# Maths World

Class 2





ਸਿੱਖਿਆ ਅਤੇ ਭਲਾਈ ਵਿਭਾਗ, ਪੰਜਾਬ ਦਾ ਸਾਂਝਾ ਉਪਰਾਲਾ



**Punjab School Education Board** 

Sahibzada Ajit Singh Nagar

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Co-ordinator: Pritpal Singh Kathuria

Subject Expert, P.S.Ed.B

Cover design: Manjit Singh Dhillon

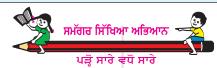
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#### ਇਹ ਪੁਸਤਕ ਵਿਕਰੀ ਲਈ ਨਹੀਂ ਹੈ।

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## FOREWARD

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. 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

**Punjab School Education Board** 

## Text Book Development Committee

#### **Writers**

- Gurinder Kaur, Primary Teacher, Govt. Primary School, Jheurheri, S.A.S. Nagar
- Maninder Kaur, Primary Teacher, Govt. Elementary School, Akalgarh, Patiala
- Jaspreet Singh, Primary Teacher, Govt. Elementary School, Aral Majra, Fatehgarh Sahib
- Gurnaib Singh, Primary Teacher, Govt. Elementary School, Maghania, Mansa
- Pawandeep Kumar, Primary Teacher, Govt. Primary School, Faror, Fatehgarh Sahib
- Pooja, Primary Teacher Govt. Primary school Durali, S.A.S. Nagar
- Rubby Khullar Primary Teacher, Govt. Elementary Sachool Latour, Fatehgarh Sahib
- Sukhjinder Kumar, Primary Teacher, Govt. Elementary School Dulba, Patiala
- Gurpreet Singh Primary Teacher, Govt. Primary School lung, Patiala

#### **Vettors**

- Gurveer Kaur, Subject Expert, SISE/SCERT, Punjab
- Rumkeet Kaur, Subject Expert, SISE/SCERT, Punjab
- Nirmal Kuar, ASPD DGSE Office, Punjab
- Parminder Singh Principal Govt. Senior Secondary School Chuhri Wala Dhanna, Fazilka
- Harminder Singh, Master, Govt. Sen. Sec. School, Badali Ala Singh, Fatehgarh Sahib
- Rakesh Kumar 'Deepal', Retd. Head Master, S.A.S Nagar
- Harmeet Singh, Retd. Head Master S.A.S. Nagar
- Arun Kumar Garg, Govt. Senior Secondary School, Budhlad Mansa
- Jatinder Kumar, Govt. High School, Giana, Rama Mandi, Bathinda
- Paras, C.H.T., Govt. Elementary School, Gatti Rahime Ke, Ferozepur
- Charan Singh, Govt. Senior Secondary School, Lumbri Wala, Ferozepur
- Sukhwant Kaur, Lect., Govt. Senior Secondary School (Boys), Samrala, Ludhiana
- Iqbal Kaur, Mistress, Govt. Senior Secondary School, Dyalpura, S.A.S Nagar
- Ratinder Kaur, Miftreff. Govt. High School, Balongi, S.A.S. Nagar
- Bindu Gulati, Principal Senior Secondary School Rurki Kha, Hoshairpur

#### **Translator**

Seema Taneja, Govt. High School Danewala, Sri Mukatsar Sahib

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## **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**

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

### Do you Remember

Wr	Write forward counting from 1 to 20.														
Wr	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**

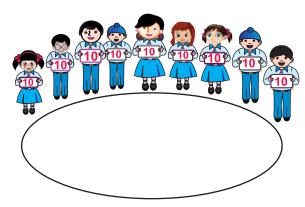
Teacher should take care that steps of student and number being announced, must be the same. He must also take care that heel of first foot must touch the toe of the other foot. This activity should be done for a couple of days. After this activity, train them to count other solid objects. "How many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

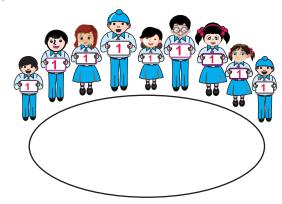


#### To understand Ones, Tens:- Play Way Method

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

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



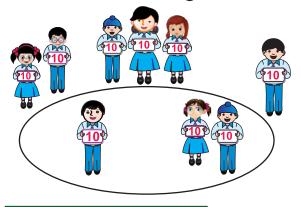


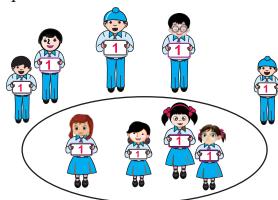
On the circle towards right hand, choose 9 students and make them stand outside this circle holding card of ones each. Around the circle of left hand, make 9 students stand, each holding card of Tens.

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

For example: Make number 18.





6. Now ask how many ones, tens will make 18?



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





1- Tens 1- Ones

Number 4



4- Ones

Number 26



2-Tens

6- Ones

Number 42



See bliss?

4-Tens

2- Ones

Number 70



7-Tens

Number 99



9-Tens

9- Ones

### **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.



## Count And Write

words for the control of the control











## 2. Depict the Given Numbers in Currency Notes

49 =

59 =

69 =

89 =

99 =

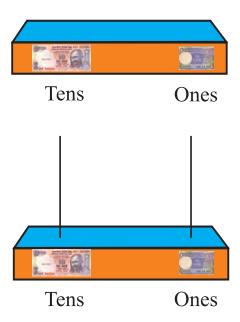
## Practical Activty

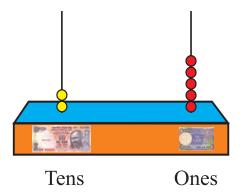
**Objective:** Explaining two digit numbers with the help of Abacus and writing.

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

#### **Method:**

- 1. 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.
- 2. Ask the students to fix two matchsticks in the clay. (representing ones / tens)
- 3. Teacher will ask the students any two digit number, for example 25.
- 4. Now ask the students to put beads in abacus.



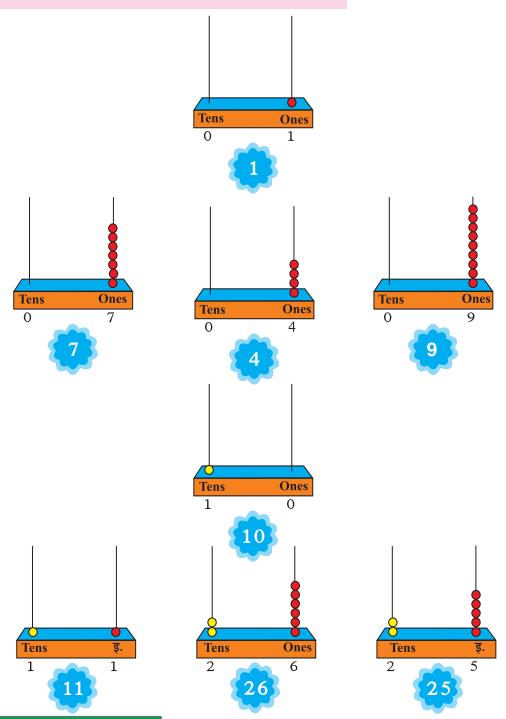


#### **Note for Teachers**

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**

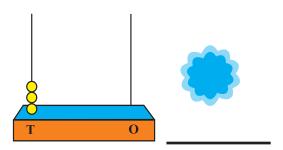


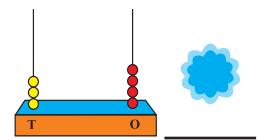
## **Note for Teachers**

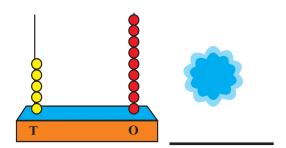
Teacher will tell the students about the short form 'O' to write ones and 'T' to write tens.

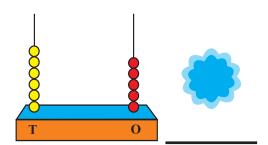


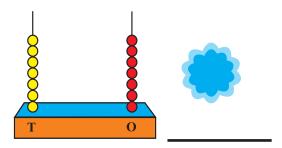
Count the Beads of Abacus and write the Number in Figures and Words.

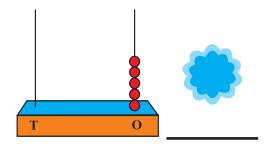


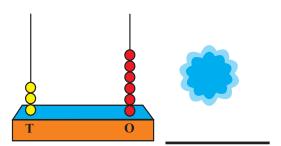


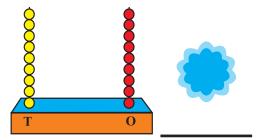




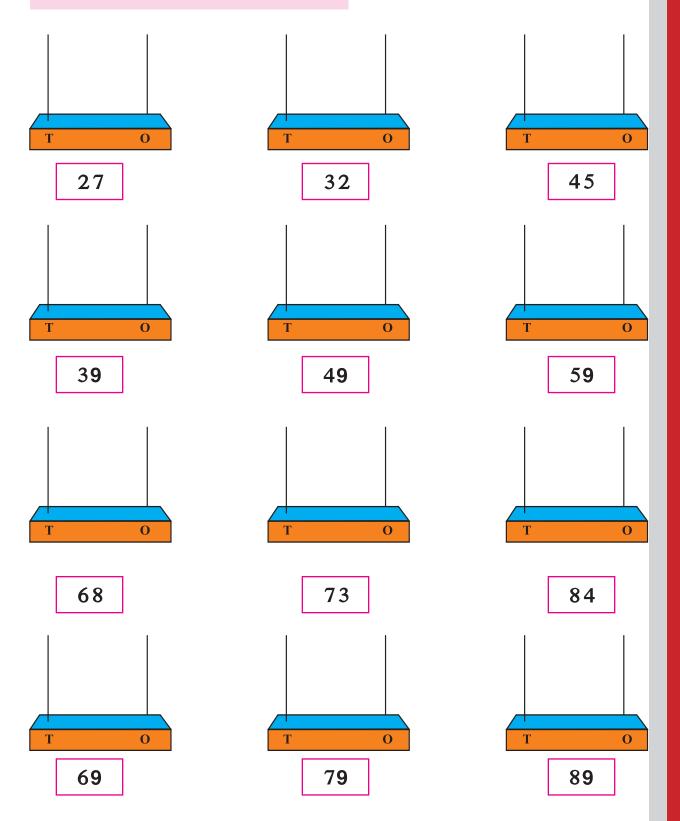








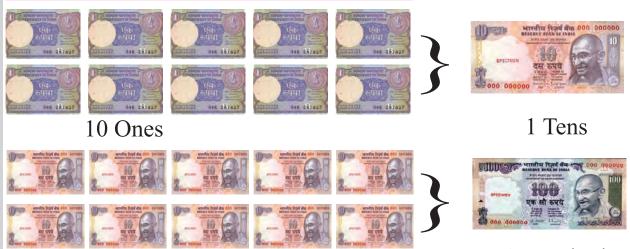
## Show Given Numbers on Abacus





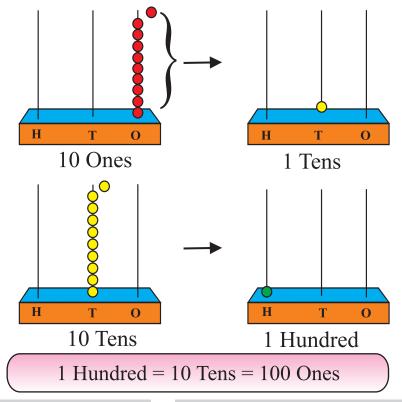
## Let Us Make Hundreds

## Knowledge of Hundred with Currency Notes.



10 Tens 1 Hundred

## To Understand Hundreds with Abacus





## Break the Number into One and Tens





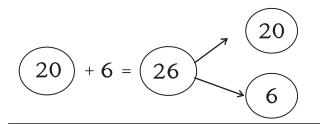








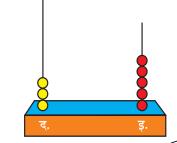


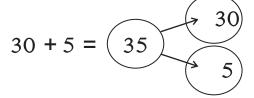


Tens	Ones
2	6

#### 2 Tens 6 Ones

(b)



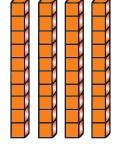


$30 \rightarrow$	35
5	

Tens	Ones
3	5

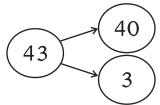
3 Tens 5 Ones

(c)









$$40 + 3 = 43$$

$$\begin{array}{|c|c|c|}\hline 40 \rightarrow \hline 3 \end{array}$$

Tens	Ones
4	3

4 Tens 5 Ones



## Split/Break the Number into Ones-Tens

(1)



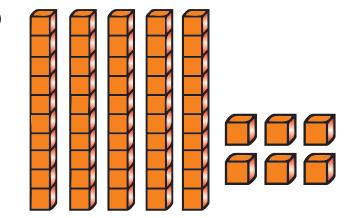






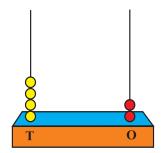
Tens	Ones

(2)



Tens	Ones

(3)

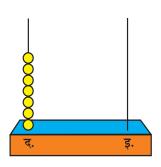


Tens	Ones

## Count the Ones, Tens and Write the Number



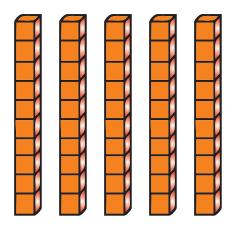
(2)



Tens Ones

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

(3)





Tens Ones

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

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





#### Let's Play Clap, Snap

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

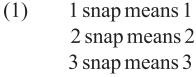
Method: (1) Teacher will tell the children



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

•••••

9 clap means 90



••••••

.....

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**



- 20 plus 9, twenty nine 20 9 29

  Learn it, you will really shine.
- 30 plus 9, thirty nine 30 9  $\longrightarrow$  39 Grapes grow on vine.
- 40 plus 9, forty nine

  You are fine and I am fine

  40

  9

  49
- 50 plus 9, fifty nine 50 9  $\longrightarrow$  59 Learn the way how to dine.
- 60 plus 9, sixty nine

  People like the tree of pine.
- 70 plus 9, seventy nine 70 9 79

  Exercise make us great and fine
- 80 plus 9, eighty nine

  80 9 89

  In the prayers stand in a line
- 90 plus 9, ninety nine

  90

  91

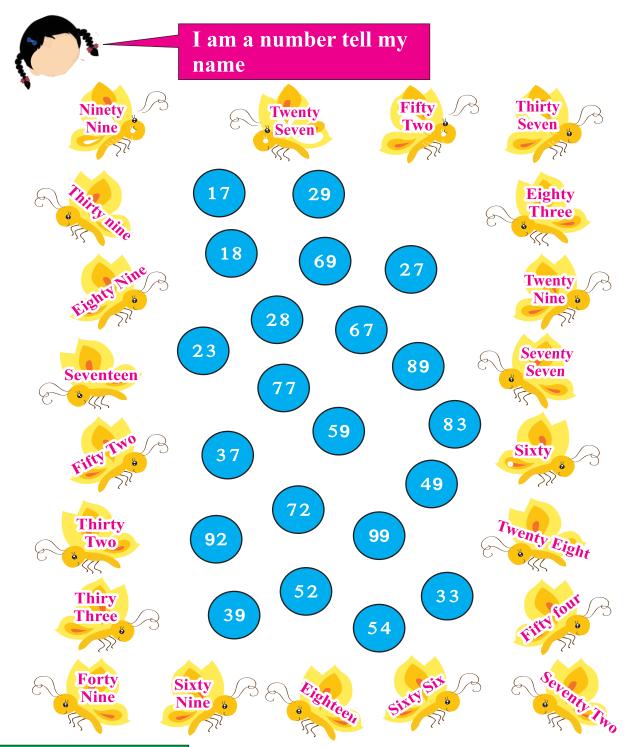
  All the books belong to mine

#### **Note for Teachers**

Use Mann cards while rhyming.

## Write Counting 1-100

 1				Δ.
				100



#### **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

34

31

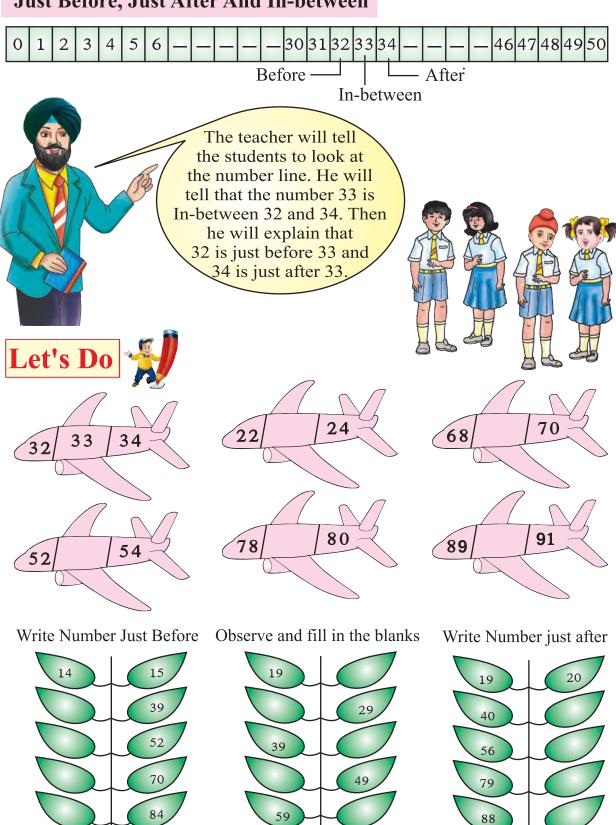
35

35

33

32

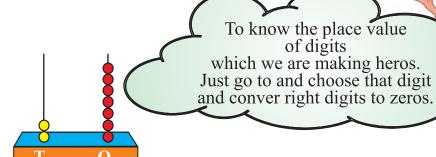
### Just Before, Just After And In-between



22



## Place value of Digits



2 Tens 7 Ones

2

7

Tens	Ones	
2	7	
		$Ones = 7 \times 1 = 7$
	→ 2	$Tens = 2 \times 10 = 20$

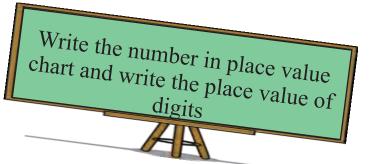
Place value of 7 in 27 is 7.

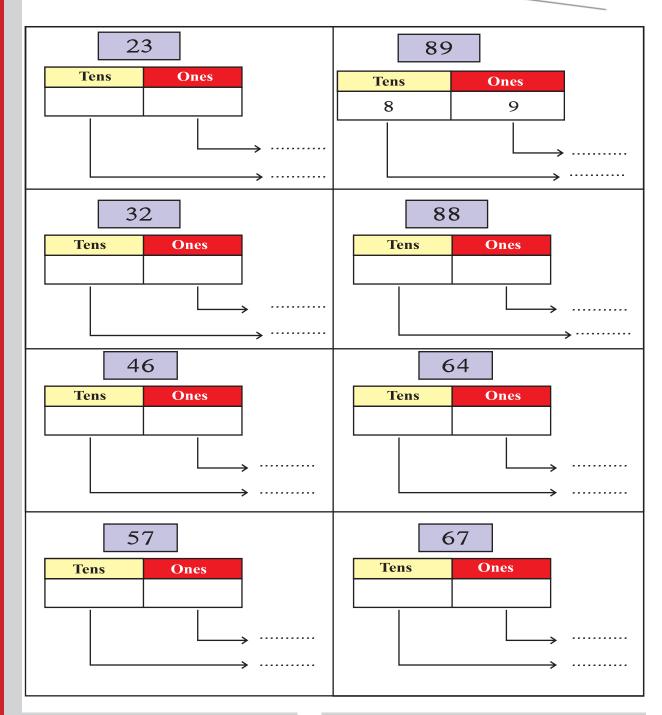
Place value of 2 in 27 is 20

## Activity

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



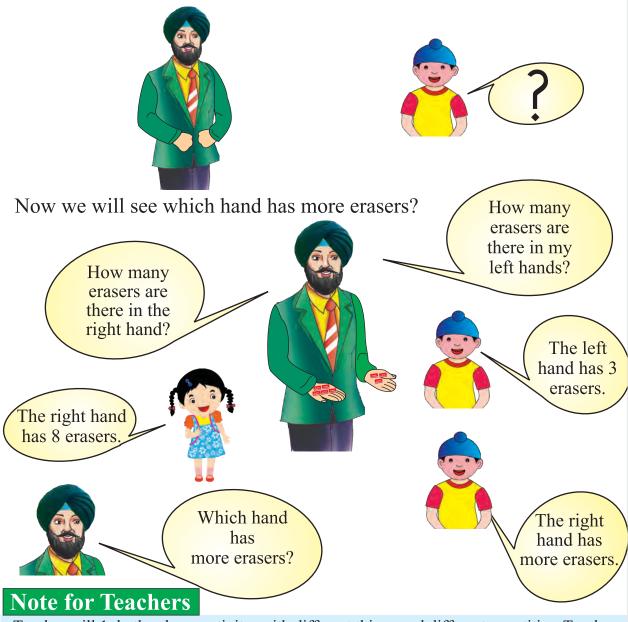




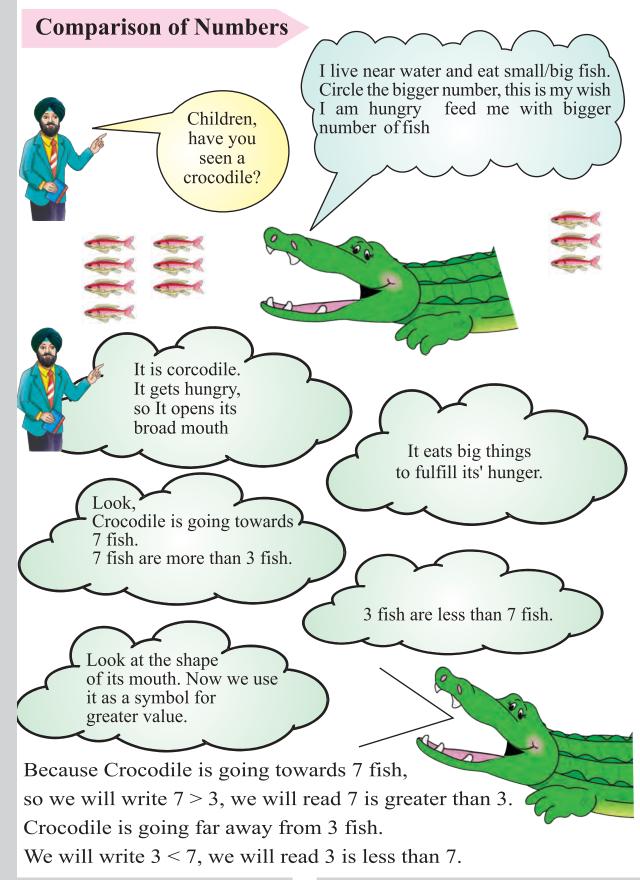


#### **Comparison of Numbers**

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.

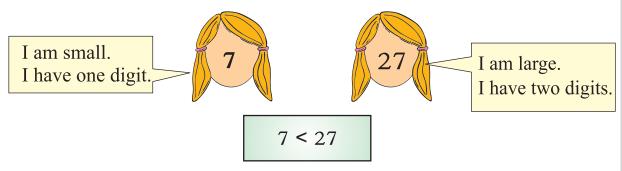


Teacher will 1 do the above activity with different things and different quantities. Teacher will tell the students the concept of greater number and smaller number by writing different numbers on the blackboard.





Now we Compare Two Digit Numbers



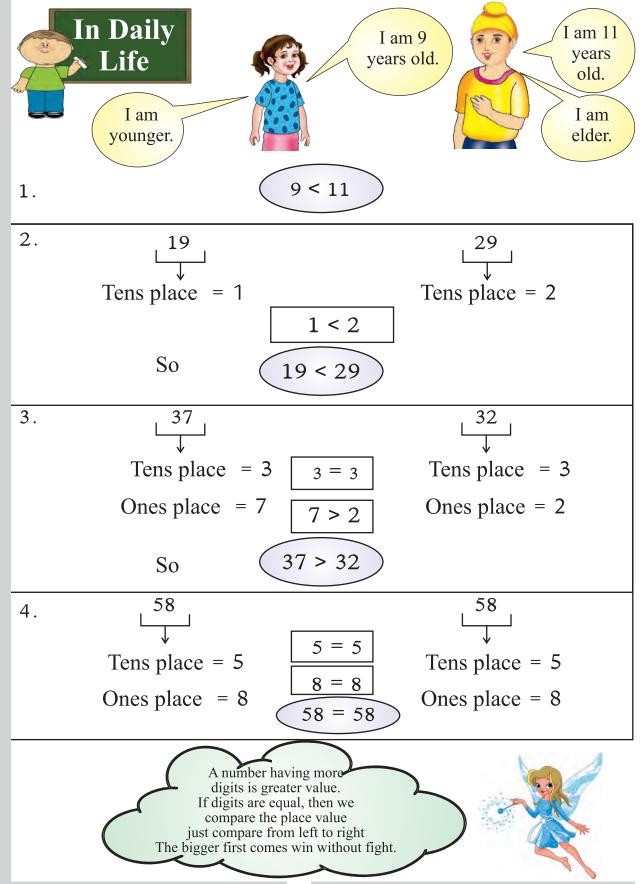
Hence 7 is smaller than 27

- 1. Number having more digits is always greater than number having less digits.
- 2. 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.

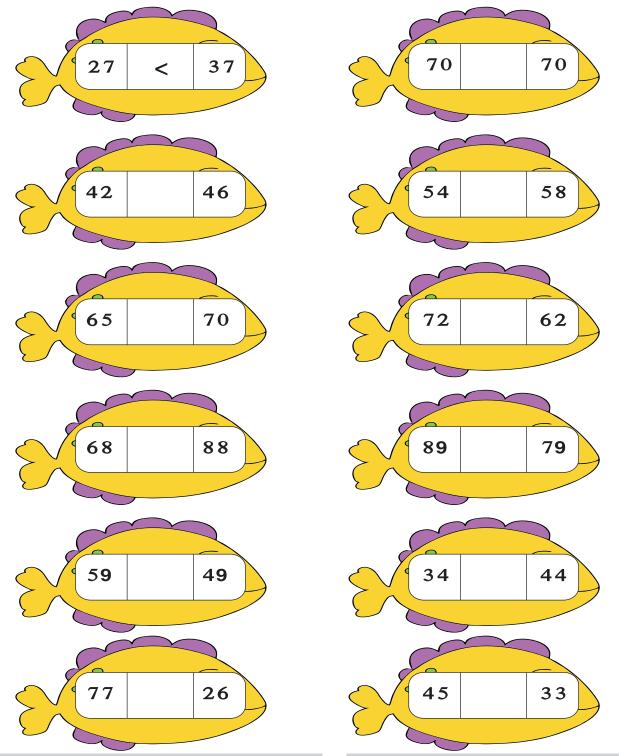
4. If both the numbers have same digits at tens and one place, the numbers are equal.

$$22 = 22$$

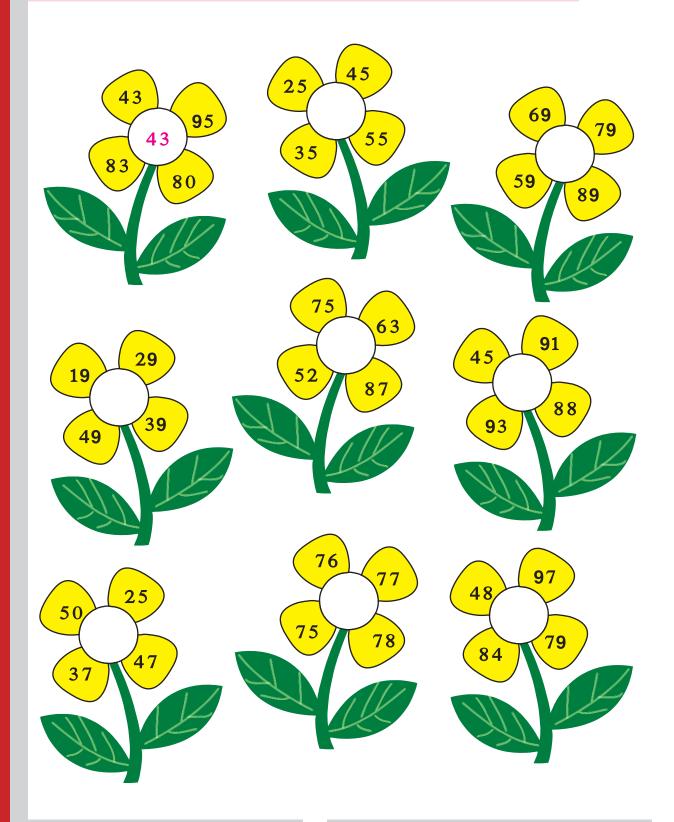




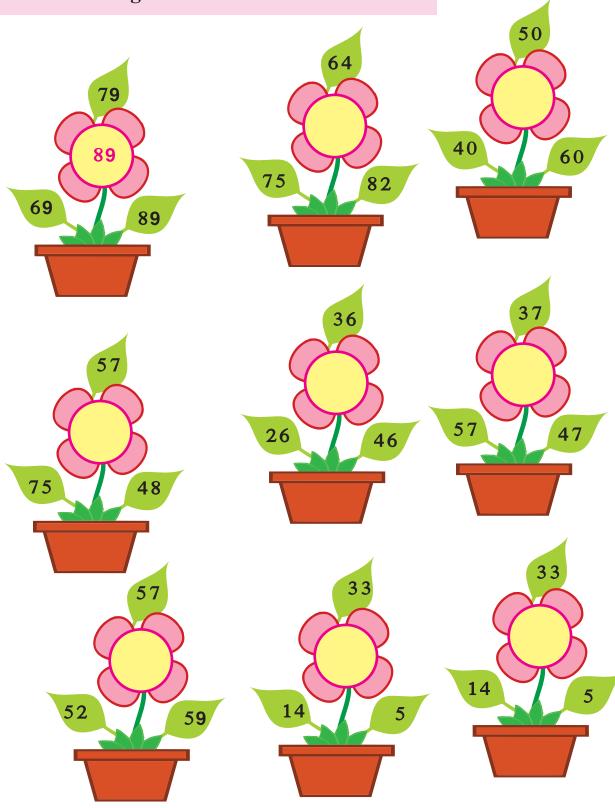
## Fill in the blanks with >, < or = symbols



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

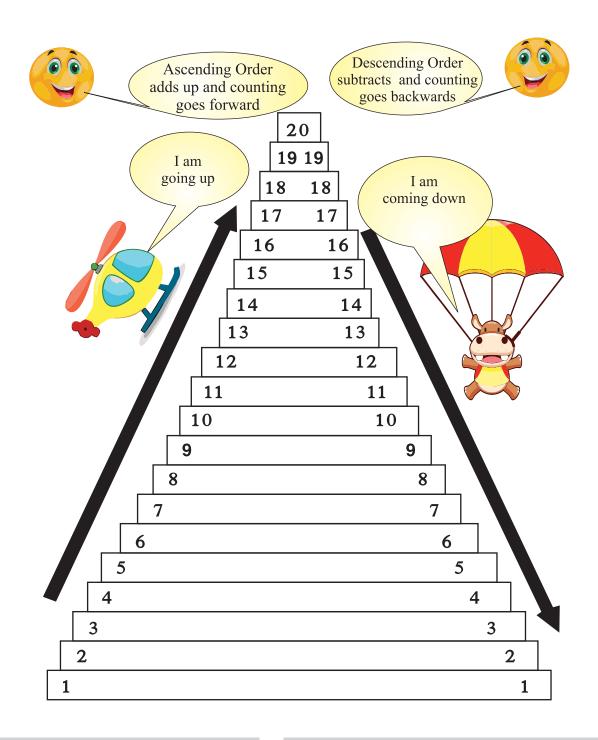


# 3. Write the greatest number in the flower



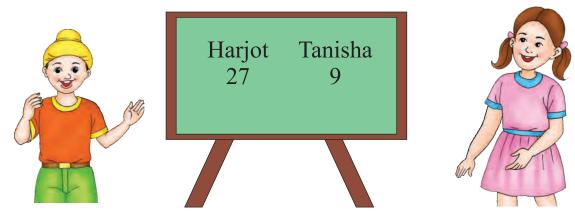


#### **Ascending Order, Descending Order**

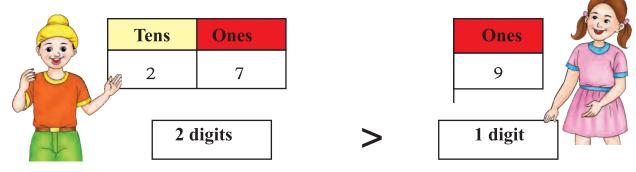




#### **Ascending Order, Descending Order**

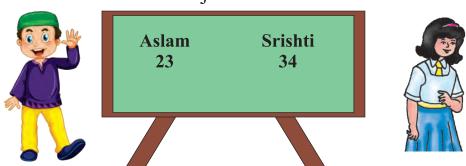


Harjot and Tanisha are playing cricket. Let's see who wins? Harjot has scored 27 runs and Tanisha has scored 9 runs.



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
		2 < 3 <		

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

so 
$$34 > 23$$
 or  $23 < 34$ 

Now compare the runs of Harjot, Tanisha,

Aslam and Srishti

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



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



#### 1. Write in ascending order

14, 24, 32, 12 \_\_\_

12

14

24

32

5, 96, 19, 89

\_\_\_\_

\_\_\_\_

\_\_\_\_

28, 15, 89, 90

83, 27, 15, 33

\_\_\_\_

\_\_\_\_

47, 49, 42, 40

\_\_\_\_

\_\_\_\_

\_\_\_\_

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

\_\_\_\_

16, 79, 24, 75

\_\_\_\_

\_\_\_\_

\_\_\_\_\_

52, 59, 56, 50

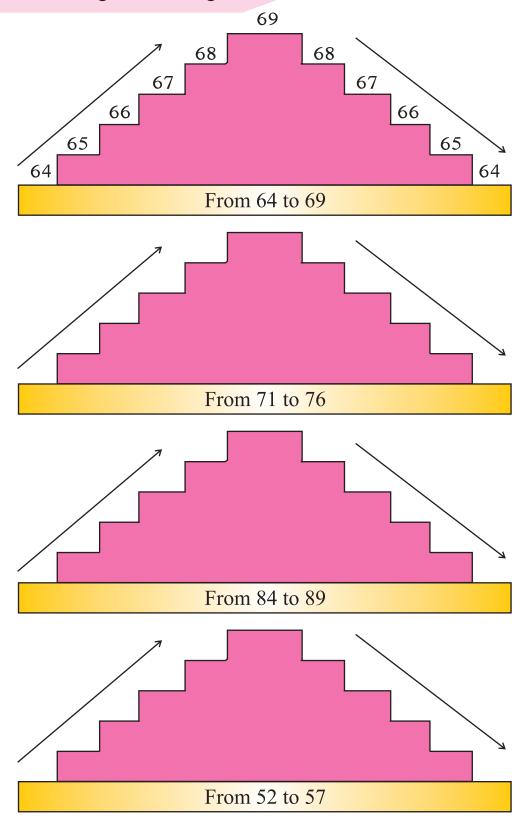
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\_\_\_\_

99, 79, 89, 29

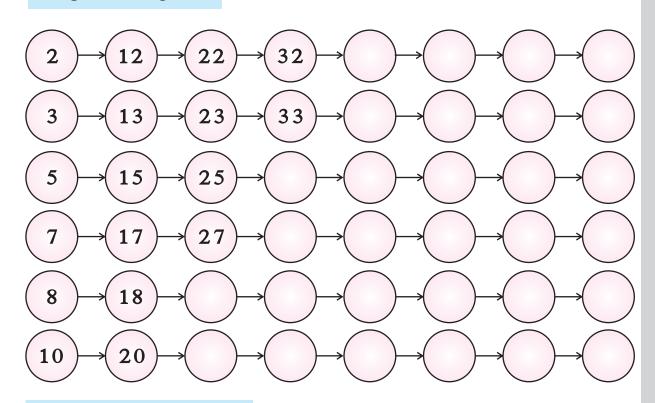
35

# Write Ascending/Descending Order

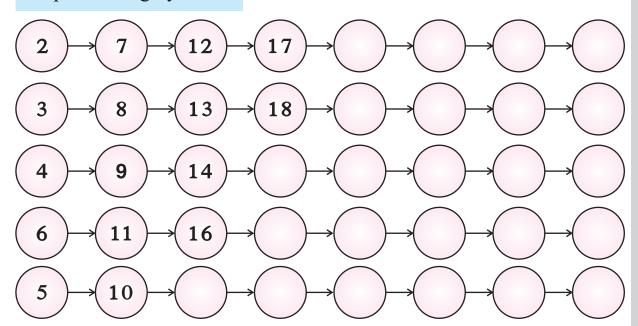


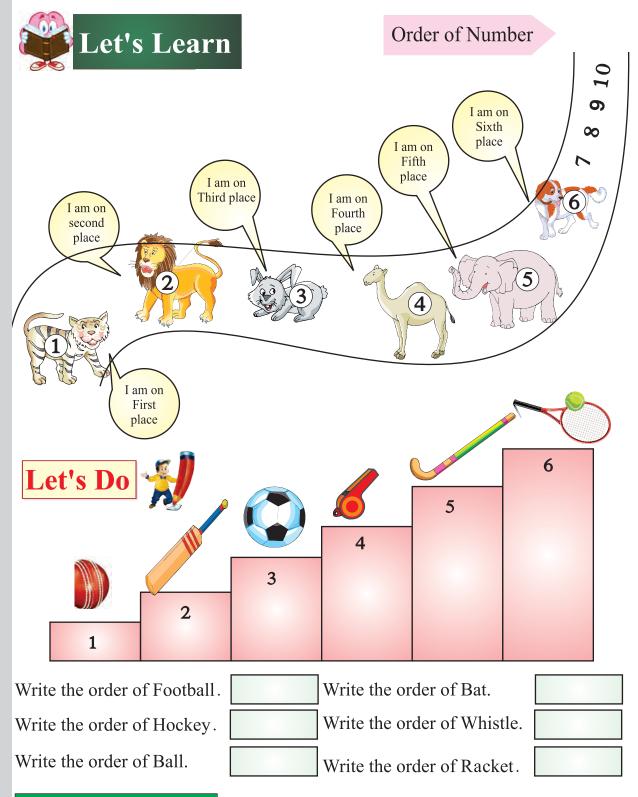
# Counting by Different Methods

### Skip Counting tens



# Skip Counting by fives



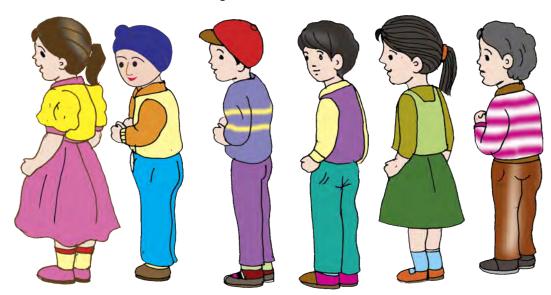


#### **Note for Teachers**

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.

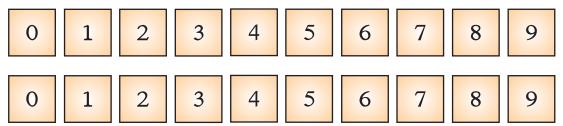




To make two digit numbers with given two digits

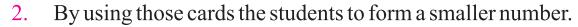
Objective — To make the small and the large number by using flash cards of two digits.

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



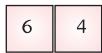
Method 1: Teacher will call a child and ask him to pick any two cards.

Like- 4 6



4 6

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



- 4. 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.



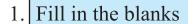
- 6. She will tell them to make different numbers from flash cards.
- 7. Then she will ask them about the smallest and the greater number out of them.

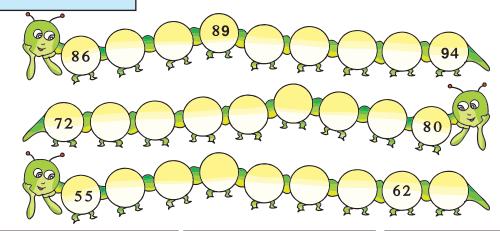


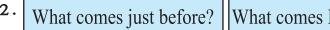
1. Write two digit numbers from given digits:

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

# Worksheet







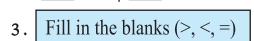
#### What comes In-between

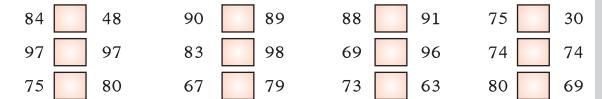
#### What Comes just after

79	90	79	81	83	85
86	100	98	100	70	72
73	80	85	87	93	95

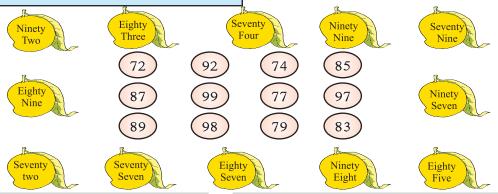
99	79
68	82

88

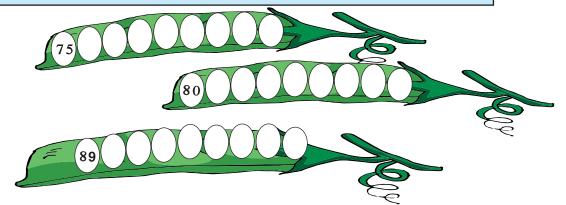




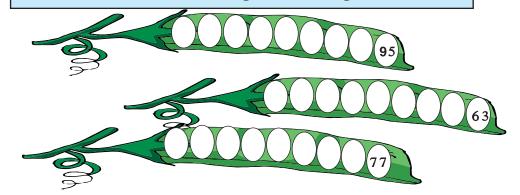
### Match the number names with the numerals



5. Write the forward counting from the given number



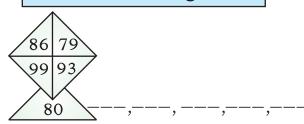
Write backward counting from the given number



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

8. Form numbers for each of the following

Write in ascending order



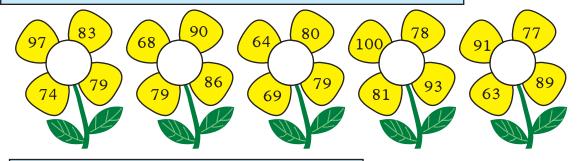




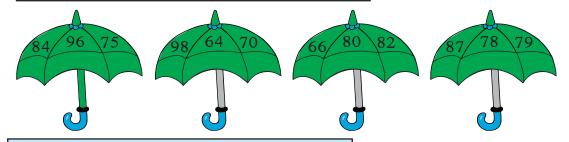
#### 11. Encircle the smallest number

89	98	79	96	78	69	77	83	6
90	97	63	88	89	71	93	47	6
100	82	74	75	94	83	58	66	9

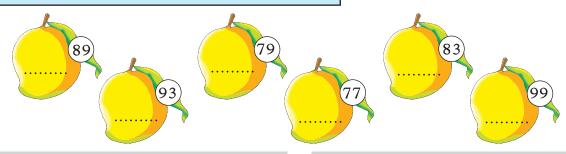
### 12. Write the greatest number in the centre of the flower.



#### 13. Write the numbers in decreasing order



#### 14. Write the following numbers in words

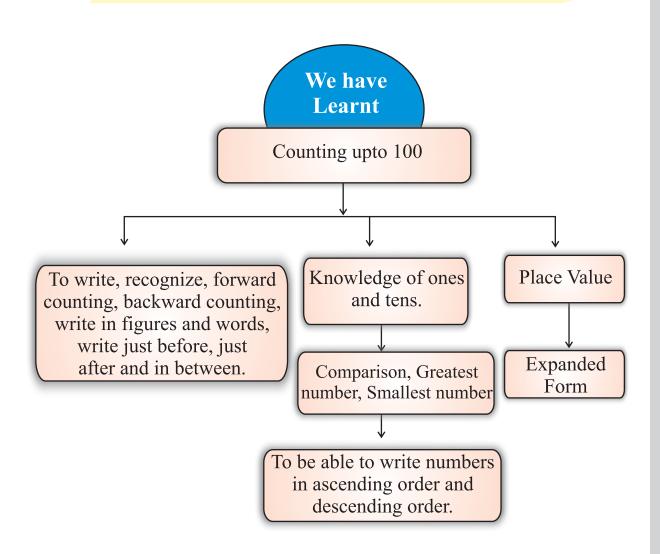


16. Tell the place value of the encircled digit:	
1(8) = The place value of 8 is	
$\mathfrak{G}4$ = The place value of 5 is	
62 = The place value of 6 is	
7(7) = The place value of 7 is	
16. Skip counting by tens	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
7	
17. Skip counting by fives	
$3 \rightarrow 8 \rightarrow 0 \rightarrow 0 \rightarrow 0 \rightarrow 0$	
$6 \rightarrow 11 \rightarrow 0 \rightarrow 0 \rightarrow 0$	
18. Write two digit number using given digits	
(i) 2, 5 (ii) 3, 4 (iii) 3, 4	
(iii) 7, 8 (iv) 1, 6 (iv) 1, 6	
(v) 5, 7 (vi) 2, 8 (vi) 2, 8	
<ul><li>(i) How notes of ₹10 and ₹1 make the number 54?</li><li>(ii) How notes of ₹10 and ₹1 make the number 72?</li></ul>	



#### **Points to Remember**

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



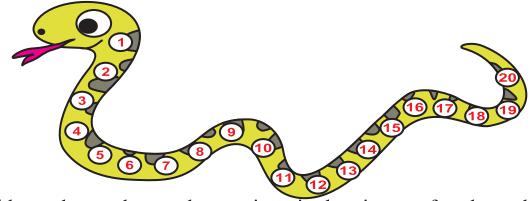


### **ADDITION-SUBTRACTION**

#### **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.

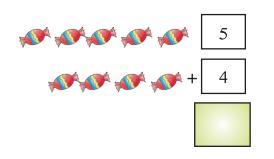
#### Do You Remember



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

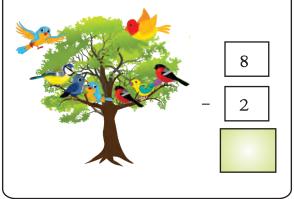
9-5= 9-3= 7-4= 8-4= 8-6= 7-6= 9-3=

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



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

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



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



#### **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



Look at the blackboard

> Correct, Now tell me orally.

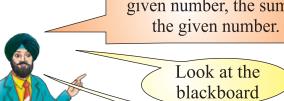


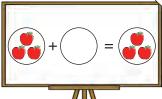




3

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









# Let's Do



$$1 + 2 = \boxed{\phantom{0}} = 2 + 1$$

$$2 + 4 = \boxed{\phantom{0}} = 4 + 2$$

#### **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	_	1	=	2



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



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

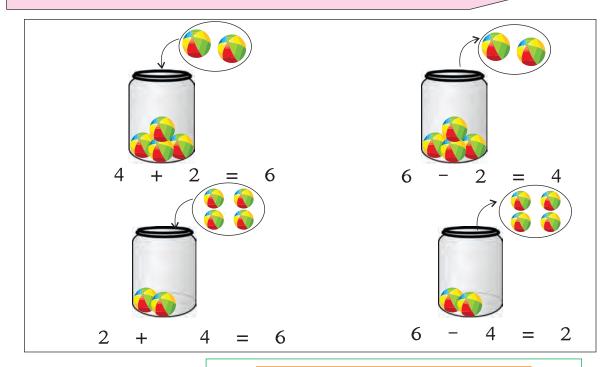
# Let's Do



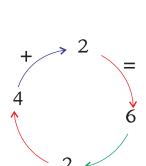


The difference does not matter what we had alres The difference does not matter with, what we had already with, what we had already we are left with understand it better.

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



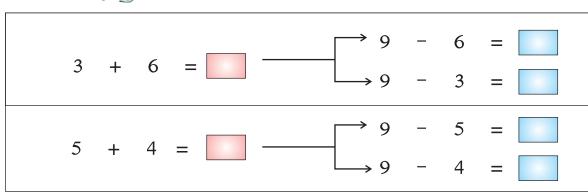
2 + 4 = 6



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

4 = 2







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



I have pencils of 10 colours.

**Sukhdev Singh** 



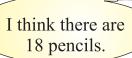
I have pencils of 8 colours.





Rahim

How many pencils are there with both boys?

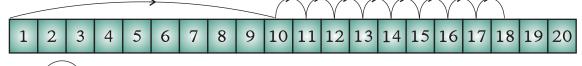


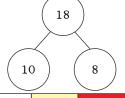
Tarleen



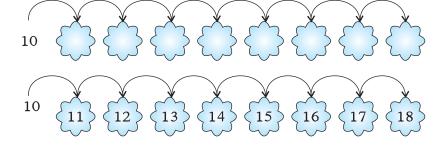
Let us do the sums with the help of number strip.

#### (a) Addition on Number strip



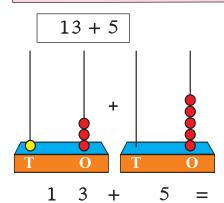


	Tens	Ones
	1	0
+		8
	1	8



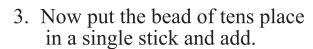
1 Tens 8 Ones.

#### (b) Addition with Abacus

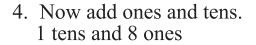


- 1. Put the beads in Abacus according to the given number.
- 2. Now put the beads of one's place of both numbers in a single stick and count.

  3 + 5 = 8



$$1 + 0 = 1$$

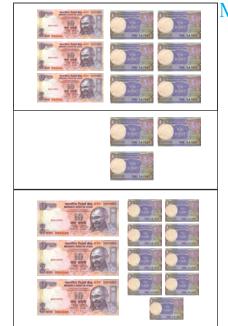


$$10 + 8 = 18$$

T	O
1	8

	Tens	Ones
	1	3
+		5
	1	8

#### (c) Add With Currency Notes



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.

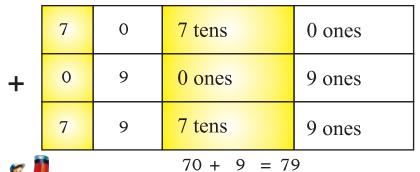
7	0
0	9

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:



# Let's Do



Fill in the blanks:-

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

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

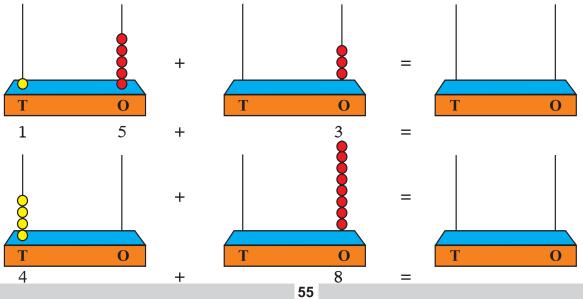
#### 3. Fill in the blanks:-

$$36 + \dots = 39$$
 $54 + \dots = 58$ 
 $72 + \dots = 77$ 

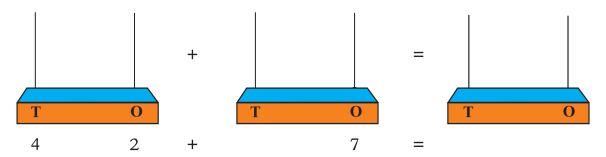
#### 4. Split the given numbers into tens and ones.

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

#### 5. Add on Abacus:-



6. Draw beads on Abacus and add.



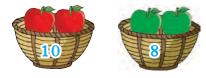
7. Show currency notes for the given numbers and then add them.

$$56 + 3$$



Tens	Ones

8. 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)



I have 16 colours.

I have no colour



Rahim

No worry, give you 4 colours.

Wow, Now I have 4 colours.



**Sukhdev Singh** 

I had 16 colours. I gave you 4 colours.

How many colours are left with you now?



**Bunty** 

I think 12 colours



**Tarleen** 

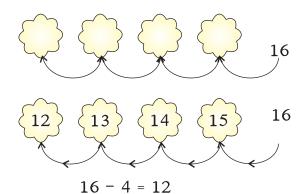


Lets now do the sums on number strip.

#### 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

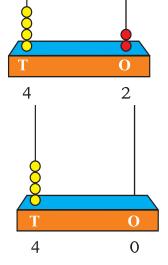
16 - 4



	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.

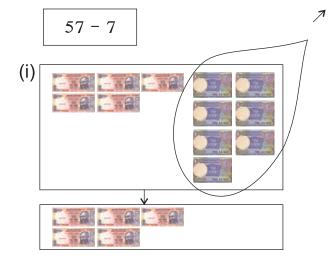
$$4 - 4 = 4$$

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

	7	8		7 tens + 8 ones
_		7	$\rightarrow$	0 tens+ 7 ones

78 - 7

	7	8	7 tens + 8 ones
_		7	0 tens + 7 ones
		1	1 Ones
			<u> </u>
	7	8	7 tens + 8 ones
_	0	7	0 tens + 7 ones
	7	1	7 tens + 1 ones
	Ů		

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.

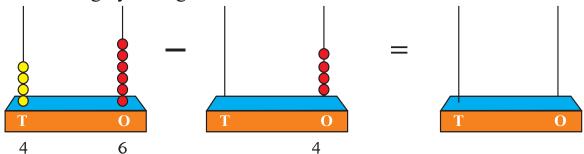
$$7 - 0 = 7$$

- 5 . 7 tens, 1 ones
- 6.70 + 1
- 7. 71



1. Fill in the blanks:-

2. Subtracting by taking out beads from abacus.



3. Subtract with currency notes

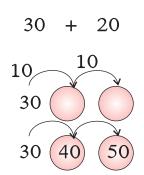
4. Subtract after splitting in ones, tens.

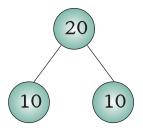
	8	6	<b>──</b>	tens	+ ones
_		2	<b>──</b>	tens	+ ones
				···· tens	+ ···· ones

- 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)

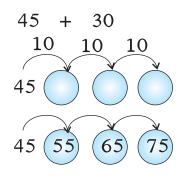
#### (a) by Splitting a number

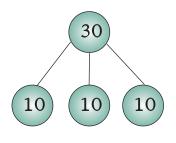




	T	O
	3	0
+	2	0
	5	0

$$30 + 20 = 50$$





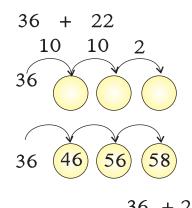
20

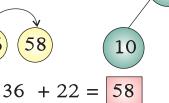
10

22

	T	
	T	O
	4	5
+	3	0
	7	5

$$45 + 30 = 75$$





	T	O
	3	6
+	2	2
	5	8

#### **Note for Teachers**

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



(a) Add by splitting a number.

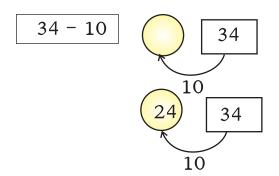
(1) 40 + 20	(2) 78 + 21
(3) 56 + 40	(4) 30 + 22

- 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?

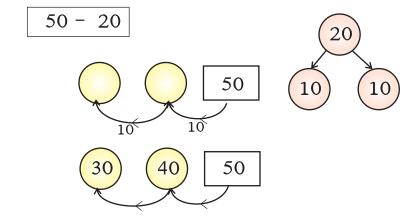


Subtraction of 2 digit numbers from 2 digit numbers (without carrying)

# Splitting a number

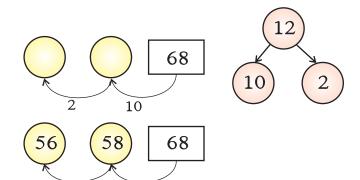


T	O
3	4
1	0
2	4



T	O
5	0
2	0
3	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)

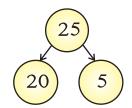
#### (a) By splitting a number

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

$$= 37 + 20 + 5$$

$$= 57 + 5$$

$$= 62$$



#### (b) By splitting both numbers

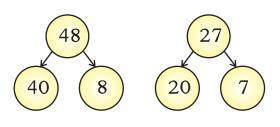
$$48 + 27$$

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

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

$$= 60 + 15$$

$$= 75$$



#### (c) Expansion method

Step 1

53 + 48 =	Tens	Ones
	5	3
+	4	8

#### Step 1

5	Tens	+	3	Ones
<b>→</b> 4	Tens	+	8	Ones
			11	Ones

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

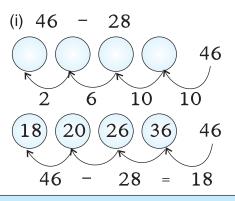
#### 3. Add with expanded form:

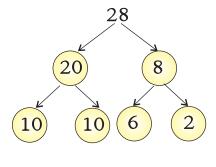
45 + 36	54 + 27

- 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



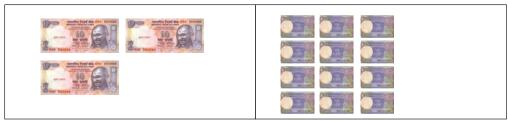


#### (b) With currency notes

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  $\mathfrak{T}2$ . Therefore take ten notes of  $\mathfrak{T}1$  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				
20 + 3 = 23					



1. Subtract by splitting a number:

82 - 16	30 - 18
60 - 25	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

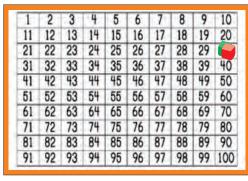
Method: (i) Write counting from 1 to 100 On chart and paste It on cardboard.

- (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	5	6	7	8	9	10
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.



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	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32		34	35	36	37	38	39	40
41	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	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



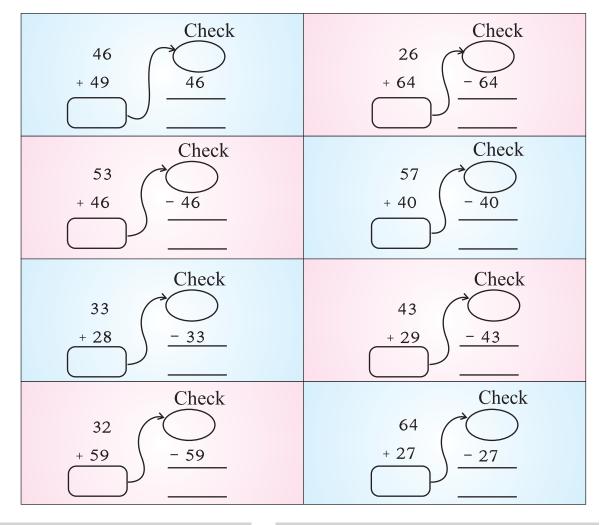




#### Add the numbers and check

Check	Check
18 (56)	72 (96)
+38 - 38	+ 24 \ - 72
56 18	96 24







$$32-15 = 17$$

Relationship between Addition-Subtraction

$$17 + 19 = 36$$

$$23 + 24 = 47$$

$$40 + 50 = 90$$

# Let's Do



$$48 + 44 =$$

$$92 - 48 =$$

$$60 + 35 =$$

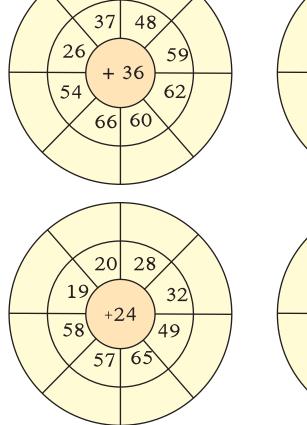
# **Brain Teaser**

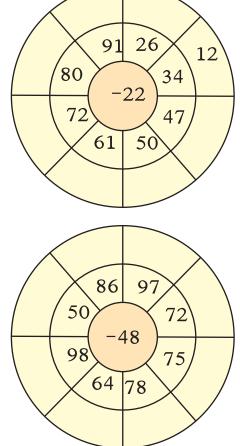
+	50	42	34	26	18
30					
32			<b>→</b> 66		
35					
37					> 55
39					

73

+	36	40	56	29	32
10					
15					
17					
19					
22					

# Add/Subtract





# **Brain Teaser**



# Can you help me to sail my boat through water?























# **Brain Teaser**

# Think, Understand and Do:

9

6

9 6

6

3 + 3 =

\_

4 6 + 8

+ 6 =

= |

9 + =

| +

30 + 7 =

= |

26 - = 10

- | +

16 + 14 = 5



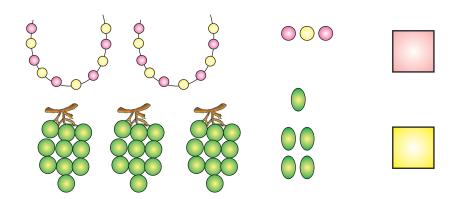
Objective: Doing Addition as brain workout.

**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.

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

#### 1. Count and Write:



### 2. Add by Counting forward

#### 3 Add:

# 5. Subtraction by backward counting:

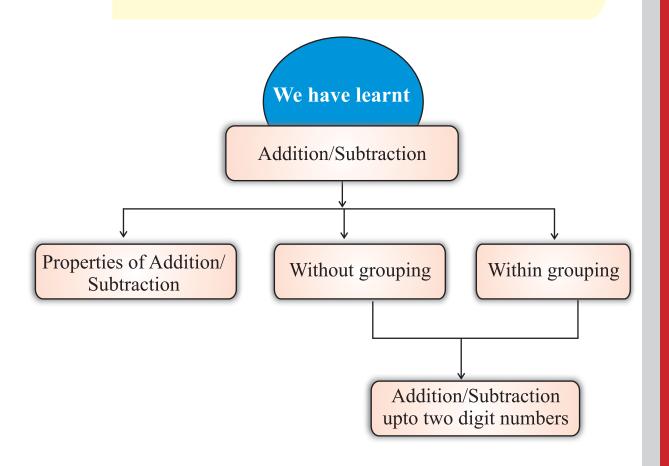
#### 6. Subtract:

7. Add after splitting a number : 48 + 25



# **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**

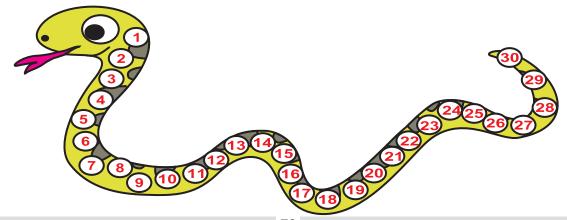
- 1. To understand how to make groups.
- 2. To develop Mulitiplication as Repeated addition of a group.
- 3. To understand the concept of equal sharing.
- 4. Activities to make equal groups.

# Do You Remember

# Activity



Let us count by jumping two's.

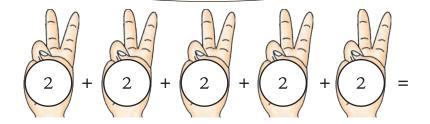




## **Grouping by 2-2**



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 '×' in place of 'times'
× is called multiplication.

Now, Raise three fingers

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

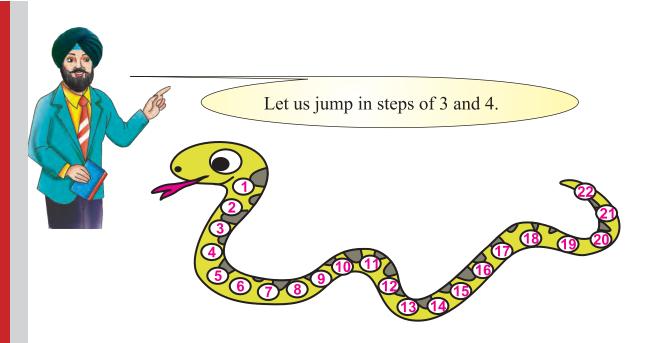




3 + 3 + 3 = 3 times 3=  $3 \times 3$ 

= 9

3 fingers 3 times



# To say Counting in different ways

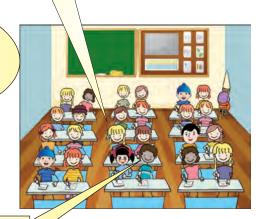


All children take a jump of 2. Where have they reached? Let us speak together.

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



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

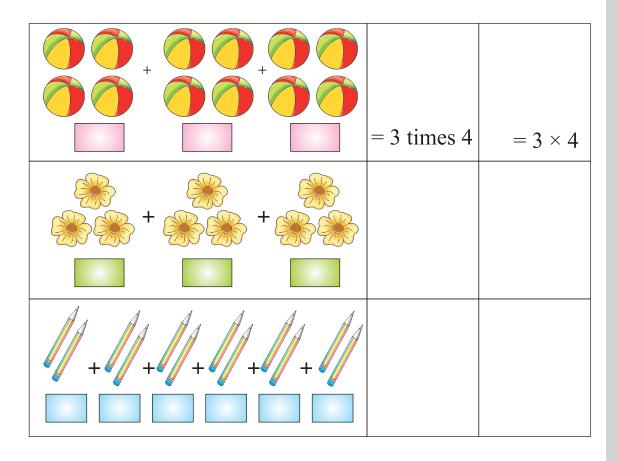


3, 6, 9, 12, 15, 18, 21, 24, 27, 30



#### Fill in the blanks

## **Count and Write**



## Add repeatedly and change into Multiplication

$$7 \times 4$$

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

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

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



# Let's Learn













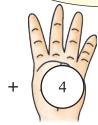
Three fingers of 4 children means 4 times 3

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

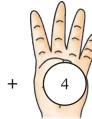


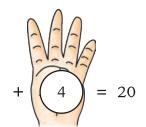
Now the teacher says to five children, to raise 4 fingers of their hand.













5 times 4

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



Buckets



Buckets



Buckets



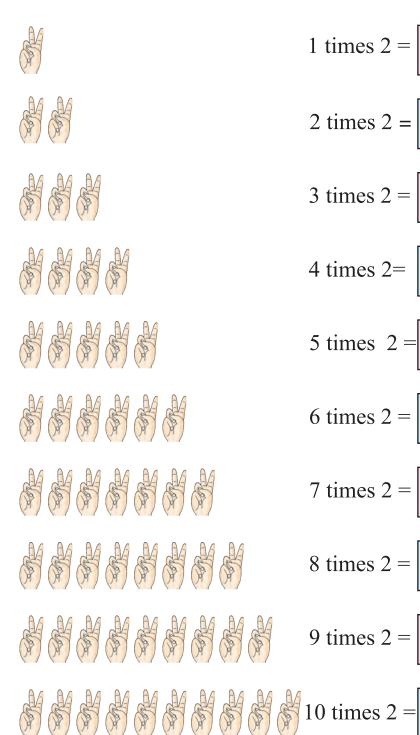




Buckets

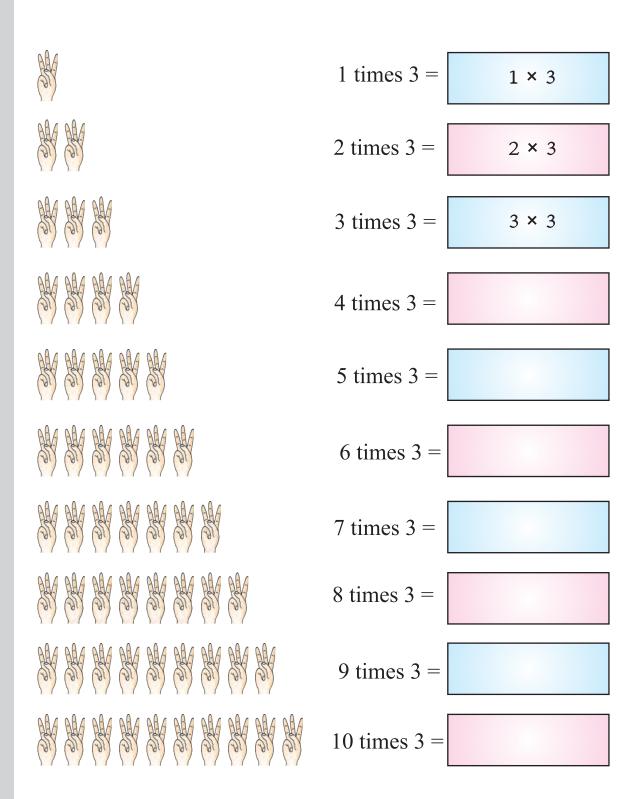
 $3 \text{ times } 2 = 3 \times 2 = 6$ 

## Write according to group of 2



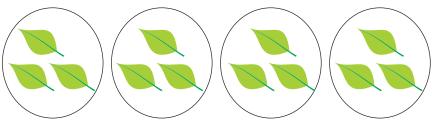
1 times 
$$2 = \boxed{1 \times 2}$$
2 times  $2 = \boxed{2 \times 2}$ 
3 times  $2 = \boxed{3 \times 2}$ 

# Write according to group of 3.

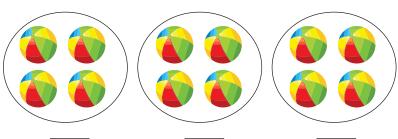




1. Add repeatedly and change into the multiplication fact.









2. Add and change into multiplication fact.

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

$$5 + 5 + 5 + 5 =$$

$$6 + 6$$
 = x

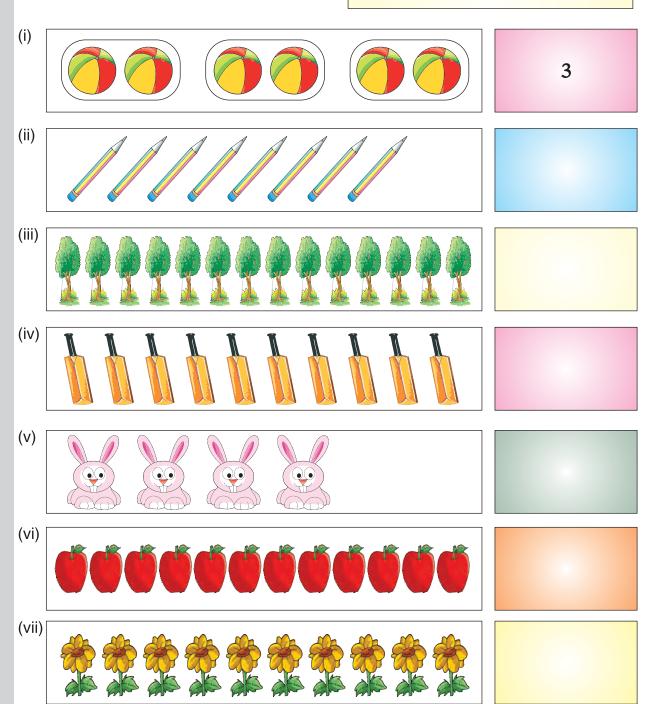
$$2 + 2 + 2 + 2 + 2 + 2 =$$

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



# Let us make groups of 2

How many groups are made?



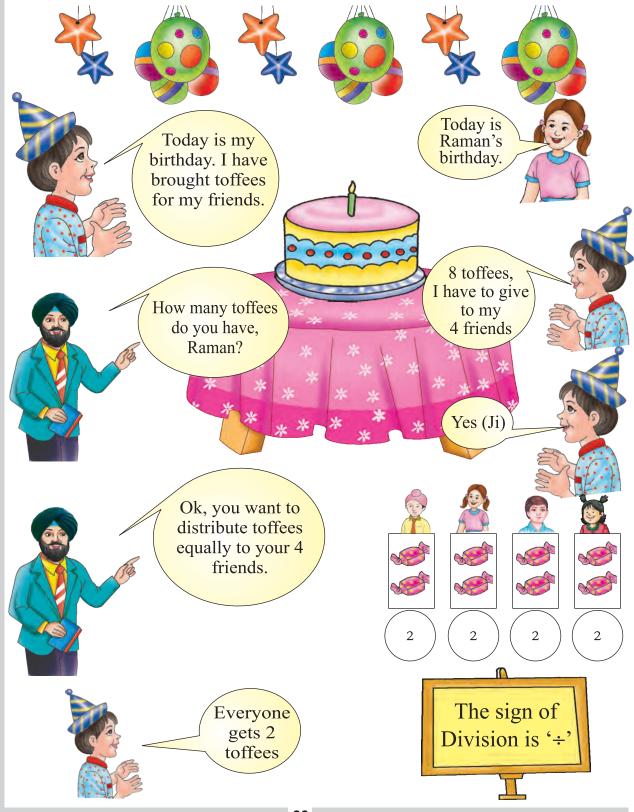


Let us make groups of 3

# How many groups are made?



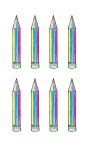
# Birthday of Raman

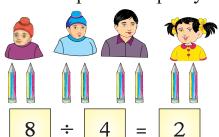


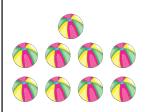


# **Divide Equally**

Divide 8 pencils equally among 4 children.







Divide 9 ball equally among 3 children.















Divide 10 beads equally into 2 strings.









Divide 6 toffees equally among 3 children.















## **Note for Teachers**

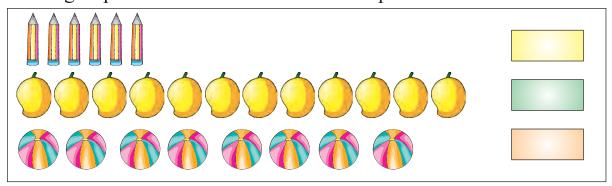
Method to divide equally is called 'Division'. The sign of division is '÷'



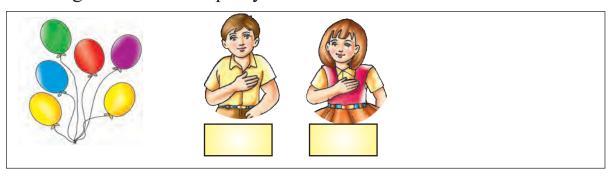
1. Add and write in terms of multiplication fact.

2. Write in terms of multiplication.

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



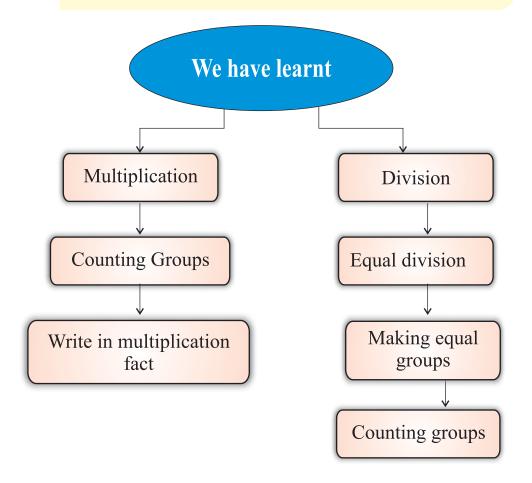
4. Divide gives balloons equally between two students.





# **Points to Remember**

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





# **MONEY (CURRENCY)**

# **OBJECTIVES**

- 1. 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

# Introduction





What is the cost of this eraser?

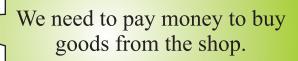
The cost of this eraser is ₹2.

The cost of this pencil is ₹5.



What is the cost of Pencil?



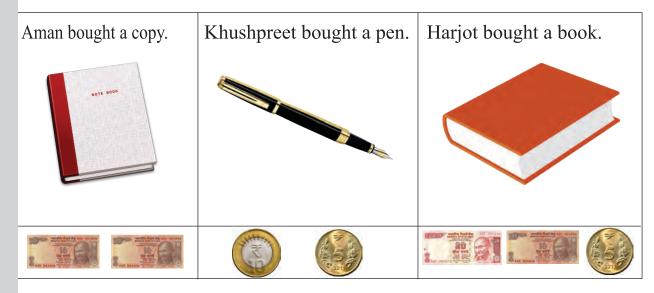


It means we need money to buy things.





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



Draw 4 coins of ₹ 5

Draw 2 coins of ₹ 5

Draw 2 coins of ₹ 10

Draw 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 = \_\_\_\_\_

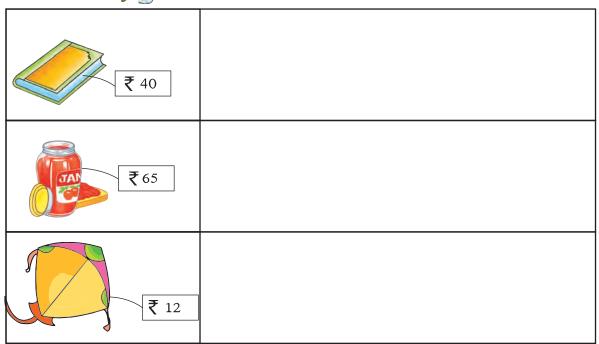
Cost of garland = -



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





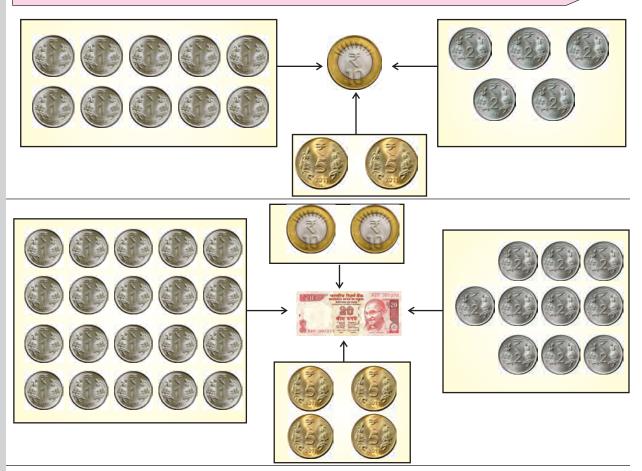


# Note for Teachers

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

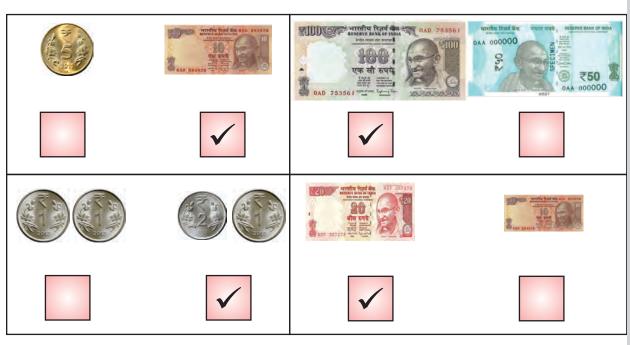


Make an amount of ₹20 from the coins of ₹10, ₹5, ₹2 and ₹1.

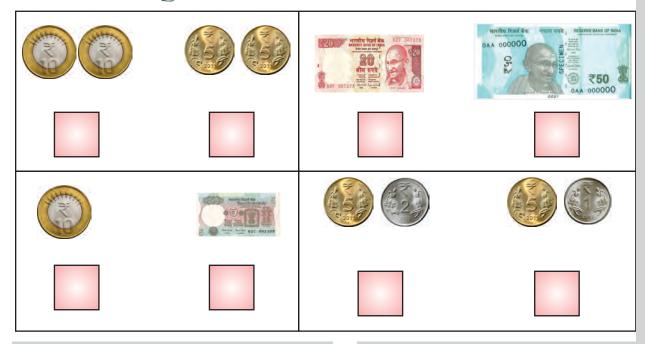




Put a Tick ( ) for the greater value of money in the given choices



# Let's Do



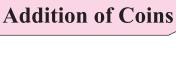
# Write the value of items purchased using the given price of each item

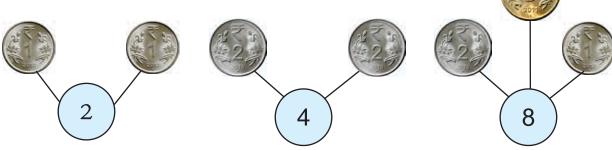


# Let's Do



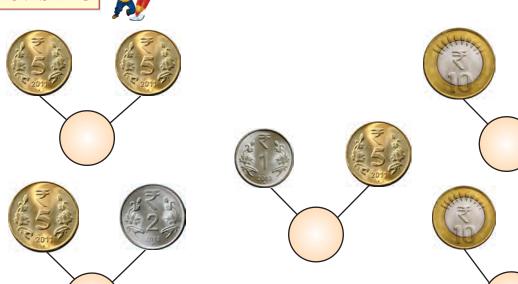


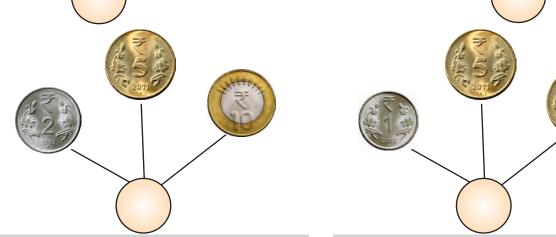




# Let's Do







# Worksheet \_\_\_\_

1. Count and Write



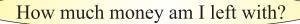
2. Put a tick (  $\checkmark$  ) in the box for the greater value of money from the given choices.

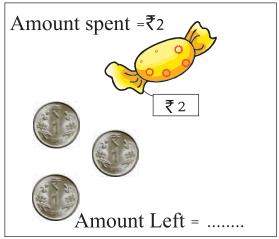


3. Put a tick ( $\checkmark$ ) for correct value of coins for the givev value of money.



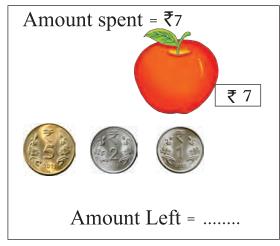
4. Simran bought different things from the shopkeeper as shown in the given pictures. She had money as shown in the picture. How much money is left with her after buying the things?



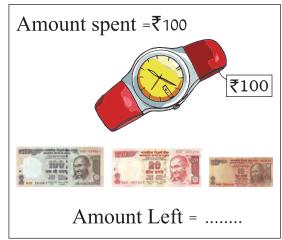






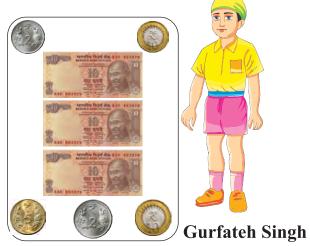






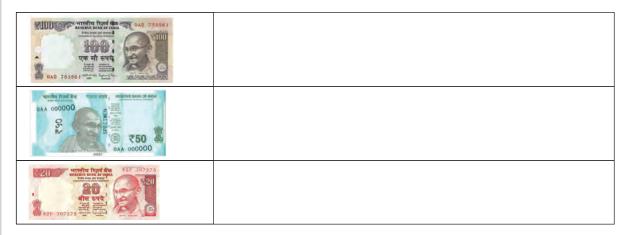
## 5. Answer the following questions:





- \* How much amount of money does Pari have?
- \* How much amount of money does Gurfateh have?
- \* Who has more amount of money?
- \* How much more amount of money is there?

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



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.
- 5. 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.



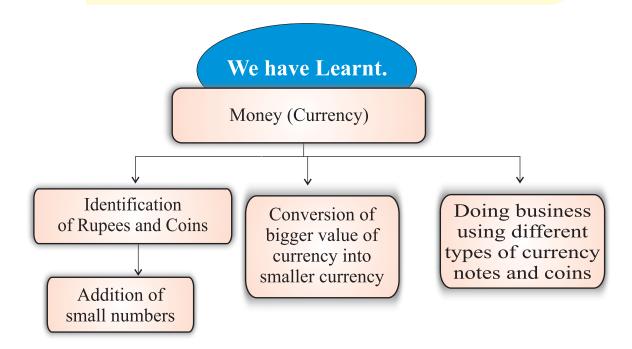
Two rupees are greater than one
Five rupees are greater than two really
Five plus five equals ten
Ten plus ten equals twenty
Fifty are greater than twenty
Think what makes it fifty
Fifty plus fifty equals hundred
Learn it by heart really.





# Points to Remember

Indian currency (Money) includes rupees and paise.





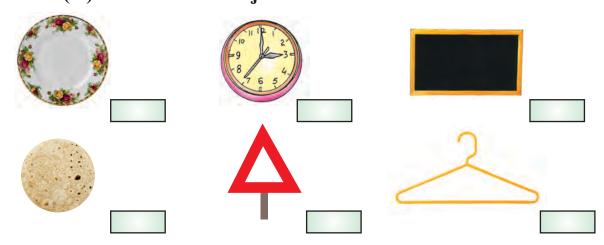
## **SHAPES**

#### **OBJECTIVES**

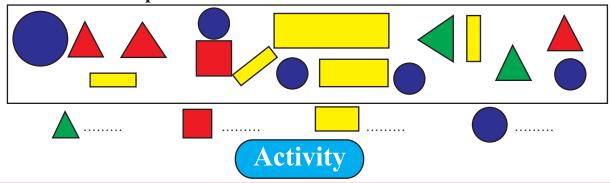
- 1. Recognise different things around us and be able to classify them according to their characteristics.
- 2. Recognise circle, square, rectangle and triangle by their names.
- 3. Recognise cube, cylinder, cone and sphere by their names.
- 4. Recognise these shapes around us.
- 5. To draw different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

### Do You Remember

1. Choose triangles/quadri-angles/circular things from the following shapes. Mark (✓) on triangle, (×) on quadri-angle and mark circle (O) on the circular objects.



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



# 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 "We children, will play the game of shapes today." Every child will close his eyes and take things from the bag one by one and will describe the shape by touching it.

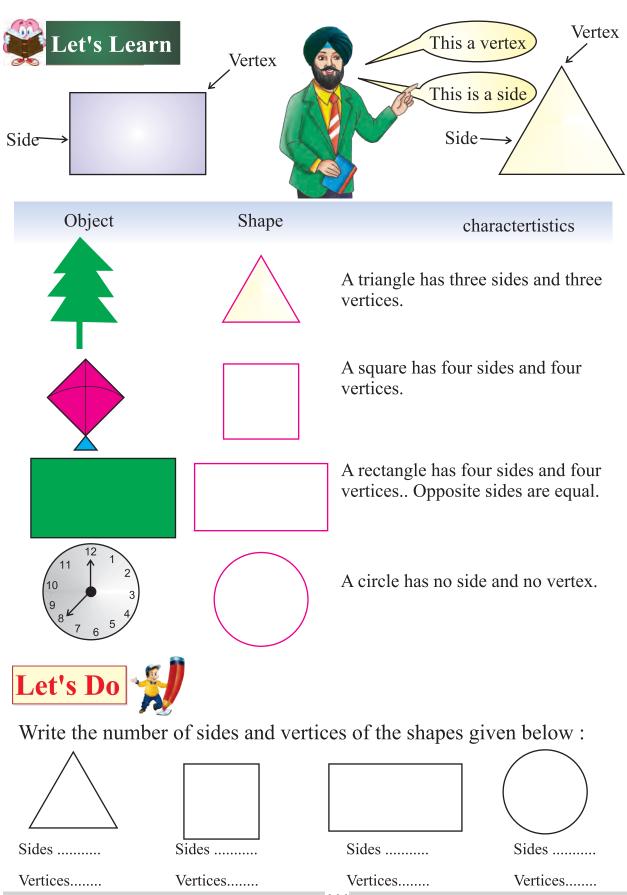


Jasveer's turn came first. She closed her eyes put her hand in the bag. She touched all the faces of the object and said, "It has no corner, so it is a circle." On hearing this, all children clapped.

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.

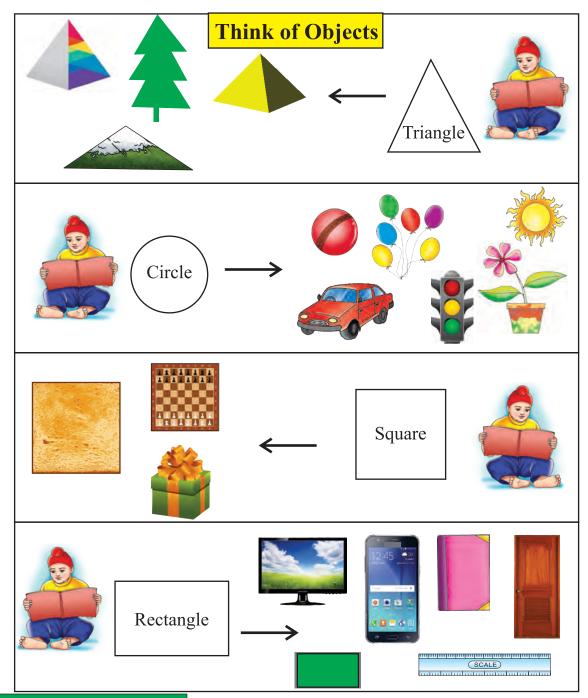
#### **Note for Teachers**

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.



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

Show 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.

# **Curve and Straight Lines**

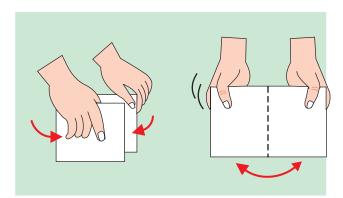
Which way would you choose for going from home to school?



School

### **Straight Lines**

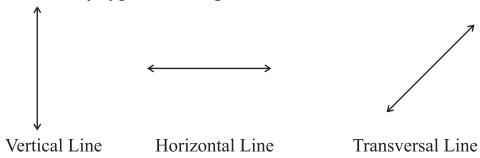
If we fold a paper and make a crease, a straight line is formed at the crease when we unfold it.



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



There are many types of straight lines



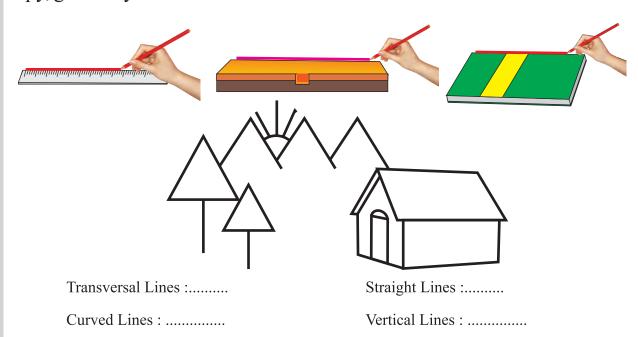
#### **Curved Lines:**

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



#### To Draw a Line:

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

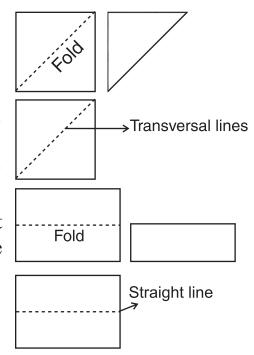


The teacher draws straight and curved lines on blackboard or on sand before asking the students to draw in their note-books.

# Activity

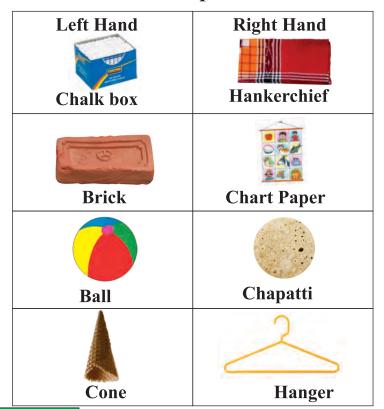
The teacher will clarify a horizontal line, vertical line and transversal line by folding a paper. Take a square paper. Fold it diagonally. Now unfold it. The crease formed on the paper is representing a transversal line.

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



# (Activity)

# **Different Three Dimensional Shapes**

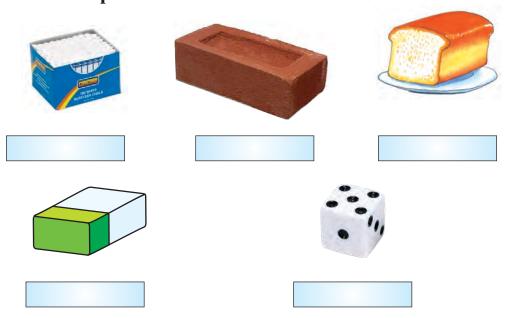


### **Note for Teachers**

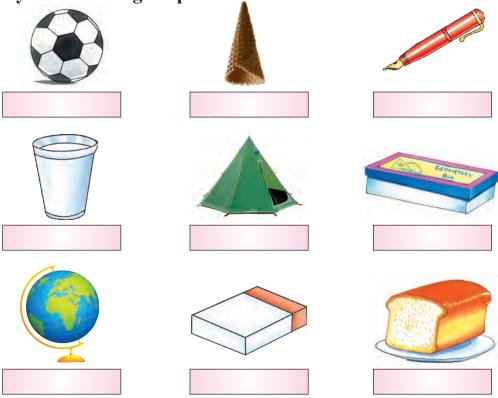
The teacher well hold different objects in his left hand and right hand and will ask the students to differentiate the shapes.



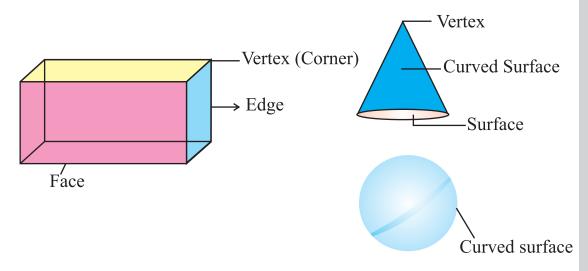
2. Choose cube and cuboid from the following shapes and write the name of the shapes.



3. Identify the following shapes and write their name.



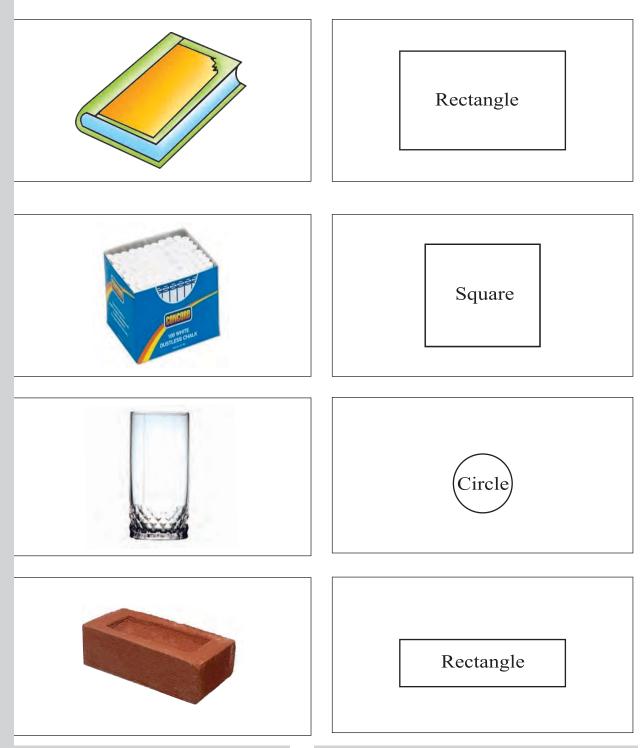
**Faces, Edges and Vertices** 



Name of Solid Shape	Solid Objects	Faces	Edges	Vertices
Cube		6	12	8
Cuboid		6	12	8
Sphere		1	0	0
Cone		2	1	1
Cylinder		3	2	0

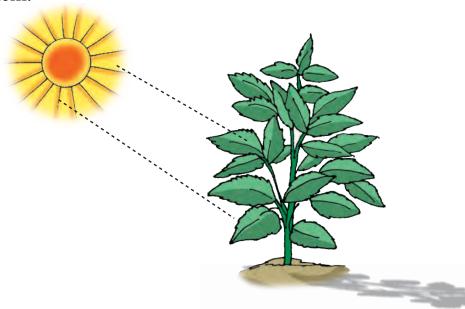
# To Draw Plane Figures on the Paper From Solid Figures.

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.......



### **Formation of Shadows**

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



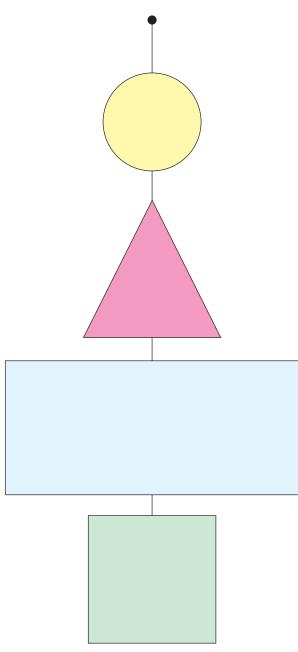
Can you identify shadow of different shapes? Match the following objects with their shadows.





# 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 thread the shapes together with a thick thread and make a hanging.



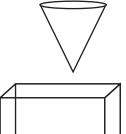


#### Fill in the blanks-

- 1. If all the faces of an object are same, then it is a ......... (cube/cuboid)
- 2. 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 or four)

#### Match and colour them as directed:

6 plane surfaces, all surfaces equal (green colour)



1 curved surface, no edges (blue colour)

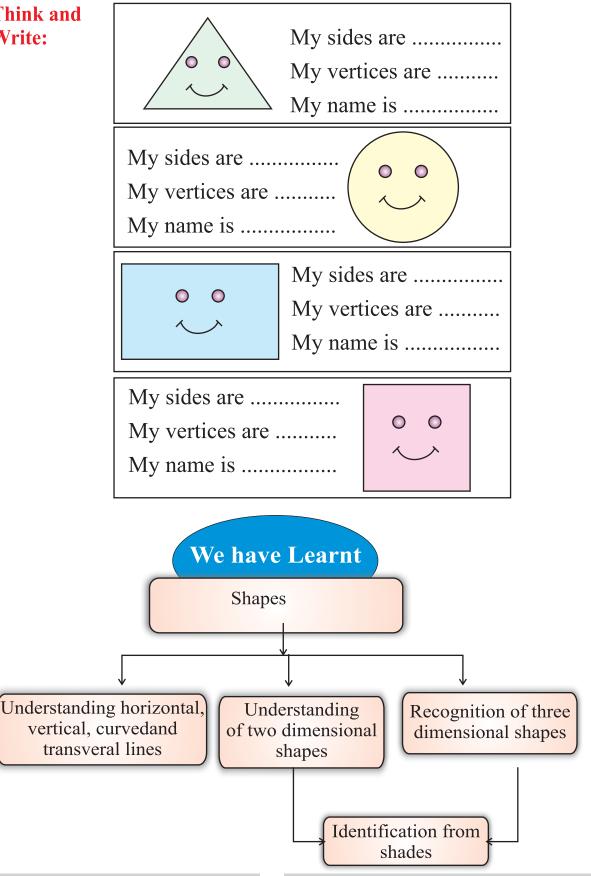
1 plane surface, 1 curved surface, 1 vertex (red colour)



6 plane surface, all surfaces unequal (yellow colour)



#### Think and Write:





# **Patterns**

### **OBJECTIVES**

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

# Activity

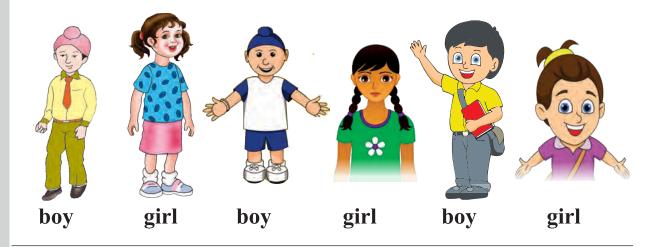
Teacher will explain in detail about patterns and continue the sequence of patterns of previous classes and relate it with things around us. He will motivate them to make patterns. For example, he will call boys and girls of the class one by one and will make patterns as shown below:



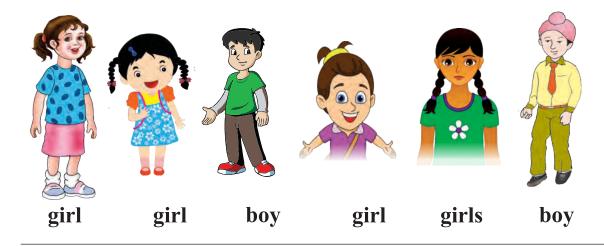


123

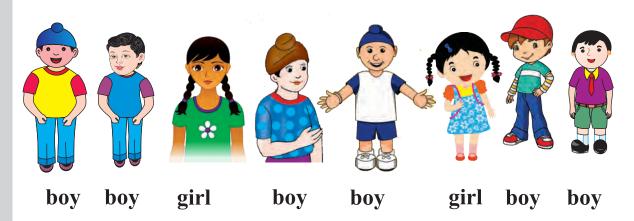
## Pattern-1

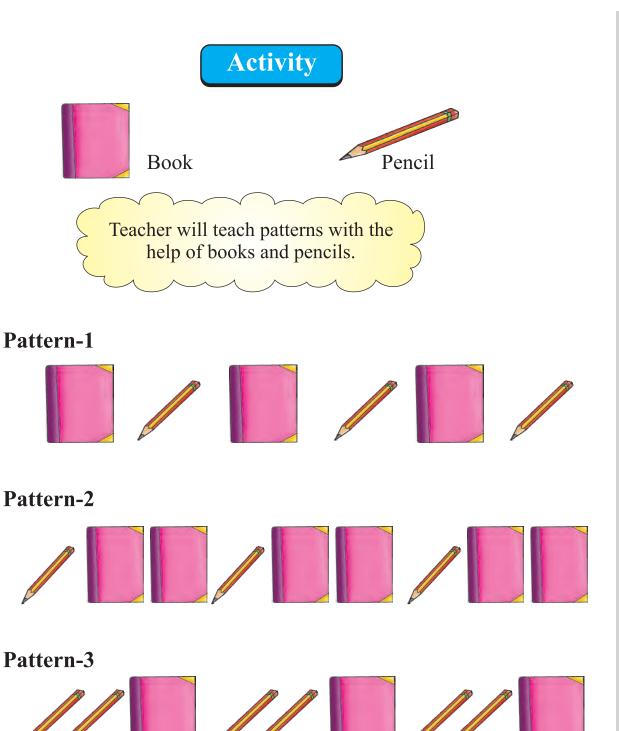


# Pattern-2



# Pattern-3



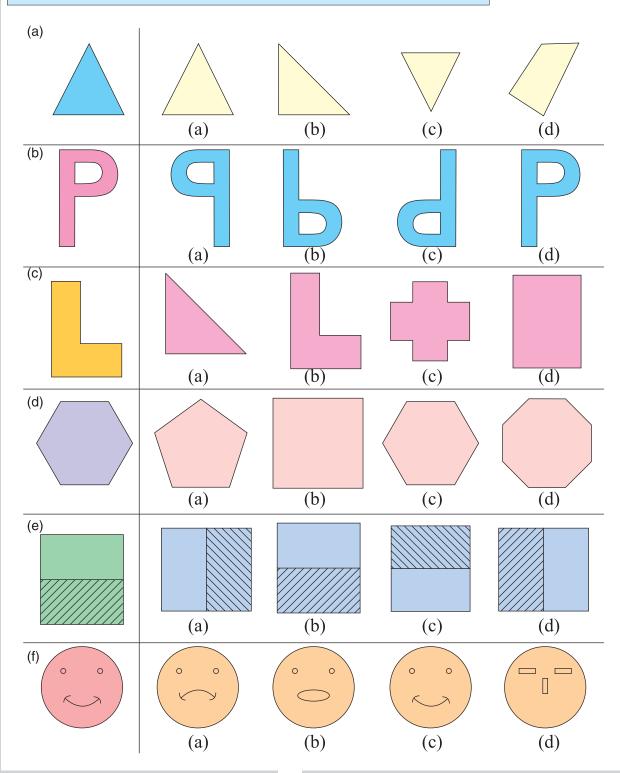


# **Note for Teachers**

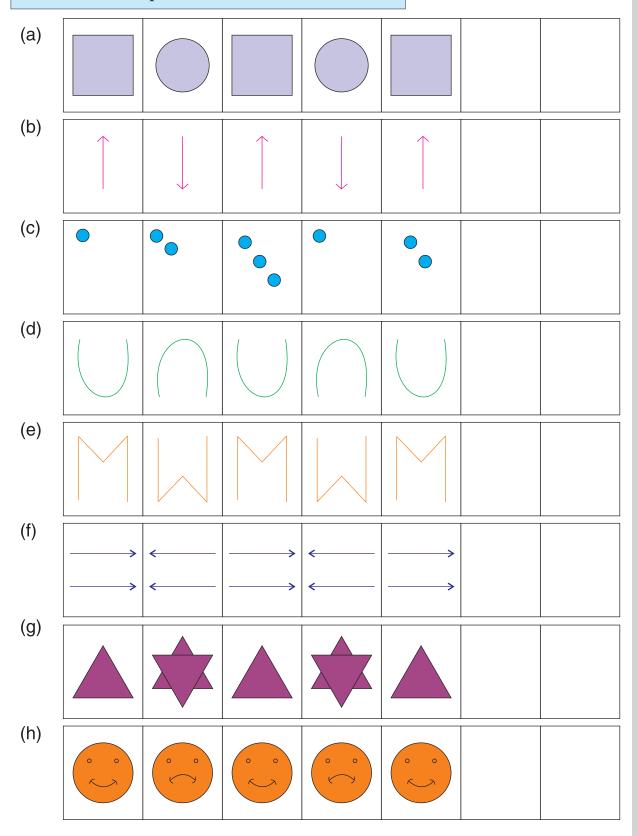
Encourage the children to make patterns with the help of pencils, erasers, sharpeners and books etc.



# 1. Encircle the pictures having same shape and size

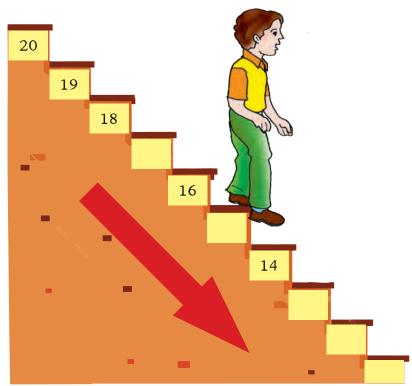


# 2. Observe the patterns and fill in the blanks

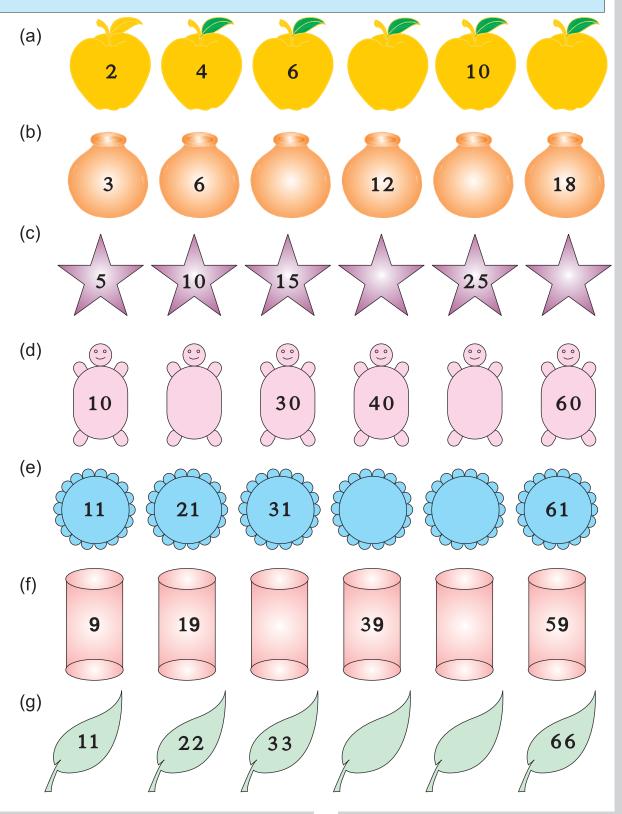


# 3. Observe the pattern and fill in the numbers.

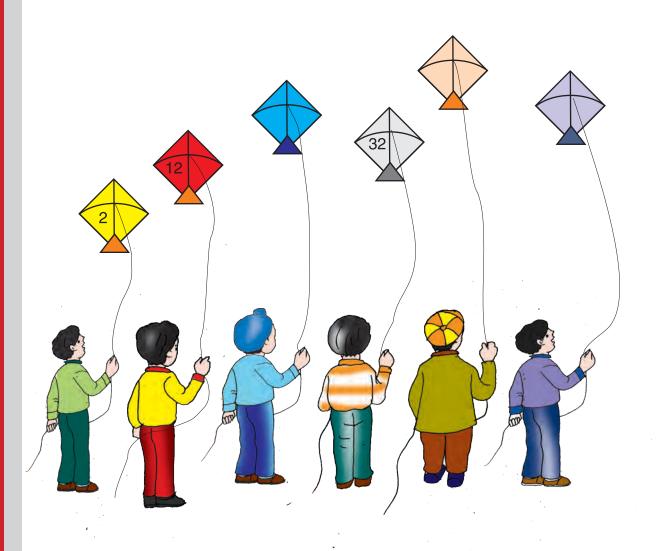




# 4. Let's observe some number patterns. Fill the correct numbers in the patterns given below.



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

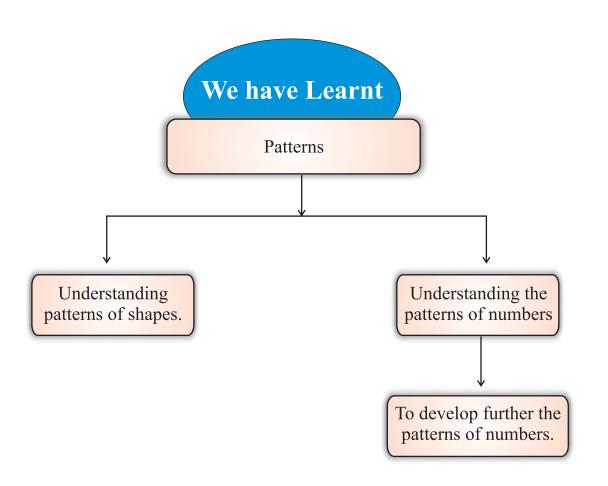


6. Observe carefully and fill the next boxes.

a	1	2	1	2	1		
b	1	3	5	7		13	

С	А	В	С	D	Е			
d	20	30	40	50			80	
е	22	24	26	28	30			
f	AB	CD	EF	GH			MN	
g	1	4	7		13		19	
h	19	18	17	1	6			
11	19	10	17		0			
i	35	30	25	2	0			
j	75	65	55	4	5			
131								







# **MEASUREMENT**

#### **OBJECTIVES**

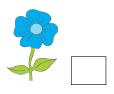
- \* Developing knowledge on the basis of physical features of relative objects of daily life.
- \* To give knowledge about non-standard units of length, weight, capacity.
- \* To develop reasoning.

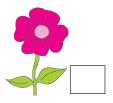
## Do You Remember

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.

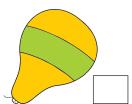






2. Write 1 to 3 in order from light to heavy.







#### Introduction



Dear children,
Can you measure the
length of blackboard with
handspan

Children, Can we measure the length with any other way except Handspan

Look, the length of blackboard is 8 handspans of Ramesh

Yes with steps



Dear children, Now
we will learn measurement
of length with the help of
solid objects. With this method
we can measure the length
of objects easily.



Yes, we can measure distance between two places with the help of steps.









Can we measure the length with other things except objects handspan and steps

Yes, Raju you can measure the length with pencils, sharpener, matchsticks

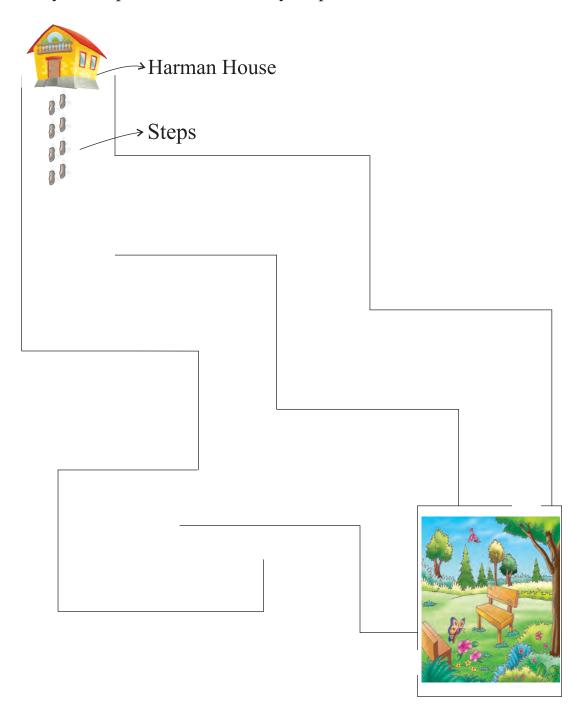


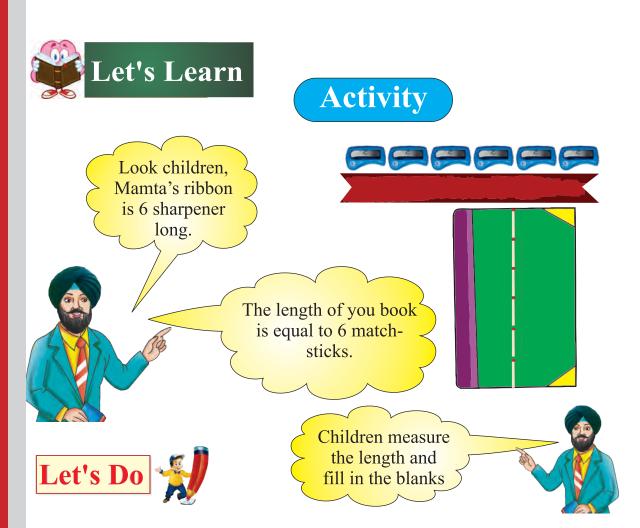
### **Hint for Teachers**

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

# Activity

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. The length of your pencil = ..... matchsticks.
- 2. The length of your book = ..... handspans.
- 3. The length of your room = ..... steps.
- 4. The length of your sharpener = ..... fingers.
- 5. The length of verandah of you school = ..... steps.
- 6. The length of your table = ..... handspans.
- 7. The length of the window of your class = ...... pencils.

Fill the colours if all your answers are correct

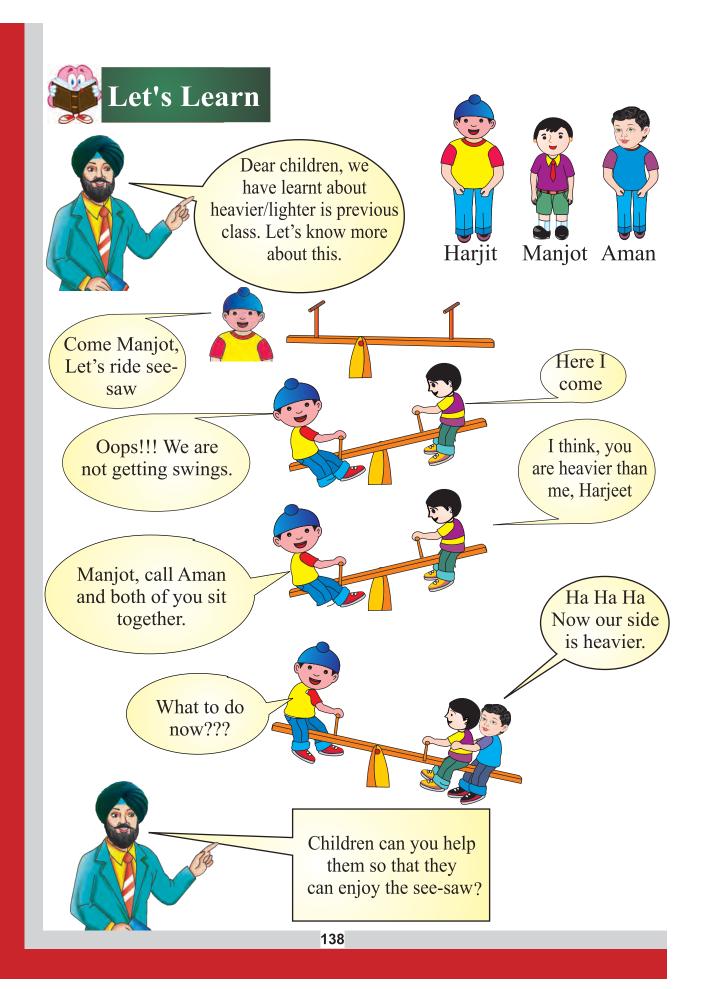
Handspans, steps, fingers, sharpener and matchsticks are Non-standard units of length.

#### Who will tell first?

- 1. 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?
- 2. Kajal's ribbon is 6 sharpener long and Mamta's ribbon is 12 sharpener long. What is the total length of both the ribbons?
- 3. 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?
- 4. The length of table is about 10 handspans, the length of black-board is about 20 handspans. Which is shorter? By how many handspans?
- 5. 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?

# Put Right (✓) or Wrong (×)

1.	We can easily measure the length of a room with fingers.	
2.	You can measure distance between school gate and classroom with steps.	
3.	We can measure the length of a door with matchsticks.	
4.	We can measure length of a blackboard with handspans.	
5.	In the early days, parts of body were used for measuring length.	





1. Tick  $(\checkmark)$  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

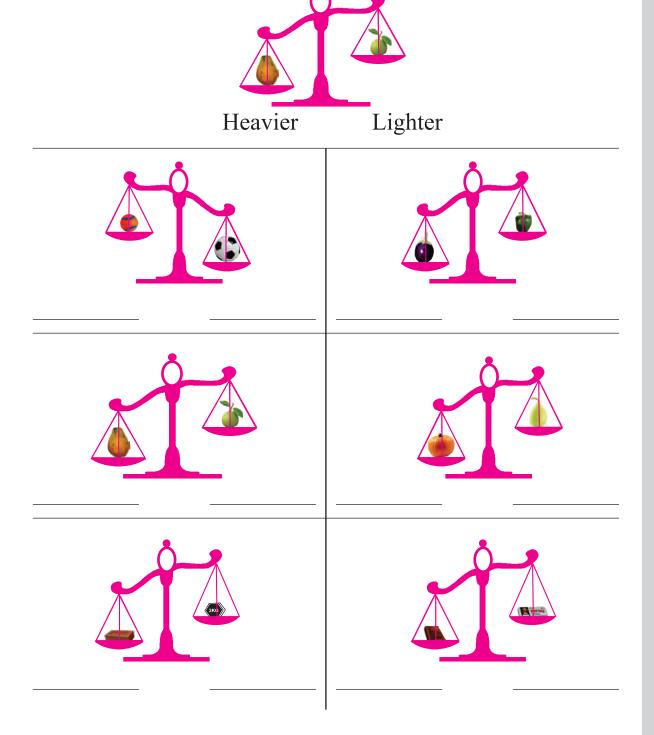
- The weight of your book is equal to weight of 3 guavas.
- The weight of your copy is 2 guavas equal to weight of 2 guavas from them.
- So, the book is ...... than the copy. (lighter/heavier)
- The copy is ...... than book. (heavier/lighter).

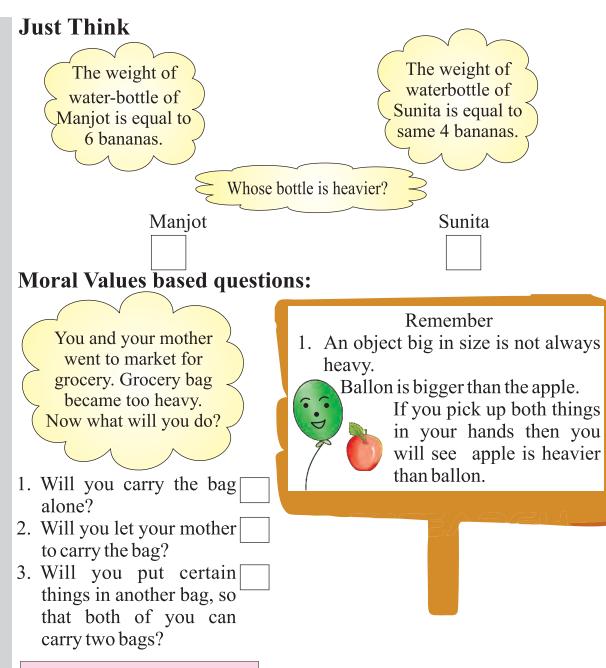






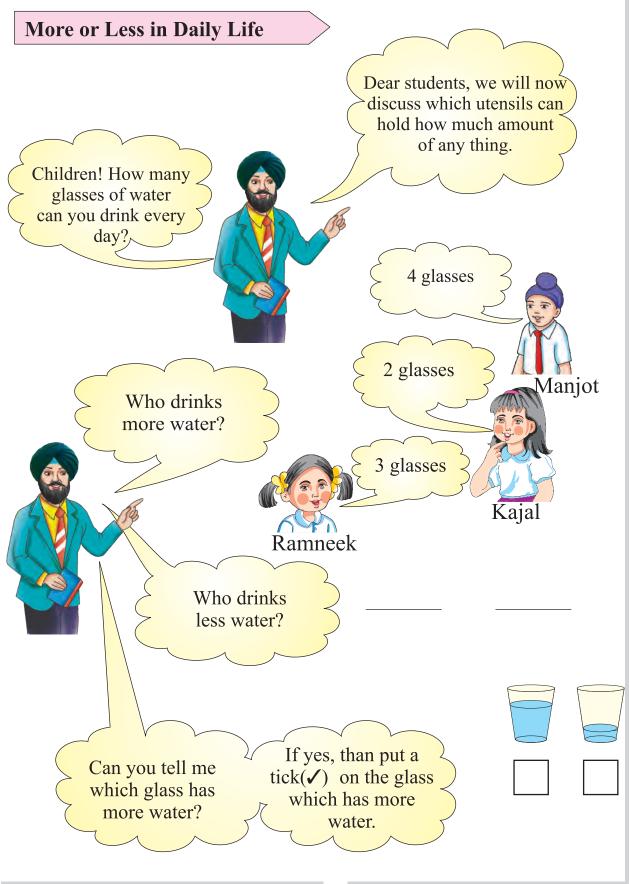
1. Which pan of the balance is heavier and which is lighter?





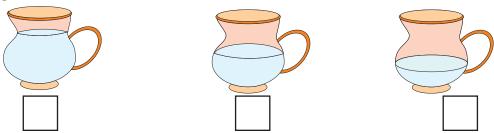
#### Who will answer first?

- 1. 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?
- 2. 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.
- 3. 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?
- 4. 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?

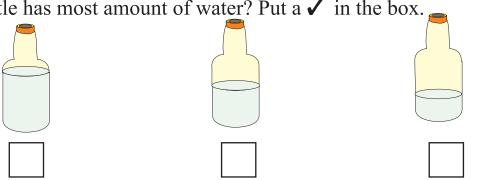


# Work Sheet

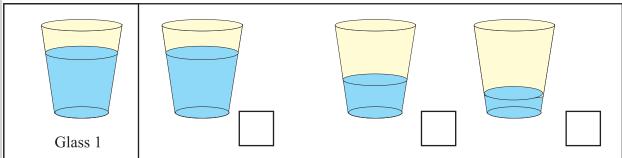
1. Which jug has the least water ? Put ✓ in the box.



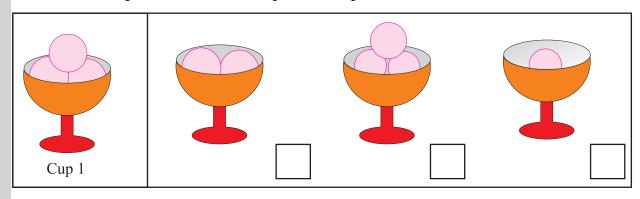
2. Which bottle has most amount of water? Put a 🗸 in the box.



3. Which glass has water equal to glass no. 1? Put ✓ tick in the box.



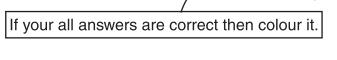
4. Which cup has icecream equal to cup no. 1? Put a ✓ in the box.



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

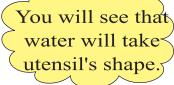


### Think About Similarly, a bottle A jug fills with 1. fills with 4 similar 6 glasses of glasses of water. water. The capacity of ..... is more than ...... The capacity of a bottle is equal to 3 glasses of water then: 2. The capacity of 2 such bottles will be equal to ...... glasses of water. (ii) The capacity of 3 such bottles will be equal to ......glasses of water. (iii) The capacity of 4 such bottles will be equal to ....... equal to ...... glasses of water. (iv) The capacity of 5 such bottles will be equal to ......glasses of water.



Put the water in different shaped utensils and observe it

#### **Activity**













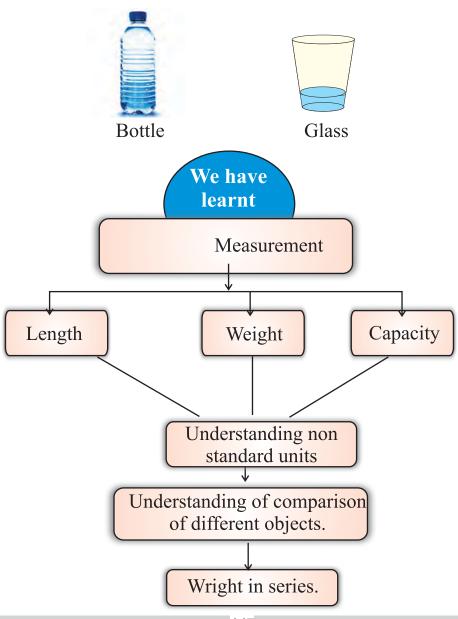




#### To measure capacity of bottle

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

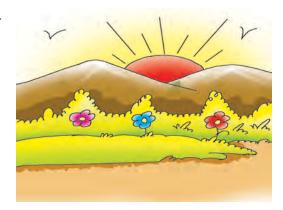
### **OBJECTIVES**

- 1. To Know the importance of time in daily life
- 2. 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 is shown in the given picture?

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.

Which time is shown in this picture?



13.	
(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?	



### **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.

N	Ionday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Fir	st day	Second Day	Third day	Fourth day	Fifth day	Sixth day	Seventh day

Make students learn this rhyme orally.

(g) At what time do you get up in the morning?

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.



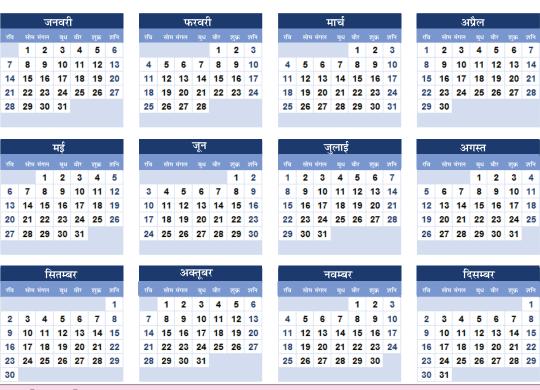
Days	of a	week	(Ask	stud	ents)
					0. 11/00/2

l.	which day is holiday in a week?										
2.	Which day is first working day of the week?										
3.	How many days are there in a week?										
1.	Tell	the nan	nes (	of any	two da	ays of	a we	ek.			
5.	Whi	ch is yo	our f	avourit	te day	of a v	week'	?			
5.	Whi	ch day	com	es befo	ore Tu	esday	?				
7.	Whi	ch day	com	es afte	r Thui	sday'	?				
		·				•					
8.	Wri	te the n	am	e of da	ys						
	Fi	irst						Third			
	Si	ixth						Seventh	n [		
9.	(i)	Which	da	y come	es afte	r day	s wr	itten be	elow :		
		Sunda	y					Tueso	day		
					Thursday						
	(i	i)Whicl	h da	y come	es befo	ore da	iys w	ritten b	elow	:	
				I	Friday					Mondays	
	Saturday										
	(iii) Which day comes two days after days written below										
	Tuesday				Sunday				Wednesd	ay	
	151										

#### 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?
- \* With the help of calender we can understand the importance of time after dividing it into different parts.
- \* Calender makes our time systematic in terms of days, weeks and months.

### 2018



#### Remember that:

- A year has 12 months.
- A year has 365 days.
- A month has 30 or 31 days.
- February month has 28 or 29 days.
- The year in which February has 29 days is called leap year.



#### 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."



F 🥌		
(1)How many days are (a) 28	there in the month (b) 29	of February in a leap year? (c) 30
(2)Which month of the (a) January	•	
(3) Which of followin	, , , , , , , , , , , , , , , , , , ,	
(a) October	(b) December	(c) March
(4) Which month is of	spring season?	
(a) March	(b) December	(c) October
(5) Which month is 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?

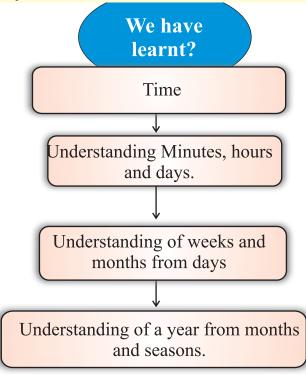
  - (a) After a month (b) After six months (c) After a year
- (4) How long does a tree take to grow?
  - (a) Days
- (b) Minutes
- (c) Years.
- (5) After how much time your birthday comes?

  - (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

1. 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	N	0. 0	f chi	ldre	n wl	no li	ke r	elat	ed fi	ruits		
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 of 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?"

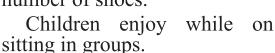
Teacher: "Children, Look under the shoes. There is a number on it. It is the size of your shoe. In this way you can know about big/small size of your shoes." He asks the students to see the back side of their shoe and note the number.



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) No. of children having / notebooks in the bag = ......
- (2) No. of children having notebooks in the bag = .....
- (3) Children having notebooks are ....... than children 3 having notebooks (more/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?

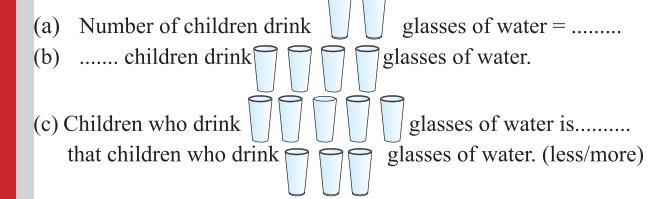
  Answer Less
- (4) How many students are there in the second class? Answer 30



. 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
	2
	8
	10
	6

Find



Vegetable seller has lot of vegetables for you. Count and write.

	Vegetables	Number
	***	
	000000	
Cou	nt and write	
(I) (ii) (iii) (iv) (v) (vi)	Which vegetable do you like? Which vegetable is in more number? Which vegetable is in less number? What is the total number of tomatoes? What is the total number of carrots? What is the total number of all vegetables?	

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?	
· /	J	

(	(ii)	Which coloured	d cars are more in number?	

(	111	Which coloured cars are less in number?	
٦	/	, ,, , _ , _ , _ , , , , , , , , ,	

4	(iv)	Which coloured cars are equal in number?	
- (	IVI	which colouled cars are equal in humber:	

$(\mathbf{v})$	What is the total number of all cars?	
( V )	what is the total number of an cars:	

4. Health check up was done by a doctor in the school. In this check up height of the children. After measuring the height a list was prepared as shown below:

	Height (in cm)	Number of children	
(I)	Who is the tallest child in the class?		
(ii)	How many children are there in the class wit maximum height?	th	
(iii)	How many children are there in the class wit minimum height?	th	
(iv)	How many children are there of cm of	f	
	height.		
(v)	How many total children are there in the cla	ass?	
Н	ints for Teachers		
	ncher will measure the height of children in cms. He dents with same height and will enter the data in the ta	<b>C</b> 1	f



#### **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:-**

(1) Alloting different colours to 12 months of the year.

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

- 2. Each children of the class is given a small piece paper cut in square shape. All pieces will be of same size.
- 3. Each child will fill the colour as shown above in the table according to his/her birthday month.
- 4. Then each child will paste it on the chart after colouring the piece of paper.
- 5. 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	
2	
3	
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.

 $(\checkmark \text{ or } x)$ 

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

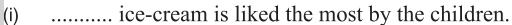
 $(\checkmark \text{ or } \times)$ 

(v) Bag No. 3 has 3 apples.

 $(\checkmark \text{ or } \times)$ 

3. Look carefully at the table given below.

Name of Ice-cream	The Number of children who like
AND OFFICE AND ADDRESS OF THE PARTY OF THE P	
Chocolate	
Vanilla	
Strawberry	
Mango	

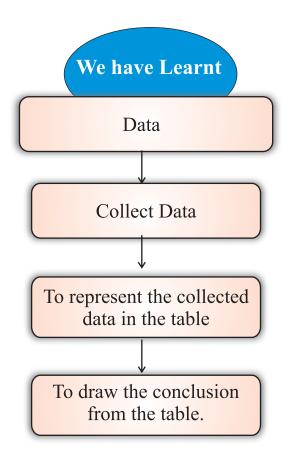


- (ii) .....ice-cream is liked the least by the children.
- (iii) How many children like chocolate ice-cream?
  - (a) 6
- (b) 8
- (c) 10
- (d) 7
- (iv) How many children like vanilla and straw-berry ice-cream?
  - (a) 6
- (b) 10
- (c) 8
- (d) 12
- (v) Vanilla and chocolate ice-cream is liked by equal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



#### **Point to Remember**

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























































### मान कार्ड