

fs4u

Bar Charts & Pie Charts

‘How To’ Booklet 30

Bar & Pie Charts

This section covers the ways data can be represented:

- a) bar chart
- b) pie chart

Cumulative frequency is covered in a separate section

Example

A class of 20 pupils obtained the following marks out of 50 in a test.

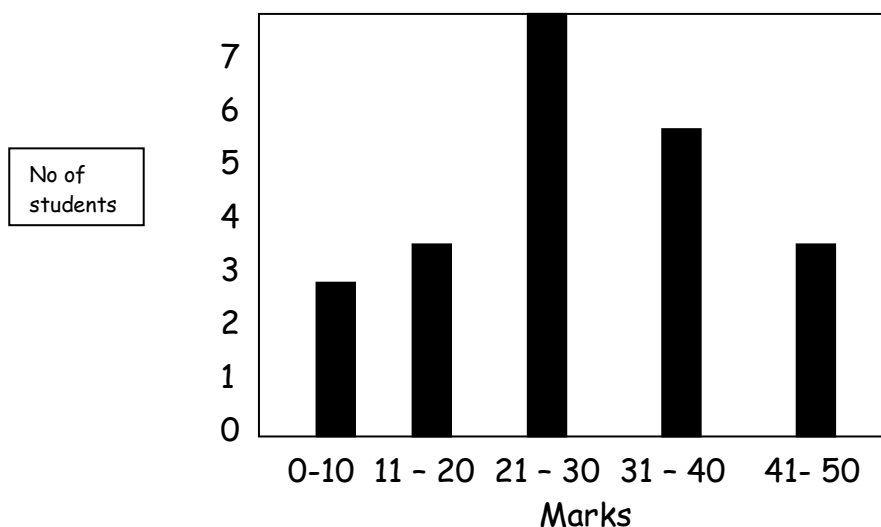
29 25 23 21 18
12 3 34 48 37
38 42 46 24 5
25 32 16 36 27

To be able to draw a bar chart or a pie chart, first a frequency table must be obtained.

Marks	Tally	Frequency
0-10	II	2 (two students got 0-10 marks)
11 - 20	III	3
21 - 30	III II	7
31 - 40	III	5
41 - 50	III	3
		20

Bar Chart

A bar chart can be drawn from this table



Pie Chart

Further calculation needs to be done to be able to draw a pie chart.

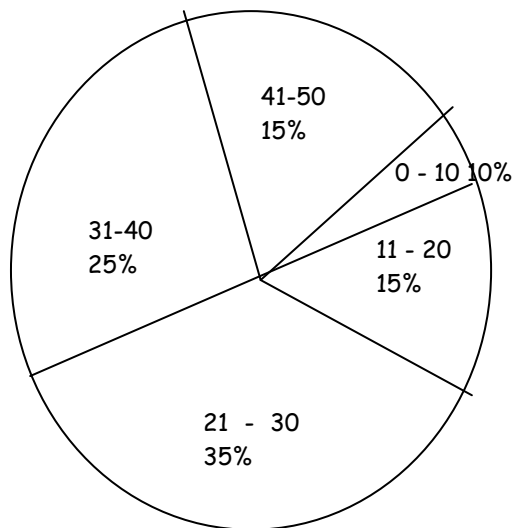
In a pie chart there are 360° . In this question we have 20 pupils - therefore each pupil is equivalent to 360° divided by $20 = 18^\circ$

Putting this information in the following table.

Marks	Frequency	Angle	
0 - 10	2	$2 \times 18^\circ$	36°
11 - 20	3	$3 \times 18^\circ$	54°
21 - 30	7	$7 \times 18^\circ$	126°
31 - 40	5	$5 \times 18^\circ$	90°
41 - 50	3	$3 \times 18^\circ$	54°
	20	Total	360°

Pie Chart

A pie chart can be drawn using the values of the angles for each of the intervals.



These calculations can be done with data collected from within your vocational area. You can input your data in a computer database and the results, including frequency tables, pie charts and bar charts can be obtained.

Activity

Thirty people were surveyed in a shopping centre and asked their ages. These are displayed below.

54	41	65	46	66	37
32	71	34	73	15	26
64	22	54	8	58	43
14	57	43	52	24	68
43	39	59	35	48	49

- draw a tally-frequency table
- from your table draw a bar chart
- using the data in your frequency table, construct another table to calculate the angles in a pie chart.
- draw a pie chart.