

The background of the cover features an aerial photograph of a lush green agricultural landscape, likely a vineyard or similar crop field, with distinct rows and paths. Overlaid on this image are several hexagonal shapes of varying sizes, some of which are semi-transparent, creating a geometric pattern. The publisher's name 'Collins' is printed in white on a red rectangular background in the top left corner.

**Collins**

# Maths Now

**3**

Author  
**Prabha Sethy**

Published by Collins Learning

**A division of HarperCollinsPublishers India Private Limited**

**HarperCollinsPublishers**

A-75, Sector-57, Noida, Uttar Pradesh 201301, India

1 London Bridge Street, London, SE1 9GF, United Kingdom

2 Bloor Street East, Toronto, Ontario M4W 1A8, Canada

Lvl 13, 201 Elizabeth Street (PO Box A565, NSW, 1235), Sydney NSW 2000, Australia

195 Broadway, New York, NY 10007, USA

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First edition 2020

© **HarperCollinsPublishers India Private Limited, 2020**

Reprint: 10 9 8 7 6 5 4 3 2 1

ISBN: 9789353027421

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Typesetting design and layout by Interactive Book Services Pvt. Ltd.

Cover design by Interactive Book Services Pvt. Ltd.

Illustrations by Interactive Book Services Pvt. Ltd.

Printed and bound in India by

## Acknowledgements

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# Preface

**Maths Now** is a series of eight books for classes 1 to 8 based on the NCERT syllabus. The series follows an activity-oriented approach to make mathematics engaging for students through emphasizing connections between mathematics and day-to-day experiences. This series also features the balanced use of manipulatives, virtual manipulatives, abstract ideas and other interesting features to improve inherent mathematical skills of students by creating foundational interest in the subject.

This series has been created with a view to enhance the students' understanding of the key concepts of mathematical problem-solving and to increase practical learning by bringing in contexts from outside the classroom. The main aim of the series is to eradicate maths phobia among students, make mathematical concepts crystal clear so that students appreciate the beauty of the subject and the role it plays in one's life.

## Key Features

**Let's Get Started** Chapter starter in the form of a picture-based exercise

**Mental Maths** Objective-type questions to develop quick-thinking skills

**Go Easy!** Additional tips helping students to calculate quickly

**Do You Know?** Nuggets of information to add real-world context to abstract mathematical concepts

**Common Errors** Pointers highlighting common mistakes and misconceptions

**Solved Examples** Exercises with step-by-step solutions

**Word Problems** Textual questions based on real-life situations

**Exercises** In-text objective-type questions for quick review

**Crossword and Puzzles** Mathematical problems to stimulate the students' engagement

**Maths Lab Activity** Hands-on activity to connect concepts with their practical uses in real-life situations

**Concept Map** Graphic organizer to logically represent relationships between concepts under one topic

**Key Concepts** List to concisely give an overview of concepts in each topic

**Chapter Revision** Exercises at the end of each chapter for a comprehensive review

**Skill Up!**

- **Project** Practical activities to enhance real-world application of concepts
- **Life Skills** Questions to inculcate positive behaviour and add a layer of ethical thinking while solving practical mathematical questions
- **Mind Buzzer** Questions to provide challenging questions relating to real-life examples

**Teacher's Notes** Important tips related to concepts for the teacher

**Worksheets** Exercises that covers financial literacy, inferential and experiential learning

**Reasoning Worksheet** Questions to stimulate rational thinking using mathematical skills

**Eminent Mathematicians** Brief write-up on eminent mathematicians and their contributions

**Poster** Important points and formulae in the form of a pull-out page

**Review Corner** Variety of questions at the end of the book for additional practice

We would like to take this opportunity to thank all the teachers who reviewed the books and provided their feedback, which helped in improving the quality of the content.

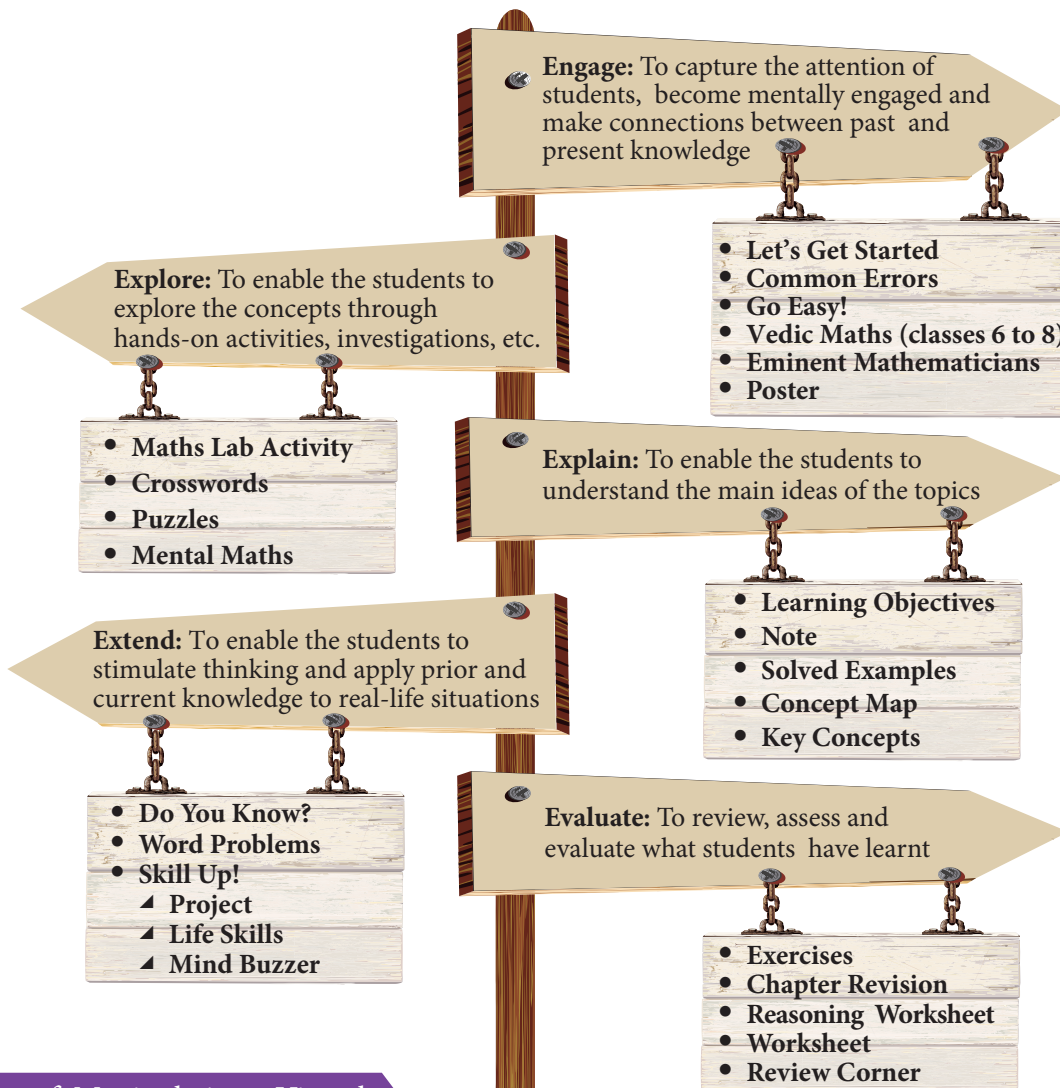
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Authors

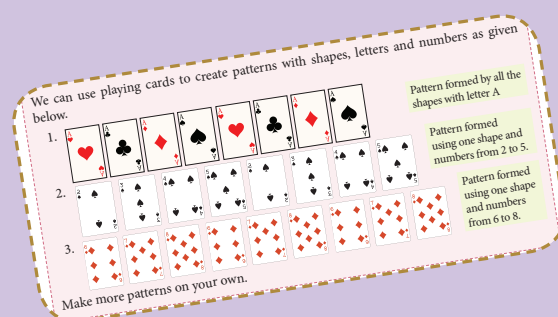
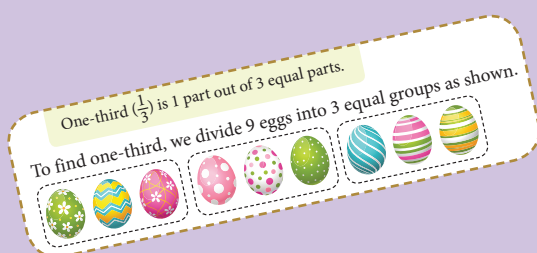


# Key Features

Different features interspersed within the book aim to provide active learning tools and techniques. These tools and techniques have been designed keeping in mind the 5E principle based on the constructivist approach to learning. These features can be used as learning strategies to enhance the understanding of key concepts of mathematics and increase practical learning and problem-solving by bringing in real-life contexts from outside the classroom.



Balanced use of Manipulatives, Virtual Manipulatives and Abstract Ideas!



# About the Features

## Let's Get Started

Picture-based chapter-opening exercise

## Common Errors

Pointers highlighting common mistakes and misconceptions

## Eminent Mathematicians

Brief write-up on eminent mathematicians and their contributions

## Engage

## Go Easy!

Shortcuts for easy and fast calculations

## VEDIC MATHS

Shortcut techniques to solve mathematical calculations

## Poster

Important points and formulae in the form of a pull-out page

## Maths Lab Activity

Hands-on activity to help in improving investigation, reinforcement and extension of concepts just learnt

## Mental Maths

Objective-type questions to develop quick-thinking skills

## Explore

## PUZZLE!

Questions in the form of a puzzle to stimulate engagement with the concepts

## CROSSWORD

Questions in the form of a crossword to stimulate engagement with the concepts

## Note

Pointers for better understanding of concepts

## SOLVED EXAMPLES

Example exercises with step-by-step solutions

## Explain

## Concept Map

Logical representation of relationships between concepts in a chapter

## Key Concepts

- Definition of important terms and formulae given as bulleted list

## Do you know?

Nuggets of information to add real-world context to abstract mathematical concepts

## WORD PROBLEMS

Textual questions based on real-life situations

## Extend

## SKILL UP!

## Project

Practical activities to enhance real-world application of concepts

## Life Skills

Thought-provoking questions to help develop sensible life skills such as better awareness, empathy and attitude towards self and others

## Mind Buzzer

Questions to arouse intellectual curiosity and encourage the students to think beyond the classroom

## EXERCISE

In-text objective-type questions for quick review, assessment and evaluation

## Chapter Revision

Chapter-end questions with varieties of objective and subjective-type questions

## Evaluate

## REASONING WORKSHEET

Questions to stimulate rational thinking using mathematical skills

## WORKSHEET

Picture-based, fun problem-solving questions to reinforce concepts

## REVIEW CORNER

Variety of questions at the end of the book for additional practice

## Maths Around Us

A two-page feature providing a variety of interesting information and activities that connect maths and Indian history, art, culture, real-life situations and financial literacy



## Maths Around Us

### SYMMETRY AROUND US

We can observe symmetry in many things around us. In nature, in art, in architecture, in science, etc. Symmetry means having one half that is exactly the same as the other half.

Any shape, figure or object is said to be symmetrical if it has one or more lines of symmetry. That is, each half or part can be folded to exactly match the other half.

To find out whether a given shape or object is symmetrical, we can draw an imaginary line through its center to see if the two halves are exactly the same.

We can also fold a figure along the imaginary line to observe if the two halves are exactly the same.

Symmetry is a very important concept in mathematics and is used in many fields of study.

Some examples of symmetry in nature and art are given below.

1. The leaves of a tree are symmetrical.

2. The wings of a butterfly are symmetrical.

3. The petals of a flower are symmetrical.

4. The body of a fish is symmetrical.

5. The face of a human is symmetrical.

6. The architecture of many buildings is symmetrical.

7. The design of many clothes is symmetrical.

8. The pattern of many carpets is symmetrical.

9. The shape of many fruits is symmetrical.

10. The body of many animals is symmetrical.

11. The design of many logos is symmetrical.

12. The shape of many letters is symmetrical.

13. The pattern of many wallpapers is symmetrical.

14. The design of many flags is symmetrical.

15. The shape of many coins is symmetrical.

16. The pattern of many fabrics is symmetrical.

17. The design of many toys is symmetrical.

18. The shape of many tools is symmetrical.

19. The pattern of many books is symmetrical.

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22. The pattern of many musical instruments is symmetrical.

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# Maths Around Us

## SYMMETRY AROUND US

We can observe symmetry all around us—in nature, in patterns, art and architecture, at home, etc. Symmetry means having one half that is exactly the same as or is a mirror image of the other half.

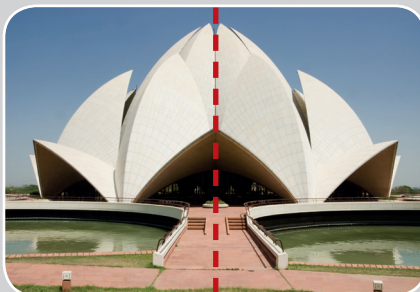
Any shape, figure or object is said to be symmetrical if it has mirror halves or equal parts. That is, each half or part must be of the same shape and size as the other.

To find out whether a given shape or object is symmetrical, we can draw an imaginary line through its centre to see if the line divides the shape or object into identical halves. In addition, we can also fold a figure along this imaginary line to obtain the symmetrical halves.

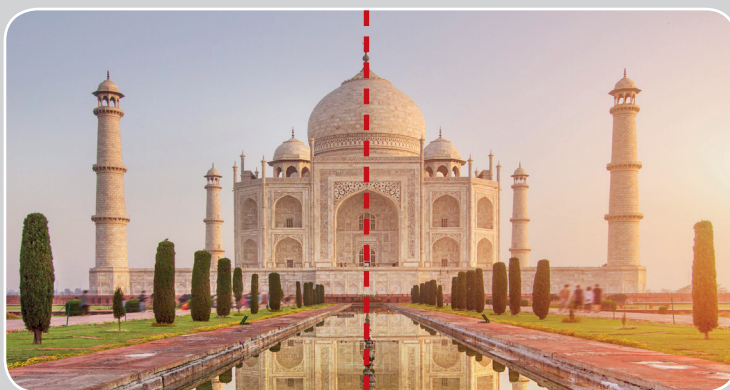
Most buildings and historical monuments in the world are constructed using symmetry. It helps in making these structures stronger and adds to their beauty as well.



India Gate (New Delhi)



Lotus Temple (New Delhi)



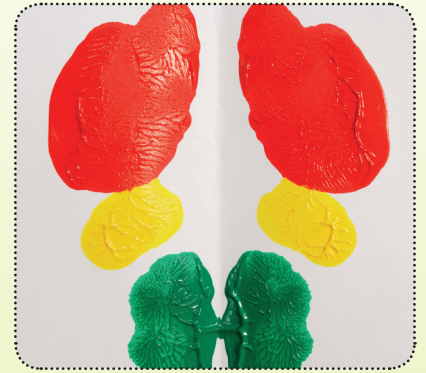
Taj Mahal (Agra, Uttar Pradesh)



Qutab Minar  
(New Delhi)

To understand symmetry better, let us do a hands-on activity with art.

1. Take a piece of paper (square or rectangular) and fold it perfectly in half (ensure all the edges line up).
2. Open the paper and place two or three teaspoons of different coloured liquid paint on the paper (preferably near the fold), in a pattern of your choice.
3. Then fold the paper and slowly rub on top of the paper carefully but thoroughly.
4. Now open the paper to see the symmetrical design formed. The line of fold in the centre represents the imaginary line.
5. For more fun, you can decorate the design or pattern obtained with glitter glue after they dry up.



Look out for symmetrical objects or things around you. Collect those things (like leaves or flowers can be dried) or their images and paste them here in the space provided. Also, draw the imaginary line on each to show their symmetrical halves.





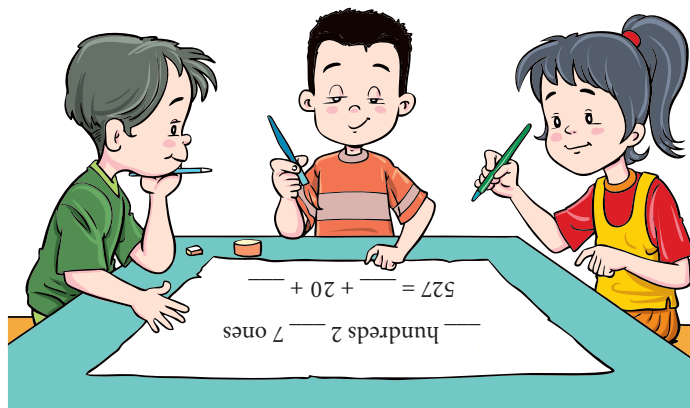
# Numbers up to 10,000

## Learning Objectives

- To read, write and expand 4-digit numbers
- To understand place value of 4-digit numbers
- To compare numbers and form the greatest and the smallest 4-digit numbers
- To learn about even and odd numbers
- To round off numbers to the nearest tens, hundreds and thousands

## Let's Get Started

Ronav, Saniya and Madhav are solving a place value game on 3-digit numbers as shown alongside. Help them to finish the game.



214

2 hundreds 1 ten  
\_\_\_\_\_ ones

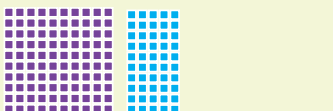
$200 + \underline{\hspace{2cm}} + 4$



\_\_\_\_\_

1 hundred \_\_\_\_\_ tens  
3 ones

$100 + 50 + \underline{\hspace{2cm}}$



127

\_\_\_\_\_ hundred  
2 \_\_\_\_\_ 7 ones

$\underline{\hspace{2cm}} + 20 + \underline{\hspace{2cm}}$

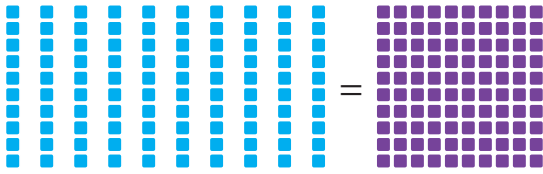


We know that all numbers are formed by combining the digits from 0 to 9.



10 ones = 1 ten

A group of 10 ones is called a **ten**.



A collection of 10 tens is called a **hundred**.

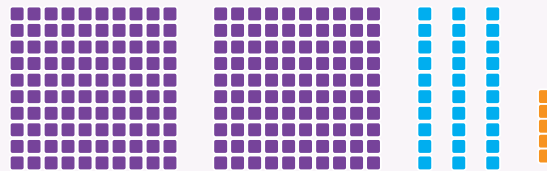
The smallest 3-digit number is **100**.

The greatest 3-digit number is **999**.

Let us quickly revise numbers up to 999 by solving the following exercise.



## EXERCISE 1A



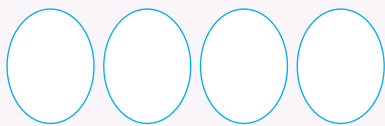
1. Look at the above representation and answer the following.

- Number name: \_\_\_\_\_
- Expanded form: \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_
- Place values of the digits: \_\_\_\_\_ hundreds \_\_\_\_\_ tens \_\_\_\_\_ ones
- What is the number just before this number? \_\_\_\_\_
- What is the number just after this number? \_\_\_\_\_

2. Arrange the following numbers as per the order mentioned.

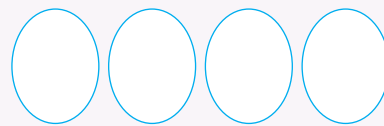
a. increasing order

659, 284, 971, 364



b. decreasing order

129, 843, 705, 364



3. Answer the following.

Class 3 of a primary school has a total of (100 + 20 + 5) students.

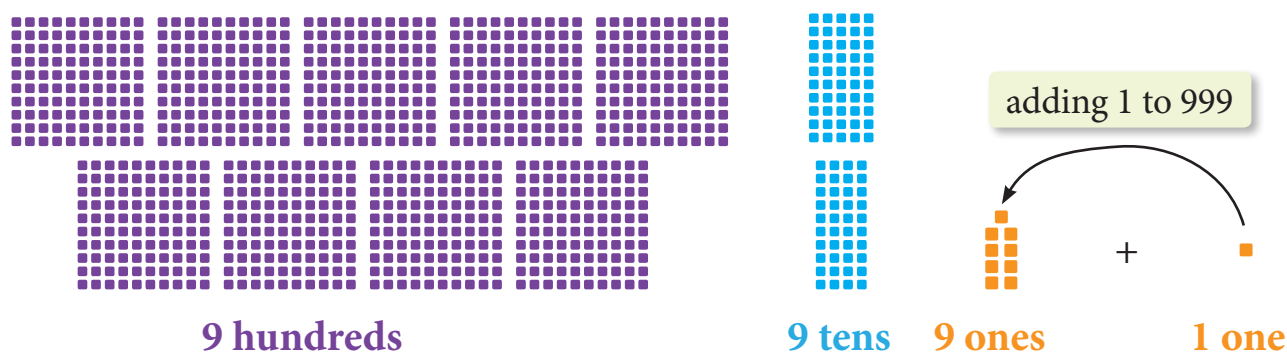
- How many students are there in all? \_\_\_\_\_
- Write the number in words. \_\_\_\_\_



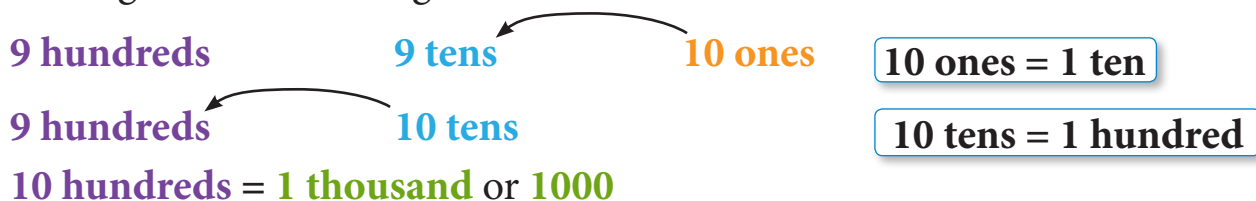


## INTRODUCTION TO 4-DIGIT NUMBERS

The greatest 3-digit number is 999. What comes after 999? Let us find out.



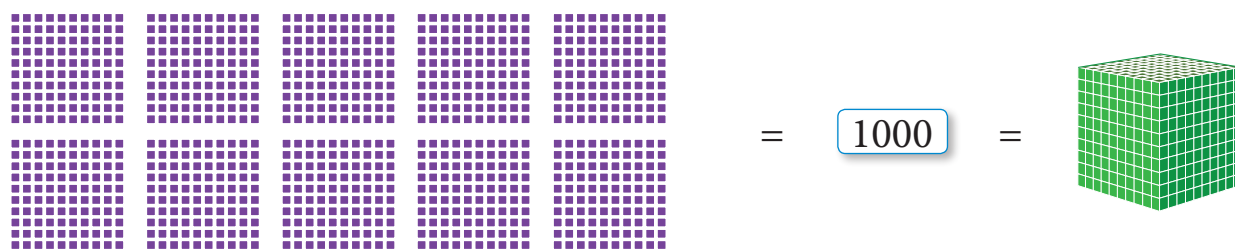
Adding 1 one to 9 ones gives 10 ones. So, we have:



So, the number after 999 is 1000. 1000 is the smallest 4-digit number. It is read as one thousand. The number 1000 introduces the **thousands period** to us.

Just after 1000, the counting continues as 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010 and so on. That is, the numbers increase by 1 each time.

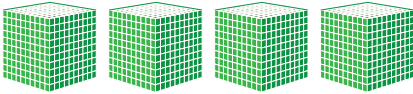
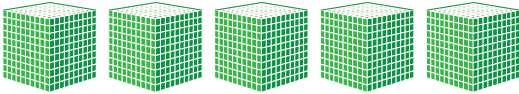
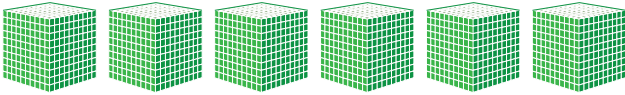
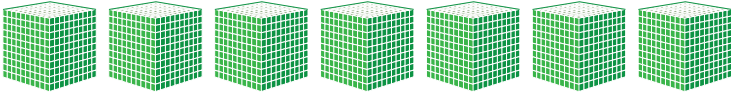
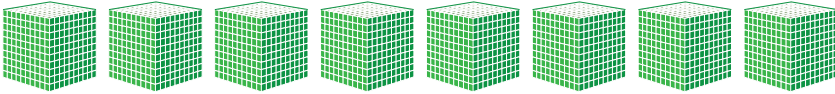
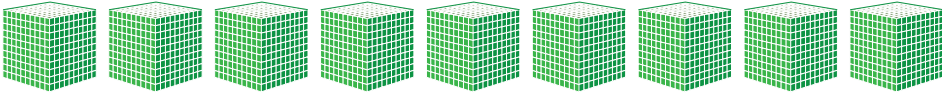
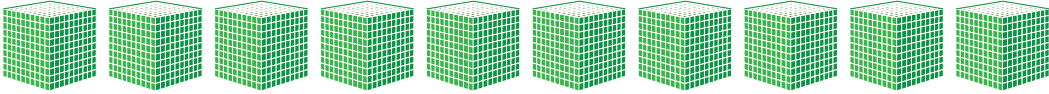
We know that 100 can be represented using a block of 100 small cubes. So, 10 such blocks placed together represent 1 thousand.



Look at the following table and learn counting by thousands. Also, complete the last column of the table.

	1000	One thousand
	2000	Two thousand
	3000	Three thousand



	4000	Four thousand
	5000	Five thousand
	6000	
	7000	
	8000	
	9000	
	10,000	Ten thousand

## Place Value and Face Value

We represent 4-digit numbers using the following place values.

Thousands	Hundreds	Tens	Ones
↓	↓	↓	↓
Th	H	T	O

The **place value** of a digit in a number indicates its position or place in the number. We can write it in words as well as figures.

The **face value** of a digit in a number is the digit itself.

Consider the number 9638.

Place value of:

9 = 9 thousands or 9000

6 = 6 hundreds or 600

3 = 3 tens or 30

8 = 8 ones or 8

Face value of:

9 = 9

6 = 6

3 = 3

8 = 8

### Go Easy!

An easier way to write the place value is by writing the digit followed by as many zeros as the number of digits on the right side of the digit concerned.

**Example:** In 7463, the place value of 7 is 7000 (as there are three digits after the digit 7 in the given number).



**Example:** Write the place value and face value of each digit in the number 5839.

	Th	H	T	O
	5	8	3	9
	↓	↓	↓	↓
Place value	5000	800	30	9
Face value	5	8	3	9



### Mental Maths

Find the place value and the face value of the underlined digits.

a. 7 5 8 4

b. 2 7 3 0

## UNDERSTANDING 4-DIGIT NUMBERS

### Read and Write 4-Digit Numbers

To read and write the number names for 4-digit numbers:

- first read the number in thousands place,
- then read the number in hundreds place and
- finally, read the numbers in tens and ones places together.

Consider the following 4-digit numbers.

Th	H	T	O
2	9	7	6
Two thousand	nine hundred	seventy-six	

2976: Two thousand nine hundred seventy-six

Th	H	T	O
5	0	0	9
Five thousand			nine

5009: Five thousand nine

### Writing Numerals for Number Names

Consider the number name four thousand, seven hundred, sixty-one.

The numeral for it is

Th	H	T	O
4	7	6	1

The numeral for the number name nine thousand eight hundred fifty is

Th	H	T	O
9	8	5	0



### Note

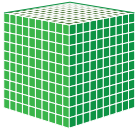
In a 4-digit number, if there are no digits in the hundreds and tens places, we do not mention them in the number name.



## More About 4-Digit Numbers

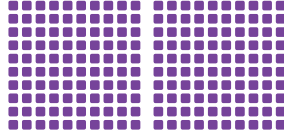
Look at the following representation of a 4-digit number. Count the number of thousands, hundreds, tens and ones, respectively.

Thousands



1 thousand

Hundreds



2 hundreds

Tens



7 tens

Ones



9 ones

So, the number is 1279.

This is called the **standard form** of a number.

**Number name:** One thousand two hundred seventy-nine

This way of representing a number is also called its **word form**.

We can write the number in terms of its place value as follows:

$$1279 = \underline{1} \text{ thousand} \quad \underline{2} \text{ hundreds} \quad \underline{7} \text{ tens} \quad \underline{9} \text{ ones}$$

or

$$1000 + 200 + 70 + 9$$

This way of representing a number is called its **expanded form**.

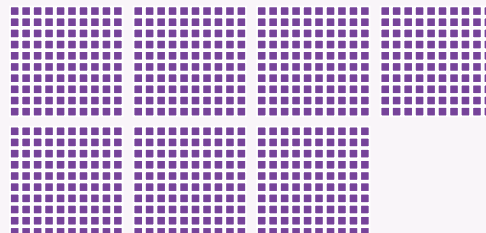
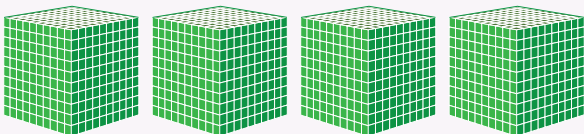


### EXERCISE 1B

1. Write the place values and face values of the underlined digits.

- 5629: Place value \_\_\_\_\_, Face value \_\_\_\_\_
- 7341: Place value \_\_\_\_\_, Face value \_\_\_\_\_
- 8190: Place value \_\_\_\_\_, Face value \_\_\_\_\_

2. Write the answers for the number represented by the following.



Number = \_\_\_\_\_

Number name = \_\_\_\_\_

3. Write the number names for the following.

- 5689 \_\_\_\_\_
- 2107 \_\_\_\_\_
- 6000 \_\_\_\_\_



**4. Write the numerals for the following.**

- a. Six thousand two hundred eighty-one \_\_\_\_\_  
b. Nine thousand three hundred sixty-seven \_\_\_\_\_  
c. Eight thousand one hundred fifty-four \_\_\_\_\_

**5. Write the expanded form of the following numbers.**

- a. 4 0 2 9 = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_  
b. 8 5 7 2 = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_  
c. 1 3 6 4 = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_

**6. Write the numerals.**

- a.  $6000 + 400 + 20 + 9 =$  \_\_\_\_\_      b.  $5000 + 100 + 30 + 8 =$  \_\_\_\_\_  
c.  $3000 + 200 + 40 + 0 =$  \_\_\_\_\_      d.  $8000 + 600 + 50 + 3 =$  \_\_\_\_\_

**7. Fill in the blanks.**

- a. Seven thousand six hundred ninety-five people lived in a village.  
Write that in numerals: \_\_\_\_\_  
b. Out of them, the number of men were equal to the place value of 7.  
Number of men = \_\_\_\_\_.  
c. The number of children were equal to the sum of the place values of 9 and 5.  
Number of children = \_\_\_\_\_.

**NUMBER AFTER, BEFORE OR IN BETWEEN**

To find the number that comes just after any given 4-digit number, we add 1 to the digit in the ones place of the given number.

**Example:** Write the number that comes just after each of the following.

- a.  $2964 \rightarrow \underline{2965}$       b.  $3718 \rightarrow \underline{3719}$

The number that comes just **after** a given number is called the **successor** of that number.

To find the number that comes just before any given 4-digit number, we subtract 1 from the digit in the ones place of the given number.

**Example:** Write the number that comes just before each of the following.

- a.  $\underline{5293} \leftarrow 5294$       b.  $\underline{7385} \leftarrow 7386$



**Mental Maths**

What comes just after:

- a. 7218 \_\_\_\_\_  
b. 3429 \_\_\_\_\_



**Mental Maths**

What comes just before:

- a. \_\_\_\_\_ 7246  
b. \_\_\_\_\_ 3950



The number that comes just **before** a given number is called the **predecessor** of that number.

The number **in between** is the number between two numbers. It will be the successor of the first number and the predecessor of the second number.

**Example:** Find the number in between the given numbers.

a. 2596, 2597, 2598

b. 7103, 7104, 7105

## COUNTING NUMBERS IN 10s, 100s AND 1000s .....

### Counting Numbers in 10s

When we count numbers in 10s, we add 10 each time.

**Example:** Write the next four numbers by counting in 10s.

2730  $\xrightarrow{+10}$  2740  $\xrightarrow{+10}$  2750  $\xrightarrow{+10}$  2760  $\xrightarrow{+10}$  2770

### Counting Numbers in 100s

When we count numbers in 100s, we add 100 each time.

**Example:** Write the next four numbers by counting in 100s.

3280  $\xrightarrow{+100}$  3380  $\xrightarrow{+100}$  3480  $\xrightarrow{+100}$  3580  $\xrightarrow{+100}$  3680

### Counting Numbers in 1000s

When we count numbers in 1000s, we add 1000 each time.

**Example:** Write the next four numbers by counting in 1000s.

1903  $\xrightarrow{+1000}$  2903  $\xrightarrow{+1000}$  3903  $\xrightarrow{+1000}$  4903  $\xrightarrow{+1000}$  5903



## EXERCISE 1C

1. Write the successor of the following numbers.

a. 3815 \_\_\_\_\_

b. 2067 \_\_\_\_\_

c. 9149 \_\_\_\_\_

2. Write the predecessor of the given numbers.

a. \_\_\_\_\_ 5893

b. \_\_\_\_\_ 2078

c. \_\_\_\_\_ 1430

3. Write the number in between the given numbers.

a. 1672 \_\_\_\_\_ 1674

b. 3048 \_\_\_\_\_ 3050

c. 7165 \_\_\_\_\_ 7167



#### 4. Fill in the blanks by counting in 10s.

a. 7430, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b. 2581, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

#### 5. Fill in the blanks by counting in 100s.

a. 2100, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b. 9236, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

#### 6. Fill in the blanks by counting in 1000s.

a. 3000, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b. 5929, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## COMPARISON OF NUMBERS

### Comparing Numbers With Different Number of Digits

A mango orchard had 786 trees and an apple orchard had 2600 trees. Which orchard had more trees?

Here, compare 786 and 2600.

H	T	O
7	8	6

This number has 3 digits.

786

Th	H	T	O
2	6	0	0

This number has 4 digits.

2600

<

So, the apple orchard has more trees.

### Comparing Numbers With the Same Number of Digits

Let us learn to compare numbers with the same number of digits using the following examples.

## SOLVED EXAMPLES

Compare the given numbers and write  $>$ ,  $<$  or  $=$ .

**Example 1:**

Th	H	T	O
7	2	9	0



Th	H	T	O
3	8	7	5



**Solution:** We first check the digits in the thousands place of both the numbers.

Thousands place:  $7 > 3$

So,  $7290 > 3875$



### Note

Symbols for:

greater than -  $>$

less than -  $<$

equal to -  $=$

Greater  
number  
is on this  
side

$>$

Smaller  
number  
is on this  
side



**Example 2:**

Th	H	T	O
4	6	2	8

Th	H	T	O
4	9	7	8

**Solution:** First check the digits in the thousands place. As both the numbers have the same digit (4), check the digits in the hundreds place.

Hundreds place:  $6 < 9$

So,  $4628 < 4978$

**Example 3:**

Th	H	T	O
5	2	3	0

Th	H	T	O
5	2	3	7

**Solution:** The digits in the thousands, hundreds and tens places of both the numbers are the same. So, check the digits in the ones place.

Ones place:  $0 < 7$

So,  $5230 < 5237$

**Example 4:**

Th	H	T	O
4	1	0	9

Th	H	T	O
4	1	0	9

**Solution:** The digits in all the four places of both the numbers are the same. So, both the numbers are equal.

So,  $4109 = 4109$

**Greatest and Smallest Numbers**

Vibha has 3617 books in her library, Amit has 2458 books, Sachin has 1800 books and Shalini has 3099 books.

Who has the maximum number of books? Who has the least number of books?

**Finding the Greatest Number**

To find the maximum number of books, we need to find the greatest number out of the four given numbers.

Th	H	T	O
3	6	1	7

Th	H	T	O
2	4	5	8

Th	H	T	O
1	8	0	0

Th	H	T	O
3	0	9	9

First check the digits in the thousands place. The greatest digit determines the greatest number.

The numbers 3617 and 3099 have 3 in the thousands place. The other two numbers (2458 and 1800) have smaller thousands digits (2 and 1, respectively).





Th	H	T	O
3	6	1	7

Th	H	T	O
3	0	9	9

Check the hundreds digits in the numbers 3617 and 3099.

Since  $6 > 0$ ,  $3617 > 3099$ .

So, Vibha has the maximum number of books.

### Finding the Smallest Number

To find the least number of books, we need to find the smallest number out of the four given numbers.

Th	H	T	O
3	6	1	7

Th	H	T	O
2	4	5	8

Th	H	T	O
1	8	0	0

Th	H	T	O
3	0	9	9

First check the digits in the thousands place. The smallest digit determines the smallest number.

As 1 is the smallest digit, 1800 is the smallest number.

So, Sachin has the least number of books.

### SOLVED EXAMPLES

**Example 1:** Find the greatest number among the following groups of numbers.

a. 5624      5639      5670      5681

b. 7358      7352      7356      7354

**Solution a:** In this case, the digits in the thousands and hundreds places are the same in all the numbers. So, check the digits in the tens place.

Th	H	T	O
5	6	2	4

Th	H	T	O
5	6	3	9

Th	H	T	O
5	6	7	0

Th	H	T	O
5	6	8	1

The greatest digit in the tens place determines the greatest number.

So, 5681 is the greatest number.

**Solution b:** Here, the digits in the thousands, hundreds and tens places are the same. So, check the digits in the ones place.

Th	H	T	O
7	3	5	8

Th	H	T	O
7	3	5	2

Th	H	T	O
7	3	5	6

Th	H	T	O
7	3	5	4

The greatest digit in the ones place determines the greatest number.

So, 7358 is the greatest number.



**Example 2:** Find the smallest number out of the given numbers.

6732

6815

6279

6485

**Solution:** In all the numbers, the digits in the thousands place are the same. So, we check the digits in the hundreds place.

Th	H	T	O
6	7	3	2
6	8	1	5
6	2	7	9
6	4	8	5

So, the smallest number is 6279.



### EXERCISE 1D

1. Compare the numbers. Write  $>$ ,  $<$  or  $=$ .

a. 46  351    b. 2436  999    c. 6384  6329    d. 8901  8901

2. Circle the greatest number out of the given numbers.

a. 2854, 3179, 7264, 6543                      b. 3192, 8407, 1889, 7108

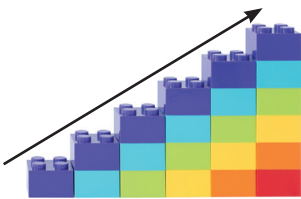
3. Circle the smallest number out of the given numbers.

a. 5329, 1001, 9214, 6372                      b. 7128, 8593, 2105, 7469

## Order of Numbers

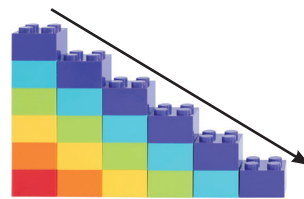
### Ascending Order

Ascending order means arranging from the smallest to the greatest.



### Descending Order

Descending order means arranging from the greatest to the smallest.



To write numbers in **ascending order**, compare them and then write them from the smallest to the greatest.

**Example:** Arrange the following numbers in ascending order.

5123

4709

8352

4627

First check the number of digits in each number. All the numbers have 4 digits. Next check the digits in the thousands place. The smallest digit determines the smallest number.

Here 4627 and 4709 have the smallest digit in the thousands place, which is 4.



As 4709 and 4627 have the same digit (4) in the thousands place, we check the digits in the hundreds place.

Compare 4 7 0 9 and 4 6 2 7.

In the hundreds place,  $6 < 7$ . So, 4627 becomes the smallest number and 4709 is the second greater number.

Now compare the other two numbers, 5 123 and 8 352. Here,  $5 < 8$ .

So, the third greater number is 5123 and the greatest number is 8352.

③
②
④
①  
 5123,      4709,      8352,      4627

So, by arranging the numbers in ascending order, we get:

4627 < 4709 < 5123 < 8352

To write numbers in **descending order**, compare them and then write them from the greatest to the smallest.

**Example:** Arrange the following numbers in descending order.

1340,      8457,      6219,      9738

First check the digits in the thousands place of all the numbers. 9738 has the greatest digit in the thousands place. So, it is the greatest number.

Looking at the thousands digits and arranging the numbers in descending order, we get:

①
②
③
④  
 9738 > 8457 > 6219 > 1340

## FORM GREATEST AND SMALLEST NUMBERS OUT OF GIVEN DIGITS

Samar has 4 cards. Each card has a digit on it. Help Samar make the greatest number out of these digits.

3      5      1      7

- a. To form the **greatest number** out of these digits, write the greatest digit first, then the next greater digit and so on.

The greatest 4-digit number using the given digits is 7531.

7      5      3      1



### Note

Remember to write on top of each number its position to indicate their order, that is, increasing or decreasing.



### Mental Maths

1. Number these bottles in an ascending order of height.



2. Number these pine trees in descending order of height.



- b. To form the **smallest number** out of these digits, write the smallest digit first, then the next smaller digit and so on.

1

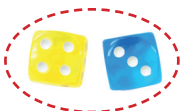
3

5

7

## EVEN AND ODD NUMBERS

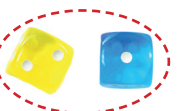
Even numbers are numbers that can be paired completely.



4 is an even number.

These numbers end with or have 0, 2, 4, 6 or 8 in their ones place. **Examples:** 430, 6574, 2068

Odd numbers are numbers that cannot be paired completely.



5 is an odd number.

These numbers end with or have 1, 3, 5, 7 or 9 in their ones place.

**Examples:** 431, 6575, 2067

### Do you know?

While counting numbers in sequence, even and odd numbers appear alternately.

Odd	Odd	Odd	Odd
1	2	3	4
	Even		Even
		5	6
			Even
			7 ...



### Common Errors

Write the greatest and the smallest numbers with the following digits.

5, 8, 0, 3

Greatest number 8530

Smallest number: 0358 ✗

3058 ✓

A number never begins with a zero. Zero has no value at the beginning of a number.

We start with the next smallest digit and then write 0.



### Mental Maths

- Smallest and largest numbers formed by 2, 8, 0, 6 are \_\_\_\_\_ and \_\_\_\_\_.
- Is 342 an odd number? \_\_\_\_\_
- Is 4408 an even number? \_\_\_\_\_



### EXERCISE 1E

1. Write each group of numbers in ascending order.

a. 9621	1580	7643	4891
b. 6432	2814	1782	5962
c. 2431	5143	3849	2058

2. Write each group of numbers in descending order.

a. 7068	8726	7592	8251
b. 5728	4205	4816	6214
c. 9100	7640	7381	9432



### 3. Write the greatest and the smallest numbers formed by the given digits.

		Greatest	Smallest
a.	2, 8, 5, 4	_____	_____
b.	3, 9, 1, 0	_____	_____
c.	5, 3, 8, 2	_____	_____

### 4. Write the last digit to make these numbers even.

	Th	H	T	O
a.	5	7	3	
b.	6	1	4	

### 5. Write the last digit to make these numbers odd.

	Th	H	T	O
a.	5	1	3	
b.	7	0	8	

## ROUNDING OFF NUMBERS

Rounding off a number is a method used when we do not know the exact number but come close to the actual number. This method helps us to do our calculations faster and easily.

For instance, if there are 18 children in a park, we can say that there are about 20 children in the park.

Let us learn how to round off a number to its nearest 10 or 100.



### Rounding off Numbers to the Nearest 10

To round off a number to the nearest 10, we look at the digit at the ones place.

- If the digit at the ones place is less than 5 (i.e., 0, 1, 2, 3 or 4), we retain the tens digit as it is and change the ones digit to 0.
- If the digit at the ones place is equal to or greater than 5 (i.e., 5, 6, 7, 8 or 9), we add 1 to the tens digit and change the ones digit to 0.

This can also be explained on a number line.

### Rules of rounding off to the nearest 10

Rounded down	Numbers from		Rounded up
<b>0</b> ←	0 to 4	5 to 9 →	<b>10</b>
<b>10</b> ←	10 to 14	15 to 19 →	<b>20</b>
<b>20</b> ←	20 to 24	25 to 29 →	<b>30</b>
<b>30</b> ←	30 to 34	35 to 39 →	<b>40</b>
<b>40</b> ←	40 to 44	45 to 49 →	<b>50</b>
<b>50</b> ←	50 to 54	55 to 59 →	<b>60</b>
<b>60</b> ←	60 to 64	65 to 69 →	<b>70</b>
<b>70</b> ←	70 to 74	75 to 79 →	<b>80</b>
<b>80</b> ←	80 to 84	85 to 89 →	<b>90</b>
<b>90</b> ←	90 to 94	95 to 99 →	<b>100</b>

