Pie Graph
(English Medium)

Exercise

Solution 1:

1. The expenditure on education is 10% of the monthly income.
2. Percentage of income saved = 20%

Hence, Amount saved = 20% of monthly income

= 20% of Rs. 7200

$$= \frac{20}{100} \times 7200$$
$$= \text{Rs. } 1440$$

Thus, the budget for savings in terms of money is Rs. 1440.

3. Degree measure for the expenditure on clothes

= 5% of the total degree measure

$$= \frac{5}{100} \times 360°$$
$$= \frac{1}{20} \times 360°$$
$$= 18°$$

Thus, the degree measure for the expenditure on clothes is 18°.

4. The maximum expenditure is done on food i.e. 40%.

Solution 2:

1. Number of students who took part in the lemon and spoon race

$$= \frac{\text{Degree measure for lemon and spoon race}}{360°} \times \text{Total number of students}$$
$$= \frac{90°}{360°} \times 60$$
$$= 15$$

Thus, 15 students took part in the lemon and spoon race.

2. From the pie graph, we observe that the least number of students took part in high jump.
3. From the graph, we observe that the maximum number of students took part in running.
4. Number of students who took part in shot put.

$$= \frac{\text{Degree measure for shot put}}{360^\circ} \times \text{Total number of students}$$

$$= \frac{60^\circ}{360^\circ} \times 60$$

$$= 10$$

Thus, 10 students took part in shot put.

Solution 3:

1. Total expense = Rs. 540

Cost of the bag = 30% of the total expense

$$= 30\% \text{ of } 540$$

$$= \frac{30}{100} \times 540$$

$$= 162$$

Thus, the cost of the bag is Rs. 162.

2. Total expense = Rs. 540

Cost of the water-bag = 10% of the total expense

$$= 10\% \text{ of Rs. } 540$$

$$= \frac{10}{100} \times 540$$

$$= \text{Rs. } 54$$

Thus, the cost of the water-bag is Rs. 54.

3. Degree measure for sketch-pen = 5% of the total degree measure

$$= 5\% \text{ of } 360^\circ$$

$$= \frac{5}{100} \times 360^\circ$$

$$= 18^\circ$$

Thus, the degree measure of sketch-pen is 18°.

4. Amount spent on notebooks = 40% of the total expense

$$= 40\% \text{ of Rs. } 540$$

$$= \frac{40}{100} \times 540$$

$$= \text{Rs. } 216$$

Thus, the maximum amount i.e. Rs. 216 was spent on Notebooks.

Practice – 1

Solution 1:

1. Total fund collected

= Contribution from (Dev + Maitri + Anuj + Riya + Jafar)

= Rs. (12 + 30 + 36 + 24 + 18)

= Rs. 120

2. Contribution by Jafar = Rs. 18

Thus, percentage of contribution by Jafar

$$= \frac{\text{Contribution by Jafar}}{\text{Total fund collected}} \times 100$$

$$= \frac{18}{120} \times 100$$

$$= 15\%$$

3. Contribution by Anuj = Rs. 36

The degree measure of the contribution by Anuj

$$= \frac{\text{Contribution by Anuj}}{\text{Total fund collected}} \times 360^\circ$$
$$= \frac{36}{120} \times 360$$
$$= 108^\circ$$

When the angle in the figure corresponding to the contribution by Anuj is measured, its measure is 108°.

4. Dev contributed the least fund i.e. Rs. 12.

Solution 2:

1. Percentage of Wheat = 35%

Percentage of Cotton = 15%

Thus, Percentage of Wheat – Percentage of Cotton

= 35% – 15%

= 20%

Hence, the purchase of Wheat is 20% more than the purchase of Cotton.

2. Purchase of Sesame = 10% of the total purchase of 3600 kg

= 10% of 3600 kg

$$= \frac{10}{100} \times 3600$$
$$= 360 \text{ kg}$$

Thus, 360 kg of Sesame were bought.

3. Degree measure of Cotton = 15% of 360°

$$= \frac{15}{100} \times 360^\circ$$
$$= 54^\circ$$

When the angle in the figure corresponding to Cotton is measured, its measure is 54°.

4. Purchase of Castor-seeds = 25% of the total purchase

= 25% of 3600 kilograms

$$= \frac{25}{100} \times 3600$$
$$= 900 \text{ kilograms}$$

Solution 3:

1. The maximum runs were scored in the fifth over i.e. 18 runs.

2. In the second over, not a single run was scored.

3. Runs scored in the third over = 12

Total runs scored = 50

$$\text{Percentage of the total runs scored in the third over} = \frac{\text{Runs scored in the third over}}{\text{Total runs scored}} \times 100$$
$$= \frac{12}{50} \times 100$$
$$= 24\%$$

Hence, 24% of the total runs were scored in the third over.

4. 28 percentage of the total runs = 28% of 50

$$= \frac{28}{100} \times 50$$
$$= 14$$

From the graph, 28 percentage of the total runs i.e. 14 runs were scored in the fourth over.