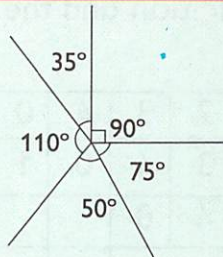# Unit 7: Data Handling

Pie Charts

In the unit on geometry, we learnt that angles at a point add up to 360°.

For example, in the figure alongside
110° + 35° + 90° + 75° + 50° = 360°

We can use this knowledge of angles at a point to represent data. In this method, we use angles to represent the different quantities of items in a set of data. Such a diagram when drawn is called a pie chart.

To draw a pie chart, follow the steps below:

1. Add all the items you are given and equate their number to 360°.
2. Find the number of degrees each item represents.
3. Draw a circle.
4. From the centre of the circle, draw the angle representing each item.
5. Label each section with the correct name of the item and angle.

Example 7.1

A farmer has 5 hectares of coffee, 8 hectares of tea, 3 hectares of maize and the remaining 4 hectares for grazing. Draw a pie chart to represent this information.

Solution
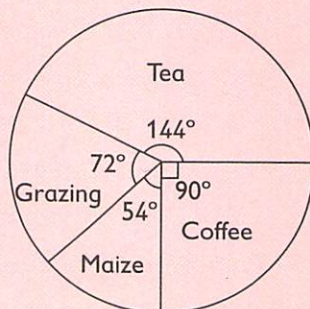
The farmer owns 5 + 8 + 3 + 4 = 20 hectares of land.

1 ha is equivalent to $\frac{360°}{20} = 18°$

Coffee occupies 5 × 18° = 90°

Tea occupies 8 × 18° = 144°

Maize occupies 3 × 18° = 54°

Grazing occupies 4 × 18° = 72°

Check

$$
\begin{array}{r}
90° \\
144° \\
54° \\
+ \ 72° \\
\hline
360°
\end{array}
$$

What times of the day was the temperature of the patient the same?
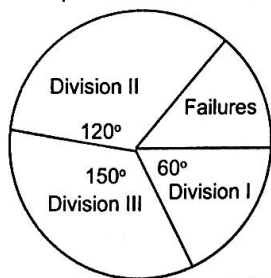
_____

7.3 | Pie charts

1. A farmer planted his land as follows:

   [1998 No.40]

   Maize $\frac{2}{5}$ of the land, beans $\frac{1}{3}$ of the land, peas $\frac{1}{5}$ of the land, and elephant grass on the remainder.

   Draw a pie chart to represent this information.

   _____

2. The pie chart below shows the performance of 60 candidates of Pole-Pole P/S in PLE Mock examinations. Use the information to answer the questions that follow.   **[2000 No. 41]**

   a) How many candidates passed in division I?

   _____

   b) How many candidates passed in division II?

   _____

   c) How many candidates failed?

   _____

d) Of those who passed, what fraction passed in division III?

_____

3. A piece of land is used as follows:

   [2001 No. 42]

   5 hectares for growing coffee.
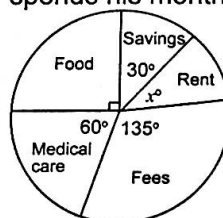
   10 hectares for growing cassava

   20 hectares for growing matoke

   25 hectares for keeping animals

   Represent the above information on a pie-chart. (use a radius of 5 cm)

   _____

   The pie chart below shows how Kalinda spends his monthly salary.   **[2006 No.42]**

   a) If he spends sh.15,000 on rent, find his salary.

   _____

   b) Work out the amount of money he spends on:
      (i) Food

      (ii) Medical care