

GCSE QUESTIONS

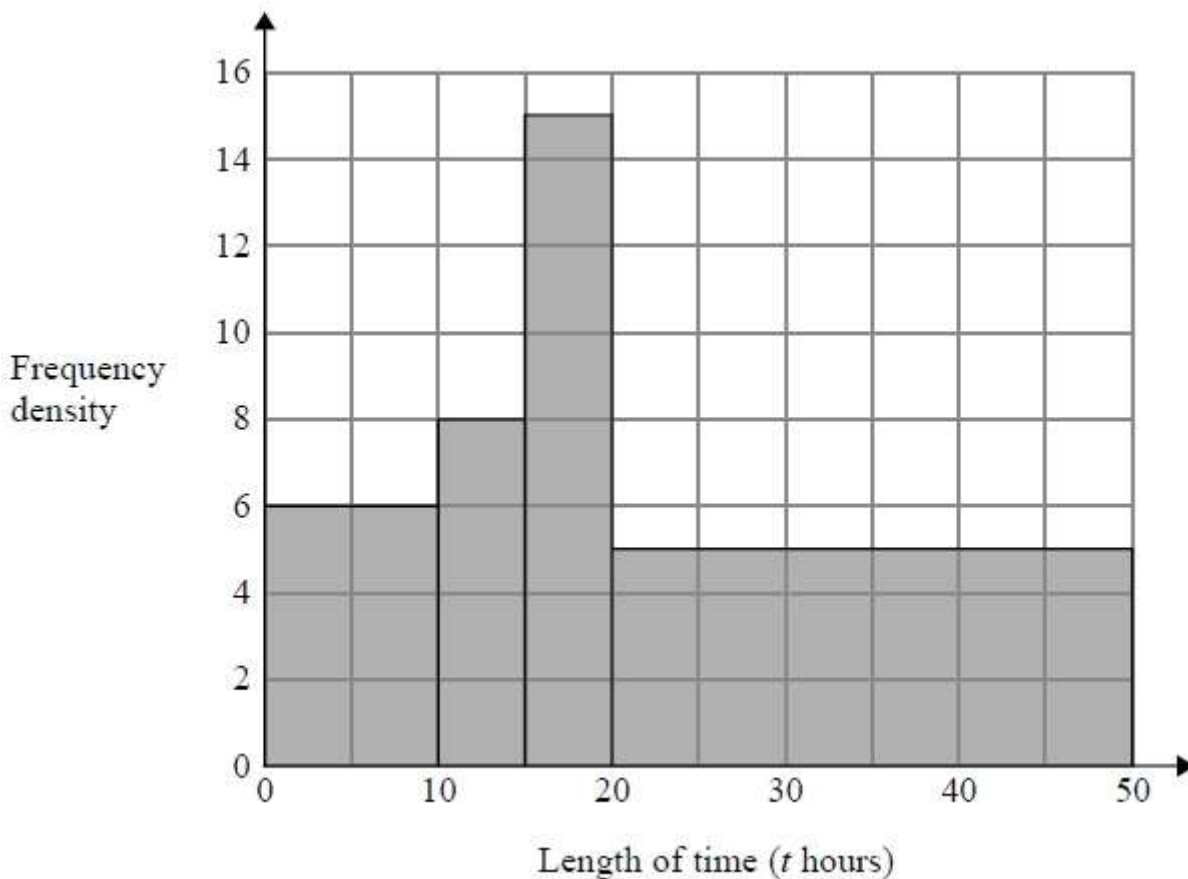
Q1. NON-CALCULATOR

Bhavna recorded the lengths of time, in hours, that some adults watched TV last week.

The table shows information about her results.

Length of time (t hours)	Frequency
$0 \leq t < 10$	6
$10 \leq t < 15$	8
$15 \leq t < 20$	15
$20 \leq t < 40$	5

Bhavna made some mistakes when she drew a histogram for this information.



Write down **two** mistakes Bhavna made.

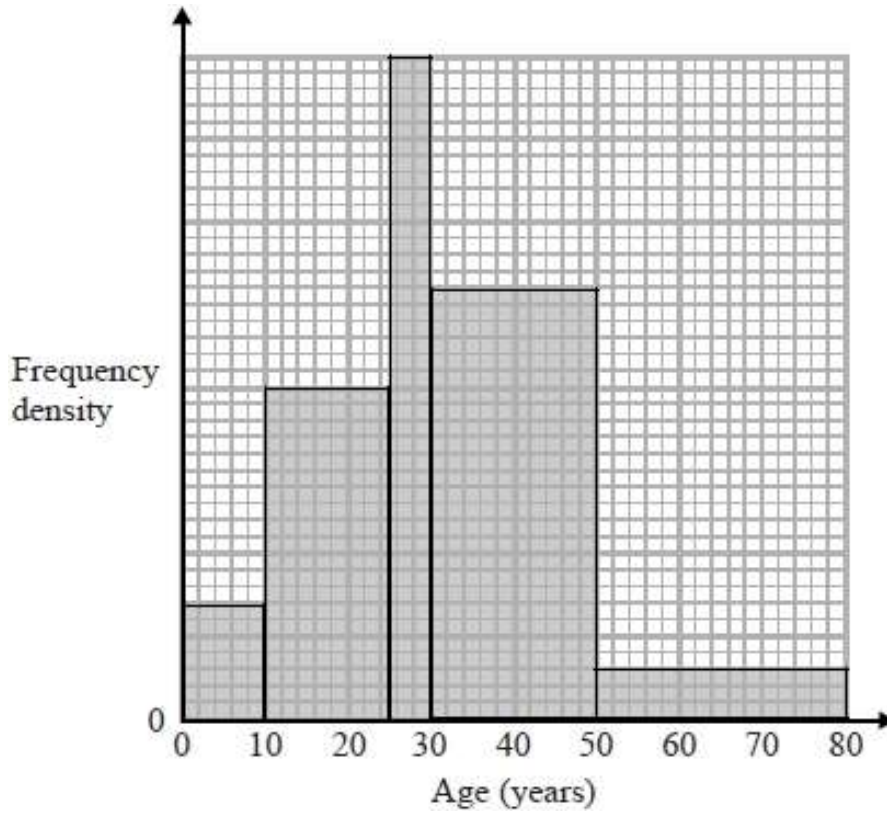
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(Total for question = 2 marks)

Q2. NON-CALCULATOR

The histogram shows information about the ages of the members of a football supporters club.



There are 20 members aged between 25 and 30

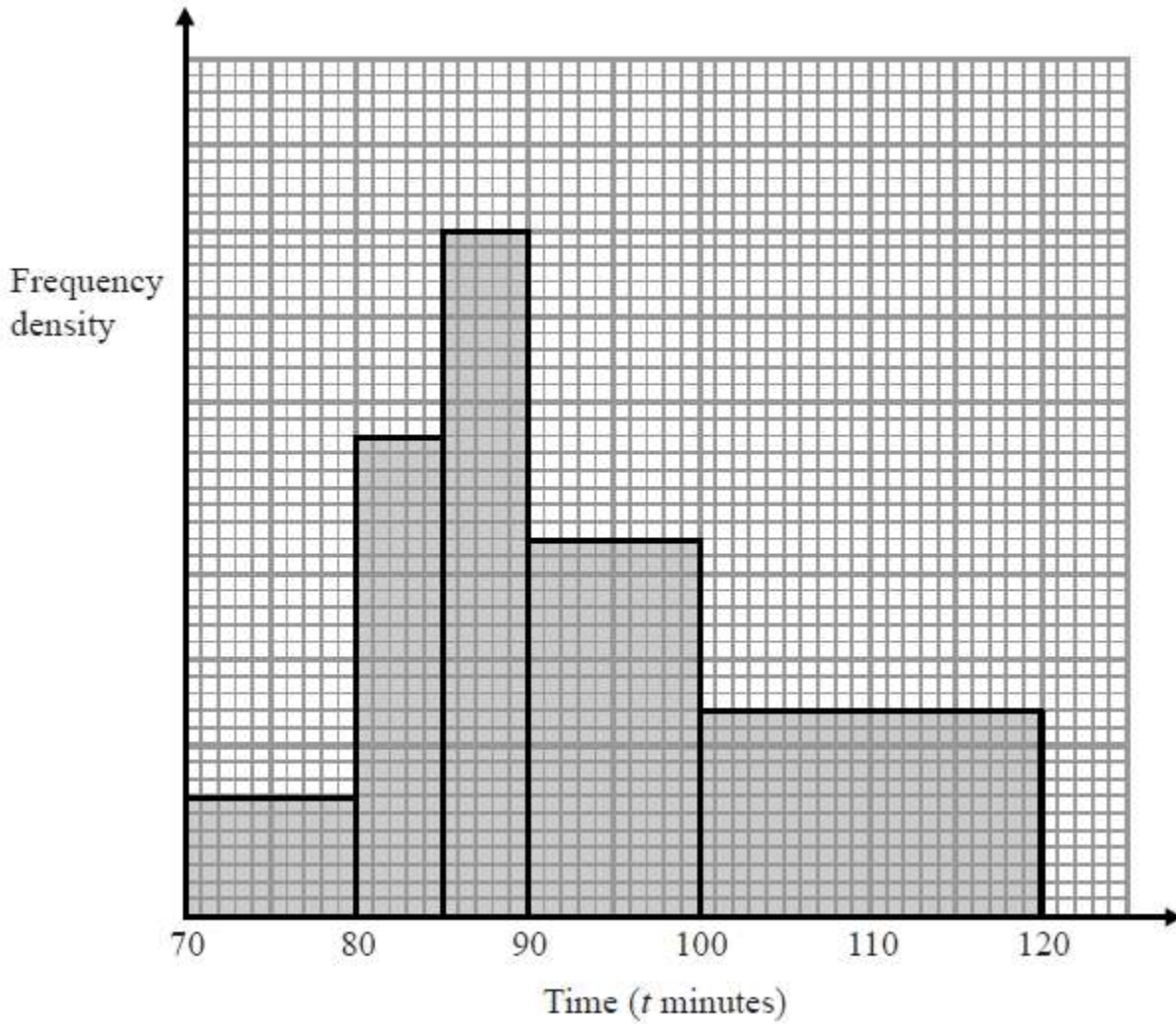
One member of the club is chosen at random.

What is the probability that this member is more than 30 years old?

.....
(Total for question = 3 marks)

Q3. NON-CALCULATOR

The histogram shows information about the time taken by cyclists to finish a cycle race.



7 cyclists took 80 minutes or less to finish the race.

- (i) Work out an estimate for the number of cyclists who took more than 105 minutes to finish the race.

.....

- (ii) Explain why your answer to part (i) is only an estimate.

.....

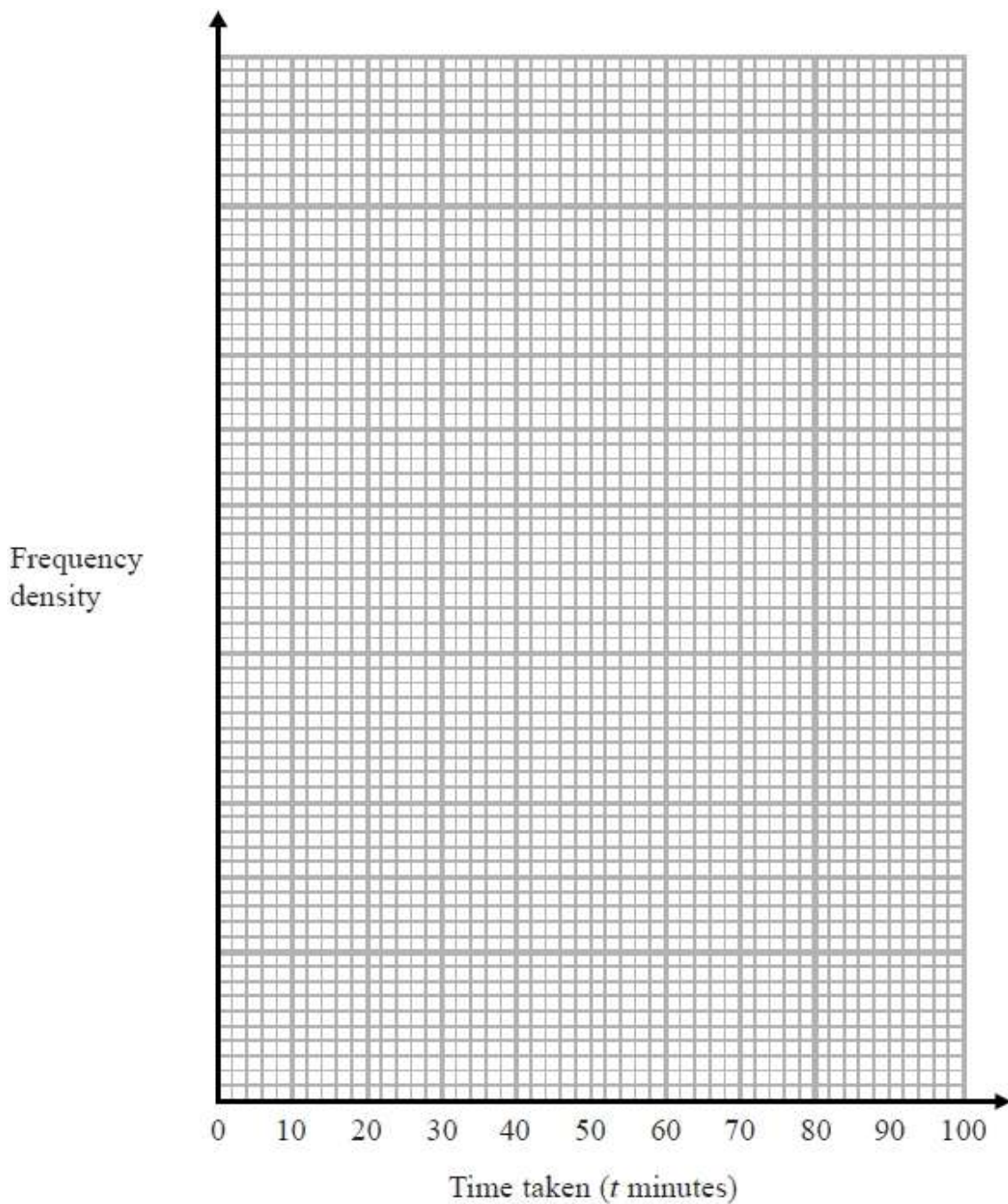
(Total for question = 4 marks)

Q4. CALCULATOR ALLOWED

The table shows information about the times a group of students took to do a park run.

Time taken (t minutes)	Frequency
$0 < t \leq 25$	20
$25 < t \leq 45$	35
$45 < t \leq 60$	45
$60 < t \leq 75$	87
$75 < t \leq 85$	10
$85 < t \leq 95$	8

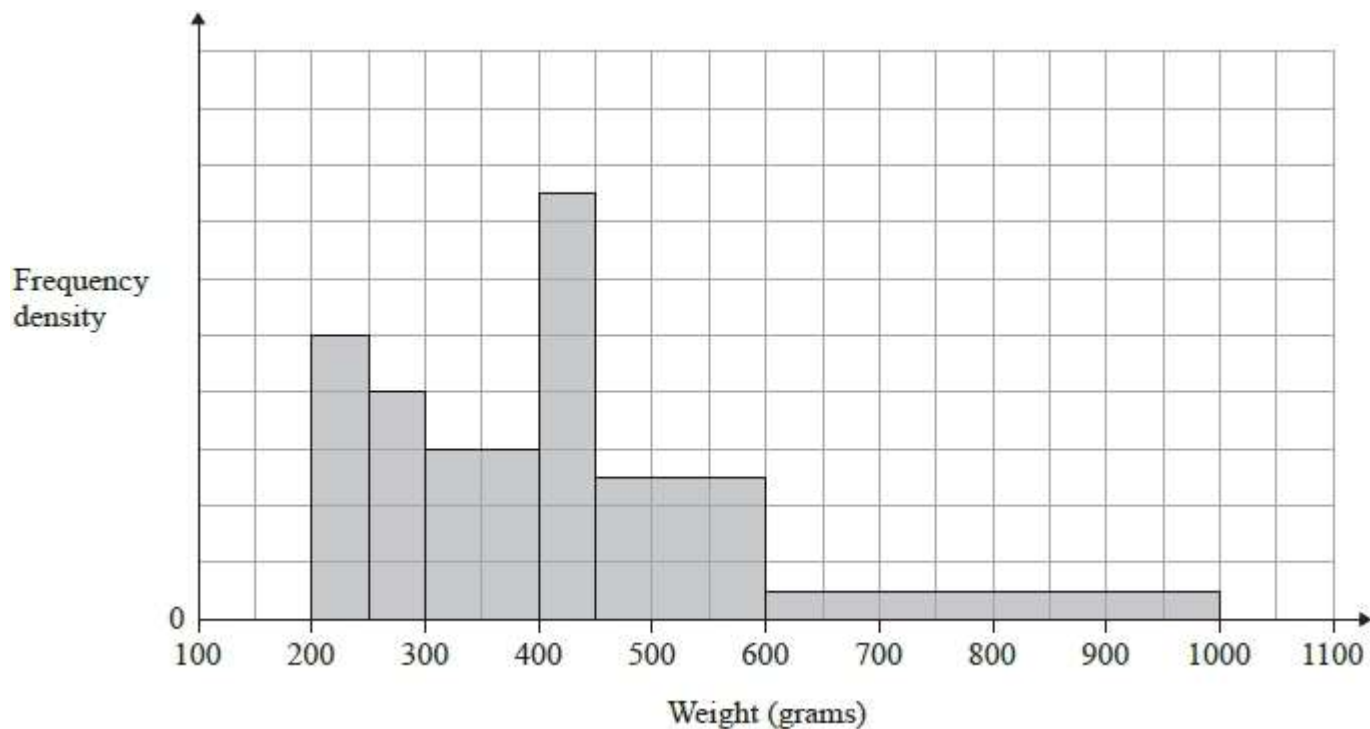
Draw a histogram for this information.



(Total for question = 3 marks)

Q5. CALCULATOR ALLOWED

The histogram gives information about the weights of some fish.



The number of fish with a weight between 400 g and 450 g is 7 more than the number of fish with a weight between 250 g and 300 g.

(a) Calculate the total number of fish represented by the histogram.

.....
(3)

(b) (i) Use the histogram to find an estimate for the median weight.

..... g
(2)

(ii) Give a reason why your answer to part (b)(i) is only an estimate.

.....
.....

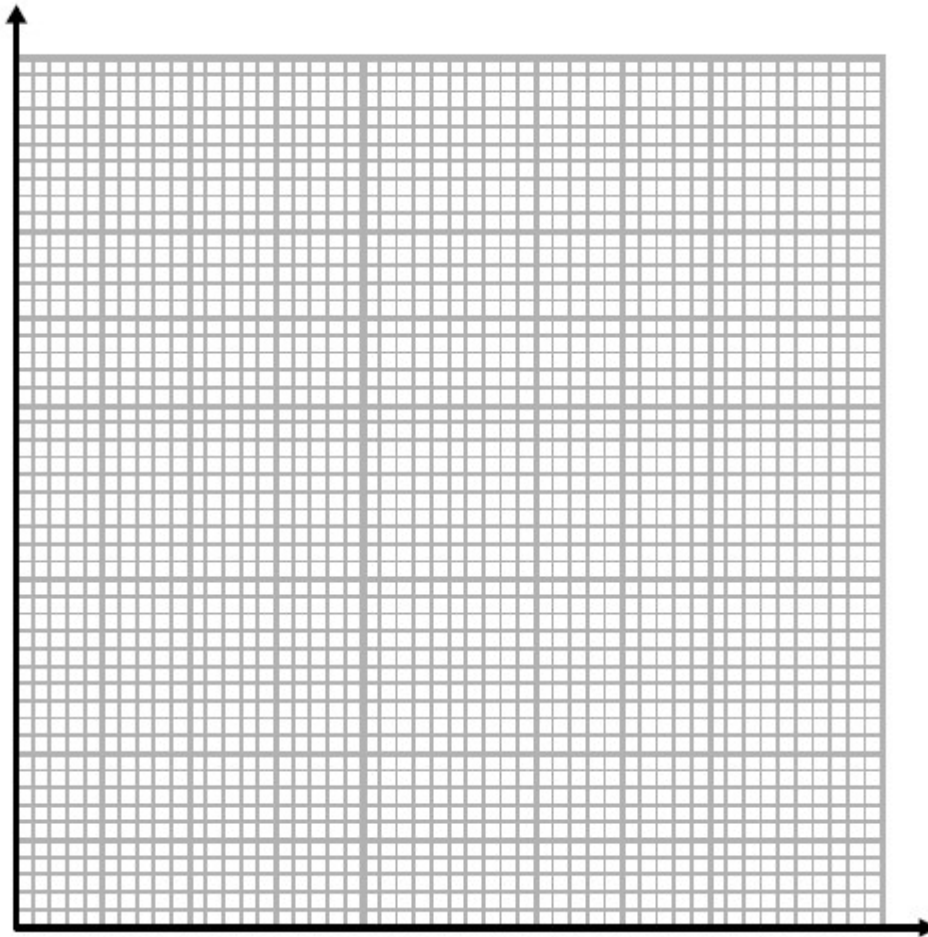
(1)
(Total for question = 6 marks)

Q6. CALCULATOR ALLOWED

The table gives information about the speeds, in km/h, of 81 cars.

Speed (s km/h)	Frequency
$90 < s \leq 100$	13
$100 < s \leq 105$	16
$105 < s \leq 110$	18
$110 < s \leq 120$	22
$120 < s \leq 140$	12

(a) On the grid, draw a histogram for the information in the table.



(3)

(b) Find an estimate for the median.

..... km/h

(2)

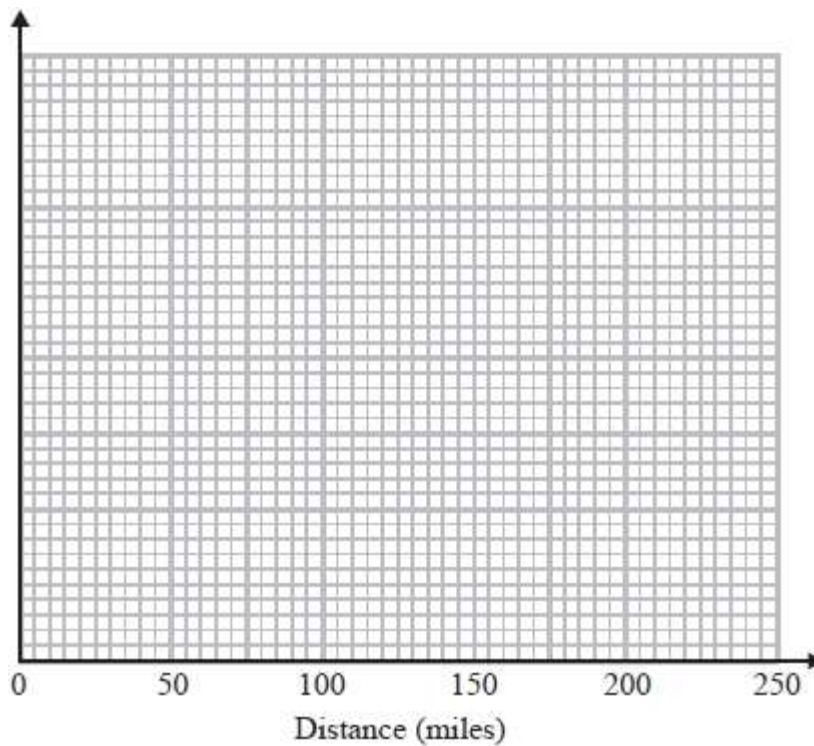
(Total for question = 5 marks)

Q7. CALCULATOR ALLOWED

The table shows information about the distances 570 students travelled to a university open day.

Distance (d miles)	Frequency
$0 < d \leq 20$	120
$20 < d \leq 50$	90
$50 < d \leq 80$	120
$80 < d \leq 150$	140
$150 < d \leq 200$	100

(a) Draw a histogram for the information in the table.



(3)

(b) Estimate the median distance.

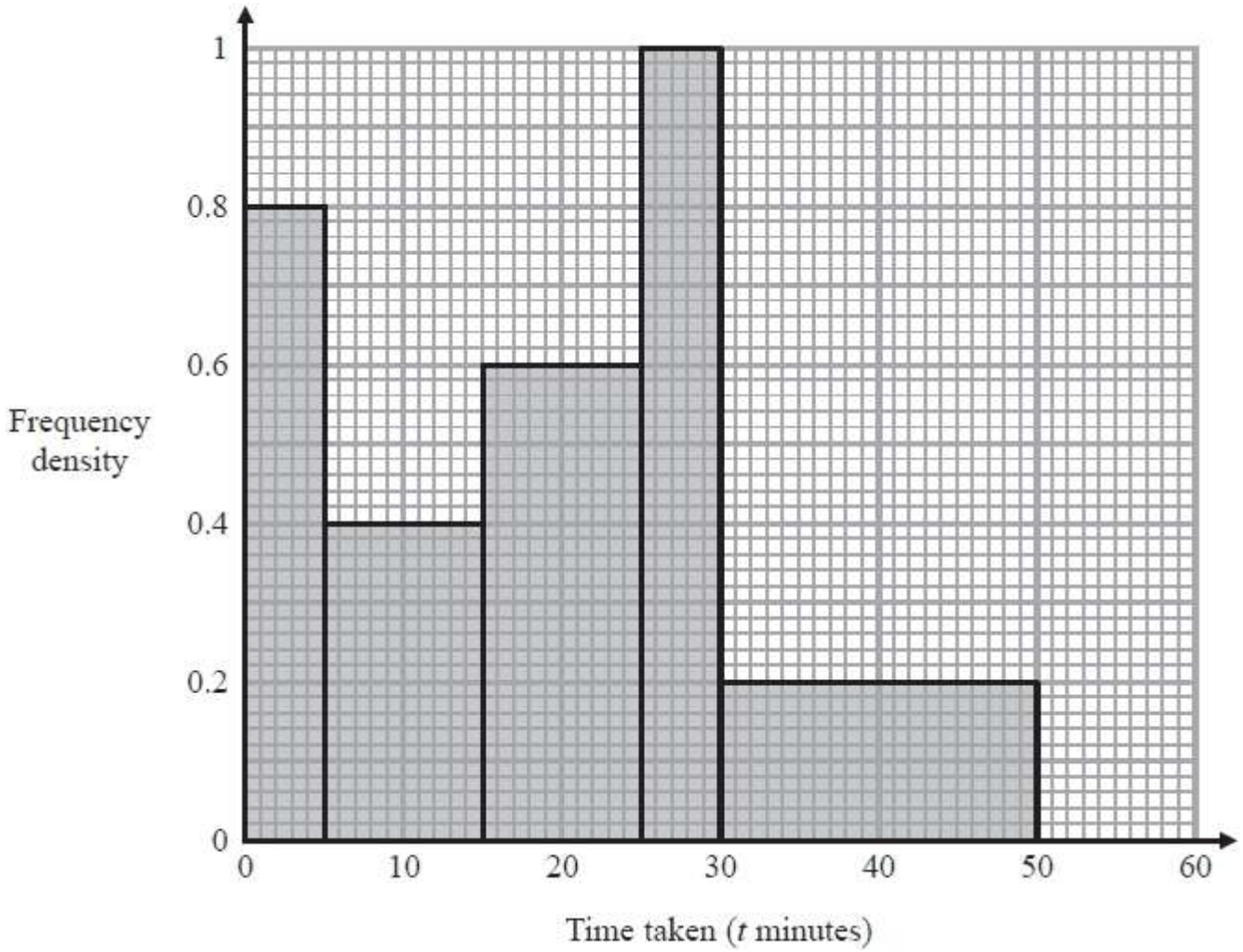
..... miles

(2)

(Total for question = 5 marks)

Q8. CALCULATOR ALLOWED

The histogram shows information about the times taken by some students to finish a puzzle.



(a) Complete the frequency table for this information.

Time taken (t minutes)	Frequency
$0 < t \leq 5$	4
$5 < t \leq 15$	
$15 < t \leq 25$	
$25 < t \leq 30$	
$30 < t \leq 50$	

(2)

(b) Find an estimate for the lower quartile of the times taken to finish the puzzle.

..... minutes

(2)

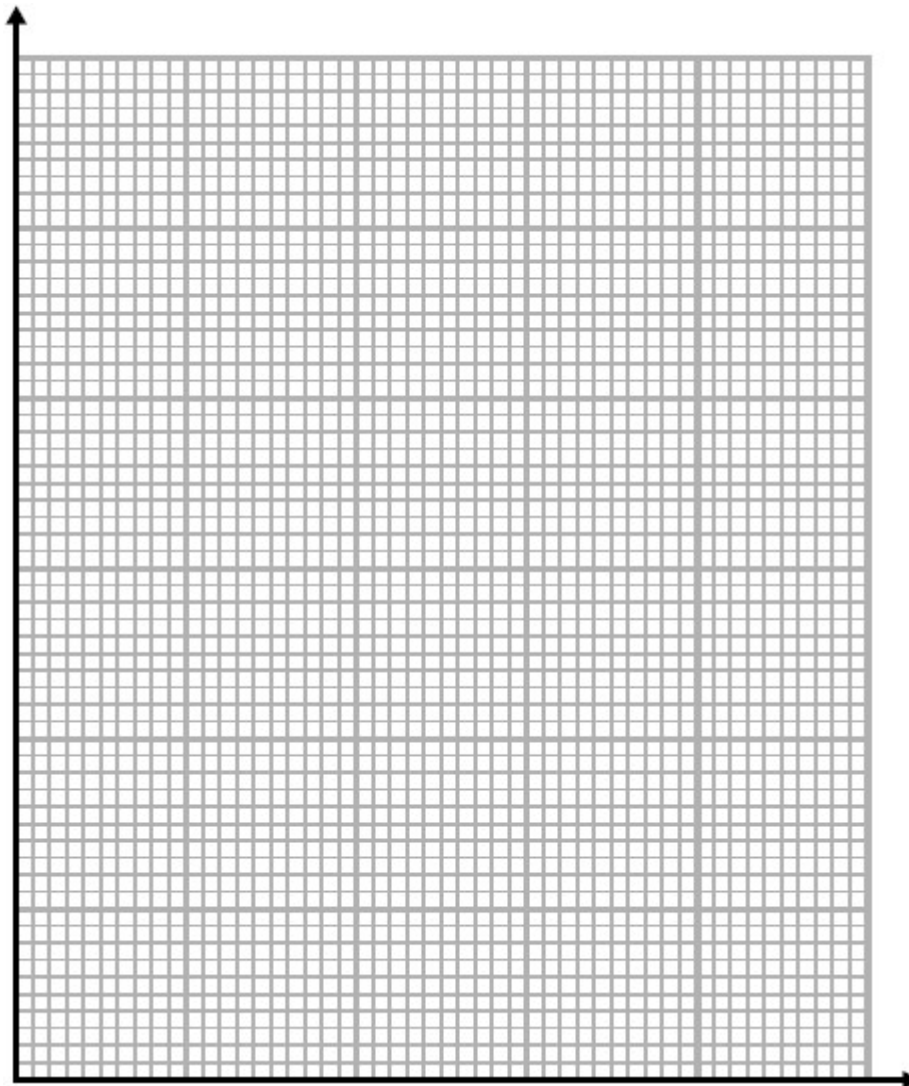
(Total for question = 4 marks)

Q9. CALCULATOR ALLOWED

The table gives information about the heights of 150 students.

Height (h cm)	Frequency
$140 < h \leq 150$	15
$150 < h \leq 155$	30
$155 < h \leq 160$	51
$160 < h \leq 165$	36
$165 < h \leq 180$	18

(a) On the grid, draw a histogram for this information.



(3)

(b) Work out an estimate for the fraction of the students who have a height between 150 cm and 170 cm.

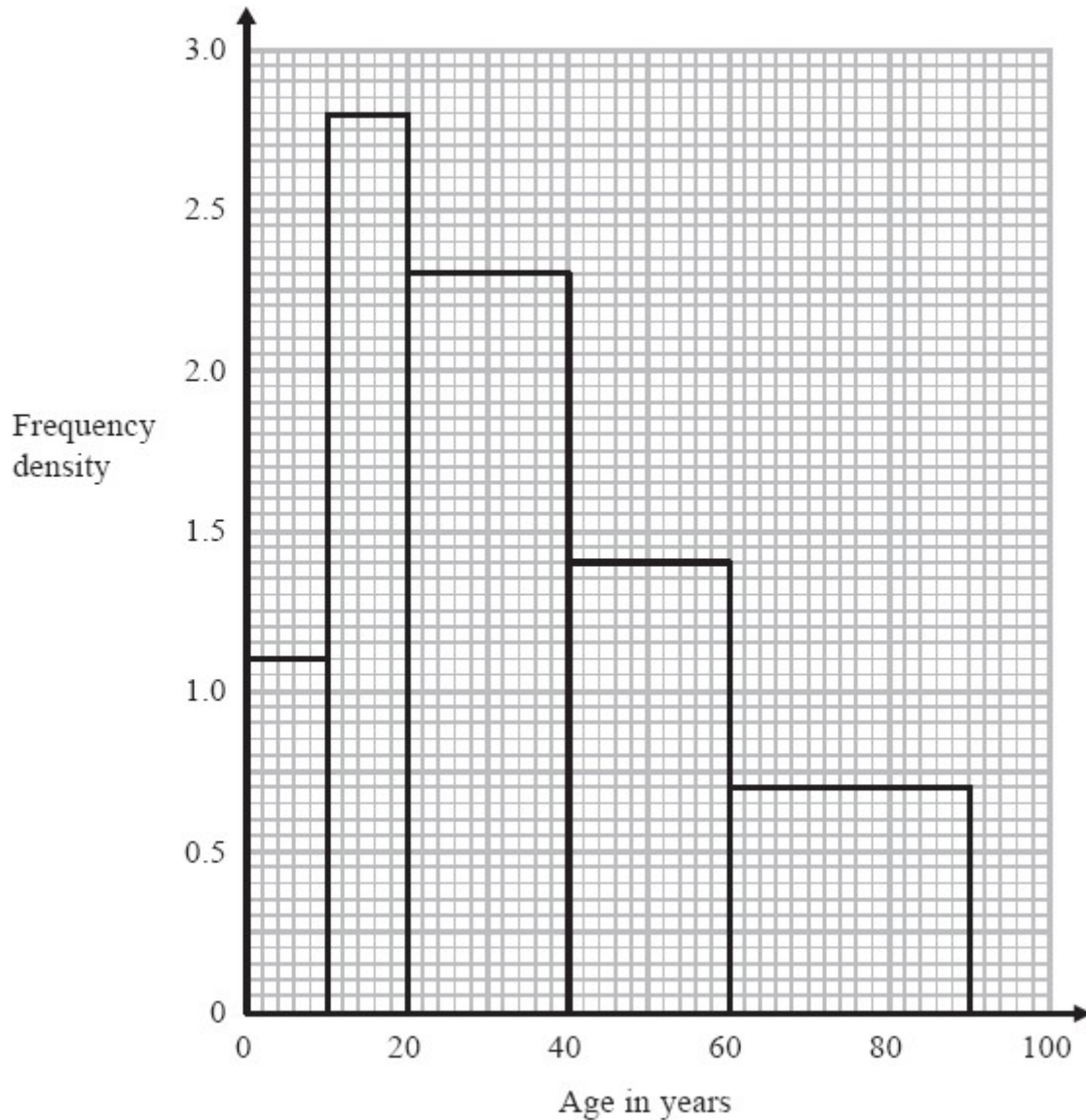
.....

(2)

(Total for question = 5 marks)

Q10. CALCULATOR ALLOWED

The histogram shows some information about the ages of the 134 members of a sports club.



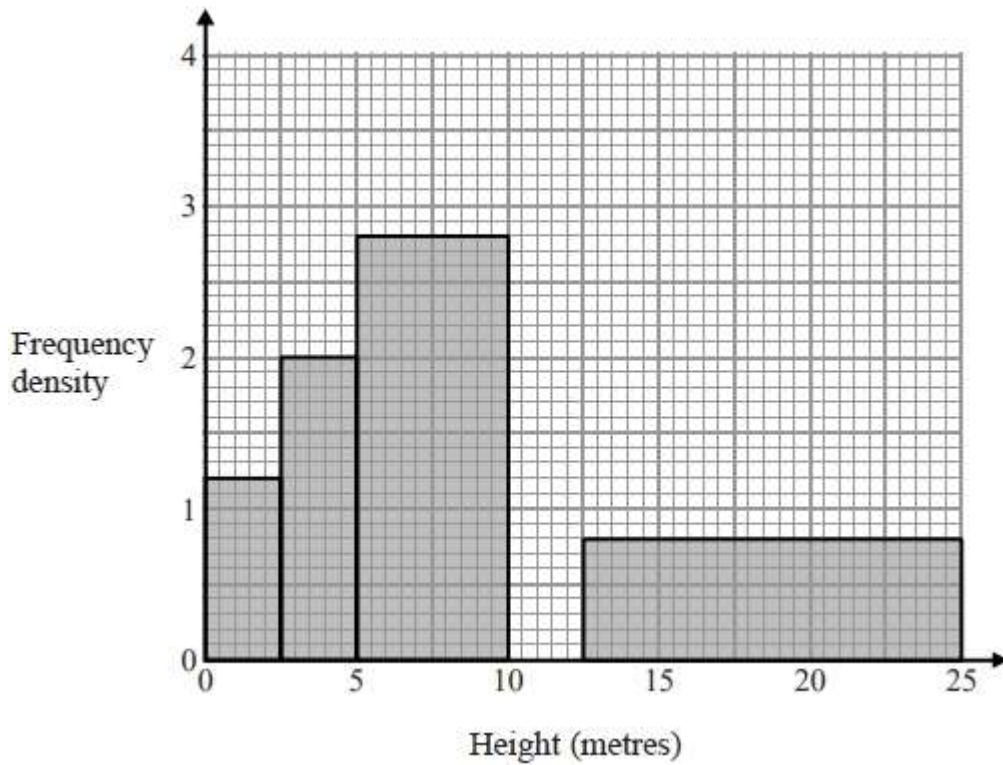
20% of the members of the sports club who are over 50 years of age are female.

Work out an estimate for the number of female members who are over 50 years of age.

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(Total for question = 3 marks)

Q11. CALCULATOR ALLOWED

The histogram gives information about the heights, in metres, of the trees in a park.
The histogram is incomplete.



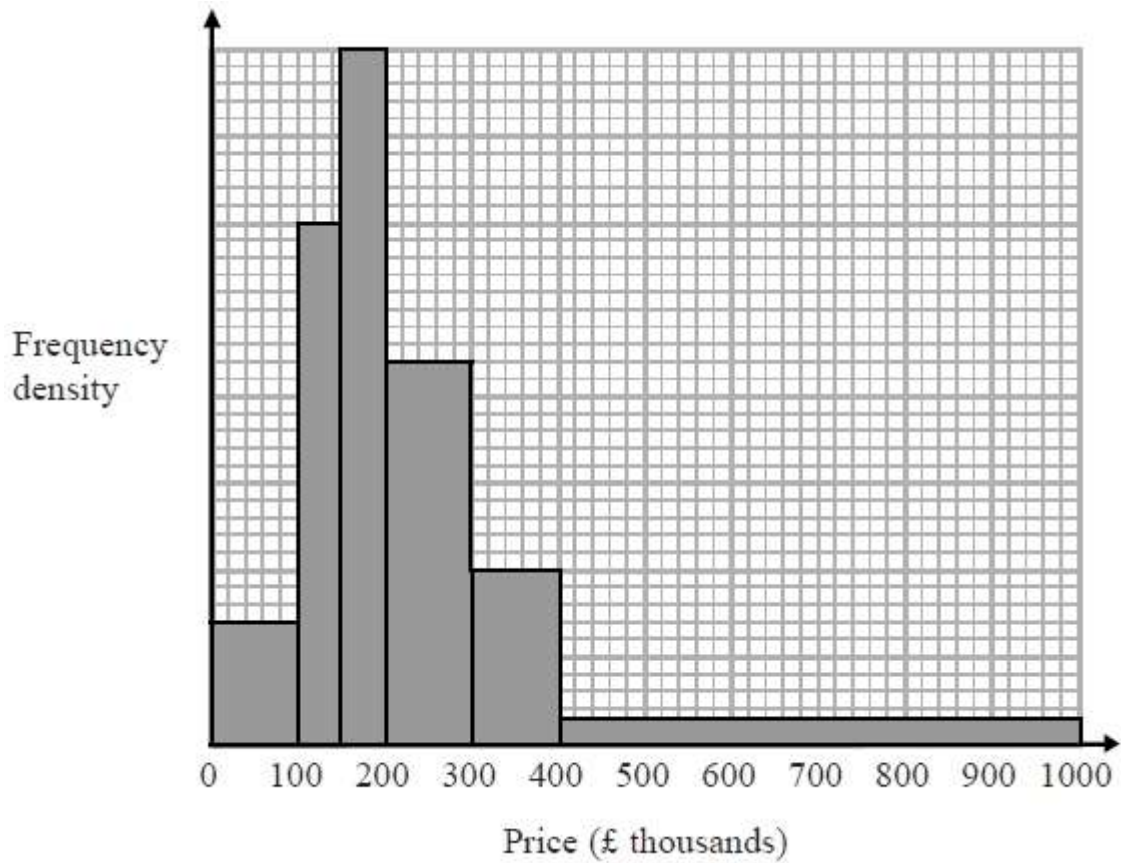
20% of the trees in the park have a height between 10 metres and 12.5 metres.
None of the trees in the park have a height greater than 25 metres.

Complete the histogram.

(Total for question = 3 marks)

Q12. CALCULATOR ALLOWED

The histogram gives information about house prices in a village in 2015



20 houses in the village have a price between £300 000 and £400 000

Work out the number of houses in the village with a price under £200 000

.....
(Total for question is 3 marks)