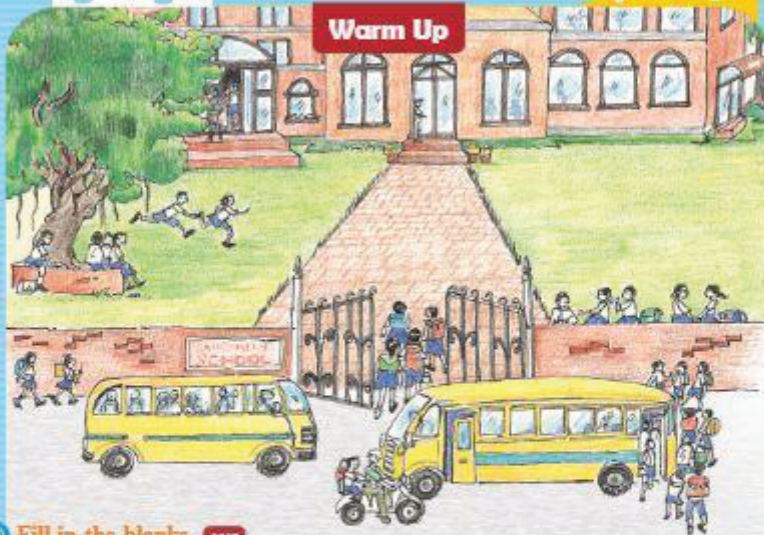


1

LARGE NUMBERS



Fill in the blanks. **ANS**

1. There are 575 girls and 410 boys in Class 3. Who are less in number? _____
2. There are 59 primary school teachers and 42 middle school teachers. Who are more in number? _____
3. There are 230 rose plants, 114 sunflower plants and 241 marigold plants in the school garden. Arrange these numbers in increasing order.

4. There are 126 rooms in the school. What is the place value of 2 in the number? _____



4-DIGIT NUMBERS



Which is the greatest 3-digit number?

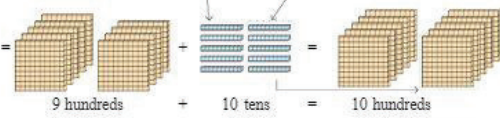
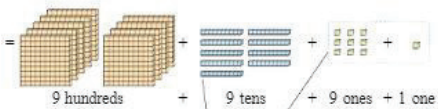
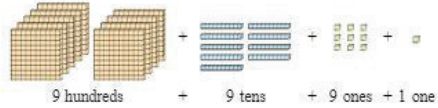


999



If you add 1 to 999, it will become the smallest 4-digit number.

$$999 + 1 =$$



$$900 + 100 = 1000$$



10 hundreds make a 1000.

1000 is the smallest 4-digit number.

Th	H	T	O
1	0	0	0

1 thousand
1000

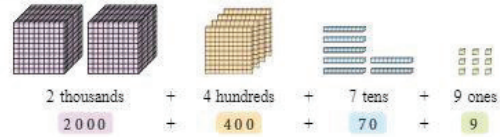
Counting by thousands

The coloured digit shows how many thousands.

	1000	One thousand
	2000	Two thousand
	3000	Three thousand
	4000	Four thousand
	5000	Five thousand
	6000	Six thousand
	7000	Seven thousand
	8000	Eight thousand
	9000	Nine thousand
	10000	Ten thousand

Forming 4-digit numbers

EXAMPLE 1 Which number is formed by the following blocks?



This can be written as

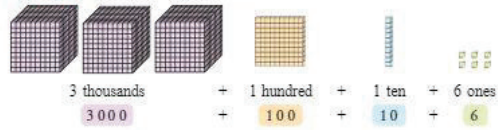
Th	H	T	O
2	4	7	9

.

ANS. 2479



EXAMPLE 2 Which number is formed by the following blocks?



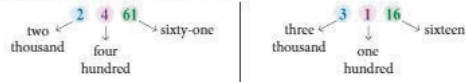
This can be written as

Th	H	T	O
3	1	1	6

. **ANS.** 3116

Reading 4-digit numbers

EXAMPLE 3 Read 2461 and 3116 aloud.



ANS. 2461 is read as two thousand four hundred sixty-one.

ANS. 3116 is read as three thousand one hundred sixteen.

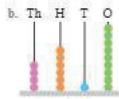
4-digit numbers on the abacus

An abacus is a tool used for counting.

EXAMPLE 4 Which number is formed on the abacus?



This abacus shows the number 5230.
5230 is read as five thousand two hundred thirty.

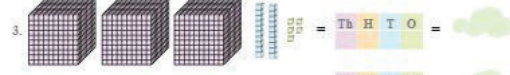


This abacus shows the number 4619.
4619 is read as four thousand six hundred nineteen.



Exercise 1.1

A. Type the numbers. **ANS.**



4. 3 thousands + 0 hundreds + 4 tens + 6 ones =

Th	H	T	O

5. 7 thousands + 2 hundreds + 0 tens + 2 ones =

Th	H	T	O

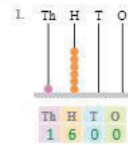
6. 4000 + 100 + 20 + 5 =

Th	H	T	O

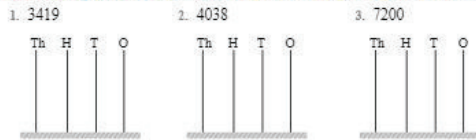
7. 5000 + 800 + 80 + 1 =

Th	H	T	O

B. Count the beads and type the numbers. **ANS.**



C. Click to place correct number of beads on the abacus to show the numbers. **ANS**



D. Type the numbers. **ANS**

- eight thousand four hundred fifty-six 8456
- one thousand fifteen _____
- three thousand six _____
- one thousand nine hundred nine _____

E. Type the number names. **ANS**

- 2156 _____
- 5000 _____
- 5300 _____
- 6040 _____
- 9999 _____

PLACE VALUE AND FACE VALUE

The place value of a digit in a number depends on the position it occupies.

PLACE → Thousands (Th) Hundreds (H) Tens (T) Ones (O)



The face value of a digit is the digit itself. It does not depend upon the position of the digit in the number.

Exercise 1.2

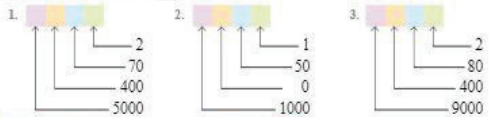
A. Type the place of the coloured digits. **ANS**

- Mahatma Gandhi was born in the year 1869. Tens
- He went to South Africa in 1893. _____
- Gandhi ji came back to India in 1915. _____
- He led the Quit India Movement in 1942. _____
- He helped India get freedom in 1947. _____

B. Type the place value of each digit. **ANS**



C. Type the numbers. **ANS**



D. Type the numbers in expanded form. **ANS**

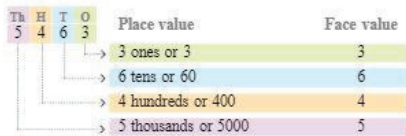
- 4718 = _____
- 5002 = _____
- 6500 = _____
- 7098 = _____

E. Type the standard form of the numbers. **ANS**

- $3000 + 60 =$ _____
- $4000 + 500 + 10 + 3 =$ _____
- $700 + 70 + 8 =$ _____
- $9000 + 100 + 90 + 1 =$ _____



EXAMPLE 5 Write the place value and face value of each digit in 5463.



I Can Do It!

A. Form a number with **ANS**

- 4 in the thousands place, 3 in the hundreds place, 7 in the tens place, 1 in the ones place.
- 2 in the hundreds place, 0 in the ones place, 9 in the tens place, 6 in the thousands place.



B. Type the face value of the coloured digits. **ANS**

- 1309 2. 7185 3. 4564
- 2711 5. 8615 6. 8541

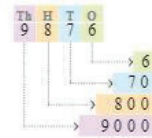
EXPANDED FORM

When you write a number as the sum of the place value of its digits, the number is said to be in its expanded form.

EXAMPLE 6 Write the expanded form of 9876.

Standard form = 9876
Expanded form = 9000 + 800 + 70 + 6

ANS. 9876 = 9000 + 800 + 70 + 6



COMPARING NUMBERS

When two numbers have the same value, you use the equals sign (=) to express the relationship between them.

For example, 4215 = 4215.

When two numbers do not have the same value, you use the greater than sign (>) or the less than sign (<). For example, 4132 is greater than 2341 or 4132 > 2341. Similarly, 2341 is less than 4132 or 2341 < 4132.



Quick TIP

big small small big
4132 > 2341 2341 < 4132
is greater than **is less than**
The 'small' end of the signs > and < always points to the **smaller number**.

When the number of digits is different

EXAMPLE 7 Compare 948 and 1039.

The number with greater number of digits is greater.

ANS. 1039 > 948



When the number of digits is the same

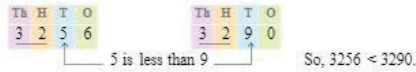
Step 1 Compare the digits in the thousands place.



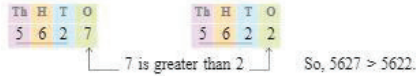
Step 2 If the digit in the thousands place is the same, compare the digits in the hundreds place.



Step 3 If the digits in the thousands and hundreds place are the same, compare the digits in the tens place.



Step 4 If all the other digits are the same, compare the digits in the ones place.



Writing numbers in an order

When numbers are written from the smallest to the greatest, they are in ascending order.

When numbers are written from the greatest to the smallest, they are in descending order.

EXAMPLE 8 The top three individual scores of an IPL series are given below. Arrange these scores in ascending and descending order.

Shikhar Dhawan	479	David Warner	641	Steven Smith	472
----------------	-----	--------------	-----	--------------	-----

ANS. Ascending order: $472 < 479 < 641$
Descending order: $641 > 479 > 472$

Exercise 1.3

A. Compare each pair of numbers. Put $>$, $<$ or $=$ in the .

- 113 133
- 1573 1578
- 2618 2719
- 7830 7830
- 9003 9008
- 863 853
- 1120 2120
- 5401 6411
- 8592 9582
- 9992 9792



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B. Click on the smallest number in each group.

- 3205 4289 3526 3010
- 1080 1800 1008 8001
- 9129 9291 1299 9921
- 1199 1999 9111 1991

C. Click on the biggest number in each group.

- 651 2162 6215 1265
- 5882 3678 8249 8924
- 6160 6061 6610 6110
- 9911 9991 1119 9191

D. Type the numbers in ascending order.

- 1375 375 3175 7153 _____
- 4586 5586 2586 5658 _____
- 2236 2706 2716 2268 _____
- 9191 2929 9993 9292 _____

E. Type the numbers in descending order.

- 3450 345 5430 4350 _____
- 7432 7732 7237 2377 _____
- 2659 2859 2759 6592 _____
- 4567 4675 4765 4576 _____

FORMING NUMBERS

EXAMPLE 9 Form the greatest 4-digit number using the digits 3, 2, 7 and 1. Write the digits in descending order.

ANS. 7 3 2 1

The greatest number that can be formed using these digits is 7321.

EXAMPLE 10 Form the smallest 4-digit number using the digits 4, 5, 9 and 0. Write the digits in ascending order.

ANS. 0 4 5 9

0 at the beginning of a number gives us a 3-digit number.

So, exchange the position of 0 and 4 to form the smallest 4-digit number.

The smallest 4-digit number that can be formed using these digits is 4059.



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SUCCESSOR AND PREDECESSOR

Rohit is playing with the calculator. He has typed 4326 on it.

What would Rohit get if he adds 1 to 4326?

$$4326 + 1 = 4327$$

4327 comes just after 4326.

So, 4327 is the successor of 4326.

What would Rohit get if he subtracts 1 from 4326?

$$4326 - 1 = 4325$$

4325 comes just before 4326.

4325 is the predecessor of 4326.

EXAMPLE 11 Find the successor of 7049.

$$\text{Successor} = 7049 + 1 = 7050$$

ANS. 7050

EXAMPLE 12 Find the predecessor of 8560.

$$\text{Predecessor} = 8560 - 1 = 8559$$

ANS. 8559

Add 1 to the number to get its successor.



Subtract 1 from the number to get its predecessor.



Exercise 1.4

A. Form the smallest and the greatest 4-digit numbers.

- | | | |
|---------------|-----------------|-----------------|
| | smallest number | greatest number |
| 1. 0, 2, 1, 7 | _____ | _____ |
| 2. 5, 3, 0, 5 | _____ | _____ |
| 3. 7, 0, 5, 9 | _____ | _____ |
| 4. 8, 9, 6, 0 | _____ | _____ |

B. Fill in the blanks.

- | | |
|----------------------------------|----------------------------------|
| 1. Greatest 3-digit number _____ | 2. Smallest 3-digit number _____ |
| Greatest 2-digit number _____ | Smallest 2-digit number _____ |
| Difference _____ | Difference _____ |

C. Type the successor of each number.

- 1431 _____
- 6088 _____
- 5889 _____
- 3125 _____
- 1009 _____
- 7000 _____



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D. Type the predecessor of each number.

- 1752 _____
- 7511 _____
- 4997 _____
- 5170 _____
- 100 _____
- 9078 _____

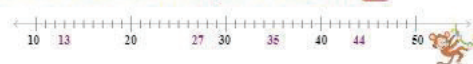
ROUNDING OFF NUMBERS TO THE NEAREST TEN

Kapil had noted down the number of pencils and erasers in his stationery shop. But he has lost the note. All he remembers is that there were about 50 pencils and 80 erasers. Later, Kapil found the note. There were exactly 47 pencils and 82 erasers in his shop. The numbers 50 and 80 are close to the exact numbers.

- 47 is close to 50. So he rounded it up to 50.
- 82 is close to 80. So he rounded it down to 80.
- A number is rounded down to the nearest ten if the ones digit is 4 or less.
- A number is rounded up to the nearest ten if the ones digit is 5 or more.
- If a number is exactly between the two tens, it is always rounded up to the higher ten.

Exercise 1.5

A. Fill in the blanks with the help of the number line.



- 13 is between 10 and 20 but closer to 10. So, 13 is rounded off to _____.
- 27 is between 20 and 30 but closer to 30. So, 27 is rounded off to _____.
- 35 is exactly in the middle of 30 and 40. So, 35 is rounded off to _____.
- 44 is between 40 and 50 but closer to _____. So, 44 is rounded off to _____.

B. Round off each number to the nearest ten.

- 48 _____
- 32 _____
- 95 _____
- 61 _____
- 23 _____
- 64 _____
- 92 _____
- 17 _____



17

EVEN AND ODD NUMBERS

Numbers that can be put in pairs (group of two) are called even numbers. For example, 6 is even.



Numbers that can not be completely paired are called odd numbers. On pairing them, one is left over. For example, 7 is odd.



Even numbers end with 2, 4, 6, 8 or 0.	Even					Odd numbers end with 1, 3, 5, 7 or 9.
	50	752	6024	9716	3148	
	Odd					
	81	523	1005	3437	2649	



I Can Do It!

Click and place tick (✓) for the odd numbers and cross (X) the even numbers. **ANS**

- | | | | | | | | | |
|--------|--------------------------|--------|--------------------------|---------|--------------------------|---------|--------------------------|-------------------------------------|
| 1. 14 | <input type="checkbox"/> | 2. 22 | <input type="checkbox"/> | 3. 31 | <input type="checkbox"/> | 4. 40 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. 551 | <input type="checkbox"/> | 6. 688 | <input type="checkbox"/> | 7. 7317 | <input type="checkbox"/> | 8. 8724 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

ROMAN NUMBERS

You use the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 to write numbers. Ancient Indian mathematicians developed this number system and introduced it to the rest of the world. It is called the Hindu-Arabic system.

Long ago, the Romans used 7 letters to write numbers.

Roman numbers	I	V	X	L	C	D	M
Hindu-Arabic numbers	1	5	10	50	100	500	1000

These letters were put together according to the given rules to form numbers. The Roman system did not use zero.



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Numbers from 1 to 39

The letters I, V and X are used to form numbers between 1 to 39.

Roman numbers	I	II	III	IV	V	VI	VII	VIII	IX	X
Hindu-Arabic numbers	1	2	3	4	5	6	7	8	9	10

Rule 1: I and X can be repeated 3 times. Repetition means addition. V cannot be repeated.

$$II = 1 + 1 = 2$$

$$XX = 10 + 10 = 20$$

$$III = 1 + 1 + 1 = 3$$

$$XXX = 10 + 10 + 10 = 30$$

Rule 2: I to the left of V or X means subtraction.

$$IV = 5 - 1 = 4$$

$$IX = 10 - 1 = 9$$

Rule 3: I to the right of V or X means addition.

$$VI = 5 + 1 = 6$$

$$VIII = 5 + 1 + 1 + 1 = 8$$

$$VII = 5 + 1 + 1 = 7$$

$$XI = 10 + 1 = 11$$

Rule 4: To write numbers greater than 10, they are expanded into tens and ones, and appropriate letters are used.

$$11 = 10 + 1 = XI$$

$$19 = 10 + 9 = XIX$$

$$12 = 10 + 2 = XII$$

$$23 = 20 + 3 = XXIII$$

$$14 = 10 + 4 = XIV$$

$$27 = 20 + 7 = XXVII$$



Exercise 1.6

A. Type the Roman numbers for the Hindu-Arabic numbers. **ANS**

- | | | |
|---------------|---------------|---------------|
| 1. 7 = VII | 2. 16 = _____ | 3. 30 = _____ |
| 4. 24 = _____ | 5. 29 = _____ | 6. 35 = _____ |

B. Type the Hindu-Arabic numbers for the Roman numbers. **ANS**

- | | | |
|-----------------|------------------|-------------------|
| 1. VI = 6 | 2. II = _____ | 3. XVI = _____ |
| 4. XIX = _____ | 5. XXIII = _____ | 6. XXV = _____ |
| 7. XXXI = _____ | 8. XXXIV = _____ | 9. XXXVII = _____ |

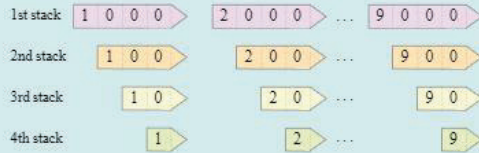


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Ma Maths Lab Activity

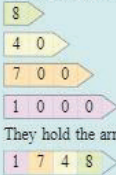
Aim: Use arrow cards to form numbers according to place value
You will need: arrow cards in stacks of 1000, 100, 10 and 1



Preparation: Students to work in groups of 5.

Steps

- One student from each group calls out a 4-digit number in which all the digits (1 to 9) are different. For example, 1748.
- The other students of the group arrange the arrow cards to get the number called out by the first student.



They hold the arrow cards one above the other to form the number.

- One student asks the place value of any one digit, say 4.
- Another student removes the card with 4, that is 4 0 and says 40. Similarly, the next student asks the place value of another digit, and the chain continues.



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Mental Maths

A. Click on the 4-digit numbers. **ANS**

- | | | | | | |
|-----------------|------|---------------|------|--------------------------|------|
| 1. 137 | 6572 | 733 | 1339 | 766 | 8400 |
| 2. One thousand | | | | Nine hundred ninety-nine | |
| | | Seven hundred | | One thousand two hundred | |

B. Fill in the blanks. **ANS**

- The number for five thousand six hundred ninety-three is _____
- $3000 + 200 + 7 =$ _____
- The number name of 6015 is _____
- The place value and face value of 8 in 7854 is _____ and _____

C. Compare each pair of numbers. Put > or < in the **ANS**

- | | | | | | | | | |
|----|---|---|---|--|----|---|---|---|
| Th | H | T | O | | Th | H | T | O |
| | 5 | | | | | | | |
- One thousand five One thousand
- 295 2000
- 4500 540

D. Click on the numbers in which the place value of **ANS**

- 7 is 70. 47 700 675 8749
- 8 is 800. 7486 8590 8 9862
- 1 is 1000. 7143 1743 4317 4371
- 6 is 6. 600 6000 7160 86

E. Fill in the correct number. **ANS**

- 1 more than 79 = _____
- 1 less than 70 = _____
- One less than 6000 = _____
- $7549 +$ _____ $= 7550$



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