Government of Karnataka

MATHEMATICS

Text cum Workbook

(Revised)

English Medium

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2

SECOND STANDARD

PART - 2

Karnataka Text Book Society (R.)
6th Cross, Malleshwaram
Bengaluru-560 003.

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W8F1M6

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Lesson - 7

MENTAL ARITHMETIC

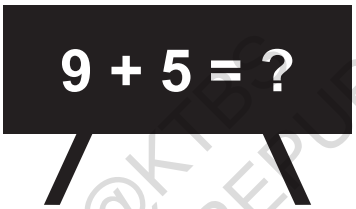
B4Y8N1

After studying this lesson you :

- add and subtract single digit numbers mentally.
- add and subtract multiples of 10 mentally.

ADDITION

Example 1 :





D'souza Gowri Salman

Salman has solved the problem quickly.

Example 2 :

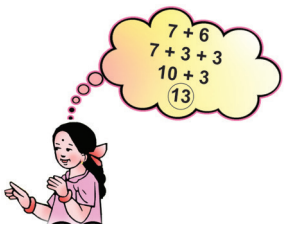
3 + 8 = ?



D'souza has solved the problem quickly.

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Example 3 :



7 + 6 = ?

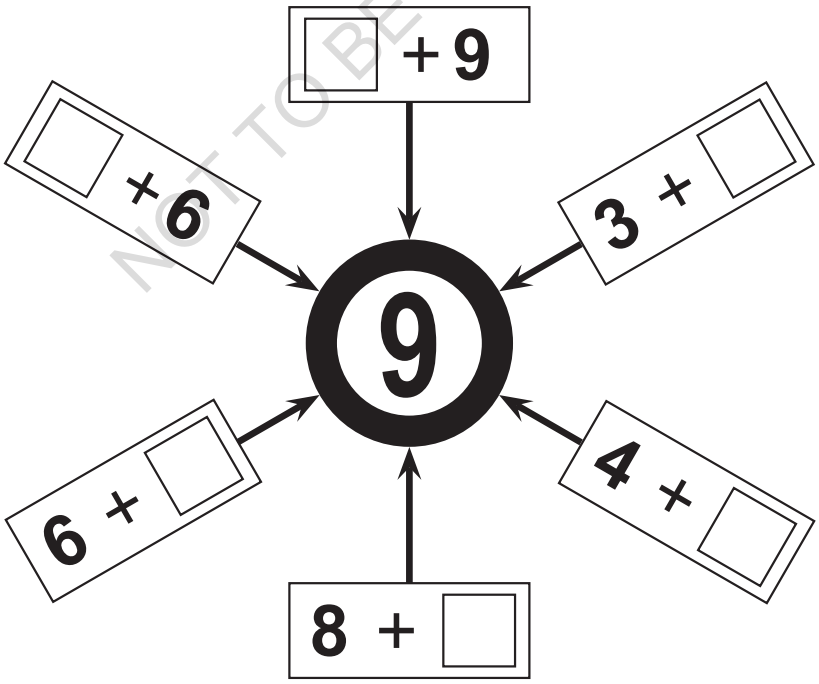
Gouri has solved the problem quickly.

Add the following mentally.

1) 6+2	5) 8+5	9) 7+3
2) 8+4	6) 9+2	10) 9+8
3) 5+5	7) 2+8	11) 4+6
4) 3+9	8) 5+0	12) 7+9

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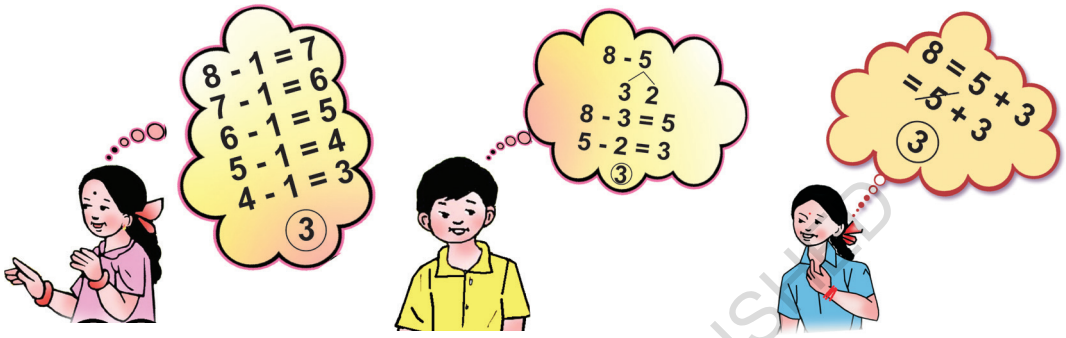
Fill in the missing numbers.



SUBTRACTION (MENTALLY)

Example 1 :

8 - 5 = ?



Choose the most suitable method to solve the problem quickly and practise.

Example 2 :

6 - 2 = ? **7 - 4 = ?** **9 - 6 = ?**

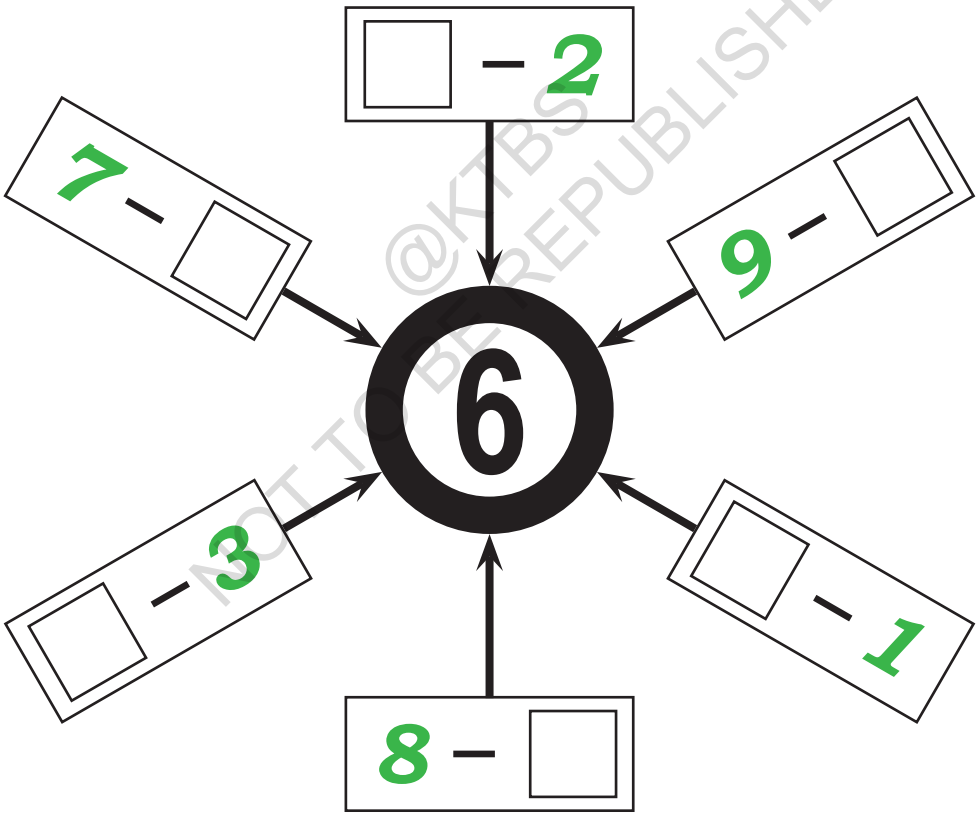


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Solve mentally

1) 5-3	5) 9-6	9) 6-1
2) 3-3	6) 7-3	10) 8-7
3) 5-2	7) 8-6	11) 9-2
4) 8-2	8) 6-6	12) 5-0

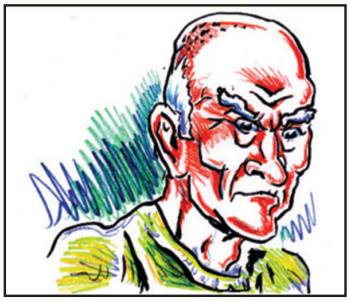
Fill in the blanks.



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Addition and Subtraction of Multiples of ten (Mental)

Activity : "Shathayushi" game



Children sit in a circular form. One Child says 10 and Starts the game. The next Child adds 10 to it and says 20 and others continue the game by increasing the number by 10 (30, ... 40, ... 50, ... so on) In this game, the one who says 100 is Shathayushi. This person has to leave the game. The next person again starts the game by saying 10. The game continues.

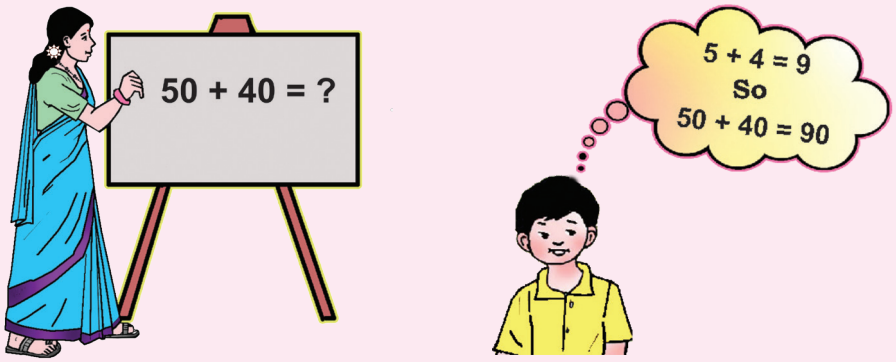


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Add mentally.

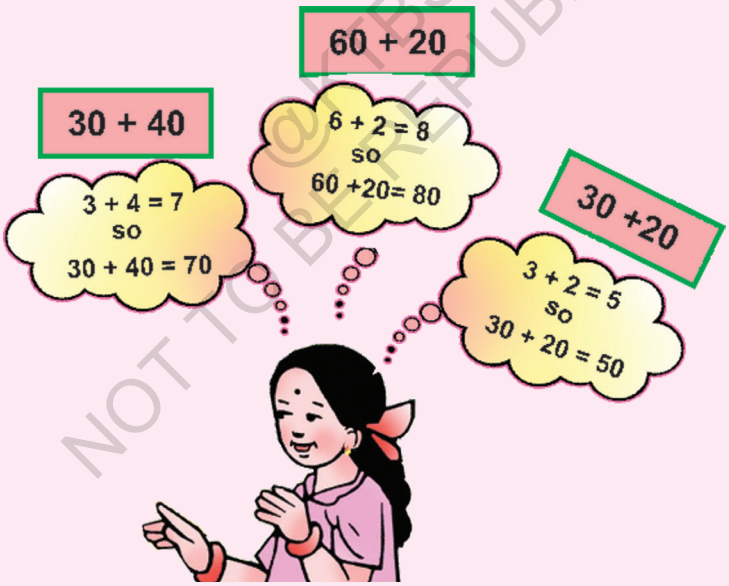
10 + 10	50 + 10	60 + 10
20 + 10	80 + 10	10 + 50
30 + 10	40 + 10	10 + 70

Example 1 :



50 + 40 = 90

Example 2 :



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Add Mentally and answer the following :

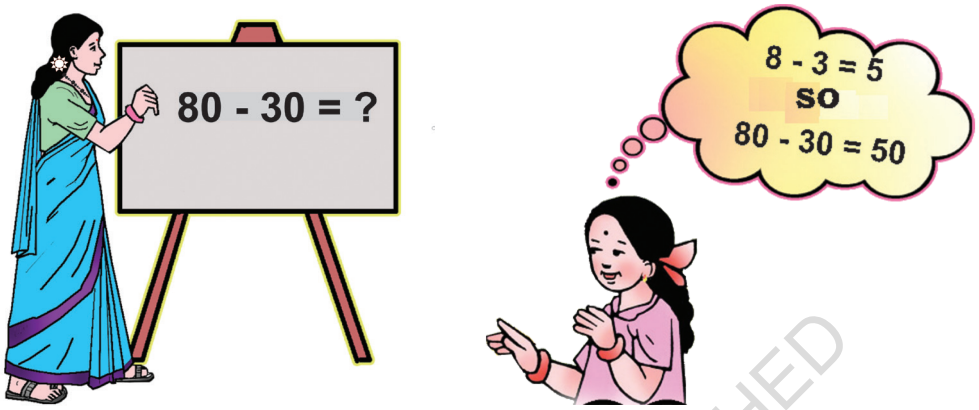
1) 40 + 20 2) 50 + 30 3) 20 + 70

4) 30 + 40 5) 80 + 10 6) 20 + 50

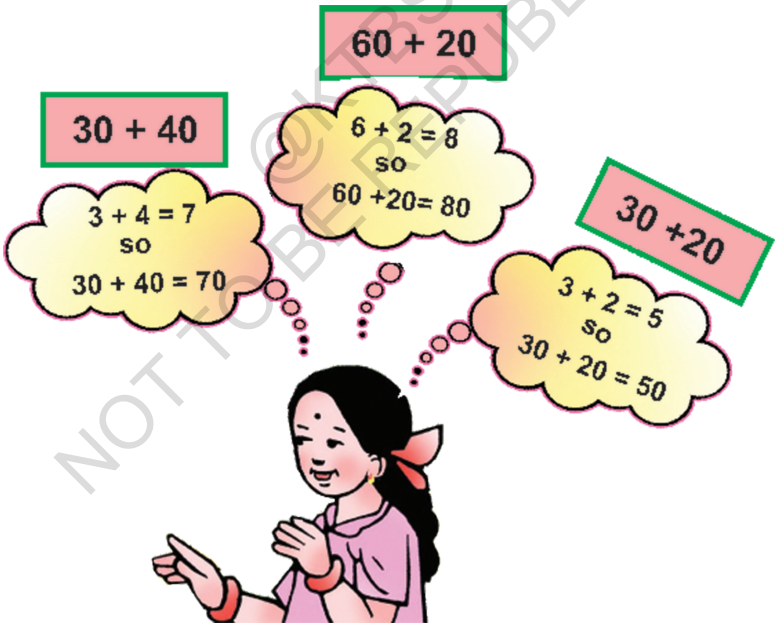
7) 60 + 30 8) 70 + 10

Subtraction

Example 1 :



Example 2 :



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Solve Mentally and answer the following :

1) 20 - 10	2) 50 - 20	3) 60 - 40	4)70-10
5) 60 - 30	6) 70 - 30	7) 90 - 50	8)80-80

Lesson - 8

MONEY

E6Z6D4

After studying this lesson you :

- recognise the coins and currency notes.
- arrange different coins and notes together for different amount, not exceeding Rs. 50.
- add and subtract small amounts of money mentally.
- do transaction of money by using three to four notes.

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COINS AND CURRRENCY NOTES

Do we need money to buy things?

Yes, we need money. Let us know about it.

By using different coins and notes the children will do the following activity in the class. The children will come one by one near the table and pick a coin or a note on the table and paste them in the appropriate place in the given chart.

Like this all the children will do the same activity.

- Collect the different coins. Place a thin sheet of paper on the coin. Hold the paper lightly with one hand and rub the tip of a pencil or a crayons on the paper softly to trace the coins.
- Cut out the traced picture of coins.
- Take a drawing sheet and cut it into shapes of notes write the value of note on them use these playing notes in the above said activity.

Sl. No.	Face value	stick pictures of coins and notes
1]	50 paise	
2]	2 Rupees	
3]	10 Rupees	
4]	20 Rupees	
5]	1 Rupee	
6]	5 Rupees	
7]	50 Rupees	

Our currency notes are made of paper.
Coins are made of metal.
The value of a coin or note is written on it.

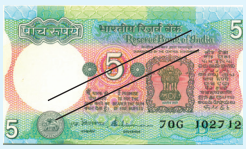
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Identify the following coins and notes and write the values as given in the example.

Example :  Value ☐ Paise	 Value ☐ Rupee
 Value ☐ Rupee	 Value ☐ Rupee
 Value ☐ Rupee	 Value ☐ Rupee
 Value ☐ Rupee	 Value ☐ Rupee
 Value ☐ Rupee	 Value ☐ Rupee

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Match as shown in the example.

	A	B
1]		2 Rupees
2]		10 Rupees
3]		50 Rupees
4]		1 Rupee
5]		5 Rupees
6]		20 Rupees

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Match the Picture and value of the Coins :-

	A	B
1]		1 Rupee
2]		2 Rupees
3]		5 Rupees
4]		50 paise

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Know this :

1 Rupee, 2 Rupees, 5 Rupees and 10 Rupees are available both in coins and notes.

How many paise make one rupee?

1 Rupee = 100 paise

" ₹ " - This is the Symbol of Rupee.

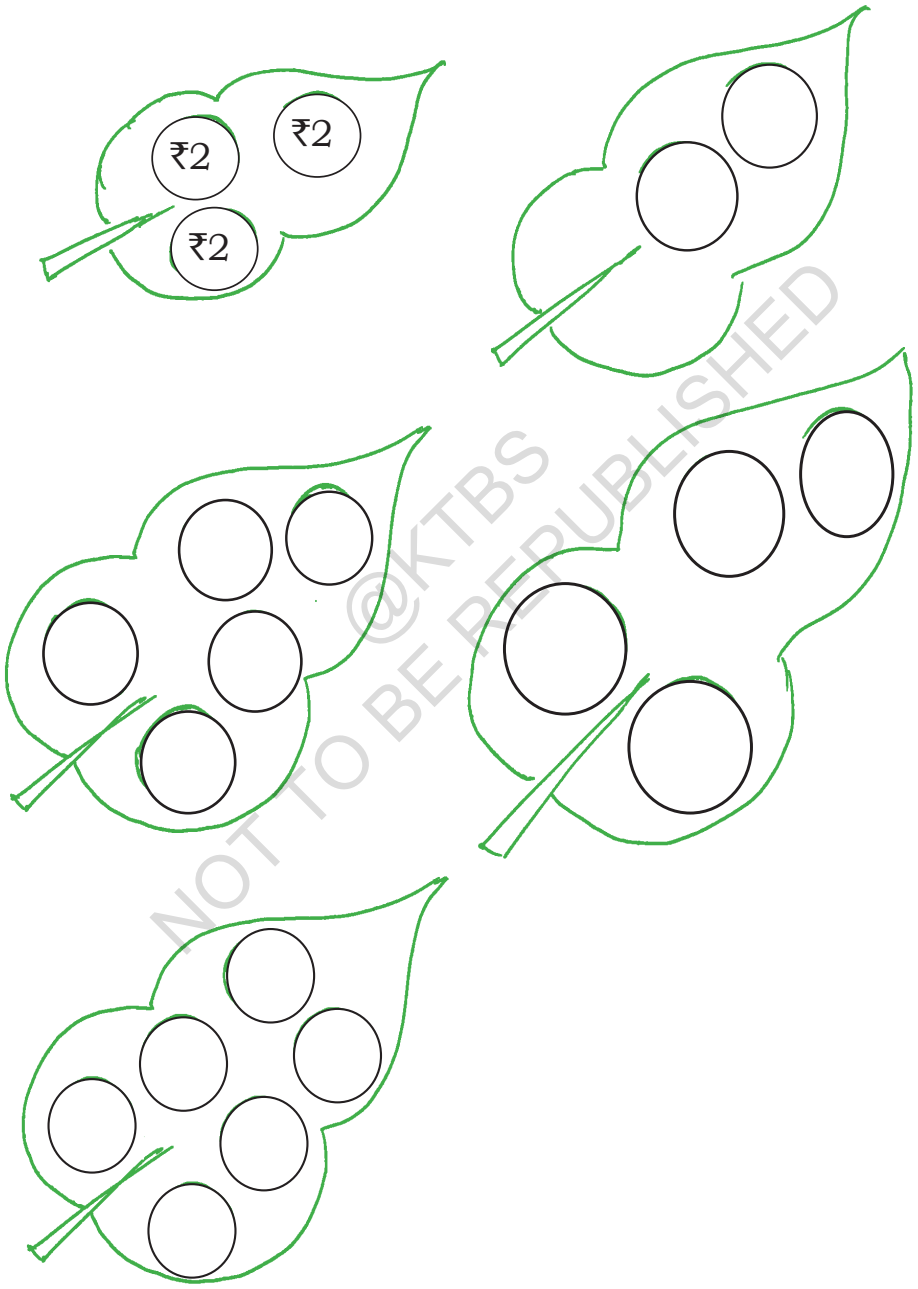
Look at the chart and find the amount of each article, write it in the given box.

Articles	Arrangement of notes	Amount
		25 Rupees
		Rupees
		Rupees
		Rupees
		Rupees

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Make ₹ 6 by using ₹ 1, ₹ 2 and ₹ 5 Coins only.

Example :



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Make ₹ 20 by using ₹ 10 and ₹ 5 notes or coins.

1)

2)

3)

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Make ₹ 50 by using ₹ 20 and ₹ 10 notes.

1)

2)

Find the number of notes or coins required to make the given amount.

1] How many  notes will make ₹10 ?

2] How many  notes will make ₹ 15 ?

3] How many  notes will make ₹ 30 ?

4] How many  notes will make ₹ 50 ?

5] How many  Rupees will make ₹ 12 ?

6] How many  notes will make ₹ 40 ?

7] How many  notes will make ₹ 40 ?

8] How many  Rupee will make ₹ 5 ?

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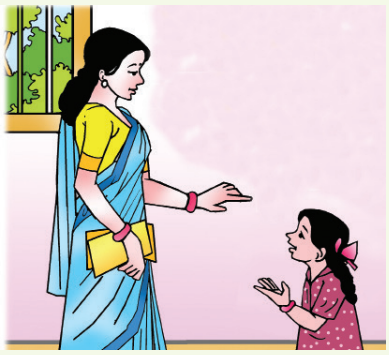
Write the numbers equal to the given cost.

	₹ ₹ ₹ ₹
	₹ ₹ ₹
	Paise Paise ₹
	Paise Paise

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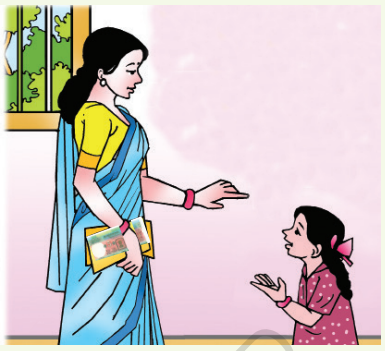
Mental Addition and Subtraction for small amount of money

1



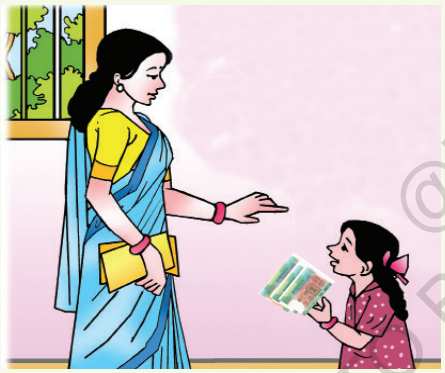
Mom, give me some money to buy chocolate.

2



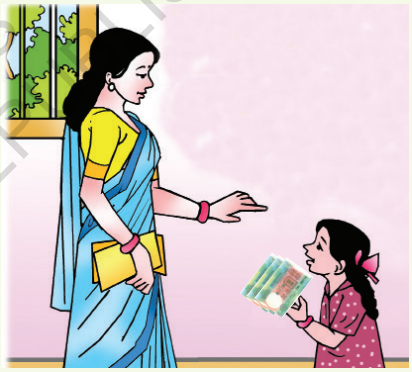
Take this money and buy the chocolate.

3



How much money do you have now?

4



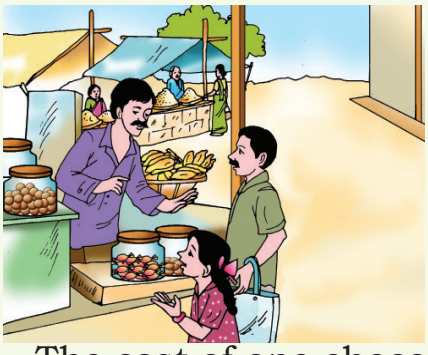
I have ₹15 with me. (5+5+5=15)

5



Uncle, what is the cost of one chocolate?

6



The cost of one chocolate is ₹ 4.

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7



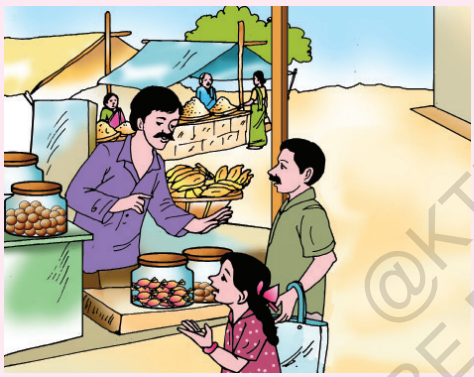
Uncle, give me three chocolates.

8



Take 3 chocolates.

9



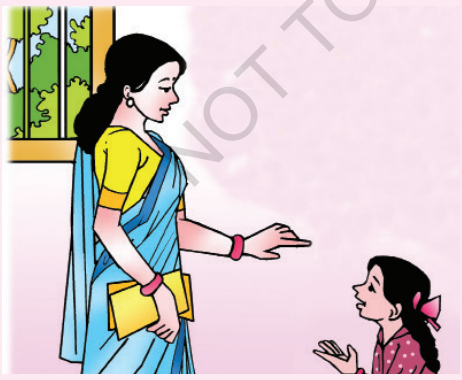
Take the change

10



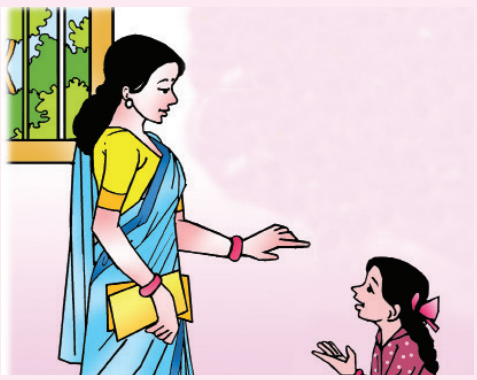
Thank you uncle.

11



Have you bought the chocolate? How much money is remaining with you?

12



Yes Mom.
₹ 3 remained with me.

How much did she pay to the shopkeeper?

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Look at the arrangement of different notes and coins and then write the sum in the blank space provided.

1) 

₹ 22

2) 

₹

3) 

₹

4) 

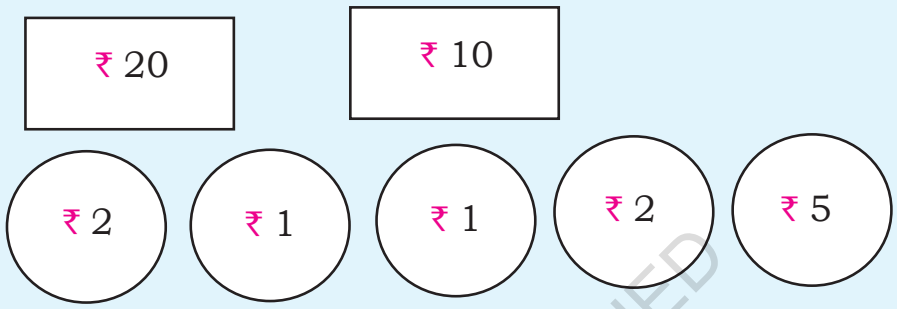
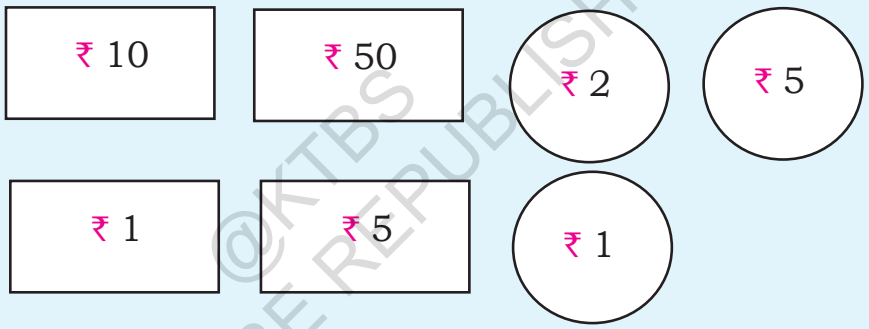
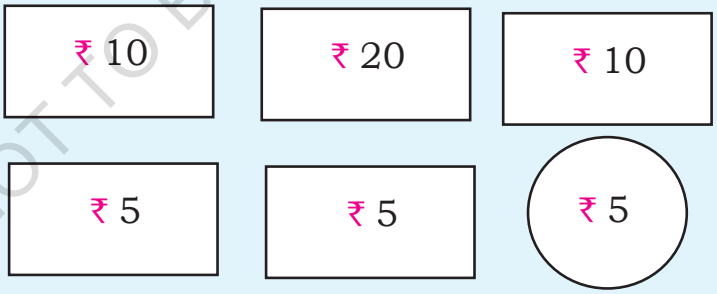
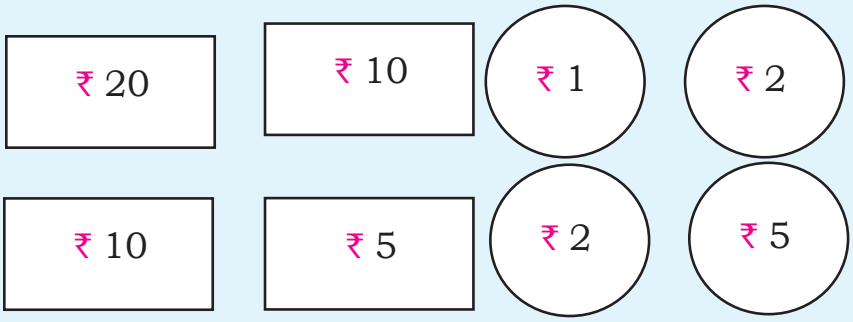
₹

5) 

₹

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Colour the notes/coins that you need to pay the given sum.

Sum	Notes/ coins
₹ 14	
₹ 23	
₹ 35	
₹ 50	

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By looking at the pictures and money given, add the money first and then circle the amount by selecting the notes and coins given beside it.

Example:



₹ 10

₹ 30

+

3	0
1	0
4	0

₹ 20 ₹ 10 ₹ 20 ₹ 10 ₹ 50





₹ 5 ₹ 20

+

₹ 20 ₹ 5 ₹ 20 ₹ 10

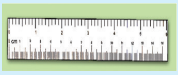




₹ 2 ₹ 12

+

₹ 5 ₹ 5 ₹ 2 ₹ 1 ₹ 1 ₹ 1





₹ 5

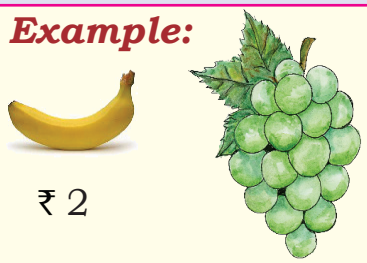
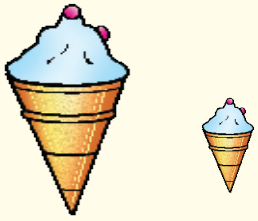
₹ 10

+

₹ 5 ₹ 5 ₹ 1 ₹ 2 ₹ 2 ₹ 2

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By looking at the pictures and the money tag, fill up the blanks as given in the example.

Sl. no	Purchased articles	Money you have	Money you Spent	Money which is left with you.
1.	***Example:***  ₹ 2 ₹ 5	₹ 10	₹ 7	₹ 3
2.	 ₹ 5 ₹ 20	₹ 30	₹ _____	₹ _____
3.	 ₹ 40	₹ 50	₹ _____	₹ _____
4.	 ₹ 10 ₹ 5	₹ 25	₹ _____	₹ _____

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Transaction of Money by using 3 to 4 notes or coins.

Activity : Set up a small shop in the class with different items with price tag to them.

* Then one will be the shop owner who has certain amount of money with him/her and other two children will act as buyers. Buyers have ₹ 30 each with them. They buy two items from the shop. They announce price of each item loudly.

* One will write the price on the board. After buying they have to announce how much they paid to the shop owner and money left with them.

This activity can be repeated for other children also.

For this activity prepare play notes money using drawing sheet.

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₹ 10



₹ 5



₹ 5



₹ 8



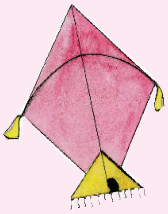
₹ 12



₹ 6



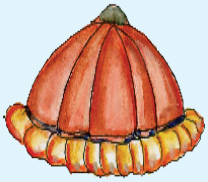
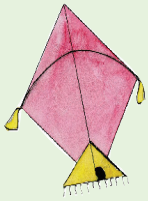
₹ 12



₹ 3



₹ 1

Items	Money spent	Money left
Example  	6 + 1 2 _____ 1 8 _____	3 0 - 1 8 _____ 1 2 _____
 	+ _____ _____	– _____ _____
 	+ _____ _____	– _____ _____
 	+ _____ _____	– _____ _____

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Lesson - 9

LENGTH

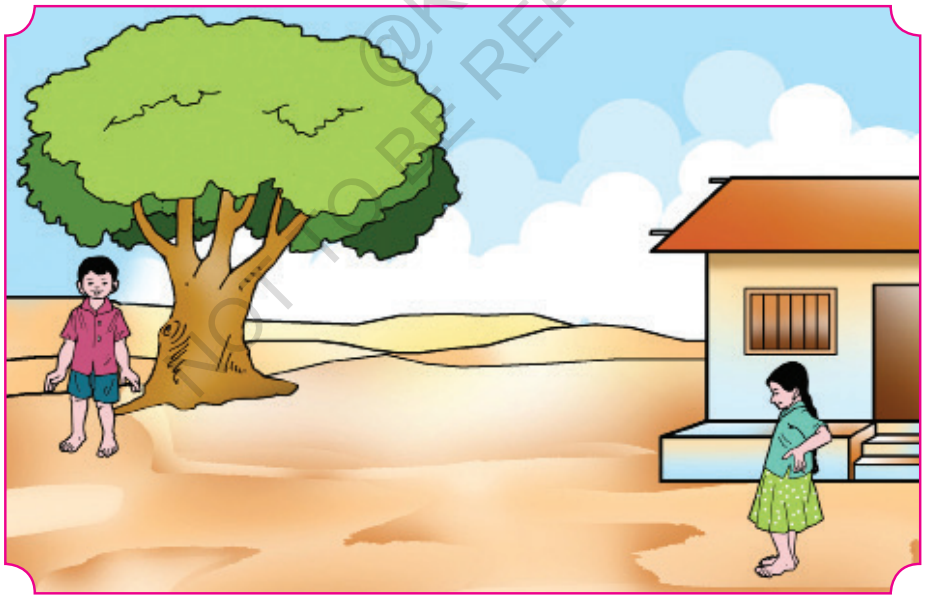
H6X1P1

After studying this lesson you :

- distinguish between near-far, thin-thick, tall-short, high-low.
- compare objects according to their lengths and arrange them in order.
- measure short length in using of non-formal units. (Example : Gilli-Dandu, and Marble game)
- estimate length and verify by using (irregular) non-formal units.

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Near and Far



Look at the given above picture

1) Who is near the house?

The girl is near the house.

2) Who is far from the house?

The boy is far from the house.

3) Who is near the tree?

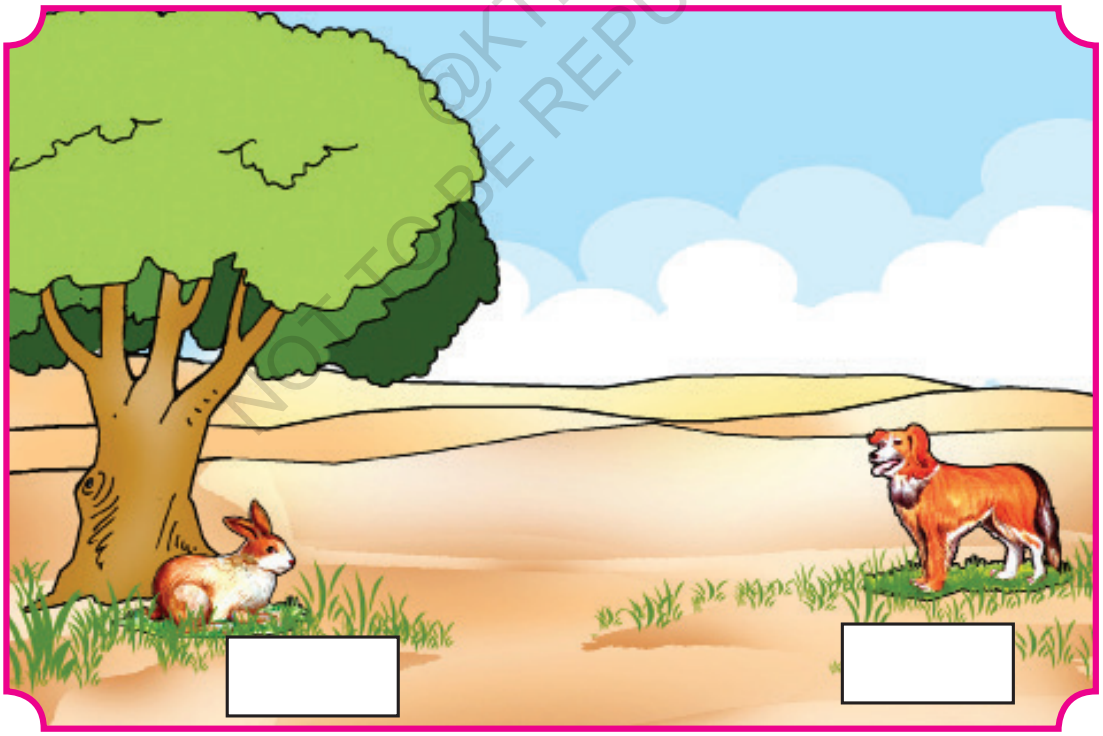
The boy is near the tree.

4) Who is far from the tree?

The girl is far from the tree.

Which is near and which is far ?

Look at the picture and put '✓' mark to the animal which is near the tree.

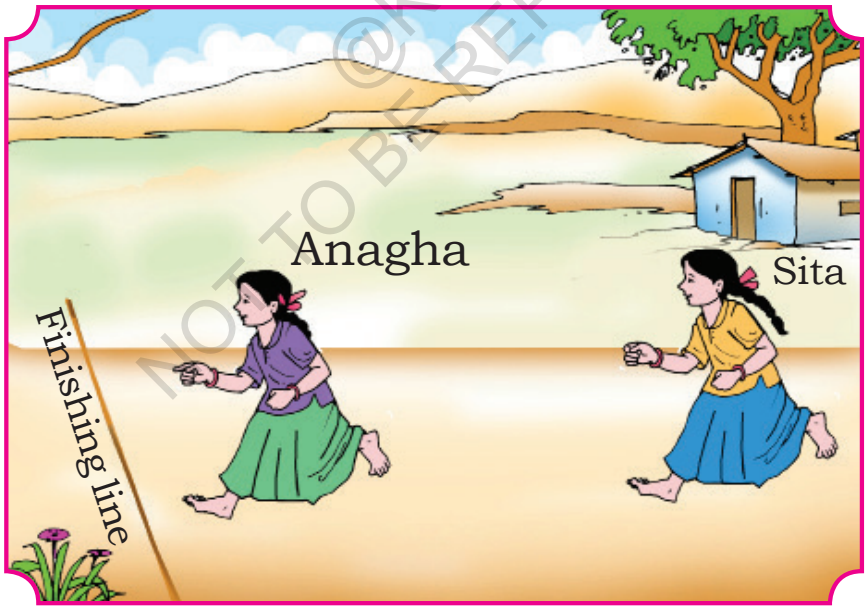


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2) Look at the picture and circle the one who is sitting far from Black Board.



3. Look at the picture and answer



a) Which girl is near the finishing line? _____

b) Which girl is far from the finishing line? _____

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Thin and Thick

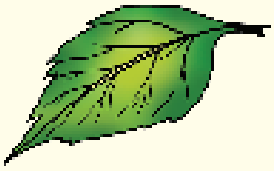
Look at the pair of pictures and identify which is thin and which is thick?



Thin



Thick

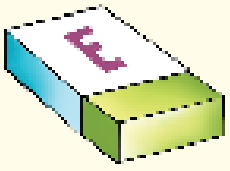












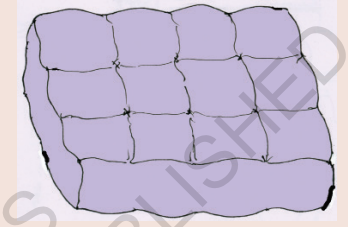
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Mark '✓' the thin one









Mark '✓' the thick one









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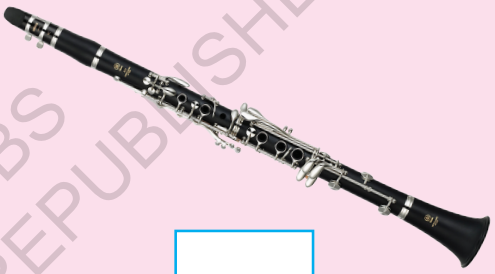
Long- Short

Mark‘ ✔ ’ the long one.















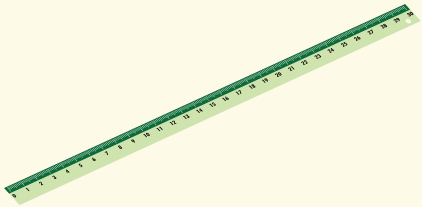


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Write 'L' for long object and 'S' for short object in the box given.



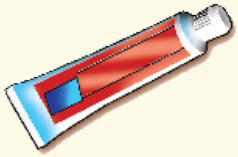


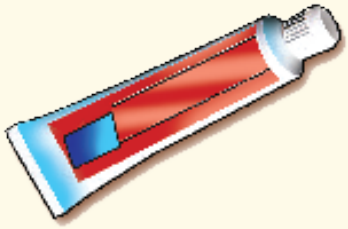








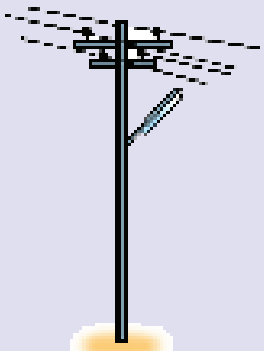


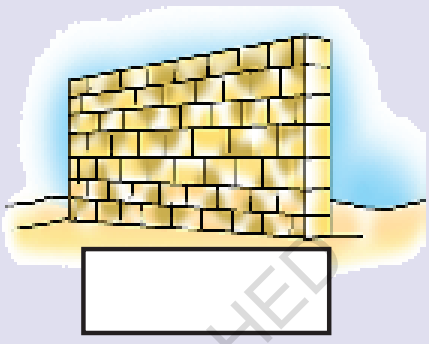


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Tall and short .

Write 'T' for tall object and 'S' for short object in the box given.



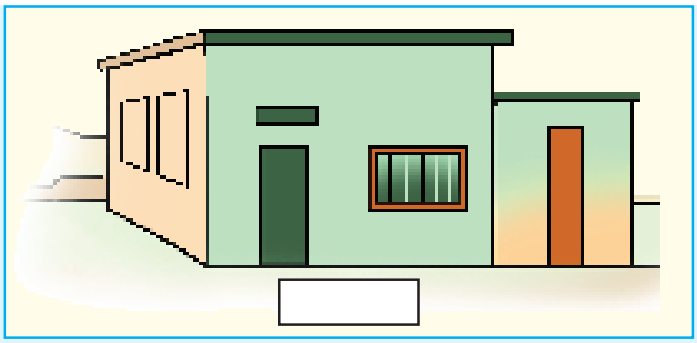


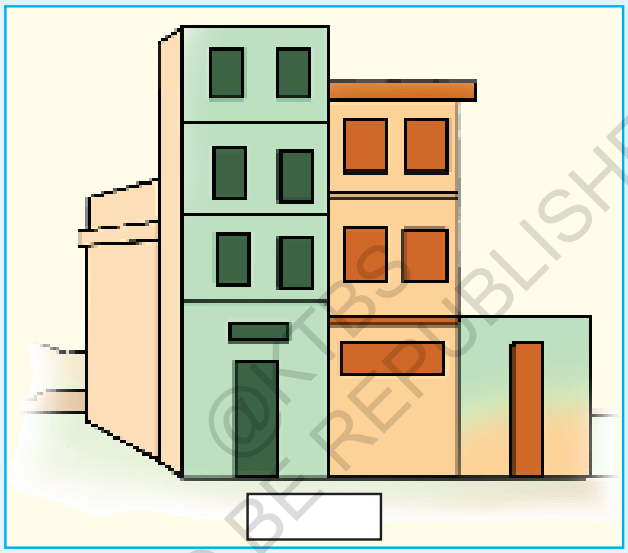




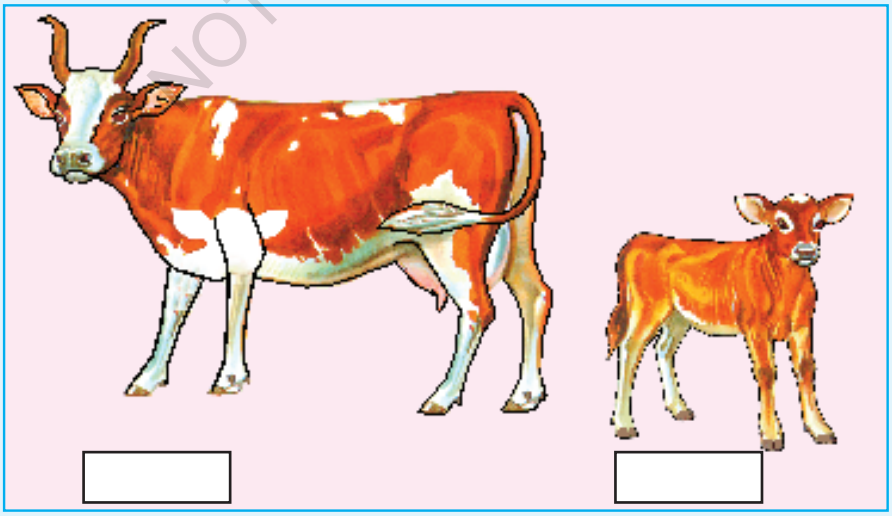


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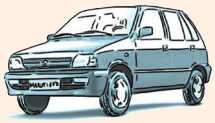
Mark ‘ ✔ ’ the taller one.



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Mark ‘✓’ the shorter one













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Tick Right ‘✓’ or Wrong ‘✗’ for the following.

1) A Giraffe is taller than a rat. ☐

2) Your mother is shorter than you. ☐

3) A tamarind tree is shorter than a rose plant. ☐

4) A cow is taller than a hen. ☐

High and Low

Observe the figure : Girija and Ambuja are standing at different places in a building.



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- Who is standing very high? _____
- Who is standing very low? _____

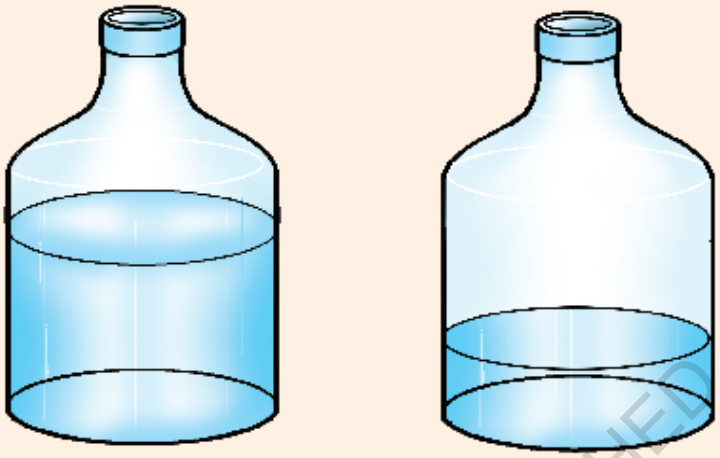
1. Tick the object which is high.



2. Tick the object which is low.



3.



Look at these two water cans.

Tick the can in which water level is high.

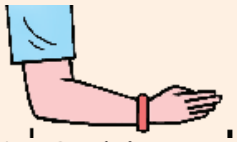
Non Standard units of measuring length:



1- Foot



1- Span



1- Cubit



4- Fingers



1-Pace



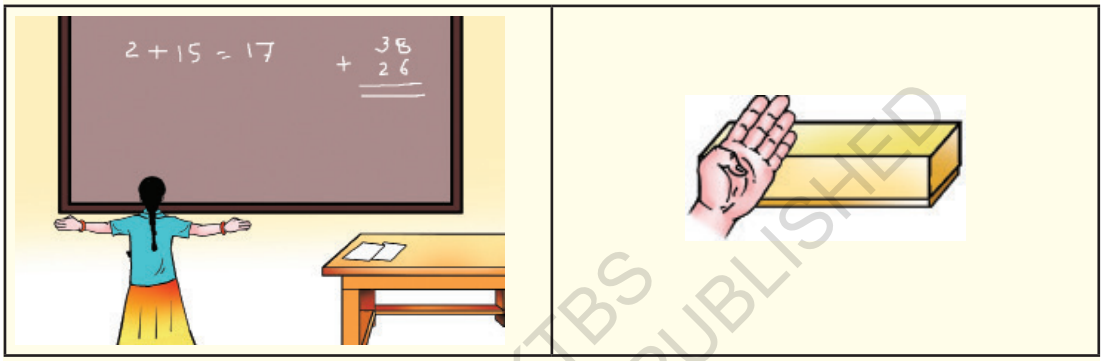
1-Fathom

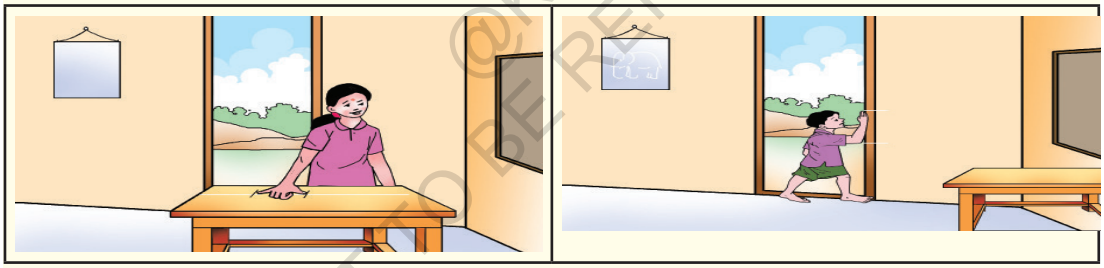
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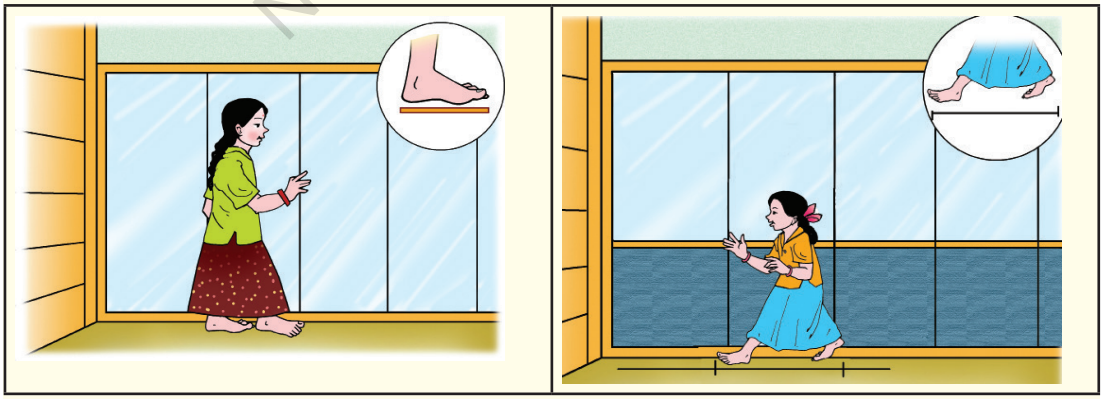
In your previous class, you learnt how to measure the length using hand span, foot strips and cubit. Let us learn some more nonstandard ways to measure length.

Measure with .....

Anagha and her friends were trying to find out the length of different materials in the class room.







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After Measuring the table one says, “it is ten handspan” and another says, “it is nine handspan”.

Record the length of the objects you have measured in your note book and compare it with your friend’s measurement.

Like this they compare the lengths of different materials and find out that each measurement is different.

1. Measure the length of your book and pencil box with fingers and hand span. Record in the following table.

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Book		Pencil box	
Fingers	Hand span	Fingers	Hand span

Compare the lengths measured in fingers and hand span.

Compare these measurements with the measurement of your friends which is recorded in his/her book.

2. Measure the length of table, desk and black board with your handspan and fingers and compare it.

Things	Fingers	Hand-Span	Which unit do you prefer? Fingers/Handspan
Table			
Desk			
Black board			

Measure the length with foot and foot steps Record the measurement which you and your two friends have made in the table.

	You		Friend-1		Friend-2	
	Foot	Foot step	Foot	Foot step	Foot	Foot step
Length of the class room						
Length between door and window of the class room						
Length between the black board and the place where they are sitting						

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4. Name the things around you that are smaller than the measurement of your hand span?

1) _____

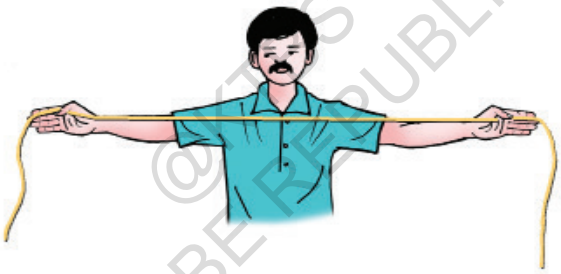
2) _____

3) _____

Activity:

List the different games which you play in our daily life where you use foot and foot steps to measure the distance.

Fathom and Cubit



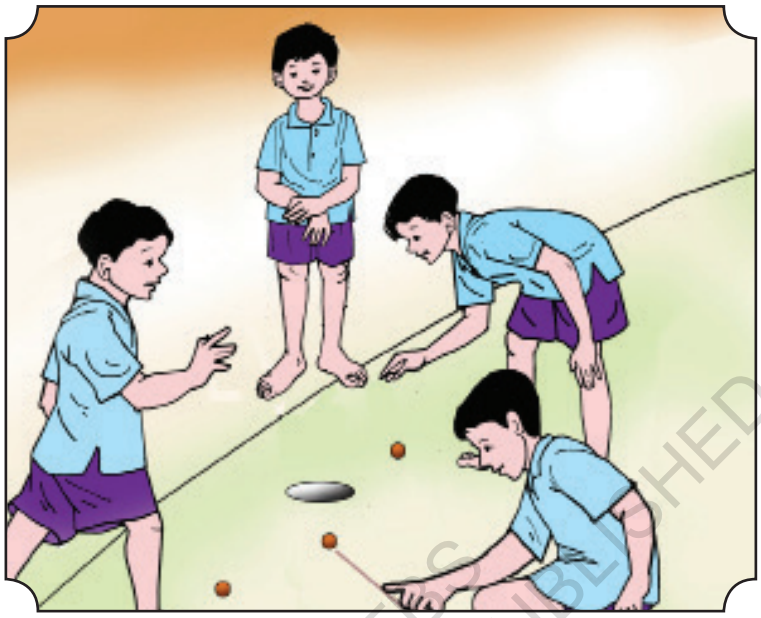


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1) The length of your classroom is _____ fathom and_____ cubit.

2) The length of your classroom bench is _____fathom and _____ cubit.

Marble Game

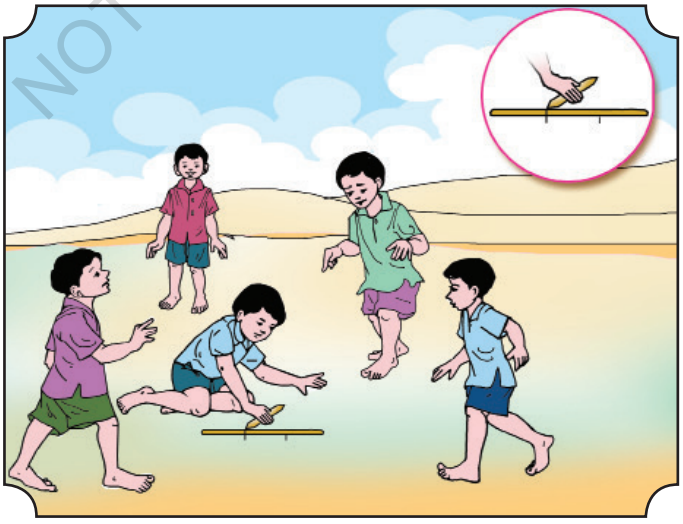


Some children are playing marble in the play ground. One child is measuring the length between one marble and another.

How is the boy measuring the length in the picture?

The boy is measuring the length using hand span.

Gilli-Dandu



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Look at the picture some children are playing Gilli-Dandu.

First measure the dandu with the gilli, one dandu is equal to 3 (Three) Gillis.

How are children measuring the length in the picture?

Children are using gilli and dandu to measure the length.

To measure long length they use dandu and to measure small length they use gilli.

Activity:

Measure the length of the following items in your house. By using any two non-standard units of your choice and record it in the following table and compare the results.

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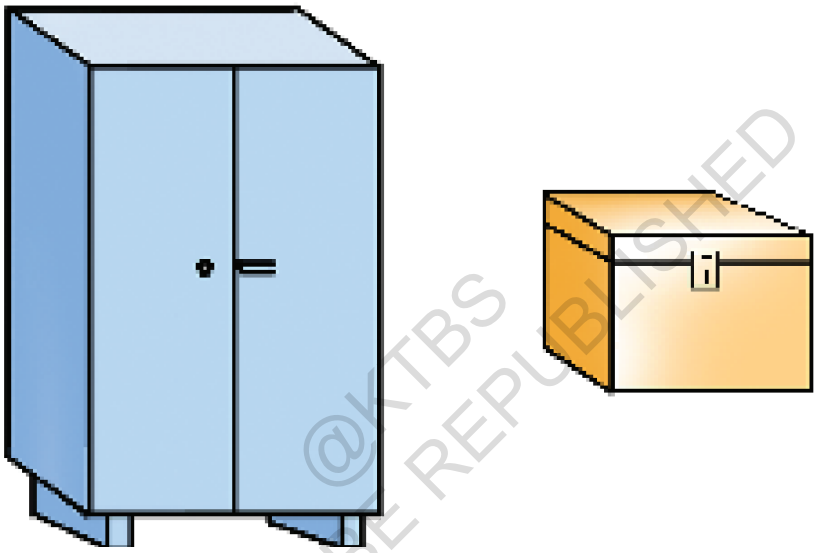
Items	Measurement in unit-1	Measurement in unit-2
Length of mat		
Length of TV in your home		
Length of cup board		
Length of door		

Guess ....

The skill of estimation is very essential in our daily life.

Look at the picture, we can see two things. One is a box and the other is an almerah.

Guess the length of box in hand span.



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- The length of box is _____ handspans .
- Guess the width of an almirah in hand spans
- The width of the almirah is _____ handspans.

Now you measure with your hand span.

The length of box is _____ hand spans and the width of almairah is _____ handspans.

Did you find any difference in guess work and actual length measurement ?

Lesson 10

WEIGHT

T6E3X3

After studying this lesson you :

- compare heavy and light objects.

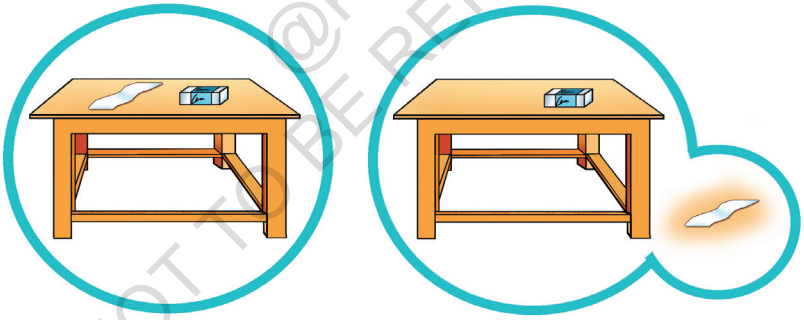
Comparision of heavy and light objects

BLOW AND SEE !

Take a small piece of paper and an eraser, keep it on a table gently blow across objects.

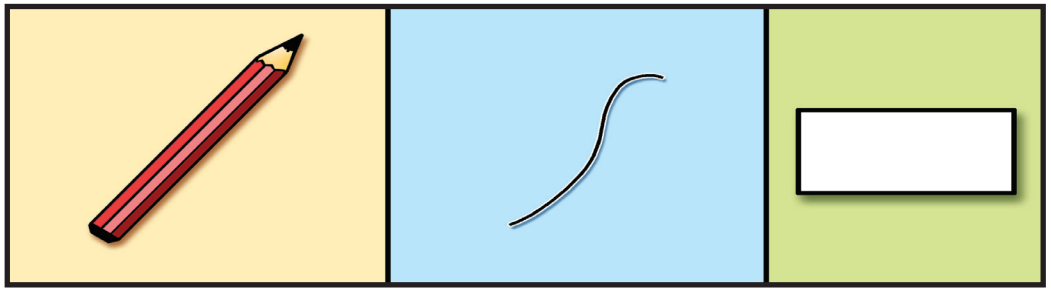
What do you observe?

Paper flew away.

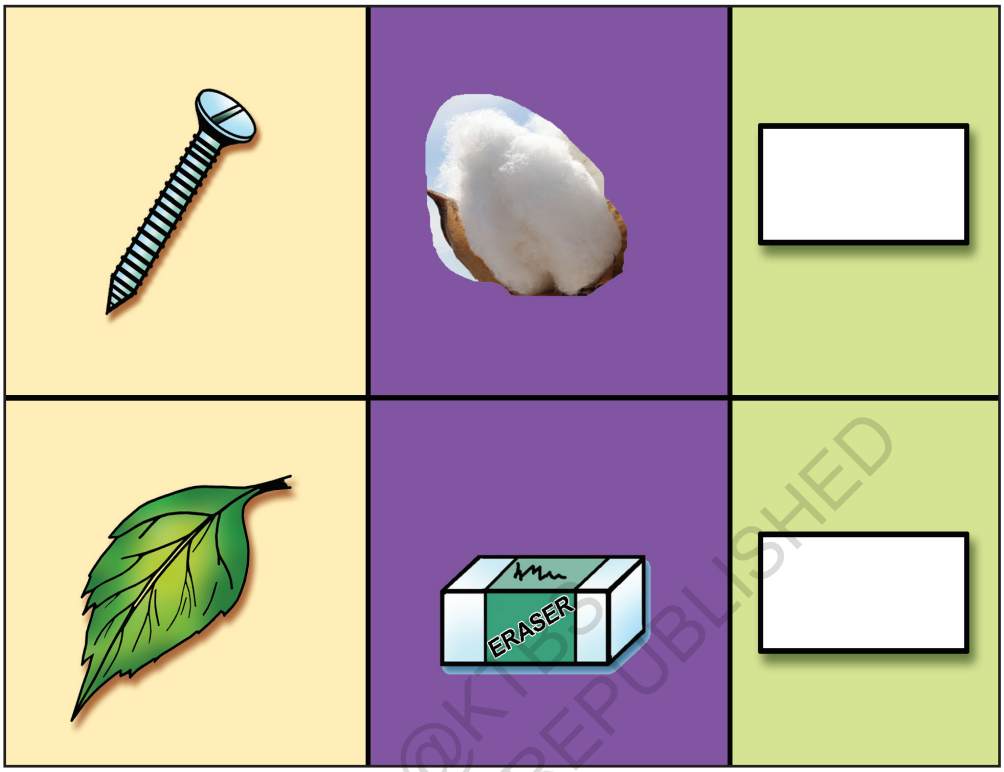


Paper is lighter than an eraser. So it fell down.

Repeat the above activity using the following pair of materials. Identify which one is heavier and write it in the given box.

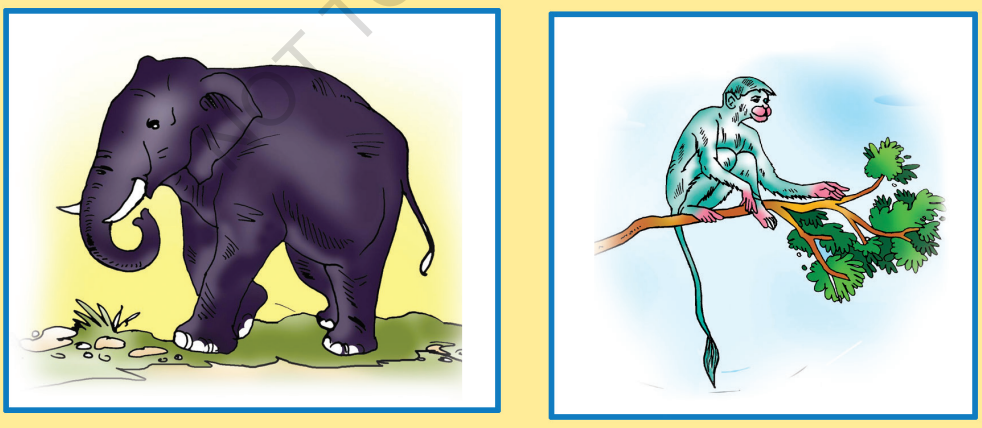


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Look at the pictures below.



Which animal is heavier?

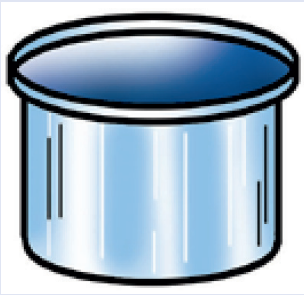
Elephant is heavier.

Observe the following pictures, which is heavy? Put ✓ mark in the given box





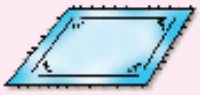
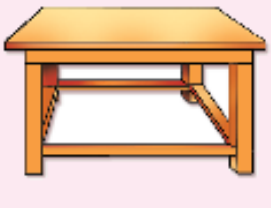


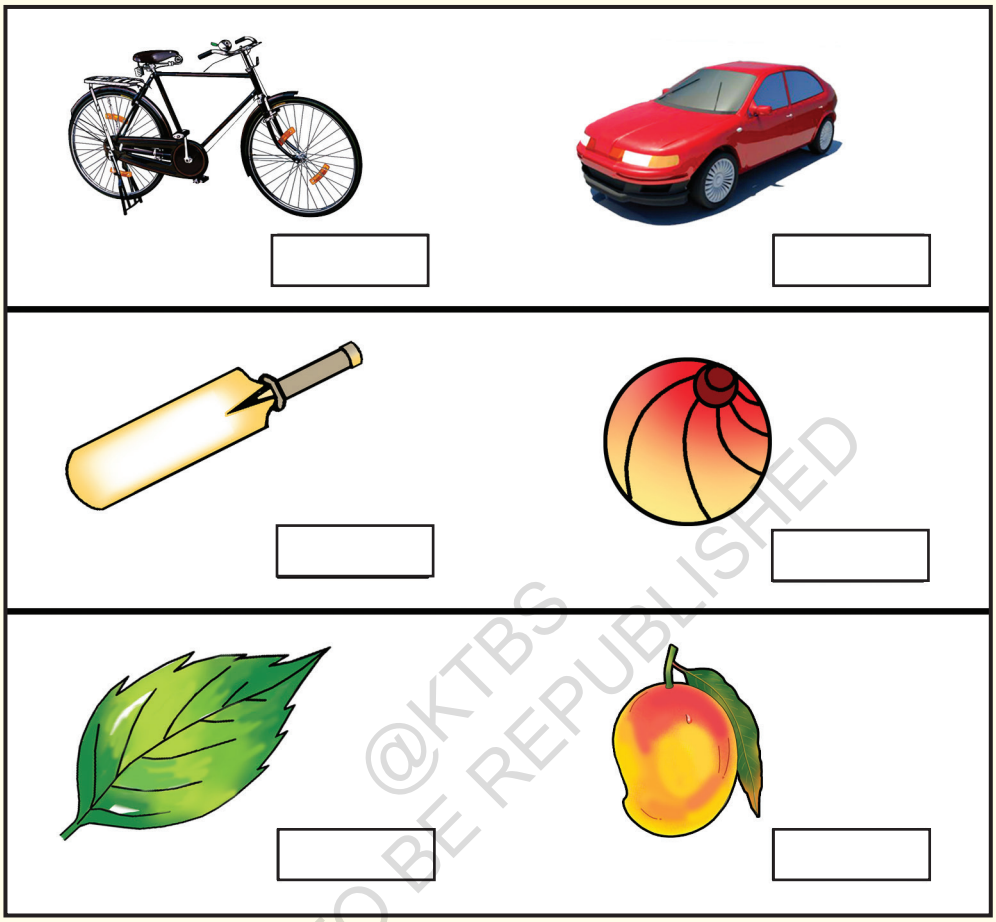
Before doing the above activity, let children compare weights of different things by holding them in their hands.

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Find out which is heavy and which is light? write H for heavy and L for light in the given space.

Ex :  L	 H
	
	
	
	

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Activity:-

Take water in a big tumbler. Put a piece of wood and a piece of thermocol on it. Which one floats? Why? Find out.

NOTE

Conduct the above activity with other available materials.



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Lesson - 11

TIME

T8H6B9

After studying this lesson you :

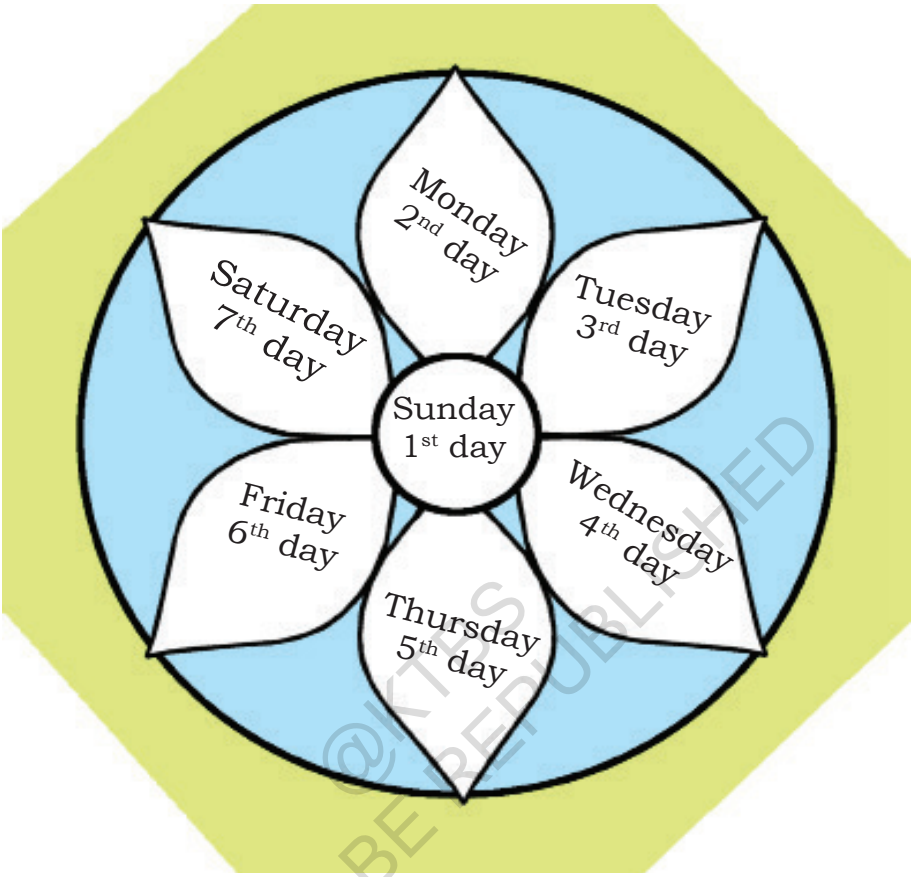
- ⋆ familiarise the days of a week.
- ⋆ familiarise with yesterday, today and tomorrow
- ⋆ familiarise the months of the year.
- ⋆ recognise the cyclic natural events including seasons.
- ⋆ know the importance of the events occurring over long periods in terms of dates/days.
- ⋆ familiarise with the 12 month calendar and write the names of week, days and months.

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Days of the week

Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday





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Fill in the blanks.

1) Fifth day of the week is _____
2) Monday is the _____ day of the week.
3) Last day of the week is _____
4) Sunday is the _____ day of the week.
5) Fourth day of the week is _____
6) Tuesday is the _____ day of the week.
7) There are _____ days in a week.
8) Sixth day of the week is _____

Before and After days. Fill in the table as slown in

Example Sunday	Monday	Tuesday
	Wednesday	
	Thursday	
	Friday	
	Saturday	
	Sunday	
	Tuesday	

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1. Write the next two days that come after Wednesday.

   _____ , _____

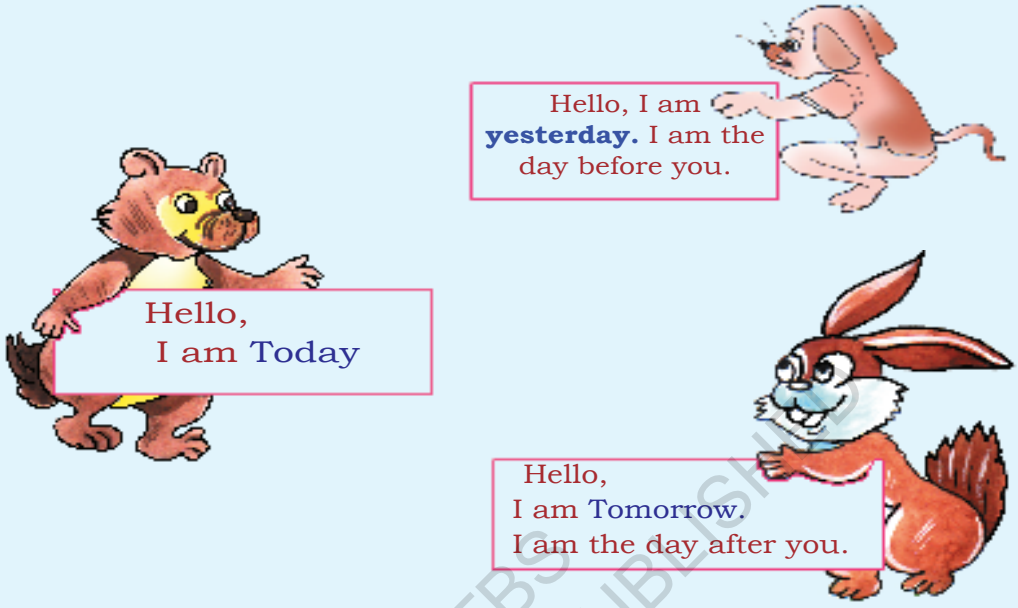
2. Write the two days, that come before Saturday.

   _____ , _____

3. Write the next two days that come after Monday.

   _____ , _____

Yesterday, today and tomorrow



If today is Monday,
Yesterday was Sunday
and tomorrow will be Tuesday.

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Think :

Today is Friday. It's birthday of Rama. Yesterday he went to the birthday of his friend Raju.

Raju and Rama are going to birthday of David tomorrow.

- Name the day on which Raju celebrated his birthday?

  _____

- Name the day on which David will celebrate his birthday?

  _____

Complete the Table

Yesterday	Today	Tomorrow
Sunday	Monday	
		Thursday
Tuesday		
	Saturday	
Thursday		
	Sunday	

Fill in the blanks with suitable answers.

1) If yesterday was Sunday, today is _____

2) If today is Friday, tomorrow will be _____

3) If yesterday was Wednesday, then today is _____ and tomorrow _____

4) The day after Monday is _____

5) Tuesday comes after _____

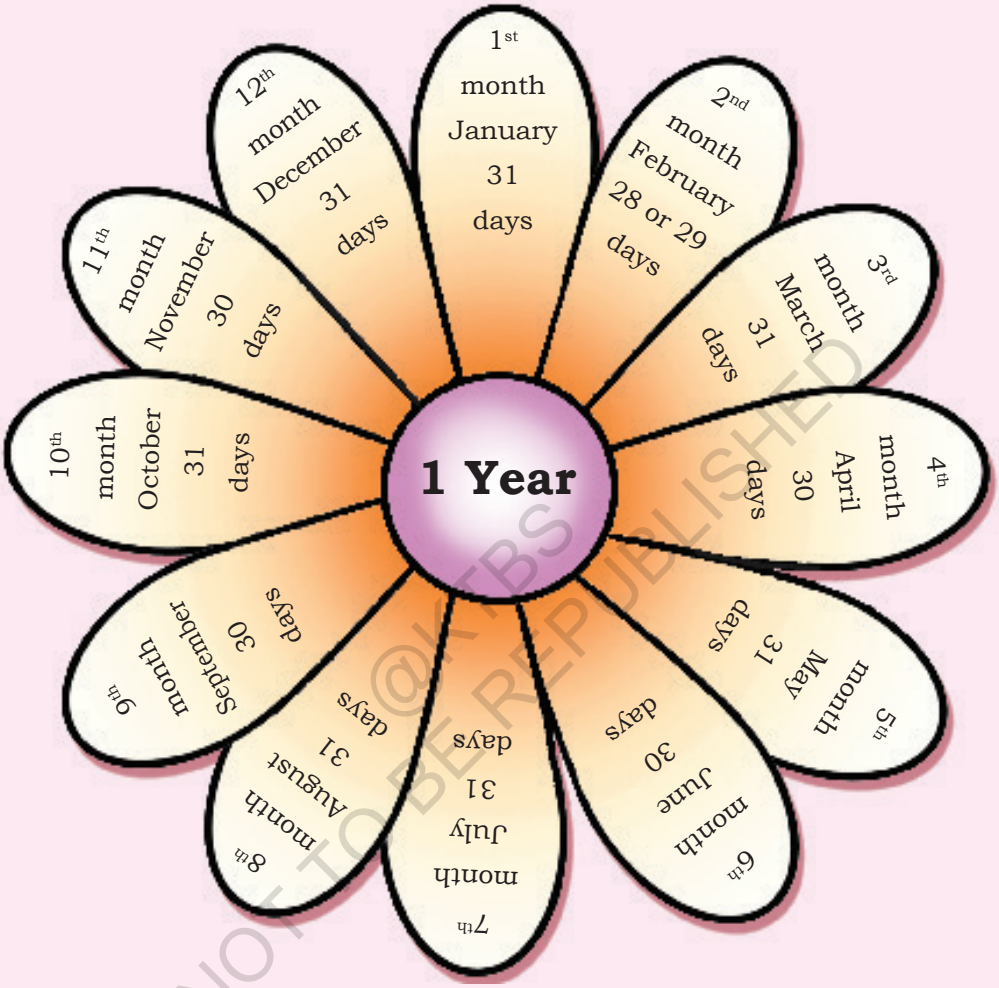
6) The day before Thursday is _____

7) If today is Saturday, yesterday was _____ and tomorrow is _____

8) If Monday is Anagha's birthday. The next day is _____

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Months Of The Year



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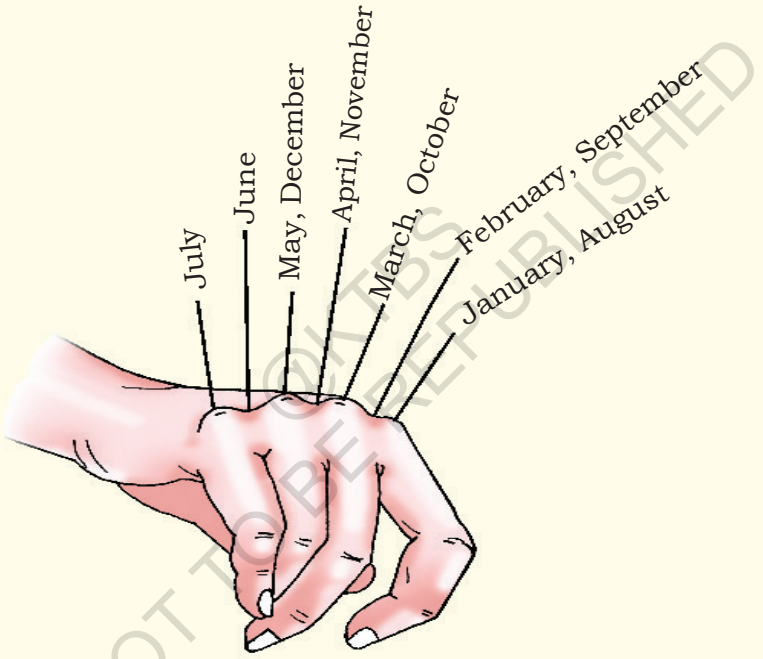
Look at the Picture and list out the months of the year according to the instructions given in the table.

Months having 31 days	Months having 30 days	Month having Least number of days

Year starts with January and ends with December.



All months of a year in your hand :-



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12 months = 365 days

=1 year



In some years, we find 366 days. That is a **"Leap year"**

A leap year comes once in every four years. In a leap year the month of February has 29 days.

MONTHS	DAYS
January	31
February	28 or 29
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31
12 MONTHS	**365 DAYS (or 366 DAYS)**

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1) 10th month of the year is _____

2) 12th month of the year is _____

3) January has _____ days.

4) November has _____ days.

5) The number of months which have 30 days is _____

6) The number of months which have 31 days is _____

7) The month which has 28 or 29 days is _____

8) How many months is equal to one year _____

SEASONS

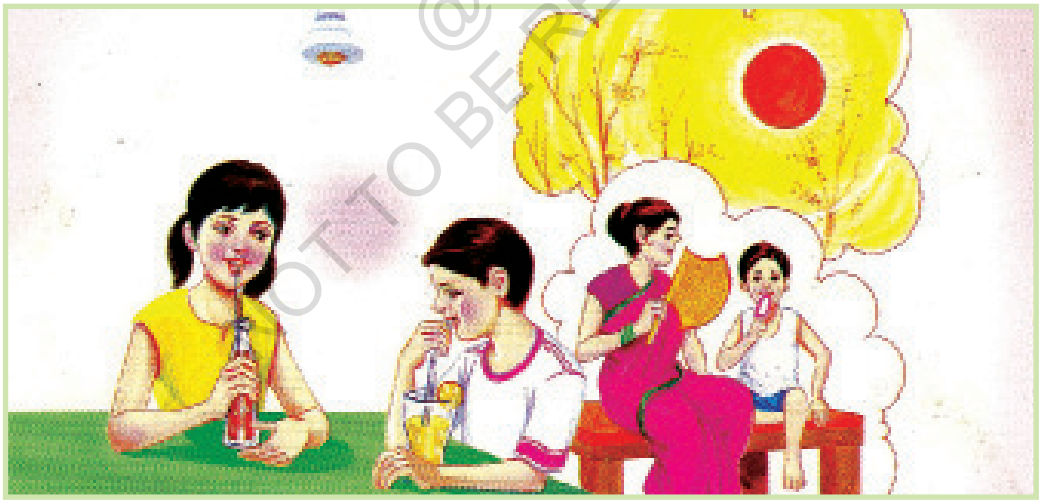
Summer	Rainy	Winter
• February	• June	• October
• March	• July	• November
• April	• August	• December
• May	• September	• January

There are three seasons in a year. Generally these three seasons come in 12 months of a year. The table is as above.

Observe the pictures given below.

Every year

- From the end of February, March, April and May we feel too hot.
- It is summer season.



- Summer season is very hot.
- Usually we wear thin cotton clothes during this season.
- Trees start grooming and blowing new leaves and flowers in the season.
- Nature give us sweet mangoes in this season.

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- In the month of June, July, August and September the whole country becomes green and prosperous and Children will enjoy in rain.
- It is rainy season.



- Children like to play in the rain.
- The trees and plants look green after the rain.
- We carry umbrellas in rainy season.
- October, November, December and January are the cold months of the year.
- It is winter season.

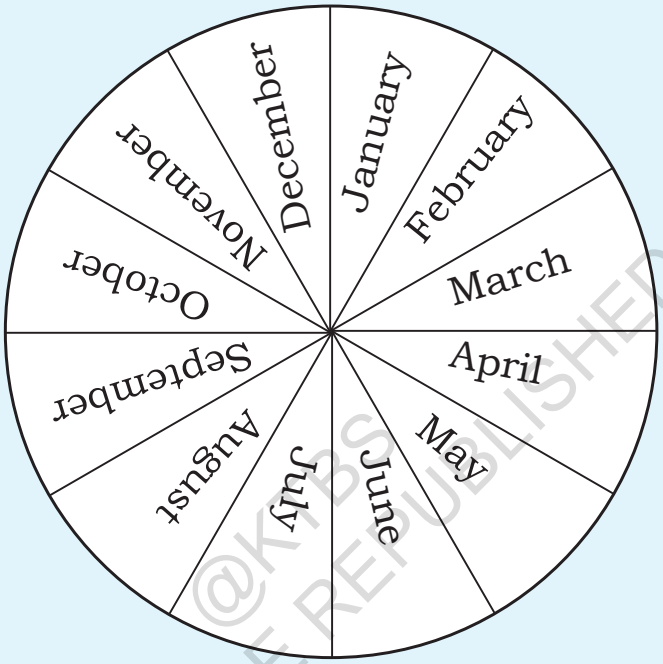


- Sweaters and shawls are pulled out from the cupboards in winter.
- The trees will lose all it leaves and look life less.
- In some parts of the country, there will be heavy snow fall, children and elders enjoy playing in the snow.

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Activity:-

Colour the months according to the seasons. Use 'Blue' for winter, 'Yellow' for summer and 'Green' for rainy season.



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The names of months in Lunar calendar :

1) Chaitra	2) Vaishakha	3) Jeshta
4) Ashada	5) Shravana	6) Bhadrapada
7) Ashwija	8) Karthika	9) Margashira
10) Pushya	11) Magha	12) Phalguna

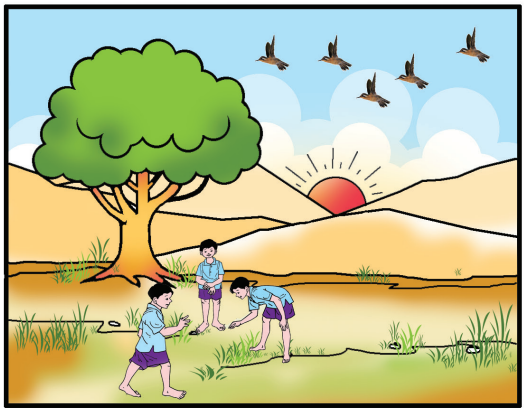
Fill in the blanks.

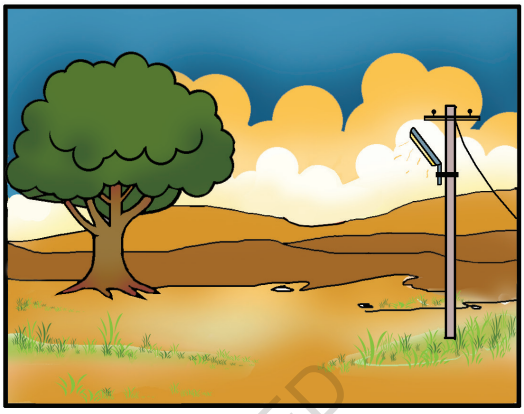
Summer in _____, _____, _____, _____ months.

Winter in _____, _____, _____, _____ months.

Rain in _____, _____, _____, _____ months.

Day And Night





What difference will you find in the above pictures?

* We work during day time.
* Sleep during night.
* Birds are flying during day time.
* Rest in nests during night.
* During day time we get sunlight.
* During night, we use different artificial sources of light.

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In one full day, half of the time is day and half of the time is night.



Day begins with sunrise and night begins with sunset. Day ends with sunset and night ends with sunrise. This happens every day. it is routine of nature.



Tick ✓ Right or × Wrong.

1) We sleep during day. ☐

2) We get sunlight during night. ☐

3) We work during day time. ☐

4) Birds take rest in nest during night. ☐

5) We get sunlight during day. ☐

6) Day starts with sunset. ☐

7) Night starts with sunset. ☐

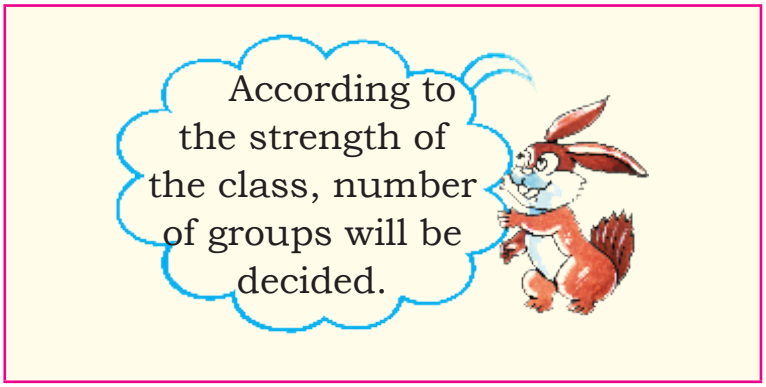
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Sequence Of Events

Activity:-

Take a few sets of cards with the names of 12 months. Children will play a game now. You have to divide them into different groups. Each group contains 12 children.

Now they distribute set of cards containing the names of 12 months to each group.



Start from January. Whoever has the card should come forward and tell about the festivals and national festivals in that month.

For example.

First Child: In this month we celebrate a festival called **"Makara Sankranthi"**

Second Child: The national festival we celebrate in this month is **"Republic day on 26th"**

They have to play this game for all the months.

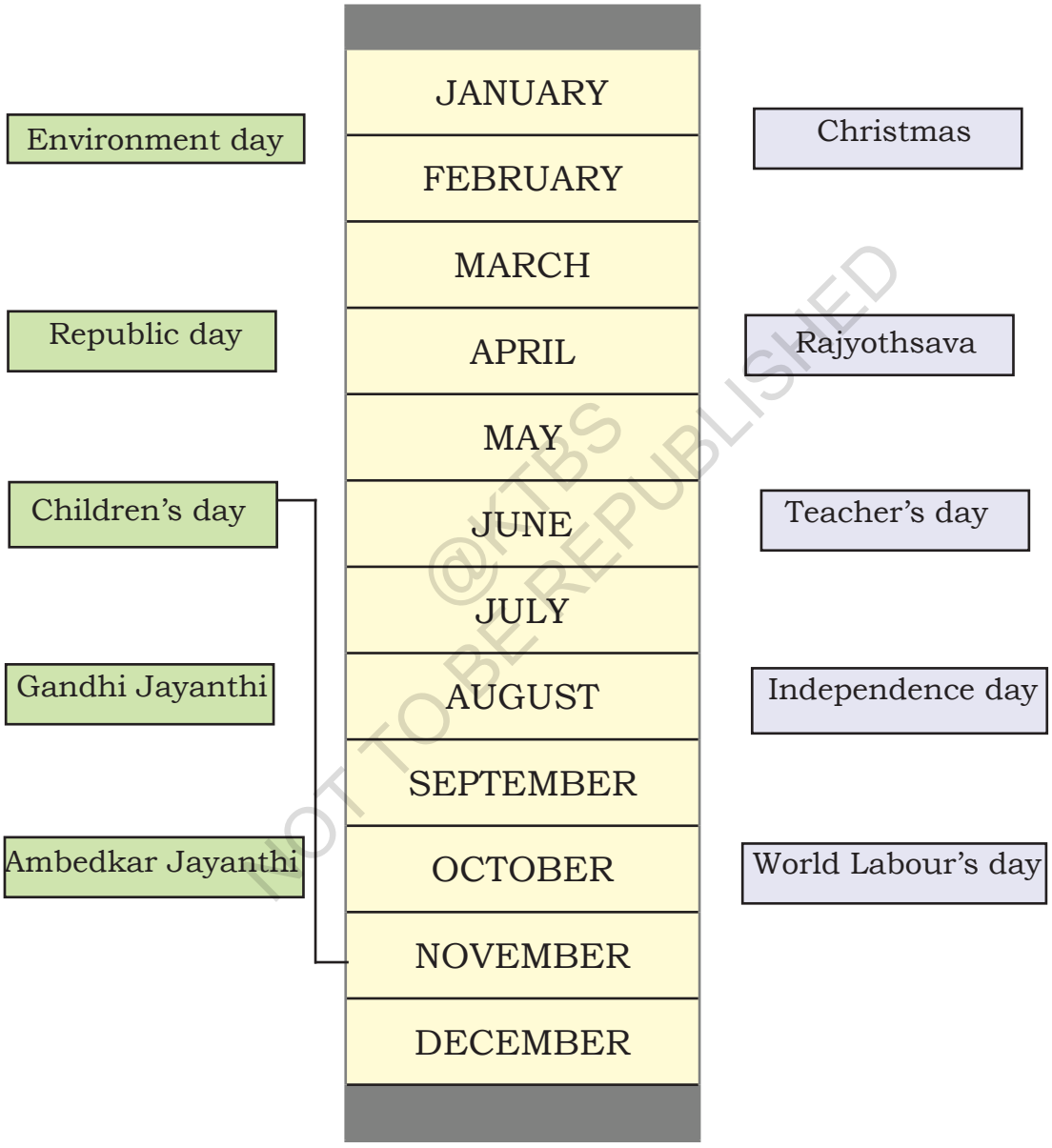
In the same way, know about many events, festivals, national festivals, birthdays, school day etc which occur every year sequentially.

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Think and answer.

1) We celebrate the Republic day on _____
2) We celebrate the Environmental day on _____ of June.
3) We celebrate the Independence day on _____
4) Teacher's day come in the month of _____
5) We celebrate Gandhi Jayanthi on _____
6) We celebrate Kannada Rajyothsava on_____
7) We celebrate Children's day on _____
8) We celebrate Christmas on_____
9) Your birthday falls on_____

Match the following events with the Suitable months.



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2017 Calendar

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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				

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			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				

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			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	

April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30						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

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	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			

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				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	

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31					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

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		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		

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					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

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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				

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			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		

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31					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

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There are 4 complete weeks in a month.

52 complete weeks in a year.

There are 12 months in one year.



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Observe the given calendar and answer the following.

1) The shortest month of the year is _____. It has _____ days.

2) How many months have maximum Sundays? _____
Name those months _____

3) In which month is your birthday_____ the date and day of your birthday _____ and _____

Activity :-

Mark the birthdays of any of your five friends in the given calendar.

Activity:-

Find the 12 months from the given box (colour the months with different colours)

D	F	E	B	R	U	A	R	Y	D
S	E	P	I	E	N	S	O	J	E
F	J	G	H	K	L	Q	C	A	C
J	U	A	P	R	I	L	T	N	E
U	L	R	W	X	D	M	O	U	M
N	Y	X	A	B	C	A	B	A	B
E	M	A	R	C	H	Y	E	R	E
N	O	V	E	M	B	E	R	Y	R
S	S	E	P	T	E	M	B	E	R
U	N	A	U	G	U	S	T	X	M

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Lesson - 12

DATA HANDLING

M7B1F7

After studying this lesson you :

- collect data by measuring.
- discuss about data and group them according to colour and size.
- draw conclusions from the data collected.

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Activity 1 :

Appu has this poster of different fishes.



How many different kinds of fishes are there ? Count and write in the Box.

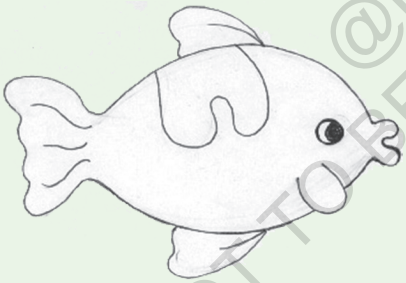
1)  ☐

2)  ☐

3)  ☐

4)  ☐

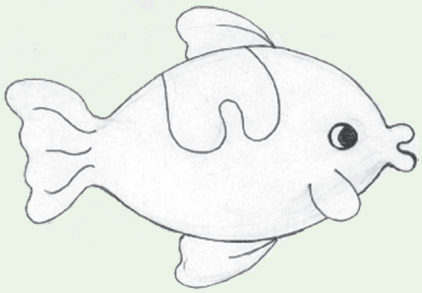
Which coloured fishes are more in number in the given Poster ? Colour them.





Which coloured fishes are least in number in the given Poster ? Colour them.





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Activity 2 :

Suma : Ananya has invited all of us for her birthday. Shall we all go to her house to celebrate her birthday ?

[Suma, Rashmi, Peter, Krishna and Anu went to Ananya's house, wished her and gave gifts]



Ananya : Oh! very surprising. I have got many gifts.

Suma : Ananya, you have got dolls, crayons, pencil box, chocolates, pens, water bottles and many more gifts.

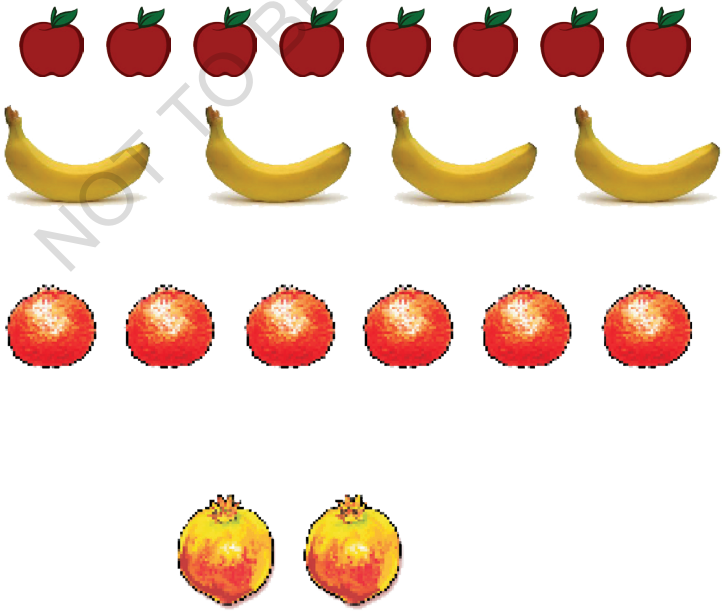
© KTBS NOT TO BE REPUBLISHED

Ananya : Now Let us count the total gifts received.

S.No.	Gifts	Number
1	dolls	2
2	crayons	10
3	chocolates	4
4	water bottles	2
5	pencil boxes	1
6	Pens	3
	Total	**22**

Activity 3 :

Susheela and her mother go to a fruit shop. They buy apples, Pomogranate, bananas and oranges. Out of curiosity, Susheela wanted to count each type of fruit and list them. You can help her.



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Sl.No	Fruits	Number
1	Apples	8
2	Pomegranates	
3	Bananas	
4	Oranges	
Total number of fruits		

Activity 4 :

Use each of the articles given below and fill the bucket with water. Count the number of times you use each article and write the number.



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Sl. No	Article	Quantity of water required to fill the bucket
1		_____ Mugs
2		_____ Water bottles
3		_____ Vessels

Activity 5 :

Measure the breadth of your class room with hand span, cubit and foot. Write them.

Unit of measurement	Breadth of the room
Hand span	_____ Hand spans
Cubit	_____ Cubits
Foot	_____ Feet

Activity 6 :

Aruna has a chart of various kinds of coloured flowers. You can help her to sort out the flowers according to the table given.



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S.No	Flowers	Number
1	Rose 	
2	Sunflower 	
3	Hibiscus 	
4	Lotus 	
Total number of flowers		

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Answer the following questions :

1) Which flower is maximum in number. ?

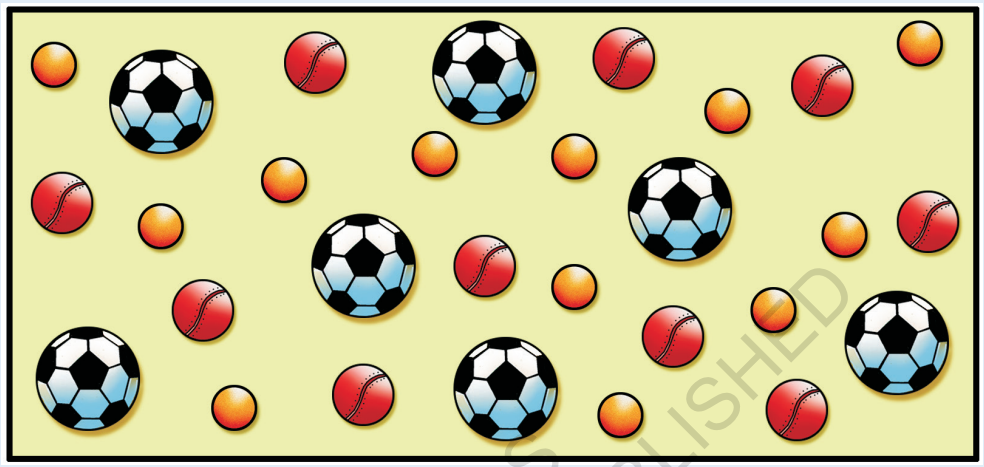
2) Which flower is minimum in number. ?

3) When you compare the number of roses with sunflower,

- Which flower is more in number ? _____
- Which flower is fewer in number ? _____

Activity 7 :

Observe this picture. Here balls of various sizes are kept. List them according to their sizes.



Balls	How many are there ? Write number
	
	
	
Total	

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a) Which type of ball is more in number ? Put a ✓ mark





b) Which type of ball is fewer in number ? Put a ✓ mark.





Activity 8 :

Read the information given in the chart and answer the following questions.

Favourite Activities of students of a class in given below

Students	Music	Dance	Reading	Art and Craft	Games
Girls	12	20	9	34	16
Boys	6	8	11	25	40
Total	18	28	20	59	56

1. Which is the favourite activity of girls ?

   _____

2. Which is the favourite activity of boys ?

   _____

3. Which is the overall favourite activity of students ?

   _____

4. Which activity is liked least by the boys ?

   _____

5. Who among boys and girls like the dance least ?

   _____

Collection of data and presenting systematically is called a '**Table**'.

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Lesson - 13

PATTERNS

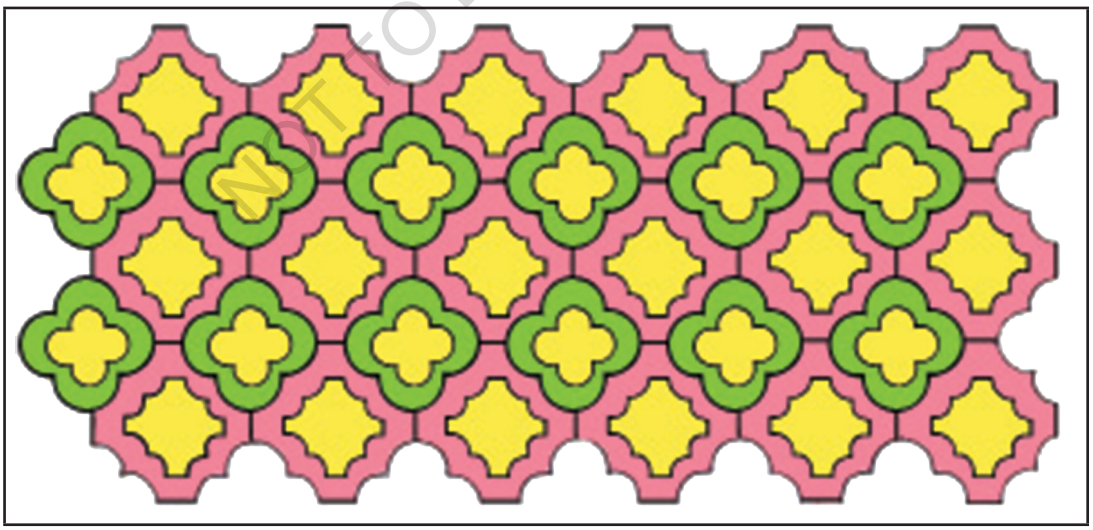
Q6G8L6

After studying this lesson you :

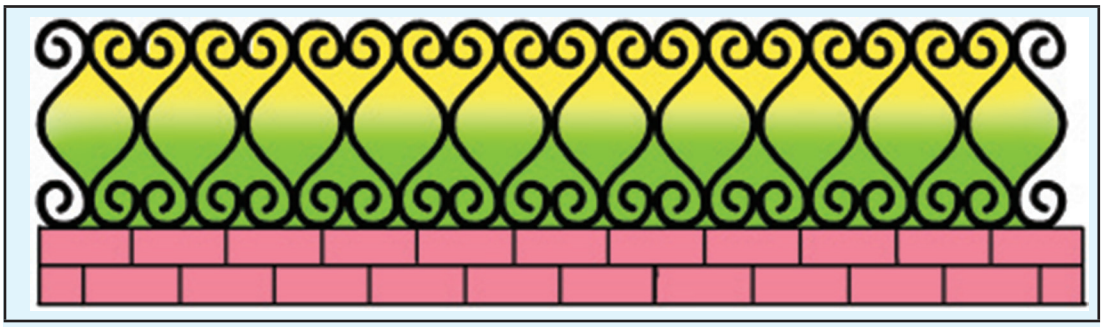
- observe and write patterns in sequence of shapes and numbers.
- search for patterns in different ways of splitting a number.
- create block patterns by stamping thumb prints, leaf, prints, vegetable prints etc.
- create patterns of regular 2D shapes by stamping.

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Chinni and Ginni were going home. On the way, they saw some people making the pavement. The tiles used were of different colours and designs. This is what they saw.



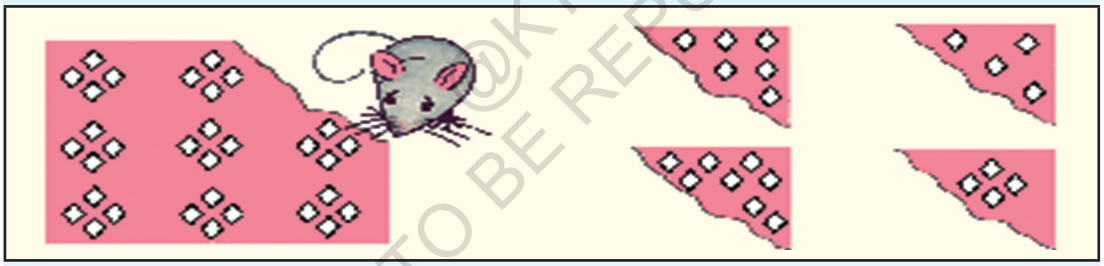
In the evening, they were playing in a park. They saw iron grills on the boundary wall like this.



We see many such patterns around us. Ex : Tiles, Shirt, Sarees etc. Observe these patterns.

Rat  has eaten a part of the shawl of Chinni's mother.

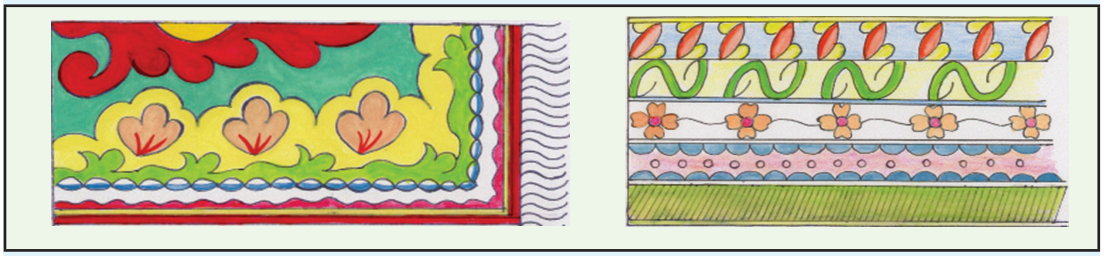
Look at the picture and help Chinni in matching and arranging the piece with the same pattern.



A pattern is an orderly arrangement of design or colours or shapes.

We find many patterns in our surroundings.

Bed Sheets, A Saree



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Floor



Tiles



Activity 1 :

List out any three things in which you find some patterns around your surroundings.

1.

2.

3.

Activity 2 :

Collect some commonly available materials that have a pattern.

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Extension Of Patterns

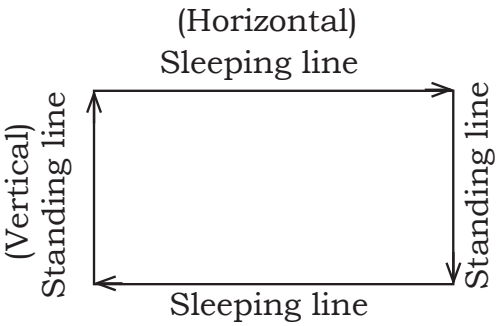
Naseem is making a necklace of beads. Which bead do you think Naseem will put next ? Colour the beads.

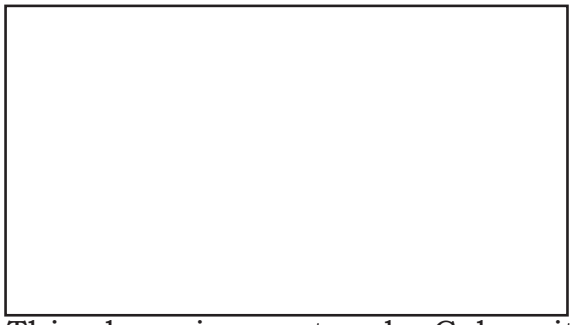


Fill the colours in the remaining boxes so as to get a definite pattern.

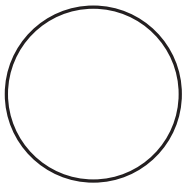


Shapes and Patterns





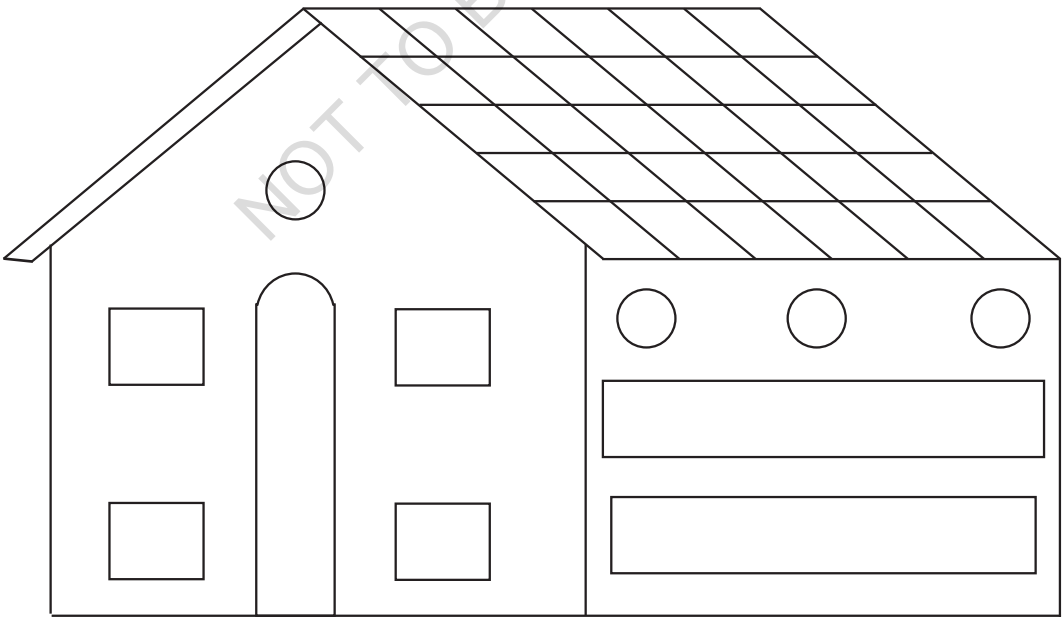
This shape is a rectangle. Colour it



Circle

This shape is a round. It is also called a circle. Colour it.

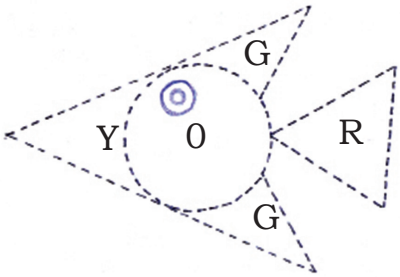
Observe the given picture. Colour rectangles and circles, with different colours.



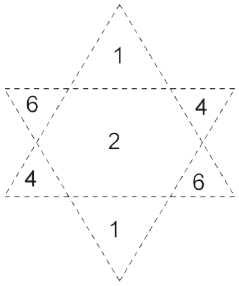
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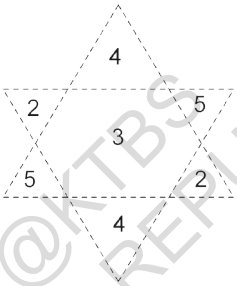
Join the Dots

Join the dots with pencil to complete the picture. Colour the picture as per the given colour scheme.

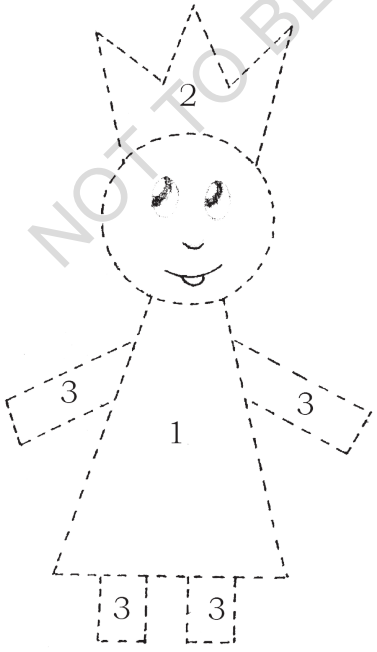


1. Y - Yellow
2. O - Orange
3. G - Green
4. R - Red





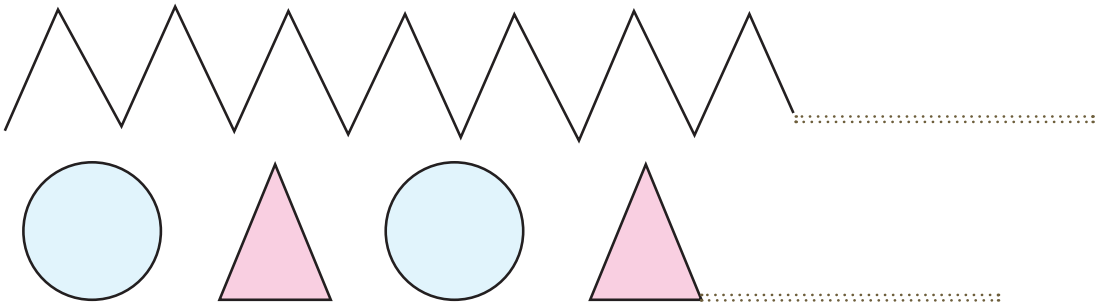
1. Red
2. Yellow
3. Orange
4. Blue
5. Pink
6. Green



1. Pink
2. Red
3. Blue

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Observe the following patterns.



After observing the above pattern we know that,

* The same shape repeats regularly in a pattern.

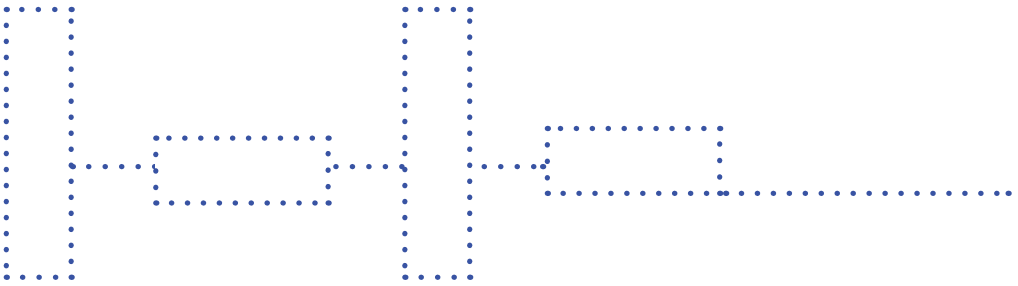
* In the first figure, '∧' shape is repeated continuously.

In the second figure, ○ and △ shape gets repeated alternately to form a definite pattern.

Repetition of the same shapes at regular intervals is called a pattern.

Example :

Complete the following, so as to get a pattern, as shown in the Illustration.

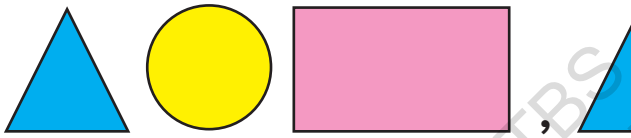


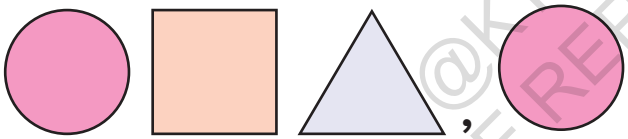
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1.

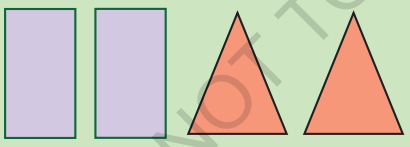
2.

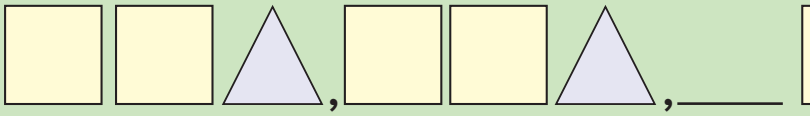
What comes next ?

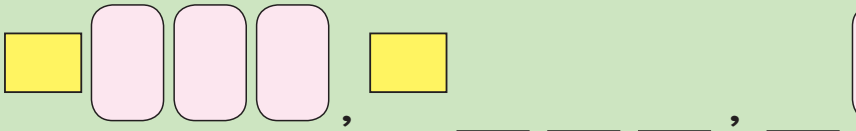




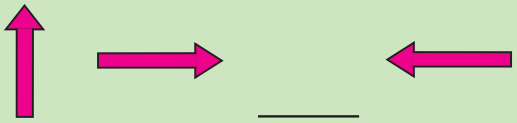
Look at the patterns and draw the missing shapes.

1. 

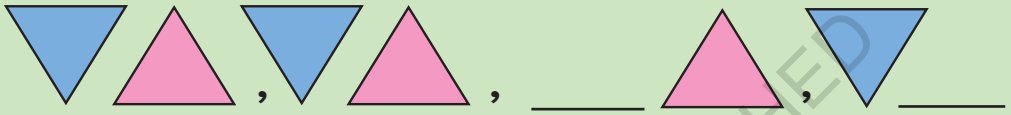
2. 

3. 

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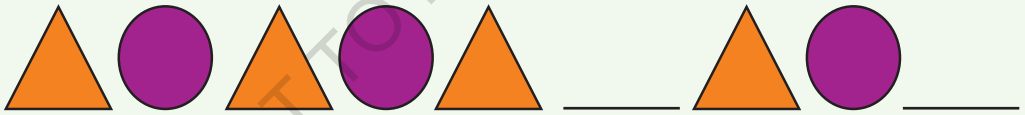
4. 

5. 

6. 

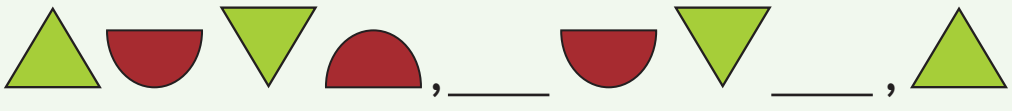
7. 

Look at the patterns draw the missing figures and apply the colours.

1. 

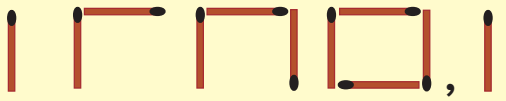
2. 

3. 

4. 

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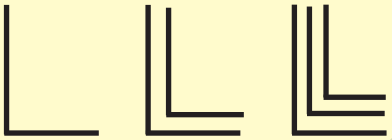
Make Patterns using matchsticks.

1.  _____ _____ _____, _____

2.  _____ _____, _____ _____

3.  _____ _____, _____

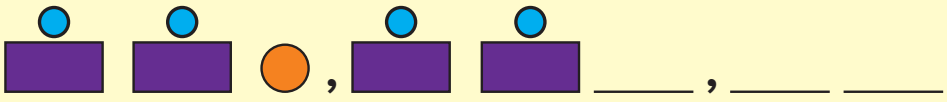
Try the following

1.  _____ _____ _____

2. 

3.  _____ _____

4.  _____

5.  _____, _____ _____

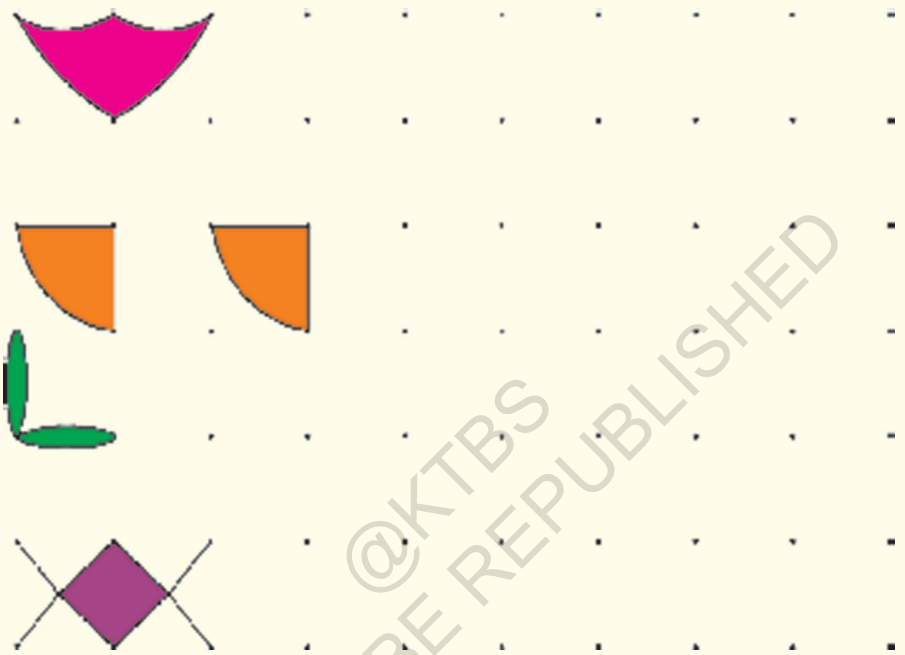
6.  _____, _____ _____ _____

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Try this

On a dot grid join two or more dots by curved lines and then form rangoli, design patterns.

Patterns



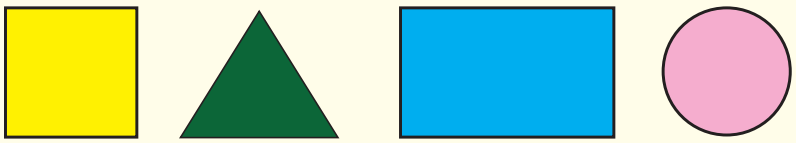
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Do it yourself

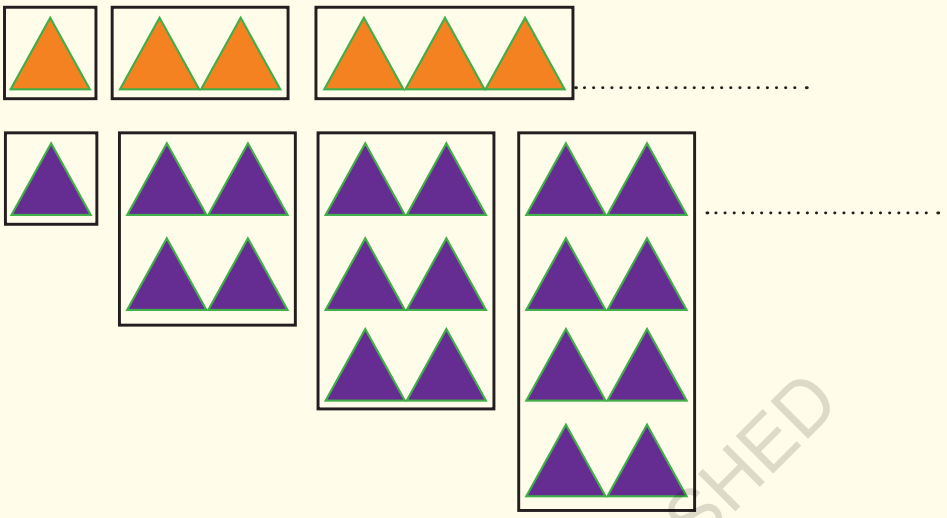
Draw designs or patterns of your own choice using dot grids.

Project Work

Take four sheets of different coloured craft paper and cut the following shapes from it. Create different patterns of your own.



Observe the following pattern



Number pattern

This pattern is represented by numbers as follows.

1, 2, 3, 4

2, 4, 6, 8

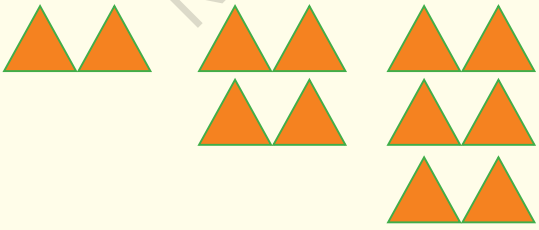
Let us consider the numbers.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10



,.....

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



,.....

100, 90, 80, 70, 60, 50, 40, 30, 20, 10

In every group of numbers we see that a definite rule is followed.

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In 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, starting from 1, next number is obtained by adding 1.

In 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, starting from 2, next number is obtained by adding 2.

In 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, starting from 100, the next number is obtained by subtracting 10.

This method of writing the numbers in an order is called number pattern.

Number Pattern is an orderly arrangement of numbers.

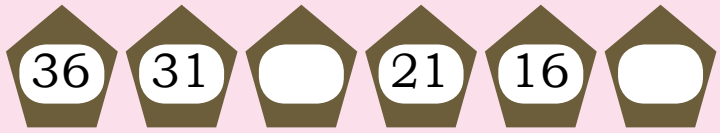
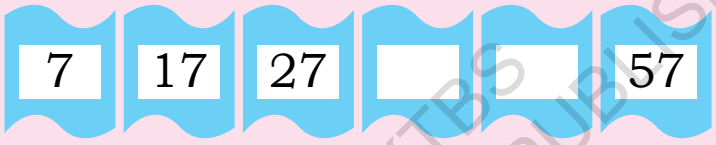
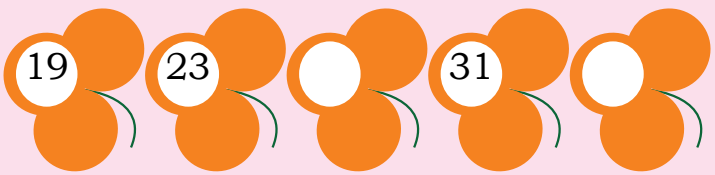
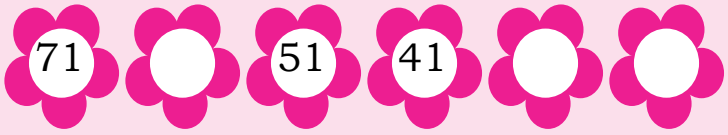
Example :

* 2, 4, 6, 8, 10, 12, 14, 16 **Rule :** Add 2

See the pattern and guess the next numbers and also write the rule in the box.

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		Rule
1.	15, 20, 25, 30, 35, ____ , ____ , ____	
2.	15, 13, 11, 9 ____ , ____ , ____	
3.	10, 12, ◯, 16, ◯, 20, ◯, 24	
4.	48, 44, 40, 36, ◯, 28, ◯, ◯	
5.	22, 32, ◯, 52, ◯, ◯, 82, ◯	

6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

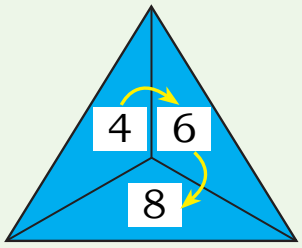
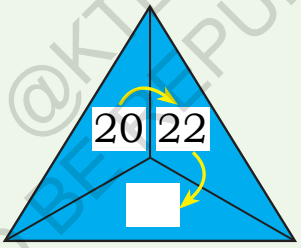
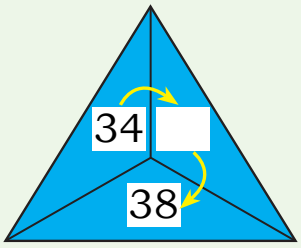
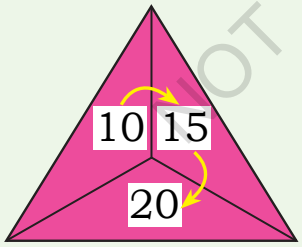
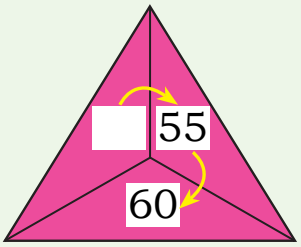
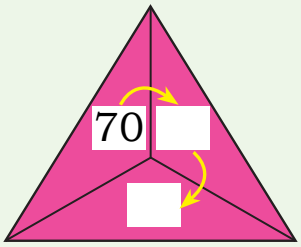
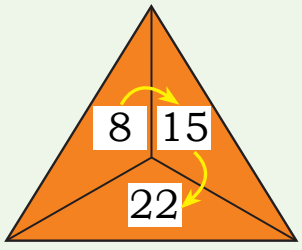
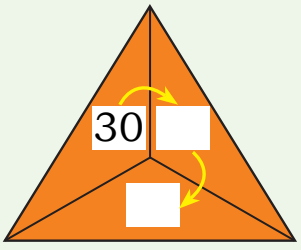
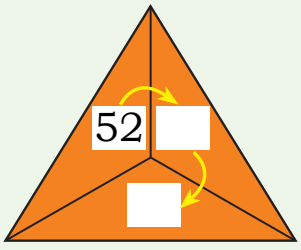
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Activity :

Colour the numbers ending with 1, 3, 5, 7, 9 in Yellow and 2, 4, 6, 8 in Blue. Enjoy the pattern.

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

Complete the Triangle in each case

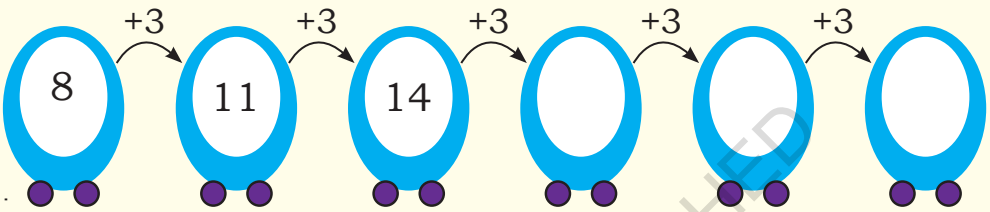
1.			
2.			
3.			

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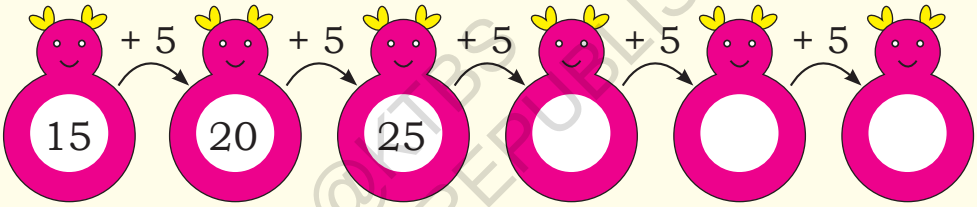
Class work

Follow the pattern and complete the Series.

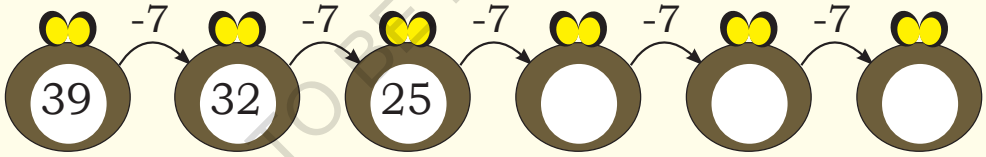
1.



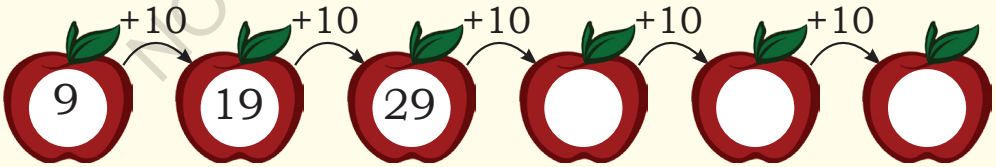
2.



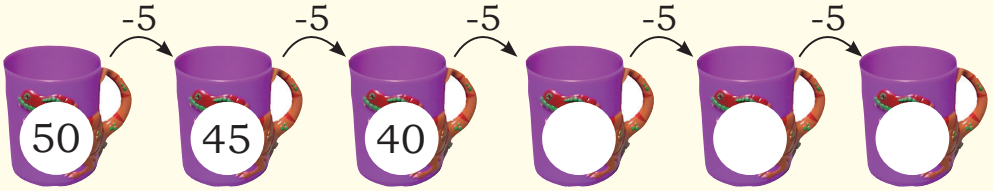
3.



4.



5.



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Observe this pattern.

1	=	1				
2	=	1	+	1		
3	=	1	+	1	+	1
4	=	1	+	2	+	1
5	=	1	+	3	+	1
6	=	1	+	4	+	1
7	=	1	+	5	+	1
8	=	1	+	6	+	1
9	=	1	+	7	+	1
10	=	1	+	8	+	1

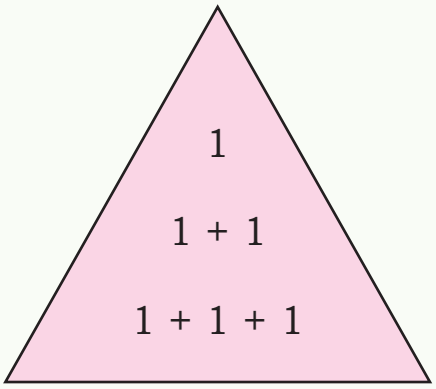
Here, the numbers 2 to 10 is expressed as a sum of two or three numbers. Means 2 is split into 1+1 . Similarly, 3 is split into 1+1+1 and so on.

Pattern 1 :

1 =

2 =

3 =



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Pattern 2 :

$4 = 1 + 2 + 1$

$5 = 1 + 3 + 1$

$6 = 1 + 4 + 1$

$7 = 1 + 5 + 1$

$8 = 1 + 6 + 1$

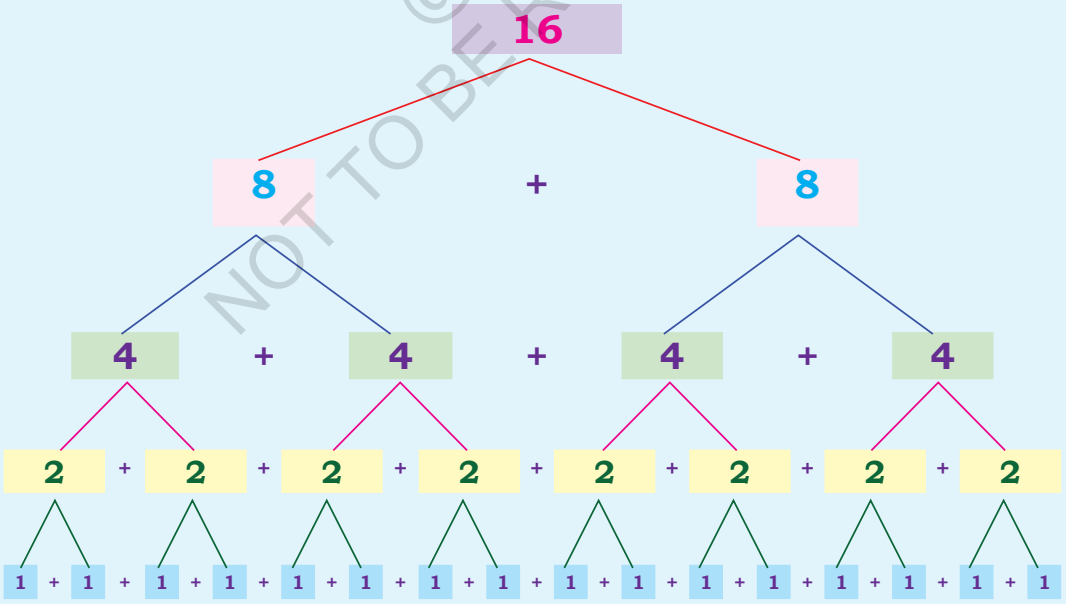
$9 = 1 + 7 + 1$

$10 = 1 + 8 + 1$

Observe the Pattern 3

In the split form, the first and third numbers are the same and the middle number is increasing by 1.

Let us see how to split the single number in different ways to form a pattern.

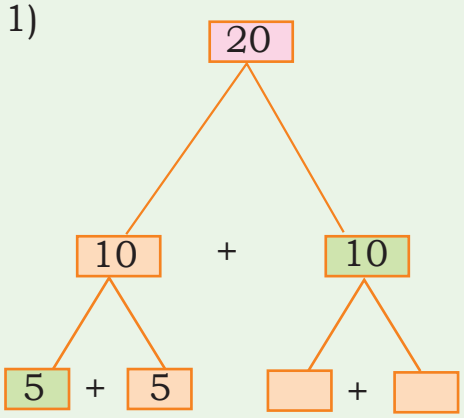


Here 16 is written in four different forms. From these forms a number pattern has formed.

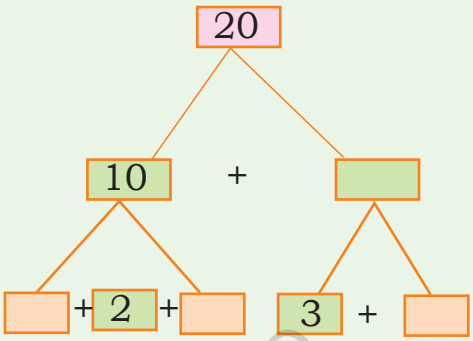
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Complete the following patterns.

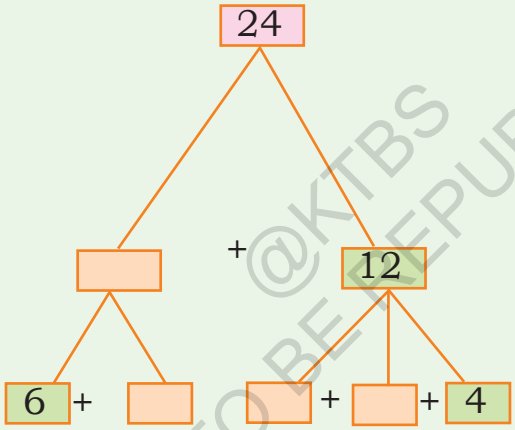
1)



2)



3)



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Fill the blanks as shown in the example and observe the Number pattern for others.

Example :

1)	18 =	9+9	8+10	7+__	__+12	__+ __
2)	12 =	20-8	18-6	16- __	__ -2	__ - __
3)	14 =	10+4	9+ __	__+ 6	__+ __	6+ __
4)	10 =	20-10	30 - __	__-30	50- __	__ - __

Create block patterns by stamping thumb prints, leaf prints and vegetable prints etc.

Activity 1 : Stamp print by using Vegetables.

Materials required:

a) Onion, Bitter guard, Pointer guard, Ridge guard, Carrot, Ladies finger.

b) Water colours - Red, Green, Blue, Orange etc.



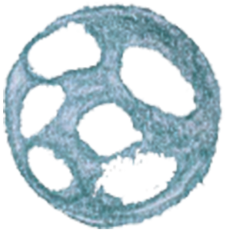
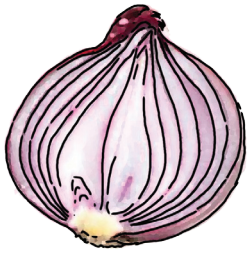
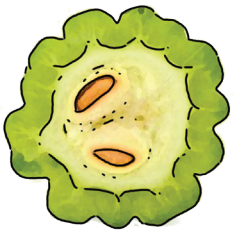
Procedure :

1) Cut the Onion vertically.

2) Cut the Bitter guard, Pointer guard, Ridge guard, Carrot, and Ladies finger horizontally.

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Pictures of cut Vegetables

 Carrot	 Bitter guard	 Pointer guard
 Ladies finger	 Onion	 Ridge guard

Immerse the cut end of these vegetables in different colours and stamp its impressions on a sheet of paper.



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Activity 2: *Stamp print pattern using leaf and vegetables.*

Materials required:

a) Medium size leaves of any plant.

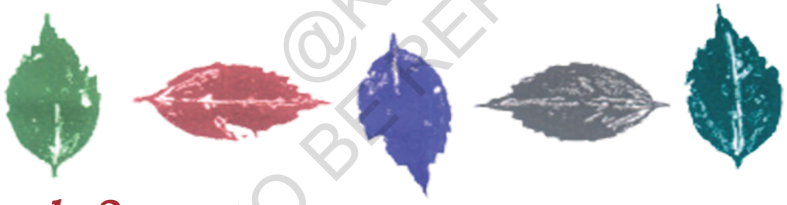
b) Vegetable: Bitter guard.

c) Water colour - Green, Red, Pink.

Procedure :

1. Clean the surface of the leaf
2. Colour the inner side of the leaf using green tube.
3. Make different patterns on paper by stamping the leaves as shown below.

Example 1 :



Example 2 :



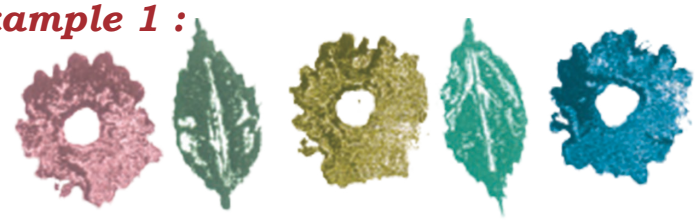
Example 3 :



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Stamp the print pattern using leaf and bitter guard as shown.

Example 1 :



Example 2 :



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Activity 3 :

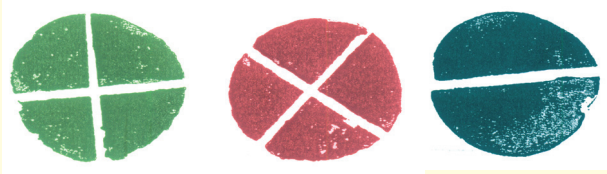
Engraved stamp print pattern

Materials required:

Carrot, different colour tubes, cutter

Procedure

1) Take horizontally cut pieces of Carrot
2) Engrave '+', '-', '×' and '÷' symbols on a cut surface of carrot
3) Dip the engraved surface of the cut piece in different colours and form a pattern on a paper.



Activity 4:

Thumb print pattern.

Materials required: Different colour tubes, sticks.

Procedure

1. Colour your thumb.
2. Make thumb prints on a paper.
3. Use the stick to draw a particular shape (to draw eyes, wings) to form a definite Picture. Ex : Birds, Fish etc.



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Activity 5: Stamp print sequence

Materials required:

Cut pieces of Carrot, Ladies finger, Bitter guard, Ridge guard and Point guard and different colours.

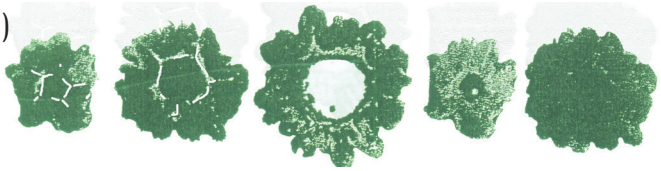
Procedure:

Immerse the cut end of different vegetables in different colours and make stamp print sequence on a sheet of paper, as shown in the example.

1)



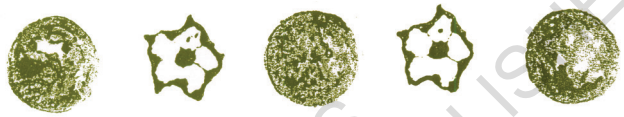
2)



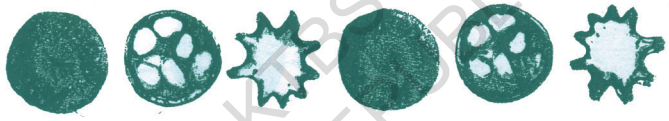
3)



4)



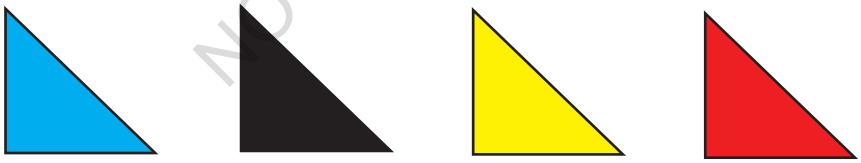
5)



Patterns of regular 2 D shapes

Activity 1:

Take 8 cut pieces of triangles of equal size of different colours with the help of your teacher and arrange them in different pattern selecting any three colours on a square board.



Blue Black Yellow Red



Blue Black Yellow Red

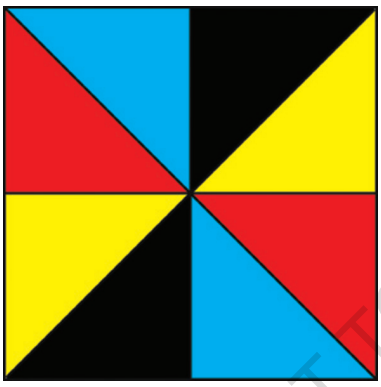
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Square Board

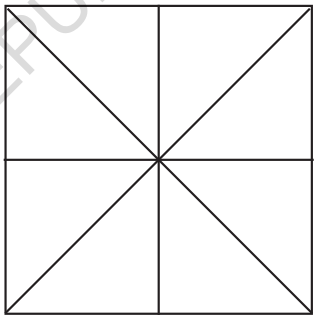


You can arrange these triangles on square board in different ways or patterns

Activity 2 :



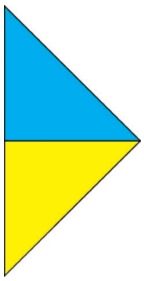
Do it yourself with different combinations of coloured triangles.



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Now arrange the triangles on a table or floor without using square board and form a definite shape as shown below.

Pattern-1

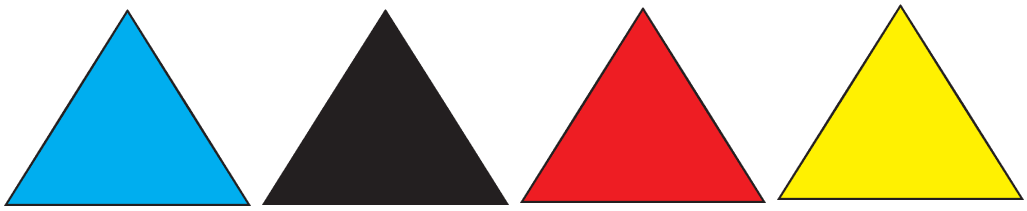


Pattern-2

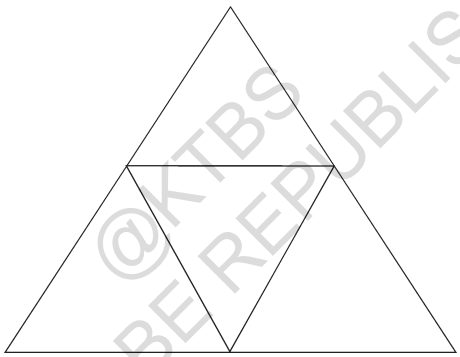


Activity 2 :

Collect four triangles of different colours of same size with the help of your teacher as shown below.



Now arrange them to form a big triangle.



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You can try for other patterns.

Activity 3:

We are given four pieces of triangular cardboard. Arrange these to form a square and rectangle.

