DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
19GET275 - VQAR-1

Pie Chart Questions with Solution

Some important Formulas:
- To draw a pie chart with percentages

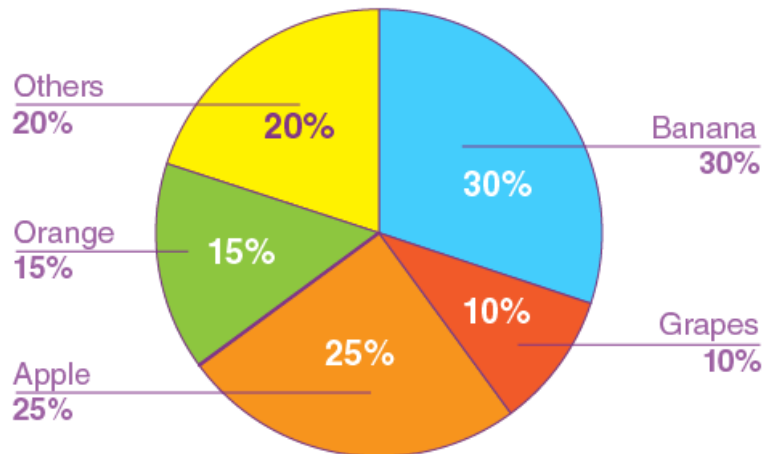$Percentage\ of\ a\ data = \frac{Given\ data}{Total\ of\ all\ data} \times 100$

- To draw a pie chart with central angle

$Central\ angle\ of\ a\ data = \frac{Given\ data}{Total\ of\ all\ data} \times 360^o$

Try to solve the following pie chart questions and check your answers with the solution given here.

Question 1:

The below pie chart shows the sale of different fruits in a day for a shop:

Answer the following questions based on the pie chart:

(i) If a total of 1200 kg of fruits were sold in a day, calculate the amount of bananas sold (in kg).

(ii) Find the difference between sales of grapes and oranges.

(iii) Calculate the central angle for others.

Solution:

(i) Total amount of fruits sold = 1200 kg

Percentage of banana sold = 30%

Amount of banana sold = 1200 × (30/100) = 360 kg

(ii) Amount of grapes sold = 1200 × (10/100) = 120 kg
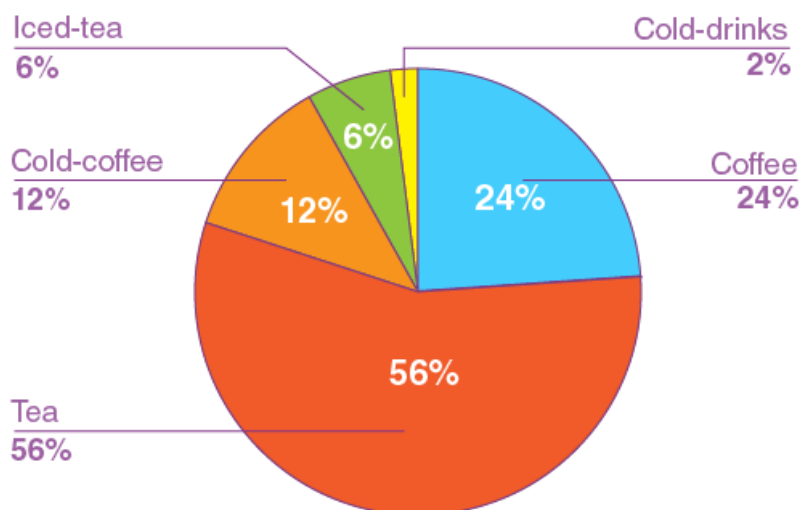
Amount of oranges sold = 1200 × (15/100) = 180 kg

Difference = 180 − 120 = 60 kg

(iii) Amount of other fruits sold = 1200 × 20 = 240 kg

Central angle = 240/1200 × 360° = 72°.

Question 2:

In the summer, a survey was conducted among 400 people about their favourite beverages. The following pie chart shows the data:

Answer the following questions:

(i) How many people like tea?

(ii) How many more people like coffee than cold coffee?

(iii) What is the total central angle for iced tea and cold-drinks?

Solution:

(i) Total number of people = 400

Number of people like tea = 400 × 56/100 = 224

(ii) Number of people like coffee = 400 × 24/100 = 96

Number of people like cold-coffee = 400 × 12 = 48

Number of people like coffee more than cold-coffee = 96 − 48 = 48.

(ii) Number of people like iced-tea = 400 × 6/100 = 24

Number of people like cold-drinks = 400 × 2/100 = 8

Central angle for iced-tea = 24/400 × 360° = 21.6°

Central angle for cold-drinks = 8/400 × 360° = 7.2°

Total central angle = 21.6° + 7.2° = 28.8°.

The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.
Various Expenditures (in percentage) Incurred in Publishing a Book
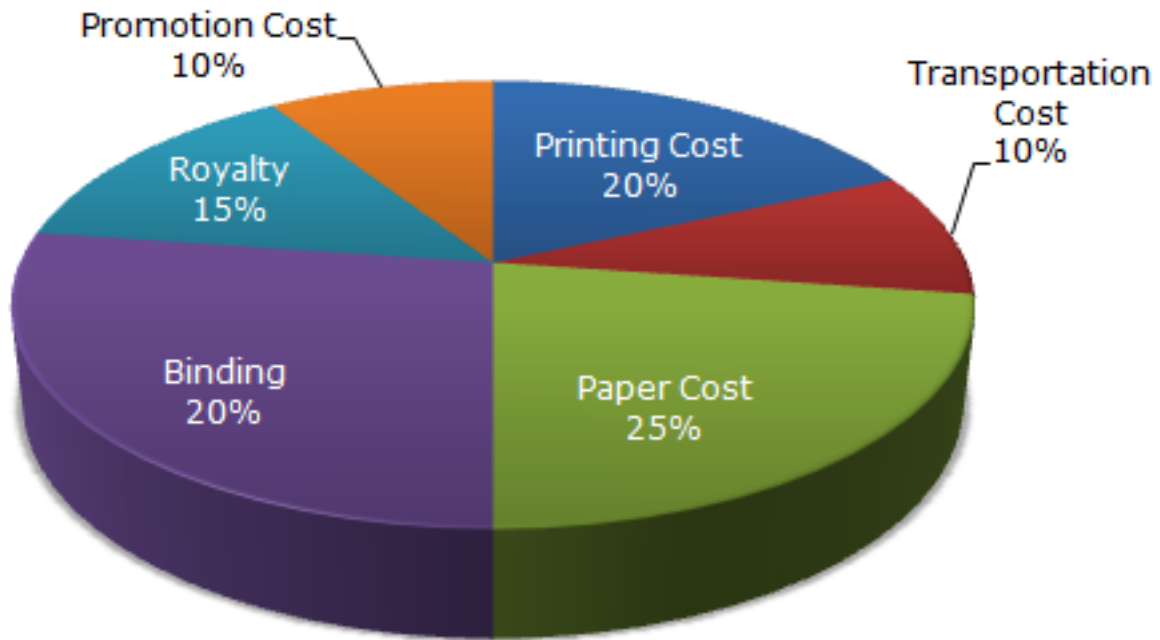
1.
If for a certain quantity of books, the publisher has to pay Rs. 30,600 as printing cost, then what will be amount of royalty to be paid for these books?
Rs. 19,450
Rs. 21,200
Rs. 22,950
Rs. 26,150

2.What is the central angle of the sector corresponding to the expenditure incurred on Royalty?
15°
24°
54°
48°

3.The price of the book is marked 20% above the C.P. If the marked price of the book is Rs. 180, then what is the cost of the paper used in a single copy of the book?
Rs. 36
Rs. 37.50
Rs. 42
Rs. 44.25

4.If 5500 copies are published and the transportation cost on them amounts to Rs. 82500, then what should be the selling price of the book so that the publisher can earn a profit of 25%?
Rs. 187.50
Rs. 191.50
Rs. 175
Rs. 180

5.Royalty on the book is less than the printing cost by:
5%
$33\frac{1}{5}\%$
20%
25%

6.If the difference between the two expenditures are represented by 18° in the pie-chart, then these expenditures possibly are
Binding Cost and Promotion Cost
Paper Cost and Royalty
Binding Cost and Printing Cost
Paper Cost and Printing Cost

7.For an edition of 12,500 copies, the amount of Royalty paid by the publisher is Rs. 2,81,250. What should be the selling price of the book if the publisher desires a profit of 5%?
Rs. 152.50
Rs. 157.50
Rs. 162.50
Rs. 167.50

8.If for an edition of the book, the cost of paper is Rs. 56250, then find the promotion cost for this edition.
Rs. 20,000
Rs. 22,500
Rs. 25,500
Rs. 28,125