Bar graph

1. Each student takes a graph paper draws bar graph of number of persons in each family.
   - Explain X axis, Y axis, origin, independent variable (or the fixed parameter or thing that we are counting) on X axis and dependent variable (or parameter that we are observing) on Y axis.
   - Plot 1, 2, 3, 4, ... etc on X axis.
   - Ask how many students stay alone? This number will most likely be zero. Mark that on Y axis at the first column of 1 person.
   - Ask how many students have 2 persons in the family? Mark this value.
   - In this way go upto 10 and above persons in a family.
   - Draw bar graph.

2. Solve a problems from question paper – e.g.

   Budget allocations of a state for a particular years are as follows –

Items	Proposed expenditure in crore rupees
Agriculture	12000
Industry	9000
Irrigation and Electricity	6000
Education	8000
Communcation	5000

   Present the above data by a bar chart .

   (All together draw a bar chart. Explain how to write scale.)

Pie chart

Q. 3 (e) This is for 3 marks. Generally an option to a question on statistics. This question is easier.

Activity 1   -   45 min

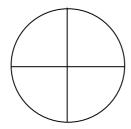1) Students should know how to find the 4th term when 3 proportional terms are known. (trairashik)

e.g.

Number of mangoes	Cost
5	16
8	?

$$\frac{8 \times 16}{5}$$

They should know cancellations and finding answer.

They should learn to write mangoes below mangoes and cost below cost and the question mark on the bottom right.

1) The angle of 2 semicircles together is 360 degrees, what is the angle of 1 semicircle?

2) The angle of 4 quarters together is 360 degrees, what is the angle of 1 quarter?

3) The cost of one cake is 360 rupees. 4 children ate it together. How much should each one pay?

4) What if 6 children ate it together?
5) A ate half, B and C together ate remaining cake. Who pays how much?

6) Notice that we are dividing angle 360.

7) Use a protractor and divide the circle into 60, 120, 50, 70, 40, 40.

8) The total cost is 720. It means that the cost of total 360 degrees is 720. What is the cost of each degree of slice?

Angle	Rupees
360	720
1	720/360 = 2

If I ate 5 degree slices, I will have to pay 10 rupees.

9) Total 9000 rupees correspond to 360 degrees. So, 2000 rupees corresponds to???

Rupees	Degrees
9000	360
2000	??

$$\frac{2000 \times 360}{9000} = 80 \text{ degrees}$$

10) Solve one problem from exam paper - e.g.

The daily production costs of a small factory are as follows :
Raw materials Rs. 2000
Labour cost Rs. 3000
Direct expenditure Rs. 1500
Extra expenditure Rs. 2500
Represent the above data in a pie chart.

Find total expenditure by adding all expenses
Total expenditure = Rs. 9000/-
Rs. 9000 is represented by 60 degrees in a circle.

9000 → 360 degrees
2000 → ?? $\frac{2000 \times 360}{9000} = 80$

Calculate degrees for each of the expenses.

	Expense in Rs	Angle in Pie chart	
Raw materials	2000	80	
Labour cost	3000	360/3 = 120	
Direct expenditure	1500	120/2 = 60	
Extra expenditure	2500	$\frac{2500 \times 360}{9000}$ = 100	
TOTAL	9000	360	

Draw a circle of any radius.
Draw lines demarcating the angles and mark those portions.

Homework –

Draw all graphs in last 5 years question papers. You have secured 3 marks.