# Maths World

## Class 2







# **Punjab School Education Board**

Sahibzada Ajit Singh Nagar

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ਇਹ ਪੁਸਤਕ ਵਿਕਰੀ ਲਈ ਨਹੀਂ ਹੈ।

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# FOREWORD

The Punjab School Education Board has been continuously engaged in developing syllabi, producing and renewing text books according to the changing educational needs at the state and national level.

This book has been developed in accordance to the guidelines of National Curriculum Framework (NCF)-2005 and PCF-2013, after careful deliberations in workshops involving experienced teachers and experts from the Board and field as well. The book in hand was implemented in academic year 2018-2019. The book has been revised from 2022-23 to align the syllabi of Primary Classes with the syllabi of the Pre-Primary classes. All efforts have been made to make this book interesting with the help of activities and coloured figures. This book has been prepared with the joint efforts of subject experts of Board, SCERT and experienced teachers/experts of Mathematics. Board is thankful to all of them.

The authors have tried their best to ensure that the treatment, presentation and style of the book in hand are in accordance with the mental level of the students of class-II. The topics, contents and examples in the book have been framed in accordance with the situations existing in the young learner's environment. A number of activities have been suggested in every lesson. These may be modified, keeping in view the availability of local resources and real life situations of the learners.

I hope the students will find this book very useful and interesting. The board will be grateful for suggestions from the field for further improvement of the book.

Chairman

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# **CONTENTS**

1.	Numbers	1
2.	Addition-Subtraction	45
3.	Multiplication and Division	77
4.	Money (Currency)	91
5.	Shapes	108
6.	Patterns	123
7.	Measurement	133
8.	Time	148
9.	Data Handling	156

## **Learning Outcomes**

### The learner

- Works with two digit numbers
  - reads and writes numerals for numbers up to 99
  - uses place value in writing and comparing two digit numbers.
  - forms the greatest and smallest two digit numbers (with and without repetition of given digits)
  - solves simple daily life problems/ situations based on addition of two digit numbers
  - solves daily life situations based on subtraction of two digit numbers
  - represents an amount up to Rs. 100 using 3 4 notes and coins (of same / different denominations of play money)
- describes basic 3D and 2D shapes with their observable characteristics
  - identifies basic 3D-shapes such as cuboid, cylinder, cone and sphere by their names
  - distinguishes between straight and curved lines
  - draws / represents straight lines in various orientations (vertical, horizontal, slant)
- estimates and measures length/distances and capacities of containers using uniform non-standard units like a rod/pencil, cup / spoon /bucket etc.
- compares objects as heavier/ lighter using simple balance.
- identifies the days of the week and months of the year.
- sequences the events occurring according to their duration in terms of hours / days; for example, Does a child remain in school for a longer period than at home?
- draws inference based on the data collected such as the number of vehicles used in Samir's house is more than that in Angelina's.



## **Numbers**

### **OBJECTIVES**

- Understanding the importance of maths in activities in daily life.
- Understanding the terms increasing/decreasing, predecessor/ successor in daily life.
- Creating interest in maths among children with the help of maths activities.
- Creating ability to do activities of maths related to numbers upto 100 with different ways.
- Mental and Intellectual development.
- 6. Preparing children to apply and understand maths in future.

### Do you Remember

Write forward counting from 1 to 20

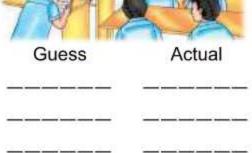
Write backward counting from 20 to 1

Today we will count the number of students in our class. You will tell me the number of students present in our class today.

# Activity

How many students are present in our class today?

How many boys are present in the class? How many girls are present in the class? How many boys and girls in total are present in the class?



# Activity

### Counting with Steps



Let us count with steps upto 100



### **Note for Teachers**

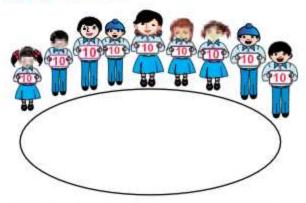
- 1. Teacher should take care that steps of student and number being announced, must be the same. He must also take care that heel of first foot must touch the toe of the other foot. This activity should be done for a couple of days. After this activity, train them to count other solid objects. "How many students are present in the class?", the teacher will ask the students everyday for the practice of counting.
- The teacher will show the students, the matchsticks, leaves and beads and will ask them to guess their number and then will tell them to count.

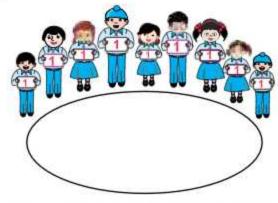


### To understand Ones, Tens:- Play Way Method

Material: Nine cards of 1-1, Nine cards of 10-10

**Procedure:** (i) Draw two circles on the ground.



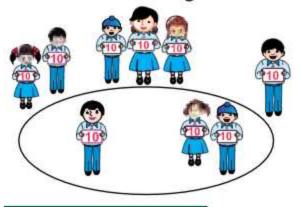


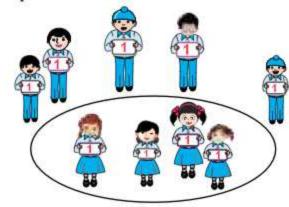
On the circle towards right hand, choose 9 students and make them stand outside this circle holding card of ones each. Around the circle of left hand, make 9 students stand, each holding card of Tens.

Teacher will announce any two digit number.

(ii) Students will jump into the circle by using cards of tens and ones.

For e.g. If teacher announces 34, four students holding ones cards and three students holding tens cards will jump into the circle.





### **Note for Teachers**

Teacher will announce different numbers and the students will jump into the circle by using cards of tens and ones.



Objective: Knowledge of Ones-Tens

Material: 10 currency notes of ₹1 each.
10 currency notes of ₹10 each.

### Method

1. Keep all the currency notes on the table.

- Ask the students to count currency notes of ₹ 1.
- Then ask the students to pick a single currency note of ₹10 instead of ten currency notes of ₹1.
- Now ask them to count currency notes of ₹10.
- Ask them to make different numbers using currency notes.

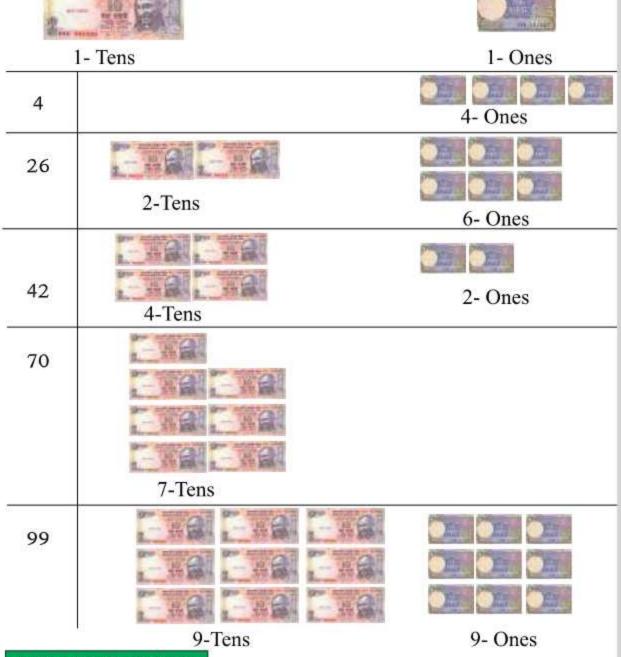
For example: Make number 28.



Now ask how many ones, tens will make 18?



### To Understand Ones/Tens with the Help of Currency Notes



### **Note for Teachers**

Teacher will tell the students to pick currency notes of ₹1 while counting upto 9. When they reach number 10, they will pick a currency note of ₹10 instead of ten note of ₹1.



## Write the number as per the value of given currency notes.

(i) (ii) (iii) (iv) (v)

## 2. Depict the Given Numbers in Currency Notes

29 =

49 =

59 =

69 =

89 =

99 =

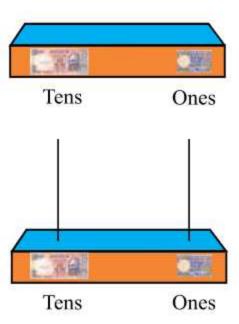
# Practical Activty

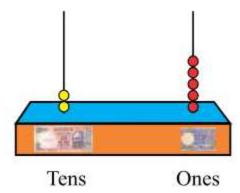
Objective: Explaining two digit numbers with the help of Abacus and writing.

Required Material: Clay, matchsticks, beads and currency notes.

### Method:

- Ask the students to make clay base with the help of clay. Ask them to put a one rupee note on the base at the right side and a currency note of ₹ 10 on the left side.
- Ask the students to fix two matchsticks in the clay. (representing ones/tens)
- Teacher will ask the students any two digit number, for example 25.
- Now ask the students to put beads in abacus.



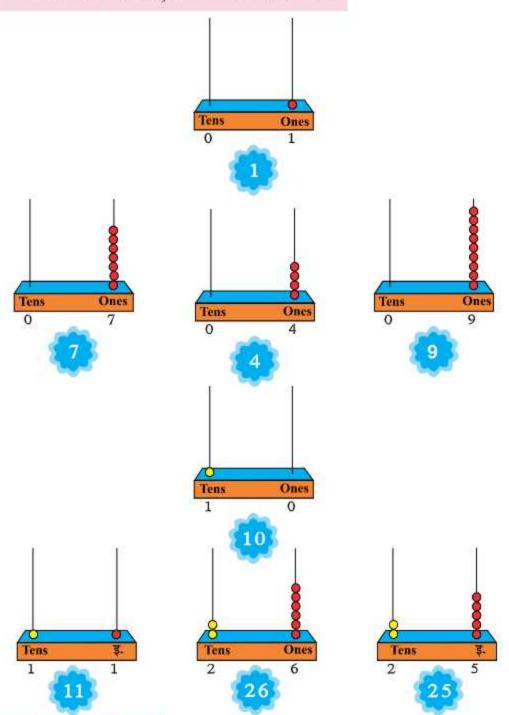


### **Note for Teachers**

Teacher will tell the students that a stick of Abacus can hold only nine beads. In this way, the stick of ones can hold nine beads. Therefore, for ten beads of ones, one bead will be put in the tens stick.



### To Understand Ones, Tens With Abacus

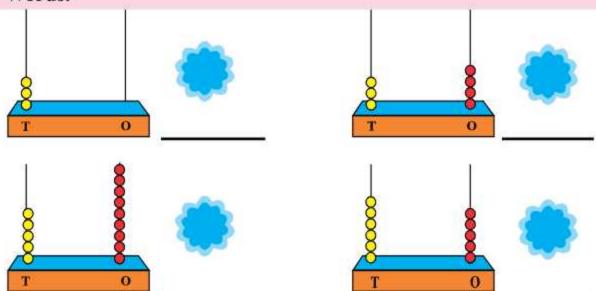


## **Note for Teachers**

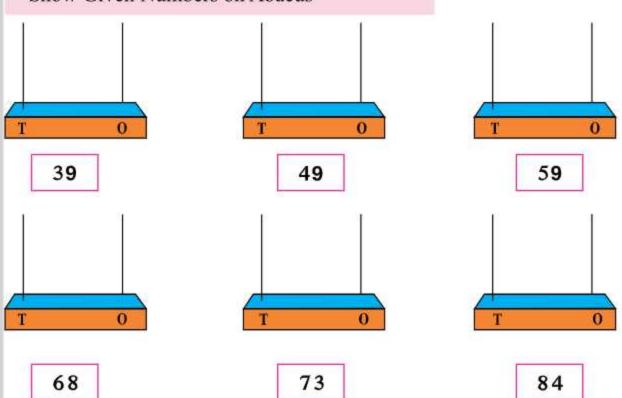
Teacher will tell the students about the short form 'O' to write ones and 'T' to write tens.



# Count the Beads of Abacus and write the Number in Figures and Words.



### Show Given Numbers on Abacus





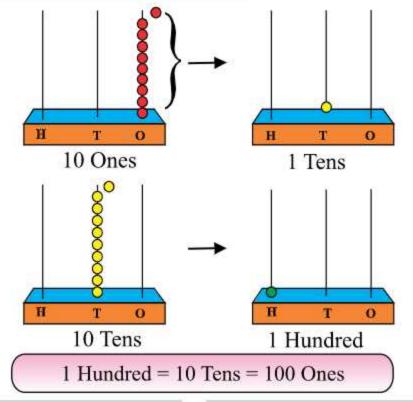
# Let Us Make Hundred

### Knowledge of Hundred with Currency Notes.



10 Tens 1 Hundred

## To Understand Hundred with Abacus





### Break the Number into One and Tens

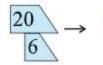




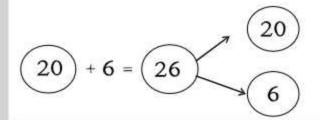








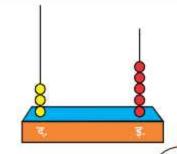


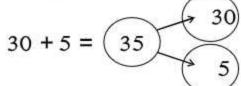


Tens	Ones
2	6

2 Tens 6 Ones

(b)



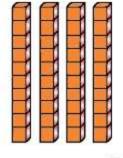


30 →	35
5	

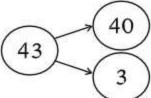
Tens	Ones
3	5

3 Tens 5 Ones

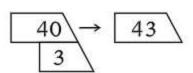








$$40 + 3 = 43$$



Tens	Ones	
4	3	

4 Tens 5 Ones



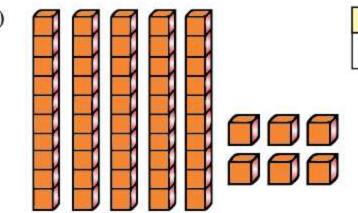
## Split/Break the Number into Ones-Tens

(1)

Tens	Ones

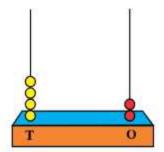
24 =.....Ones

(2)



Tens	Ones

(3)



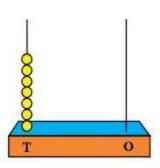
Tens	Ones

### Count the Ones, Tens and Write the Number

(1) Tens Ones

......Tens ...... Ones = .....

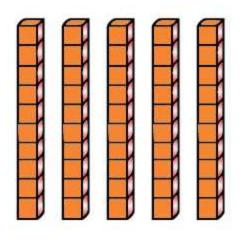
(2)

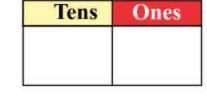


Tens	Ones

.....Ones = .....

(3)





......Ones = ......

### Match the Birds with their Nests as Shown Below





### Let's Play Clap, Snap

### Objective:- To understand/Ones-Tens

Method: (1) Teacher will tell the children



1 clap means 10 2 clap means 20 3 clap means 30

9 clap means 90

......

(1) 1 snap means 1 2 snap means 2 3 snap means 3

. . . . . . . . . . . . . . . . . . .

. . . . . . . . . . . . . . . . . . . 9 snaps means 9



After telling about clap and snap, the teacher will speak the number

for example-37 (Students will clap 3 times and snap 7 times)

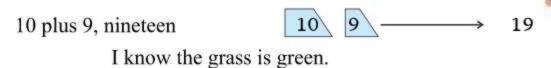
- \* Speak the different numbers.
- \* Clap = Tens, Snap = Ones
- \* To write the number according to its place value in the place value chart on the blackboard.

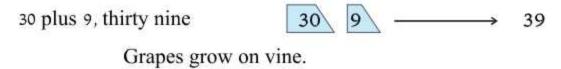
Tens	Ones
3	7

### **Note for Teachers**

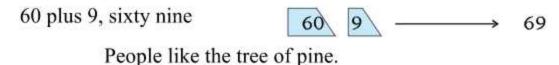
Ask the children to listen to the number carefully.

### Family of Nine



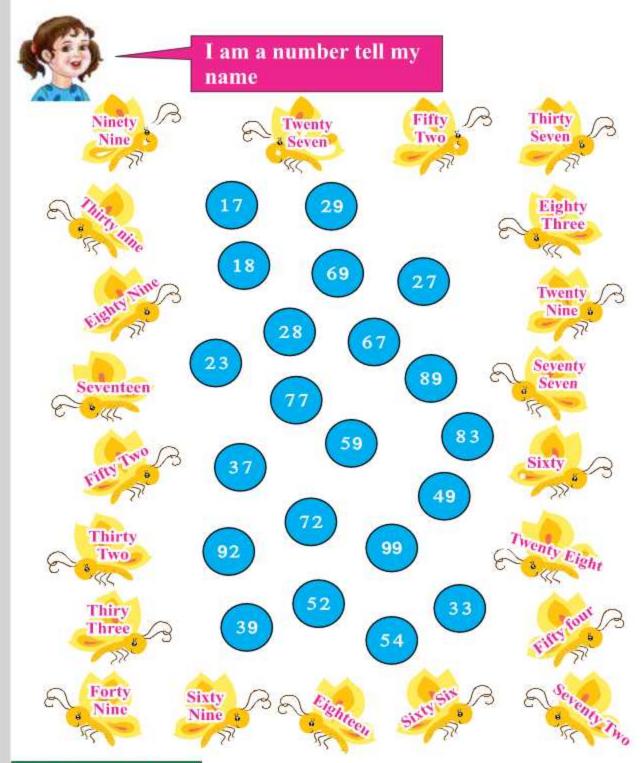


50 plus 9, fifty nine 
$$50$$
 9  $\longrightarrow$  59 Learn the way how to dine.



### **Note for Teachers**

Use Mann cards while rhyming.



### **Note for Teachers**

Teacher would prepare two types of flash cards. They will write numbers on one set and numbers names on the other set. One student with numeral card well stand and ask "I am a number, tell my name." In this way student with number name card will also stand and show the card. This activity will continue with different numbers.



### Before, After and In between



Stand up and say counting from 31 to 36.















## Now Speak

Number just before 33 is

Number just After 33 is

Number between 33 and 35 is

Number just before 32 is

Number just before 36 is

Number just after 34 is

Number just after 32 is

Number between 31 and 33 is

32

34

34

31

----

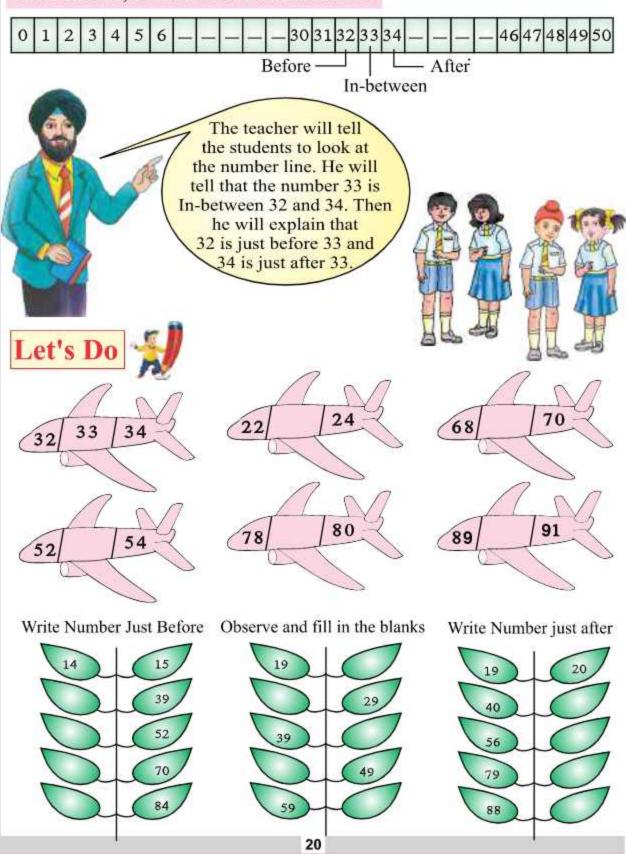
35

35

33

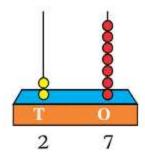
32

### Just Before, Just After And In-between





### Place value of Digits



To know the place value of digits which we are making heros.
Just go to and choose that digit and conver right digits to zeros.

2 Tens 7 Ones

Tens	Ones	
2	7	
	L7	$Ones = 7 \times 1 = 7$
07		Tens = $2 \times 10 = 20$

Place value of 7 in 27 is 7.

Place value of 2 in 27 is 20

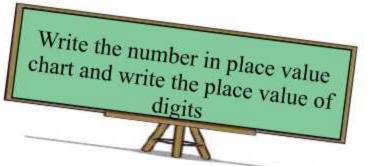
# Activity

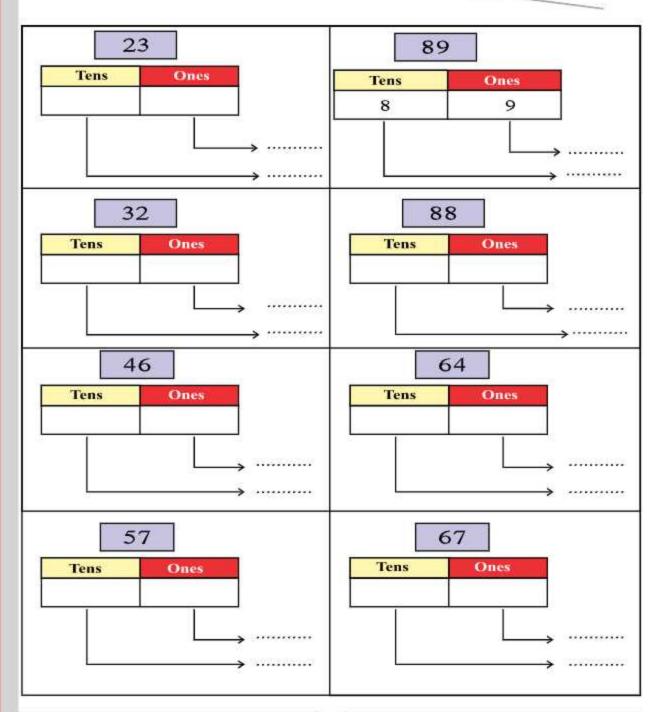
- Tell any number to the students. Ask them to pick up maan cards to form that number.
- Form numbers from the maan cards. Write the place value of its digits.

### **Note for Teachers**

Using the Maan Cards, the teachers will explain the place value of '0' at unit/ones place.



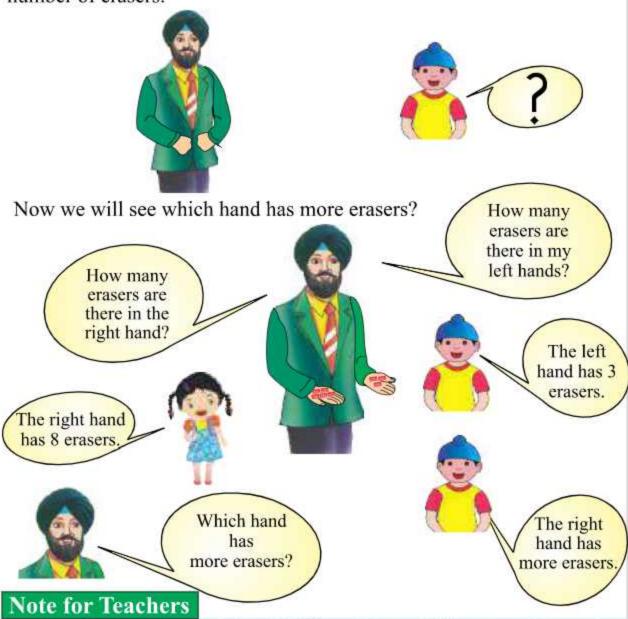




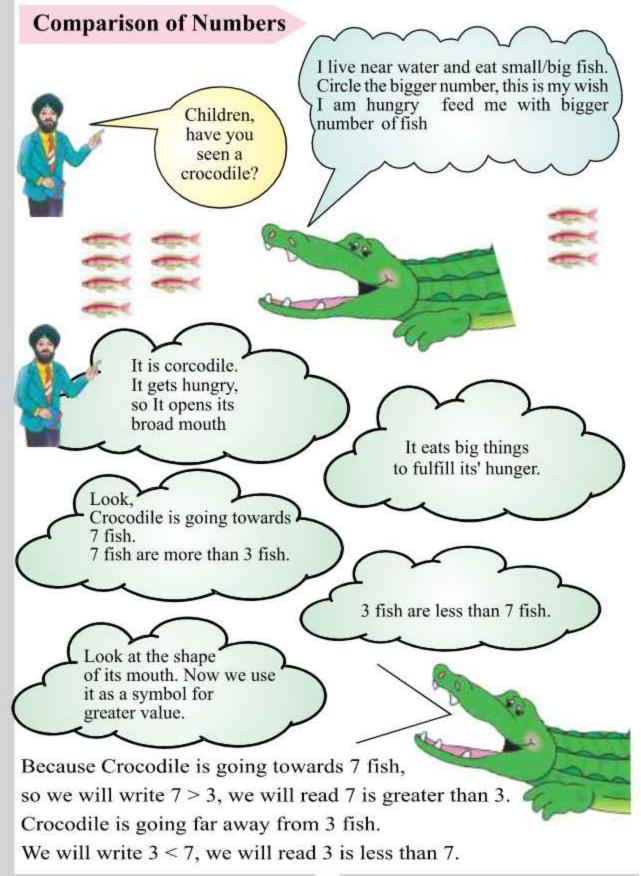


### Comparison of Numbers

Teacher will ask students to make a guess about the number of erasers in his hand, by showing different number of erasers in his hands. The students should be able to tell the hand with greater number and lesser number of erasers.

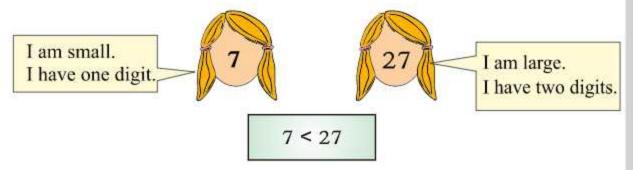


Teacher will I do the above activity with different things and different quantities. Teacher will tell the students the concept of greater number and smaller number by writing different numbers on the blackboard.





### Now we Compare Two Digit Numbers



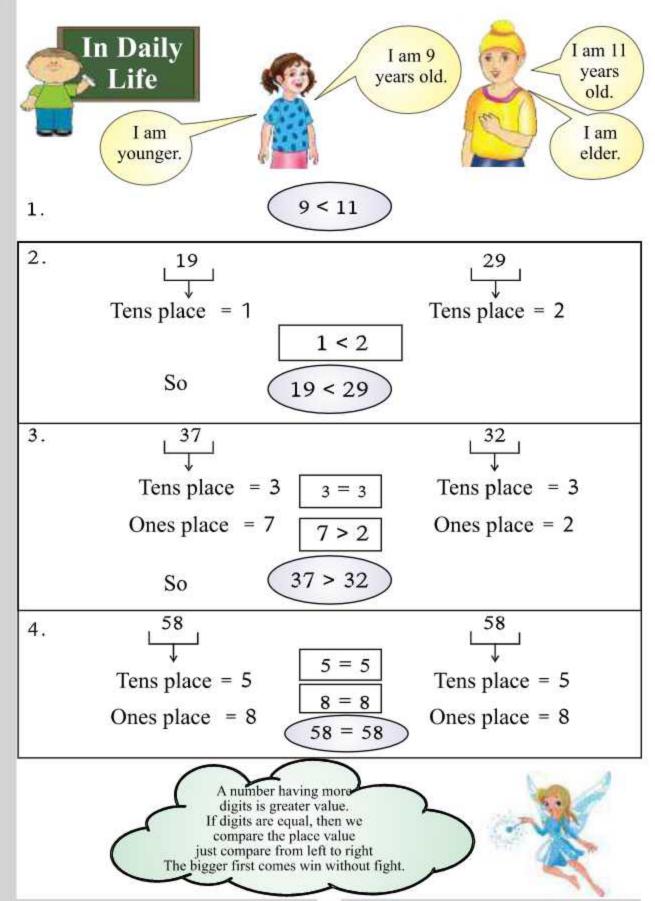
### Hence 7 is smaller than 27

- Number having more digits is always greater than number having less digits.
- If the numbers to be compared have same number of digits, then compare the digits at tens place. The number having greater digit is greater.

3. If tens place is same, then compare digits at ones place. The number having greater digit is greater.

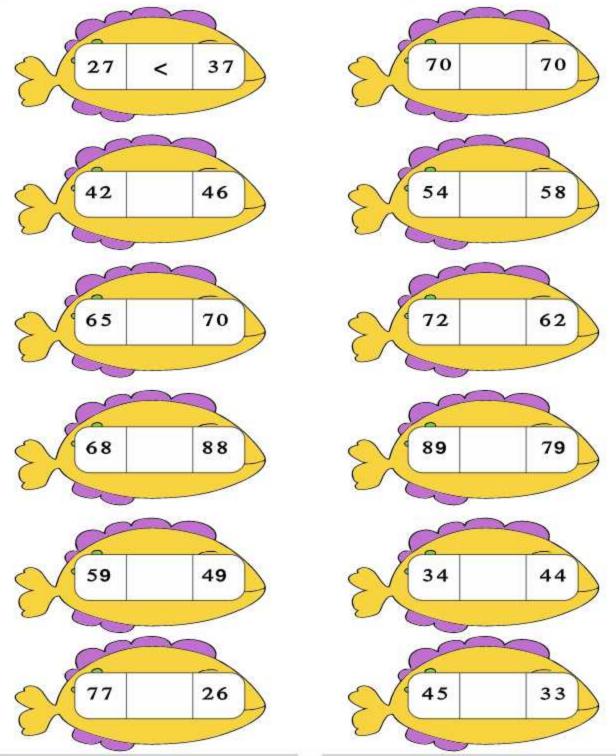
4. If both the numbers have same digits at tens and one place, the numbers are equal.

$$22 = 22$$

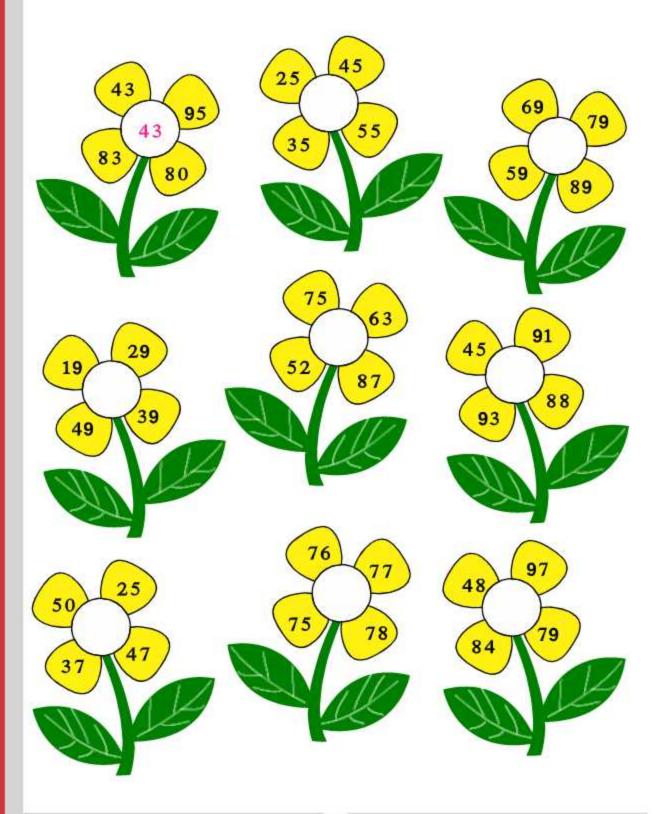




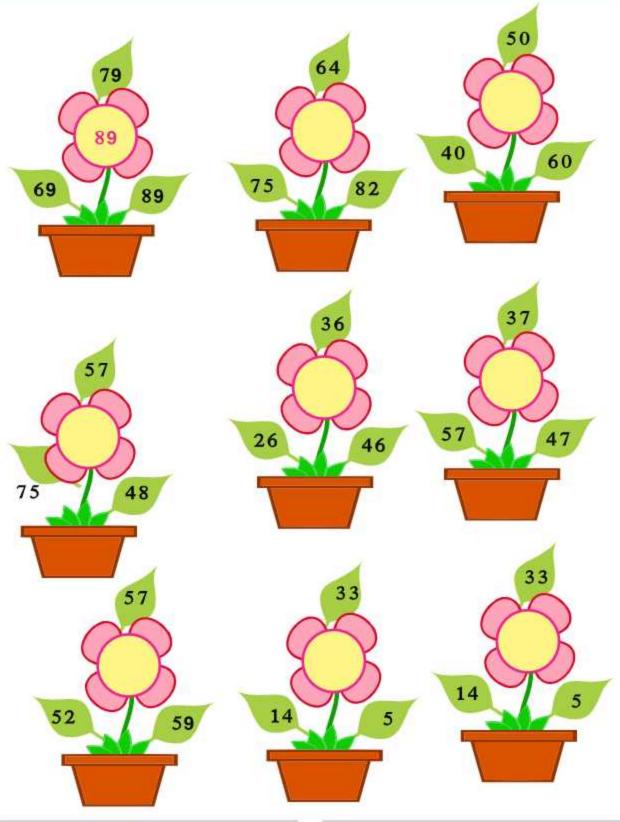
# Fill in the blanks with >, < or = symbols



### 2. Write the smallest number in the centre of the flower

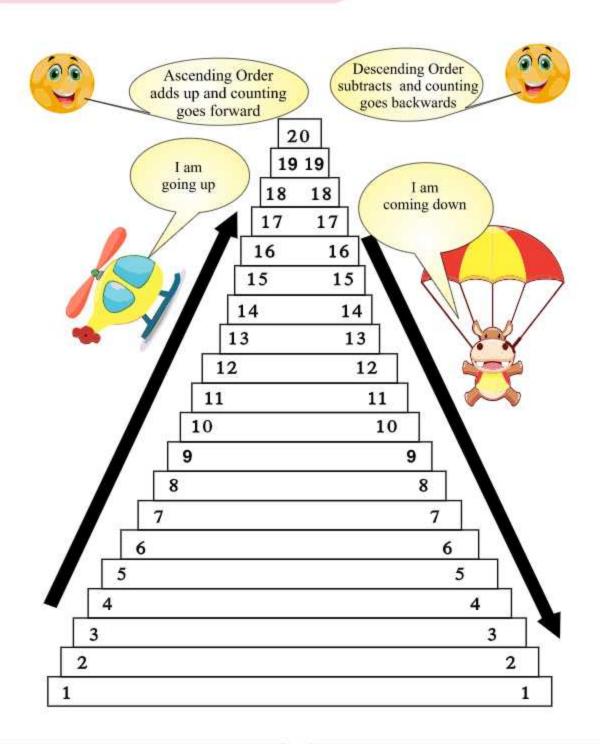


## 3. Write the greatest number in the centre of the flower.





### **Ascending Order-Descending Order**

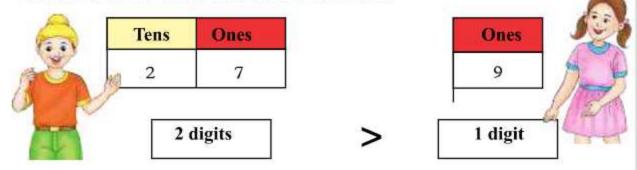




#### **Ascending Order, Descending Order**

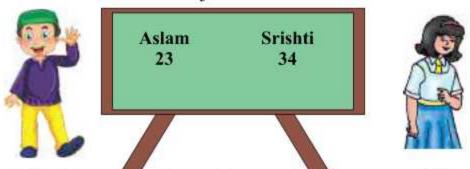


Harjot and Tanisha are playing cricket. Let's see who wins? Harjot has scored 27 runs and Tanisha has scored 9 runs.



27 > 9

Since 27 is greater than 9. Harjot has won.



Aslam and Sirshti are playing cricket. Aslam has scored 23 runs and Srishti has scored 34 runs.

Since the number of digits in the scored runs is qual, now compare the tens place digit.

Tens	Ones		Tens	Ones
2	3		3	4
				l
		<b>→</b> 2 < 3 <b>←</b>		

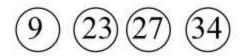
2 is smaller than 3 at tens place which means 3 is greater than 2

Now compare the runs of Harjot, Tanisha,

Aslam and Srishti

27, 9, 23, 34

To find the highest scored runs, write numbers in ascending order



When numbers are arranged from smaller number to greater number, it is called ascending order.

Now, look at these numbers

34 27 23 9

When numbers are arranged from greatrer number to smaller number, it is called desending order/



#### 1. Write in ascending order

5, 96, 19, 89

39, 59, 89, 69 \_\_\_\_\_ \_\_\_\_

#### 2. Write in descending order

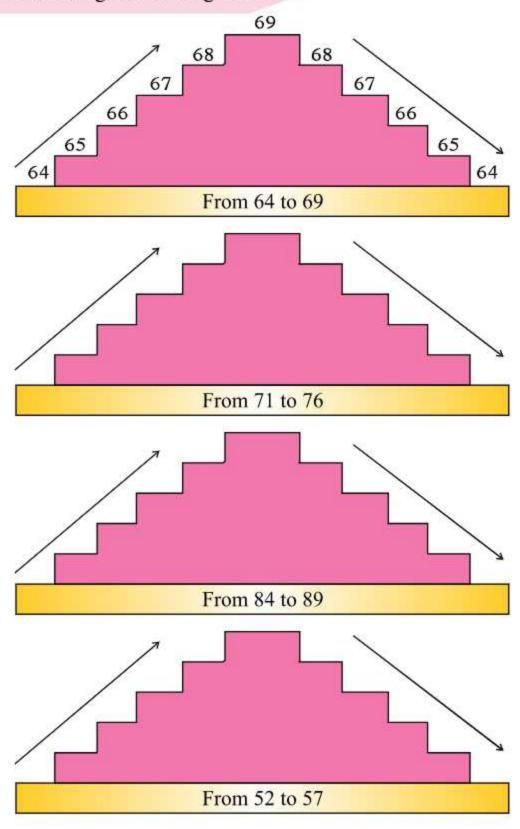
10, 73, 98, 27 98 73 27 10

58, 43, 27, 10 \_\_\_\_\_ \_\_\_\_

95, 34, 81, 23

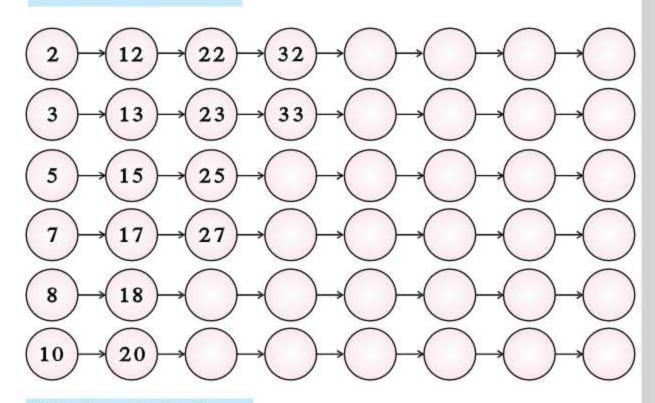
99, 79, 89, 29

## Write Ascending/Descending Order

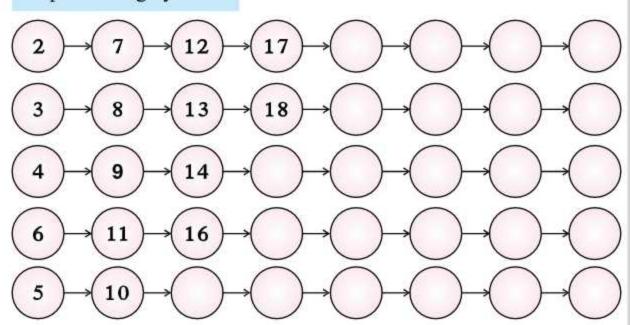


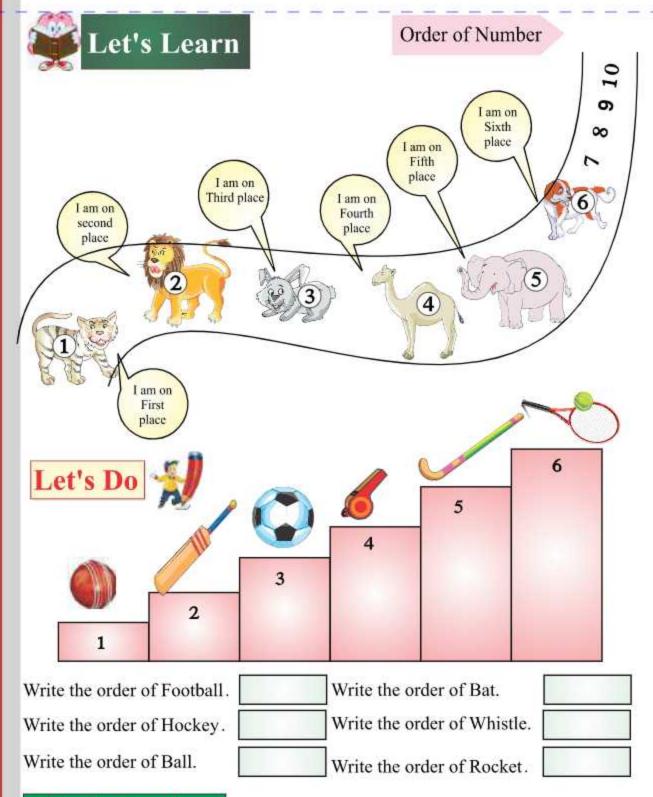
## Counting by Different Methods

### Skip Counting by tens



## Skip Counting by fives



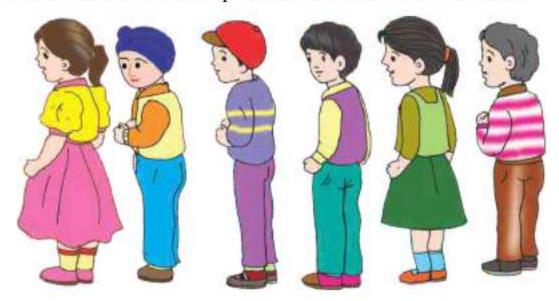


#### **Note for Teachers**

The teacher will make the students stand in a queue and ask each of them about his place. In this way, he will explain the concept of order of numbers.

## Activity

Let the students stand in a queue and ask their number in order.



# Practical Activty

To make two digit numbers with given two digits

Objective — To make the small and the large number by using flash cards of two digits.

Material — Two sets of flash cards from 0 to 9.

 0
 1
 2
 3
 4
 5
 6
 7
 8
 9

 0
 1
 2
 3
 4
 5
 6
 7
 8
 9

Method 1: Teacher will call a child and ask him to pick any two cards.

Like- 4 6

2. By using those cards the students to form a smaller number.



3. Similarly she/he will tell them to make greater number.



- Write these numbers on the blackboard and discuss about smaller and greater number.
- 5. Teacher will now call three students and ask then to pick any 2 flash cards each.



- 6. She/he will tell them to make different numbers from flash cards.
- Then she/he will ask them about the smallest and the greater number out of them.



1. Write two digit numbers from given digits:

3,4	2,7	5,3
1,5	7,9	6,9
7,8	6,9	2,7

## Counting from 101 to 200

In Fig.	In words	In Fig.	In words	In Fig.	In words	In Fig.	In words
101	One hundred one	128	One hundred twenty	154	One hundred fifty four	179	One hundred seventy
102	One hundred two	100	eight	155	One hundred fifty five		nine
103	One hundred three	129	One hundred twenty nine	156	One hundred fifty six	2022	One hundred Eighty
104	One hundred four	130	One hundred thirty	157	One hundred fifty seven	181	One hundred Eighty one
105	One hundred five	131	One hundred thirty one	150	One hundred fifty eight	182	One hundred Eighty
106	One hundred six	132	One hundred thirty two				two
107	One hundred seven	133	One hundred thirty	1655020	One hundred fifty nine	183	One hundred Eighty three
108	One hundred eight		three		One hundred sixty	184	One hundred Eighty
109	One hundred nine	134	One hundred thirty four	a execut	One hundred sixty one		four
110	One hundred ten	125		162	One hundred sixty two	185	One hundred Eighty
111	One hundred eleven	135		163	One hundred sixty three		five
112	One hundred twelve	0.000	One hundred thirty six	164	Diff.	186	One hundred Eighty six
100000	One hundred thirteen	137	One hundred thirty seven		One hundred sixty four	187	One hundred Eighty
1111000	One hundred fourteen	138	One hundred thirty	annes.	One hundred sixty five	400	seven
1000		,,,,	eight		One hundred sixty six	188	One hundred Eighty eight
1000	One hundred fifteen	139	One hundred thirty	167	One hundred sixty seven	189	One hundred Eighty
	One hundred sixteen		nine	168	One hundred sixty	355	nine
117	One hundred seventeen	140	One hundred forty	100	eight	190	One hundred Ninety
118	One hundred eighteen	141	One hundred forty one	169	One hundred sixty nine	191	One hundred Ninety
2000	One hundred nineteen	142	One hundred forty two	170	One hundred seventy		one
120	One hundred twenty	143	One hundred forty three	171	One hundred seventy	192	One hundred Ninety two
121		144	One hundred forty four		one	193	One hundred Ninety
	one	145		1/2	One hundred seventy two		three
122	One hundred twenty two		One hundred forty six	173	One hundred seventy	194	One hundred Ninety four
123	One hundred twenty	147	One hundred forty	174	three One hundred seventy	195	One hundred Ninety five
	three		seven		four	100	
124	One hundred twenty four	148	One hundred forty eight	175	One hundred seventy five		One hundred Ninety six One hundred Ninety
125	One hundred twenty	149	One hundred forty nine	176	One hundred seventy		seven
	five	150	One hundred fifty	170	six	198	One hundred Ninety
126	One hundred twenty six	151	One hundred fifty one	177	One hundred seventy seven	199	eight One hundred Ninety
127	One hundred twenty	152	One hundred fifty two	170	49 W W W W	133	nine
	seven	153	One hundred fifty three	1/8	One hundred seventy eight	200	Two hundred

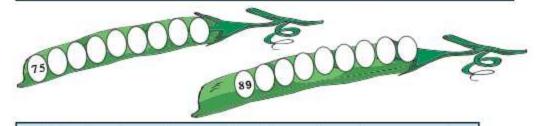
#### **Note for Teachers**

Similarly The teacher will tell the students to write counting and the number names upto 999.



 In the given picture first given the number of stars and then write the actual number after counting them. Guess- ..... Actual number of stars- ..... 2. Fill in the blanks What comes just before? 3. What Comes just after What comes In-between Fill in the blanks (>, <, =)Match the number names with the numerals Eighty Seventy Ninety Seventy Ninety Three Nine Nine Two Eighty Ninety Nine Seven Seventy Eighty Ninety Eighty Eight Five

6. Write the forward counting from the given number



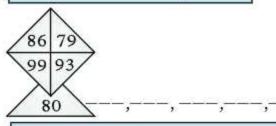
7. Write backward counting from the given number

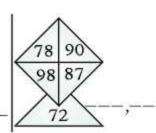


8. Write each of the following numbers in the expanded form

9. Form numbers for each of the following

10. Write in ascending order





11. Write the following in figures



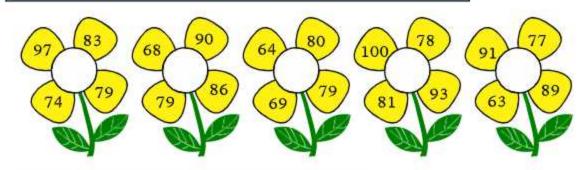
## 12. Encircle the greatest number

89	98	79
90	97	63

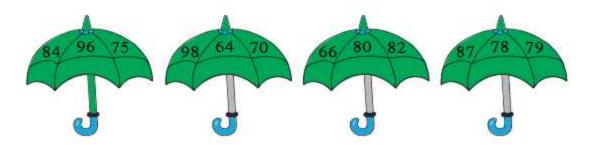
96	78	69	
88	89	71	

77	83	68	
93	47	69	

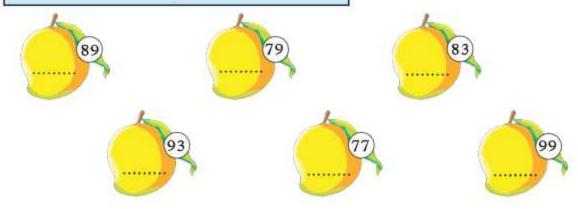
## 13. Write the greatest number in the centre of the flower.



## 14. Write the numbers in decreasing order



## 15. Write the following numbers in words

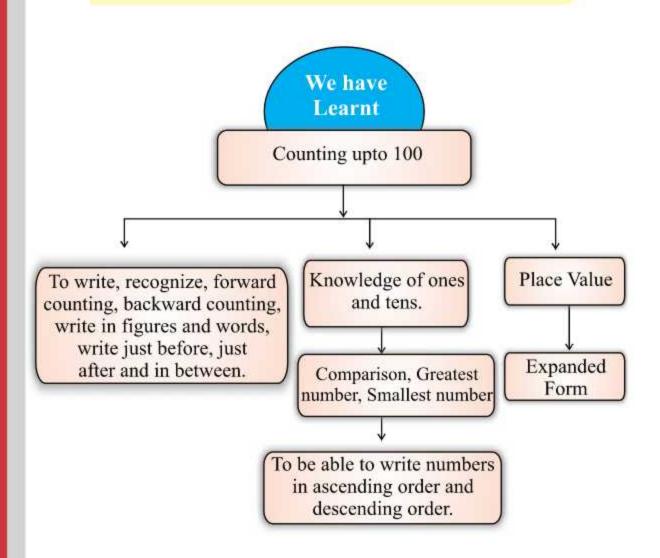


16. Tell the place value of the encircled digit :
$1 \otimes =$ The place value of 8 is
$\Im 4$ = The place value of 5 is
62 = The place value of 6 is
$7\overline{7}$ = The place value of 7 is
17. Skip counting by tens
$ \begin{array}{c} 4 \\ \hline  14 \\ \hline  24 \\ \hline  \end{array} $
7
18. Skip counting by fives
$3 \rightarrow 8 \rightarrow \bigcirc \rightarrow \bigcirc \rightarrow \bigcirc \rightarrow \bigcirc$
$6 \rightarrow 11 \rightarrow \bigcirc$
19. Write two digit number using given digits
(i) 2, 5 (ii) 3, 4 (iii) 3, 4
(iii) 7, 8 (iv) 1, 6
(V) 5, 7 (Vi) 2, 8 (Vi) 2, 8
20. (i) How notes of ₹10 and ₹1 make the number 54?
(ii) How notes of ₹10 and ₹1 make the number 72 ?



#### Points to Remember

- \* Smallest one digit number 1
- \* Greatest one digit number 9
- \* Smallest two digit number 10
- \* Greatest two digit number 99



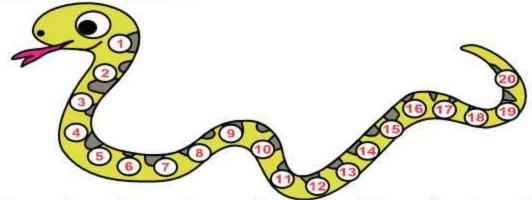


### **ADDITION-SUBTRACTION**

#### **OBJECTIVES**

- Solving problems of addition-subtraction orally and with the help of pictures.
- \* Estimating the result of addition and subtraction and comparing with the results of other given numbers.
- \* Explaining orally similar rules of addition and subtraction facts.
- \* Addition and subtraction of zero to a number.
- \* Arranging the two digit numbers in columns of ones and tens, Adding-subtract with regrouping and without regrouping.

#### Do You Remember

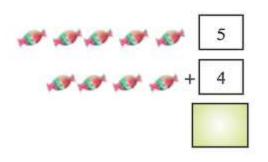


Add or subtract the numbers written in the picture of snake and write the answers in the given boxes.

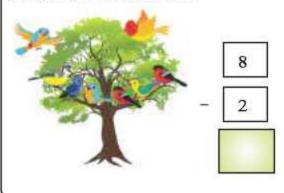
$$9 - 5 = 9 - 3 = 9 -$$

$$6 - 3 = 5 - 3 = 5$$

Amrit has 5 toffees. His teacher gives him 4 more toffees. How many toffees does he have?



8 birds were sitting on a tree. 2 birds flew away. How many birds are left on the tree now?



Amrit has 6 beads. How many more beads does he need to make them 10 in number? (Ask orally)

Rafiq has 10 beads. How many beads does he give to Simmy so that he is left with 4 beads? (Ask orally)



## Let's Learn

#### **PROPERTIES OF ADDITION**



Students, to add two numbers, sign '+' used. This sign '+' depicts/ represents addition. Now let us study the properties of Addition. The numbers that we add are called addends.



The sum of two numbers does not change when the order of the addends is changed.

Look at the black-board

$$5 + 6 = 11$$
 $6 + 5 = 11$ 
 $5 + 6 = 6 + 5$ 



#### **Note for Teachers**

Teacher will tell the students by giving different examples that the sum of two numbers does not change when the order of addends is changed.



When we add '1' to the given number, we get the next number (successor)

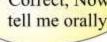
6

3

Look at the blackboard

> Correct, Now tell me orally.

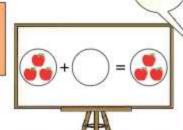






When we add Zero to a given number, the sum is

the given number.





Correct, tell me orally.

## Let's Do



#### Difference



Students, to subtract smaller number from the greater number sign of '-' is used. This sign of '-' represents subtraction. Lets, now study the properties of subtraction.



When we subtract 1 from a number, we get the preceding number or the number just before it.

3	2.77	1	=	2



There is no change if we subtract 0 from a number.



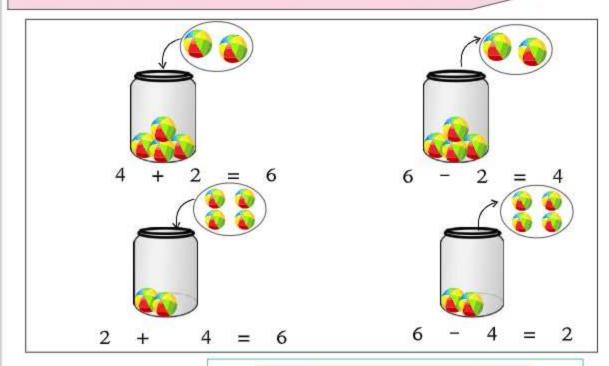
Subtracting number from the same number, we get zero ('0')

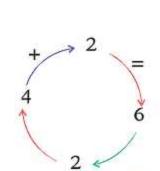
## Let's Do



49

### Addition and Subtraction - In terms of Inverse Operations





4 + 2 = 6

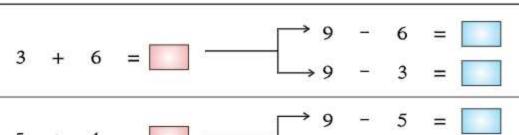
2 + 4 = 6

6 - 2 = 4

6 - 4 = 2

Addition and Subtraction are inverse operations. For each addition fact, we can write a corresponding subtraction fact

## Let's Do





Addition of 1 digit number with 2 digit numbers (without carrying



I have pencils of 10 colours.

Sukhdev Singh



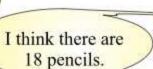
I have pencils of 8 colours.

Bunty



Rahim

How many pencils are there with both boys?



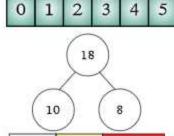


Tarleen



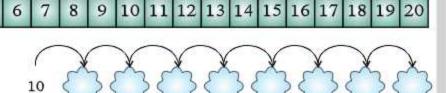
Let us do the sums with the help of number strip.

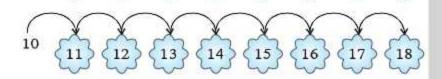
#### (a) Addition on Number strip



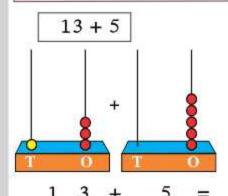
	Tens	Ones
	1	Ō
+		8
	1	8

1 Tens 8 Ones.





#### (b) Addition with Abacus

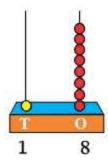


- Put the beads in Abacus according to the given number.
- Now put the beads of one's place of both numbers in a single stick and count.
   3+5=8
- Now put the bead of tens place in a single stick and add.

$$1 + 0 = 1$$

4. Now add ones and tens. 1 tens and 8 ones

$$10 + 8 = 18$$



	Tens	Ones
	1	3
+		5
	1	8

#### (c) Add With Currency Notes

$$36 + 3$$



- Method: 1. Take currency notes according to given numbers.
  - 2. Firstly, add currency notes of ones.

$$6 + 3 = 9$$

3. Now add currency notes of tens.

$$3 + 0 = 3$$

4. ...3 tens and ....9 ones

$$30 + 9 = 39$$

Method: 1. Write the digits of addends in boxes.

7	0
0	9

2. Write the numbers in ones and tens:

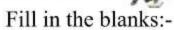
7	0	7 tens + 0 ones	0 ones
0	9	0 tens + 9 ones	9 ones

3. Add ones:

4. Add tens:

$$70 + 9 = 79$$

## Let's Do



$$20 + 7 =$$
 $40 + 8 =$ 
 $50 + 9 =$ 
 $70 + 6 =$ 

$$30 + 2 =$$
 $60 + 5 =$ 
 $80 + 4 =$ 
 $90 + 3 =$ 

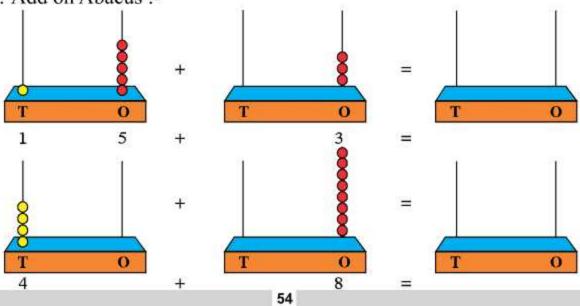
#### 2. Fill in the blanks:-

#### 3. Fill in the blanks:-

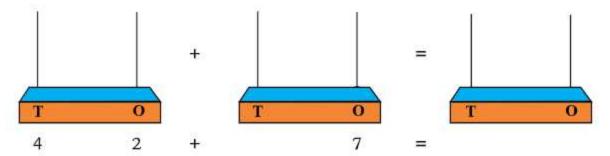
#### 4. Split the given numbers into tens and ones.

39	=	*****	Tens	+		Ones
45	=		Tens	+	*****	Ones
72	=		Tens	+		Ones
74	=	*****	Tens	+	*****	Ones

#### 5. Add on Abacus :-

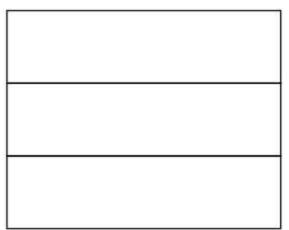


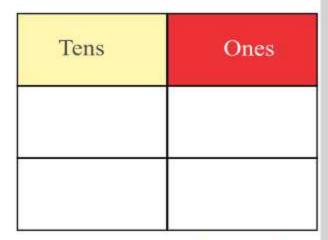
6. Draw beads on Abacus and add.



7. Show currency notes for the given numbers and then add them.

$$56 + 3$$





 There are 10 red apples in a basket and 8 green apples in second basket. How many apples are there in two baskets.



9. Rajia has 14 toffees. Her mother gives her 5 more toffees. How many toffees does Razia have now?



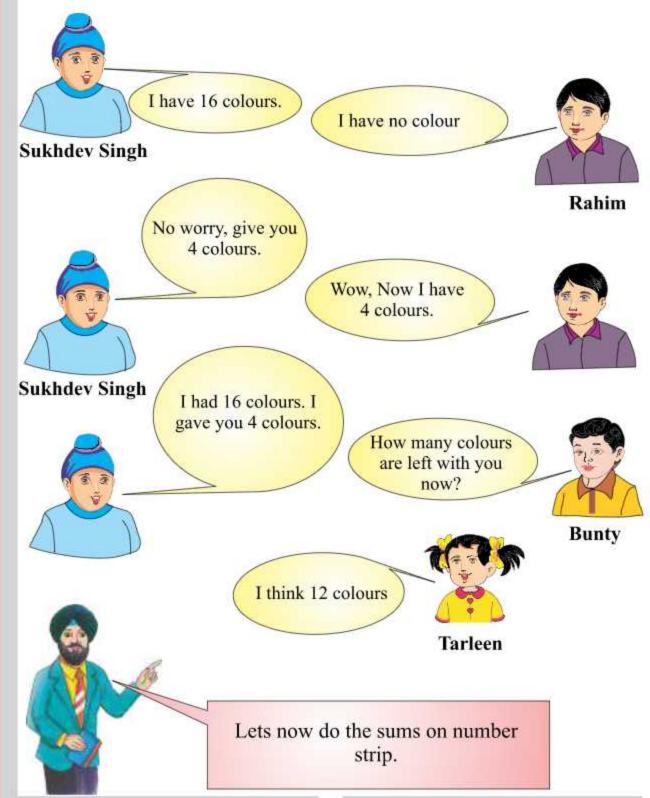
10. One tomato plant has 12 tomatoes and the other has 7 tomatoes. How many tomatoes are there on the two plants?



#### **Note for Teachers**

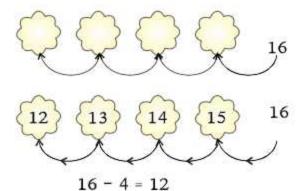
- \* To develop the understanding of addition and subtraction by packing up currency notes according to the given numbers. Do this activity only after discussion with the students.
- \* Do the sums in copy only after the concept is clear.

#### Subtraction of 1 digit number from 2-digit number (without borrowing)



#### a. Subtract with the help of number strip.

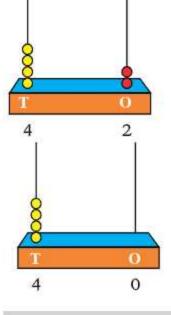
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
14		4				u V		1,7				1	入	入	入	J				



	Tens	Ones
	1	6
-		4
	1	2

#### b. Subtract with Abacus

42 - 2



- Method: 1. Put beads in abacus according to the given sum.
  - 2. Take out the beads from stick of one's place of given number.

$$2-2=0$$

3. Take out beads of tens place as given in the sum from the stick.

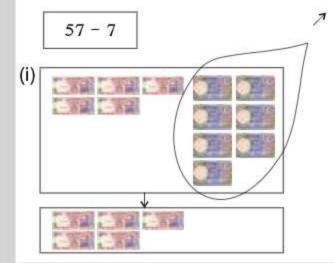
$$4 - 4 = 4$$

4. Write tens, ones

$$4 \text{ Tens} = 0 \text{ ones}$$

$$= 40 + 0$$

#### c. Subtraction Using Currency Notes



Method:1. Pick the currency notes according to the given greater number.

2. Subtract ones place from one's place.

$$7 - 7 = 0$$

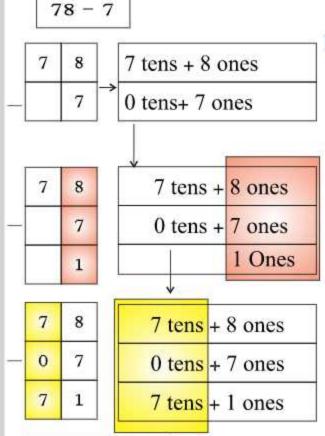
3. Subtract ten place from ten place.

$$5 - 0 = 5$$

4. Count remaining tens, ones.

5 tens + 0 ones

#### d. Subtract by Spilitting into Tens and Ones



78 - 7 = 71

#### Method:

- 1. Write the digits of given sum in columns of the tens and ones.
- 2. Write number in tens and ones.
- 3. Subtract ones from ones.

$$8 - 7 = 1$$

4. Subtract tens from tens.

$$7 - 0 = 7$$

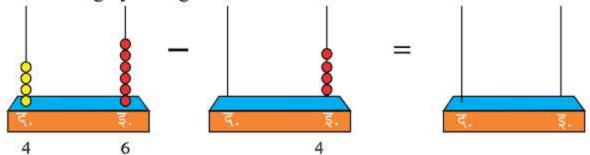
5.7 tens, 1 ones

$$6.70 + 1$$



1. Fill in the blanks:-

2. Subtracting by taking out beads from abacus.



3. Subtract with currency notes

```
65 - 5
```

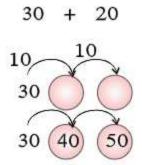
4. Subtract after splitting in ones, tens.

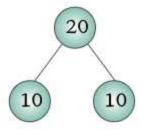
	8	6	<b>]</b> →	tens	+ ones
-		2	<b>→</b>	tens	+ ones
ļ			]	···· tens	+ ones

- 5. There were 24 oranges in a basket. 3 oranges were eaten from the basket. How many oranges were left?
- 6. There are 37 apples in an apple box. 5 apples are rotten and thrown away. How many apples are left?

#### Addition of 2-digit numbers with 2-digit numbers (without carrying)

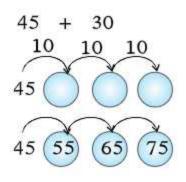
## (a) by Splitting a number

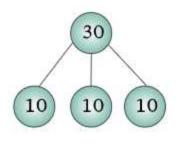




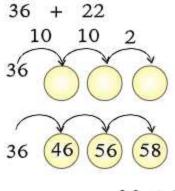
	T	o
	3	0
+	2	0
	5	0

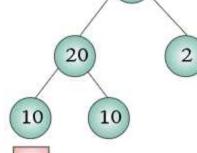
$$30 + 20 = 50$$





	T	o
	4	5
+	3	0
	7	5





22

	T	o
	3	6
+	2	2
	5	8

36	+	22 =	5
36	+	22 =	3

#### **Note for Teachers**

Firstly ask the students about splitting of numbers. Then let them practice the sums.



(a) Add by splitting a number.

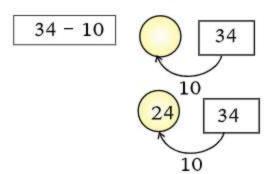
(1) 40 + 20	(2) 78 + 21
(3) 56 + 40	(4) 30 + 22

- 5. Avneet planted 20 rose plants and 10 marigold plants in her flowerbed. How many total plants were planted by Avneet?
- 6. Sanjeev had 30 balloons. Bobby gave him 15 more balloons. How many balloons does sanjeev have now?
- 7. There are 18 girls and 21 boys in the IInd class. How many total students are there in the class?

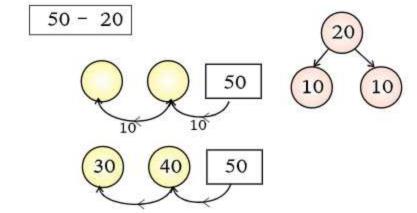


Subtraction of 2 digit numbers from 2 digit numbers (without carrying)

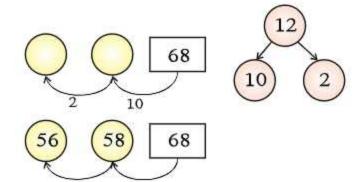
## Splitting a number



	T	o
	3	4
_	1	0
N X	2	4



	T	0
	5	0
_	2	0
	3	0



0	T	o
	6	8
=	1	2
	5	6



1. Subtract after splitting a number

40 - 20	76 - 36
54 - 40	85 - 14

- 2. There were 30 oranges in a basket. 20 oranges were taken away from the basket. How many oranges were left in the basket?
- 3. There were 40 students in a class. Out of them, 30 students participated in a race. How many students did not participate in the race?
- 4. There are 28 stories in a story book. Raman read 20 stories out of them. How many stories are left to be read?
- 5. Jasveer has 42 pearls. He has made a necklace of 35 pearl. How many pearls are left unused?
- 6. Lakhwinder had 67 pencils. He distributed 36 pencils among his class on his birthday. How many pencils are left with him?
- 7. Ginny had 98 rupees. She bought a doll of 86 Rupees. How much money is left with her?



Addition of 2-digit number with 2-digit numbers. (with carrying)

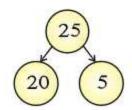
#### (a) By splitting a number

$$37 + 25 = 37 + 20 + 5$$

$$= 37 + 20 + 5$$

$$= 57 + 5$$

$$= 62$$



#### (b) By splitting both numbers

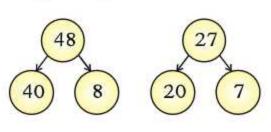
$$48 + 27$$

$$= 40 + 8 + 20 + 7$$

$$= 40 + 20 + 8 + 7$$

$$= 60 + 15$$

$$= 75$$



## (c) Expansion method

Step 1

53 + 48 = Tens Ones 5 3 + 4 8

#### Step 1

+	3	Ones
+	8	Ones
	11	Ones
	+	+ 3 + 8 11

Because 10 Ones = 1 ten, 11 Ones = 1 tens 1 ones

#### Step 3

1 ten	
5 tens	+ 3 ones
4 tens	+ 8 ones
10 tens	+ 1 ones

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

$$= 100 + 1 = 101$$



#### 1. Add by splitting a number:

44 + 37	52 + 48

#### 2. Add by splitting both numbers:

58 + 46	62 + 29	

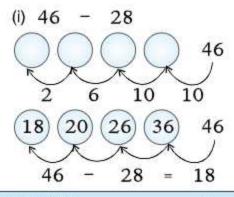
#### 3. Add with expanded form:

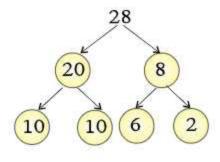
28 + 28	36 + 36

- 4. There are 28 students in class II. Two new students are admitted. How many students are there in the class II now?
- 5. There are 64 trees in a village. Villagers planted 26 more trees. How many trees are there in the village now?

#### Subtract of 2-digit numbers from 2-digit numbers (With borrowing)

#### (a) By Splitting a number



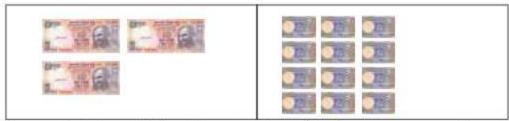


#### (b) With currency notes

42 - 19 = (i) Pick currency notes according to the given number.



(ii) Pick currency notes according to the given number. Because 9 > 2, Rupees 9 can't be subtracted from ₹2. Therefore take ten notes of ₹1 for a ten's note. By adding there will be 10 + 2 = 12 One rupee notes.



(iii) Now from subtrahend 19 subtract notes of 1-1 rupees according to ones place (that is 9).



(iv) Now subtract one 10 rupees note from tens place of subtrahend.



(v) Now count and write.

20	3

Let's Do

### 1. Subtract by splitting a number:

30 - 18
76 - 57

- 2. There are 20 flowers on a rose plant. 14 flowers fell down because of rain. How many flowers are left on the plant?
- 3. There were 91 mangoes on a cart of fruits. 57 mangoes were sold away. How mangoes were left on the cart?



### Addition-Subtraction with Playway Method

Objective: Add-subtract (orally)

Material: 1. Two dice, from which:

- (i) '+' sign on 3 faces of first dice.
  - '-' sign on 3 other faces of first dice.
- (ii) Write 1, 2, 3, 10, 20, 30, on second dice
- 2. Chart 3. Marker
- Method: (i) Write counting from 1 to 100 on chart and paste It on cardboard.
  - (ii) This game can be played by 2-3 students.
  - (iii) Both the students will put their tokens on the number 30.
  - (iv) First child will throw both the dices together.
  - (v) He will move his token forward or backward according to number on one

1	2	3	4		6		8		
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35		37	38	39	40
41	42	43	44	45	46	47	48	49	50
	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

token must move to 33.

(viii) Similarly, the game will continue. The child who reaches first at number 100, will be a winner. 10



dice and '+' '-' sign on the other dice.

- (vi) For example: if child's token is on 51 and it comes '+' and '10' on two dice then token must move to 61.
- (vii) If other child's token is on 36 and it comes '-' and '3' on the dice. Then his

1	2	3	4	5	6	7	8	9	10
11	12	13	19	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32		34	35	36	37	38	39	90
91	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83		85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

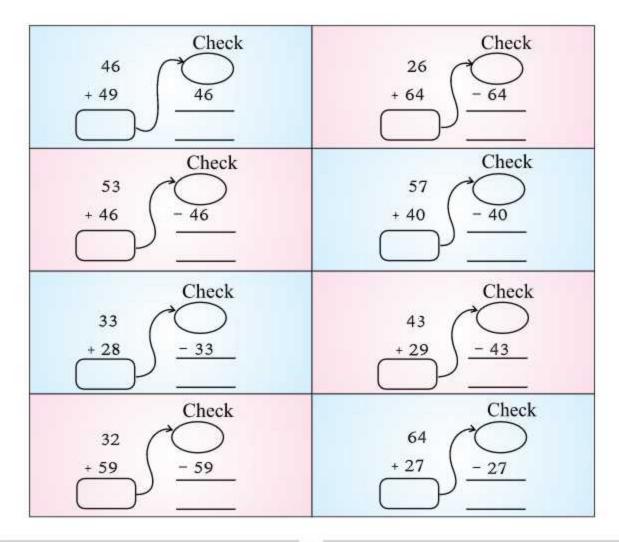




#### Add the numbers and check

Check
72 (96)
+ 24 ( - 72
96 24

# Let's Do





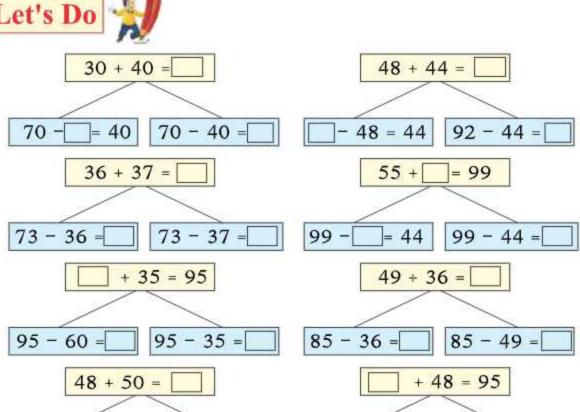
Relationship between Addition-Subtraction

# Let's Do

= 50

98 -

98 - 50 =



95 - 47 =

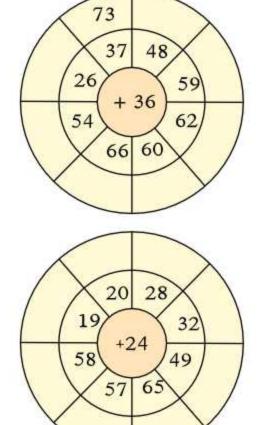
95 - 48 =

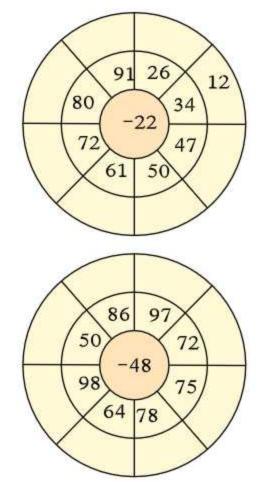
# **Brain Teaser**

+	50	42	34	26	18
30					
32	-		<b>→</b> 66		
35			12	**	
37	-				> 55
39					

+	36	40	56	29	32
10					
15					
17	6				
19					
22					

### Add/Subtract





### **Brain Teaser**



# Can you help me to sail my boat through water























# **Brain Teaser**

## Think, Understand and Do:

9

+

9

6

10 - 5 =

6

3 + 3 =

-

4

6 + 8 =

+

6 =

=

9 + =

+

30 + 7 =

=

26 - = 10

- | +

16 + 14 = 5

25 - =



Objective: Doing Addition as brain workout.

Procedure:\* The team, who reaches first at 50 by using numbers 1, 2, 3, 4, 5, 6 ....., will win.

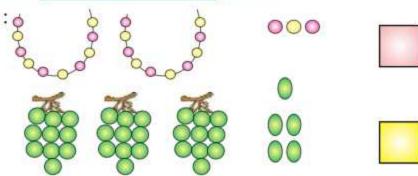
- \* This game can be played by two students or 2-teams.
- \* Suppose one team is A and other team is B.

Α	2			15			29			49	
	+ 3	В		+ 4	В		+6	В	Α	+1	
- <del></del>	5		S	19		-	35			50	
Α	+ 1		Α	+3		Α_	+1	122			Τ.
_	6		(==	22			36 +4	В			
	+ 3	В		+6	В		40	-			
-	9		9	28	Ī	A	+3				
Α	-		۸				43				
-	+ 6		Α	+1	1	-	+6	В			
	15			29			49				

A team will become winner by reaching first at total of 50 like this.

# Worksheet

1. Count and Write:



2. Add by Counting forward

Put a (✓) for the correct option.

5. Subtraction by backward counting:

6. Subtract:

7. Add after splitting a number: 48 + 25

8. Choose the correct answer for the word problem and solve it.

(a) Preeti collected a few leaves out of which is were green and three were yellow How many leaves does Preeti have?

(b) 32 birds are sitting on a mango tree out of wheel 22 are pigeons. How many sparrows are there on the tree?

(i) 
$$22 + 32 =$$
 (ii)  $22 +$  =  $32$ 

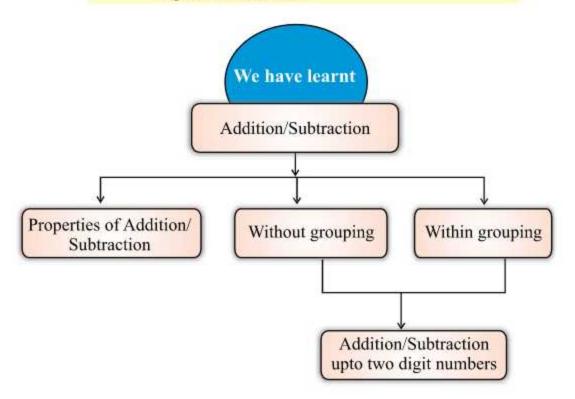
- 9. Match the following:-
  - (i) I bought 16 balloon out of which 9 went up in air. How many ballons do I have now? (i) 20 + ? = 32
  - (ii) My grandmother has a necklace with 32 beads out of which 20 are red coloured and will are yellow coloured How many yellow beads are there?

(iii) I bought 5 roses and 16 marigold flowers. How many flowers do I have? (iii



#### Points to Remember

- There is no change when we add or subtract zero to a number
- \* Addition-Count forward
- Subtraction-Count backwards
- \* Sign of Addition '+'
- \* Sign of subtraction '-'





### **MULTIPLICATION AND DIVISION**

## **OBJECTIVES**

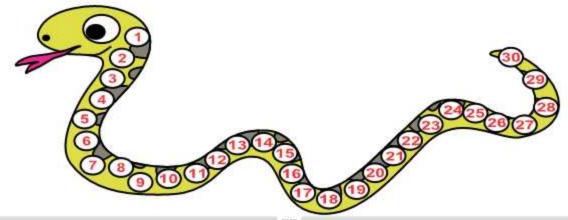
- 1. To understand how to make groups.
- 2. To develop Mulitiplication as Repeated addition of a group.
- 3. To understand the concept of equal sharing.
- 4. Activities to make equal groups.

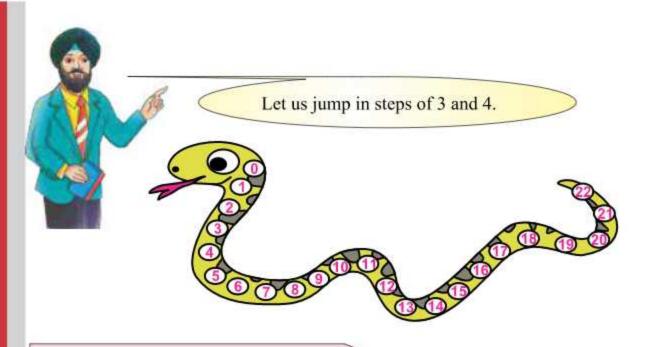
### Do You Remember

# Activity



Let us count by jumping two's.





### To say Counting in different ways

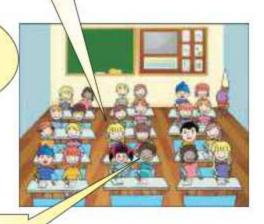


All children take a jump of 2. Where have they reached? Let us speak together.

2, 4, 6, 8, 10, 12, 14, 16 18, 20



Where have they reached by taking jumps of 3 steps? Let us speak together.



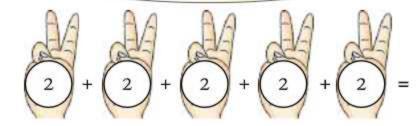
3, 6, 9, 12, 15, 18, 21, 24, 27, 30



### Grouping by 2-2



Students: Raise two fingers of your hand.





5 times two fingers

$$2 + 2 + 2 + 2 + 2 = 5 \text{ times } 2$$
  
=  $5 \times 2$   
=  $\boxed{10}$ 



Put sign 'x' in place of 'times'
× is called multiplication.

What is this addition of the same number time and again called?

Now, Raise three fingers









3 + 3 + 3 = 3 times 3=  $3 \times 3$ 

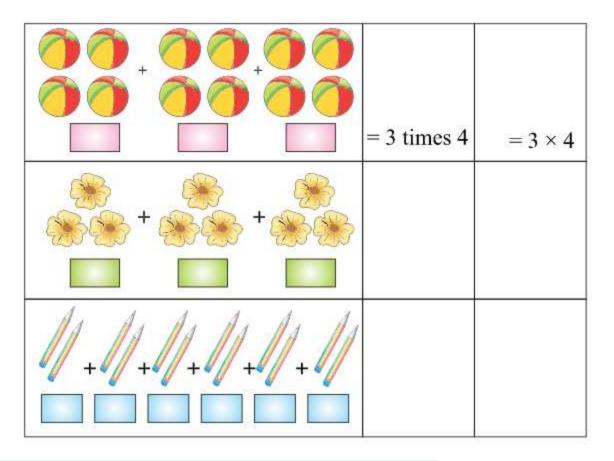
79

3 fingers 3 times



#### Fill in the blanks

#### Count and Write

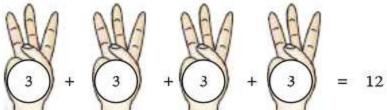


### Add repeatedly and change into Multiplication

$$2+2+2+2+2$$

$$3 + 3 + 3 + 3 + 3 + 3$$







Three fingers of 4 children means 4 times 3

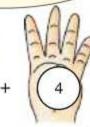
 $4 \text{ times } 3 = 4 \times 3 = 12$ 

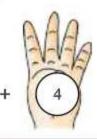


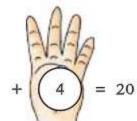
Now the teacher says to five children, to raise 4 fingers of their hand.













5 times 4

5 times  $4 = 5 \times 4 = 20$ 



(2)

Buckets



(2)

Buckets



(2)

Buckets

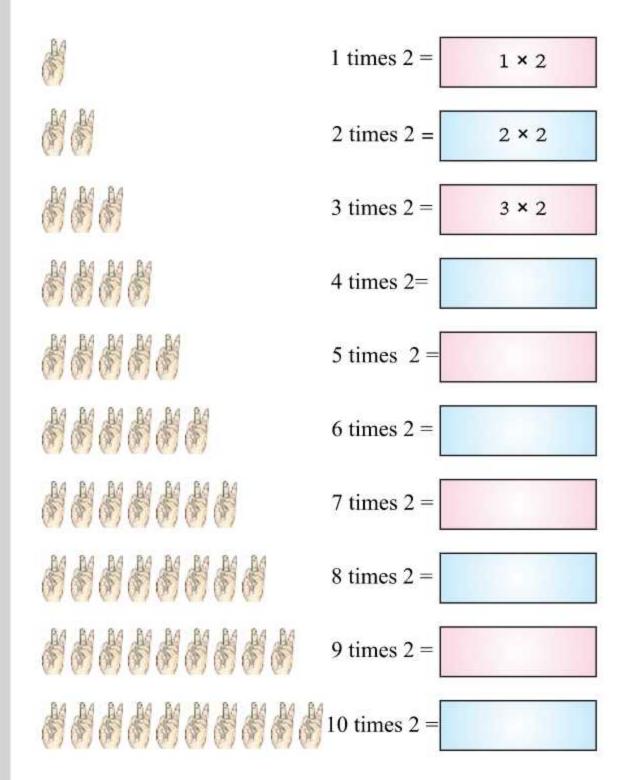


6

Buckets

 $3 \text{ times } 2 = 3 \times 2 = 6$ 

### Write according to group of 2



### Write according to group of 3.

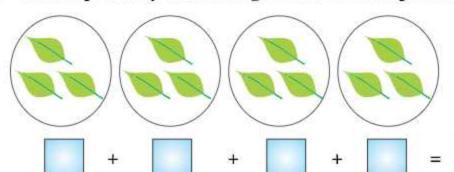
制制								
問題	SE S							
陽陽	多	SE S						
多多	See See	SE S	September 1					
多多	See See	SAN	SA S					
陽陽	38	部	1986	學	Sept.			
問問	SE S	1	1	總	See See	多		
影影	1		學	September 1	38	36	SE S	
陽陽	STATE OF THE PARTY	1	1	SA SA	3	See See	36	986

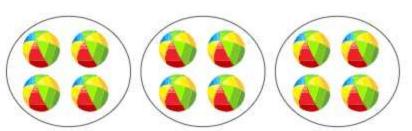
$$1 \text{ times } 3 = \boxed{1 \times 3}$$
$$2 \text{ times } 3 = \boxed{2 \times 3}$$

$$3 \text{ times } 3 = \boxed{\qquad \qquad 3 \times 3}$$

# Let's Do

1. Add repeatedly and change into the multiplication fact.









X

2. Add and change into multiplication fact.

$$3 + 3 + 3 + 3 + 3$$

$$5 + 5 + 5 + 5$$

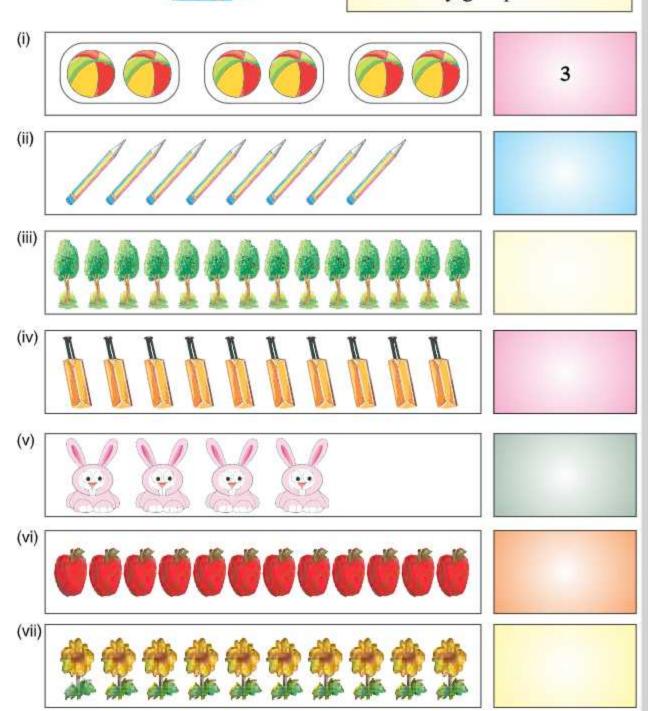
$$1+1+1+1+1+1+1+1 =$$





# Let us make groups of 2

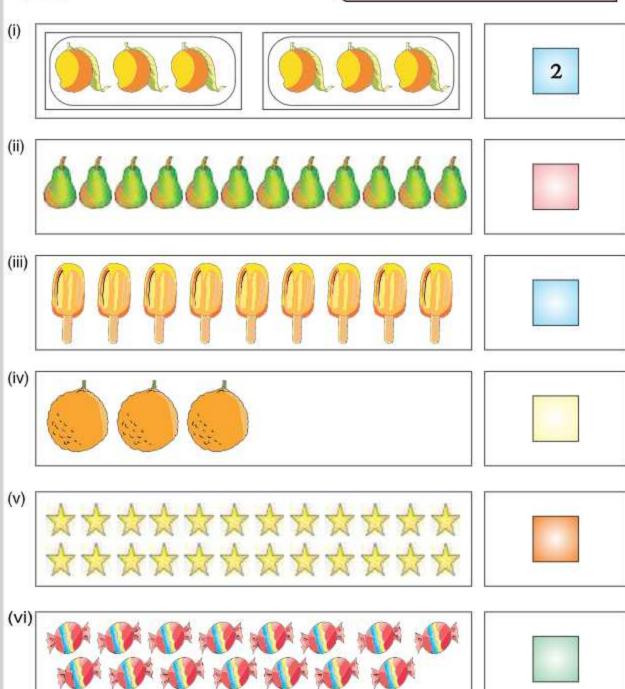
# How many groups are made?



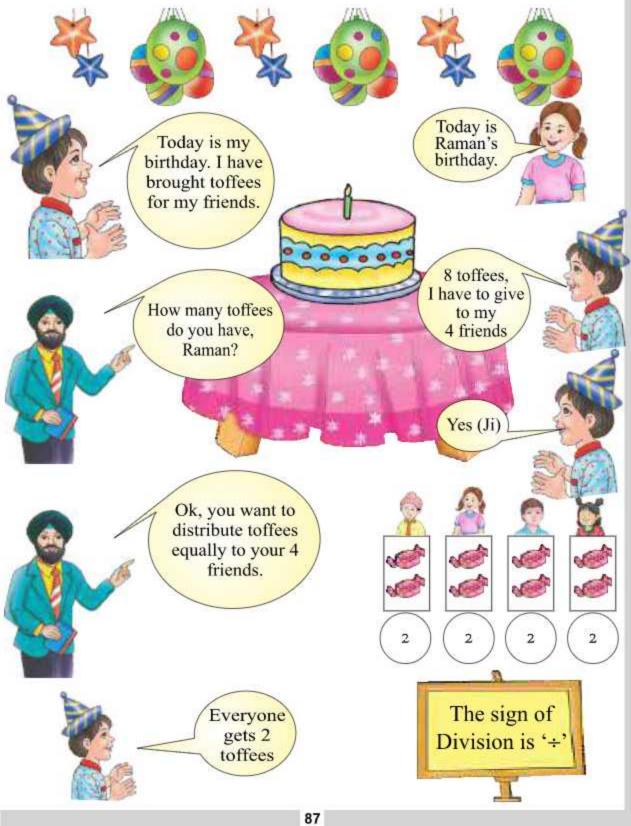


Let us make groups of 3

## How many groups are made?

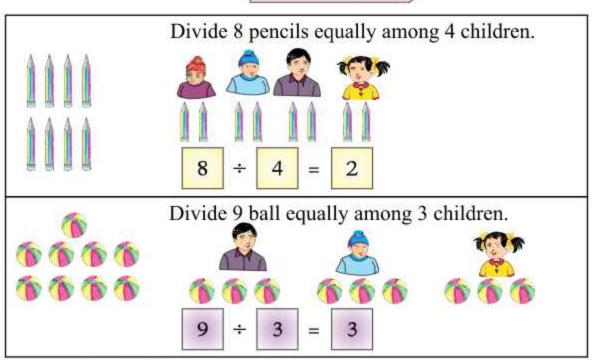


### Birthday of Raman

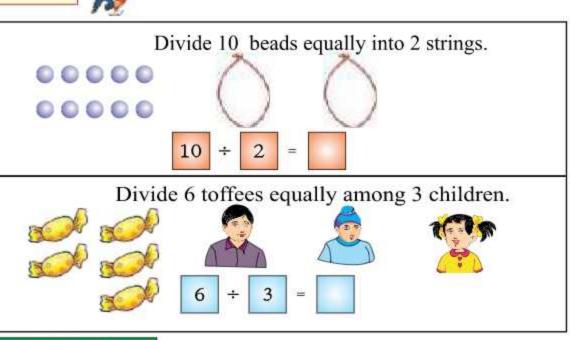




### **Divide Equally**



# Let's Do



#### **Note for Teachers**

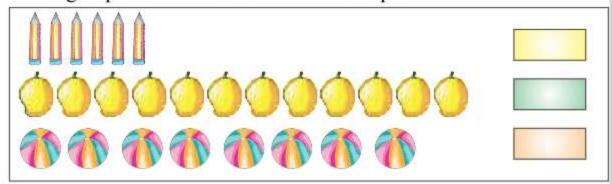
Method to divide equally is called 'Division'. The sign of division is '÷'



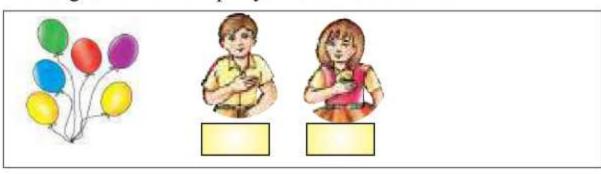
1. Add and write in terms of multiplication fact.

2. Write in terms of multiplication.

3. Make groups of 2-2 and tell the number of pairs.



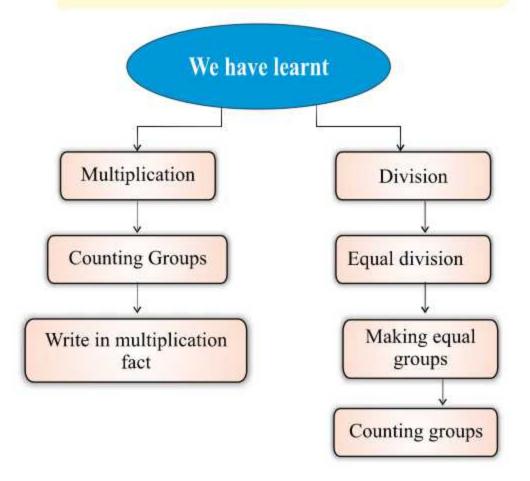
4. Divide given balloons equally between two students.





## Points to Remember

- \* The sign of multiplication 'x'
- \* The sign of division '÷'





# **MONEY (CURRENCY)**

### **OBJECTIVES**

- Identification of currency used in our daily life-Notes and coins.
- 2. Collecting amount of money.
- 3. Using 3-4 currency notes for business purpose.

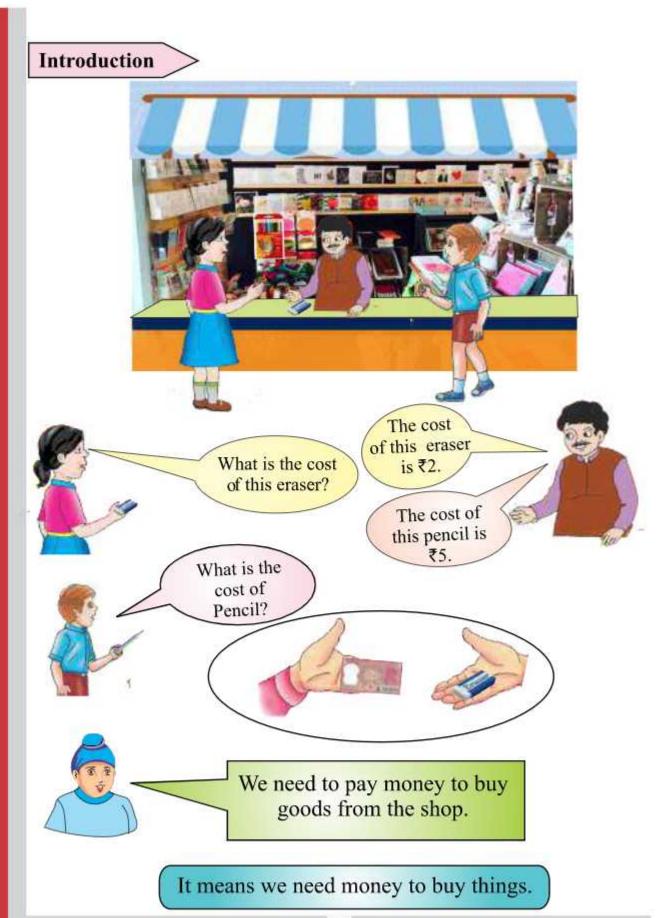
### Do You Remember

#### Value of Notes and Coins



### Convert the given value of ₹ into coins

₹25	₹30





Do you know that the symbol of Rupee is '₹'



Aman, Khushpreet, Harjot went to the bazar.



### How much money did they pay to the shopkeeper?

Aman paid ₹ ..... for a copy to the shopkeeper.

Khushpreet paid ₹ ...... for a pen to the shopkeeper.

Harjot paid ₹ ...... for a book to the shopkeeper.



### **Draw Coins**

5 coins of ₹ 1 =











5 coins of ₹ 2 =











Let's Do



₹4 coins of ₹ 5

₹2 coins of ₹ 5

₹2 coins of ₹ 10

₹5 coins of ₹ 10





Make a garland of given coins and tell the value of coins in the garland.



Number of ₹1 coins in the garland = 10 Cost of the garland = ₹1 × 10 = ₹ 10

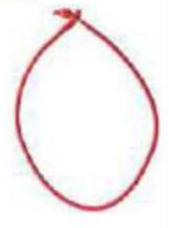
# Let's Do



## **Draw Coins fo your Choice**

Number of ₹2 coins in the garland = \_\_\_\_\_

Cost of garland = -





Number of ₹5 coins in the garland =

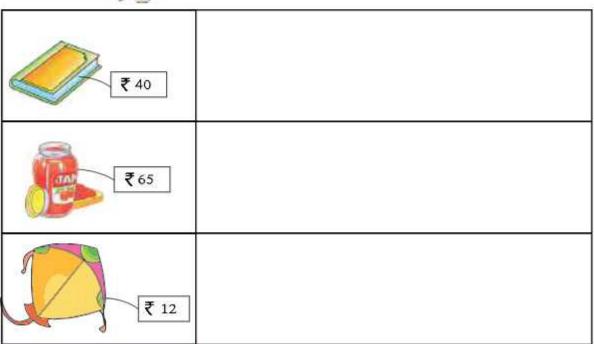
Cost of garland =



### Convert the given value of ₹ into notes & coins.



# Let's Do

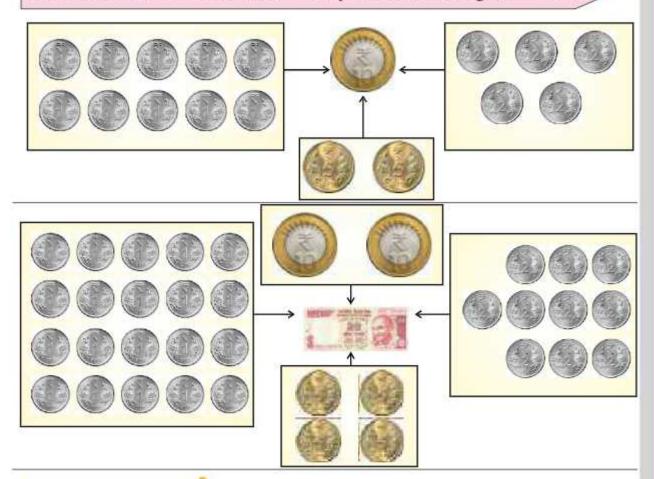


## **Note for Teachers**

Teacher would encourage the students to convert value of given things using different denomination.



## Convert the small coins into currency notes/coins of greater value



# Practical Activty



Take a piece of paper and cut into shapes of different currency notes. Write the value of each note on it and paste over here.



Let us exchange currency notes of greater value into currency notes of smaller value.





### Convert a ₹100 note into currency notes of ₹10 each



### Convert a ₹50 note into coins of ₹ 10 each



### Convert a ₹20 note into currency notes of ₹ 5 each



## Convert a ₹ 10 note into coins of ₹ 2 each

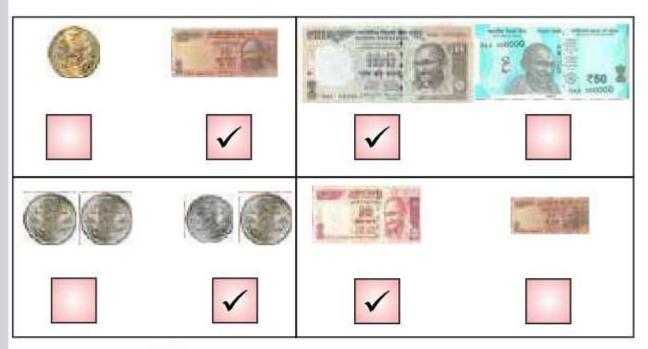


#### Make an amount of ₹20 from the coins of ₹10, ₹5, ₹2 and ₹1.

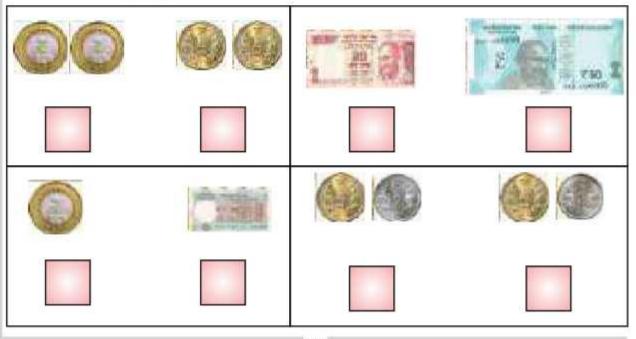




# Put a Tick (✓) for the greater value of money in the given choices



# Let's Do



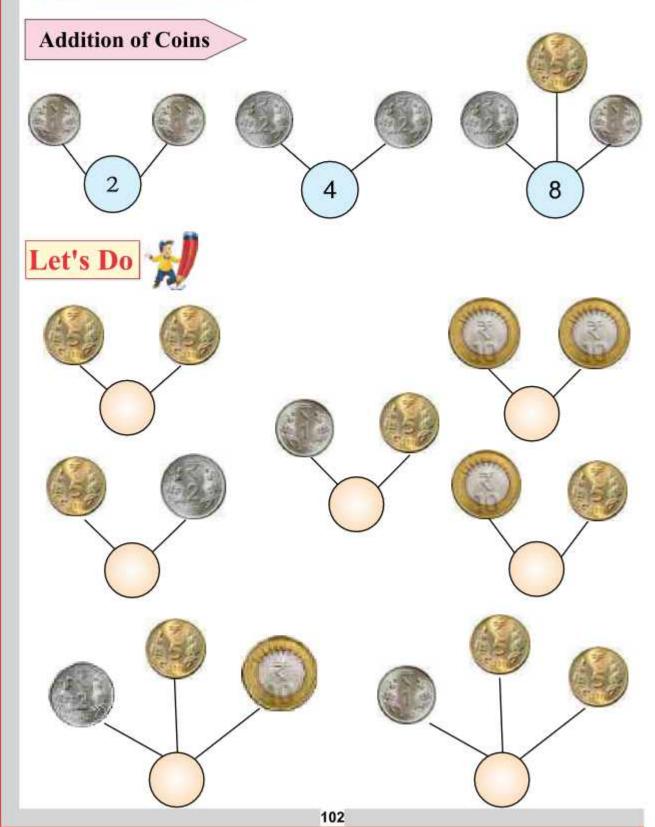
### Write the value of items purchased using the given price of each item



# Let's Do









 Write the number as per the value of given currency notes and coins.



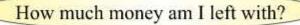
2. Put a tick (✓) in the box for the greater value of money from the given choices.

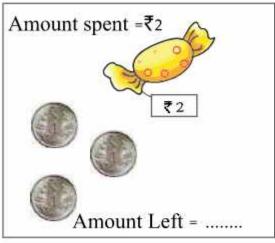


3. Put a tick ( ✓ ) for correct value of coins for the givev value of money.



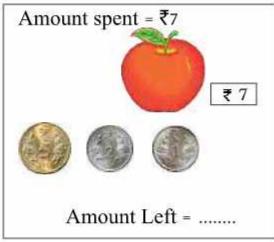
4. Simran bought different things from the shopkeeper as shown in the given pictures. She had money as shown in the picture. How much money is left with her after buying the things?



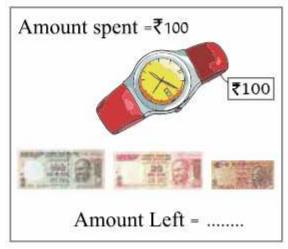










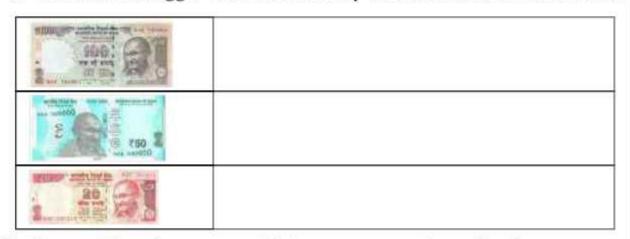


#### 5. Answer the following questions:



#### 6. Convert the bigger value of currency notes/coins into smaller ones.

\* How much more amount of money is there?



### 7. Convert the given amount into currency notes and coins.

₹ 47	
₹ 28	



#### Preparing coins and notes with the help of cardboard and papers.

Material Required- Cardboard, paper, coins, pencils.

#### Procedure-

- 1. Keep a coin under the paper.
- 2. Hold the paper tightly.
- 3. Rub pencil or colours on the coin surface under the paper.
- 4. The picture of coin will get imprinted on the paper.
- Cut out the printed coin and paste it on cardboard and cut the piece of cardboard into shape of a coin.

Take a rectangular shaped paper and cut it into the shape of currency notes and prepare notes using colours.









#### **Note for Teachers**

In a role play activity, give the role of a shopkeeper and buyers to different students and let them pose as stationary, fruits and toys sellers and buyers. Students wil use currency notes and coins prepared by them to buy things.



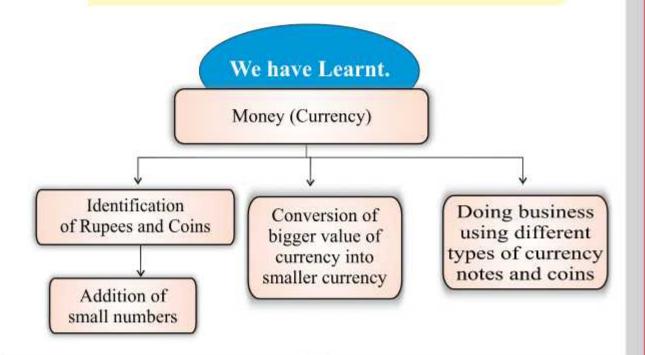
Two rupees are greater than one
Five rupees are greater than two really
Five plus five equals ten
Ten plus ten equals twenty
Fifty are greater than twenty
Think what makes it fifty
Fifty plus fifty equals hundred
Learn it by heart really.





#### **Points to Remember**

Indian currency (Money) includes rupees and paise.



107

# 5

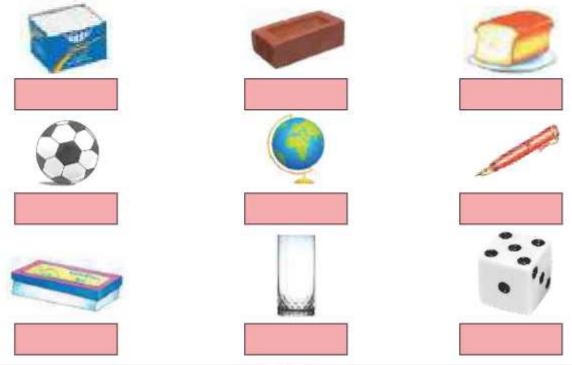
## **SHAPES**

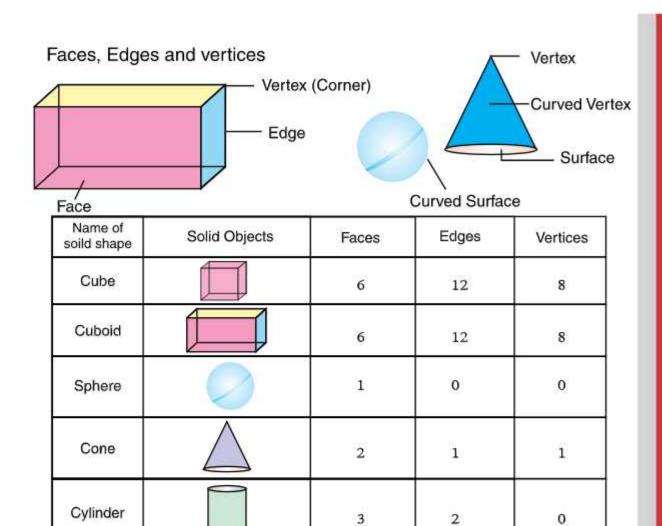
#### **OBJECTIVES**

- Recognise different things around us and be able to classify them according to their characteristics.
- 3. Recognise cube, cylinder, cone and sphere by their names.
- 2. Recognise circle, square, rectangle and triangle by their names.
- 4. Recognise these shapes around us.
- 5. To draw different lines and understand the difference as well.
- 6. Recognise things from their shadows.

#### Do You Remember

1. Write the names of the following items according to their shapes.





## Activity

Solid figures Three dimensional different shapes

In left hand	Ŀ	In right hand
Cha Bo	527.00	Handkerchief
Bri	ck	Chart
Ва	all	Chapati
A Con	ne	Hanger

#### **Note for Teachers**

The teacher will hold different objects in his left hand and right hand and will ask the student to differentiate the shape.



# Identification/Recognition of two dimensional shapes and knowledge of their characteristics.

Gurcharan sir entered in the class with a bag today. All student are watching the bag with excitement. They are thinking what in that bags is Gurcharan sir kept the bag on the table and said to the children. "We will play the game of shape today." Every children will chose his eyes and take things from the bag one by one and will describe the shape by touching it.



Jasveer's turn came first. She closed her eyes put her hand in the bag. She touched all the faces of the object and said, "It has no corner, so it is a circle." On hearing this, all children clapped.

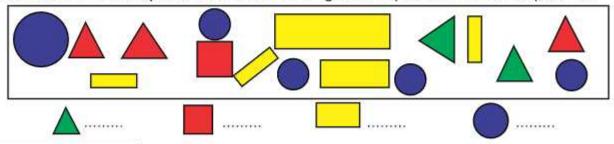
Joban came next. He put his hand in the bag, he touched the object. He said "It has three corners, so it is a triangle." On hearing this children clapped again. In this way game continued.

# Let's Do

Choose triangles/quadri-angles/circular things from the following shapes. Mark
 or traingle on quadri-angle and mark Circle (o) on the circular objects.



Choose similar shapes and count and write against the places in front of the pictures.

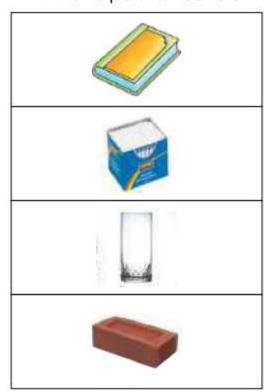


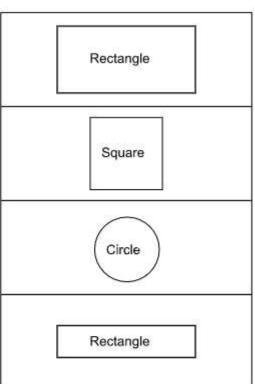
#### **Note for Teachers**

Teacher will put shapes of triangle, square and rectangles in the bag which are made with cutting of cardboard and activity will be conducted by him/her.

#### To Draw Plane figures on the paper from Solid Figures.

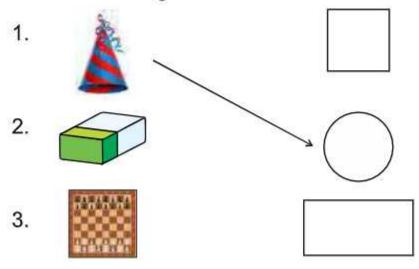
We can draw plane figures from solid figures on the paper. For example we can draw rectangle with the help of notebook. Similarly a square can be drawn with the help a chalk box etc .......





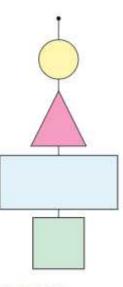


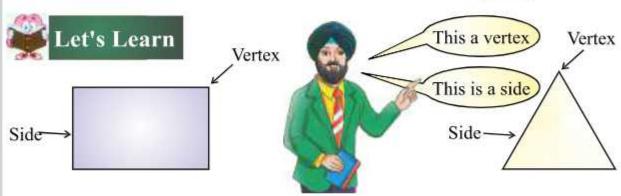
Match the following items with their base

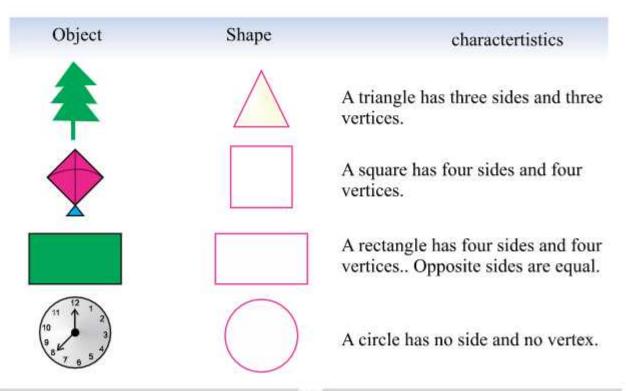


#### Make a Hanging

The students will cut shapes in cardboard with the help of the teacher and will decorate them with coloured paper. After that they will/the shapes together with a thick thread and will make a hanging.







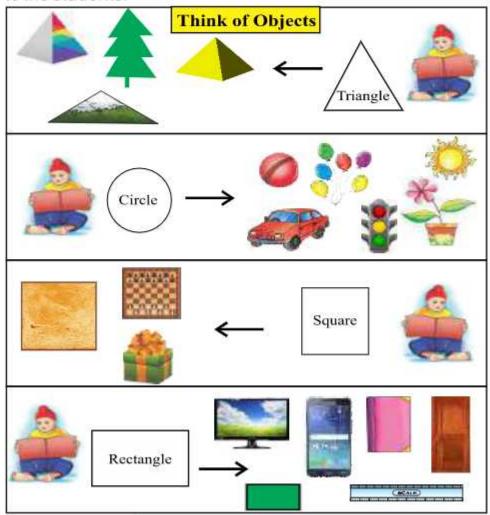


Write the number of sides and vertices of the shapes given below:

Sides	Sides	Sides	Sides
Vertices	Vertices	Vertices	Vertices

#### Recognition of shapes of the objects of daily life.

Fill the colour and show the picture in such a way that the shape is clearly visible to the students.



#### **Note for Teachers**

The teacher will explain the difference between a square and a rectangle. He will tell that the sides of a square are equal and opposite sides of a rectangle are equal.

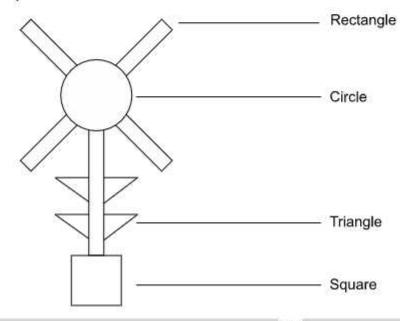


#### Complete the table according to the properties of the shape given below.

Properties	Name of the shape	Figure of the shape
3 sides and 3 vertices	Traingle	
1 curved side and no vertex		
4 equal sides and 4 vertices		
Opposite sides equal and have 4 vertices		



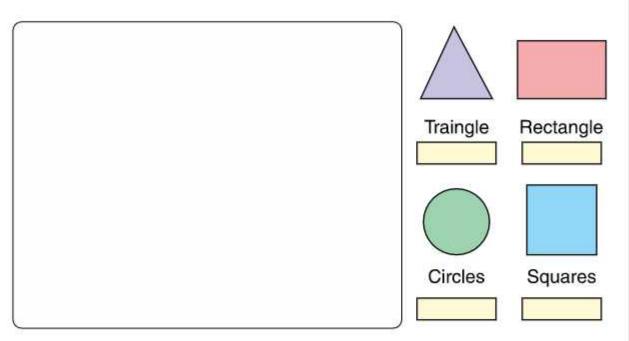
The following picture is created by using different shapes. Let's count these shapes.



Shape	Number
Rectangle	5
Traingle	4
Circles	1
Squares	1



Students, draw a picture with the help of shapes given below. Count and colour the given pictures.



# **Curve and straight Lines**

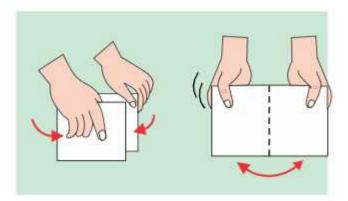
Which way would you choose for going from home to school?



School

#### **Straight Lines**

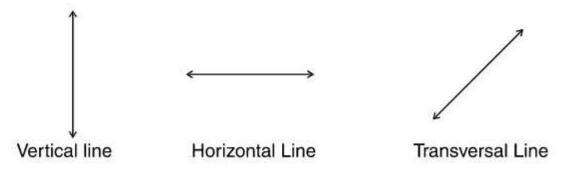
If we fold a paper and make a crease, a straight line is formed at the crease when we unfold it.



Similarly when we stretch a thread from both ends, We get a straight line.

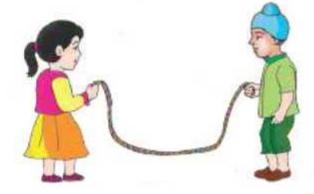


There are many type of straight lines



#### **Curved Line**

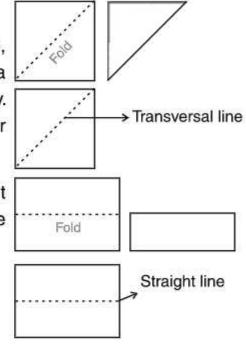
When we hold any rope loosely, we get a curved line



#### Activity

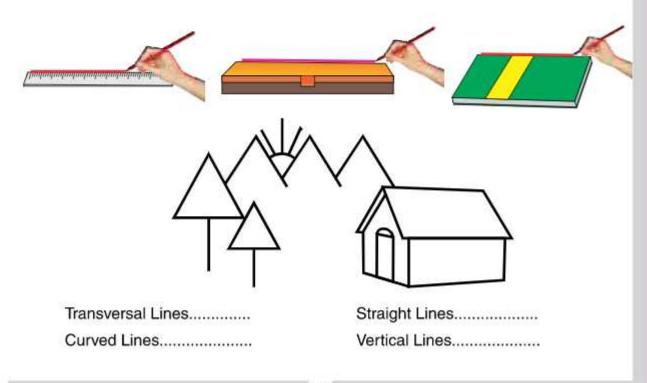
The teacher will clarify a horizontal line, vertical line and transversal line by folding a paper. Take a square paper. Fold it diagonally. Now unfold it. The crease formed on the paper is representing a transversal line.

Now take another square paper and fold it along the middle. Now unfold it. The line/Crease thus formed is a horizontal line.



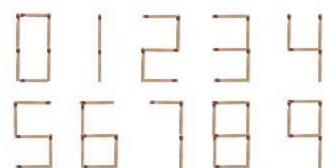
#### To Draw a line:

We can draw lines with the help of a scale or edges of any straight objects like copy, geometry box etc.



#### Game with lines

Simran arranged the matchsticks to form some numbers.



# Let's Do

1) In circle the letters of the English alphabet formed by straight lines.

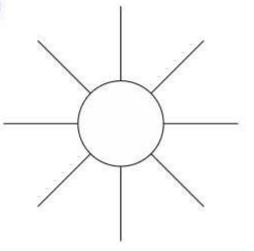
A E J K M P L S

Encircle the letters of the English alphabet formed by straight lines and curved line

B F C J

# Activity

Paste the red thread on the vertical lines, the blue thread on the horizontal lines, the matchsticks on the diagonal lines and the green thread on the curved lines as shown in the picture below



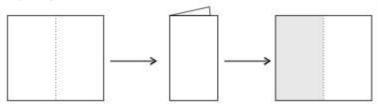
#### **Note for Teachers**

The teacher will ask the students to look at the lines on their palms. The teacher draws straight and curved lines on blackboard or on sand before asking the student to draw in their note-books.

#### Relation of half and quarter with whole part



Show a strip of rectangular paper and fold it in two and make a sharp crease and open it. Explain it to the students that the rectangle can be folded from the middle and divided into 2 equal parts



Just as we divided the paper into 2 parts, it can also be divided into 4 equal parts.



1) Draw halves and quarters of the following objects/Shape

Whole	Half	Quarter

2) Encircle the shapes showing the equal parts

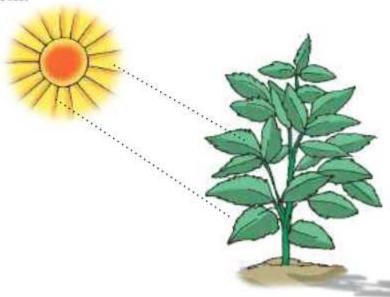


#### **Note for Teachers**

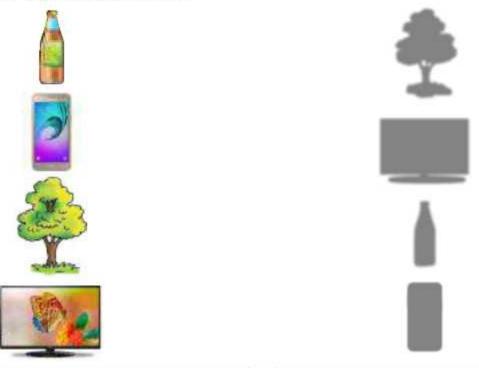
Similarly the fold the paper, handkerchief and bread and tell them about the interrelationship of half, quarter and whole.

#### Formation of Shadows

Have you ever seen a shadow? Wheneve we stand with our back towards the sun then our image appears in front of us. This is called a shadow. Similarly, shadow of different objects appears in front of them.



Can you identify shadow of different shapes? Match the following objects with their shadows.





#### (A) Fill in the blanks-

<ol> <li>If all the faces of an object are same, then it is a (cube/cube</li> </ol>	1.	If all the fac	es of an object are sa	me, then it is a	(cube/cubo	(d)
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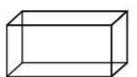
- An object which has no plane surface but has only curved surface is ......(sphere/cube)
- 3. A circle has no ...... line (straight/circular)
- 4. A triangle has ..... corners. (three/four)

#### (B) Match and colour them as directed:

6 plane surfaces, all surfaces equal (green colour)



1 curved surface, no edges (blue colour)



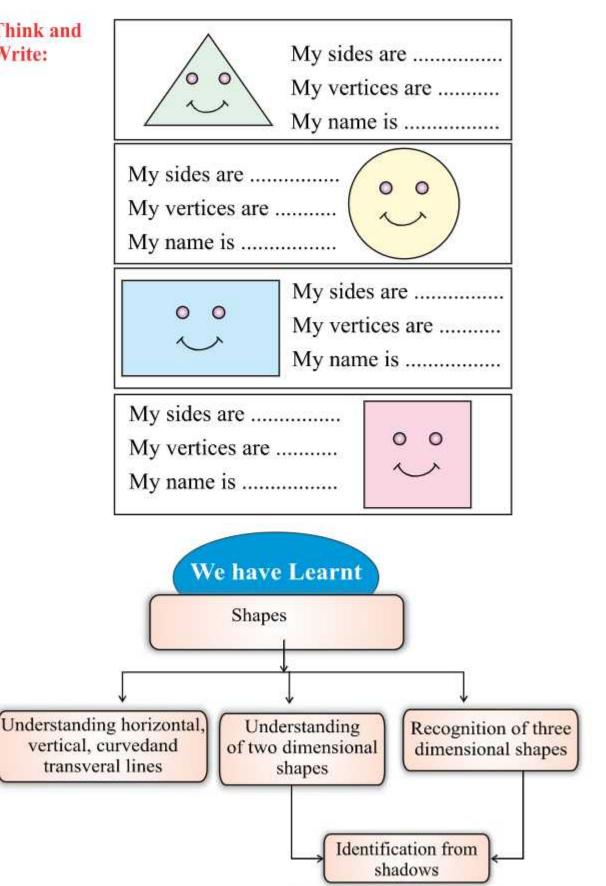
1 plane surface, 1 curved surface, 1 vertex (red colour)



6 plane surface, all surfaces unequal (yellow colour)



#### Think and Write:





## **Patterns**

#### **OBJECTIVES**

- The students will be taught in detail about the concept of patterns and to develop more patterns.
- The students will be taught to find patterns from figures and numbers with different methods.
- By observing patterns of numbers students will be taught how to develop new patterns.

# Activity

Teacher will explain in detail about patterns and continue the sequence of patterns of previous classes and relate it with things around us. He will motivate them to make patterns. For example, he will call boys and girls of the class one by one and will make patterns as shown below:





girl

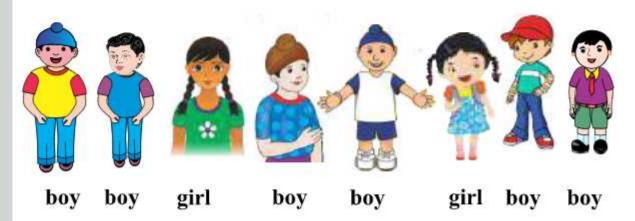
## Pattern-1

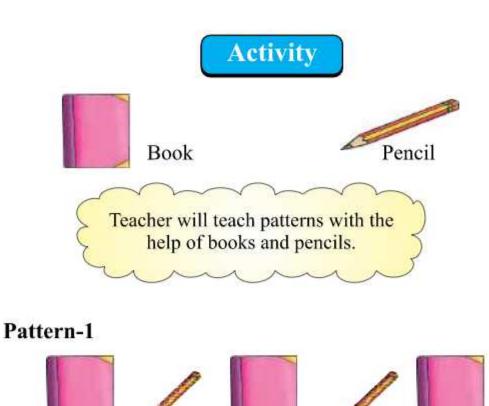


# Pattern-2



# Pattern-3







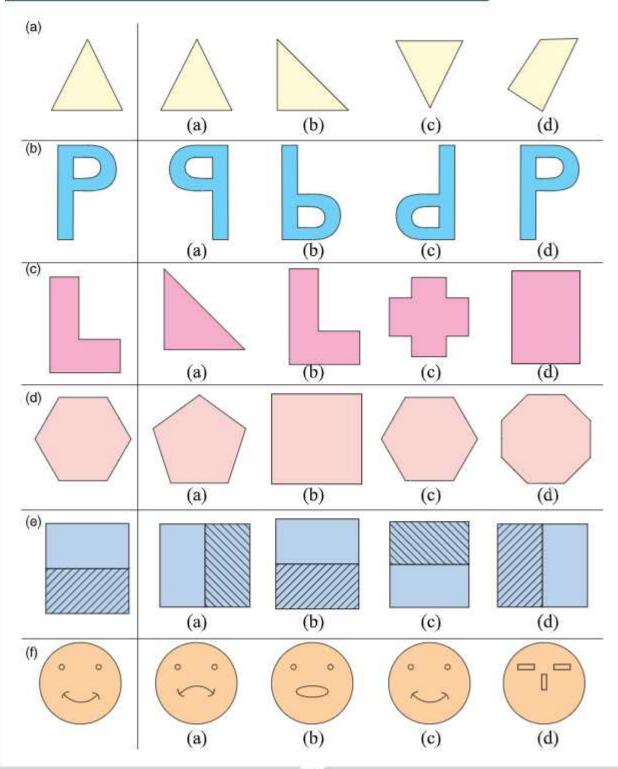


#### **Note for Teachers**

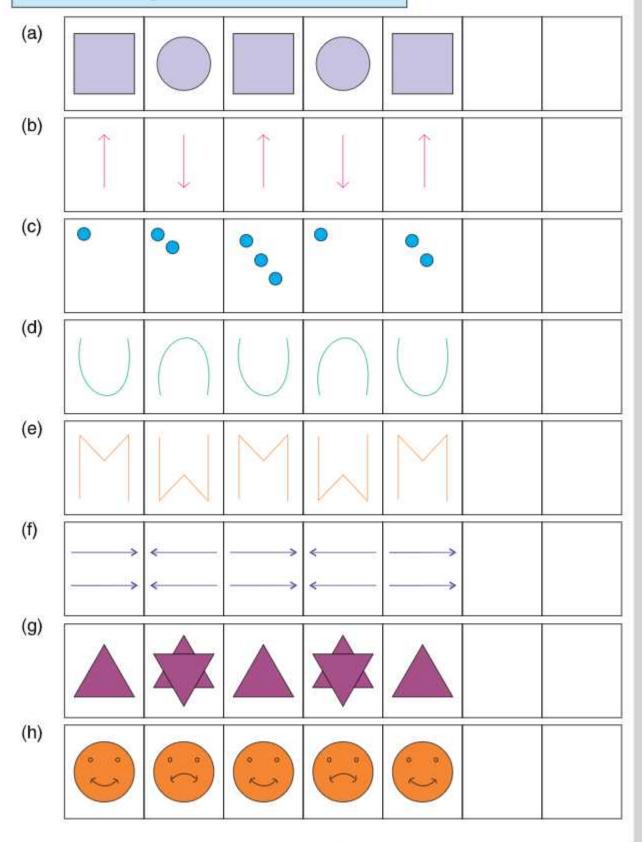
Encourage the children to make patterns with the help of pencils, erasers, sharpeners and books etc. The teacher will show the patterns from the surroundings for example floor, grills etc.



# 1. Encircle the pictures having same shape and size

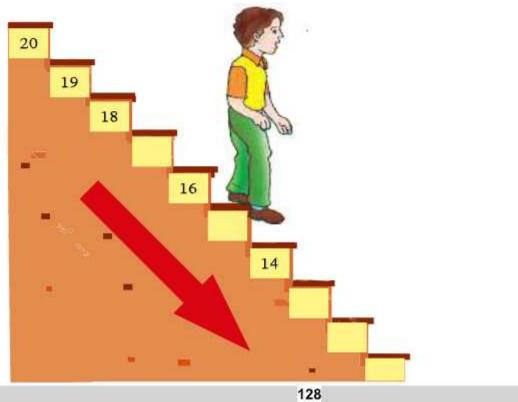


# 2. Observe the patterns and fill in the blanks

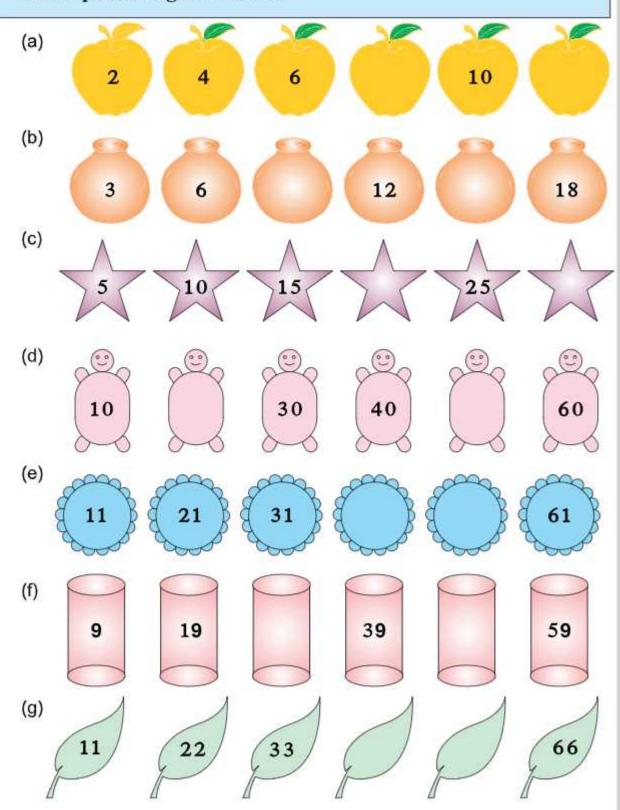


# 3. Observe the pattern and fill in the numbers.

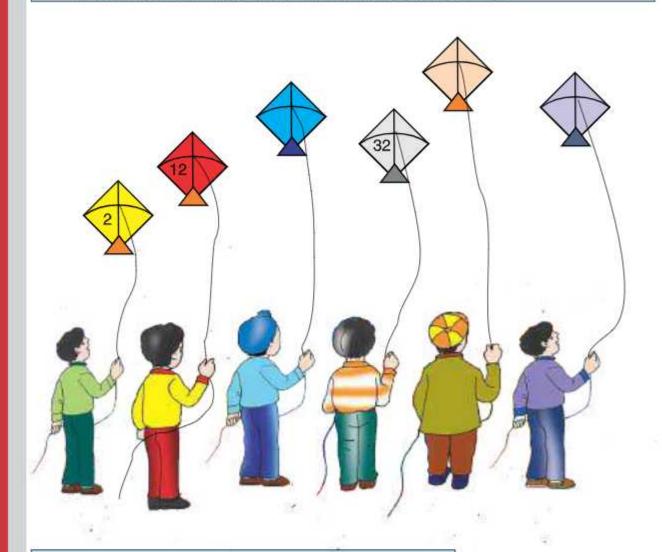




# 4. Let's observe some number patterns. Fill the correct numbers in the patterns given below.



5. There is a competition of flying kites in autumn season. Children are flying kites. Observe the patterns of numbers written on their kites and fill in the blanks/kites.



# 6. Observe carefully and fill the next boxes.

a	1	2	1	2	1		
[	2	100	22			10000	
	- 2		_			40	

c.	Α	В	С	D		E					
d.	20	30	40	50	)					80	
e.	22	24	26	28	3	30	)				
f.	AB	CD	EF	Gł	1					MN	
g.	1	4	7			13	}			19	
h.	19	18	17		1	6					
1.	35	30	25	5	2	0					
j.	75	65	55	5	4	5					
7.	Find th	e error	in the f	ollow	vinç	j inte	erv	al cou	nt	ing	
	30		33	3	36		10	38		39	
8.	8. Complete the pattern after looking at the pictures.										
	4		8	*	/		1	or <del></del>			

# M. Make a pattern using the given shape. How the beautiful patterns just see Looking great in all direction really Counting patterns are progressing like tree I will enjoy them as a cup of my tea We have Learnt Patterns Understanding Understanding the patterns of shapes. patterns of numbers To develop further the patterns of numbers.



# **MEASUREMENT**

#### **OBJECTIVES**

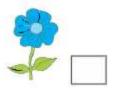
- \* Developing knowledge on the basis of physical features of relative objects of daily life.
- \* To give knowledge about non-standard units of length, weight, capacity.
- \* To develop reasoning.

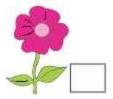
#### Do You Remember

Dear children, Let's revise units of measurements which we have done in previous class.

#### Think in Order-

1. Write 1 to 3 in order from small to big on the basis of length.

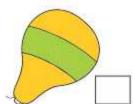




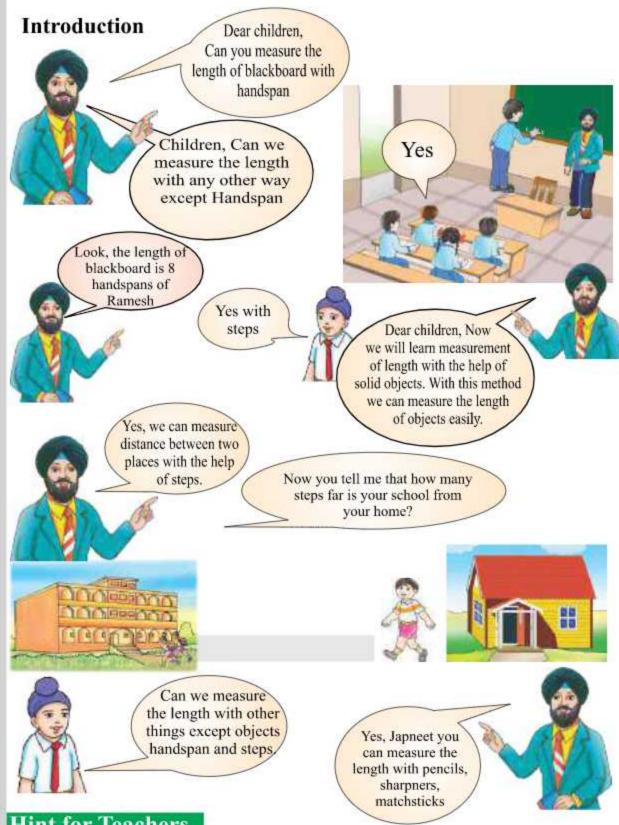


2. Write 1 to 3 in order from light to heavy.







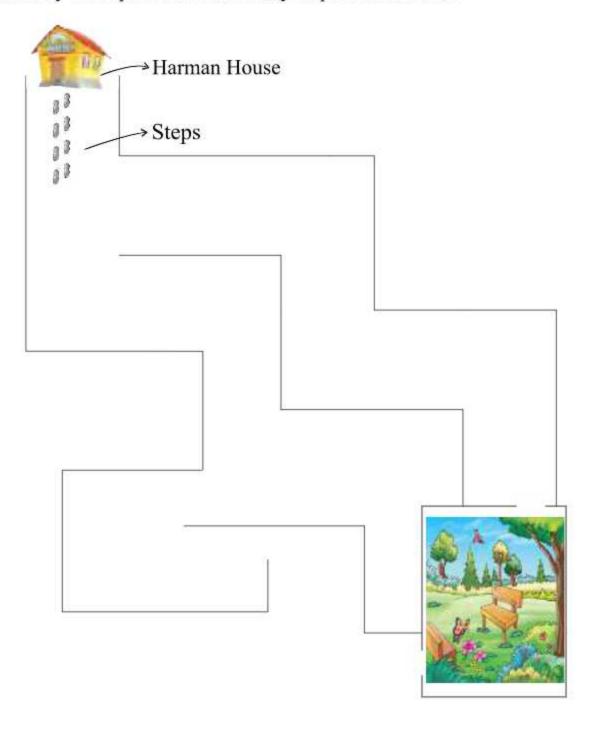


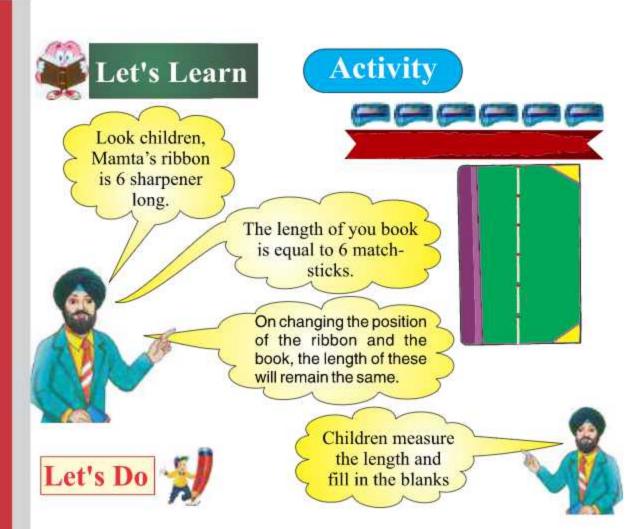
#### **Hint for Teachers**

Students will measure the length of blackboard with handspan and will tell the teacher.



Harman wants to play in the garden. Help him to find the path. There are two paths to go to the garden. Which path is short? If Harman reach the garden by short path then how many steps will he walk?





#### 1. Fill in the blanks:

- (i) The length of your pencil = ..... matchsticks.
- (ii) The length of your book = ..... handspans.
- (iii) The length of your room = ..... steps.
- (iv) The length of your sharpener = ..... fingers.
- (v) The length of verandah of you school = ..... steps.
- (vi) The length of your table = ..... handspans.
- (vii) The length of the window of your class = ...... pencils.

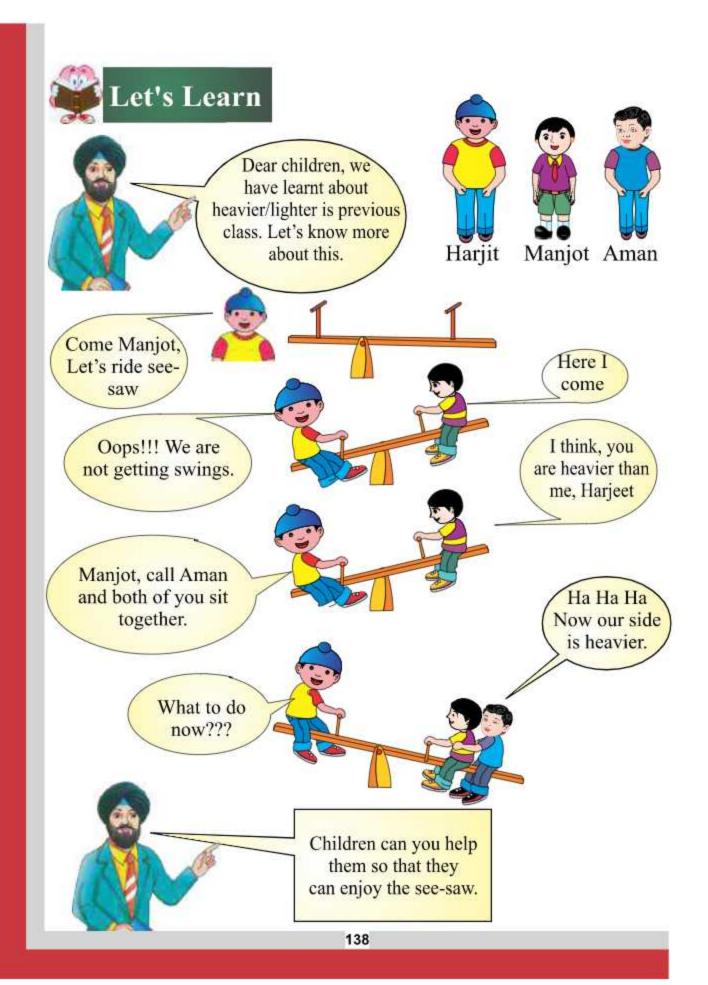
Fill the colours if all your answers are correct

Handspans, steps, fingers, sharpener and matchsticks are Non-standard units of length.

- 2. The length of a table is 6 handspans. The length of other table is 8 handspans. If both the tables are joined, how many total handspans will be the length?
- 3. Kajal's ribbon is 6 sharpener long and Mamta's ribbon is 12 sharpener long. What is the total length of both the ribbons?
- 4. The length of a book is about 12 fingers and the length of a copy is about 10 fingers. Which is longer and by how much?
- 5. The length of table is about 10 handspans, the length of black-board is about 20 handspans. Which is shorter? By how many handspans?
- 6. Your school is 30 steps away from your house. You have walked 25 steps already. How many more steps will you walk to reach your school?
- Your notebook, first draw a point 'A' and draw another point 'B' four figures away from point 'A'

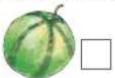
# 8. Put Right (✓) or Wrong (×)

a.	We can easily measure the length of a room with fingers.	
b.	You can measure distance between school gate and classroom with steps.	
c.	We can measure the length of a door with matchsticks.	
d.	We can measure length of a blackboard with handspans.	
e.	In the early days, parts of body were used for measuring length.	





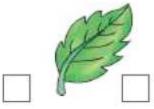
1. Tick (✓) in the box of heavier object.





2. Write 1 to 3 in the boxes according to their weight. (lighter to heav









# Let's Learn

# Activity





Look children! We can't get correct estimate of measurement. Physical balance plays important role to measure weight.



Children, heavier pan of balance always goes down see that!





Dear children,
Now we will discuss
about heavier
lighter things
using balance.





If both pans have same weight then both pans must have same height.
Pointer of the balance is also straight and the middle.

Children! Think
if vegetables seller
or scrap dealer
has no weighing
balance,
what will happen
then? Can they tell
the exact weight
by estimating?



### Think About it

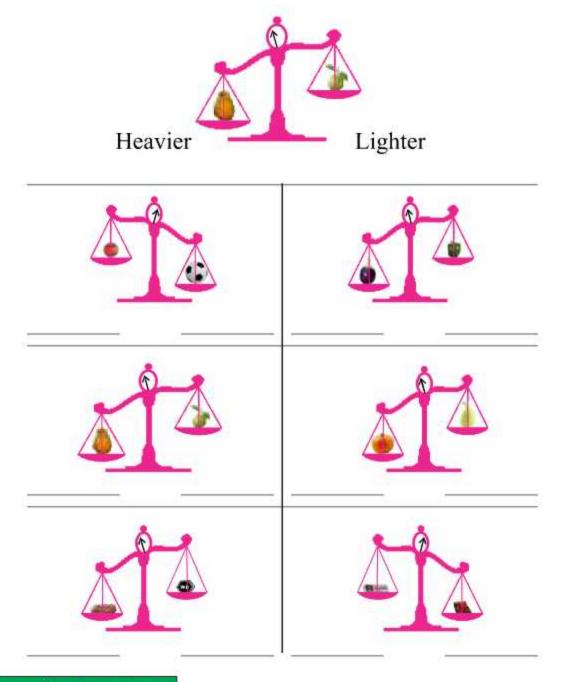


- The weight of your book is equal to weight of 3 guavas.
- The weight of your copy is 2 guavas equal to weight of 2 guavas from them.
- So, the book is ...... than the copy. (lighter/heavier)
- The copy is ...... than book. (heavier/lighter).





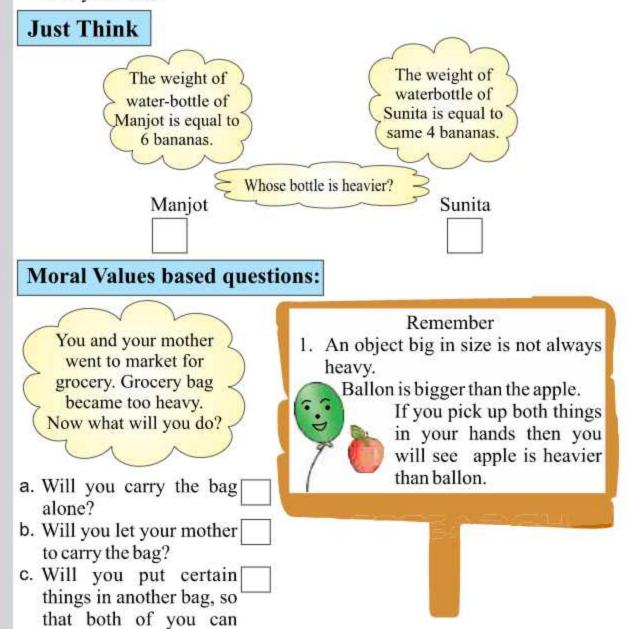
# 1. Which pan of the balance is heavier and which is lighter?



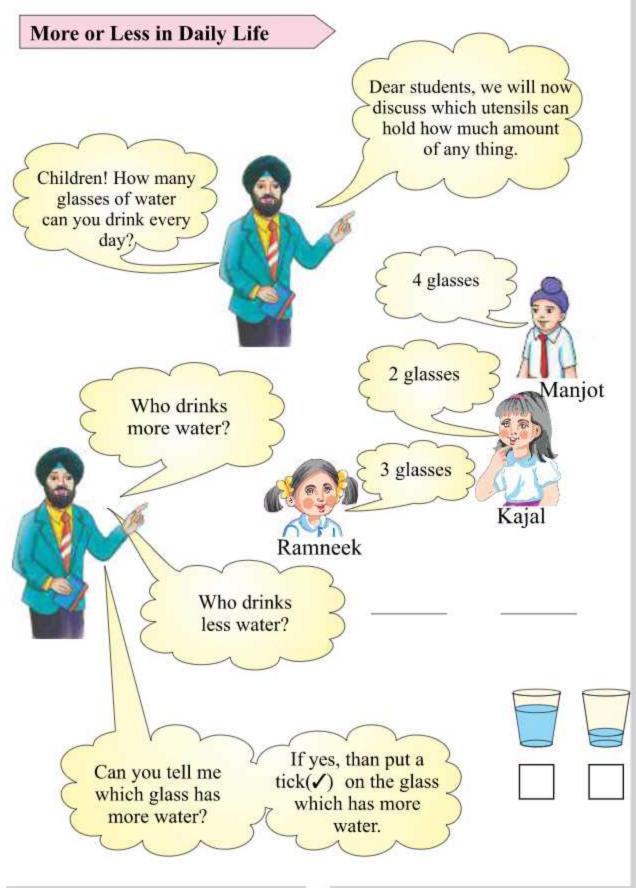
# **Note for Teachers**

The teacher while using two equal sized caps, thread and stick etc. will demonstiate the method to make a 'balance' and will also tell how to using it.'

- 2. The weight of 2 similar books is equal to weight of 6 apples. The weight of 1 such book will be equivalent to how many apples?
- The weight of 6 similar packets of biscuits is equal to weight of 6 mangoes. The weight of 3 such packets will be equal to weight of how many mangoes.
- 4. The weight of 2 similar bottles of Juice is equal to weight of 1 cake. The weight of 4 such bottles will be equal to weight of how many cakes?
- 5. The weight of 5 similar samosas is equal to weight of 10 such laddoos. What will be the weight of such 10 samosas equal to the weight of how many laddoos?

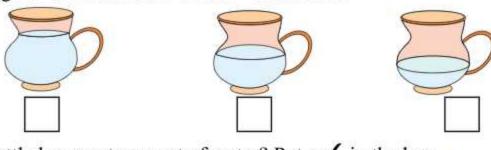


carry two bags?

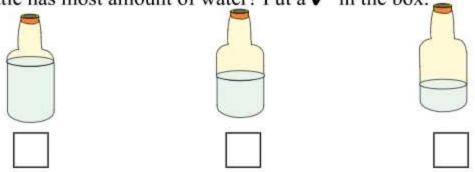




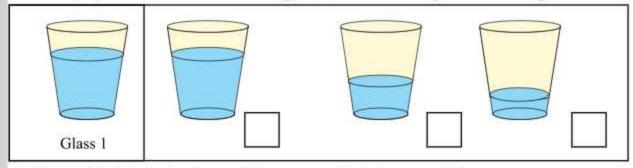
1. Which jug has the least water? Put 🗸 in the box.



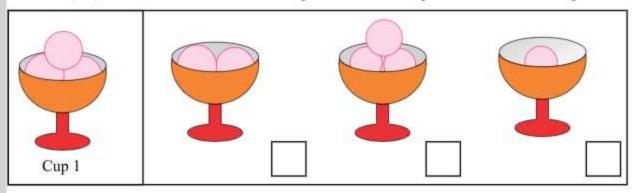
2. Which bottle has most amount of water? Put a ✓ in the box.



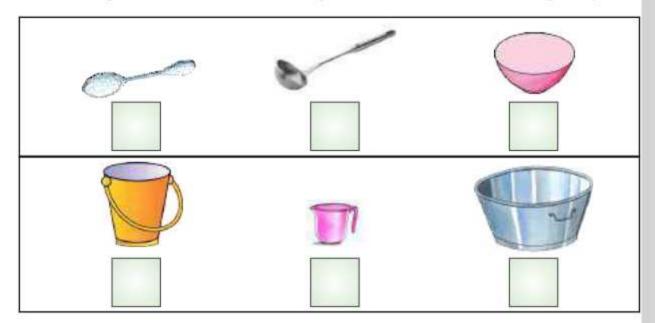
3. Put ( ) tick in the box of that glass, which has equal water to glass no. 1.



4. Put ( ) tick in the box of that cup, which has equal icecream to cup no. 1.



5. Arrange from 1 to 3 according to their less to more capacity.



### 6. Think About



The capacity of ...... is more than .......

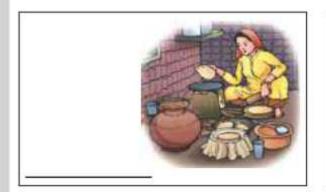
- ii. The capacity of a bottle is equal to 3 glasses of water then:
  - a. The capacity of 2 such bottles will be equal to ...... glasses of water.
  - The capacity of 3 such bottles will be equal to ......glasses of water.
  - The capacity of 4 such bottles will be equal to ...... equal to ...... glasses of water.
  - The capacity of 5 such bottles will be equal to ......glasses of water.
  - The capacity of 6 such bottles will be equal to...... glasses of water.

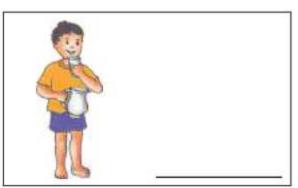
# How much water is required?

Give an estimate about how many mugs or buckets of water is used the following tasks.









# Activity

Put the water in different shaped utensils and observe it.

You will see that water will take utensil's shape.











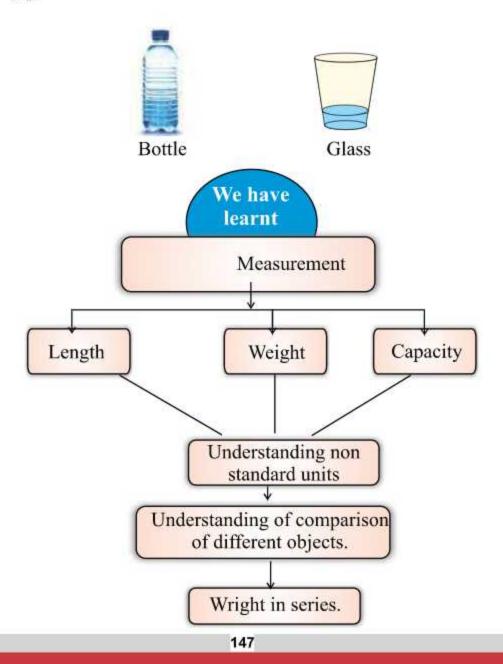




### To measure capacity of bottle

Material: Bottle, glass.

All students will bring bottles and glasses from their homes. The teacher will ask the students to fill their bottles with glass. Each student will fill the glass with water and then fill the bottle. The teacher will ask them, how many glasses of water filled the bottle.





# TIME

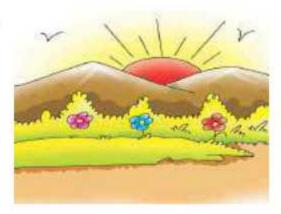
# **OBJECTIVES**

- 1. To Know the importance of time in daily life
- To know about names of days and about weeks.
- 3. Tell the months of year.
- 4. Tell about winter and summer seasons.
- 5. Understand the importances of time in modern era.

# Do you Remember

1.	What time of day is it, when you come to school?	
2.	When does the sun rise?	
3.	When is the sun exactly above our hand?	
4.	What time of day is it, when you go home from shoool and do your homework?	
5.	At what time do you play with you friends?	
6.	At what time of day does your grandmother tell you stories and riddles?	
7.	At what time of day does your family watch television together?	
8.	At what time do you sleep after dinner?	

9.



What time of the day does this picture depict?

10.

By looking at the picture make a guess about the time?



11.



Look at the picture and write about the time below the picture.

12.

What time of the day does this picture depict?



# 13. Fill the box: Morning/Afternoon/Evening/Night (a) At what time you go to school? (b) At what time you get recess? (c) At what time you get full break? (d) At what time you play? (e) At what time watch T.V.? (f) At what time we sleep at night? (g) At what time do you get up in the morning?



# Days of Week

Children, a week has seven days. First day of the week is Monday. Monday is first working day of a week. Last day of a week is Sunday, is a holiday.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
First day	Second Day	Third day	Fourth day	Fifth day	Sixth day	Seventh day

Make students learn this rhyme orally.

Monday is very cool
Tuesday surely go to school
Wednesday is good day
Thursday we should pray.
Friday is the day for study
Saturday dress like a buddy
Sunday is holiday for joy
Play with friends and enjoy.



# Days of a week (Ask students)

1.	Which day is holiday in a week?	
2.	Which day is first working day of the week?	

~	TT 1 1 1 1 1 0	
3.	How many days are there in a week?	

4.	Which day comes after	er days written below:	
	Sunday	Tuesday	

5. Which day comes before days written below:

Friday	Mondays

6. Which day comes two days after days written below:

Tuesday	Sunday	Wednesday	

7. Looking at the timetable given below answer the questions no (i) and (ii)

Monday	Verasat -E Khalsa is closed for the general public
Tuesday	Furniture Market remain is closed for the general public
Wednesday	The museum is closed for the general public
Thursday	Kamal cinema hall is closed for the general public
Friday	Doll house is closed for the children
Saturday	Punjab school Education board is closed for the general public
Sunday	Schools are closed for staff and the students.

- (i) When is kamal cinema Hall closed for the general public?
- (ii) On which day is the museum closed for the general public?

### Calender

- \* Calender shows days, weeks and months of an year.
- \* Date is the special day of a month.
- \* Calender helps us to know which day is on which date?

		Ja	nua	ary					Fet	oru	ary			l)		M	arc	h					F	۱pr	il		
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2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28					П	27	28	29	30	31			24	25	26	27	28	29	30
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	-
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	-	-	-	1	2	3		-			-		1			1	2	3	4	5					1	2	3
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
18	19	_	21	22		24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
25	26	27	28	29	_		23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31
	15.00		77.7	, Carly,			30	31										- 1									

### Dear students! Look at the calender carefully

- 1. You will see that second saturday in the month of Febraury falls on 12th so we will write as 12 02 2022
- 2. The Republic Day fall 26th of January and it is an wednesday.
- 3. In the whole year, there are 7 month with 31 day, 4 month with 30 days and then only month with 28/29 days.



- 1. How many sundays are there in the month of october, 2022
- 2. Neelam's uncle is getting massed on the first sunday of November.
  Find out the date of the wedding?
- 3. Which day is it on 5th september, 2022 ?



### Seasons

You have already been given knowledge about out phases of a day, Morning, Afternoon, Evening, and Night in the first Class. In the second class, we will tell you about four seasons of year-Winter, Spring, Summer are Autumn.

Teacher will tell the children that December, and till January and February are months of winter. March and April are of spring season. After this summer season is very long which runs from May. June, July, August and till September. October and November are months of autumns. In the month of December-Winter season comes again.

For understanding of seasons and weather students should learn this poem.

"January February are
months of winter
March April for spring
May June July August
September, Summer is the king
October November are
months for autumn
December again for winter begin
In this way seasons cycle is repeating."



100		
(1)How many days are	e there in the month	of February in a leap year?
(a) 28	(b) 29	(c) 30
(2)Which month of the	e following has win	ter season?
(a) January	(b) May	(c) August
(3) Which of following	ng months has autu	mn season?
(a) October	(b) December	(c) March
(4) Which month is	of spring season?	
(a) March	(b) December	(c) October
(5) Which month is o	of summer?	
(a) January	(b) June	(c) December



### Periods of Time

Many events of our life happen in a moment, many happen in days or months and many happen in years. Teacher will take examples from daily life to teach time and occurance of events in such a way that children can know and understand easily.

Teacher should teach the children about time and occurring of events with the help of examples from his/her day life or from school.



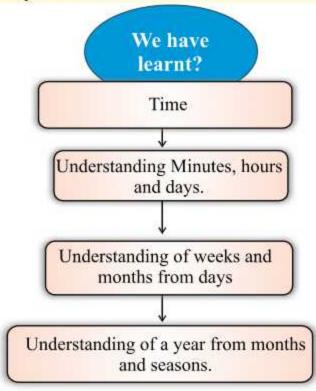
- (1) Sunday comes after how many days?
  - (a) After 7 days
- (b) After 10 days (c) After 5 days
- (2) How much time will it take to repeat the same date?
- (a) After a weak (b) After a month (b) After fifteen days
- (3) After how much time Lohri festival comes?

  - (a) After a month (b) After six months (c) After a year
- (4) How long does a tree take to grow?
  - (a) Days
- (b) Minutes
- (c) Years.
- (5) After how much time your birthday comes?
  - (a) After a month
    - (b) After 6 month
- (c) After a year



### Points to Remember

- \* There are seven days in a week.
- \* Sunday is a holiday in the week.
- Month is longer than week.
- 12 months make a year.
- \* February is the shortest month having 28 or 29 days.
- \* There are summer holidays in school in June and it is the sixth month of the year.
- \* Days make a week, weeks make a month and months make a year.
- \* If February has 29 days in any year then that year is called Leap year.
- \* Lohri festival is celebrated in the month of January and there is winter season in this month.
- \* Annual exams are held in the month of March and it is the third month of a year.





# **DATA HANDLING**

### **OBJECTIVES**

- 1. Representation of data and their analyses.
- 2. Developing understanding of more/less.
- 3. Representation of data by pictograph
- 4. Developing understanding to find results from pictograph.

# Do you Remember

# Activity

 Teacher discusses about the favourite fruits of the students in the class.



How many good a symbol depicts understanding it carefully leads you to the right answer without conflict



Teacher tells about the importance of fruits by saying fruits are essential for us. We get all minerals, vitamins from them.

Teacher asks the students about the number of fruits consumed by them everyday and encourages them to eat maximum quantity of fruits daily.

Teacher, "Children, Today we will find out which fruits do you like the most and which fruit do you like less."

Children of class take interest and think about their favourite fruit. They imagine picture/image of their favourite fruit.

Teacher: "Children, Write the name of your favourite fruit on the paper and fold the paper twice."

All the children of class write the names of their favourite fruit on the paper and fold the paper twice and keep it with themselves.

Some children write apple, some write bananas, some mangoes and some pomegranates.

Teacher then calls a student and ask him to collect the folded papers from other students and put them in a box.

When all the slips of paper are collected by the students, the teacher tells children that he will draw a table of their favourite fruits on the blackboard. She/He asks the children to draw the table in their notebooks:

Fruit	No. of	hildren v	vho like	related f	ruits	7
Apple						
Banana						
Mango						
Pomegranate						

Teacher after drawing table on the blackboard, teacher picks up the box and picks folded paper one by one from the box. He announces the name of fruits written on the papers.

Children listen to the name of fruits spoken by teacher. They will colour the box in front of fruits in their notebooks.

After colouring the boxes, teacher will ask the children about the fruit which is liked by them the most and the least.

# Activity

New uniforms are given to children of second class by the Headmaster. New shoes are also given with new uniforms.

Children, look at the shoes which you got today. Shoes of some children are big and some are small. This is because of the size of your feet.

### Hints for teachers

There should be participation of maximum student in the group activity. At the end children should be able to find out the result.

All children watch their shoes carefully.

Sandeep: "Teacher, How do we know size of shoes?"

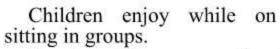
Teacher: "Children, Look under the shoes. There is a number on it. It is the size of your shoe. In this way you can know about big/small size of your shoes." He asks the students to see the back side of their shoe and note the number.



After seeing the number/size of shoes, children should be instructed

to sit in groups according to size of their shoe. Students sit in first group having same size/number of shoes.

In the second group, students sit having another number of shoes.



Teacher will encourage the students to sit in groups. A student from each group will count the number of students in his group.

Now teacher will draw a table on blackboard to represent this data and ask the children to draw the table on their notebooks.

Size of shoe	Number of children
8	

Fill in the number of children in the table after asking them their shoe size.

### **Hints for Teacher**

Teacher should encourage the students to sit in groups.



Given below is the information about number of notebooks in the bags of second class students.

Notebooks in the bag	N u m b e r of children
	12
	2
	8
	10

### To find

(1) How many children having / notebooks in the bag?

Ans: 2

(2) How many children having / / / notebooks in the bag?

Ans: 12

(3) Number of children having \_\_\_\_\_\_ notebooks is more or less than the number of children having \_\_\_\_\_\_ notebooks?

Ans: Less

The weight of children of second class was measured and data was collected. After weighing them, following table was prepared.

Weight (in kilograms)	Number of children
10	5
12	7
15	4
18	8
20	6
Total children	30

- (1) How many children weight 10kgs each?

  Answer 5
- (2) How many children are there of 20kg of weight?

  Answer 6
- (3) Number of children with a weight of 18kg is more or less than number of children with the weight of 12 kg?

  Answer Less
- (4) How many students are there in the second class? Answer - 30



 Given below is the information about number of children of second class who drink some glasses of water.

Number of glasses of water	Number of children
	7
00000	2
	8
00000	10
777	6

Find

- (a) Number of children drink glasses of water = .......
- (b) ...... children drink glasses of water.
- (c) Children who drink glasses of water is...... glasses of water. (less/more)

2. The price of different vegetables are shown in the following table. See the table carefully and answer the questions (i-vi).

Vegetables	Price (Per kg)
000000	₹ 20
****	₹ 60
1111111111111	₹ 20
99999	₹ 80
0000000000000	₹ 15

(i)	Which vegetable is the costliest?	
80.00		

- (ii) Which two vegetables have same price?
- (iii) Which vegetable costs ₹ 80 per kilogram?
- (iv) Which vegetable is cheapest?
- (v) Which two vegetables have difference of ₹ 20?
- (vi) Which two vegetables have sum total of ₹ 75?

3. Sunil's house is on the road. He often stand outside his house and watches colourful cars passing by on the road in his free time (around 6 O'lcok). One day he prepared a list of colourful cars passing on the road as shown below:

Colour of the car	Number of cars
	12
	15
	7
	8
	8

### Now tell:

- (i) How many white cars are there?
- (ii) Which coloured cars are more in number?
- (iii) Which coloured cars are less in number?
- (iv) Which coloured cars are equal in number?
- (v) What is the total number of all cars?

	Height (in cm)	Number of children
	What is the height of the tallest student/student in the class?	s
	How many children are there in the class wir maximum height?	th
)	How many children are there in the class wit minimum height?	th
)	How many children are there of cm of height.	
	How many total children are there in the cla	ss?



### Objective

- (1) To prepare a chart of birthdays of second class children.
- (2) To Collect data from the birthday chart.

Material:- Chart paper, pieces of paper cut into squares of same size, 12 different colours and gum.

### Procedure:-

Alloting different colours to 12 months of the year.

January -	July -
February -	August -
March-	September-
April -	October -
May -	November -
June -	December -

- Each children of the class is given a small piece paper cut in square shape. All pieces will be of same size.
- Each child will fill the colour as shown above in the table according to his/her birthday month.
- Then each child will paste it on the chart after colouring the piece of paper.
- This chart will be displayed in the classroom.

### Conclusion

- (1) How many months are there in a year?
- (2) How many children's birthday comes in January?
- (3) How many children's birthday comes during summer holidays?
- (4) How many children's birthday comes in July and August?
- (5) Name the month in which no child's birthday falls?



Given below is the number of apples in different bags/boxes.

Bag No.	No. of Apples
1	00000
2	00000
3	000
4	00000000

- (i) Which bag has maximum apples?
  - (a) 2
- (b) 3
- (c) 4
- (d) 1
- (ii) Which bag has minimum apples?
  - (a) 1
- (b) 4
- (c) 2
- (d) 3
- (iii) Bag No. 1 has 6 apples.

(**✓** or **×**)

(iv) Bag No. 2 and 3 has 6 apples in total.

(**✓** or **×**)

(v) Bag No. 3 has 3 apples.

(**✓** or **×**)

Look carefully at the table given below.

Name of Ice-cream	The Number of children who like
Chocolate	
Vanilla	
Strawberry	
Mango	

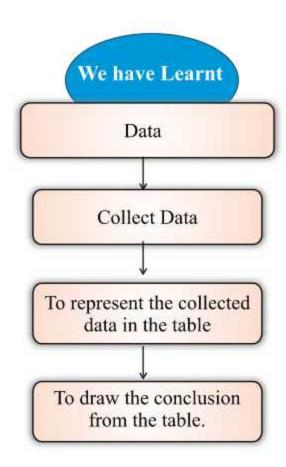


- (ii) ..... ice-cream is liked the least by the children.
- (iii) How many children like chocolate ice-cream?
  - (a) 6
- (b) 8
- (c) 10
- (d) 7
- (iv) How many children like vanilla and straw-berry ice-cream?
  - (a) 6
- (b) 10
- (c) 8
- (d) 12
- (v) Vanilla and chocolate ice-cream is liked by equal number of children. (✓ or ×)



# Point to Remember

We collect/gather lots of information everyday. Gathered/collected information is called 'data'.























































Maan Card