$$1\% \longrightarrow \frac{36}{12}$$

$$= 3$$

$$100\% \longrightarrow 3 \times 100$$

$$= 300$$

There are 300 roses altogether.

c) What is the ratio of the number of white roses to the number of red roses?

50% − 40% = 10%

10% of the roses are white.

$$\frac{10}{100} \times 300 = 30$$

There are 30 white roses.

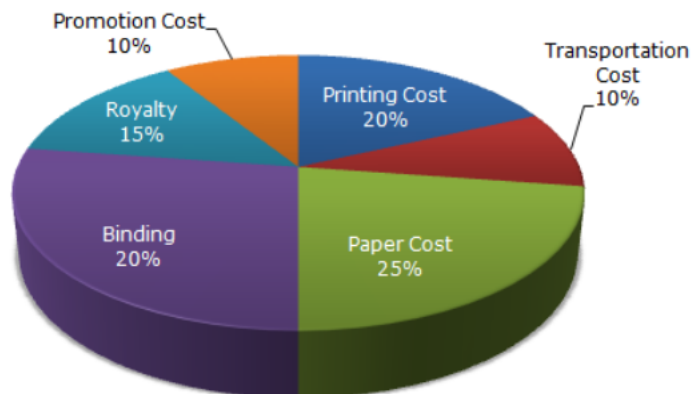40% of the roses are red.

$$\frac{40}{100} \times 300 = 120$$

There are 120 red roses.

30 : 120 = 1 : 4

The ratio of the number of white roses to the number of red roses is 1 : 4.

Self think Question

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

Promotion Cost 10%

Transportation Cost 10%

Printing Cost 20%

Royalty 15%

Binding 20%

Paper Cost 25%

a) 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?

Ans: $r = Rs.\,22950$

b) What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

Ans: 54 degree

c) 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?

Ans: Rs 37.50

d) 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%?
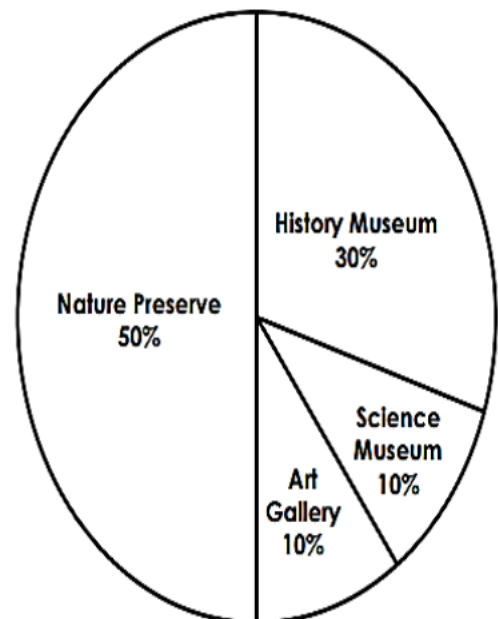
Ans: Rs. 187.50

e) Royalty on the book is less than the printing cost by:

Ans: 25%

Practice Questions

Q1. Mr. Sobieski asked his class to vote on where they would most like to go on a field trip. The choices he gave them were: history museum, science museum, art gallery, and nature preserve. All 30 students cast one vote each. The pie graph below shows the results.
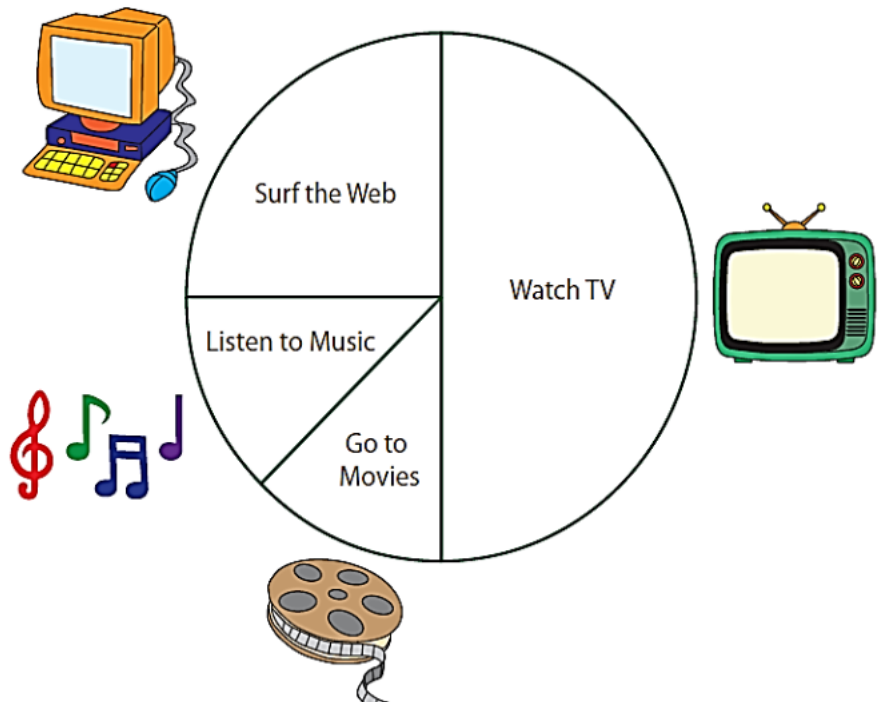

Complete the table below to show how many votes each choice received.

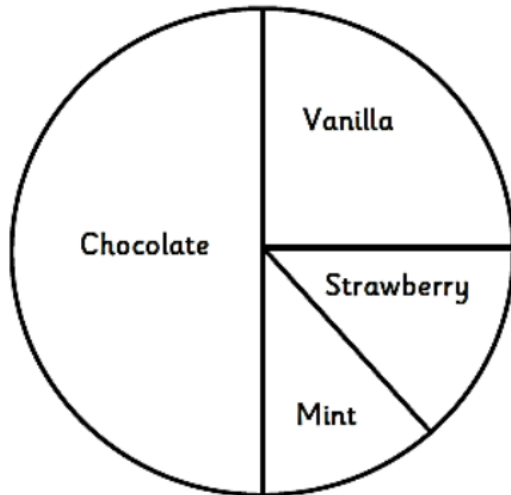| Destination	Number of Votes
History Museum	
Science Museum	
Art Gallery	
Nature Preserve	

a) How many more students chose the history museum than the science museum?

b) How many students chose the nature preserve or the art gallery?

Q2. A popular magazine took a survey among the readers on their favorite entertainment. The results were published in a circle graph. Use the graph to answer the questions.

a) What fraction of readers chose watching TV as their favorite?
b) What fraction of readers likes to surf the Internet?
c) What are the two forms of entertainment equally liked?
d) What fraction of people prefer going to movies?
e) Which entertainment is the most popular among the readers?

Q3. A sweet shop sells four flavours of ice cream: vanilla, chocolate, strawberry and mint. The pie chart shows the percentage of each sold in one day.
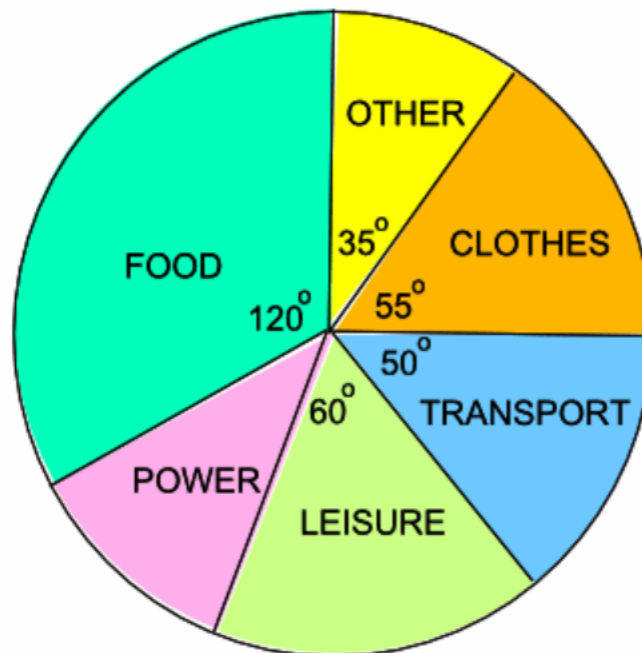

a) Complete the percentage for Mint

Type of ice cream	Percentage sold
Chocolate	50%
Vanilla	25%
Strawberry	14%
Mint	

b) If 400 ice creams were sold altogether, how many were Vanilla?

c) If 400 ice creams were sold altogether, how many were strawberry?

Q4. This pie chart shows the Mc Creedy's household weekly expenditure, broken down into categories:

Household expenditure

b) If their expenditure on food is $300 per week, what is the weekly expenditure on transport?

c) What is the expenditure of power?

d) What percentage of the family's income is spent on Power?

e) What is the percentage of expenditure of transport?

f) What is the daily expenditure of clothes
g) What is the fraction of weekly expenditure of power and transport?
h) Which one having the highest expenditure and which one is the least expenditure?

Q5. The pie chart shows the amount of time each day that Jethro spends on various activities.

a) What is the angle for the sector of the pie chart representing the time he spends playing sport?

Time spent on daily activities

Q6. Anna did a survey where she asked all the children in her school to name their favorite pet. The results are shown in the pie chart:

a) If there were 800 children in the school, how many said their favorite pet was Fish?
b) If 720 children said their favorite pet was a Dog, how many children said their favorite pet was a Rabbit?
c) What is the angle for the sector of the pie chart representing Fish?

Favorite pets