Pie Chart

Understanding the Topic

- A pie chart is a type of graph that displays data as slices of a circle.
- Each slice represents a part of the whole and is proportional to the size of the data.

How to Read a Pie Chart

- The circle represents the total amount or 100%.
- Each slice is a part of the total, showing the proportion of a category.
- The size of each slice is often labeled with a percentage or value.

Steps to Draw a Pie Chart

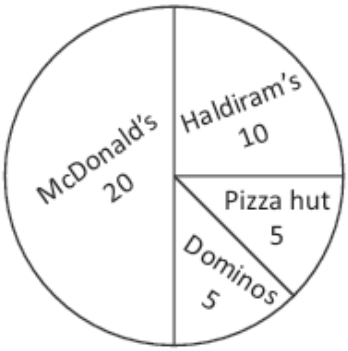
Step 1 – Find the total of all data values.

Step 2 – Convert each data value into a percentage or angle.

Step 3 – Draw the circle and divide it into slices based on the calculated angles.

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



Angle Calculation

- To find the angle for each slice:

  Angle=(Value / Total Value)×360°

Examples with Solutions

1. Example – Simple Pie Chart (Easy)

Question: In a survey, 50 students like apples, 30 like bananas, and 20 like oranges. What is the angle for apples in the pie chart?

Solution: Total = 50 + 30 + 20 = 100

Angle for apples = (50 / 100) × 360° = 180°

2. **Example – Pie Chart Proportion (Moderate)**

Question: In a class of 120 students, 48 like ice cream, 36 like cake, and 36 like cookies. What is the angle for cake in the pie chart?

Solution: Total = 120

Angle for cake = (36 / 120) × 360° = 108°

3. **Example – Calculating Angle (Moderate)**

Question: In a survey of 200 people, 80 prefer tea, 50 prefer coffee, and 70 prefer juice. Find the angle for juice.

Solution: Total = 200

Angle for juice = (70 / 200) × 360° = 126°

4. **Example – Drawing Pie Chart (Moderate)**

Question: A pie chart shows 4 categories: A = 30, B = 50, C = 20, and D = 100. What are the angles for each category?

Solution: Total = 30 + 50 + 20 + 100 = 200

Angle for A = (30 / 200) × 360° = 54°

Angle for B = (50 / 200) × 360° = 90°

Angle for C = (20 / 200) × 360° = 36°

Angle for D = (100 / 200) × 360° = 180°

5. **Example – Interpreting Pie Chart (Moderate)**

Question: A pie chart shows that 60% of the class prefers sports, 25% prefers music, and 15% prefers reading. How many students prefer music if the class has 40 students?

Solution: 25% of 40 = (25 / 100) × 40 = 10 students prefer music.

Summary Points

- A pie chart shows data as a circle divided into slices.
- Each slice represents a part of the total data.
- Angles are calculated based on the proportion of each value to the total.
- Use the formula: Angle=(Value /Total Value)×360°.

- Pie charts are useful for comparing parts of a whole.
- Always check that the total of the angles adds up to 360°.
- Pie charts are often used in surveys, polls, and data analysis.
- Understanding proportions and percentages is key to making pie charts.
- Practice drawing and interpreting pie charts for better understanding.