CIRCLE GRAPH OR PIE CHART

1. A circle graph or a pie chart shows the relationship between a whole and its parts.

2. Here, the whole circle is divided into sectors.

3. The size of each sector is proportional to the activity or information it represents.

DRAWING PIE CHARTS

Let us represent the below data in a pie chart.

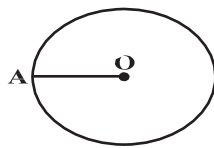| Flavours	Percentage of students preferring those flavours
Chocolate	50%
Vanilla	25%
Other flavours	25%

The total angle at the centre of a circle is 360°. The central angle of the sectors will be
a fraction of 360°.
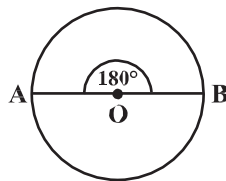
We make a table to find the central angle of the sectors

$$\text{Angle of sector} = \frac{\text{Frequency of data}}{\text{Total frequency}} \times 360°$$

Flavours	Percentage of students preferring those flavours	In fractions	In fractions of 360^0
Chocolate	50%	50/100 = 1/2	½ x 360^0 = 180^0
Vanilla	25%	25/100 = 1/4	¼ x 360^0 = 90^0
Other flavours	25%	25/100 = 1/4	¼ x 360^0 = 90^0

1.Draw a circle with any convenient radius. Mark its centre (O) and a radius (OA).

2. The angle of the sector for chocolate is 180°. Use the protractor to draw angle AOB = 180°.
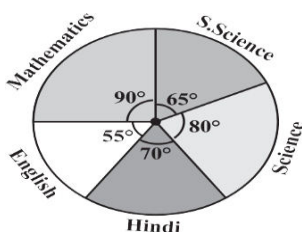

3. Continue marking the remaining sectors

PIE CHART TO NUMBERS

The following pie chart gives the marks scored in an examination by a student in Hindi, English, Mathematics, Social Science and Science. If the total marks obtained by the students were 540,answer the following questions.
(i) In which subject did the student score 105 marks?
 (ii) How many more marks were obtained by the student in Mathematics than in Hindi?
(iii) Examine whether the sum of the marks obtained in Social Science and Mathematics is more than that in Science and Hindi.

SOLUTION :

SUBJECT	ANGLE	IN FRACTION	MARKS
English	55^0	55/360= 11/72	11/72x 540= 82.5
Hindi	70^0	70/360=7/36	7/36x540= 105
Science	80^0	80/360 = 2/9	2/9 X 540 = 120
Social science	65^0	65/360 = 13/72	13/72 X 540 = 97.5
mathematics	90^0	90/360 = 1/4	¼ X 540 = 135

(i) In Hindi subject the student scored 105 marks.

(ii) Marks obtained in Mathematics more than Hindi=135-105=30

(iii) Central angle of Social Science + Mathematics = $65^0 + 90^0 = 155^0$

Central angle of Science + Hindi = $80^0 + 70^0 = 150^0$

Tthe marks obtained are proportional to the central angles

.'. Marks obtained in Social Science and Mathematics are more than that of the marks obtained in Science and Hindi.

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