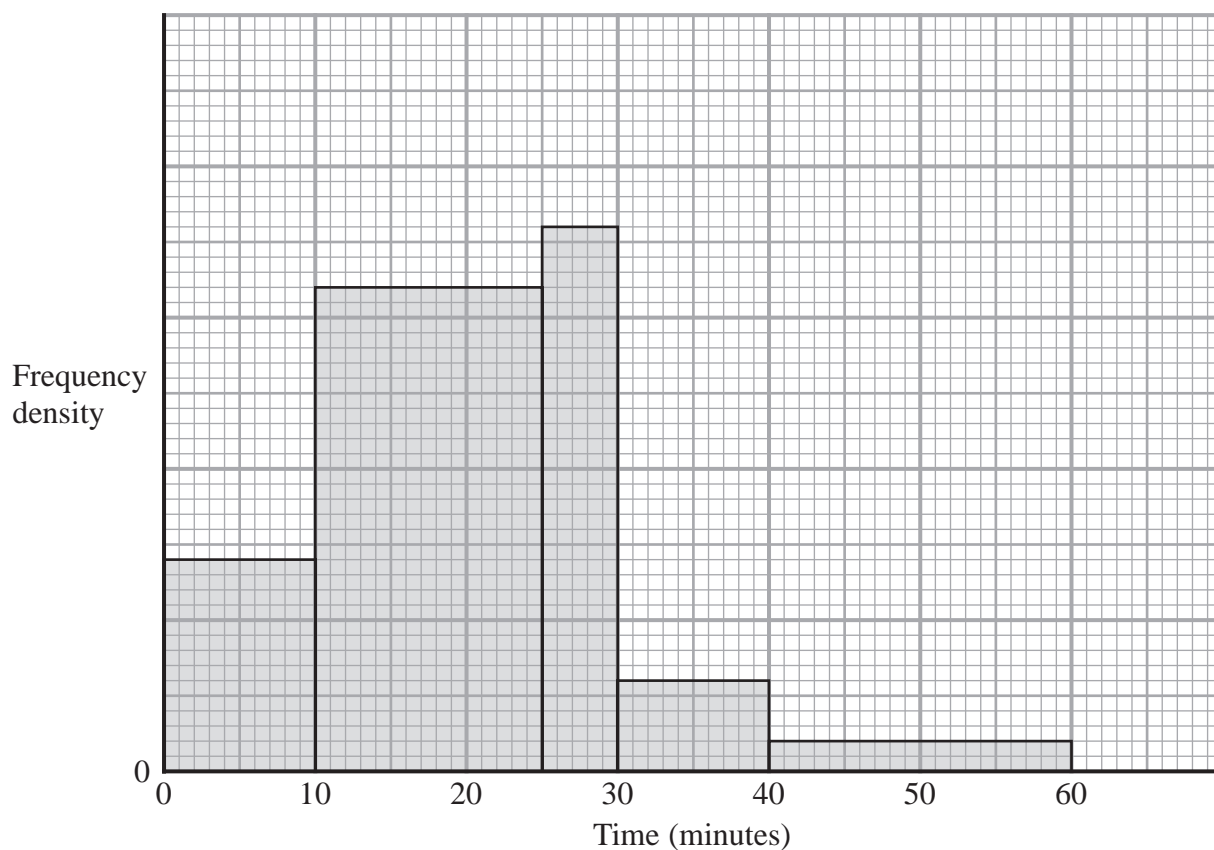**1** The histogram gives information about the times, in minutes, some customers had to wait
to be served in a restaurant.

14 customers had to wait less than 10 minutes to be served.

Work out the number of customers who had to wait less than 60 minutes to be served.

....

(Total for Question 1 is 3 marks)

2 The table gives information about the heights, in centimetres, of some plants.

Height (h cm)	Frequency
$10 < h \leqslant 20$	35
$20 < h \leqslant 35$	45
$35 < h \leqslant 50$	75
$50 < h \leqslant 70$	40
$70 < h \leqslant 80$	8

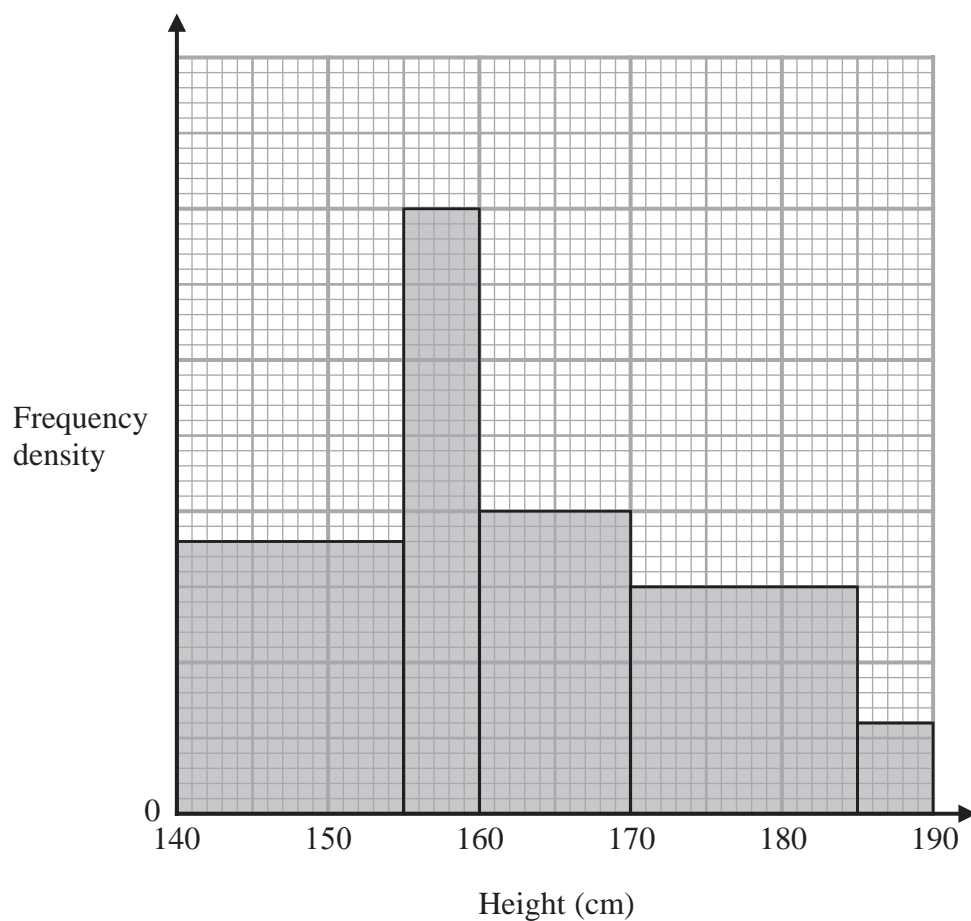(a) On the grid, draw a histogram for this information.

Height ($h$cm)
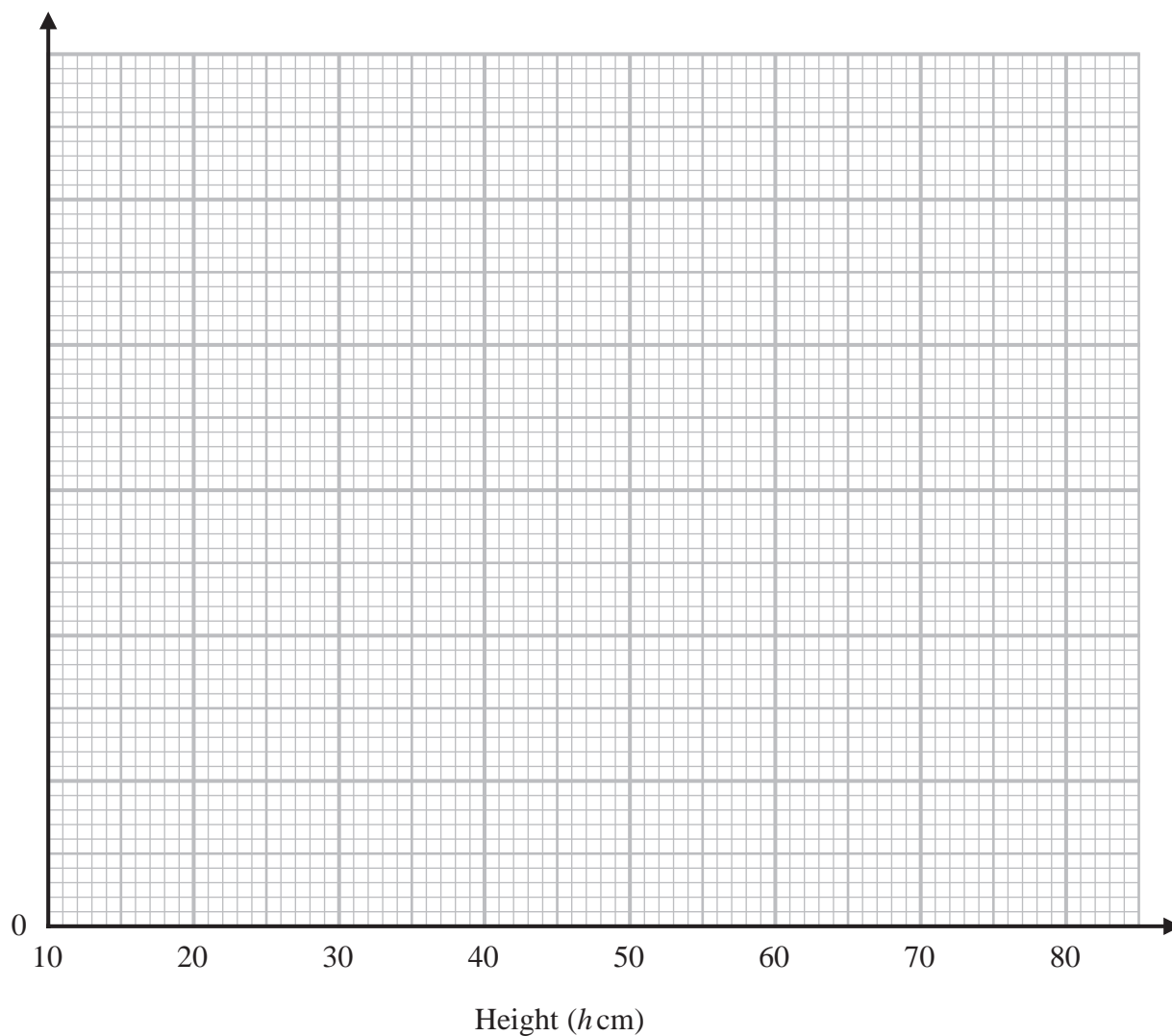
(3)

(b) Work out an estimate for the number of these plants with a height greater than 40 cm.

....

(2)

(Total for Question 2 is 5 marks)

3

Height (cm)

The histogram gives information about the heights of all the Year 11 students at a school.

There are 160 students in Year 11 with a height between 155 cm and 170 cm.

Work out the total number of students in Year 11 at the school.

....

(Total for Question 3 is 4 marks)

4 The histogram gives information about the times, in minutes, that some customers spent in a supermarket.

Time (minutes)
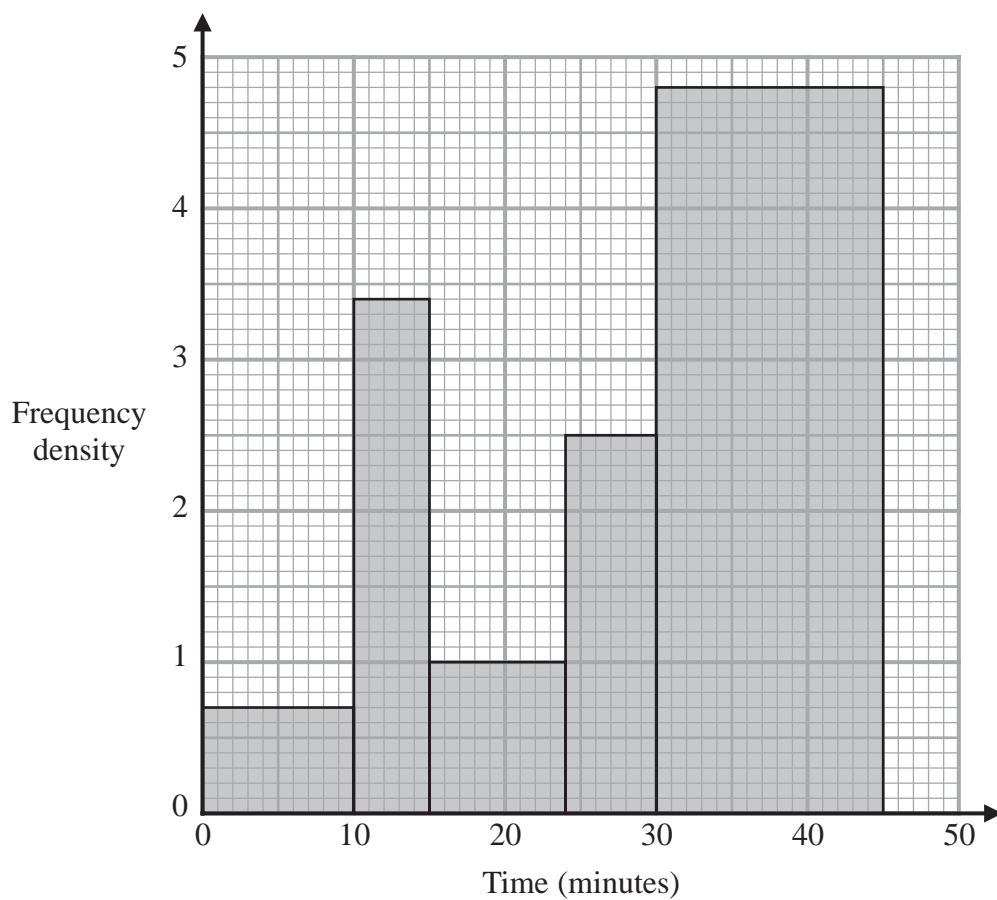
(a) Work out an estimate for the proportion of these customers who spent between 17 minutes and 35 minutes in the supermarket.

....

(3)

One of the customers is selected at random.

Given that this customer had spent more than 30 minutes in the supermarket,

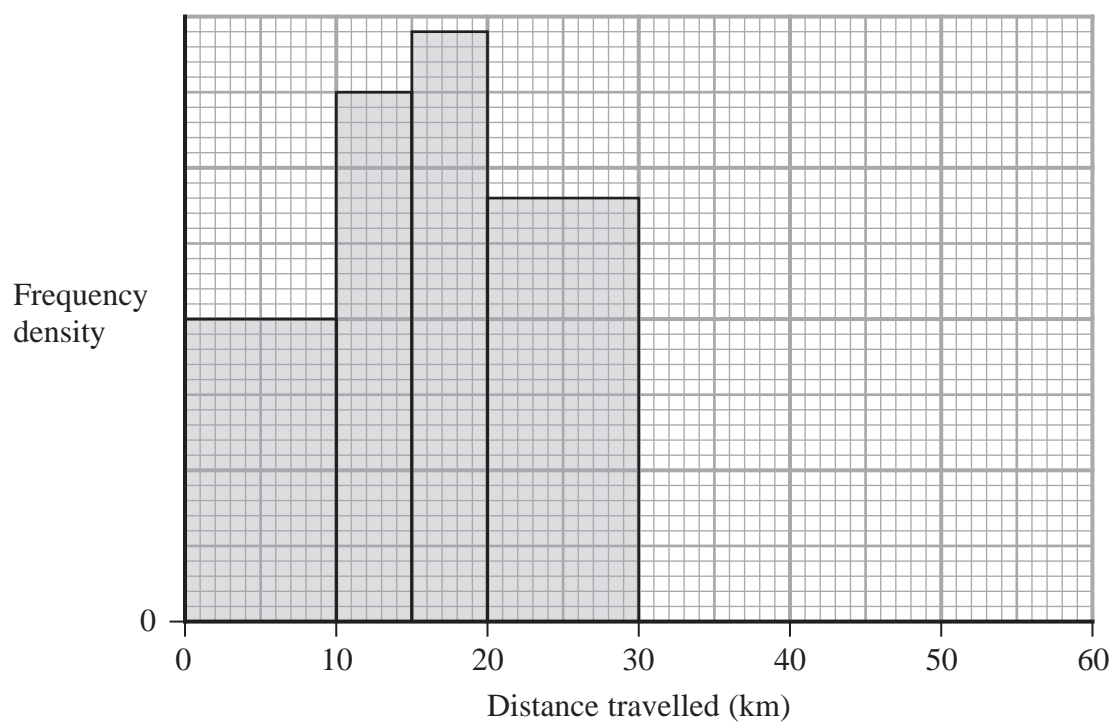(b) find the probability that this customer spent more than 36 minutes in the supermarket.

....

(2)

(Total for Question 4 is 5 marks)

5 The table and histogram give information about the distance travelled, in order to get to
work, by each person working in a large store.

Distance (*d* km)	Frequency
$0 \leqslant d < 10$	40
$10 \leqslant d < 15$	
$15 \leqslant d < 20$	
$20 \leqslant d < 30$	
$30 \leqslant d < 60$	30

Using the information in the table and in the histogram,

(a) complete the table,

(2)

(b) complete the histogram.

(1)

One of the people working in the store is chosen at random.

(c) Work out an estimate for the probability that the distance travelled by this person, in order to get to work, was greater than 25 km.

....

(2)

(Total for Question 5 is 5 marks)

6 The histogram and the table give some information about the amounts of time, in hours, that Year 11 students at Bergdesh Academy spent, in total, on their homework last week. No student in Year 11 spent longer than 9 hours on their homework.
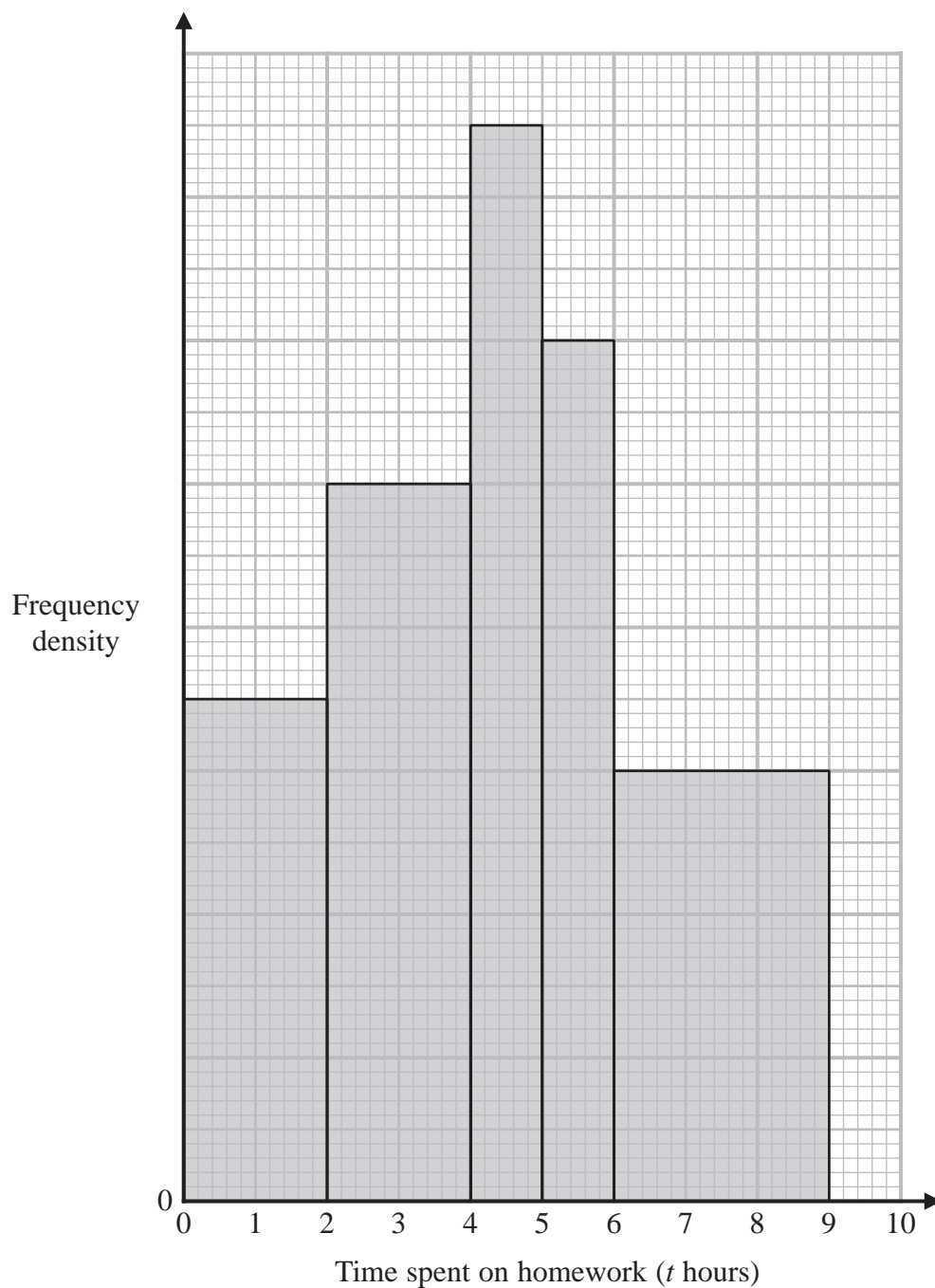
| Time spent on homework (*t* hours)	Frequency
$0 < t \leqslant 2$	28
$2 < t \leqslant 4$	
$4 < t \leqslant 5$	
$5 < t \leqslant 6$	
$6 < t \leqslant 9$	

Using the information in the histogram and in the table, work out an estimate for the mean amount of time the Year 11 students spent on their homework last week.
Give your answer in hours correct to 3 significant figures.

.... hours

(Total for Question 6 is 5 marks)

7 A postman records the weight of each parcel that he delivers.

The histogram shows information about the weights of all the parcels that the postman delivered last Monday. No parcels weighed more than 6 kg.
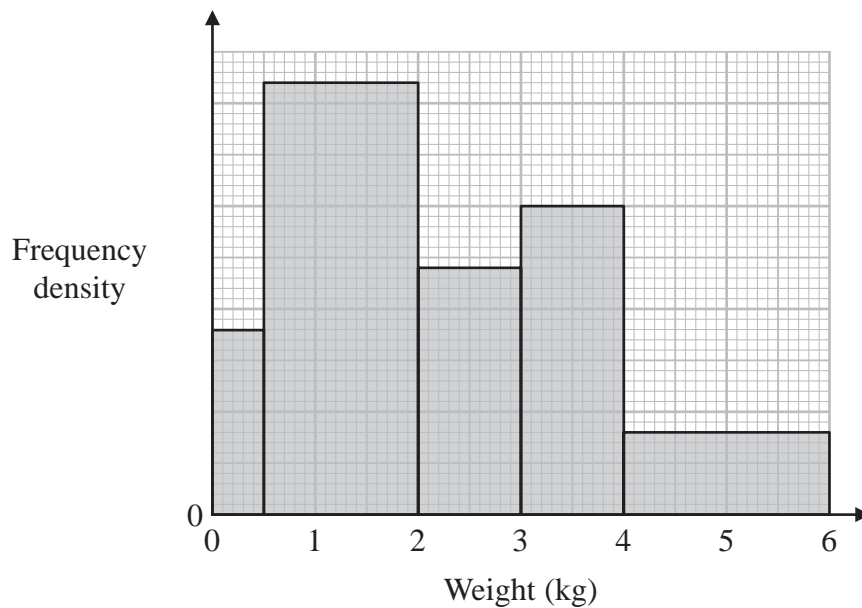
63 of the parcels that the postman delivered last Monday each had a weight between 0.5 kg and 2 kg.

(a) Work out the total number of parcels the postman delivered last Monday.

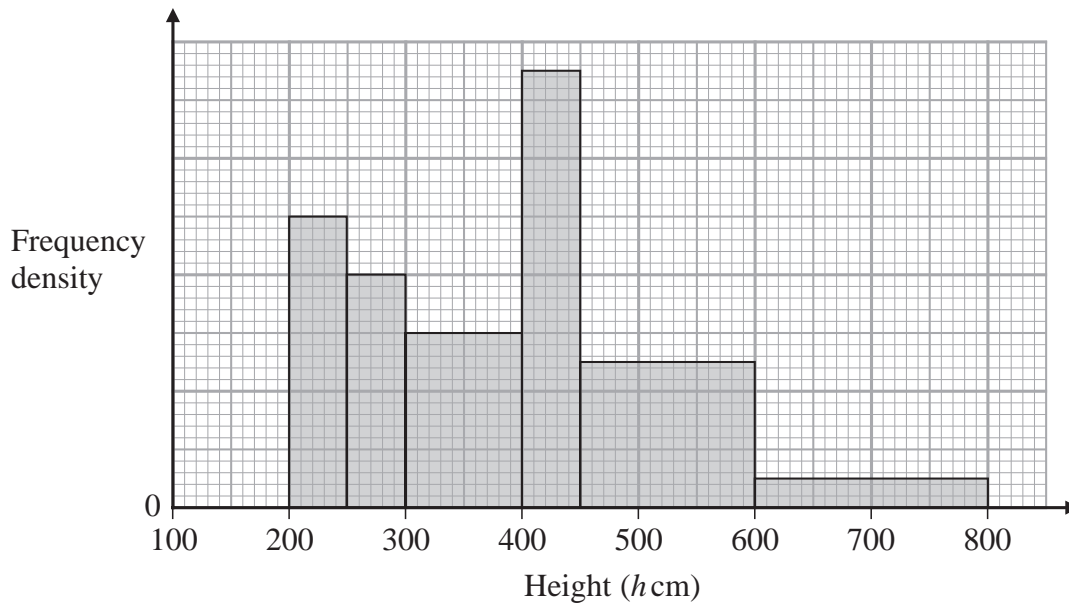..

(3)

The postman picks at random two of the records of the parcels he delivered last Monday.

(b) Work out an estimate for the probability that each parcel weighed more than 2.25 kg.

....

(3)

(Total for Question 7 is 6 marks)

8 The histogram gives information about the height, h cm, of each tree in part of a forest.


There are no trees for which $h \leqslant 200$ and for which $h > 800$

The number of trees for which $300 < h \leqslant 400$ is 8 fewer than the number of trees for which $400 < h \leqslant 500$

Work out an estimate for the number of trees in this part of the forest that have a height greater than 500 cm.

....

(Total for Question 8 is 3 marks)

9 The histogram shows information about the total time, m minutes, taken by each child in a school to walk to school every day for one week.
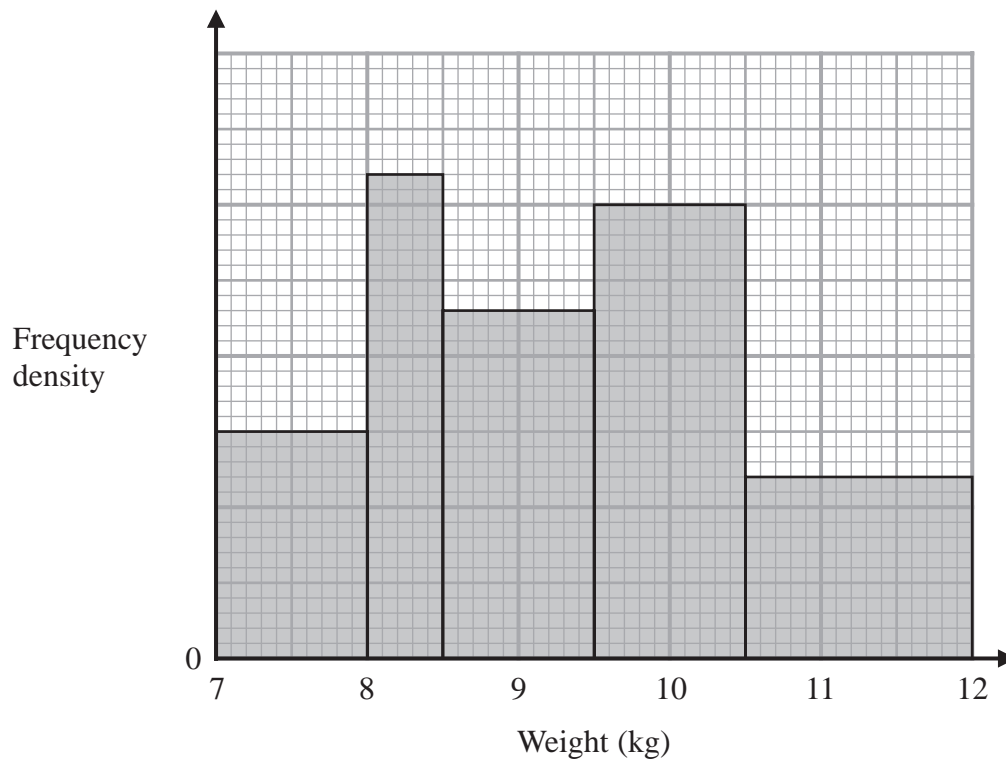

Time (m minutes)
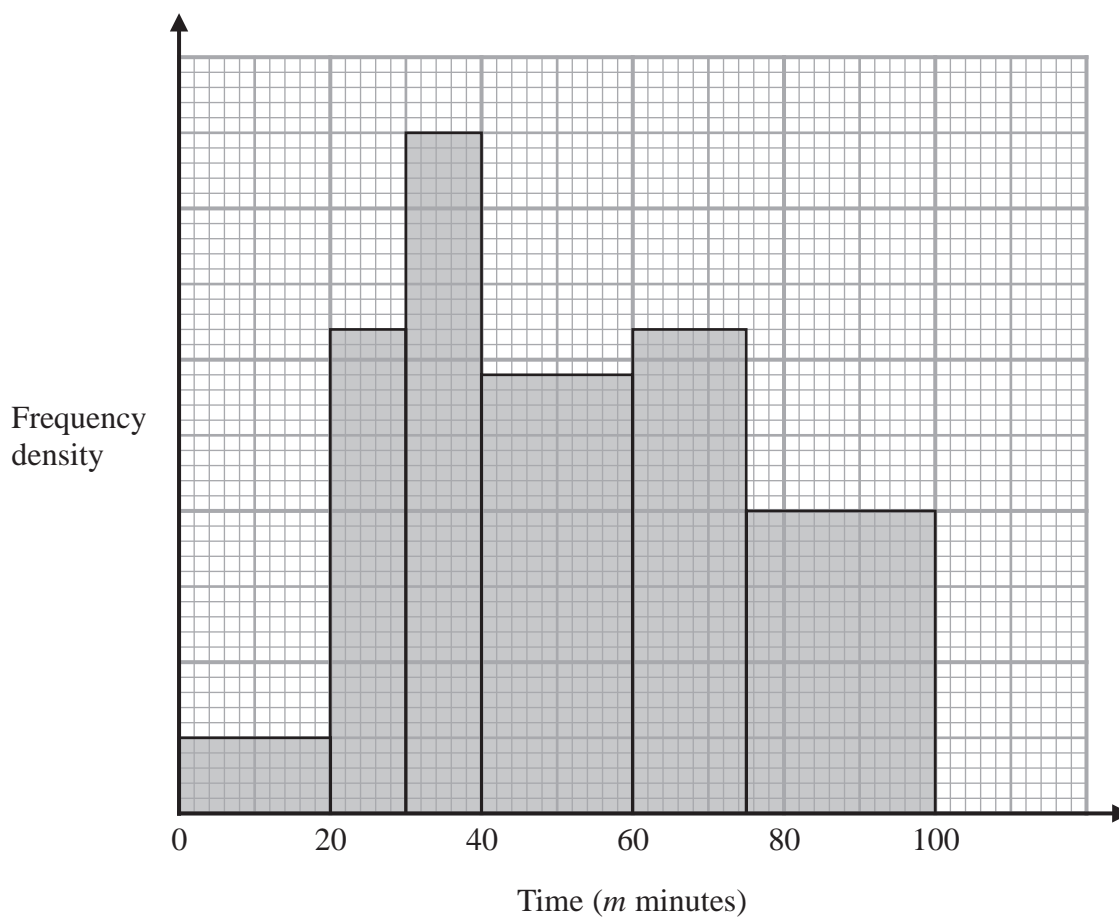
There are no children for whom $m > 100$
There are 10 children for whom $m \leqslant 20$

Work out an estimate for the number of children for whom $50 < m \leqslant 80$

....

(Total for Question 9 is 3 marks)
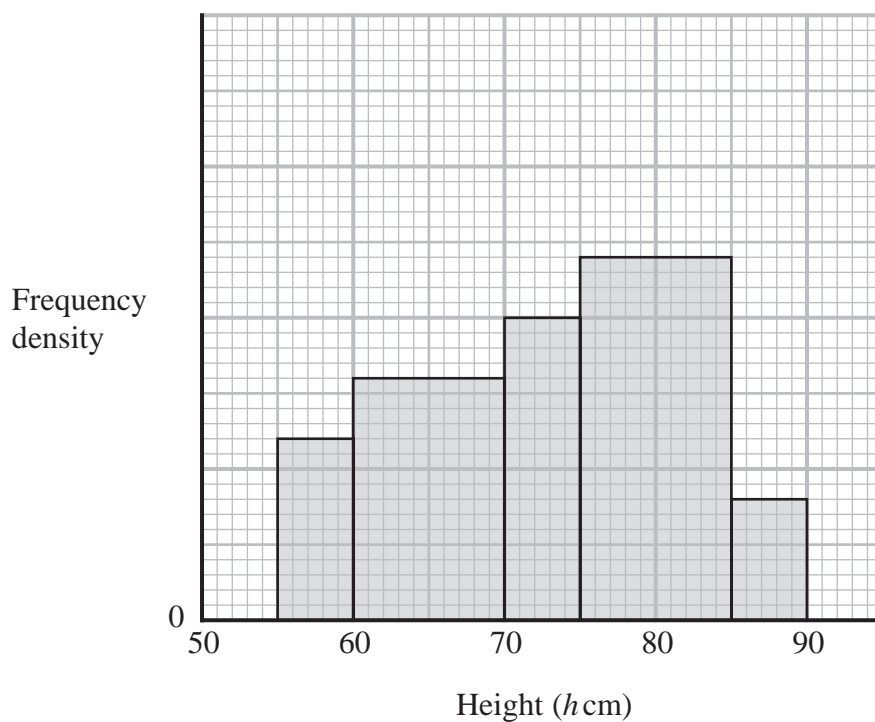
10

Frequency density

Weight (kg)

The histogram gives information about the weights, in kg, of all the watermelons in a field.

There are 16 watermelons with a weight between 8 kg and 8.5 kg

Work out the total number of watermelons in the field.

....

(Total for Question 10 is 3 marks)

11 The histogram gives information about the heights, h cm, of some tomato plants.

Height (h cm)

There are 12 tomato plants for which $75 < h \leqslant 85$
One of the tomato plants is selected at random.

Find an estimate for the probability that this tomato plant has a height greater than 82.5 cm

....

(Total for Question 11 is 4 marks)

12 The table gives information about the time taken by each student in Year 11 to complete a homework task.

Time taken (*t* minutes)	Frequency
$10 < t \leqslant 25$	15
$25 < t \leqslant 30$	18
$30 < t \leqslant 50$	32
$50 < t \leqslant 60$	4

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

Time taken (*t* minutes)
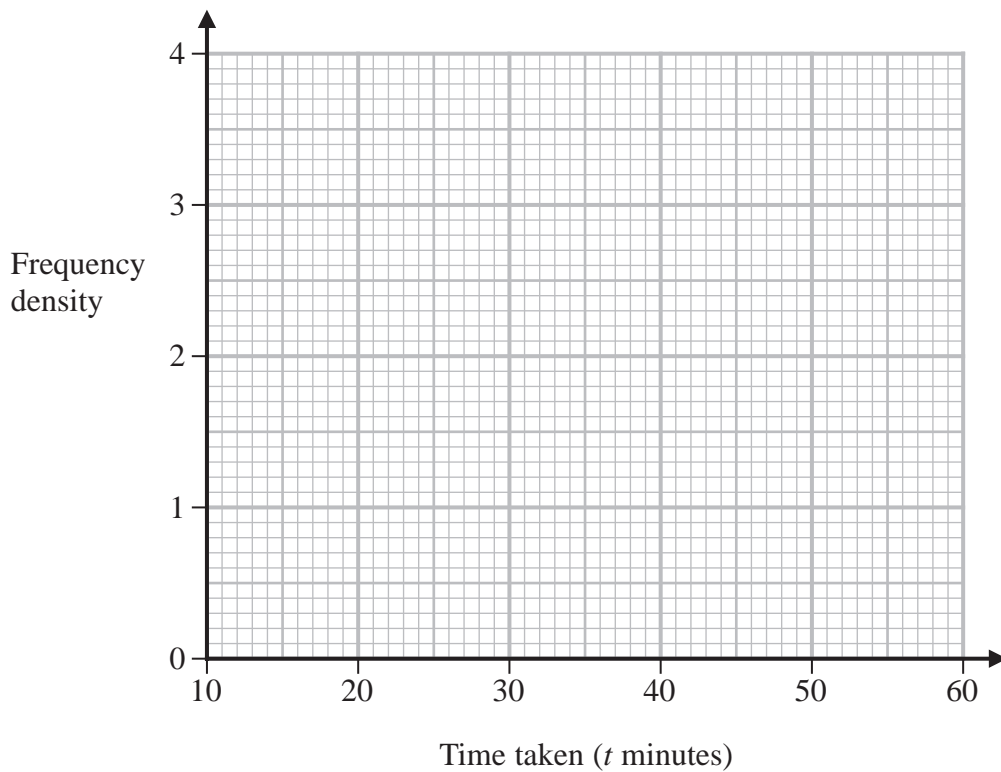
(3)

One of these students who took 50 minutes or less and more than 25 minutes to complete this homework task is chosen at random.

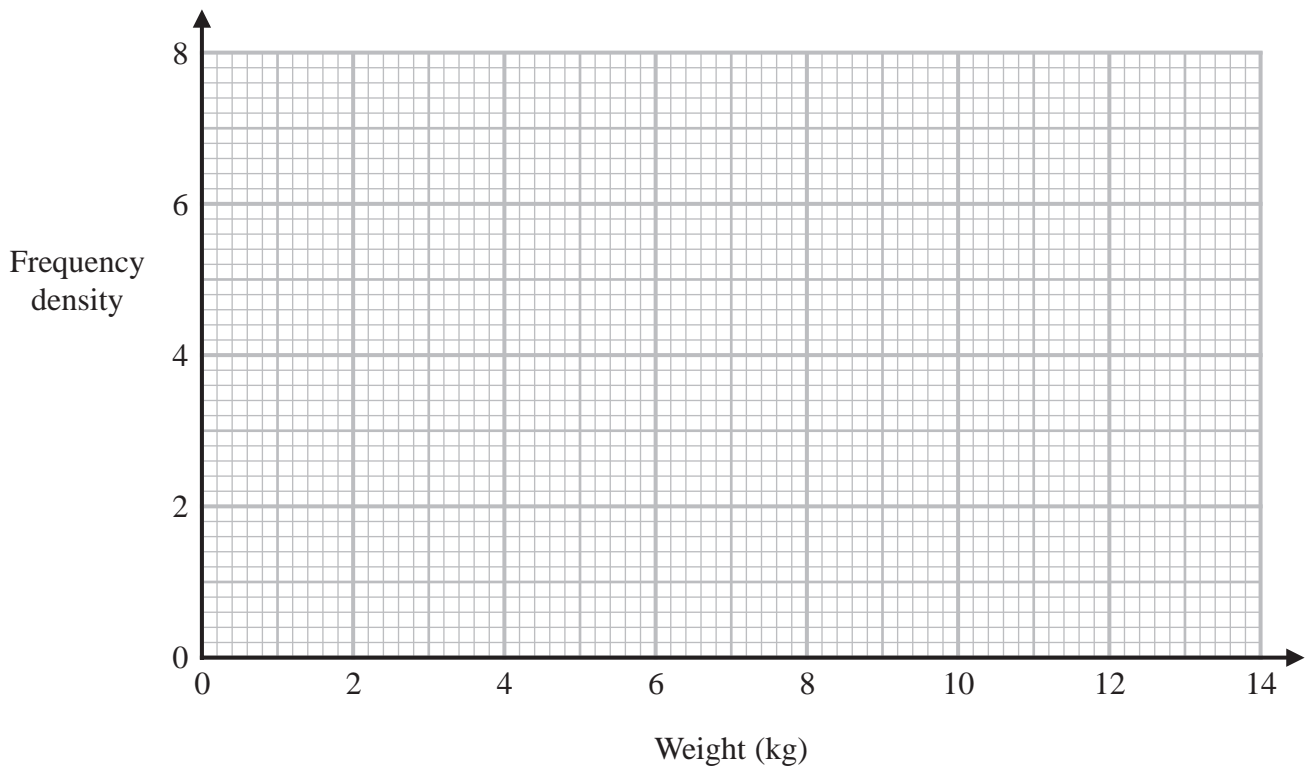(b) Find an estimate for the probability that this student took 45 minutes or less to complete this homework task.

....

(2)

(Total for Question 12 is 5 marks)

13 The table gives information about the weights, in kg, of the parcels that Pedro delivers on Monday.

Weight (w kg)	Frequency
$0 < w \leqslant 2$	12
$2 < w \leqslant 3$	7
$3 < w \leqslant 6$	15
$6 < w \leqslant 9$	12
$9 < w \leqslant 14$	9

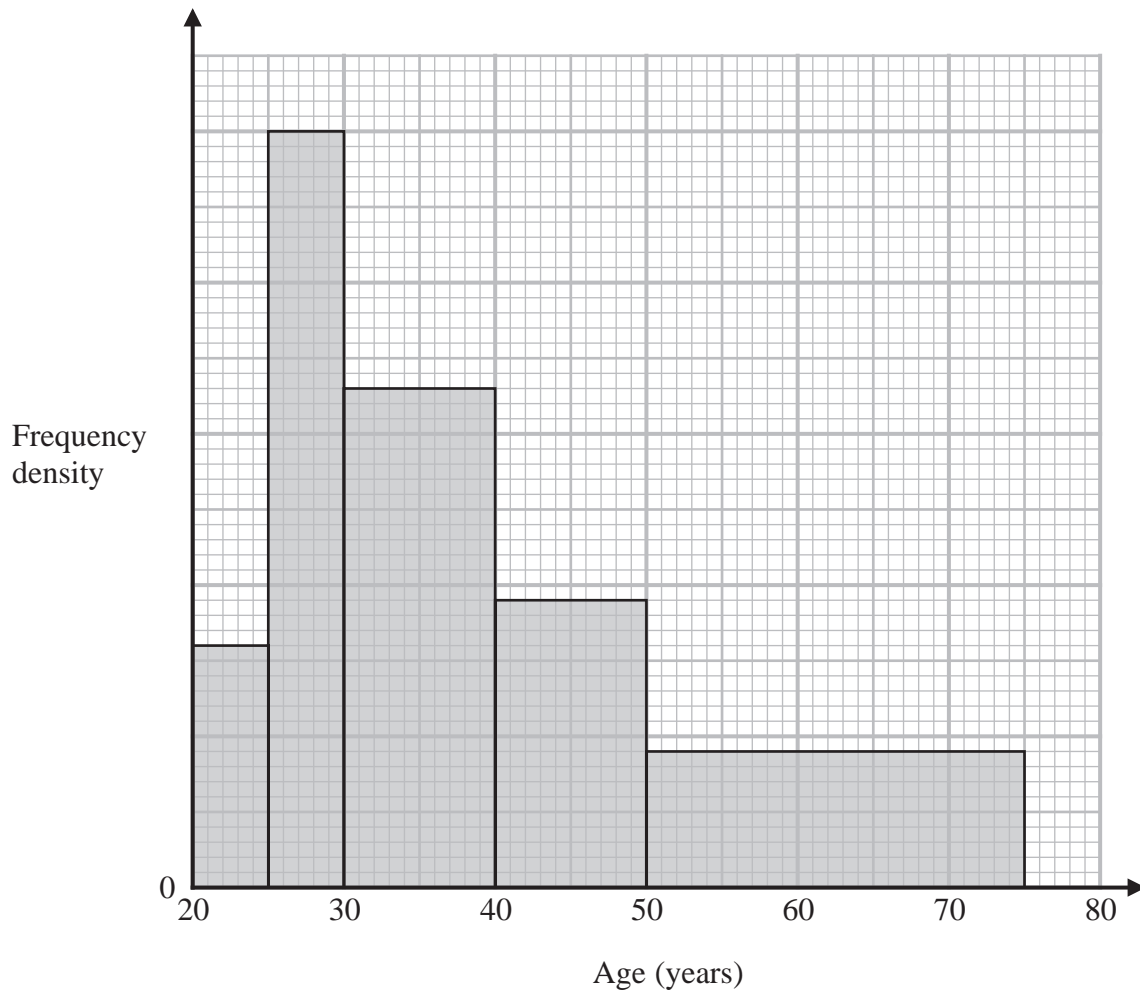(a) On the grid, draw a histogram for this information.

(3)

(Total for Question 13 is 3 marks)

14 Some people attend a concert.
The histogram shows information about the ages of these people.

Age (years)

Work out an estimate for the percentage of these people who are aged more than
55 years.
Give your answer correct to one decimal place.

....%

(Total for Question 14 is 4 marks)

15 The incomplete table and incomplete histogram give information about the times, in minutes, that 140 people waited at a station for a train.

Time (*t* minutes)	Frequency
$0 < t \leqslant 5$	23
$5 < t \leqslant 15$	
$15 < t \leqslant 30$	
$30 < t \leqslant 40$	18
$40 < t \leqslant 60$	14
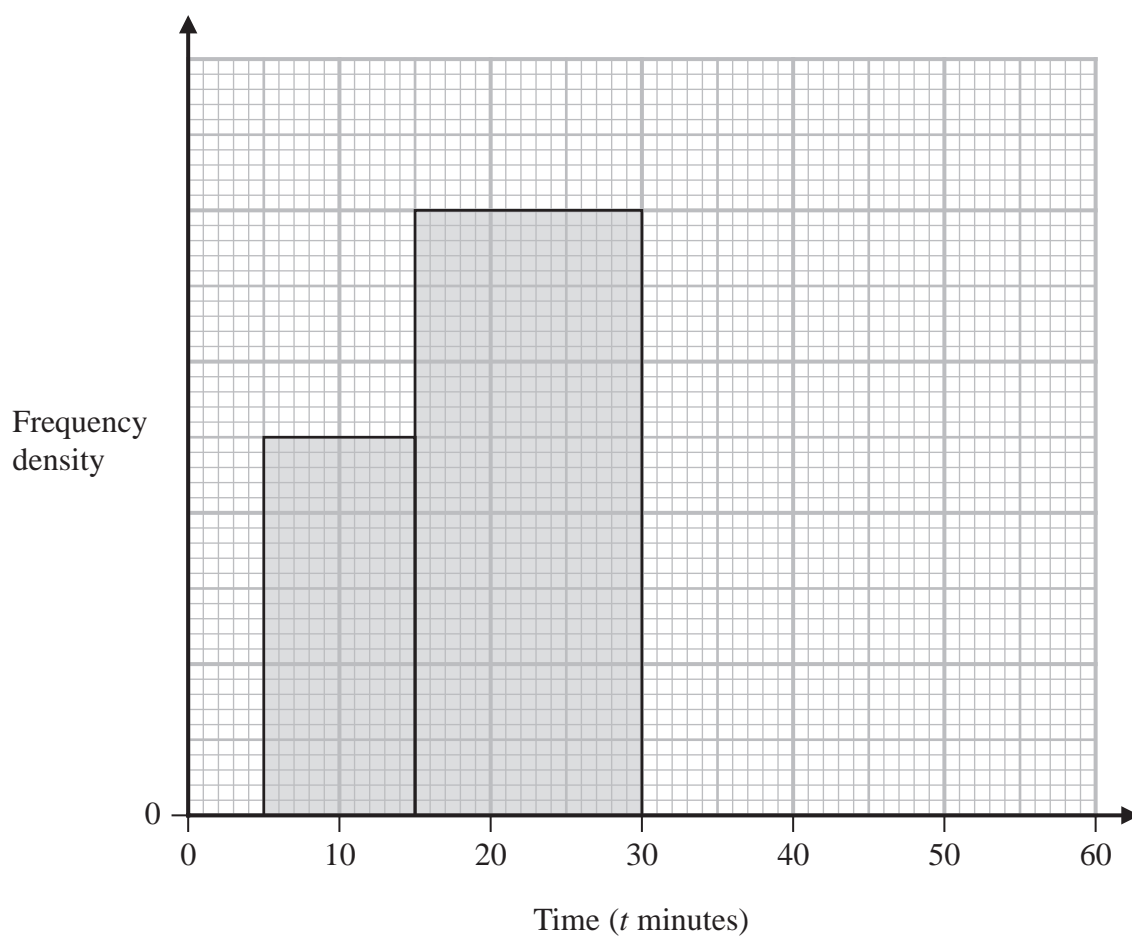
Complete the table and the histogram.

(Total for Question 15 is 4 marks)