

Displaying Discrete Data

Starter

1. **(Review of last lesson)** A bag has 5 red discs and 3 blue discs in it. Two discs are removed.
- Draw a tree diagram.
Find the probability of choosing
 - 1 red disc
 - at least 1 red disc

Notes

Discrete data is when the information can only take specific values.

E.g. red, blue, green or 1, 2, 3

Continuous data can take any value within a range

E.g. weight or height or time

Displaying discrete data – vertical line graphs, bar charts or pie charts

Collate raw data in a **tally chart** before drawing the graph.

Vertical line graph and bar charts

The height of the line or bar represents the frequency.

- Give the graph or chart a title
- Label your axes
- Give axes a scale
- Have values at equal intervals

Pie chart

The size of the angle represents the frequency.

$$\text{Angle} = \frac{\text{Frequency}}{\text{Total frequency}} \times 360^\circ$$

- Give the pie chart a title “Pie chart to show...”
- Label each area of the pie chart.

E.g. 1 A pie chart is to be drawn for this data. Calculate the angle for each category.

Colour	Frequency
Red	22
Blue	13
Green	19
Yellow	18

Working: Total frequency = $22 + 13 + 19 + 18 = 72$

Red:
$$\text{Angle} = \frac{\text{Frequency}}{\text{Total frequency}} \times 360^\circ$$
$$= \frac{22}{72} \times 360^\circ$$
$$= 110^\circ$$

Now calculate the other angles.

Colour	Frequency	Angle
Red	22	110°
Blue	13	
Green	19	
Yellow	18	

Video: [Vertical line graphs](#)

Video: [Drawing pie charts](#)

Video: [Interpreting pie charts](#)

[Solutions to Starter and E.g.s](#)

Exercise

p84 Ex 5.1 Qu 1-9

Summary

Discrete data is when the information can only take specific values.

Continuous data can take any value within a range

To display discrete data draw a vertical line graph, a bar chart or a pie chart. Always include a title in the graph or chart.

Pie charts
$$\text{Angle} = \frac{\text{Frequency}}{\text{Total frequency}} \times 360^\circ$$

[Textbook answers \(only available during a lockdown\)](#)