not have any value of its own, but it helps to know the values of other digits correctly.



Exercise 2.1

1. **Write the following numbers in words :**

(a) 3,99,400 (b) 60,09,352 (c) 13,22,966 (d) 4,50,678 (e) 15,28,001

2. Write the following numbers in figures :

(a) Two lakh ten thousand seven hundred five

(b) Twenty six lakh fifteen thousand six hundred seventeen

(c) Seventy four lakh seventy four thousand eleven

(d) Sixty four lakh fifty three thousand eight

3. Find the place values of 8 in the following numbers :

(a) 3,98,416 (b) 85,92,421 (c) 10,00,128 (d) 97,65,843 (e) 27,65,823

4. Write the following numbers in figures using commas :

(a) Ninety nine thousand three hundred forty five

(b) Three lakh seventy thousand one hundred thirty one

(c) Five lakh eighty thousand seven hundred sixty four

(d) Thirty eight lakh twenty two thousand six hundred forty nine

5. Write the given numbers in words :

(a) 68956 (b) 742586 (c) 493209 (d) 5532785 (e) 1642008

6. Write the following in figures :

(a) Smallest 4-digit number (b) Largest 4-digit number (c) Largest 5-digit number

7. Write the following in words :

(a) Smallest 5-digit number (b) Largest 5-digit number (c) Largest 7-digit number

8. Write the periods and the places of the following digits :

(a) Period of 7 in 73,519 = ☐, place = ☐

(b) Period of 8 in 3,22,428 = ☐, place = ☐

(c) Period of 9 in 9,80,136 = ☐, place = ☐

(d) Period of 6 in17,40,652 = ☐, place = ☐

Expanded Form

The total of place values of all the digits in a number written in the form of a sum is called its expanded form.

Example : Write the expanded form of 35,43,210.

Solution : Expanded form of 35,43,210

= 3 ten lakhs + 5 lakhs + 4 ten thousands + 3 thousands + 2 hundreds + 1 tens + 0 ones (in words)

or = 3000000 + 500000 + 40000 + 3000 + 200 + 10 + 0 (in figures)

or = 3000000 + 500000 + 40000 + 3000 + 200 + 10

Short Form

The number got after adding the expanded form of any number is called its short form.

Example 1 : Write 50,00,000 + 4,00,000 + 70,000 + 300 + 20 + 5 in short form.

Solution : 50,00,000 + 4,00,000 + 70,000 + 300 + 20 + 5 = 54,70,325

Example 2 : Write 8,00,000 + 60,000 + 5,000 + 400 + 80 + 7 in short form.

Solution : 8,00,000 + 60,000 + 5,000 + 400 + 80 + 7 = 8,65,487

Successor and Predecessor

Successor : The number got after adding 1 to any number is called its successor, i.e. any number which comes just after a given number is called its successor.

Example 1 : Write the successor of 64,532.

Solution : 64,532 $\Rightarrow$ 64,532 + 1
= 64,533

Example 2 : Write the successor of 8,78,649.

Solution : 8,78,649 $\Rightarrow$ 8,78,649 + 1
= 8,78,650

Predecessor : The number got after subtracting 1 from any number is called its predecessor, i.e. the number which comes just before a number is called its predecessor.

Example 1 : Write the predecessor of 73, 668.

Solution : 73,668 $\Rightarrow$ 73,668 – 1
= 73,667

Example 2 : Write the predecessor of of 64,57,826.

Solution : 64,57,826 $\Rightarrow$ 64,57,826 – 1
= 64,57,825

Exercise 2.2

1. **Write the expanded forms of the following numbers:**
   (a) 42,307 (b) 8,88,649 (c) 1,34,209 (d) 25,39,817 (e) 35,45,219
2. **Write the short forms of the following :**
   (a) 80,000 + 7,000 + 400 + 30 + 6
   (b) 60,00,000 + 5,00,000 + 70,000 + 3,000 + 10 + 5
   (c) 4,00,000 + 80,000 + 6,000 + 700 + 20 + 8
   (d) 20,00,000 + 4,00,000 + 60,000 + 5,000 + 8
3. **Write the successors of the following numbers :**
   (a) 11,099 (b) 1,29,999 (c) 81,748 (d) 3,75,678 (e) 85,36,789
4. **Write the predecessors of the following numbers :**
   (a) 11,001 (b) 61,008 (c) 1,21,121 (d) 55,76,336 (e) 7,68,701

Comparison of Numbers

Following are the rules to compare the numbers :

Rule 1 : The number which has more digits is the bigger number.

Example : Which one is bigger in 35,734 and 3,573 ?

Solution : ∵ 35,734 is a 5-digit number while 3,573 is a 4-digit number.

∴ 35,734 > 3,573

Rule 2 : If the number of digits in the given numbers is equal, we compare the digits from the left and find out the bigger number.

Example : Which one is bigger in 34,567 and 34,476.

Solution : In both the numbers, two digits from right to left are the same. The number of hundreds are 5 and 4.

Since 5 > 4 ∴ 34,567 > 34,476

Rule 3 : If the digits on the left in both the numbers are equal, we move forward and compare the rest of the digits. The number which has the bigger digit will be bigger.

Example : Which one is bigger in 6,25,413 and 6,26,314?

Solution : In both the numbers, the digits at lakhs and ten thousands places are equal. The numbers at the thousands place are 5 and 6.

Since 5 < 6 Hence, 6,25,413 < 6,26,314

Rule 4 : If all the digits of the given numbers are equal, then the numbers will be the same.

Example : In 6,54,830 and 6,54,830 which one is bigger/smaller?

Solution : Both the numbers are equal and none is bigger or smaller.

Hence, 6,54,830 = 6,54,830

Ordering of Numbers

The order of numbers is of two types :

1. **Ascending Order :** To write the numbers in increasing order is called ascending order. To write the numbers in ascending order, the smallest number is written first, then the number bigger than it, and so on.

Example : Write the given numbers in ascending order :

654630 ; 654280; 654108 ; 654830 ; 654300

Solution : Comparing the given numbers, we find that :

654108 < 654280 < 654300 < 654630 < 654830

So, the ascending order is 654108 ; 654280 ; 654300 ; 654630 ; 654830.

2. **Descending Order :** To write the numbers in decreasing order is called descending order. To write the numbers in decreasing order, the biggest number is written first, then the number smaller to it, and so on.

Example : Write the given numbers in descending order :
47602, 398425, 148752, 149307, 9988

Solution : Comparing the given numbers, we find that :
398425 > 149307 > 148752 > 47602 > 9988
So, the descending order is 398425, 149307, 148752, 47602, 9988.

Exercise 2.3

1. **Fill <, > or = in the blanks :**
   (a) 35742 ◻ 35714 (b) 8553342 ◻ 8521213 (c) 28957 ◻ 92857
   (d) 1234321 ◻ 6321234 (e) 1000001 ◻ 1000001 (f) 93589 ◻ 98539
2. **Write the given numbers in ascending order :**
   (a) 7053266, 7043268, 5396702, 5953715, 446295
   (b) 1654300, 6154001, 6431540, 654340, 16354302
   (c) 6517321, 4077111, 1147074, 7516231, 7654321
   (d) 5405185, 7751900, 6895101, 7752905, 7527501
3. **Write the given numbers in descending order :**
   (a) 9503081, 5007161, 7032022, 7054071, 6557038
   (b) 224513, 2200007, 2203852, 4231210, 2288820
   (c) 5040, 7182651, 16254, 6109342, 70819
   (d) 1212123, 3818812, 1882215, 1211885, 1212207

Making Largest and Smallest Numbers

To make the largest number : In the given digits, the largest digit is kept on the left and then the digits are placed in a decreasing order. The number so got is the largest number.

To make the smallest number : In the given digits, the smallest digit is kept on the left and then the digits are placed in an increasing order. Thus, we get the smallest number.

Remember

While making the smallest number, if there is a zero (0) among the given digits, it will not come at the first place. The number bigger than zero will occupy the first place and the zero will come at the second place.

Example 1 : Write the largest and the smallest numbers made from the digits 7, 4, 5, 3, 6.

Solution : Keeping the digits in decreasing order = 7 > 6 > 5 > 4 > 3
Hence, the largest number = 76,543
Keeping the digits in increasing order = 3 < 4 < 5 < 6 < 7
Hence, the smallest number = 34,567

Example 2 : Make largest and smallest numbers from the digits 6, 3, 8, 0, 5, 2.

Solution : Keeping the digits in decreasing order = 8 > 6 > 5 > 3 > 2 > 0

Hence, the largest number = 8,65,320

Keeping the digits in increasing order = 0 < 2 < 3 < 5 < 6 < 8

But zero (0) cannot come at the first place, so we keep it at the second place.

Hence, the smallest number = 2,03,568

Exercise 2.4

1. Write the largest numbers made from the following digits :

(a) 8, 5, 4, 1, 3 (b) 1, 2, 3, 4, 5, 6 (c) 8, 9, 7, 5, 3, 4 (d) 5, 2, 7, 8, 3

(e) 1, 7, 4, 0, 3, 5 (f) 8, 5, 3, 2, 4, 0 (g) 9, 5, 6, 8, 7, 4 (h) 6, 4, 9, 3, 2

2. Write the smallest numbers made from the following digits :

(a) 2, 7, 0, 6, 5, 4 (b) 4, 6, 5, 1, 3, 2 (c) 2, 7, 0, 6, 8, 4 (d) 7, 2, 6, 4, 5

(e) 1, 4, 6, 3, 2 (f) 2, 8, 5, 3, 0, 6 (g) 4, 3, 1, 9, 6, 7 (h) 6, 6, 7, 0, 5

3. Put a ◯ on the largest number and a □ on the smallest number formed from the following digits :

(a) 4, 2, 6, 1, 5 ⇒ 41, 526 12,456 65,421 46,512

(b) 5, 3, 8, 0, 9 ⇒ 30, 859 30,589 89,503 98,530

(c) 2, 7, 4, 9, 0, 1 ⇒ 1,02,479 1,47,290 1,97,204 9,74,210