1 200 people recorded the time they spent on social media one day.

The table shows the results.

Time, t (mins)	Frequency	Midpoint	
$0 \leqslant t < 30$	24		
$30 \leqslant t < 50$	76		
$50 \leqslant t < 60$	52		
$60 \leqslant t < 90$	48		
	Total = 200		

1 (a) Work out an estimate of the mean time.

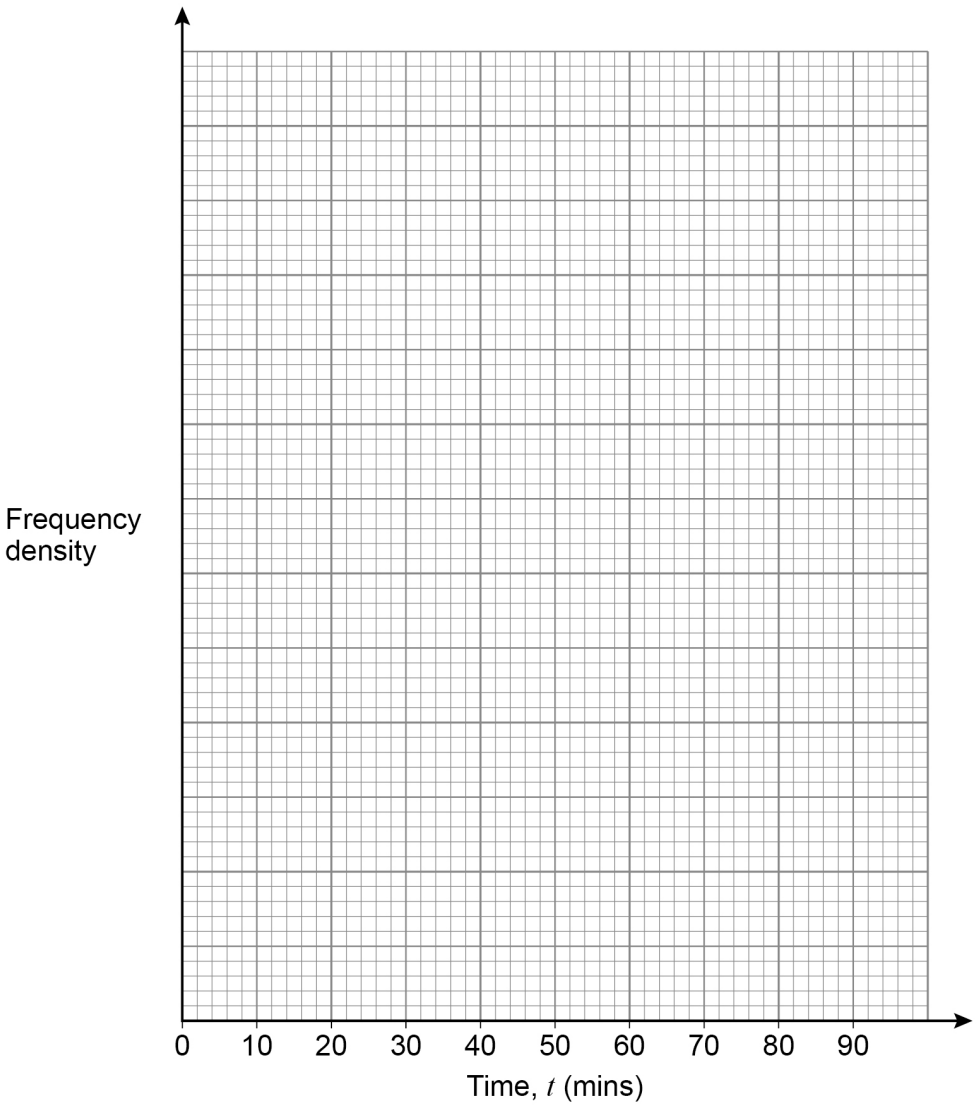
[3 marks]

Answer _____ mins

1 (b) Draw a histogram to represent the results.

[4 marks]

Time, t (mins)	Frequency	Class width	
$0 \leqslant t < 30$	24		
$30 \leqslant t < 50$	76		
$50 \leqslant t < 60$	52		
$60 \leqslant t < 90$	48		



2 102 boys and 85 girls took a test.

The table shows information about the mean marks.

	Boys	**Girls**
Number of students	102	85
Mean mark	68.5	72.4

The pass mark for the test was 70

Was the mean mark for **all** of these students greater than the pass mark?

You **must** show your working.

[3 marks]

3 Six positive numbers have

a mean of 10

a range of 19

Four of the numbers are 12 7 15 3

Work out the other two numbers.

[3 marks]

Answer _____ and _____

4 A school play takes place each day from Monday to Friday.

Here are the attendances on four of the days.

Monday	Tuesday	Wednesday	Thursday
72	83	88	97

For all **five** days, the mean attendance is 90

Work out the attendance on Friday.

[3 marks]

Answer _____

5 Sunita is x years old.

Beth is one year younger than Sunita.

Joel is double Sunita's age.

The mean of their ages is 5

How old is **Joel**?

[5 marks]

Answer _____

6 Here is a list of 11 whole numbers in numerical order.

The lower quartile, median, upper quartile and highest value are missing.

5	8		13	19		25	28		34	

- median = 2 × lower quartile
- upper quartile = 2.5 × lower quartile
- range = 2 × interquartile range

Complete the list.

[2 marks]

7 A company has 123 employees.

Information about their hourly rates of pay is shown in the table.

Hourly rate, £*p*	**Number of employees**
$10 \leqslant p < 14$	66
$14 \leqslant p < 20$	32
$20 \leqslant p < 40$	15
$40 \leqslant p < 100$	10
	Total = 123

The owner of the company uses the data to make two statements.

Statement A

"Over 30% of employees have an hourly rate that is more than £17"

Statement B

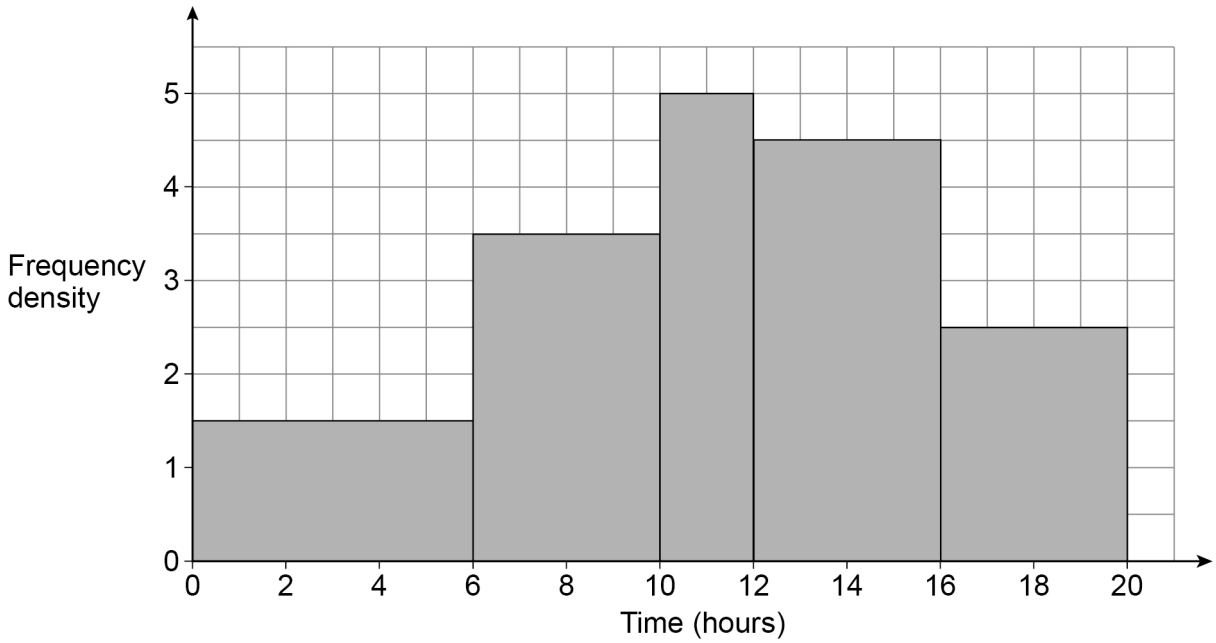
"The average hourly rate of pay is more than £20"

7 (a) Work out an estimate of the mean to support **Statement B**.

[3 marks]

8 61 students recorded how many hours they spent revising for a test.

The histogram represents the results.



8 (a) Work out an estimate of the mean time the 61 students spent revising.

You may use the table to help you.

[4 marks]

Time, x (hours)	Frequency	Midpoint	
$0 \leqslant x < 6$			
$6 \leqslant x < 10$			
$10 \leqslant x < 12$			
$12 \leqslant x < 16$			
$16 \leqslant x < 20$			

Answer _____ hours

8 (b) Give a reason why the answer to part (a) is an estimate.

[1 mark]

9 The table shows information about the ages of members of two clubs.

	Median age (years)	**Interquartile range of ages (years)**
Swimming club	21.2	7.3
Cycling club	29.7	4.6

Compare the average age and consistency of ages for the members of the two clubs.

[2 marks]

Average _____

Consistency _____

10 Liam takes part in long jump competitions.

Here is some information about 40 of his jumps.

Length of jump, d metres	**Number of jumps**	**Midpoint**	
$7.0 \leqslant d < 7.4$	15		
$7.4 \leqslant d < 7.8$	18		
$7.8 \leqslant d < 8.2$	7		
	Total = 40		

Work out an estimate of the mean distance of these 40 jumps.

Give your answer as a decimal.

[3 marks]

Answer _____ m