14 Data Handling

We'll cover the following key points:

→Pie Chart

→Bar Graphs

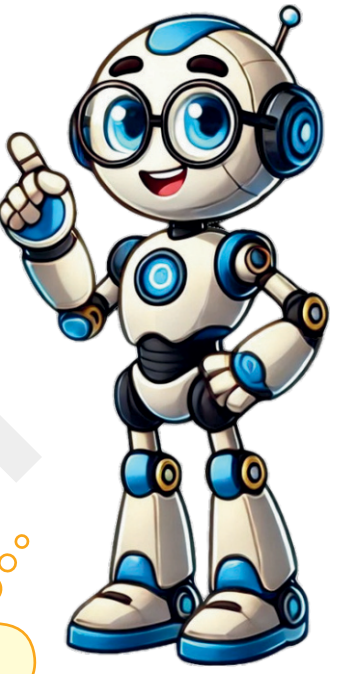
Do you Remember fundamental concept in previous class.

In class 4th we learnt

→Pictorial Representation of Data and Bar Graph

In class 3rd we learnt

→Pictorial Representation of Data



Still curious? Talk to me by scanning the QR code.

EeeBee

Learning Outcomes

By the end of this chapter, students will be able to:

- Understand the concept of data and its representation in graphical forms.
- Create and interpret bar graphs to represent and compare data.
- Read and understand information from a bar graph, including identifying the scale, axis, and labels.
- Construct a pie chart to represent data visually, using correct proportions.
- Identify the parts of a pie chart, including sectors, angles, and labels.
- Compare data from bar graphs and pie charts to draw meaningful conclusions.
- Solve simple problems by interpreting data presented in bar graphs and pie charts.
- Explain the advantages of using bar graphs and pie charts to represent data.
- Translate a given set of data into a bar graph or pie chart correctly.
- Analyze and discuss real-life examples where bar graphs and pie charts can be used effectively.

Look at the following pictograph showing the number of shirts sold by a garment shop in one week.

Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Here, one  represents 5 shirts.

Using the pictograph answer the following questions.

(a) How many shirts were sold on Monday? _____

(b) On which day _____

(c) On which day were the maximum number of shirts sold and how many? _____

Introduction

You are familiar with the pictorial representation of data. In previous class, you have studied how to collect information (data) and represent it pictorially the emphasis is given on systematic recording of data and students are expected to represent the collected information (data) either through a table or pictorially.

Representing Data as a Circle Graph

Circle graph also called pie chart, is a type of graph used to represent a part of a whole relationship. They are used to compare different parts of a whole amount.

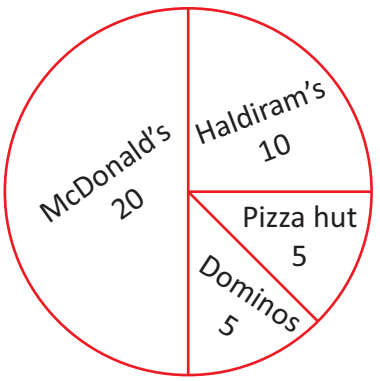
(i) They are circular shaped graphs with the entire circle representing the whole.

(ii) The circle is then split into parts or sections.

(iii) Each part/section is proportional in size to the amount each part/section represents, therefore it is easy to make comparisons.

Example : The table shows the choice of restaurants for 40 students of class V. Represent the same information on a circular graph.

Restaurant	Number of students
McDonald's	20
Pizza hut	5
Dominos	5
Haldiram's	10



McDonald's : 20 out of 40

$= \frac{20}{40} = \frac{1}{2}$ of the total

i.e. half of the circle is marked as McDonald's.

Pizza hut : 5 out of 40

$= \frac{5}{40} = \frac{1}{8}$ of the total

i.e. $\frac{1}{8}$ of the circle is marked as Pizza hut.

Dominos : 5 out of 40

$= \frac{5}{40} = \frac{1}{8}$ of the total

i.e. $\frac{1}{8}$ of the circle is marked as Dominos.

Haldiram's : 10 out of 40

$= \frac{10}{40} = \frac{1}{4}$ of the total

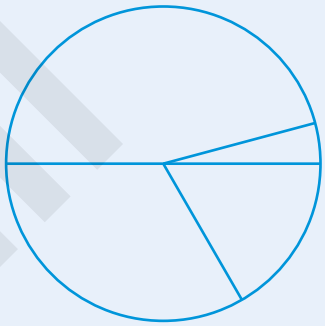
i.e. $\frac{1}{4}$ of the circle is marked as Haldiram's.

Exercise 14.1

Knowledge Application

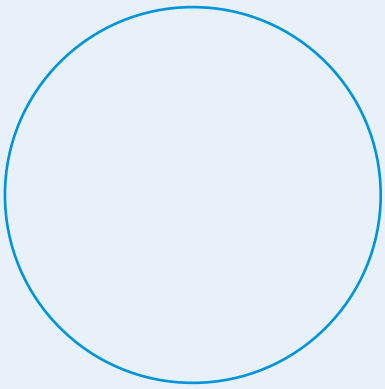
1. The teacher asked 100 students of students of Class 5. The name of their favourite colour. The data collected is shown below. Represent this data in the circle graph by finding the fractions.

Favourite Colour	Number of Students	Fraction
Red	40	
Blue	30	
Brown	20	
Yellow	10	



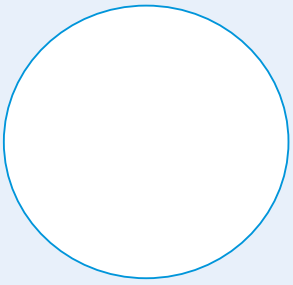
2. Hemant conducted a survey. He asked 80 children which kind of books they liked. The data is given below. Find the fractions and fill in the circle graph.

Kinds of Story Books	Number of Students	Fraction
Maths	30	
English	10	
Computer	20	
Science	20	



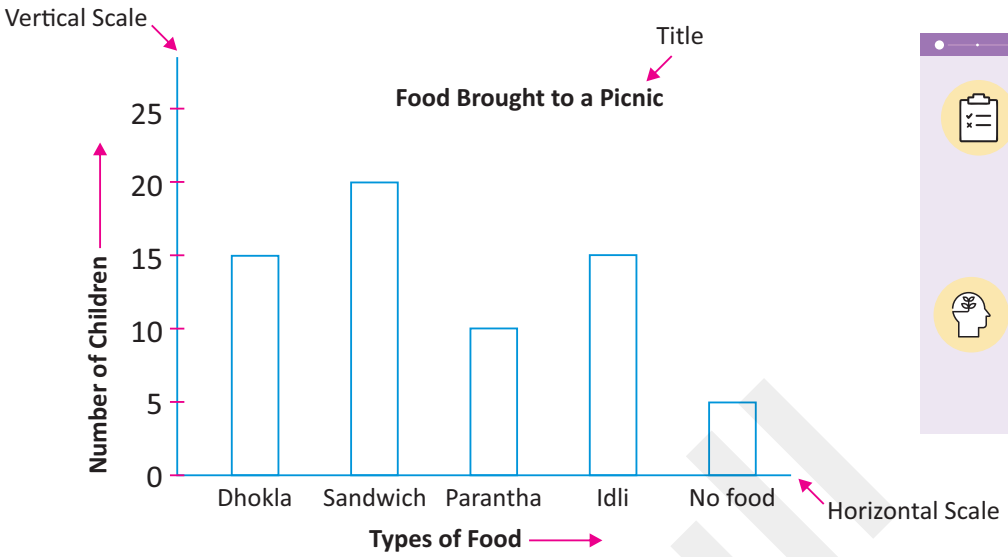
3. 100 boys were asked which kind of sports they like to watch. Look at the table that give their replies and label the given circular graph.

Sport	Number of boys
Cricket	65
Hockey	10
Football	25



Bar Graphs

Given here is a bar graph. This graph represents the food some children brought to a picnic.



From the graph, you get the following information.

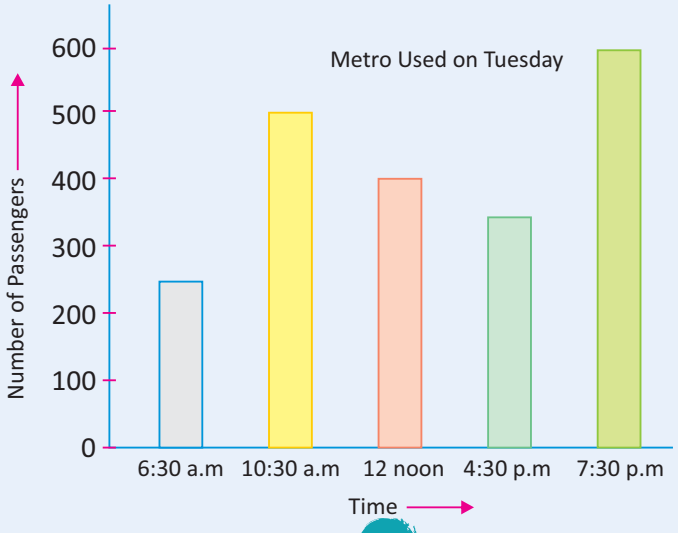
- Most children brought sandwiches for the picnic.
- 5 children did not bring any food for the picnic.
- The least number of children brought paranthas.
- An equal number of children brought dhokla and idli.
- The number of children who went for the picnic are

  $15 + 20 + 10 + 15 + 5 = 65$

Exercise 14.2

Knowledge Application

1. This bar graph shows the number of people who used the Metro on Tuesday.



Read the bar graph carefully and answer the following questions:

(a) At what time did the least number of people use the metro ?

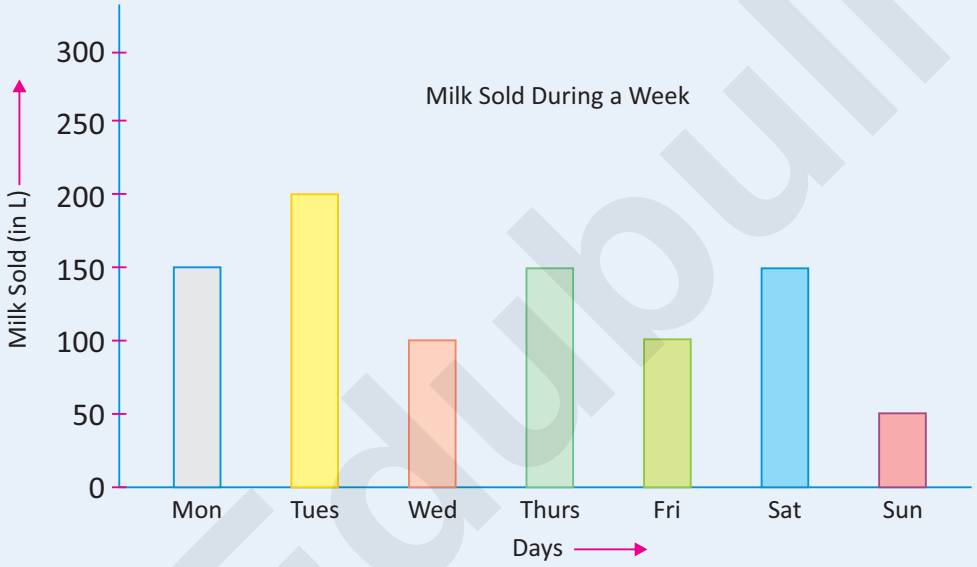
(b) At what time was the metro most crowded?

(c) At what time in the morning did the number of passengers double ?

(d) How many people used the metro on Tuesday ?

(e) What was the difference in the number of passengers at 12 noon and 4:30 p.m.?

2. This bar graph shows the quantity of milk sold by a dairy during a week.



Read the bar graph carefully and answer the following questions:

(a) What was the quantity of milk sold during the week?

(b) How much more milk was sold on Thursday compared to Friday?

(c) On which day was the least quantity of milk sold?

(d) On which day was the most quantity of milk sold ?

(e) How much milk was sold on Wednesday and Sunday together?

Project Work

Collaboration

Record your height and also write height of your three friends.

Friend	Height (in cm)
You	
1.	
2.	
3.	

Find the answer of the following questions using the table:

(i) Who is the tallest? _____

(ii) Who has the least height? _____

(iii) Find the sum of heights of first two persons in the list. _____

(iv) Find the difference in heights of last two persons in the list. _____

Think Tank

Gap Analyzer™
Take a Test

1. Tick (✓) the correct options.

(a) Data collected can be represented in the form of _____

(i) pictograph ☐ (ii) bar graph ☐

(iii) circle graph ☐ (iv) all of these ☐

(b) Every bar graph must have _____

(i) title ☐ (ii) horizontal scale ☐

(iii) vertical scale ☐ (iv) all of these ☐

(c) Circle graph also called _____

(i) pictograph ☐ (ii) bar graph ☐

(iii) pie chart ☐ (iv) none of these ☐

(d) To make a circle graph we use _____

(i) circle ☐ (ii) symbols ☐

(iii) rectangular bars ☐ (iv) horizontal bars ☐

2. The temperature recorded for seven days in a city is as follows:

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temperature	29°C	35°C	39°C	42°C	38°C	42°C	43°C

Prepare a bar graph and answer the following questions .

(a) Which was the hottest day ?

(b) What is the difference between the highest and the lowest temperature?

(c) Which two days were equally hot ?

(d) What was the temperature on Monday ?

3. Deepika opened her money bank and a heap of coins of 1 rupee, 2 rupee, 5 rupee and 10 rupee came out. She quickly made a tally chart to show the amount which was in her money bank. Compute the tally chart and answer the questions:

Coin	Tally marks	Frequency
10 rupees	𝍸 𝍸 𝍸 𝍸	
5 rupees	𝍸 𝍸 𝍸 III	
2 rupees	𝍸 𝍸 𝍸 II	
1 rupee	𝍸 𝍸 III	

(a) Which coins are minimum in number ?

(b) Which coins are maximum in number ?

(c) How many less are the 5-rupee coins than 10-rupee coins in her collection ?