2. Number Work

You have learnt to read and write numbers in the decimal system using the ten digits from 0 to 9.

❒ Revision

Problem Set 2

1. Using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 write ten each of two-, three-, four- and five-digit numbers. Read the numbers.

2. Fill in the blanks in the table below.

Devanagari numerals	International numerals	Number written in words
(1) २,३५९	2,359	Two thousand, three hundred and fifty-nine
(2) ३२,७५६	----------	----------
(3) ----------	67,859	----------
(4) १,०३४	----------	----------
(5) ----------	----------	Twenty-seven thousand, eight hundred and ninety-five

3. As a part of the 'Avoid Plastic Project', Zilla Parishad schools made and provided paper bags to provision stores and greengrocers. Read the talukawise numbers of the bags and write the numbers in words.

Kopargaon	Shevgaon	Karjat	Sangamner
12,740	28,095	31,608	10,972

4. How many rupees do they make?

(1) 20 notes of 1000 rupees, 5 notes of 100 rupees and 14 notes of 10 rupees.

(2) 15 notes of 1000 rupees, 12 notes of 100 rupees, 8 notes of 10 rupees and 5 coins of 1 rupee.

5. Write the biggest and the smallest five-digit numbers that can be made using the digits 4, 5, 0, 3, 7 only once.

6. The names of some places and their populations are given below. Use this information to answer the questions that follow.

Tala : 40,642	Gaganbawada : 35,777	Bodhwad : 91,256
Moregaon : 87,012	Bhamragad : 35,950	Velhe : 54,497
Ashti : 76,201	Washi : 92,173	Morwada : 85,890

(1) Which place has the greatest population ? What is its population ?

(2) Which place, Morwada or Moregaon, has the greater population?

(3) Which place has the smallest population? How much is it ?

❒ Introducing six-digit numbers

Teacher : How much, do you think, is the price of a four-wheeler?
Ajay : Maybe about six or seven lakh rupees.
Teacher : Do you know exactly how much one lakh is?
Ajay : It's a lot, isn't it ? More than even ten thousand, right?
Teacher : Yes, indeed! Let's find out just how much. What is 999 + 1 ?
Ajay : One thousand.
Teacher : You have learnt to write 99000, too. Now, if you add 1000 to that, you will get one hundred thousand. That's what we call one lakh.
Vijay : 9999+1 is 10,000 (ten thousand). We had made the ten thousands place for it. Can we make a place for one lakh too in the same way?
Teacher : Yes, of course. Carry out the addition 99,999 + 1 and see what you get.

$$\begin{array}{r} 99{,}999 \\ +\quad\ 1 \\ \hline 1{,}00{,}000 \end{array}$$

Here we keep carrying over till we have to make a place for the 'lakh' on the left of the ten thousands place. And we write the last carried over one in that place. The sum we get is read as 'one lakh'.

Vijay : Kishakaka bought a second-hand car for two and a half lakh rupees.
Ajay : How much is two and a half lakh?
Teacher : One lakh is 100 thousand. So, half a lakh is 50 thousand. Because, half of 100 is 50.

Vijay : That means two and a half lakh is 2 lakh 50 thousand.
Teacher : Now write this number in figures.
Vijay : 2,50,000.
Teacher : We have seen that a hundred thousand is 1 lakh. If we have 1000 notes of 100 rupees, how many rupees would they make?
Vijay : 1000 notes of 100 rupees would make 1 lakh rupees.

❒ Reading six-digit numbers

(1) 2,35,705 : two lakh thirty-five thousand seven hundred and five
(2) 8,00,363 : eight lakh three hundred and sixty-three
(3) 3,07,899 : three lakh seven thousand eight hundred and ninety-nine
(4) 9,00,049 : nine lakh forty-nine
(5) 5,30,735 : five lakh thirty thousand seven hundred and thirty five

❒ Writing six-digit numbers in figures

(1) Eight lakh, nine thousand and forty-three : There are 8 lakhs in this number. There are no ten thousands, so we write 0 in that place. As there are 9 thousands, we write 9 in the thousands place. We write 0 in the hundreds place as there are no hundreds. Forty-three is equal to 4 tens and 3 units, so in the tens and units places we write 4 and 3 respectively. In figures : 8,09,043.

When writing numbers in figures, write the digit in the highest place first and then, in each of the next smaller places, write the proper digit from 1 to 9. Write 0, if there is no digit in that place. For example, if the number eight lakh, nine thousand and forty-three is written as '89043', it is wrong. It should be written as 8,09,043. Here, we have to write zero in the ten thousands place.

(2) Four lakh, twenty thousand, five hundred : In this figure, there aren't any thousands in the thousands place, so we write 0 in it. Since there are five hundreds, we write 5 in the hundreds place. There are no tens and units, hence, we write 0 in those places.

In figures : 4,20,500.

Problem Set 3

1. Read the numbers and write them in words.

(1) 7,65,234 (2) 4,73,225 (3) 3,27,001 (4) 8,75,375 (5) 1,50,437
(6) 2,03,174 (7) 6,47,851 (8) 9,00,999 (9) 5,75,010 (10) 4,03,005

2. Read the numbers and write them in figures.

(1) One lakh thirty-five thousand eight hundred and fifty-five
(2) Seven lakh twenty-seven thousand
(3) Four lakh twenty-five thousand three hundred
(4) Nine lakh nine thousand ninety-nine
(5) Seven lakh forty-nine thousand three hundred and sixty-two
(6) Eight lakh

3. Make five six-digit numbers, each time using any of the digits 0 to 9 only once.

❒ Introducing seven-digit numbers

Teacher : Now we shall learn about seven-digit numbers. Suppose 10 farmers borrow ₹ 1,00,000 each from a Co-operative Bank. Then, how much is the total loan given by the bank to them?

Ajit : We must find out what is ten times 1,00,000. That is, we multiply 1,00,000 by 10. That means we write one zero after the number to be multiplied.

Ajay : 1,00,000 × 10 = 10,00,000

Teacher : This becomes a seven-digit number. We read it as 'Ten lakh'. We must make one more place for the 10 lakhs to the left of the lakhs place. In western countries, the term million is used. One million is equal to ten lakhs.

Thus, ten lakh = 10,00,000.

Just as we read ten thousands and thousands together, we read ten lakhs and lakhs together. So, we read 18,35,614 as 'eighteen lakh, thirty-five thousand, six hundred and fourteen'.

Study the seven-digit numbers given below in figures and in words.

(1) 31,25,745 : thirty-one lakh, twenty-five thousand, seven hundred and forty-five
(2) 91,00,006 : ninety-one lakh and six
(3) 63,00,988 : sixty-three lakh, nine hundred and eighty-eight
(4) 88,00,400 : eighty-eight lakh, four hundred
(5) seventy-two lakh and ninety-five : 72,00,095
(6) seventy lakh, two thousand, three hundred : 70,02,300

Problem Set 4

1. Read the numbers and write them in words.

(1) 25,79,899	(2) 30,70,506	(3) 45,71,504	(4) 21,09,900
(5) 43,07,854	(6) 50,00,000	(7) 60,00,010	(8) 70,00,100
(9) 80,01,000	(10) 90,10,000	(11) 91,00,000	(12) 99,99,999

2. Given below are the deposits made in the Women's Co-operative Credit Societies of some districts. Read those figures.

Pune : ₹ 94,29,408 Nashik : ₹ 61,07,187 Nagpur : ₹ 46,53,570

Ahmadnagar : ₹ 45,43,159 Aurangabad : ₹ 37,01,282 Yavatmal : ₹ 27,72,348

Sindhudurg : ₹ 58,49,651

❒ The expanded form of a number and the place value of digits

Teacher : Look at the place value of each of the digits in the number 27,65, 043.

Digit	2	7	6	5	0	4	3
Place	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Units
Place Value	20,00,000	7,00,000	60,000	5,000	0	40	3

Hamid : When we write the place values of the digits as an addition, we get the expanded form of the number. So, the expanded form of the number 27,65,043 is 20,00,000 + 7,00,000 + 60,000 + 5,000 + 0 + 40 +3.

Teacher : Now tell me the expanded form of 95,04,506.

Soni : 90,00,000 + 5,00,000 + 0 + 4,000 + 500 + 0 + 6.

Teacher : Good! It can also be written as 90,00,000 + 5,00,000 + 4,000 + 500 + 6.
Now write the number from the expanded form that I give you.
4,00,000 + 90,000 + 200

Asha : Here, we have 4 in the lakhs place, 9 in the ten thousands place and 2 in the hundreds place. There are no digits in the ten thousands place and in the tens and units places. Hence, we write 0 in those places. Therefore, the number is 4,90,200.

Teacher : Tell me the place value of the underlined digit in the number 59,30,478.

Soni : The underlined digit is 5. The digit is in the ten lakhs place. Hence, its place value is 50,00,000 or fifty lakhs.

Problem Set 5

1. Write the place value of the underlined digit.

(1) 7̲8, 95,210 (2) 1̲4, 95,210 (3) 3,5̲2,749 (4) 50,00̲0 (5) 89, 9̲9,988

2. Write the numbers in their expanded form.

(1) 56, 43, 215 (2) 70, 815 (3) 8, 35, 999 (4) 8, 88, 889 (5) 92, 32, 992

3. Write the place name and place value of each digit in the following numbers.

(1) 35, 705 (2) 7, 82, 899 (3) 82, 74, 508

4. The expanded form of the number is given. Write the number.

(1) 60, 000 + 4000 + 600 + 70 + 9 (2) 9, 00, 000 + 20,000 + 7000 + 800 + 5

(3) 20,00,000 + 3,00,000 + 60,000 + 9000 + 500 + 10 + 7

(4) 7,00,000 + 80,000 + 4000 + 500 (5) 80,00,000 + 50,000 + 1000 + 600 + 9

An interesting dice game

Prepare a table with the name of each player, as shown below.
In front of each name, there are boxes to make seven-digit numbers.

Names	TL	L	TTH	TH	H	T	U	The number formed
Ajay	1							
Megha				3				
Pushkarni	6							
Vijay		2						

Game 1 : The first player throws the dice and writes that number in any one of the boxes in front of his/her name. You can write only one number in each box and once it is written, you cannot change its place. The other players do the same till all the boxes are filled and each one gets a seven-digit number. The one with the largest number is the winner.

Game 2 : Use the same table, but you may write the number (you get on throwing the dice) in any box in front of anyone's name. The one with the largest number is the winner.

Game 3 : The rules are the same as for game 2, but the one with the smallest number is the winner.

❒ Bigger and smaller numbers

Hamid : How do we determine the smaller or bigger number when we are dealing with six- or seven-digit numbers ?

Teacher : You have learnt how to do that with five-digit numbers. The number with the bigger ten thousands digit is the bigger number. If they are the same, we look at the thousands digits to determine the smaller or bigger number.

Now, can you tell how to compare six- or seven-digit numbers ?

Hamid : Yes, I can. First, we'll look at the ten lakhs digits. If they are the same, we'll look at the digits in the lakhs place. If those are equal, we look at the ten thousands place to tell the smaller or bigger number and so on. Besides, we might be able to tell which of the numbers is bigger, just by looking at the number of digits in each number. Right ?

Teacher : Absolutely ! The number with more digits is the bigger number.

Problem Set 6

1. Write the proper symbol, '<' or '>' in the box.

(1)	5,705	<	15,705		
(2)	22,74,705		12,74,705		
(3)	35,33,302		35,32,302		
(4)	99,999		9,99,999		
(5)	4,80,009		4,90,008		
(6)	35,80,177		35,88,172		

2. Solve the problems given below.

(1) The Swayamsiddha Savings Group made 3,45,000 papads while the Swabhimani Group made 2,95,000. Which group made more papads ?

(2) Children of the Primary School in Ahmadnagar District collected 2,00,000 seeds while those in Pune District collected 3,25,000. Which children collected more seeds ?

(3) The number of people who took part in the Republic Day flag-hoisting ceremony was 2,01,306 in Pandharpur taluka and 1,97,208 in Malshiras taluka. In which taluka did a larger number of people participate ?

(4) At an exhibition, the Annapoorna Savings Group sold goods worth ₹ 5,12,345. The Nirman Group sold goods worth ₹ 4,12,900. This figure was ₹ 4,33,000 for the Srujan Group and ₹ 5,11,937 for the Savitribai Phule group.

Which group had the largest sales ? Which group had the smallest ?

Write the sales figures in ascending order.

❒ Introducing crores

99,99,999 is the biggest seven-digit number. On adding the number 1 to it, we get the smallest eight-digit number, 1,00,00,000. We read this number as 'one crore'. The new place created to write this number is called the 'crores' place.

From the following examples, you can learn to read eight-digit numbers.

Number	Reading
8,45,12,706	Eight crore forty-five lakh twelve thousand seven hundred and six
5,61,63,589	Five crore sixty-one lakh sixty-three thousand five hundred and eighty-nine
6,09,04,034	Six crore nine lakh four thousand and thirty-four

Something more

On the left of the crores place are the places for ten crores, *abja*, and *ten abja* in that order. The place value of each of these is ten times the value of the one on its right. According to the Census of the year 2011, the population of our country is 1,21,01,93,422. We read this as 'one *abja* twenty-one crore one lakh ninety-three thousand four hundred and twenty-two'.

Numbers	In words	Number of zeroes after 1
1	One	–
10	Ten	1
100	Hundred	2
1,000	One thousand	3
10,000	Ten thousand	4
1,00,000	Lakh	5
10,00,000	Ten lakh	6
1,00,00,000	Crore	7
10,00,00,000	Ten crore	8
1,00,00,00,000	*Abja*	9