

- 1 200 people recorded the time they spent on social media one day.
The table shows the results.

Time, t (mins)	Frequency	Midpoint	
$0 \leq t < 30$	24	15	360
$30 \leq t < 50$	76	40	3040
$50 \leq t < 60$	52	55	2860
$60 \leq t < 90$	48	75	3600
Total = 200			

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

[3 marks]

$$24 \times 15 = 360$$

$$52 \times 55 = 2860$$

$$76 \times 40 = 3040$$

$$48 \times 75 = 3600$$

$$\text{mean} = \frac{360 + 3040 + 2860 + 3600}{200}$$

$$= \frac{9860}{200}$$

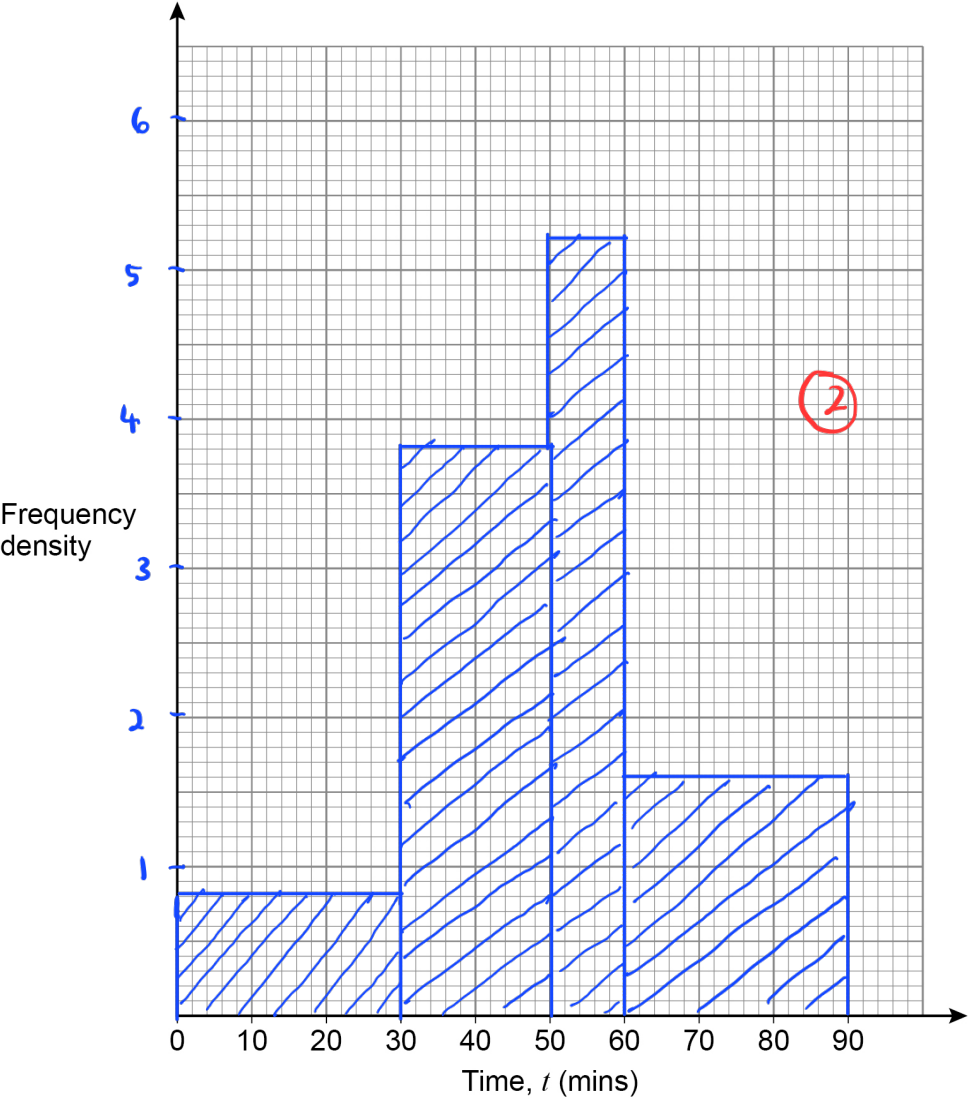
$$= 49.3$$

Answer 49.3 mins

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

[4 marks]

Time, t (mins)	Frequency	Class width	Frequency density
$0 \leq t < 30$	24	30	0.8
$30 \leq t < 50$	76	20	3.8
$50 \leq t < 60$	52	10	5.2
$60 \leq t < 90$	48	30	1.6



2 Here is some information about the time spent on social media by 40 women and 40 men last week.

Time spent, t (hours)	Number of women	Number of men
$2 < t \leq 5$	12	10
$5 < t \leq 8$	11	17
$8 < t \leq 11$	14	9
$11 < t \leq 14$	2	4
$14 < t \leq 17$	1	0

Tick **one** box for each statement. [3 marks]

	Definitely true	Might be true	Cannot be true
Three of the women spent more than 11 hours on social media.	☒ 1	☐	☐
The range for the men is 15 hours.	☐	☐	☒ 1
The women have a higher median than the men.	☐	☒ 1	☐