Name:

Date:

Histograms

GCSE
Edexcel
Mathematics
Grade (9-1)

Mark	Score (%)
33	

Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

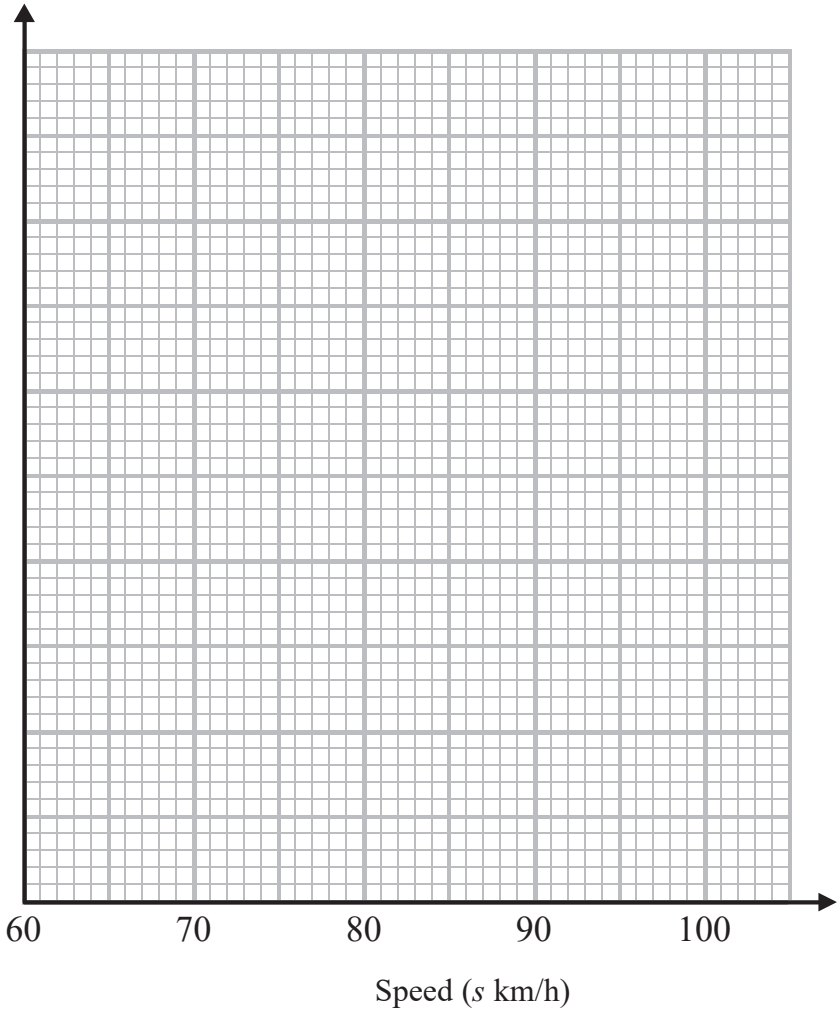
- The marks for the questions are shown in brackets

Leave blank

1 The table gives some information about the speeds, in km/h, of 100 cars.

Speed (s km/h)	Frequency
$60 < s \leqslant 65$	15
$65 < s \leqslant 70$	25
$70 < s \leqslant 80$	36
$80 < s \leqslant 100$	24

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



(3)

(b) Work out an estimate for the number of cars with a speed of more than 85 km/h.

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(2)

(Total for question 1 is 5 marks)

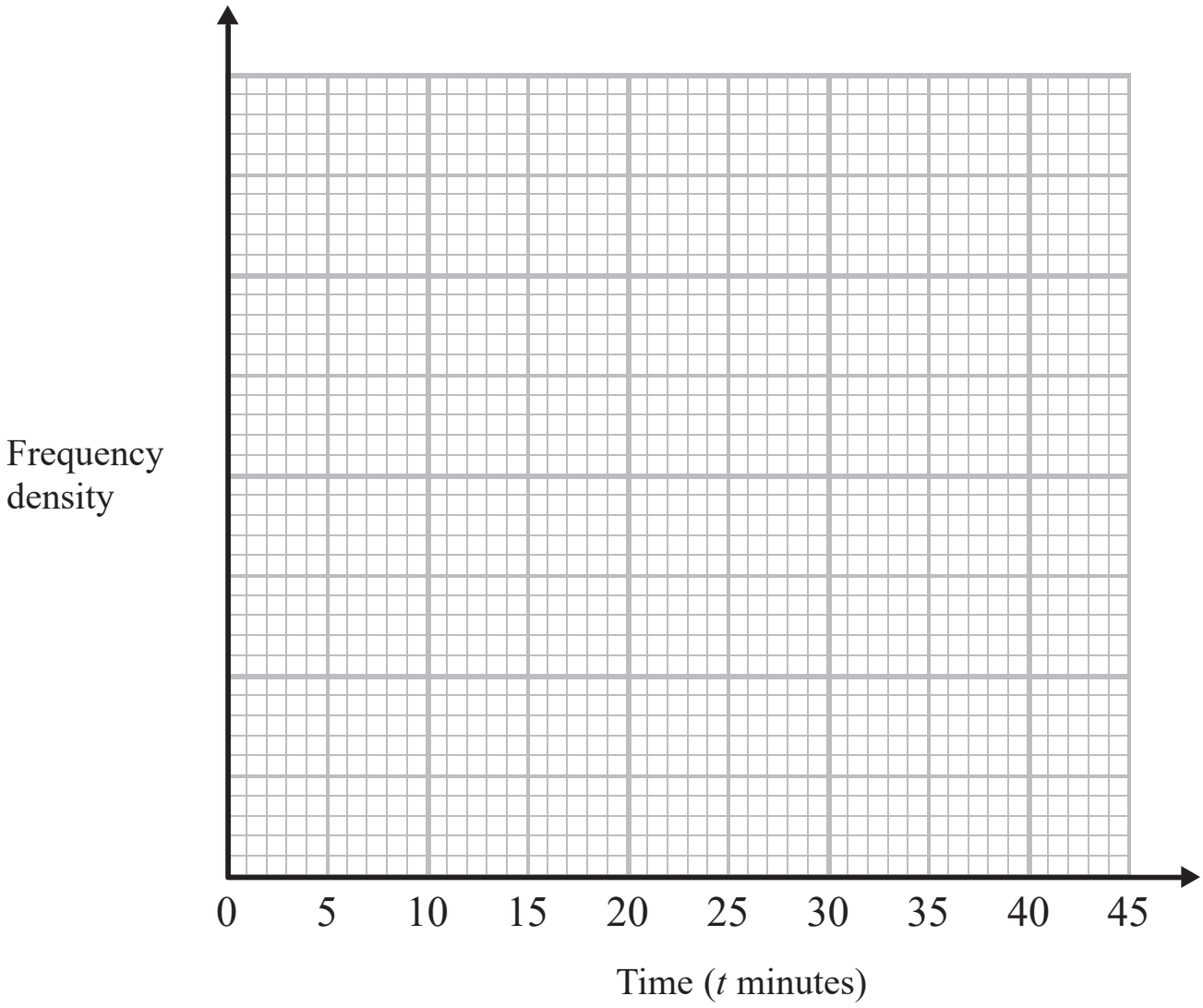
Leave blank

2 Dillon works for a computer service centre.

The table shows some information about the length of time, t minutes, of the phone calls Dillon had.

Time (t minutes)	$0 < t \leqslant 10$	$10 < t \leqslant 15$	$15 < t \leqslant 20$	$20 < t \leqslant 30$	$30 < t \leqslant 45$
Number of calls	12	15	13	18	3

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



(3)

(b) Work out an estimate for the number of calls greater than 22 minutes.

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(2)

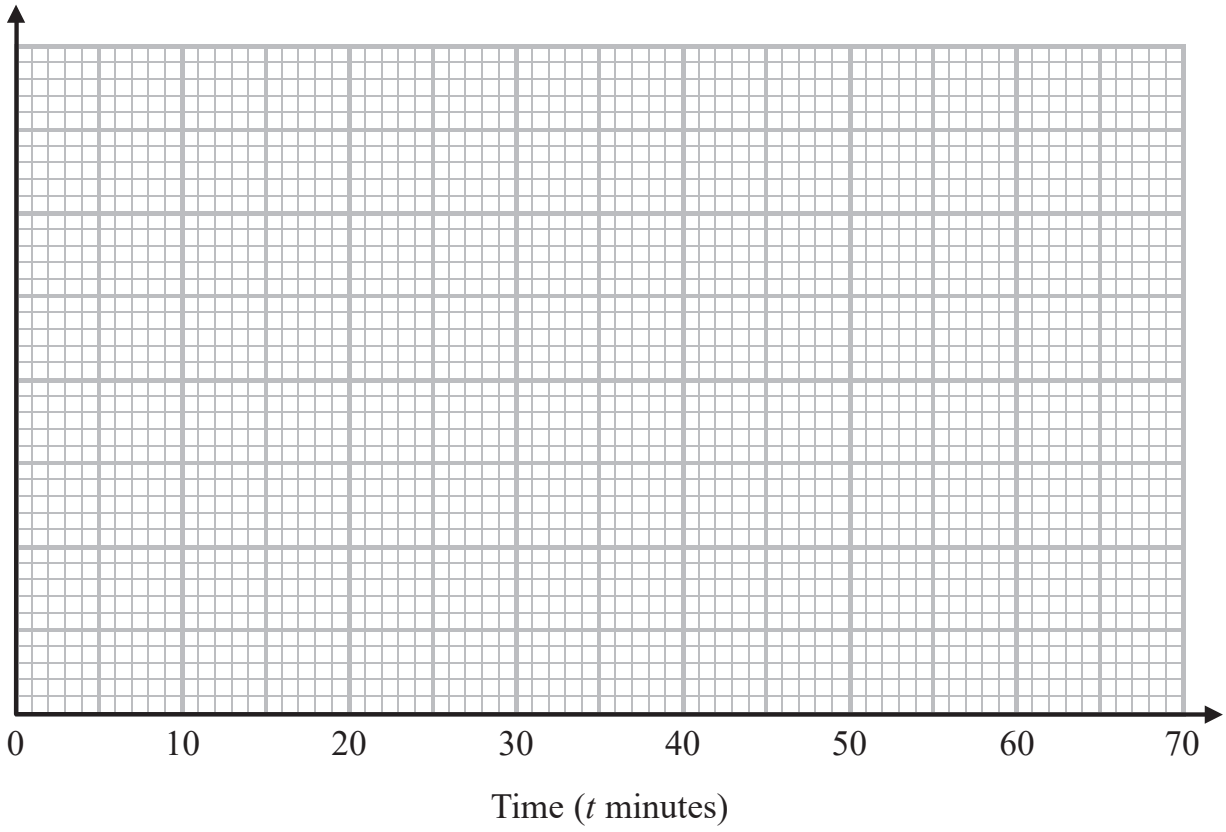
(Total for question 2 is 5 marks)

Leave blank

3 The table gives information about the lengths of time some people were in a supermarket.

Time (t minutes)	Frequency
$0 < t \leqslant 5$	8
$5 < t \leqslant 15$	32
$15 < t \leqslant 30$	36
$30 < t \leqslant 40$	18
$40 < t \leqslant 60$	6

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



(3)

A person becomes suspicious if they have spent over 45 minutes in the supermarket.

(b) Estimate the number of people who are suspicious.

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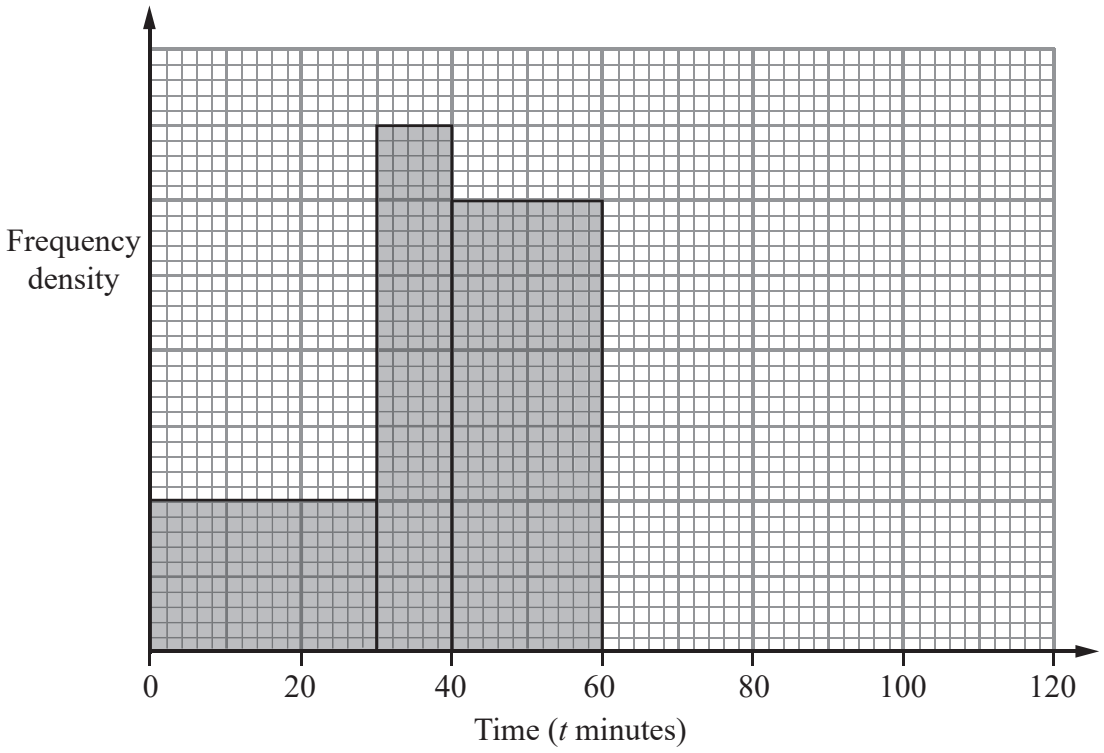
(2)

(Total for question 3 is 5 marks)

Leave blank

4 The incomplete histogram and table give some information about the times, in minutes, that cars were parked in a car park.



(a) Use the information in the histogram to complete the frequency table. **(2)**

Time (t minutes)	Frequency
$0 < t \leqslant 30$	
$30 < t \leqslant 40$	35
$40 < t \leqslant 60$	
$60 < t \leqslant 80$	30
$80 < t \leqslant 120$	20

(b) Use the information in the table to complete the histogram. **(2)**

(c) Estimate the number of cars who spent between 40 to 1 hour and 15 minutes in the car park.

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(2)

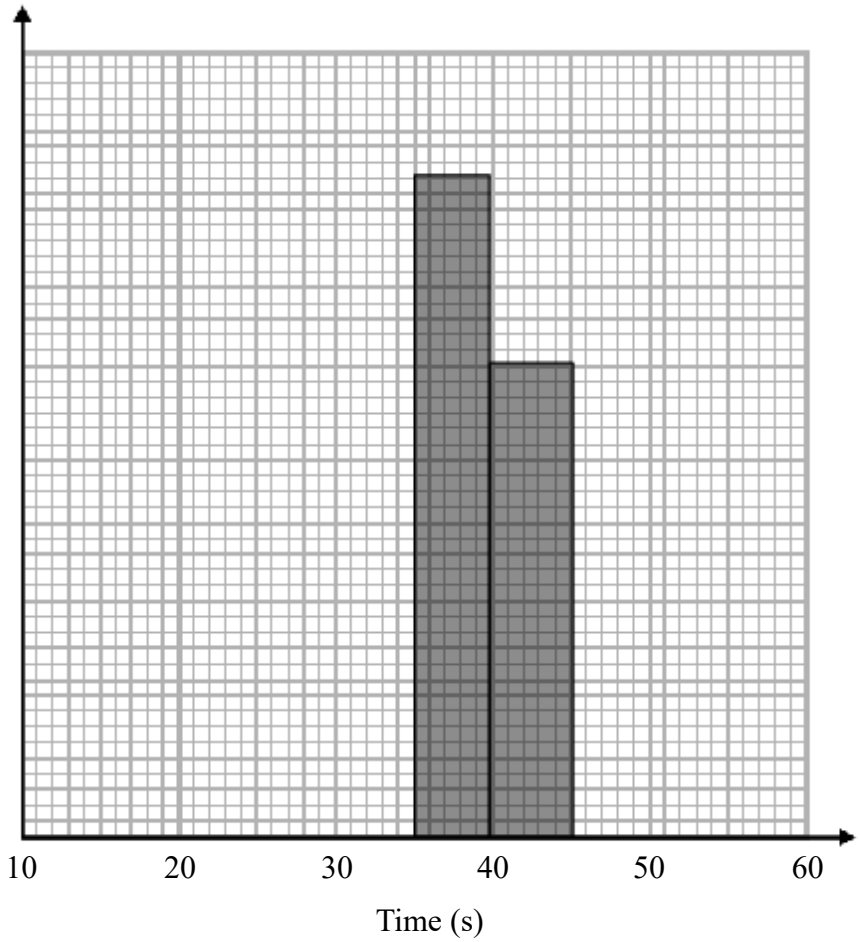
(Total for question 4 is 6 marks)

Leave blank

5 The table shows information about the time, in seconds, taken for some people to complete a puzzle.

Time (s)	Frequency
$10 < t \leqslant 25$	12
$25 < t \leqslant 35$	28
$35 < t \leqslant 40$	42
$40 < t \leqslant 45$	
$45 < t \leqslant 60$	9

(a) Use the information on the table to complete the histogram.



(3)

(b) Use the histogram to complete the table.

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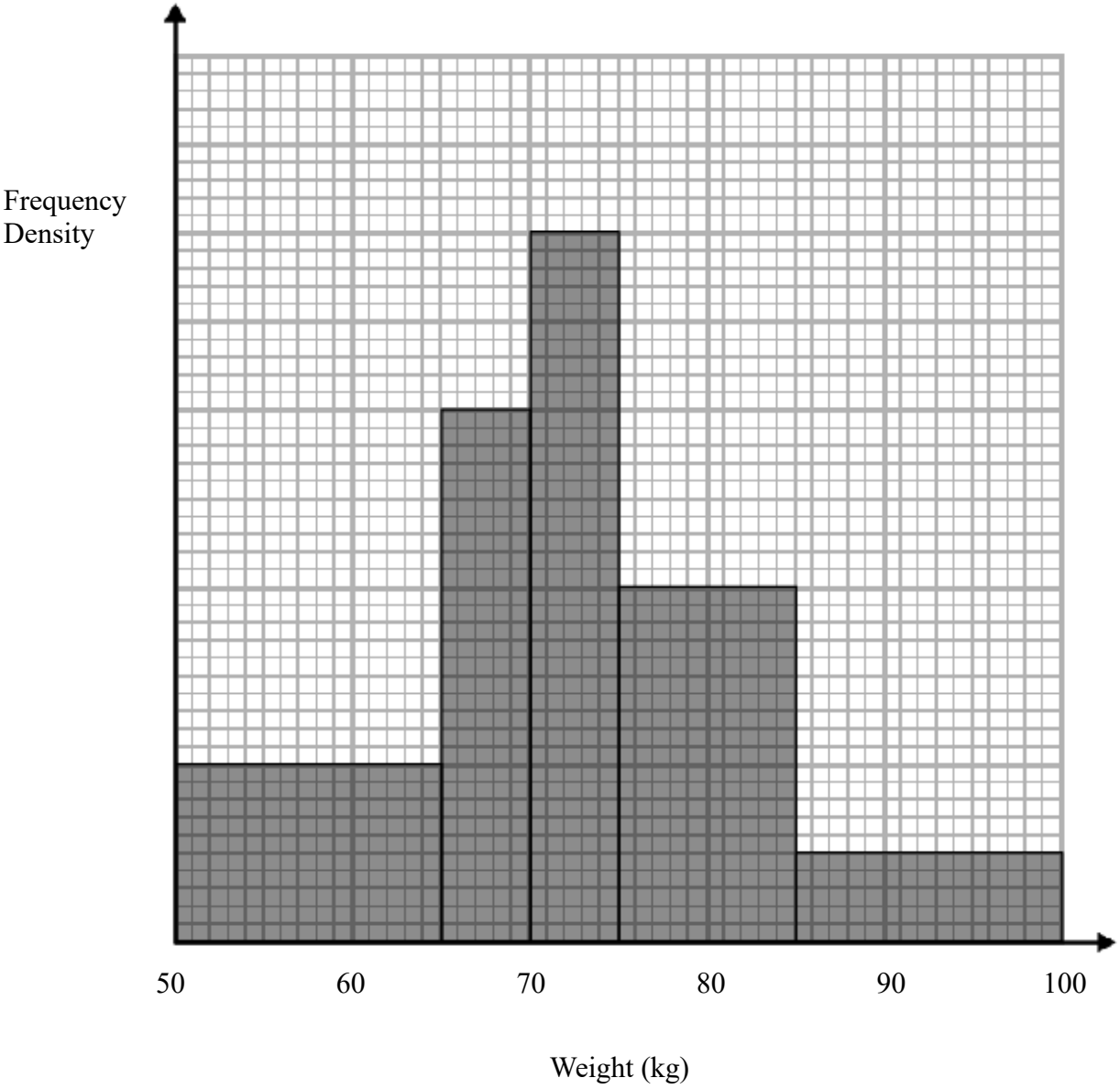
(1)

(Total for question 5 is 4 marks)

Leave blank

6 The histogram shows information about the weight of pigs.



30 pigs weigh between 50 and 65 kg.

(a) Work out an estimate for the number of pigs which weigh more than 80kg.

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(3)

(b) Explain why your answer to part a is only an estimate.

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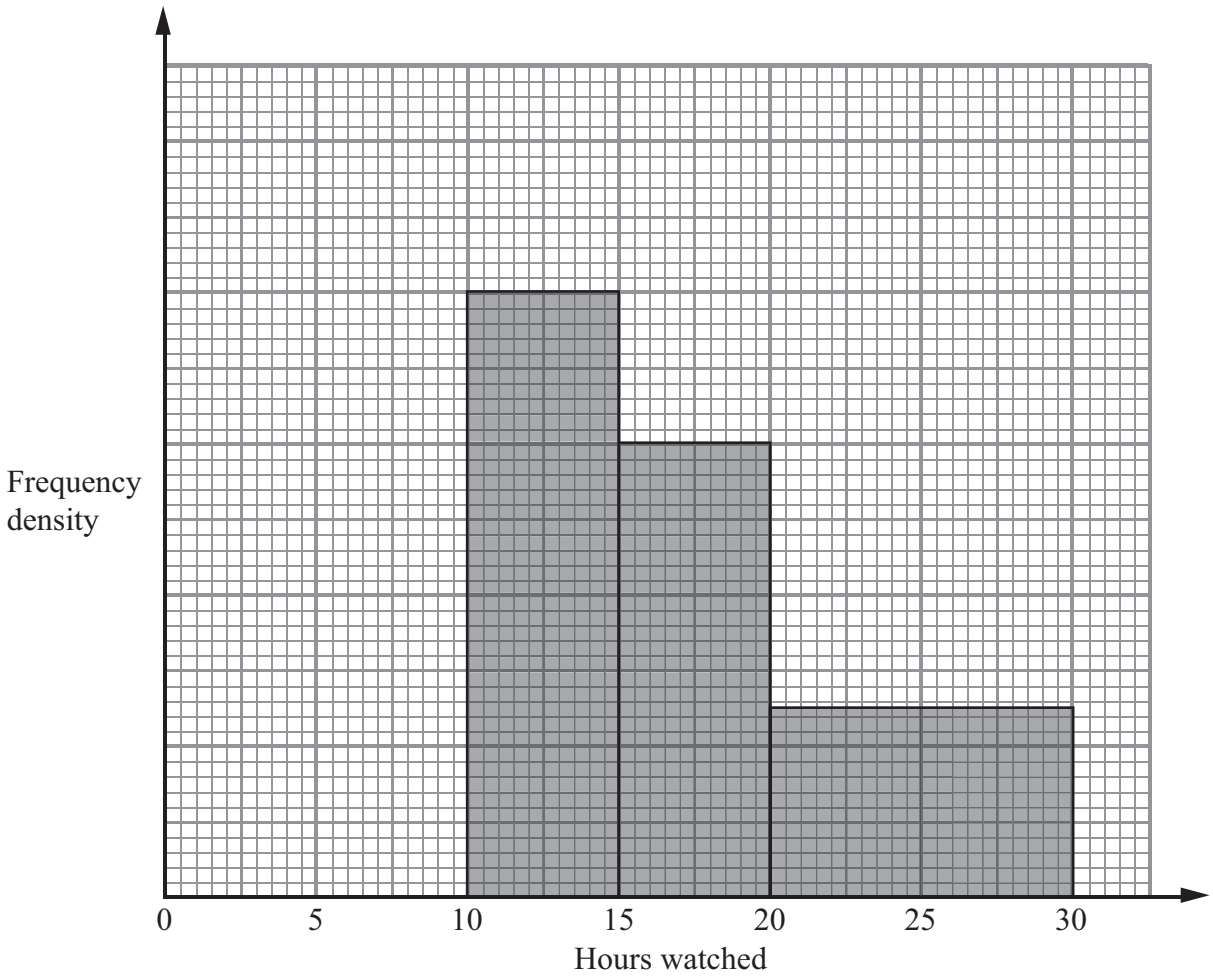
(1)

(Total for question 6 is 4 marks)

Leave blank

7 Tom asked the students in his class how many hours they watched television last week.

The incomplete histogram was drawn using his results.



Eight students watched television for between 10 and 15 hours.
Six students watched television for between 0 and 10 hours.

(a) Use this information to complete the histogram.

(2)

No students watched television for more than 30 hours.

(b) Work out how many students Tom asked.

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(2)

(Total for question 14 is 4 marks)