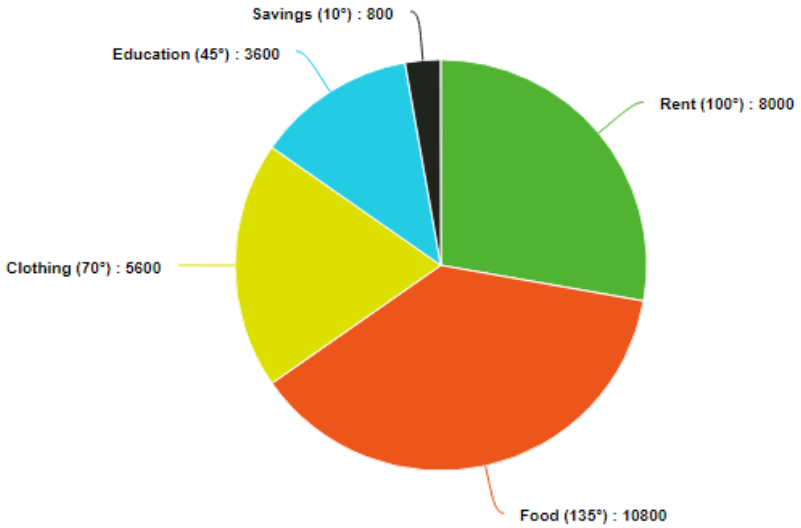
**Chapter 24: Pie Charts**
**Page No: 274**
**Exercise 24A**

**Question 1:**
**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Item | Rent | Food | Clothing | Education | Savings |
|---|---|---|---|---|---|
| Expenditure (in Rs.) | 8000 | 10800 | 5600 | 3600 | 800 |
| Central Angle | 100° | 135° | 70° | 45° | 10° |

The pie chart is as displayed below:

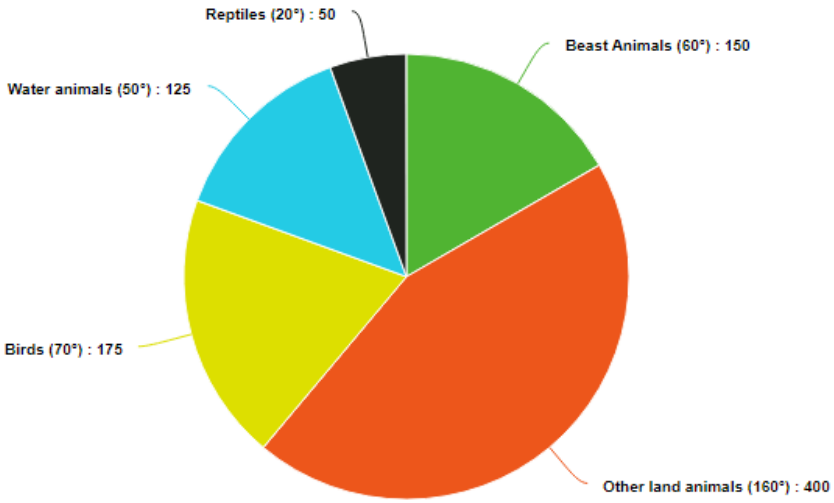



**Question 2:**
**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Beast animals | Other land animals | Birds | Water animals | Reptiles |
|---|---|---|---|---|
| 150 | 400 | 175 | 125 | 50 |
| 60° | 160° | 70° | 50° | 20° |

The pie chart is as displayed below:



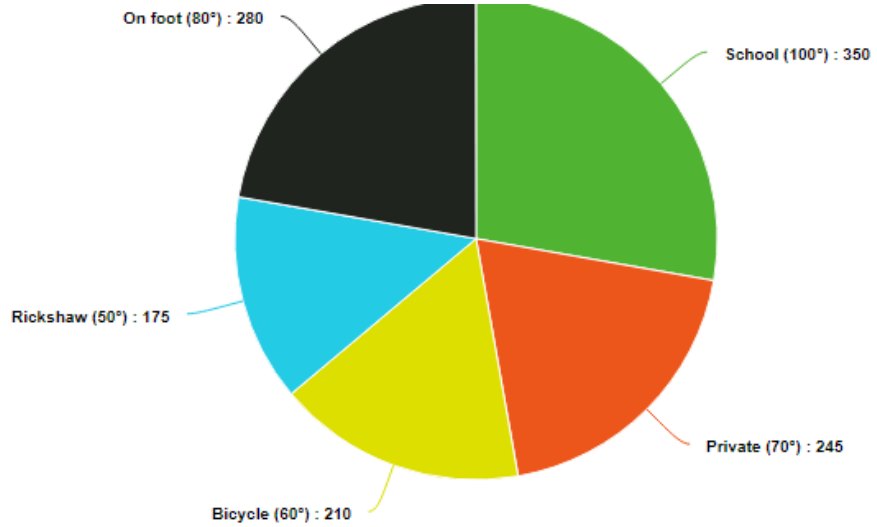

**Question 3:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| School bus | Private bus | Bicycle | Rickshaw | On foot |
|---|---|---|---|---|
| 350 | 245 | 210 | 175 | 280 |
| 100° | 70° | 60° | 50° | 80° |

The pie chart is as displayed below:



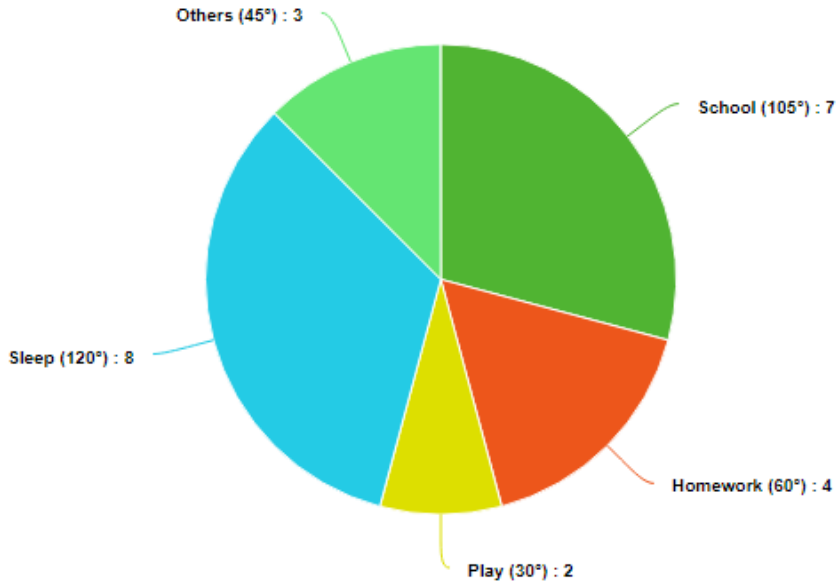

**Question 4:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Activity | School | Homework | Play | Sleep | Others |
|---|---|---|---|---|---|
| Number of hours | 7 | 4 | 2 | 8 | 3 |
| Central Angle | 105° | 60° | 30° | 120° | 45° |

The pie chart is as displayed below:



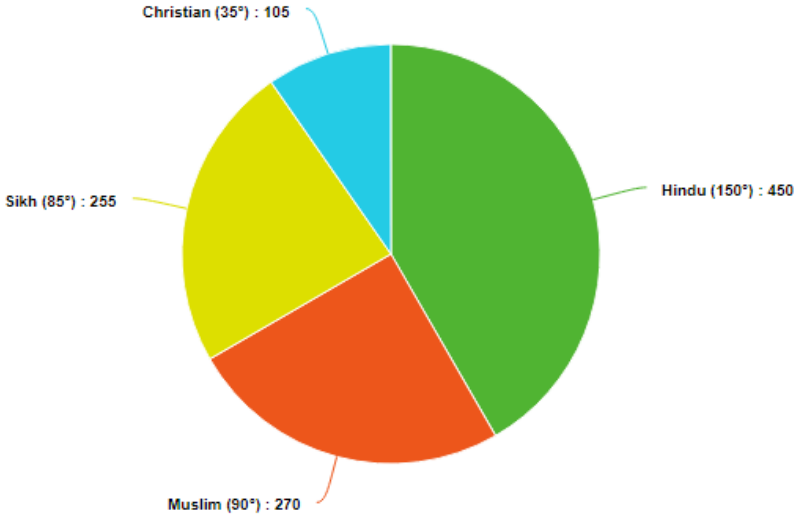

**Question 5:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Religion | Hindu | Muslim | Sikh | Christian |
|---|---|---|---|---|
| Number of workers | 450 | 270 | 255 | 105 |
| Central Angle | 150° | 90° | 85° | 35° |

The pie chart is as displayed below:



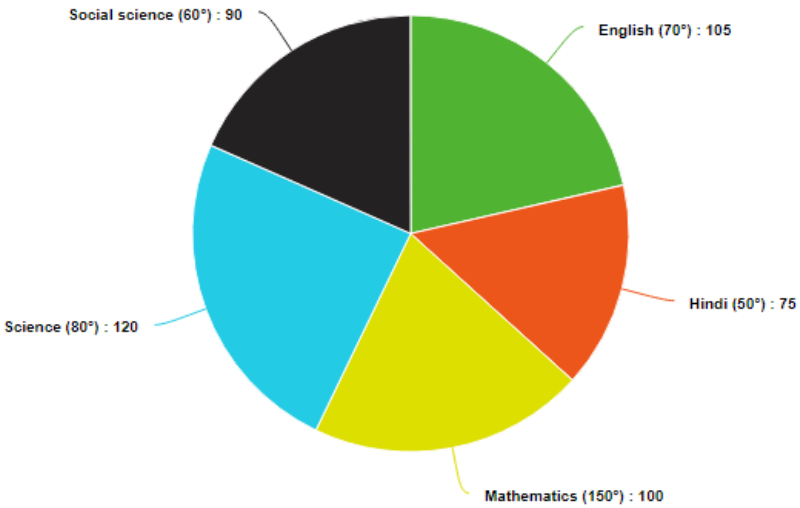
**Question 6:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Subject | English | Hindi | Mathematics | Science | Social science |
|---|---|---|---|---|---|
| Marks obtained | 105 | 75 | 150 | 120 | 90 |
| Central angle | 70° | 50° | 100° | 80° | 60° |

The pie chart is as displayed below:



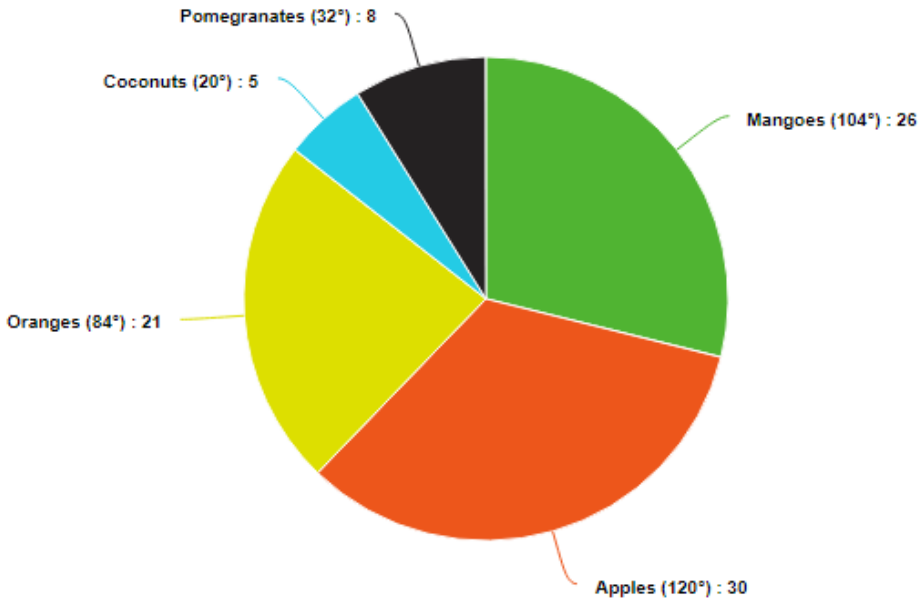

**Question 7:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Type of fruit | Mangoes | Apples | Oranges | Coconuts | Pomegranates |
|---|---|---|---|---|---|
| Number | 26 | 30 | 21 | 5 | 8 |
| Central Angle | 104 | 120 | 84 | 20 | 32 |

The pie chart is as displayed below:



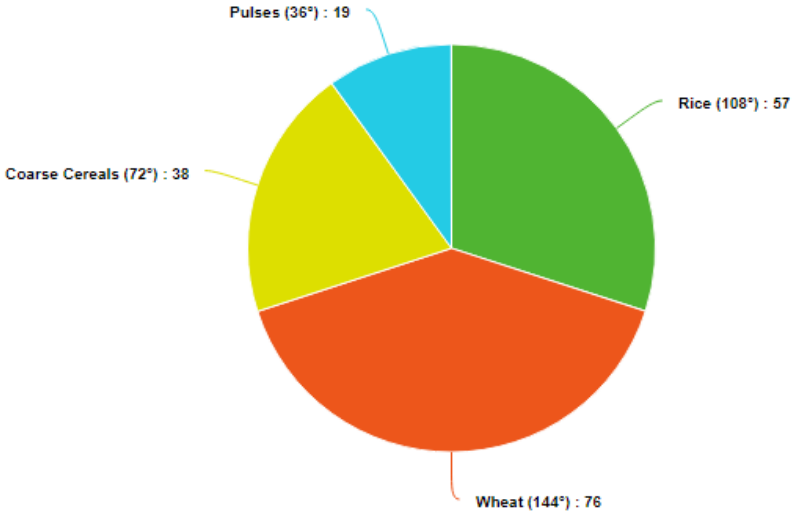

**Question 8:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| Foodgrain | Rice | Wheat | Coarse cereals | Pulses |
|---|---|---|---|---|
| Production (in millions of tonnes) | 57 | 76 | 38 | 19 |
| Central Angle | 108° | 144° | 72° | 36° |

The pie chart is as displayed below:



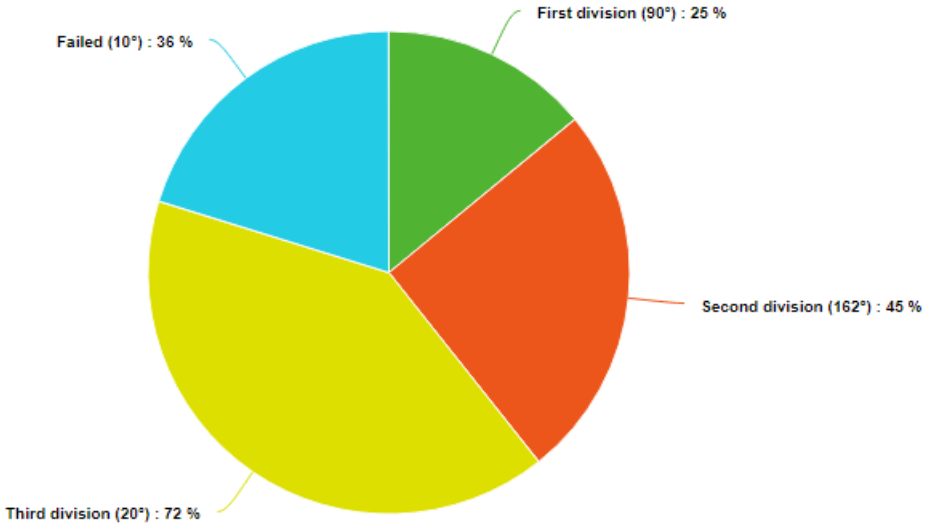

**Question 9:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum} \times 360°$

| First division | Second division | Third division | Failed |
|---|---|---|---|
| 25% | 45% | 20% | 10% |
| $\frac{25}{100}\times 360^\circ = 90^\circ$ | $\frac{45}{100}\times 360^\circ = 162^\circ$ | $\frac{20}{100}\times 360^\circ = 72^\circ$ | $\frac{10}{100}\times 360^\circ = 36^\circ$ |

The pie chart is as displayed below:



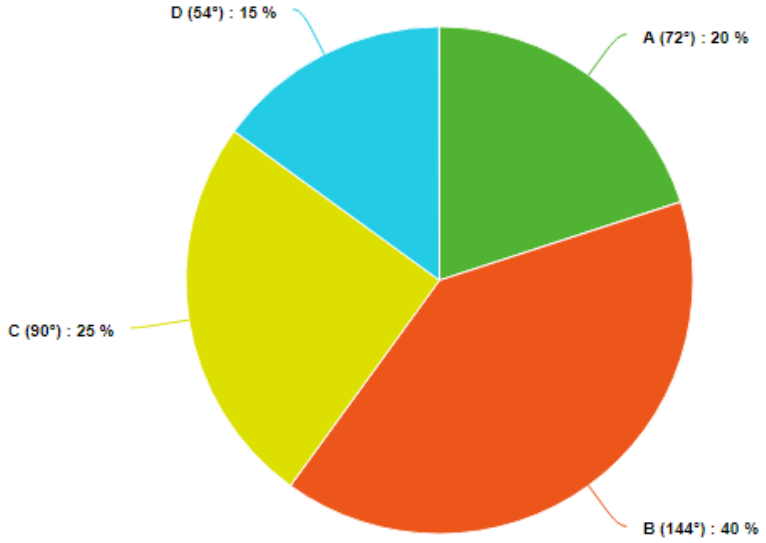

**Question 10:**

**Solution:**

The angles are calculated by using the formula: $\frac{Value\ of\ \ the\ component}{Sum}\ \times\ 360^\circ$

| Brand | A | B | C | D |
|---|---|---|---|---|
| Percentage of buyers | 20% | 40% | 25% | 15% |
| Central Angle | $\frac{20}{100}\times 360^\circ = 72^\circ$ | $\frac{40}{100}\times 360^\circ = 144^\circ$ | $\frac{25}{100}\times 360^\circ = 90^\circ$ | $\frac{15}{100}\times 360^\circ = 54^\circ$ |

The pie chart is as displayed below:



**Page No: 276**

**Exercise 24B**

**OBJECTIVE QUESTIONS**

**Tick (√) the correct answer in each of the following:**

**Question 1:**

**Solution:** (b)

$(\frac{2500}{24000} \times 360)° = 37.5°$

**Question 2:**

**Solution:** (c)

$(\frac{35}{100} \times 360)° = 126°$

**Question 3:**

**Solution:** (a)

$(\frac{x}{1650} \times 360)° = 48° => x = 220$

**Question 4:**

**Solution:** (c)

$(\frac{x}{100} \times 360)° = 81° => x = 22.5\%$