



CLICK HERE TO ACTIVATE

LESSON
PART 3



1



NUMBERS

READY ... STEADY

A. Below are given some numbers. Write their number names.

1. 668 =
2. 331 =
3. 440 =
4. 699 =
5. 308 =

B. Read the following number names. Write them in numbers.

1. Three hundred seventy six =
2. Seven hundred fifty five =
3. Eight hundred seven =
4. Nine hundred sixty two =
5. Six hundred twenty =

C. Write the numbers that come before and after the numbers given.

1. 435 
2. 378
3. 614
4. 945

D. Fill in the blanks using $<$, $>$ or $=$.

1. 639 360

2. 666 555

3. 629 629

4. 812 907

5. 672 841

6. 879 695

E. Write the following numbers in ascending order.

1. 782 308 517 914

2. 215 899 432 342

3. 866 465 743 945

F. Write the following numbers in descending order.

1. 603 858 870 964

2. 810 612 423 501

3. 425 465 543 645

G. Write the odd and even numbers in the respective boxes.

10	5	67	50	25	44	99	69	46	76
35	18	45	80	73	92	55	88	2	31

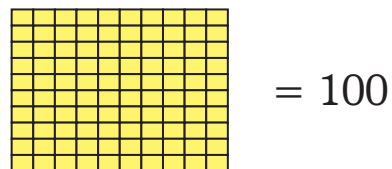
EVEN NUMBERS	

ODD NUMBERS	



EXTENSION OF NUMBERS UPTO 9999

Do you remember what happened when we added 1 to 99? We got the smallest 3-digit number '100'.



What do you think will happen if we add 1 to 999?

$$999 = 9 \text{ hundreds} + 9 \text{ tens} + 9 \text{ ones}$$

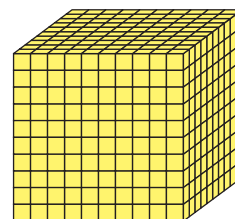
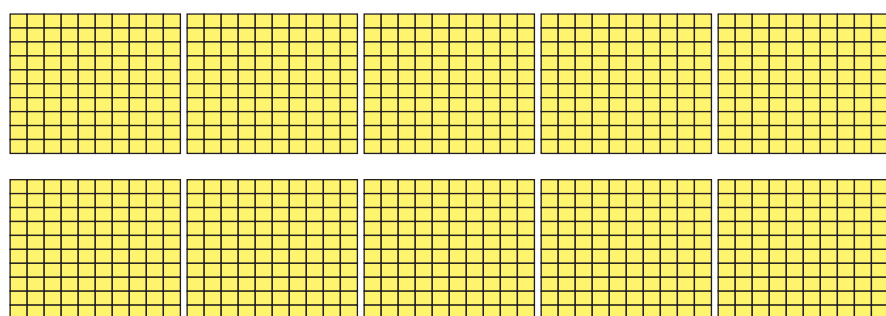
Now let us add 1

$$\begin{aligned} 999 + 1 &= 9 \text{ hundreds} + 9 \text{ tens} + 9 \text{ ones} + 1 \text{ one} \\ &= 9 \text{ hundreds} + 9 \text{ tens} + 10 \text{ ones} \\ &= 9 \text{ hundreds} + 9 \text{ tens} + 1 \text{ ten} \\ &= 9 \text{ hundreds} + 10 \text{ tens} \\ &= 9 \text{ hundreds} + 1 \text{ hundred} \\ &= 10 \text{ hundreds} = 1 \text{ thousand} \end{aligned}$$



1 THOUSAND can be written as 1000.

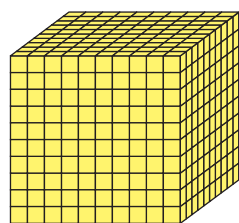
1000 is the *smallest* 4-digit number and is read as 'one thousand'!



= 10 hundreds make
1 thousand

To make any number greater than 1000, we must add 1 or more to it!

For example :



$$+ \text{ } \square = 1000 + 1 = 1001 \text{ (One thousand one)}$$

Let's look at some more examples.

$$1000 + 5 = 1005 \text{ (One thousand five)}$$

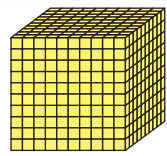
$$1000 + 3 = 1003 \text{ (One thousand three)}$$



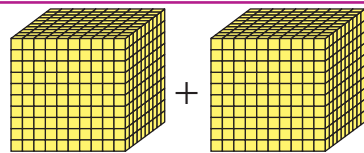
4-digit numbers can go all the way upto 9999 (Nine thousand nine hundred ninety nine).

9999 is the *largest* 4-digit number!

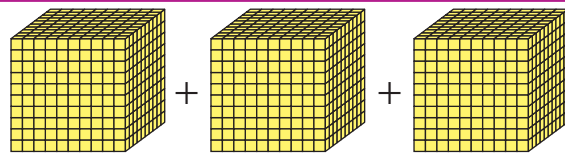
Let's learn more 4-digit numbers.



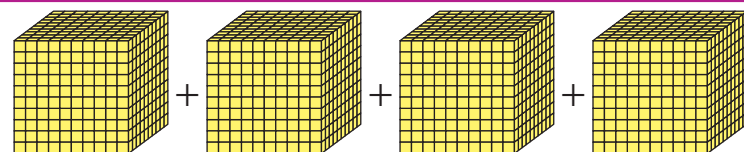
1000 (One thousand)



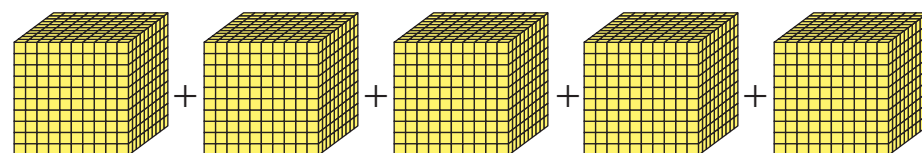
1000 + 1000 = 2000 (Two thousand)



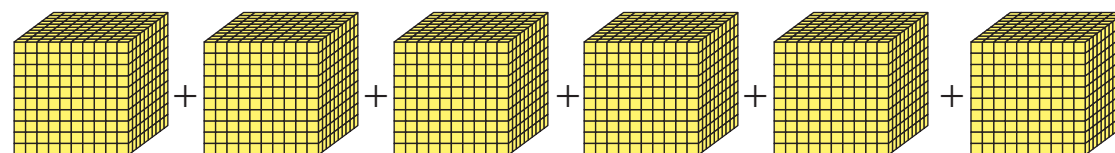
1000 + 1000 + 1000 = 3000 (Three thousand)



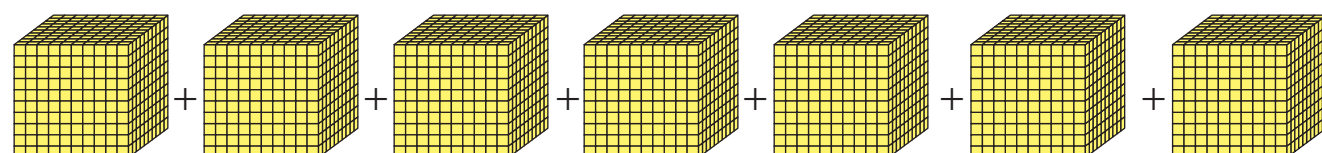
1000 + 1000 + 1000 + 1000 = 4000 (Four thousand)



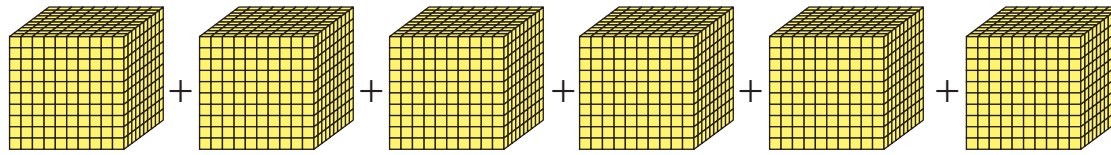
1000 + 1000 + 1000 + 1000 + 1000 = 5000 (Five thousand)



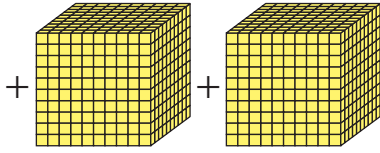
1000 + 1000 + 1000 + 1000 + 1000 + 1000 = 6000 (Six thousand)



1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 = 7000 (Seven thousand)



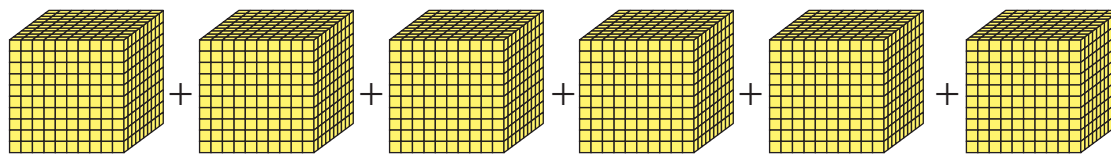
$$1000 + 1000 + 1000 + 1000 + 1000 + 1000$$



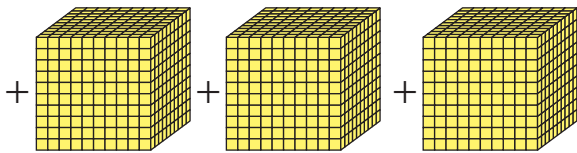
$$+ 1000 + 1000$$

$$= 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000$$

$$= 8000 \text{ (Eight thousand)}$$



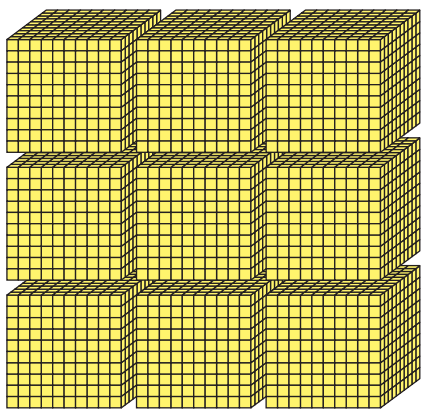
$$1000 + 1000 + 1000 + 1000 + 1000 + 1000$$



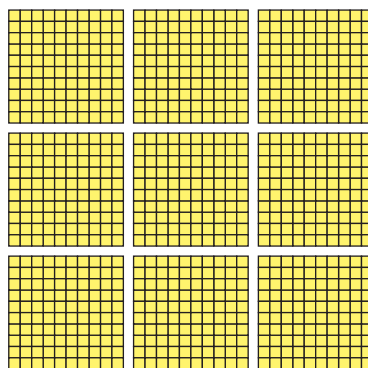
$$+ 1000 + 1000 + 1000$$

$$= 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000$$

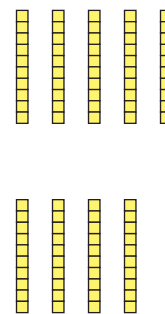
$$= 9000 \text{ (Nine thousand)}$$



+



+



+



9 thousand

+

9 hundreds

+

9 tens

+

9 ones

$$= 9999$$

This number is the largest four-digit number.

We read this number as *Nine thousand nine hundred ninety nine*.



Similarly, we can read some other 4-digit numbers as shown below.

- 3400 Three thousand four hundred
 6290 Six thousand two hundred ninety
 4381 Four thousand three hundred eighty one
 5064 Five thousand sixty four
 7003 Seven thousand three



Exercise 1.1

A. Fill in the missing numbers, in the number grids given below.

1.

1001							1008		
				1015					
									1030
		1033							
						1047			

2.

3051									3060
				3065					
						3077			
		3083							
								3099	

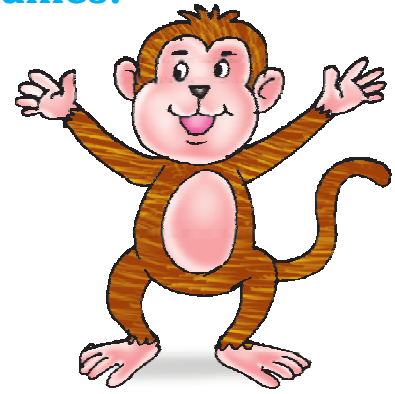
3.

5701									
							5718		
			5724						
									5740
					5746				



B. Write the numbers for the following number names.

1. Three thousand six hundred fifty nine
2. Six thousand two hundred twenty
3. Four thousand nine hundred thirty two
4. Eight thousand twenty
5. Seven thousand nine hundred nine
6. Nine thousand one hundred sixty two



C. Write the number names for the following.

1. 6249
2. 3578
3. 2390
4. 7010
5. 8405
6. 1469

D. Count by twos and write the numbers after / before the following.

1. 3460, _____, _____, _____, _____
2. _____, _____, _____, _____, _____, 6788

E. Count by fives and write the numbers after / before the following.

1. 3890, _____, _____, _____, _____
2. _____, _____, _____, _____, _____, 7140

F. Count by tens and write the numbers after / before the following.

1. 5846, _____, _____, _____, _____
2. _____, _____, _____, _____, _____, 8975

G. Count by hundreds and write the numbers after / before the following.

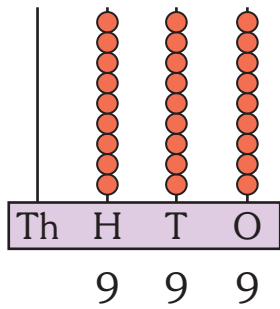
1. 3369, _____, _____, _____, _____
2. _____, _____, _____, _____, _____, 9845

H. Count by thousands and write the numbers after / before the following.

1. 3469, _____, _____, _____, _____
2. _____, _____, _____, _____, _____, 9856

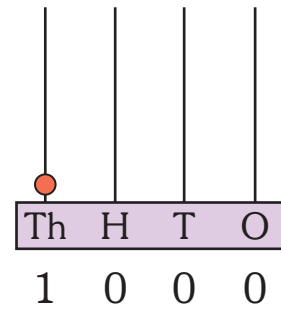
NUMBERS ON ABACUS

We know that —



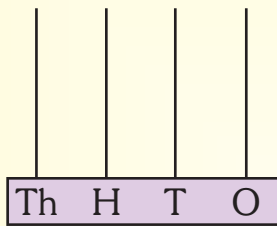
Nine hundred ninety nine

+ 1 =

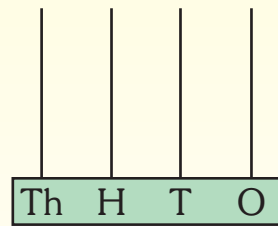


One thousand

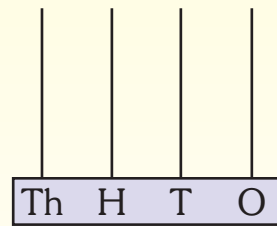
Draw the beads for the following 4-digit numbers.



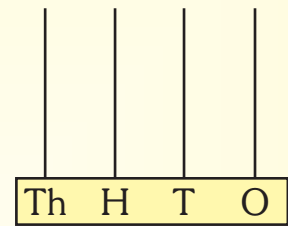
Two thousand



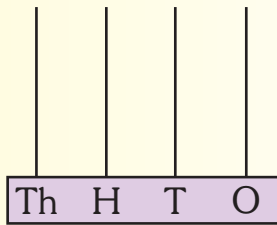
Three thousand



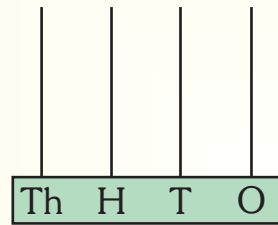
Four thousand



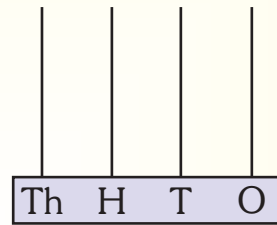
Five thousand



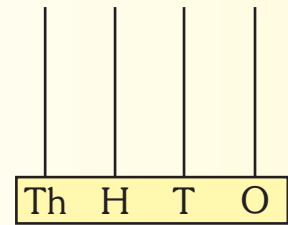
Six thousand



Seven thousand

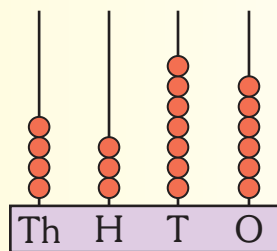


Eight thousand



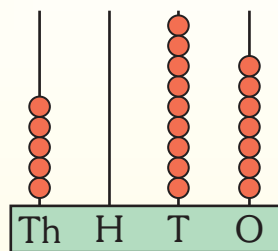
Nine thousand

Example : Read the numbers shown on the abacus and write their names.



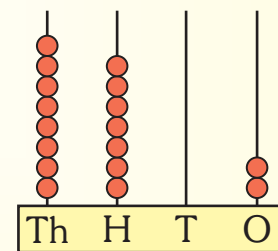
4 3 7 6

Four thousand three hundred seventy six



5 0 9 7

Five thousand ninety seven

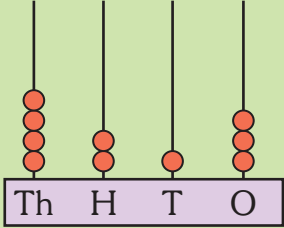
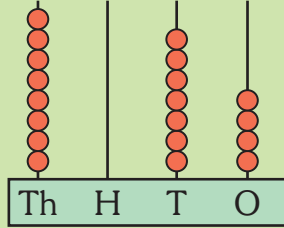
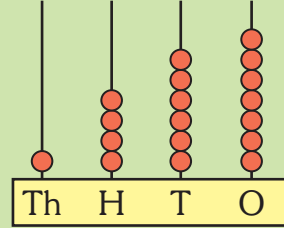
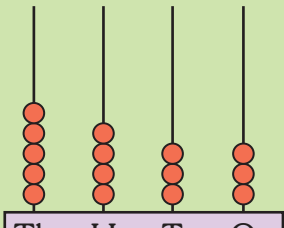
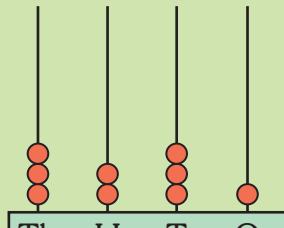
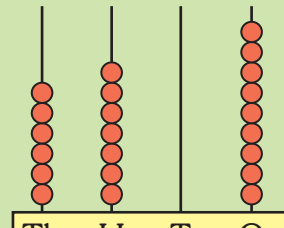


8 7 0 2

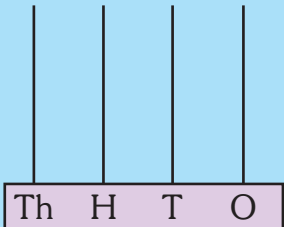
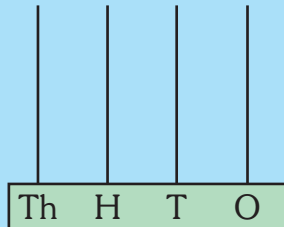
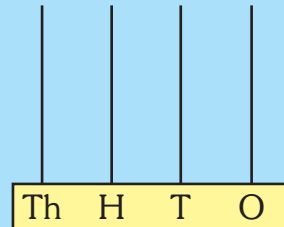
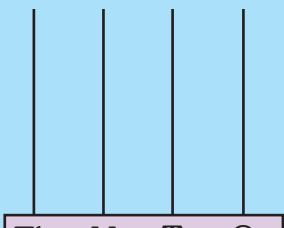
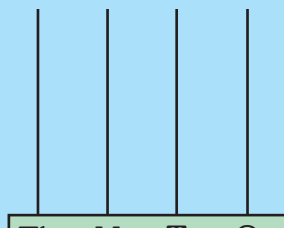
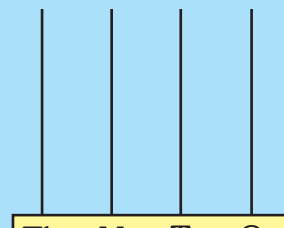
Eight thousand seven hundred two

Exercise 1.2

A. Count the beads on the abacus below and write the numbers in the box and write the number names in your note book.

<p>1.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>	<p>2.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>	<p>3.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>
<p>4.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>	<p>5.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>	<p>6.</p>  <p>Th H T O</p> <div style="border: 1px solid green; border-radius: 15px; width: 100px; height: 25px; margin: 5px auto;"></div>

B. Draw the beads on the abacus according to the numbers given below.

<p>1. 5400</p>  <p>Th H T O</p>	<p>2. 2960</p>  <p>Th H T O</p>	<p>3. 3285</p>  <p>Th H T O</p>
<p>4. 4211</p>  <p>Th H T O</p>	<p>5. 3099</p>  <p>Th H T O</p>	<p>6. 5604</p>  <p>Th H T O</p>

PLACE VALUE AND FACE VALUE

Place value

The place value of a digit refers to its position in the number.

Did you notice? As you move to the left in a number, the place value keeps increasing by ten times.

For example, let us take the number 7346.

Now, let us find the place value of all the digits starting from the right units. You will see, the place value of 6 is 6 ones, which is 6.

The place value of 4 is 4 tens, which is 40.

The place value of 3 is 3 hundreds, which is 300.

The place value of 7 is 7 thousands, which is 7000.

Face value

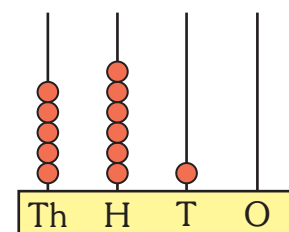
The face value of a digit is the value of the digit itself wherever it may be placed.

For example, in the number 5610, the face value of 0 is 0.

The face value of the digit 1 is 1.

The face value of the digit 6 is 6.

The face value of the digit 5 is 5.



Th	H	T	O
5	6	1	0

Place value	Face value
0	0
10	1
600	6
5000	5

Exercise 1.3

A. Write down the place values of the digits that are marked by (—) below.

- | | |
|------------------|-------------------|
| 1. <u>8</u> 500 | 2. 92 <u>9</u> 5 |
| 3. 4 <u>3</u> 00 | 4. 40 <u>5</u> 8 |
| 5. 7 <u>6</u> 95 | 6. 430 <u>2</u> |
| 7. 51 <u>1</u> 8 | 8. 699 <u>7</u> |
| 9. <u>6</u> 178 | 10. 1 <u>4</u> 35 |

5 thousands
1 hundred
2 tens
0 ones

5120

B. Form the numbers with the following ones, tens, hundreds and thousands. One has been done for you.

- | | | | |
|---|--|---|--|
| <p>1.</p> <div style="border: 1px solid blue; padding: 5px; border-radius: 10px; background-color: #e0f0ff;"> 2 thousands
3 hundreds
1 ten
5 ones </div> <div style="border: 1px solid blue; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>2.</p> <div style="border: 1px solid green; padding: 5px; border-radius: 10px; background-color: #e0ffe0;"> 1 thousand
4 tens
6 ones
2 hundreds </div> <div style="border: 1px solid green; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>3.</p> <div style="border: 1px solid red; padding: 5px; border-radius: 10px; background-color: #ffe0e0;"> 5 ones
6 tens
3 thousands
4 hundreds </div> <div style="border: 1px solid red; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>4.</p> <div style="border: 1px solid orange; padding: 5px; border-radius: 10px; background-color: #fff0e0;"> 2 ones
8 thousands
3 hundreds </div> <div style="border: 1px solid orange; width: 60px; height: 20px; margin: 5px auto;"></div> |
| <p>5.</p> <div style="border: 1px solid red; padding: 5px; border-radius: 10px; background-color: #ffe0e0;"> 4 tens
3 ones
6 thousands
3 hundreds </div> <div style="border: 1px solid red; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>6.</p> <div style="border: 1px solid green; padding: 5px; border-radius: 10px; background-color: #e0ffe0;"> 2 hundreds
6 thousands
7 ones
6 tens </div> <div style="border: 1px solid green; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>7.</p> <div style="border: 1px solid blue; padding: 5px; border-radius: 10px; background-color: #e0f0ff;"> 2 tens
3 ones
5 thousands
1 hundred </div> <div style="border: 1px solid blue; width: 60px; height: 20px; margin: 5px auto;"></div> | <p>8.</p> <div style="border: 1px solid orange; padding: 5px; border-radius: 10px; background-color: #fff0e0;"> 7 tens
2 ones
5 hundreds
2 thousands </div> <div style="border: 1px solid orange; width: 60px; height: 20px; margin: 5px auto;"></div> |

C. Write the face value of the digit underlined in each number.

1. 4567

2. 8914

3. 1485

4. 7142

5. 1405

6. 6092

7. 8347

8. 9371

REMEMBER

- ◆ Whenever there is a zero in the ones place, it means there are no ones.
- ◆ Whenever there is a zero in the tens place, it means there are no tens.
- ◆ Whenever there is a zero in the hundreds place, it means there are no hundreds.

EXPANDED FORM AND SHORT FORM

Writing the place value of each digit of a number by keeping ‘+’ among them is called its *expanded form*.

By expanding the numbers, we understand the value of each digit in the number.

The expanded form of 3785 is

$$3785 = 3000 + 700 + 80 + 5 \text{ (in figures)}$$

$$3785 = 3 \text{ thousands} + 7 \text{ hundreds} + 8 \text{ tens} + 5 \text{ ones (in words)}$$

Exercise 1.4

A. Write the expanded form of each number given below in figures.

1. 4956 = _____ + _____ + _____ + _____

2. 6068 = _____ + _____ + _____ + _____

3. 1928 = _____ + _____ + _____ + _____

4. 5870 = _____ + _____ + _____ + _____

5. 9145 = _____ + _____ + _____ + _____

B. Write the standard form for the following.

1. $9000 + 500 + 8 =$ _____

2. $8000 + 600 + 70 + 5 =$ _____

3. $6000 + 80 + 8 =$ _____
 4. $9000 + 800 + 70 =$ _____
 5. $2000 + 100 + 60 + 4 =$ _____

MATHS LAB

Objective : To develop an understanding of place value in 4-digit numbers

Materials Required : A sheet of paper, pencil and place value cards can be used from Math kit.

Preparation : Divide the class into groups of 4. Students of every group will get bowls with slips 1 to 9 and a sheet of paper and a pencil.

The students will mutually decide and then play the roles of thousands, hundreds, tens and ones.

Steps :

1. Every group will write their names on the sheet as shown here.

<u>Names</u> →	Raj	Kabir	Aditi	Aksha
Place	Th	H	T	U
Number				

2. Every student of the group will take out a slip from his or her bowl and read the number aloud before the group. They will fill the digit at right place in the place value table.
3. Then the student in the name thousands will take out as many thousand strips from the kit as there is number on the slip. Other students will take out hundreds, tens and ones from their math kit by looking at their slips.
4. They will paste the numbers as shown here. The plus sign will be inserted between every two numbers.

Th	H	T	O
3	7	2	5

3000	+	700	+	20	+	5
------	---	-----	---	----	---	---

5. Then the students will write the number name.
6. The activity will be repeated for nine times and among the group. This way each group will make numbers.
7. By changing the role of thousands, hundreds, tens and ones the activity can be repeated for more times !



PREDECESSOR AND SUCCESSOR

A number that comes just before (or precedes) a number is known as the predecessor. A predecessor is derived by subtracting '1' from the given number.

For example, to find the predecessor of 7845, we write

$$7845 - 1 = 7844$$

A number that comes just after (or succeeds) a number is known as the successor. A successor is derived by adding '1' to the given number.

For example, to find the successor of 7845, we write

$$7845 + 1 = 7846$$

COMPARING NUMBERS

Different numbers of digits

If the two numbers to be compared have different numbers of digits, then the number with more digits is the greater one.

For example :

Th	H	T	O
2	7	0	5

Th	H	T	O
	9	7	3

In this case, 2705 is greater than 973 or we write $2705 > 973$.

Same number of digits

1. If two numbers have the same number of digits, we compare them on the basis of their extreme left digits. The number with the greater extreme left digit is greater.

For example : (a) $935 > 426$ because $9 > 4$

(b) $4567 > 2789$ because $4 > 2$

2. If the extreme left digits of two numbers are the same, we compare them on the basis of the next digits towards their right and so on.

(a) $5428 > 5319$, because $5 = 5$ but $4 > 3$

(b) $2456 > 2438$, because $2 = 2$, and $4 = 4$, but $5 > 3$

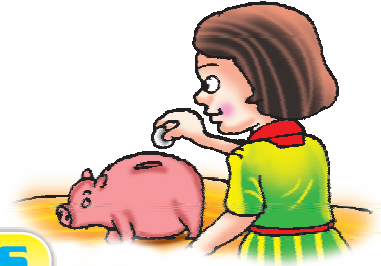
(c) $8364 > 8361$, because $8 = 8$, and $3 = 3$ and $6 = 6$ but $4 > 1$

Example : Sudha and Rajan are saving money in their piggy banks. There are ₹ 6789 in Sudha's piggy bank. There are ₹ 8540 in Rajan's piggy bank. Who has saved more money ?

Let us compare 6789 and 8540

As $8 > 6$, $8540 > 6789$

Hence, Rajan has saved more money.



ASCENDING AND DESCENDING ORDERS

Once we compare numbers using the above given rules, the numbers can be ordered from the smallest to the greatest or from the greatest to the smallest.

Ascending order

When we arrange numbers from the smallest to the greatest, they are said to be arranged in an *ascending order*.

Descending order

When we arrange numbers from the greatest to the smallest, they are said to be arranged in a *descending order*.

Example : Arrange the following numbers in ascending order.

6895, 8614, 7456, 360, 4679

Ascending order is : $360 < 4679 < 6895 < 7456 < 8614$

Example : Arrange the following numbers in descending order.

560, 9781, 7815, 3718, 5670

Descending order is : $9781 > 7815 > 5670 > 3718 > 560$

You must have noticed that there are 3-digit and 4-digit numbers.

The 3-digit number will be the smallest number.

Exercise 1.5

A. Write the predecessors of the following numbers.

1. 6176

2. 3461

3. 5785

4. 4135

B. Write the successors of the following numbers.

1. 3146

2. 8679

3. 7139

4. 8356

C. Find the greatest and the smallest numbers.

1. 4473, 8423, 900, 5000, 810

Greatest number

Smallest number

2. 882, 3972, 1895, 7785, 750

3. 2853, 7691, 9999, 2002, 924

4. 8834, 7528, 4110, 2333, 450

D. Write $<$, $>$, or $=$ in each box.

1. 6969 9696

2. 8887 8788

3. 4910 599

4. 6713 6713

E. Circle the greater amount in each pair.

1. ₹ 4525, ₹ 4555

2. ₹ 2929, ₹ 399

3. ₹ 6999, ₹ 6877

4. ₹ 9990, ₹ 9909

F. Circle the smaller amount in each pair.

1. ₹ 7008, ₹ 7018

2. ₹ 3060, ₹ 3078

3. ₹ 5788, ₹ 5896

4. ₹ 4974, ₹ 4768

G. Arrange the following in ascending order.

1. 8004 781 9820 6145

2. 6744 7054 2903 3915

3. 7615 5506 7860 7456

H. Arrange the following in descending order.

1. 815 6572 8415 3663

2. 8240 6142 7815 985

3. 8145 4765 4796 9347

ROUNDING OFF NUMBERS

When a number is rounded (or rounded off), it is approximated by eliminating the least significant digits. When rounding, you are finding the closest multiple of ten (or one hundred, or other place value) to your number. Numbers can be rounded to the tens place, hundreds place, thousands place, and so on.

Rounding off to the nearest 10

When a number is rounded to the tens place, the final value has a zero for the ones place.

In a 2-, 3- or 4-digit number

- ◆ If the digit in the ones place is 0, 1, 2, 3, or 4 then the number is rounded off keeping the number to the same ten.
- ◆ If the digit in the ones place is 5, 6, 7, 8 or 9 then we round off the number to the higher ten.

Examples :

- ◆ 73 will be rounded off to 70 (As the digit in the ones place is less than 5, so round off to the same ten).
- ◆ 235 will be rounded off to 240 (As the digit in the ones place is 5, so we round off to a higher ten).
- ◆ 5728 will be rounded off to 5730 (As the digit in the ones place is greater than 5, so we round off to higher ten).

Rounding off to the nearest 100

When a number is rounded to the hundreds place, the final value has a zero in the tens place and the ones place.

In a 3- or 4-digit number

- ◆ If the digit in the tens place is 0, 1, 2, 3, or 4, then the number is rounded off keeping the number to the same hundred.
- ◆ If the digit in the tens place is 5, 6, 7, 8 or 9, then we round off the number to the higher hundred.

Examples :

- ◆ 421 will be rounded off to 400 (As the digit in the tens place is less than 5, so we round off to the same hundred).
- ◆ 576 will be rounded off to 600 (As the digit in the tens place is greater than 5, so we round off to higher hundred).
- ◆ 8450 will be rounded off to 8500 (As the digit in the tens place is equal to 5, so we round off to a higher hundred).

Rounding off to the nearest 1000

When a number is rounded to the thousands place, the final value has a zero in the hundreds, tens and the ones places.

In a number

- ◆ If the digit in the hundreds place is 0, 1, 2, 3 or 4, then the number is rounded off keeping the number to the same thousand.
- ◆ If the digit in the hundreds place is 5, 6, 7, 8 or 9, then we round off the number to the higher thousand.

Examples :

- ◆ 8314 will be rounded off to 8000 (As the digit in the hundreds place is less than 5 i.e., 3, so we round off to the same thousand).
- ◆ 6835 will be rounded off to 7000 (As the digit in the hundreds place is greater than 5 i.e., 8, so we round off to a higher thousand).
- ◆ 7500 will be rounded off to 8000 (As the digit in the hundreds place is 5, so we round off to a higher thousand).

Exercise 1.6

A. Round off to the nearest ten.

1. 85 2. 49 3. 164 4. 235 5. 482

B. Round off to the nearest hundred.

1. 348 2. 580 3. 265 4. 235 5. 725

C. Round off to the nearest thousand.

1. 3450 2. 7940 3. 6060 4. 8784 5. 9 0 9 2

WORKSHEET

A. Write the number names for the following numbers.

1. 3456 _____

2. 7849 _____

B. Write the numbers for the following number names.

1. Seven thousand nine hundred twenty

2. Three thousand six hundred sixteen

3. Eight thousand and eighteen

4. Three thousand two hundred forty five

C. Write the place value and face value of underlined digit in each number.

1. 4563 2. 3785 3. 9378

D. Write the following numbers in expanded form.

1. 7045 _____

2. 9357 _____

E. Write the predecessor and successor of the following numbers.

1. _____ 3785 _____

2. _____ 4689 _____

3. _____ 5614 _____

F. Write $>$, $<$ or $=$ in the boxes.

1. 7385 914 2. 5678 1465 3. 938 7146

4. 6178 6178 5. 5617 6145 6. 7814 7865

G. Arrange the following numbers in ascending order.

1. 6345, 7814, 3132, 5149 _____

2. 1461, 5789, 939, 1469 _____

