Histograms, Bar Charts, Pictograms, Scatter Diagrams & Frequency Distributions Question Paper 2

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Statistics
Sub-Topic	Histograms, Bar Charts, Pictograms, Scatter Diagrams & Frequency Distributions
Booklet	Question Paper 2

Time Allowed: **57 minutes**

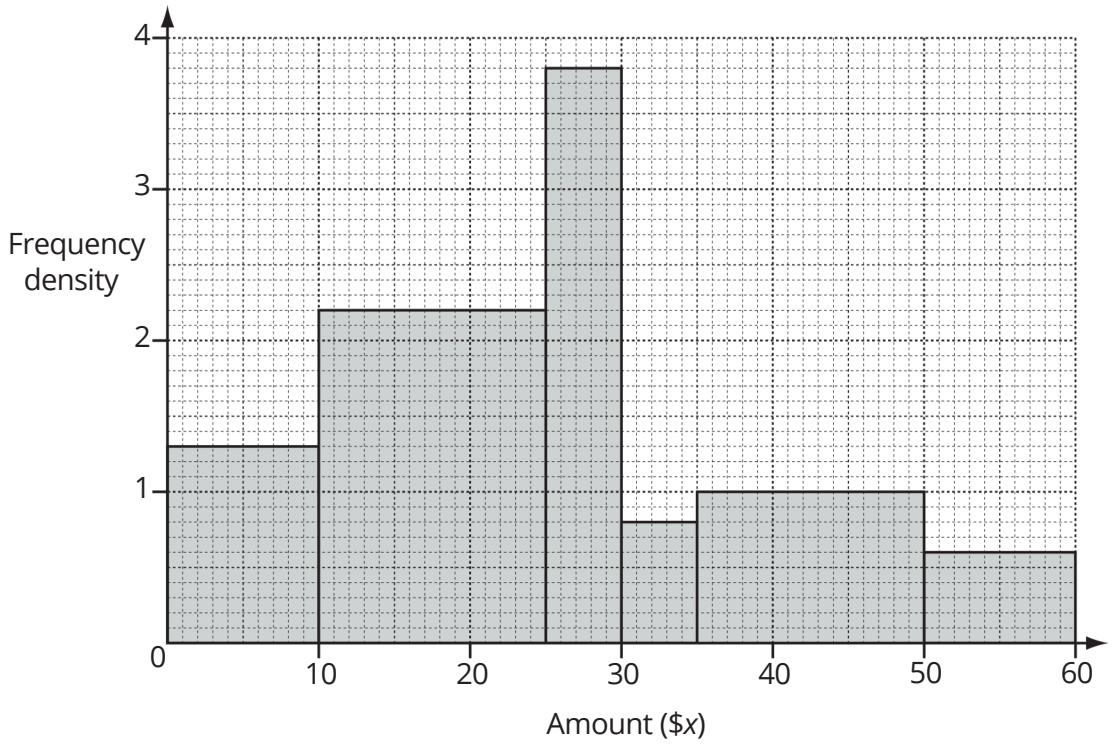
Score: **/47**

Percentage: **/100**

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1



Asurvey asked 90 people how much money they gave to charity in one month.
The histogram shows the results of the survey.

(a)Complete the frequency table for the six columns in the histogram.

Amount ($x)	0 < x Y 10					
Frequency				4		

[5]

(b) Use your frequency table to calculate an estimate of the mean amount these 90 people gave to charity.

Answer(b)$ ..... [4]

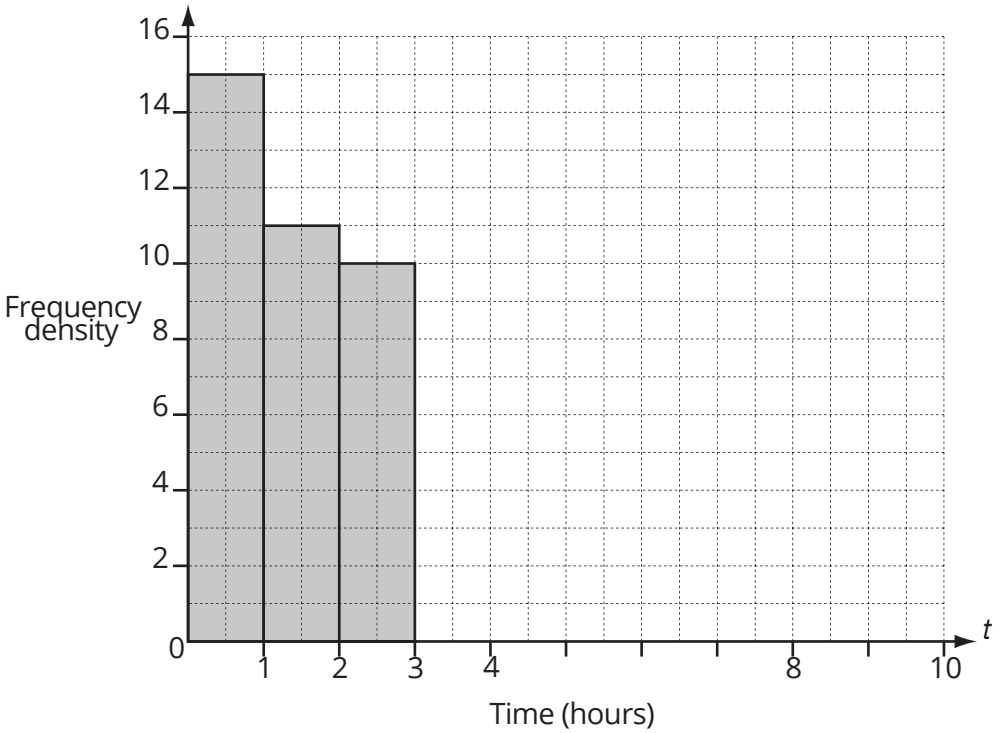
2 (a) 80 students were asked how much time they spent on the internet in one day.
This table shows the results.

Time (t hours)	$0 < t \leq 1$	$1 < t \leq 2$	$2 < t \leq 3$	$3 < t \leq 5$	$5 < t \leq 7$	$7 < t \leq 10$
Number of students	15	11	10	19	13	12

(i) Calculate an estimate of the mean time spent on the internet by the 80 students.

Answer(a)(i) ..... hours [4]

(ii) On the grid, complete the histogram to show this information.

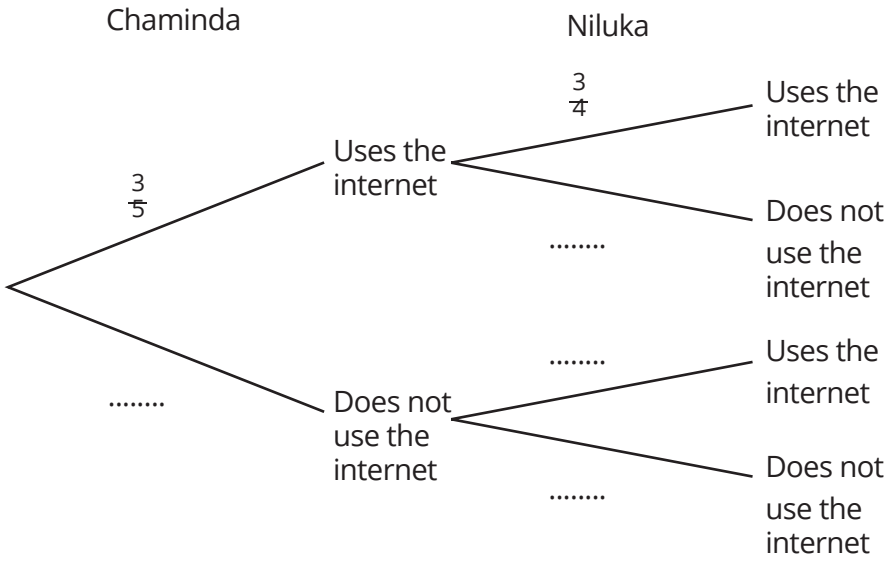


[4]

(b) The probability that Chaminda uses the internet on any day is $\frac{3}{5}$.

The probability that Niluka uses the internet on any day is $\frac{3}{4}$.

(i) Complete the tree diagram.



[2]

(ii) Calculate the probability, that on any day, at least one of the two students uses the internet.

Answer(b)(ii) ..... [3]

(iii) Calculate the probability that Chaminda uses the internet on three consecutive days.

Answer(b)(iii) ..... [2]

3

Height (h cm)	$150 < h \leqslant 160$	$160 < h \leqslant 165$	$165 < h \leqslant 180$	$180 < h \leqslant 190$
Frequency	5	9	18	10

The table shows information about the heights of a group of 42 students.

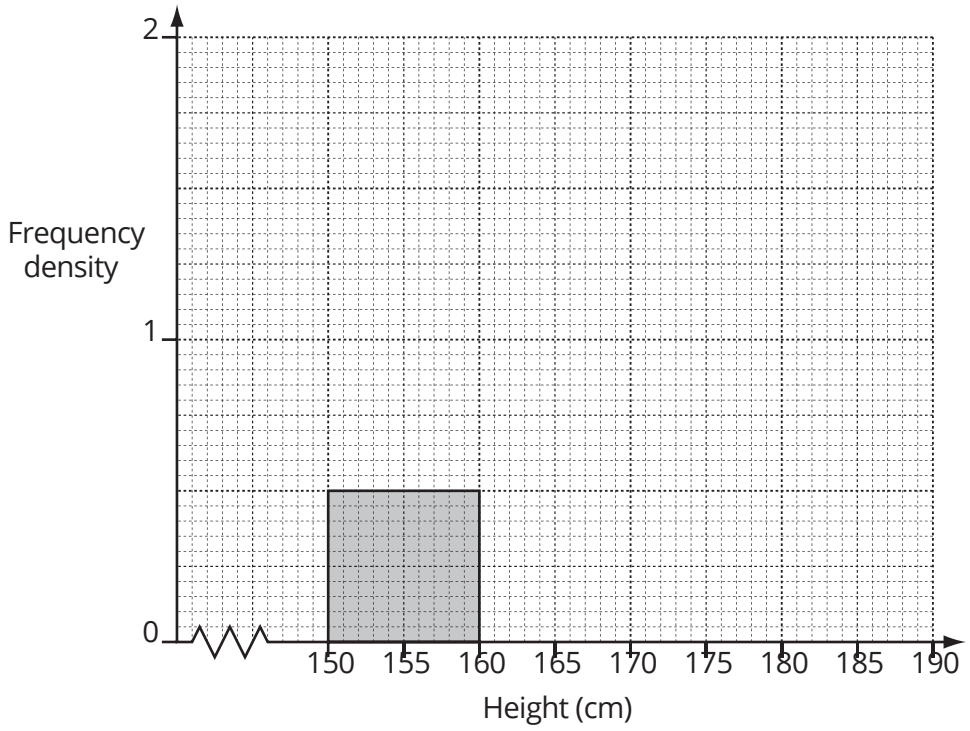
(a) Using mid-interval values, calculate an estimate of the mean height of the students.
Show your working.

Answer(a)..... cm [3]

(b) Write down the interval which contains the lower quartile.

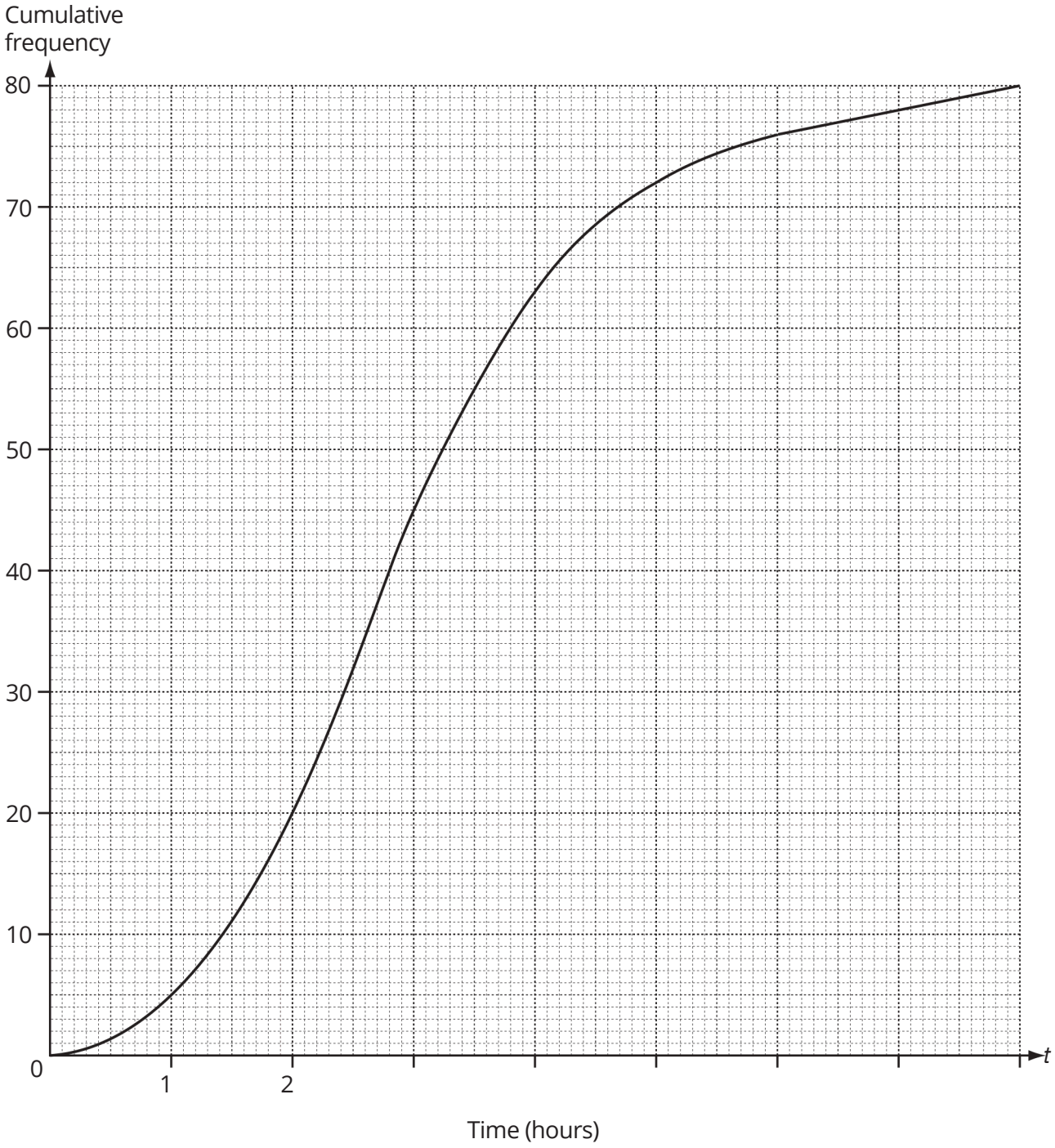
Answer(b) ..... [1]

(c) Complete the histogram to show the information in the table.
One column has already been drawn for you.



[4]

4 Felix asked 80 moto Froisr tms ohroe waw mesoamney G hCoSEu rasn dth Ae lierv ejlo ruesronueryce tso, voiskit t
He used the results to dra w a cumulative frequency diagram.



(a) Find

(i) the median,

Answer(a) (i) ..... h [1]

(ii) the upper quartile,

Answer(a) (ii) ..... h [1]

(iii) the inter-quartile range.

Answer(a) (iii) ..... h [1]

(b) Find the number of motorists whose journey took more than 5 hours but no more than 7 hours.

Answer(b) ..... [1]

(c) The frequency table shows some of the information about the 80 journeys.

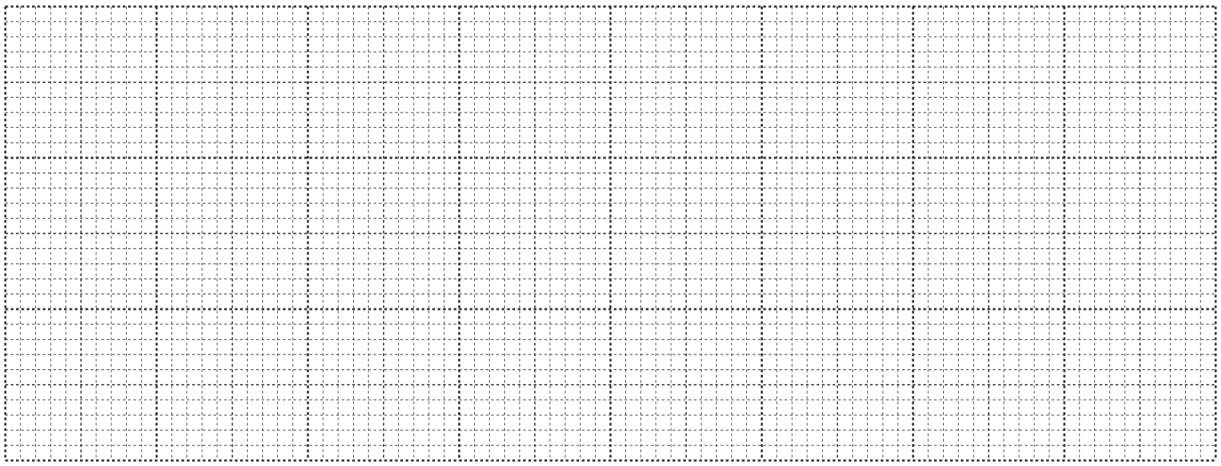
Time in hours (t)	0 < t ≤ 2	2 < t ≤ 3	3 < t ≤ 4	4 < t ≤ 5	5 < t ≤ 6	6 < t ≤ 8
Frequency	20	25	18			

(i) Use the cumulative frequency diagram to complete the table above. [2]

(ii) Calculate an estimate of the mean number of hours the 80 journeys took.

Answer(c)(ii) ..... h [4]

(d) On the grid, draw a histogram to represent the information in your table in part (c).



[5]