

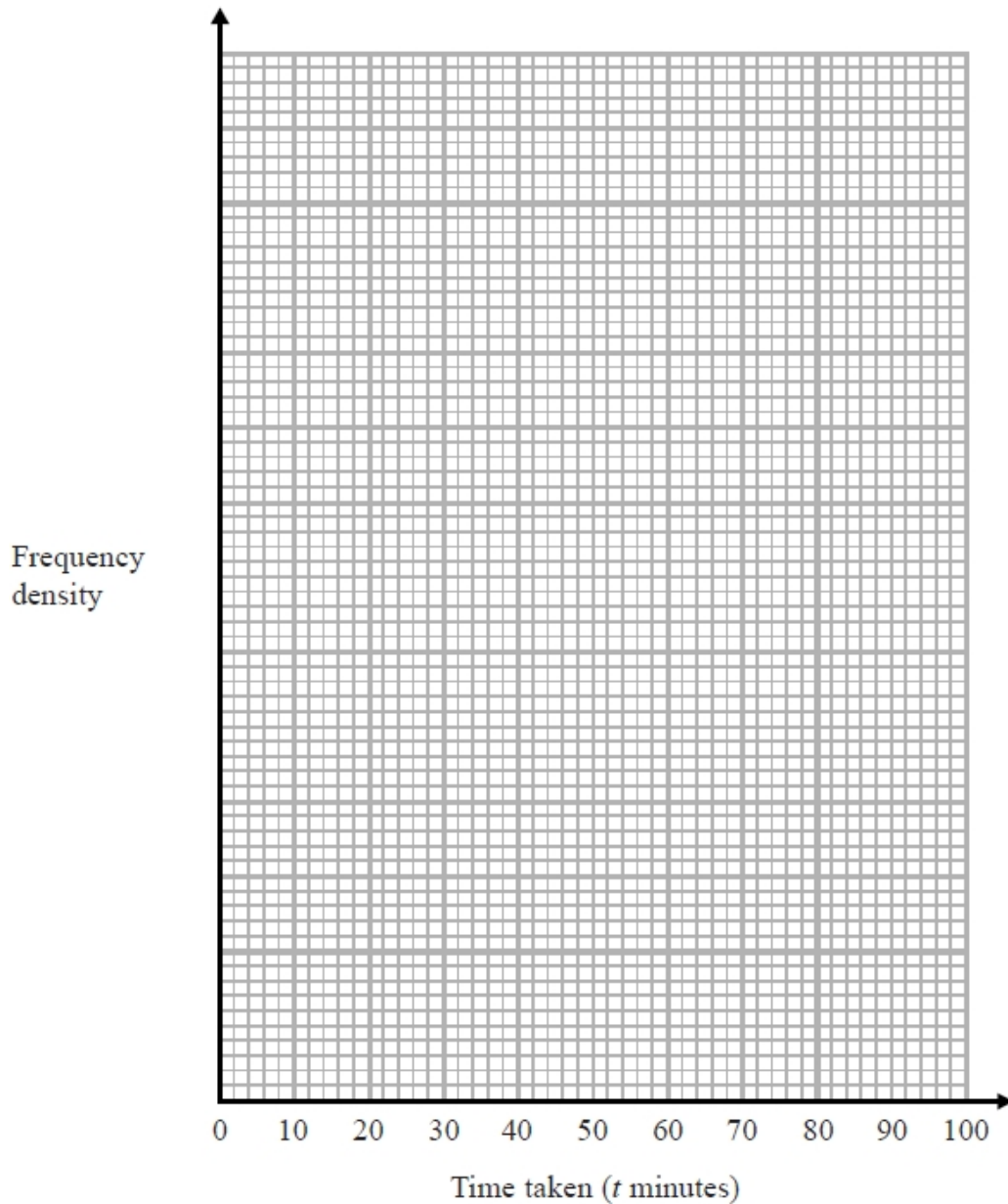
S137 Histograms

Q1.

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.



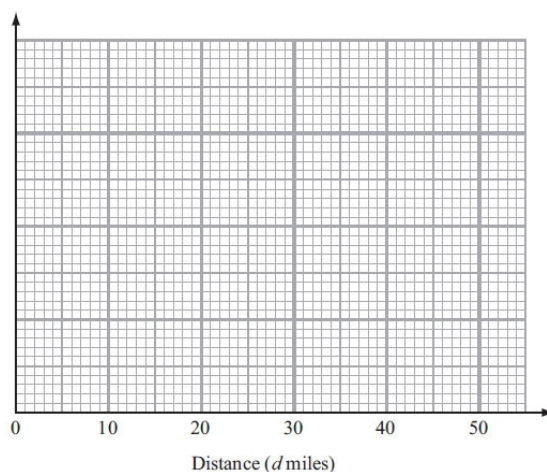
(Total for question = 3 marks)

Q2.

The table gives some information about the distances, in miles, that some men travelled to work.

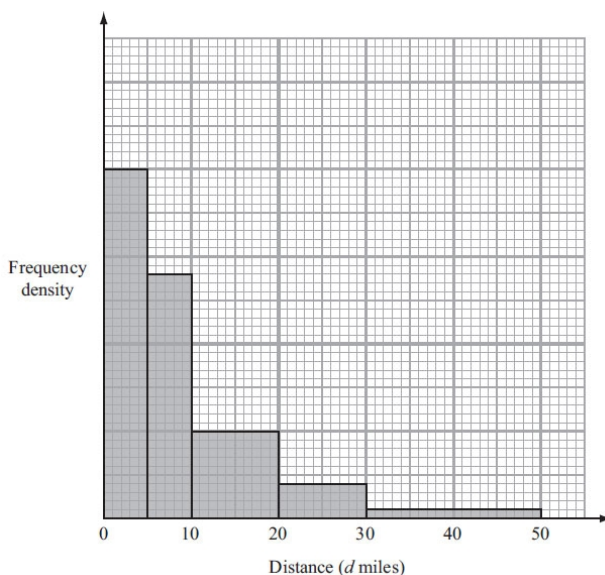
Distance (d miles)	Frequency
$0 < d \leq 5$	15
$5 < d \leq 10$	17
$10 < d \leq 20$	10
$20 < d \leq 30$	6
$30 < d \leq 50$	2

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



(3)

The histogram below shows information about the distances that some women travelled to work.



x women travelled between 10 and 20 miles to work.

(b) Find an expression, in terms of x , for the total number of women represented by the histogram.

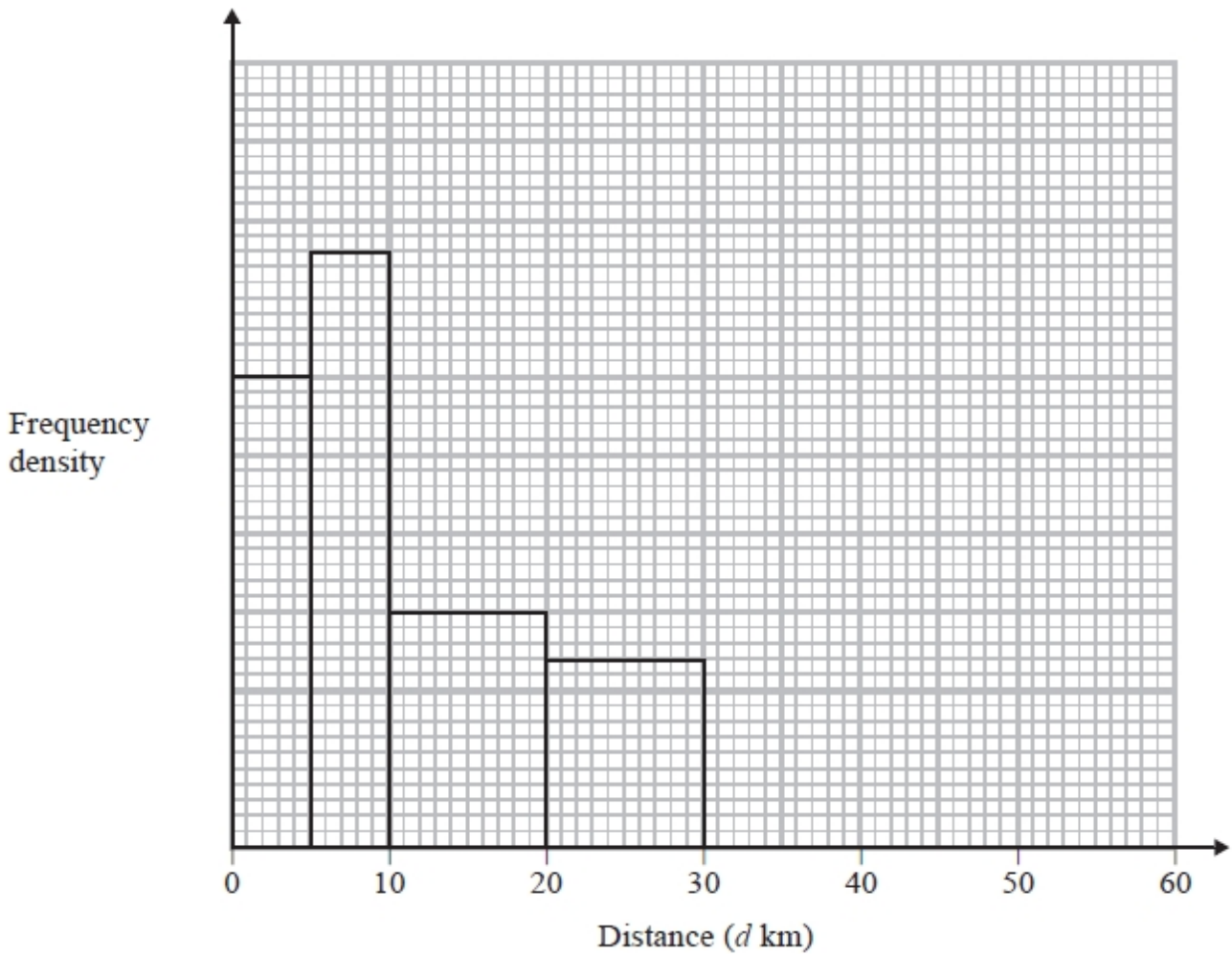
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(2)

(Total for Question is 5 marks)

Q3.

The incomplete histogram and table give some information about the distances some people travel to work.



(i) Use the information in the histogram to complete the frequency table.

Distance (d km)	Frequency
$0 < d \leq 5$	30
$5 < d \leq 10$	
$10 < d \leq 20$	
$20 < d \leq 30$	24
$30 < d \leq 50$	16

(ii) Use the information in the table to complete the histogram.

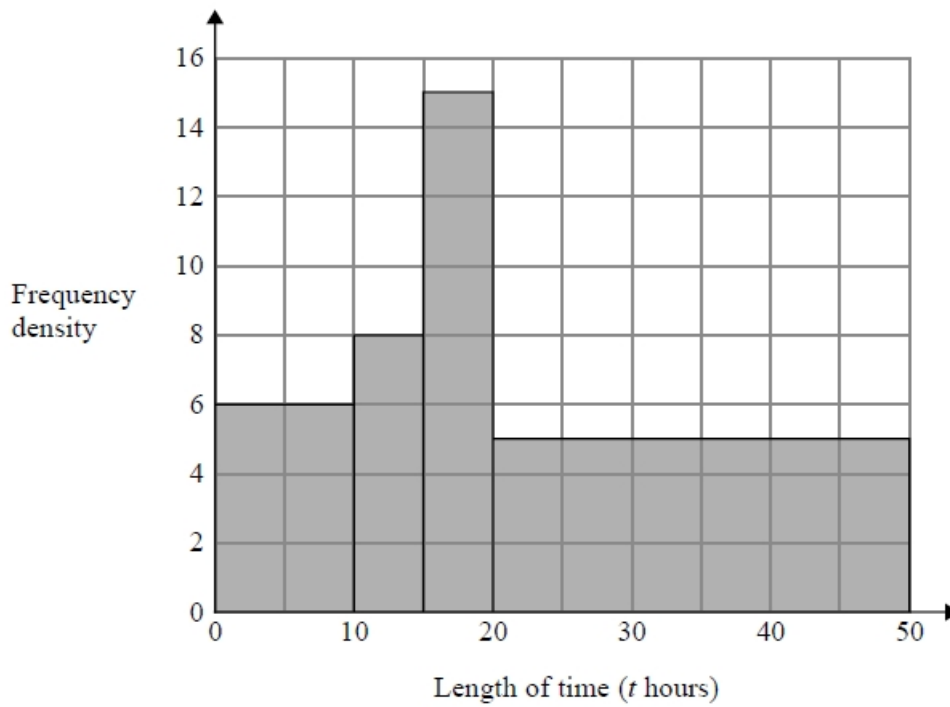
(Total for question = 3 marks)

Q4.

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.

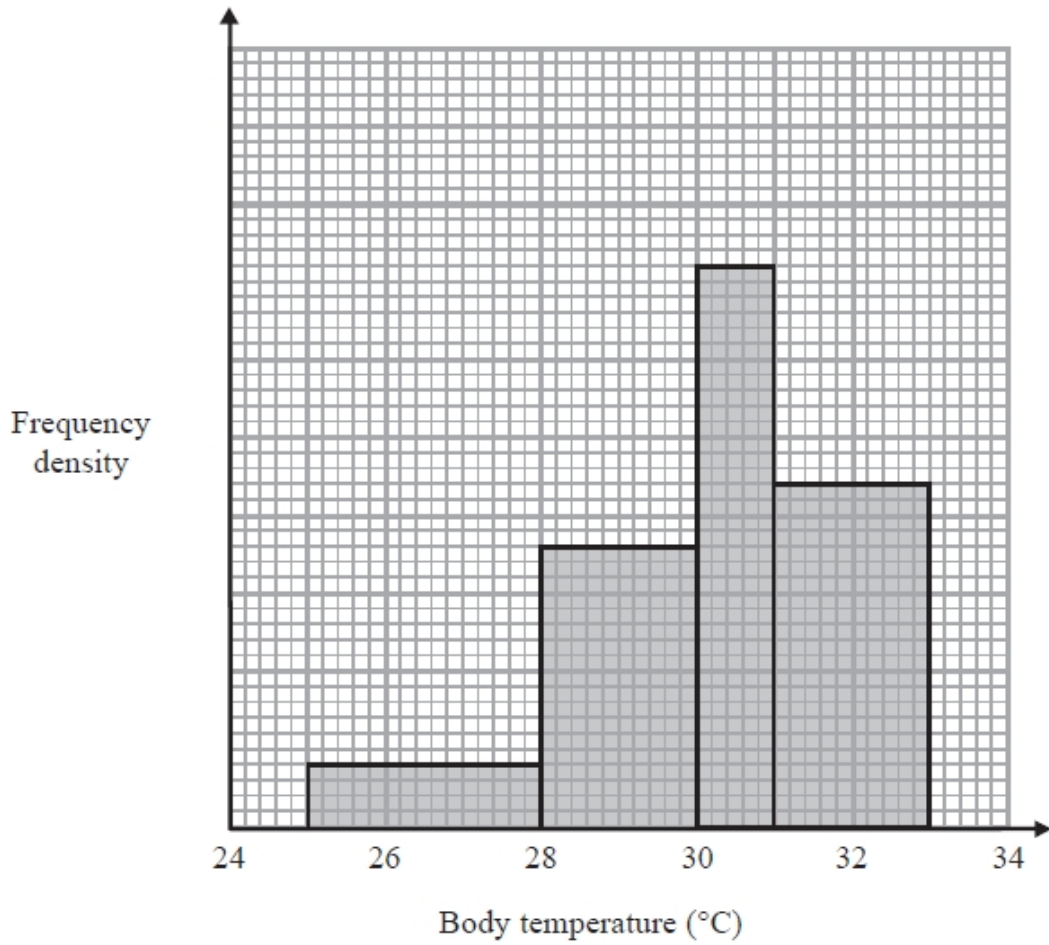
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(Total for question = 2 marks)

Q5.

The histogram gives information about the body temperatures of 320 lizards at 2 pm one day.

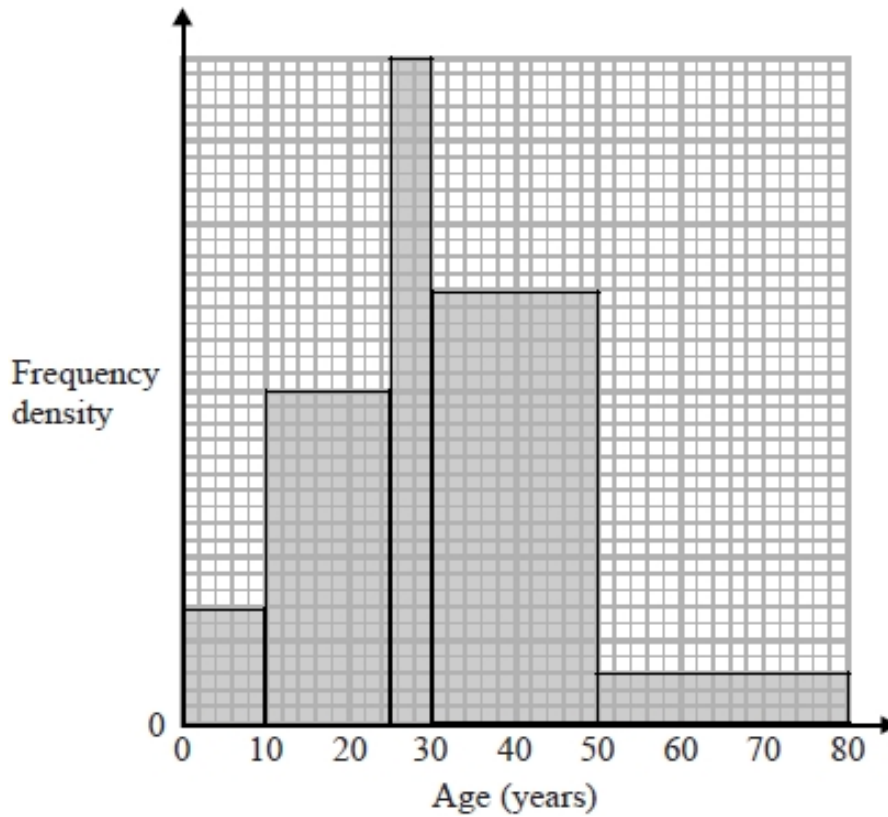


Work out how many of these lizards had a body temperature greater than 30°C.

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(Total for question = 3 marks)

Q6.

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



There are 20 members aged between 25 and 30

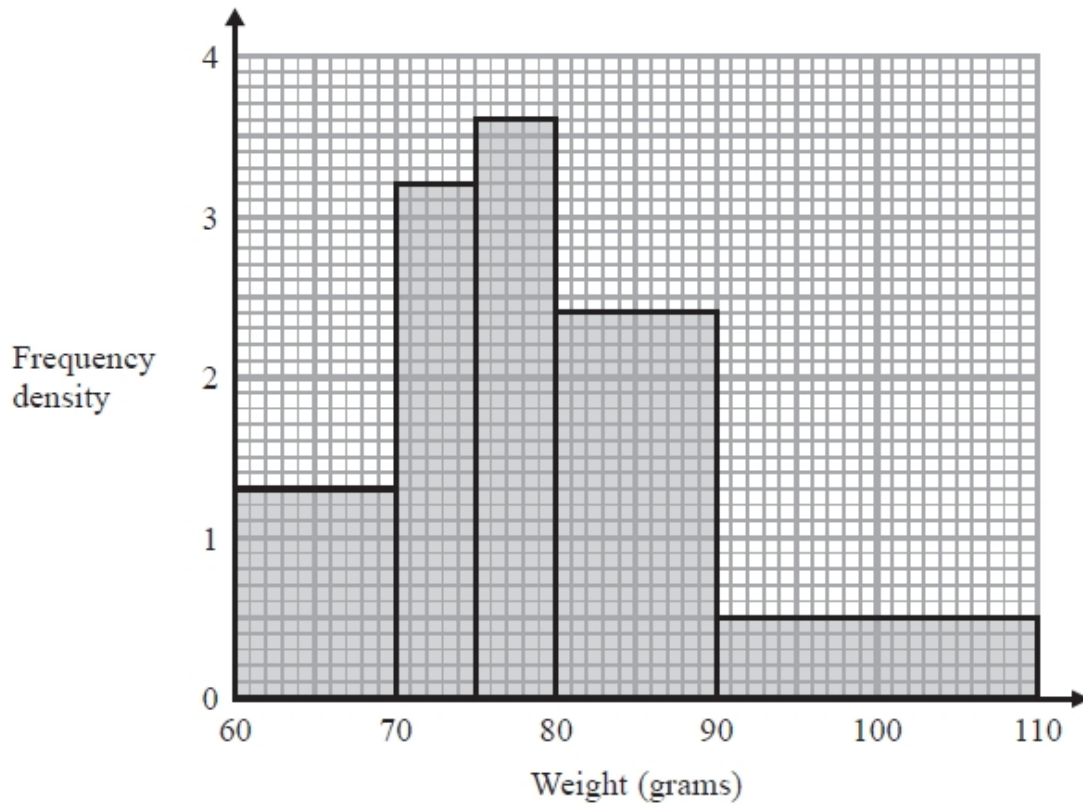
One member of the club is chosen at random.

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

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(Total for question = 3 marks)

Q7.

The histogram shows information about the weights, in grams, of some plums.

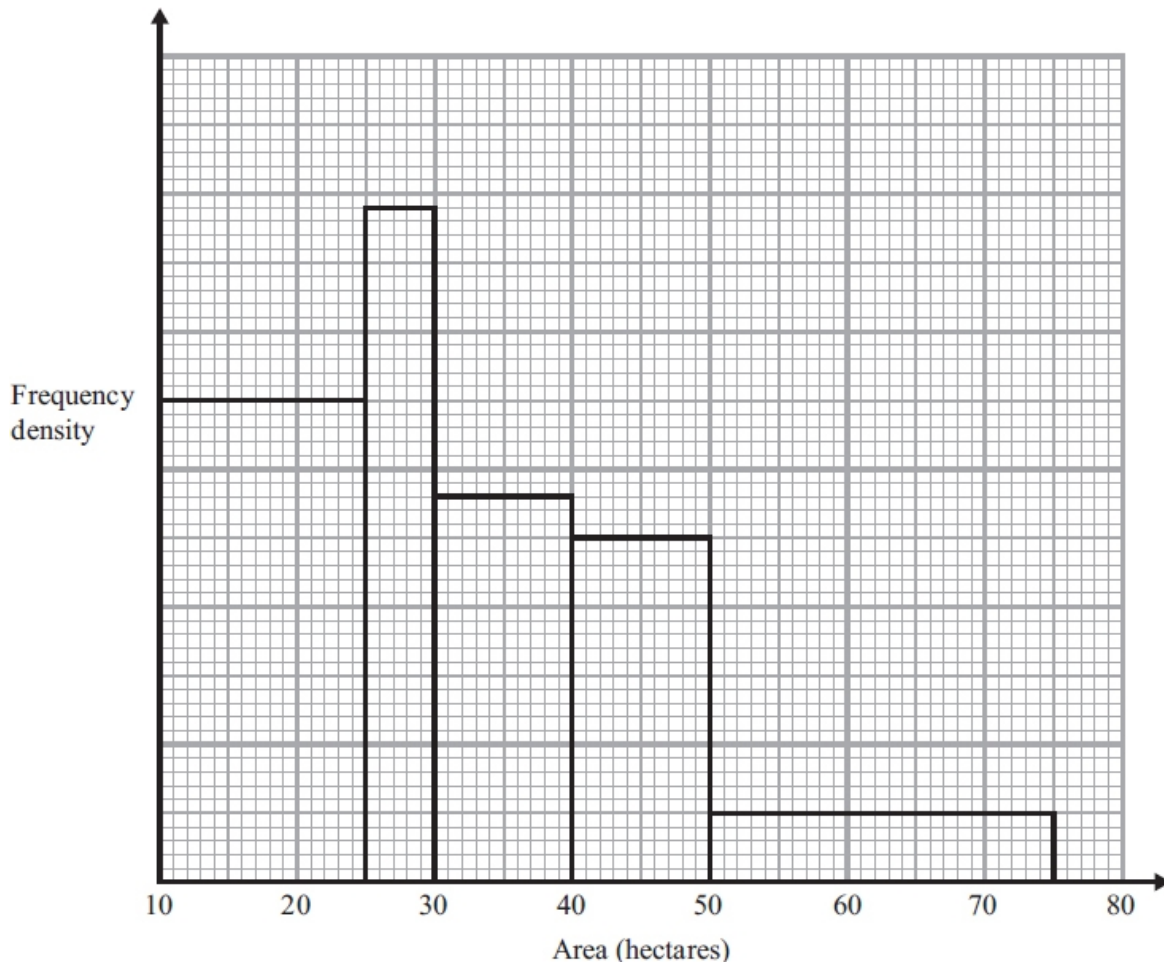


Work out an estimate for the proportion of these plums with a weight of less than 100 grams.

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(Total for question = 3 marks)

Q8.

The histogram gives information about the areas of 285 farms.

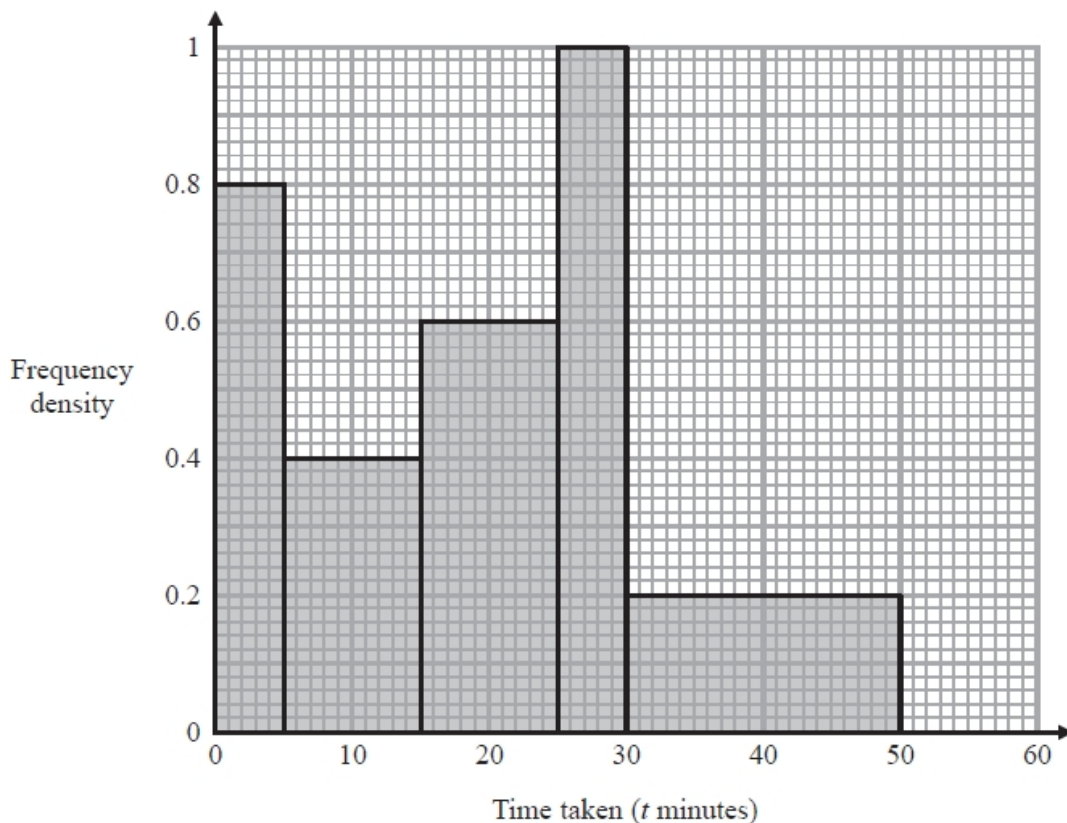


Work out an estimate for the number of these farms with an area greater than 38 hectares.

(Total for Question is 3 marks)

Q9.

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.

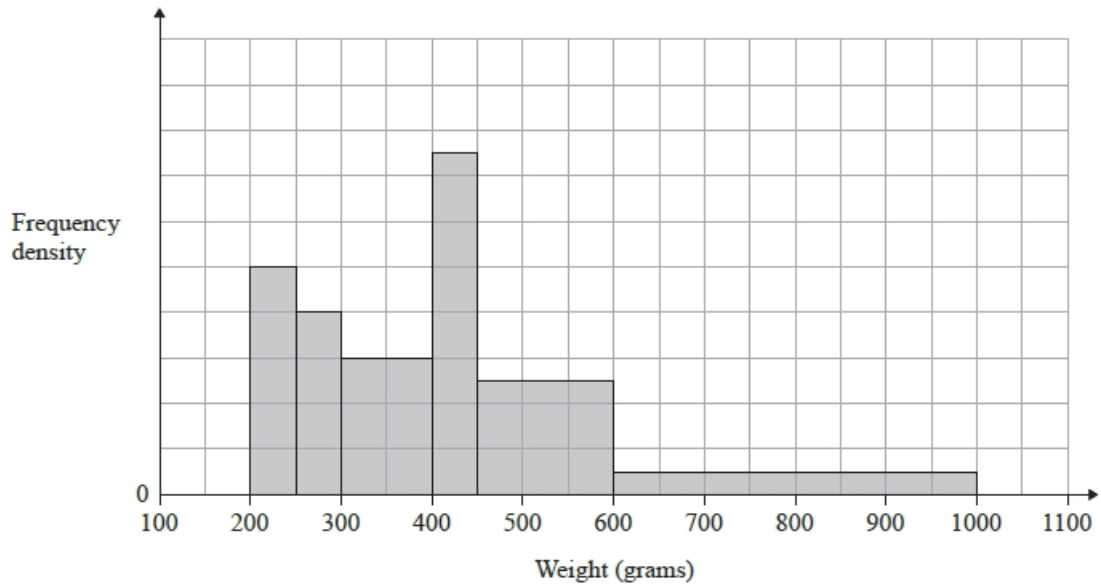
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(2)

(Total for question = 4 marks)

Q10.

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.

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(3)

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

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(2)

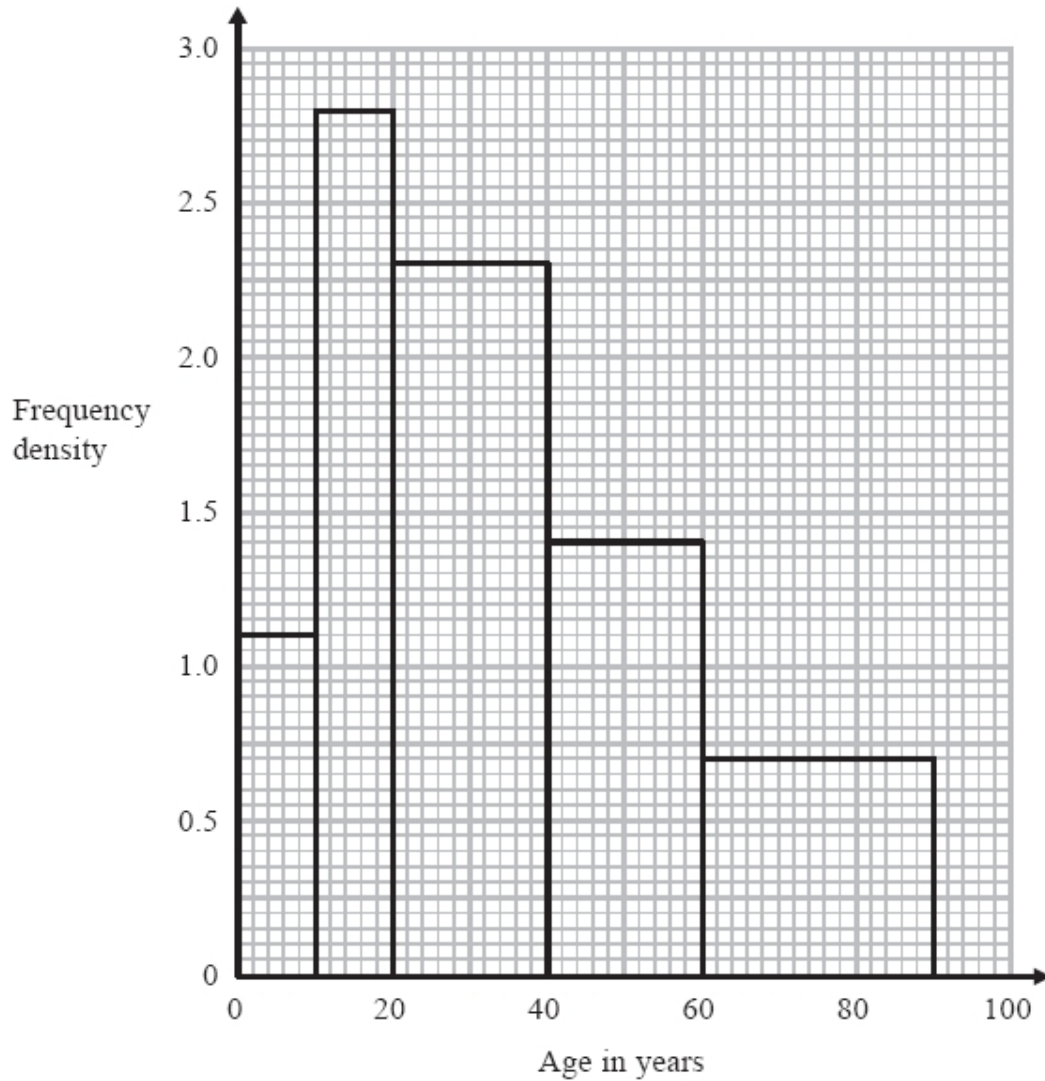
(ii) Give a reason why your answer to part (b)(i) is only an estimate.

.....
.....
(1)

(Total for question = 6 marks)

Q11.

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)

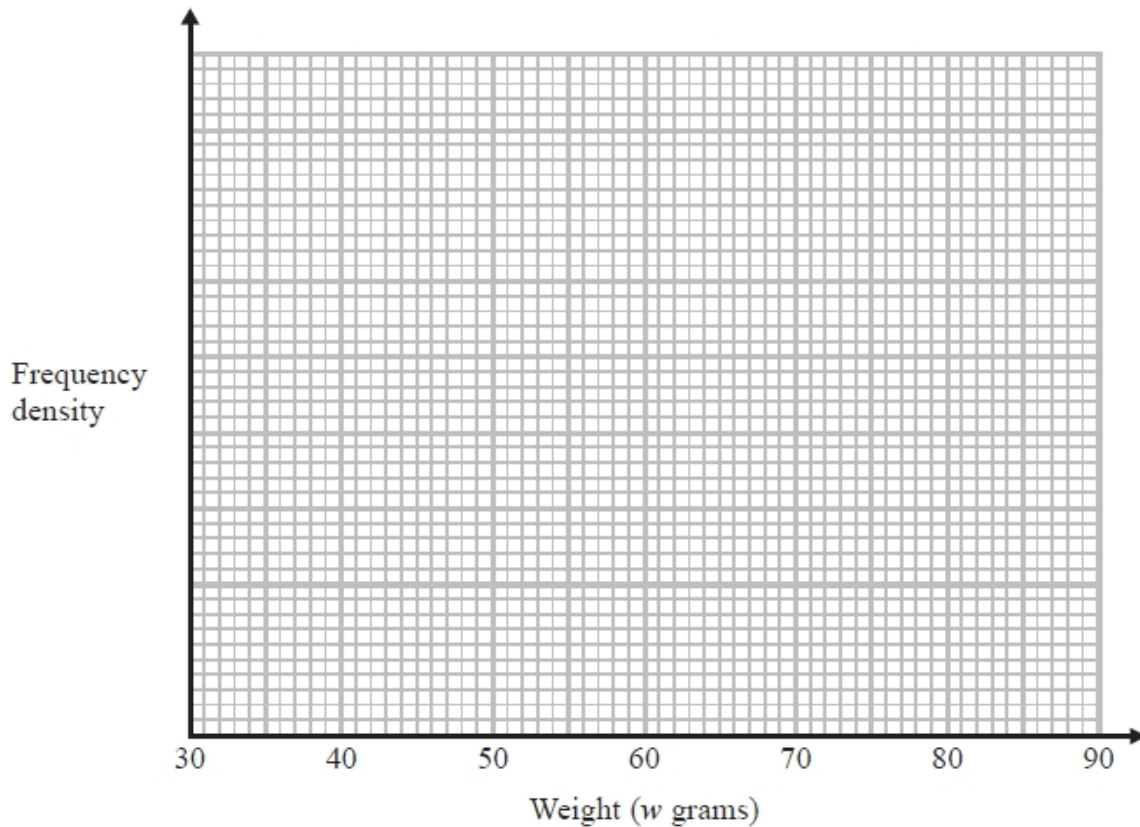
Q12.

Billy keeps chickens.

The table shows information about the weights, in grams, of eggs produced by the chickens.

Weight (w grams)	$30 < w \leq 50$	$50 < w \leq 60$	$60 < w \leq 70$	$70 < w \leq 85$
Number of eggs	12	20	17	6

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



(3)

Medium eggs weigh between 53grams and 63grams.

(b) Work out an estimate for the number of medium eggs produced.

.....
(3)

(Total for question = 6 marks)