

Representing and Interpreting Data

Calculator | 30 minutes | Total marks: 30

Name Class

1 A pie chart shows how the students in a school travel to school.

(a) 70 students walk to school.

The angle for Walk is 126°

Work out the total number of students in the school.

Answer [2 marks]

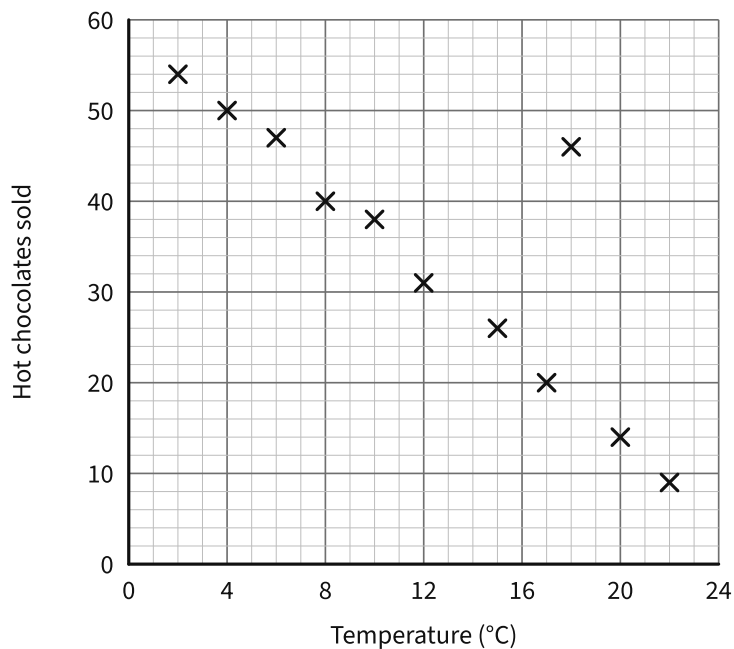
(b) 45 students travel by bus.

Work out the angle for Bus.

Answer $^\circ$ [2 marks]

2

The scatter graph shows the temperature and the number of hot chocolates sold at a café on 11 days.



(a) Describe the correlation.

Answer

[1 mark]

(b) One point does not fit the pattern.

Circle this point on the graph.

[1 mark]

(c) Draw a line of best fit on the graph.

[1 mark]

(d) Use your line to estimate the number of hot chocolates sold when the temperature is 14 °C

Answer

[1 mark]

(e) Explain why the line should not be used to estimate the number sold at 30 °C

[1 mark]

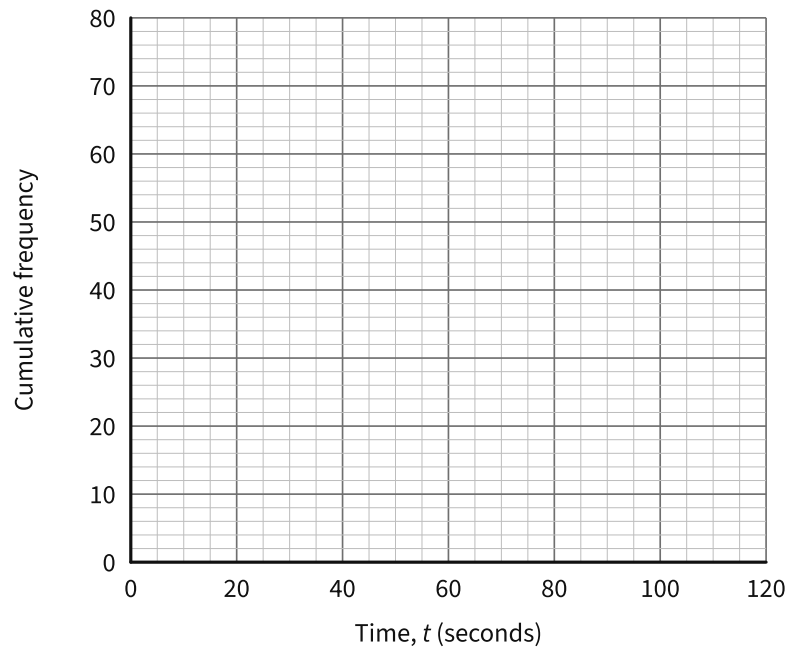
3

80 people solve a puzzle.

The table shows information about the times they take.

Time, t (seconds)	$t \leq 20$	$t \leq 40$	$t \leq 60$	$t \leq 80$	$t \leq 100$	$t \leq 120$
Cumulative frequency	4	16	42	68	76	80

(a) Draw a cumulative frequency graph for this information.



[3 marks]

(b) Use your graph to estimate the median.

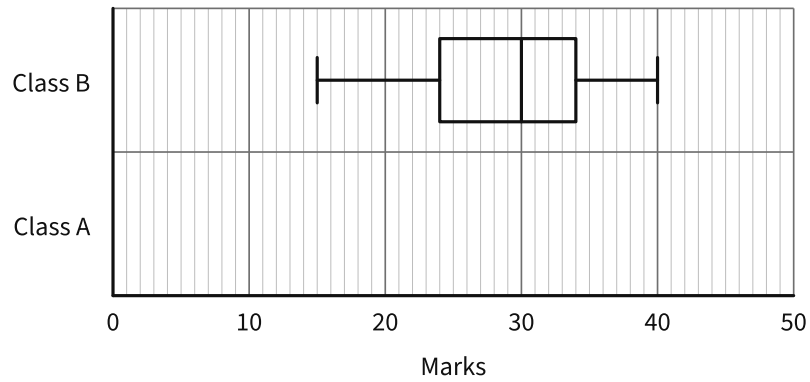
Answer seconds [1 mark]

(c) Use your graph to estimate the interquartile range.

Answer seconds [2 marks]

4

The box plot shows the marks of Class B in a test.



Here is some information about the marks of Class A in the same test.

Lowest	Lower quartile	Median	Upper quartile	Highest
12	20	27	35	48

(a) Draw the box plot for Class A on the diagram.

[3 marks]

(b) Compare the marks of Class A and Class B.

[2 marks]

5

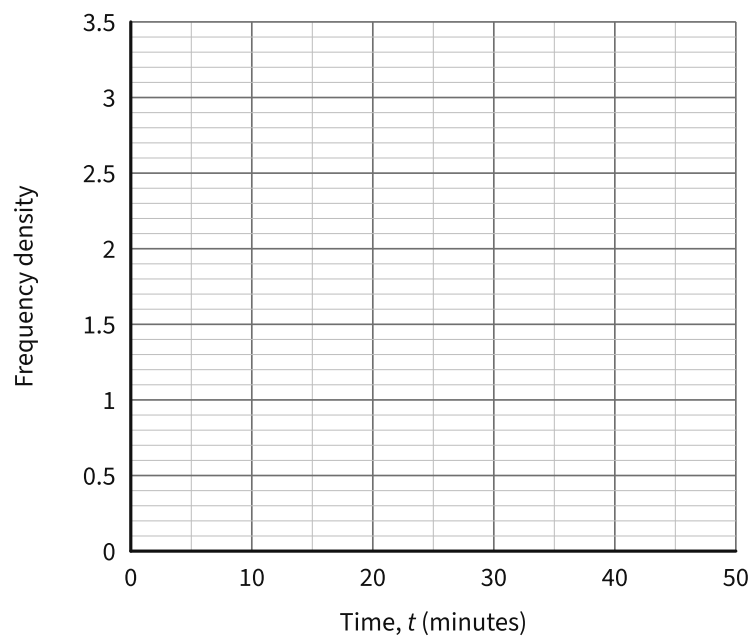
The table shows the times that 55 people spend in a shop.

Time, t (minutes)	Frequency	Frequency density
$0 < t \leq 10$	8	
$10 < t \leq 15$	12	
$15 < t \leq 20$	15	
$20 < t \leq 30$	14	
$30 < t \leq 50$	6	

(a) Complete the table.

[2 marks]

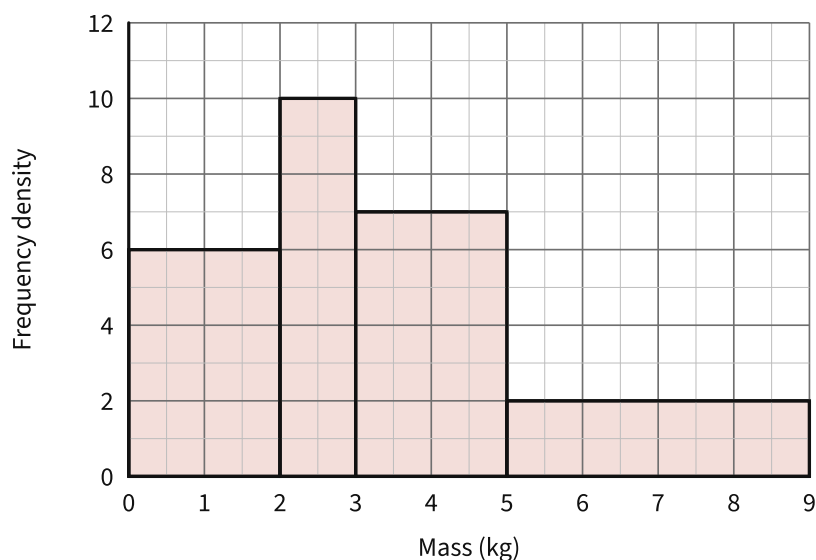
(b) Draw a histogram for this information.



[3 marks]

6

The histogram shows the masses of the parcels in a van.



(a) Work out the total number of parcels.

Answer [3 marks]

(b) Estimate the number of parcels with a mass of more than 4 kg.

Answer [2 marks]

Question	Topic	RAG
1	I can work with angles and frequencies in a pie chart	
2	I can interpret a scatter graph and use a line of best fit	
3	I can draw a cumulative frequency graph and estimate the median and interquartile range	
4	I can draw a box plot and compare two distributions	
5	I can draw a histogram with unequal class widths	
6	I can interpret a histogram	