

Representation of data using as information (data) in words, symbols, through graphs, pictures etc, called pictograph. If we make use of picture symbol for representing information then it is called **pictorial representation** or pictograph of given data. The gathered information to make sense, it has to be organized and displayed.

The pictures that represent information are known as pictographs.

For Example :

- Nishant was to find out the number of students playing different game in a school. He collected the information as under:

Football (35), Hockey (25), Cricket (40), Kabaddi (10) and Volley Ball (15).
Make the Pictograph of the information.

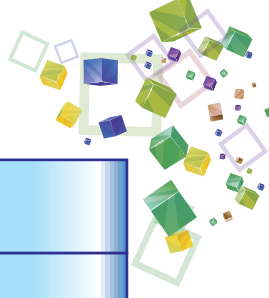
Akhil presented the information through pictograph is as under :

Football	
Hockey	
Cricket	
Kabaddi	
Volley Ball	

One  represents 5 students.

Example I : The pictograph given below showing the total collection of books in a library on different subjects .





Mathematics	
Physics	
Hindi	
Urdu	
English	

One represents 100 such books.

Answer the following questions.

- Which books are equal in number in the library?
- Which subject has maximum number of books in the library and how much?
- What is the total number of books in the library?
- Which subject has minimum number of books?

Solution :

- Hindi books and English books are same in number in the library.
- Mathematics books are maximum in number in the library.

$$\text{Number of Mathematics books} = 5 \times 100 = 500$$

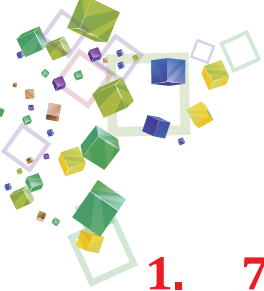
- | | | | | |
|-------------------|---|----------------|---|-----|
| Mathematics books | = | 5×100 | = | 500 |
| Physics books | = | 4×100 | = | 400 |
| Hindi books | = | 3×100 | = | 300 |
| Urdu books | = | 2×100 | = | 200 |
| English books | = | 3×100 | = | 300 |

Total books	1700
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- Urdu books are minimum in number in the library.

$$\text{Number of Urdu books} = 2 \times 100 = 200$$





EXERCISE 15.1

1. 75 students of Class IV were asked about the soap brands they use in their home. Given pictograph shows their response.

Rexona	
Liril	
Dove	
Pears	

One represents 5 children.

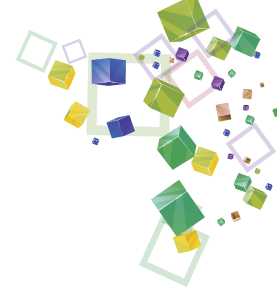
Answer the following questions.

- How many children use the Liril soap?
- Which brand of soap is used most?
- How many children use the Pears soap?
- Which brand of soap is used least?

2. Ankush goes to a toy shop where the number of various types of toys available at the toy shop are represented in pictograph.

Car	
Dolls	
Helicopters	
Buses	
Kites	
Balloons	

One symbol represents 5 toys.



Answer the following questions.

- How many toys are available in the shop?
- Which toy is available maximum in number in the shop?
- How many toy helicopters are available in the shop?
- Which toy is available minimum in number in the shop?

3. The pictograph given below represent the basket of fruits sold by a fruit seller during the four weeks of May.

First week	
Second week	
Third week	
Fourth week	

One full basket represents 100 items.

Answer the following questions.

- In which week did the fruit seller sell the maximum number of fruits?
- How many baskets of fruits were sold during the month of May?
- In which week did the fruit seller sell the minimum number of fruits?



Bar Graphs

The data from the table has been used to make a bar graph to show Raima's marks in class IV, Maths test, she has given through the year. The maximum marks for each test was 10.

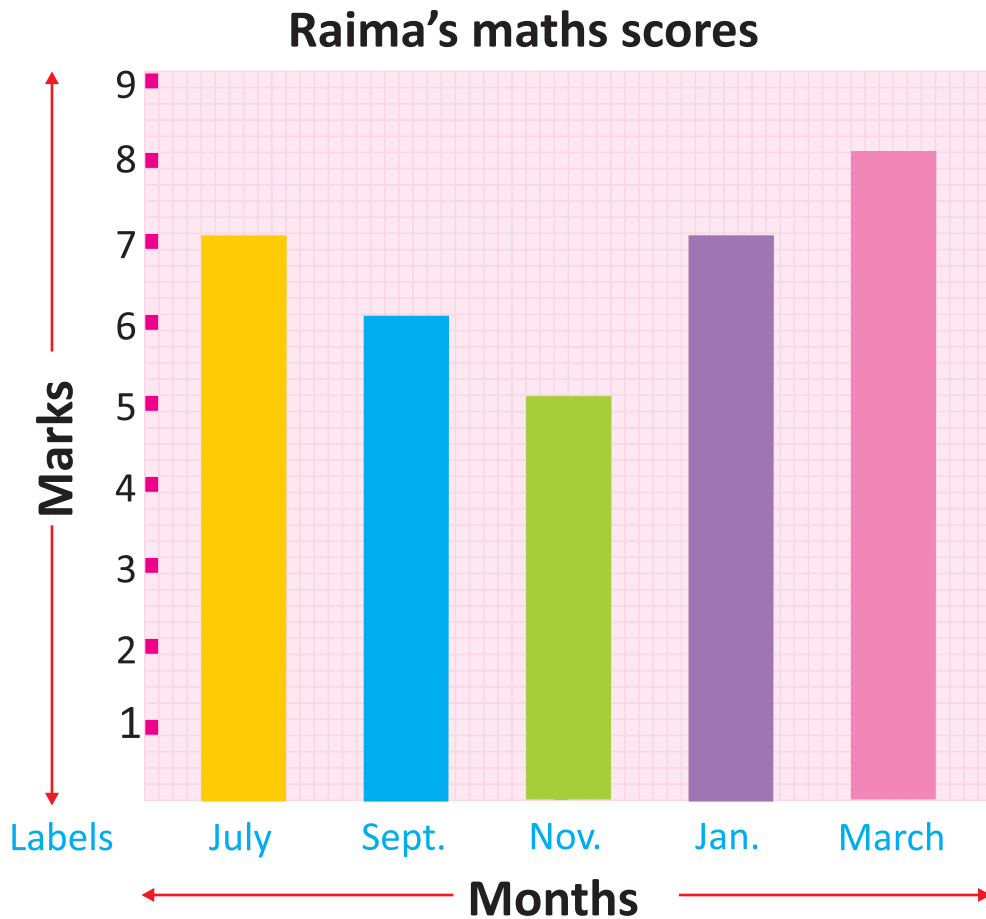
Month of test	July	September	November	January	March
Marks	7	6	5	7	8





Every bar graph must have :

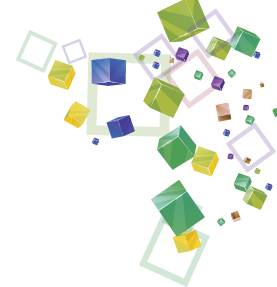
- ❖ A title explaining the information given in the graph.
- ❖ The horizontal and vertical scales.
- ❖ The labels explaining the scales.



Just like a pictograph, a bar graph helps us compare the information and understand it better. Here, by looking at the bar graph we can see that.

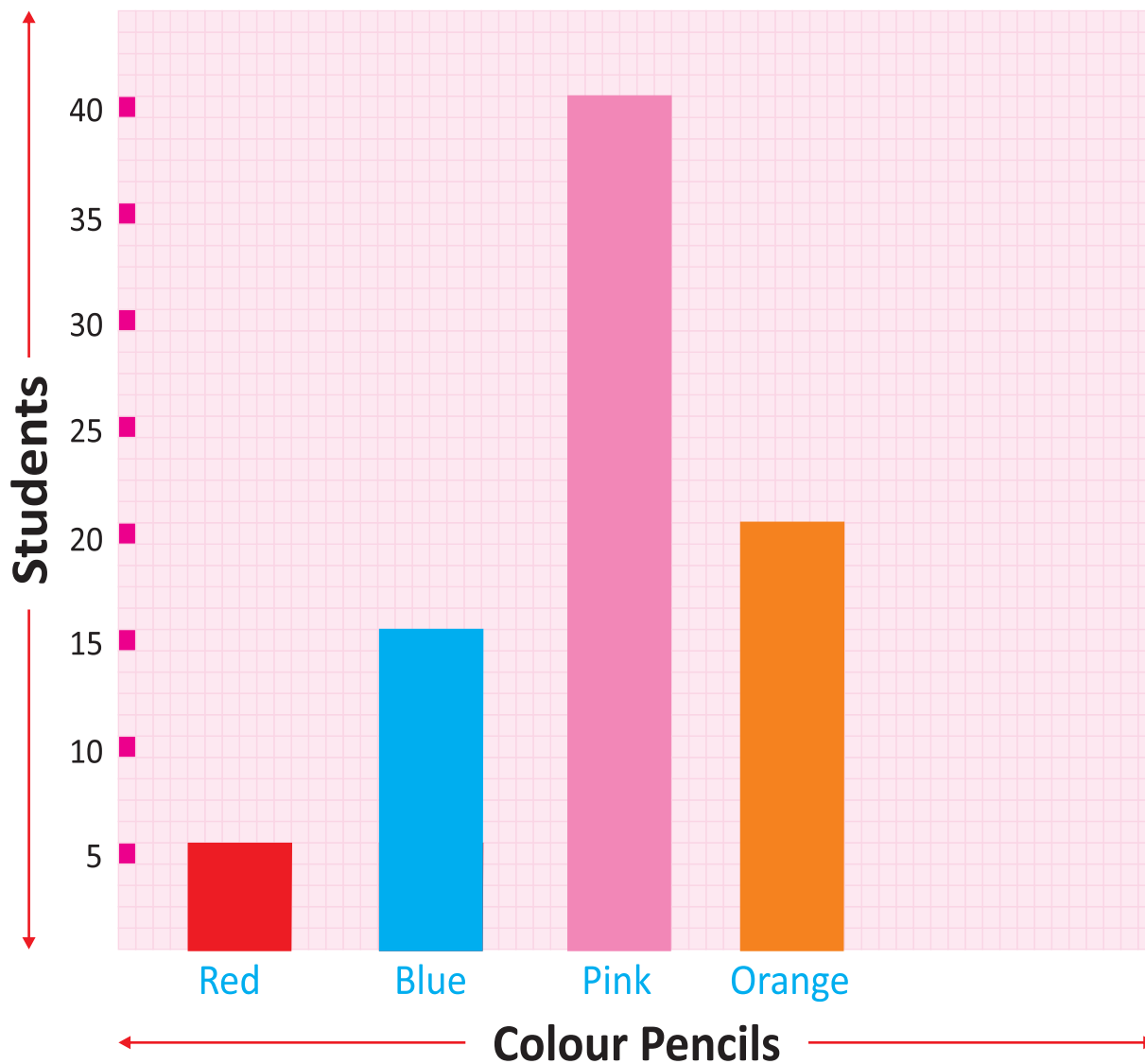
- ❖ Raima did best in the March test.
- ❖ She got the least marks in November test.
- ❖ The difference in marks between her first and last test is one mark and so on.

In simple words, we can say bar graph is a diagram in which the numerical values of variables are represented by the height or length of lines or rectangles.



EXERCISE 15.2

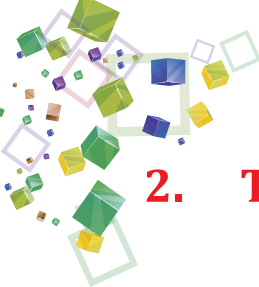
1. The following bar graph represents the number of various colour pencils used by 80 students.



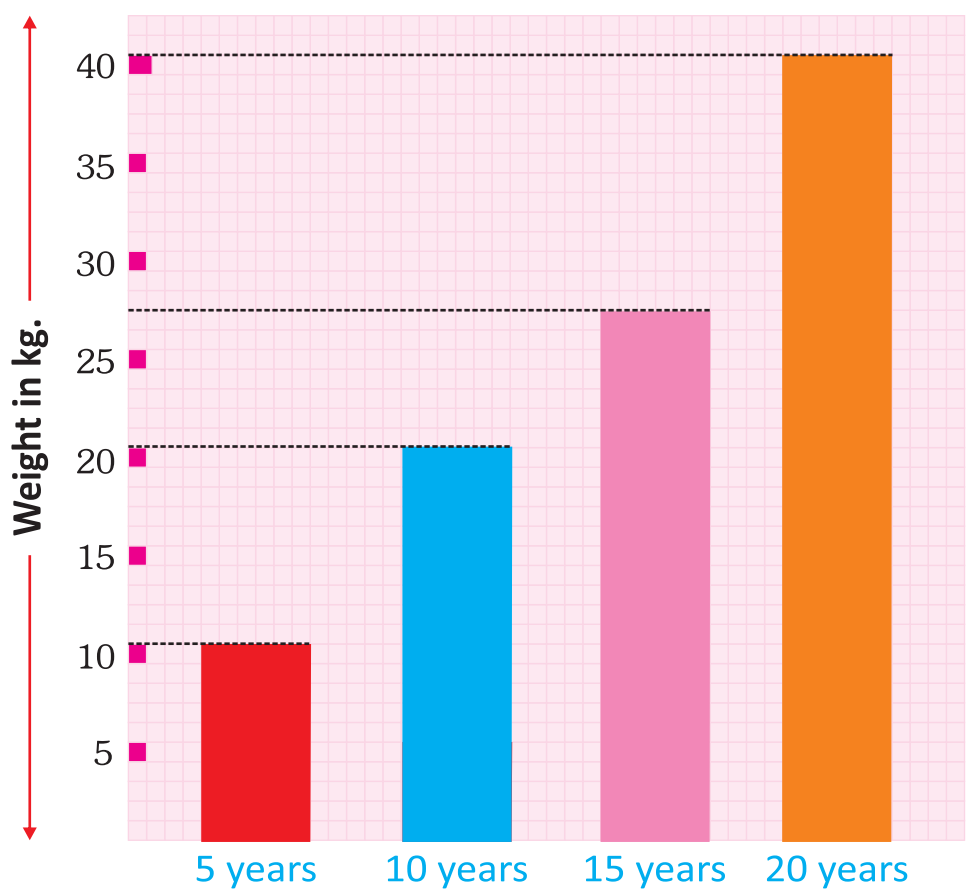
Answer the following questions.

- How many students use the red colour pencil?
- How many students use the orange colour pencil?
- Which colour pencil is used most?
- Which colour pencil is used least?





2. The weight of a boy as he was growing is shown below.



Answer the following questions.

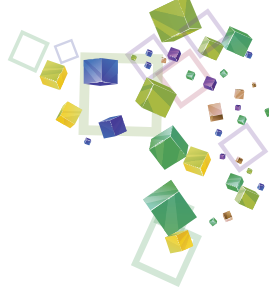
- a. Between 10 years and 20 years of age how much kg did he gain?
- b. What was his weight on his tenth birthday?
- c. When did he gain the maximum weight?
- d. When did he gain the minimum weight?

POINTS TO REMEMBER

- ❖ Pictograph is pictorial representation of data.
- ❖ A bar graph must have a title.
- ❖ The bar graph must have horizontal and vertical scales.
- ❖ The bar graph must have labels explaining the scales.

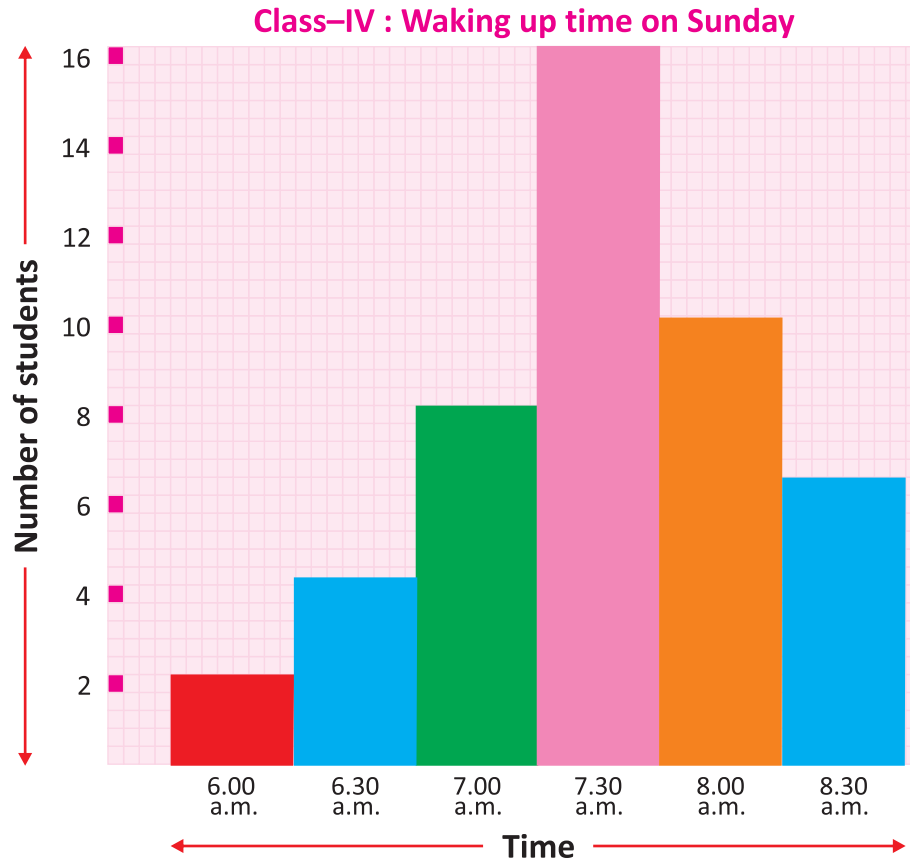


RECAP EXERCISE



1. Multiple Choice Questions (MCQs)

Tick (✓) the correct options:



a. What is at the horizontal scale in the graph, given on the next page?

- (i) Time (ii) Number
 (iii) a.m. (iv) None of these

b. What is the total number of students in class-IV?

- (i) 40 (ii) 24 (iii) 44 (iv) 46

c. At what time do the most of the students get up on Sunday?

- (i) 7:00 a.m. (ii) 7:30 a.m.
 (iii) 8:00 a.m. (iv) 8:00 a.m.

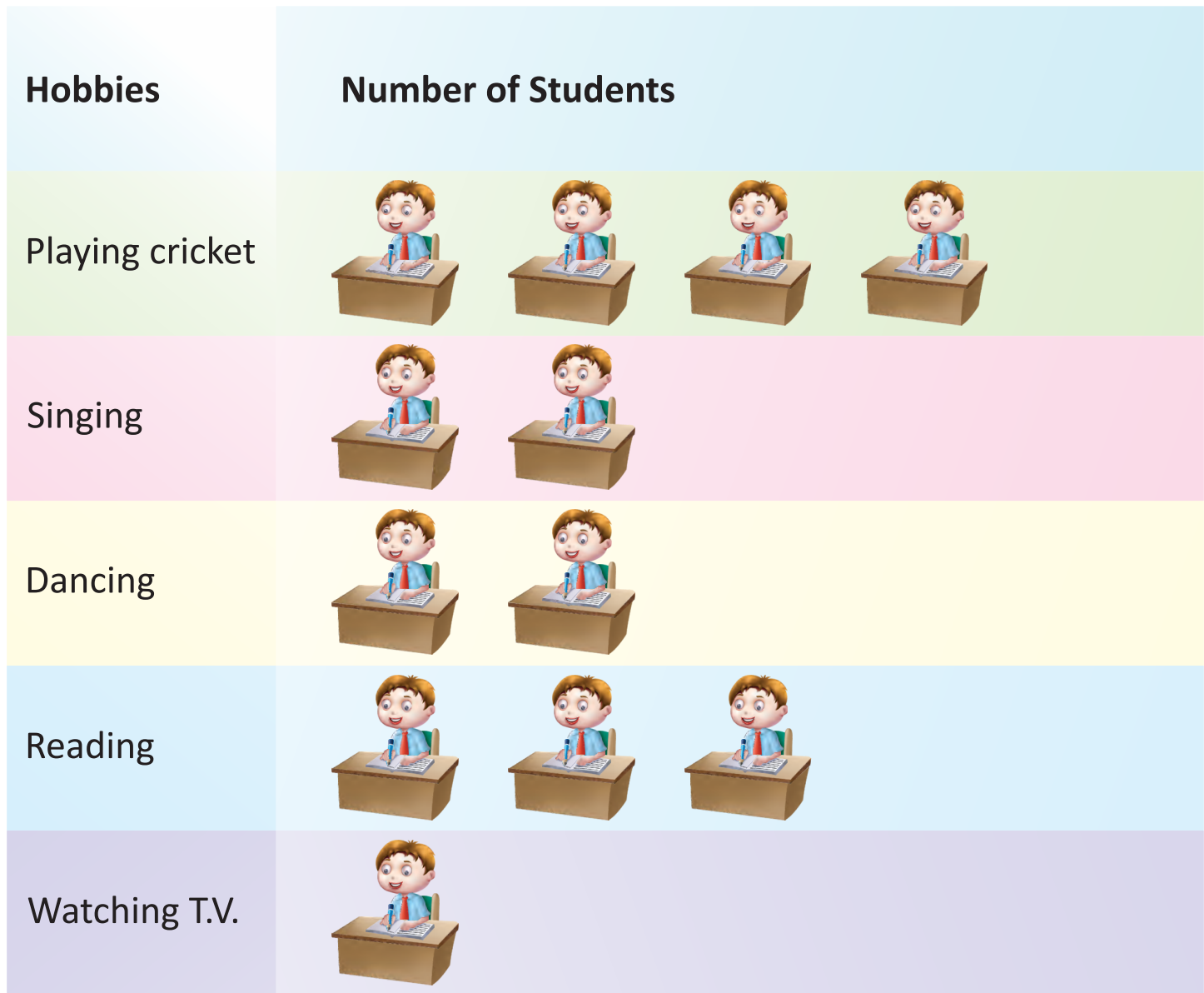
d. How many students get up at 6:30 a.m. on Sunday?

- (i) 10 (ii) 16 (iii) 8 (iv) 4





2. The pictograph shows the hobbies of 60 students in class-IV. Study the graph and answer the following questions.



Each  represents 5 students.

Answer the following question.

- What is the hobby of maximum number of students?
- How many students like singing?
- How many students like watching T.V.?
- How many students like reading?

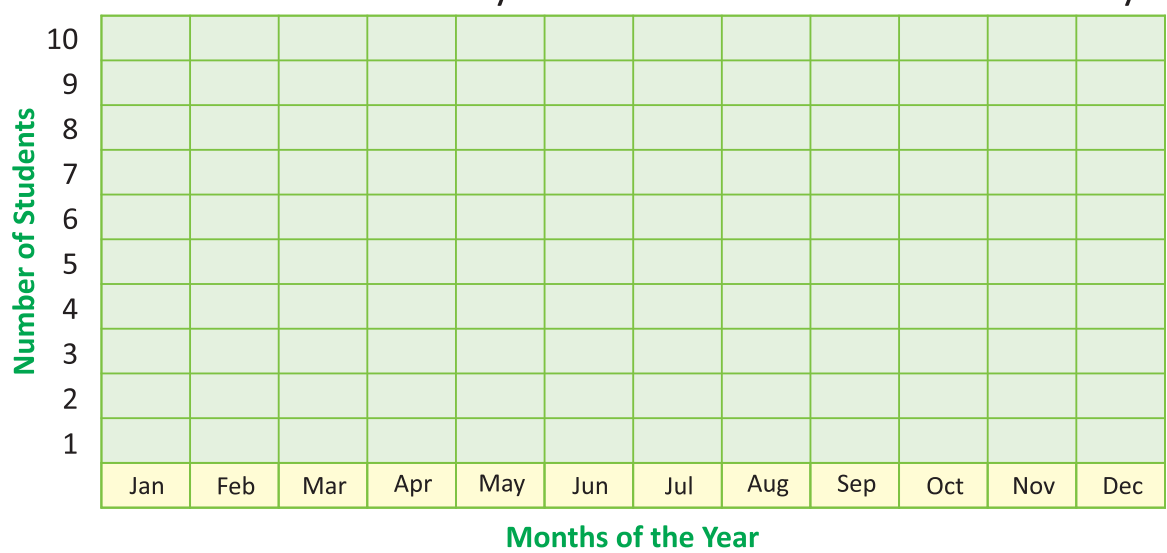


Data is the information about an object and graph is the pictorial representation of data.

Lab

Activity

- Objective :** To build a bar graph.
- Materials :** Chart paper, matchboxes, white paper, glue and crayons
- Presentation:** Make a chart with grids of the size of matchboxes, as shown. This is a class activity. Students take turns to do the activity.



- ❖ Students stick rectangular pieces of paper to cover one face of their matchboxes.
- ❖ Now, the students write their names on their matchboxes or stick their pictures on it.
- ❖ The students observe the chart and stick their matchboxes on the grid according to the month of their birthday starting from 1.
- ❖ After the entire class has completed the activity, each student is asked to answer the questions given below with the help of the bar graph.

Record the Activity :

- ❖ Any two months that may have the same number of birthdays :
- ❖ Number of children with a birthday in the same month as yours :
- ❖ The month with the least number of birthdays :
- ❖ Any month that may have no birthdays :
- ❖ The month with the maximum number of birthdays :
- ❖ Number of children in the class :

