

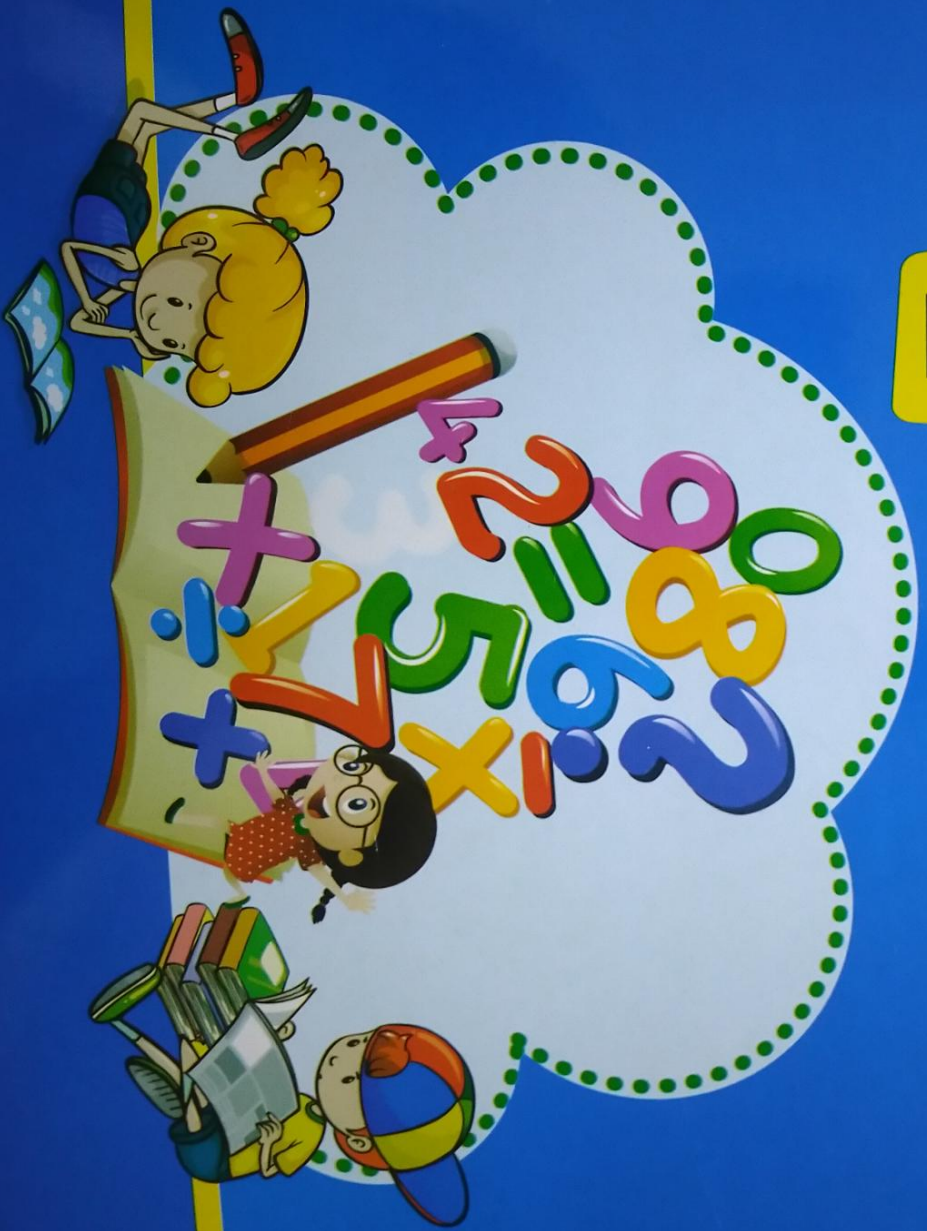
CORDOVA® App 24X7
For Teachers Only



STEP BY STEP

Mathematics

2



CORDOVA®

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1

Numbers up to 999

Use Cordova Smart Class Software on the smart board in class to learn about numbers up to 999. We have already learnt numbers up to 99. Let us revise.

Exercise-1

Do you remember

1. Write the number names :



2. Write the numbers :

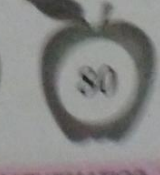
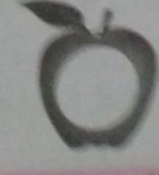
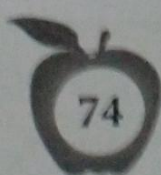
(a) Eighty-nine

(b) Thirty-six

(c) Ninety-nine

(d) Forty

3. Write the missing numbers.



4. Use $>$, $<$ or $=$:

a 81 91

b 38 40

c 96 69

d 22 22

5. (a) Write the numbers just before :

 32

 90

 22

 48

(b) Write the numbers between :

15 17 35 37 89 91

(c) Write the numbers just after :

40

58

72

29

6. Fill in the blanks :

(a) 34 = tens and ones

(b) 19 = ten and ones

7. Write the numbers.

(a) 5 tens and 4 ones =

(b) 6 tens and 1 one =

Numbers Beyond 99



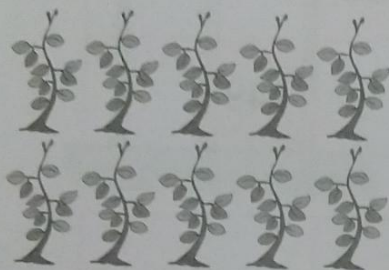
10 flowers

make



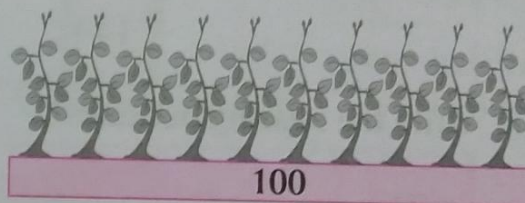
1 group of ten.

$$10 \text{ ones} = 1 \text{ ten}$$



10 tens

make



1 group of hundred.

$$10 \text{ tens} = 1 \text{ hundred}$$

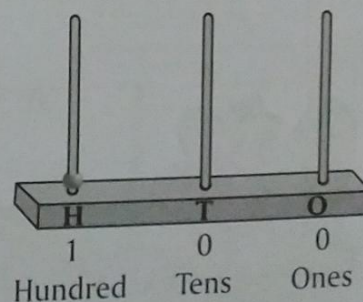
In place value chart, it is represented as shown.

H	T	O
1	0	0

We read the number 100 as 'one hundred'.

The abacus has three rods — hundreds, tens and ones.

On the abacus, the number 100 is represented as 1 hundred 0 tens 0 ones.



Remember : 99 is the greatest 2-digit number.
100 is the smallest 3-digit number.

Exercise-2

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Write the missing numbers :

101			104				108		110
		113			116			119	
	122			125		127			130
131		133			136		138		
			144			147		149	

2. Write the missing numbers :

671									
			684						
									700
				705					
							718		

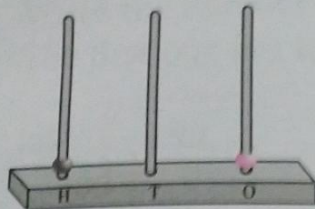


Remember :

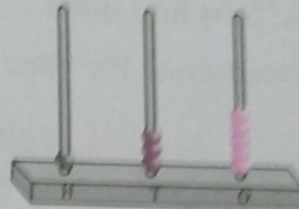
999 is the greatest 3-digit number.
 $999 + 1 = 1000$ (read as one thousand),
 which is the smallest 4-digit number.

Three Digit Numbers on Abacus

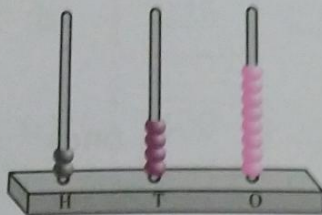
Let us represent 3-digit numbers on the abacus.



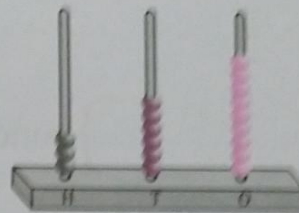
101
One hundred one



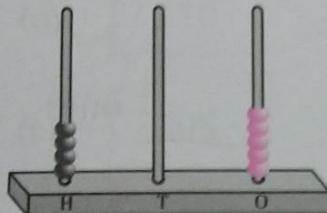
135
One hundred thirty-five



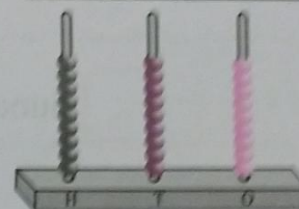
248
Two hundred forty-eight



369
Three hundred sixty-nine



405
Four hundred five



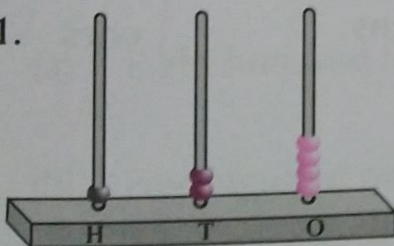
999
Nine hundred ninety-nine

Exercise-3

Use Cordova Smart Class Software on the smart board in class to do Exercise.

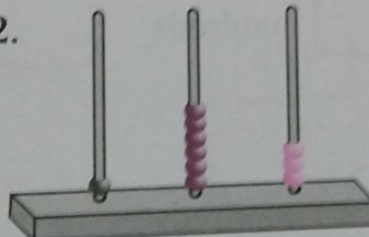
Write the number shown on each abacus. The first one has been done for you.

1.

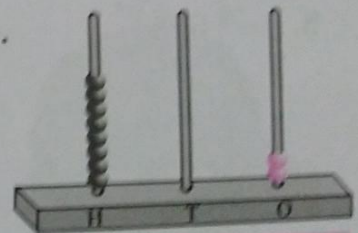


1 2 4

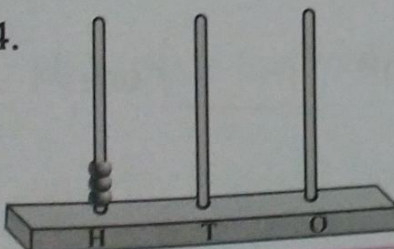
2.



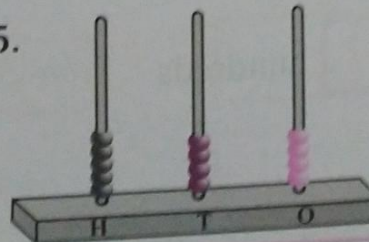
3.



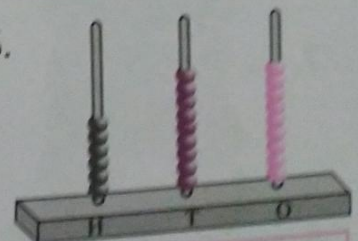
4.



5.



6.

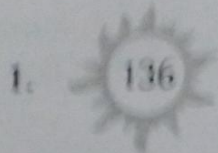


Exercise-4

Use Gerdeva Smart Class Software on the smart board in class to do Exercise

Write in hundreds, tens and ones.

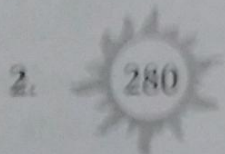
The first one has been done for you.



hundred

tens

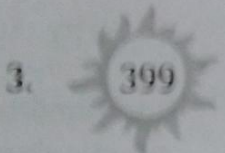
ones



hundreds

tens

ones



hundreds

tens

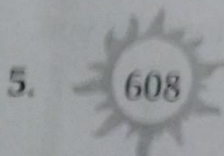
ones



hundreds

tens

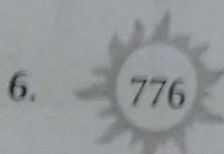
ones



hundreds

tens

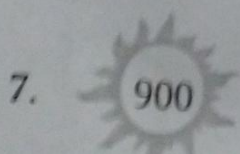
ones



hundreds

tens

ones



hundreds

tens

ones



hundreds

tens

ones

Exercise-5

Use **Cordova Smart Class Software** on the **smart board** in class to do Exercise.

1. Write the number name :

The first one has been done for you.

- (a) 199 One hundred ninety-nine
- (b) 225
- (c) 400
- (d) 310
- (e) 905
- (f) 569

2. Write the number :

The first one has been done for you.

- (a) Eight hundred fifty-six
- (b) Five hundred ninety
- (c) Seven hundred thirty-five
- (d) Three hundred twenty-nine
- (e) Six hundred ninety-nine
- (f) Nine hundred sixty-two

856



Exercise-6

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. What comes just before :

	341		517		625		999
	285		400		729		166

2. What comes between :

237		239	105		107
629		631	399		401
468		470	897		899

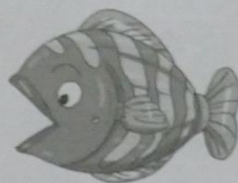
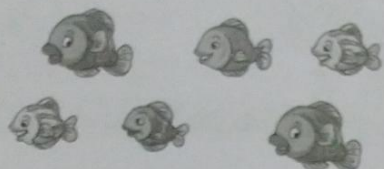
3. What comes just after :

630		479		666	
209		799		358	

Comparison of Numbers

Look at this big fish.

It is very, very hungry. So, it has its mouth wide open.



The hungry big fish always eats only the greater number of small fish.

Look at the shape of its mouth.

We use this shape in mathematics as a sign.

Since the big fish is moving towards 6 smaller fish,
so, we write $6 > 4$. We read it as '6 is **greater than** 4'.

Since the big fish turns away from 4 smaller fish,
so, we write $4 < 6$. We read it as '4 is **less than** 6'.



We have already learnt comparison of 2-digit numbers in class 1.

Let us learn to compare numbers up to three digits.

1. The number with greater number of digits is always greater.

Example : $121 > 99$ We read it as "121 is greater than 99".

or, $99 < 121$ We read it as "99 is less than 121".

2. The number with greater number of hundreds is greater.

Example : $440 > 331$ (Here, 4 hundreds are greater than 3 hundreds)

3. If the digits at hundreds place are same, then the number with greater digit at tens place is greater.

Example : $287 > 253$ (Here, 8 tens are greater than 5 tens)

4. If the digits at hundreds and tens places are same, the number with greater digit at ones place is greater.

Example : $559 > 554$ (Here, 9 ones are greater than 4 ones)

5. If the digits at hundreds, tens and ones places are same, the numbers are equal.

Example : $883 = 883$ We read it as "883 is equal to 883".

Exercise-7

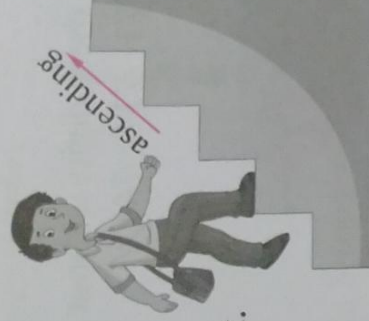
Use Cordova Smart Class Software on the smart board in class to do Exercise.

Fill in the boxes using correct sign $>$, $<$ or $=$.

The first one has been done for you.

- | | | | | | |
|--------|----------------------|-----|---------|----------------------|-----|
| 1. 136 | $>$ | 115 | 2. 500 | <input type="text"/> | 499 |
| 3. 647 | <input type="text"/> | 642 | 4. 299 | <input type="text"/> | 437 |
| 5. 628 | <input type="text"/> | 599 | 6. 555 | <input type="text"/> | 666 |
| 7. 127 | <input type="text"/> | 127 | 8. 819 | <input type="text"/> | 810 |
| 9. 300 | <input type="text"/> | 400 | 10. 999 | <input type="text"/> | 998 |

Ascending and Descending Order



Ascending order means arranging numbers from smallest to greatest.



Descending order means arranging numbers from greatest to smallest.

Example: Arrange the following numbers in ascending and descending order :

723, 159, 621, 395, 128

Solution : Arranging the numbers according to hundreds, then tens, and finally ones place, we get

Ascending order : 128, 159, 395, 621, 723

Descending order : 723, 621, 395, 159, 128

Exercise-8

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Rewrite the numbers in ascending order :

(a) 200, 700, 600, 300, 900

--	--	--	--	--

(b) 175, 427, 529, 618, 243

--	--	--	--	--

2. Rewrite the numbers in descending order :

(a) 627, 529, 450, 819, 725

--	--	--	--	--

(b) 560, 550, 580, 590, 510

--	--	--	--	--

Forming Greatest and Smallest 3-digit Numbers

Let us take the digits 1, 4 and 7.

Let us form all possible 3-digit numbers using these digits without repeating any digit.

147, 174, 417, 471, 714, 741

The smallest number formed is 147.

The greatest number formed is 741.

Exercise-9

Use **Cordova Smart Class Software** on the **smart board** in class to do Exercise.

1. Re-arrange the digits to form the greatest and smallest number.

The first one has been done for you.

	Digits	Greatest Number	Smallest Number
(a)	5, 6, 2	652	256
(b)	4, 3, 8		
(c)	7, 1, 6		
(d)	8, 0, 5		
(e)	9, 1, 5		

2. (a) Circle the greatest number :

- (b) Circle the smallest number :

197	719
917	791

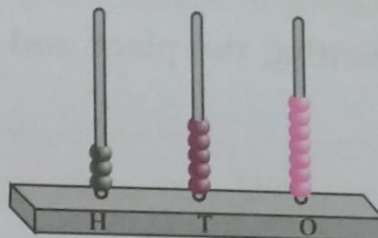
345	453
534	435



Remember : 0 is not written in the hundreds place of a 3-digit number.

Place Value

Look at the abacus given below :



There are 3 hundreds 5 tens and 7 ones. So, the number is 357.

$$357 = 300 + 50 + 7$$

The place value of 3 is 3 hundreds or 300.

The place value of 5 is 5 tens or 50.

The place value of 7 is 7 ones or 7.



Remember : The place of a digit in a number decides the place value of the digit in that number.

Let us look at some more examples to understand.

H T O

1. 8 9 3

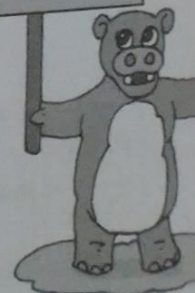
- Place value of 3 = 3 ones or 3
- Place value of 9 = 9 tens or 90
- Place value of 8 = 8 hundreds or 800

H T O

2. 5 9 9

- Place value of 9 = 9 ones or 9
- Place value of 9 = 9 tens or 90
- Place value of 5 = 5 hundreds or 500

Same digits can have different place values.



Exercise-10

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Complete the table by writing the place and place value of the colour digits.

Number	Place	Place value
127	ones	7
805	hundreds	
345		40
650		
709	tens	0
519		
748	ones	
264		

2. Write the place and place value of each digit in the following numbers :

	235		
	↙	↓	↘
Place	H	T	O
Place value	200		5

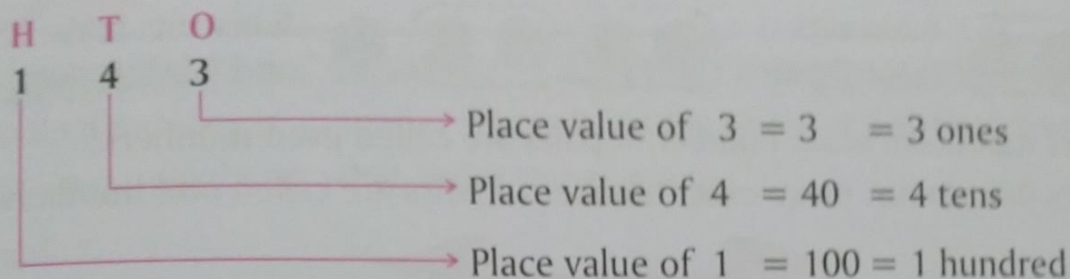
	861		
	↙	↓	↘

	333		
	↙	↓	↘
Place			
Place value			

	900		
	↙	↓	↘

Expanded Form

Expanded form tells us how many hundreds, tens and ones are there in a number. Look at the number 143.



143 = 1 hundred 4 tens 3 ones

$143 = 100 + 40 + 3$ This is the expanded form of 143.

Exercise-11

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Write the numbers in expanded form.

$$333 = \boxed{} + \boxed{} + \boxed{}$$

$$729 = \boxed{} + \boxed{} + \boxed{}$$

$$451 = \boxed{} + \boxed{} + \boxed{}$$

$$670 = \boxed{} + \boxed{} + \boxed{}$$

$$503 = \boxed{} + \boxed{} + \boxed{}$$

$$291 = \boxed{} + \boxed{} + \boxed{}$$

$$125 = \boxed{} + \boxed{} + \boxed{}$$

$$555 = \boxed{} + \boxed{} + \boxed{}$$

2. Write the numbers in short form.

$$100 + 70 + 3 = \boxed{}$$

$$200 + 80 + 1 = \boxed{}$$

$$600 + 30 + 9 = \boxed{}$$

$$400 + 60 + 8 = \boxed{}$$

$$4 \text{ hundreds} + 6 \text{ tens} + 2 \text{ ones} = \boxed{}$$

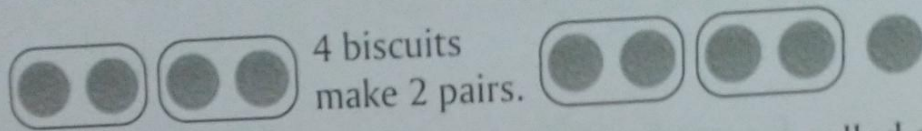
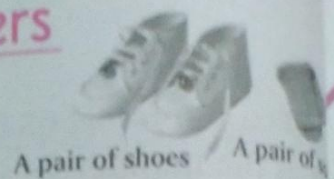
$$8 \text{ hundreds} + 2 \text{ tens} + 2 \text{ ones} = \boxed{}$$

$$7 \text{ hundreds} + 5 \text{ tens} + 8 \text{ ones} = \boxed{}$$

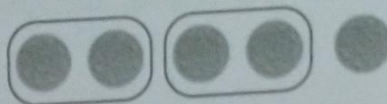
$$3 \text{ hundreds} + 4 \text{ tens} + 5 \text{ ones} = \boxed{}$$

Even and Odd Numbers

A pair has 2 objects like a pair of shoes or a pair of socks.



4 biscuits
make 2 pairs.



5 biscuits make 2 pairs
and 1 is left over.

The numbers that make exact number of pairs are called **even numbers**.
The numbers that do not make exact number of pairs are called **odd numbers**.

Exercise-12

Use Cordova Smart Class Software on the smart board in class to do Exercise.

Pair the objects and find whether they are even or odd in numbers.

The first one has been done for you.

	Objects	Number	Even/Odd
1.		9	Odd
2.			
3.			
4.			



Remember :

A number ending with 2, 4, 6, 8 or 0 is an even number.

A number ending with 1, 3, 5, 7 or 9 is an odd number.

HOTS Question

A number lies between 500 and 600. Its ones place is the same as number of eyes you have. Its tens place is four more than the digit at the ones place.

What is the number?

2

Ordinal Numbers

Use Cordova Smart Class Software on the smart board in class to learn about ordinal numbers.

An **ordinal number** is a number that tells us the order or position of an object in a collection. Ordinal says what order things are in.

Example :



1st



2nd



3rd



4th



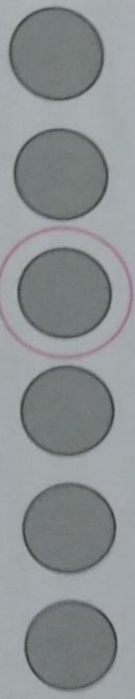
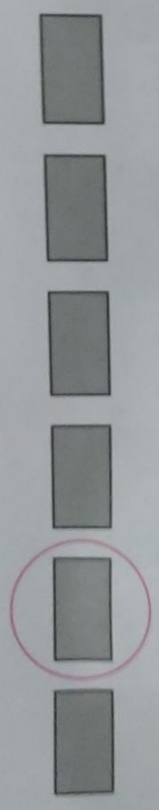
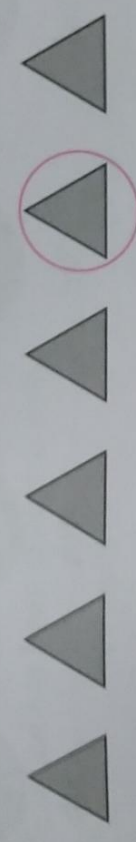
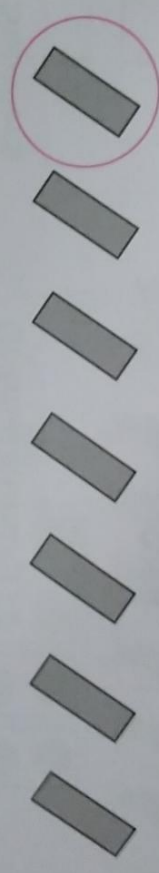
5th

Numbers	Ordinal numbers	
1	1st	first
2	2nd	second
3	3rd	third
4	4th	fourth
5	5th	fifth
6	6th	sixth
7	7th	seventh
8	8th	eighth
9	9th	ninth
10	10th	tenth

Exercise-1

Use Cordova Smart Class Software on the smart board in class to do Exercise.

In each of the following, identify the position of the encircled object (starting from the left). The first one has been done for you. Position

1.  4th
2. 
3. 
4. 
5. 

FUNTIME

Name a fruit whose :

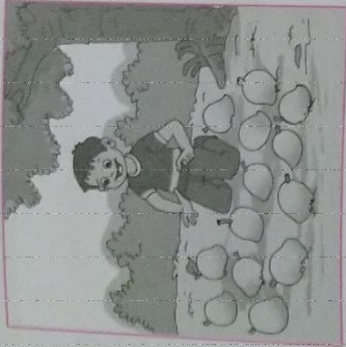
1. 1st letter is P.
2. 2nd and 3rd letters are P.
3. 5th letter is G.



3

Addition of 2-Digit Numbers

Use Cordova Smart Class Software on the smart board in class to learn about addition of 2-digit numbers.



Ankur has 13 mangoes.

Together they have $13 + 11 = 24$ mangoes.

We read it as 'thirteen plus eleven is equal to twenty-four'.

Here, 13 and 11 are called 'addends' and 24 is called the 'sum'.



Sneha has 11 mangoes.

T	O
1	3
+ 1 1	
2	4

Exercise-1

Do you remember

1. Add :

a

T	O
2	6
+ 3 3	

b

T	O
4	8
+ 1 1	

c

T	O
1	5
+ 3 2	

d

T	O
2	1
+ 5 7	

e

T	O
4	7
+ 3 2	

f

T	O
5	4
+ 1 4	

g

T	O
6	1
+ 1 7	

h

T	O
3	4
+ 5 3	

Ex 1



In my class, there are 42 boys and 35 girls. How many students are there in the class?

Ans. There are students in the class.

$$\begin{array}{r} \text{T} \quad 0 \\ 4 \quad 2 \\ + 3 \quad 5 \\ \hline \end{array}$$

Ex 2



Raman plants some flowers in his garden. 54 flowers are pink in colour and 22 flowers are yellow in colour. How many flowers does Raman plant?

Ans. Raman plants flowers.

T O

Ex 3



Jyoti makes a necklace using 37 white beads and 20 pink beads. How many beads are there in the necklace?

Ans. Total number of beads is

T O

Ex 4



Rohan was reading a book. He read 41 pages on Monday and 45 pages on Tuesday. How many pages did he read in the two days?

Ans. Rohan read pages.

T O

Addition Properties

1. **Order in adding two numbers:** The numbers can be added in any order. The sum will be same in both the cases,

Example:

$$\begin{array}{rclclcl} 3 & + & 5 & = & 8 \\ 5 & + & 3 & = & 8 \end{array}$$

2. **Adding 0:** When 0 is added to a number, the sum is the number itself.

Examples:

$$9 + 0 = 9$$

$$12 + 0 = 12$$

3. **Adding 1:** When 1 is added to a number, we get the number just after the given number.

Examples:

$$5 + 1 = 6$$

$$32 + 1 = 33$$

4. **Order in adding three numbers:** The numbers can be grouped in any order. The sum will remain the same,

Example: $3 + 5 + 7 = 8 + 7 = 15$

$$3 + 5 + 7 = 3 + 12 = 15$$

$$3 + 7 + 5 = 10 + 5 = 15$$

Exercise-2

Use Gordova Smart Class Software on the smart board in class to do Exercise.

1. Fill in the blanks:

(a) $5 + \square$

$$= 4 + 5$$

(b) $24 + \square$

$$= 26 + 24$$

(c) $6 + 8 + 5$

$$= \square + 6 + 5$$

(d) $15 + 9 + 12$

$$= 15 + \square + 9$$

(e) $23 + \square + 10$

$$= 16 + 10 + 23$$

2. Complete using addition facts:

(a) $18 + 0 = \square$

(b) $29 + \square = 29$

(c) $\square + 0 = 56$

(d) $95 + 1 = \square$

Addition of 2-digit Numbers with Regrouping

Example 1 : Add 70 and 49.

Solution :

H	T	O
	7	0
+	4	9
		9

Step 1 : Add the ones.

0 ones + 9 ones = 9 ones

Write 9 in the ones place.

Step 2 : Add the tens.

7 tens + 4 tens = 11 tens

Regroup 11 tens.

11 tens = 10 tens + 1 ten = 1 hundred + 1

Write 1 in the tens place and 1 in the hundreds place.

$$70 + 49 = 119$$

Example 2 : Add 85 and 55.

Solution :

H	T	O
(1)	(1)	
	8	5
+	5	5
1	4	0

Step 1 : Add the ones.

5 ones + 5 ones = 10 ones

Regroup 10 ones.

10 ones = 1 ten + 0 ones

Write 0 in the ones place and carry over 1 to tens place.

Step 2 : Add the tens.

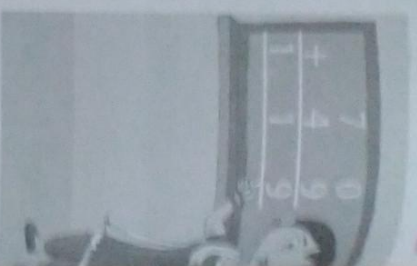
1 ten + 8 tens + 5 tens = 14 tens

Regroup 14 tens.

14 tens = 10 tens + 4 tens
= 1 hundred + 4 tens

Write 4 in the tens place and 1 in the hundreds place.

$$85 + 55 = 140$$



Exercise-3

Use Cordova Smart Class Software on the smart board in class to do Exercise-3.

1. Add :

a

H	T	O
○	○	
5	9	
+	6	1

b

H	T	O
○	○	
7	3	
+	3	7

c

H	T	O
○	○	
5	7	
+	6	4



2. In a pond, there are 89 frogs and 23 turtles, Find the total number of frogs and turtles in the pond.

Ans. There are frogs and turtles in the pond.

H	T	O
_____	_____	_____



3. Meena has 64 Barbie stickers and 48 Kitty stickers. How many stickers does she have in total?

Ans. Meena has stickers in total.

H	T	O
_____	_____	_____



4. A bookseller sells 72 books and 58 notebooks in a day. How many books and notebooks does he sell in total?

Ans. The bookseller sells books and notebooks in total.

H	T	O
_____	_____	_____

Addition of Three 2-digit Numbers without Regrouping

Let us take the numbers 21, 33 and 15.

Let us find their sum.

T	O			
2	1	→	2 tens	+ 1 one
+	3	→	3 tens	+ 3 ones
+	1	→	1 ten	+ 5 ones
6	9		6 tens	+ 9 ones

$21 + 33 + 15 = 69$

Exercise-4

Use Cordova Smart Class Software on the smart board in class to do Exercise.

Add :

1.

T	O
1	5
1	1
+	3

2.

T	O
1	1
1	7
+	3

3.

T	O
2	2
3	3
+	4

4.

T	O
1	0
3	0
+	5

5.

T	O
4	6
4	1
+	1

6.

T	O
2	1
1	6
+	3

7.

T	O
2	0
1	2
+	4

8.

T	O
4	2
3	3
+	2

Addition of Three 2-digit Numbers with Regrouping

Example : Shoma collects 22 red beads, 36 blue beads and 14 green beads make a necklace. How many beads does she collect in total?

Solution : Total number of beads = $22 + 36 + 14$

T	O	
①	2	
2	6	
3	4	
+ 1	2	
7	2	

Step 1 : Add the ones ;

$$(2 + 6 + 4) \text{ ones} = 12 \text{ ones}$$

Regroup 12 ones,

$$12 \text{ ones} = 10 \text{ ones} + 2 \text{ ones} \\ = 1 \text{ ten} + 2 \text{ ones}$$

Write '2' in the ones place and carry over '1' to the tens place,

Step 2: Add the tens ;

$$(1 + 2 + 3 + 1) \text{ tens} = 7 \text{ tens}$$

Write '7' in the tens place,

$$22 + 36 + 14 = 72$$

Thus, Shoma collects 72 beads in total,

Exercise-5

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Add:

T	O	
3	6	
2	5	
+ 1	7	

T	O	
3	2	
2	8	
+ 3	1	

T	O	
4	4	
2	7	
+ 1	6	

T	O	
4	2	
1	8	
+ 3	0	

2.

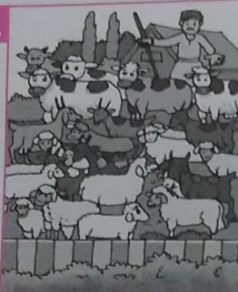


Rani has 12 pink ribbons, 19 red ribbons and 25 blue ribbons. How many ribbons does Rani have in total?

Ans. Rani has ribbons.

$$\begin{array}{r} T \\ \bigcirc \\ 1 \\ 1 \\ + 2 \\ \hline \end{array}$$

3.



A farmer has 54 cows, 28 goats and 12 sheep on his farm. How many animals does he have in total?

Ans. The farmer has animals in total.

$$\begin{array}{r} T \\ \bigcirc \\ \hline \end{array}$$

4.



In a flower garden, Sneha counts 36 roses, 19 jasmines and 21 lilies. How many flowers does she count in total?

Ans. Sneha counts flowers.

$$\begin{array}{r} T \\ \bigcirc \\ \hline \end{array}$$