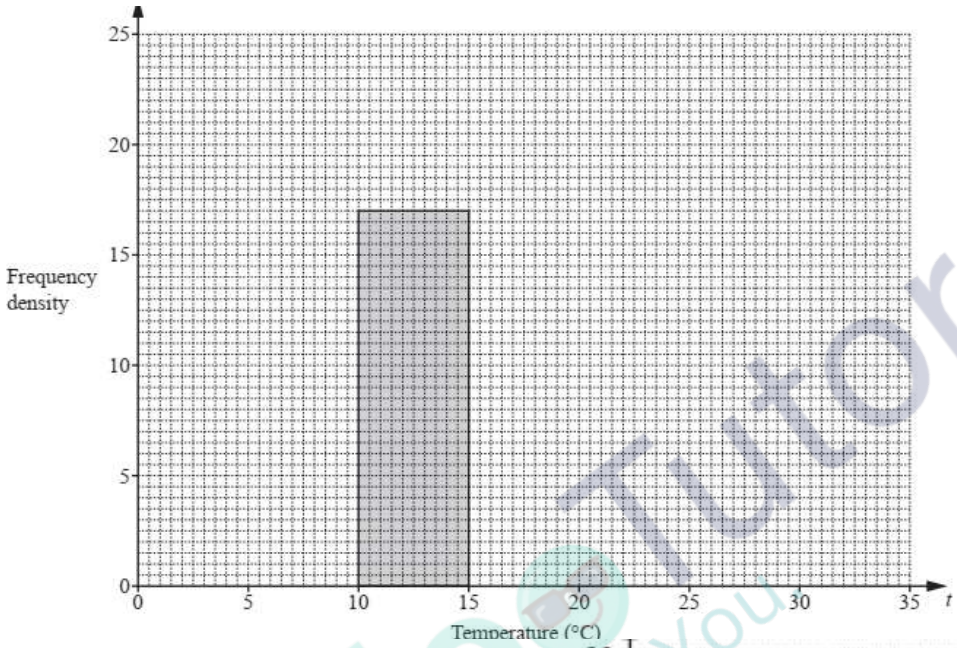
Frequency density = $\frac{Frequency}{class\ width}$ **, Frequency = Freq density x class width (area of bar)**

1. During one year the midday temperatures, t°C, in Zedford were recorded.
   The table shows the results.

Temperature (t°C)	$0 < t \leqslant 10$	$10 < t \leqslant 15$	$15 < t \leqslant 20$	$20 < t \leqslant 25$	$25 < t \leqslant 35$
Number of days	50	85	100	120	10

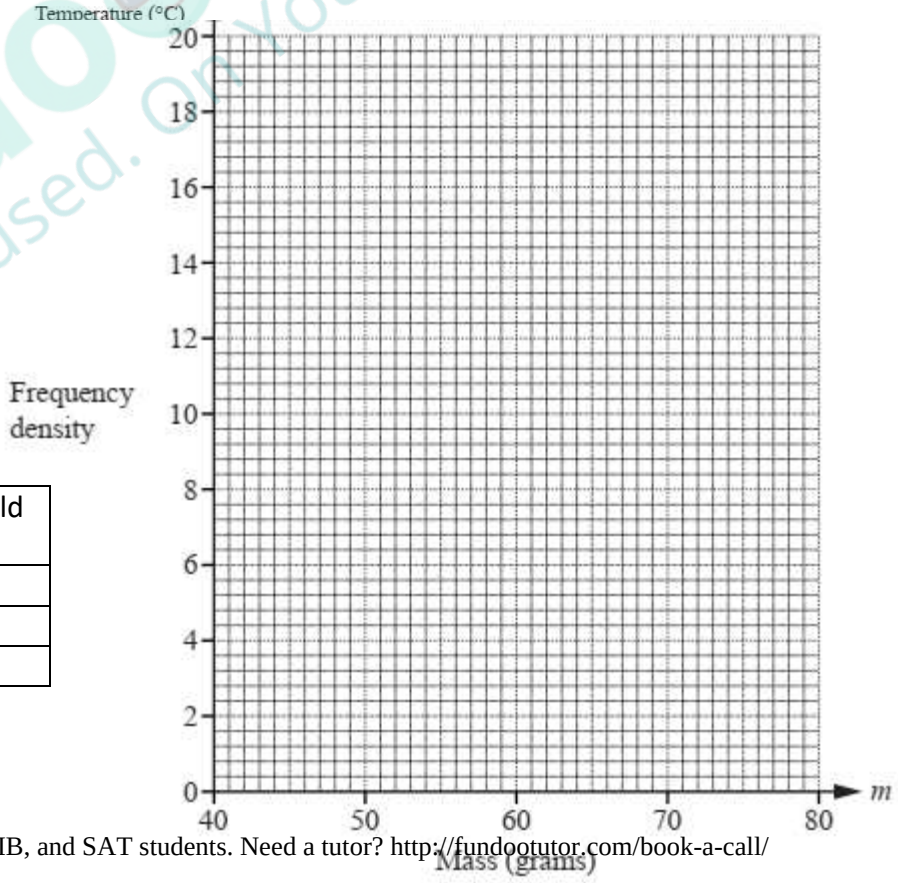


Complete the histogram to show the information in the table.
0580/41/M/J/19 Q4)

2. Three sizes of eggs are sold in a shop.
   The table shows the number of eggs of each size sold in one day
   On the grid, draw a histogram to show the information in the table. [4]

Size	Mass (m grams)	Eggs sold
Small	$46<m\leq 52$	78
Medium	$52<m\leq 62$	180
Large	$62<m\leq 80$	162

0580/43/M/J/18 Q3 (c)



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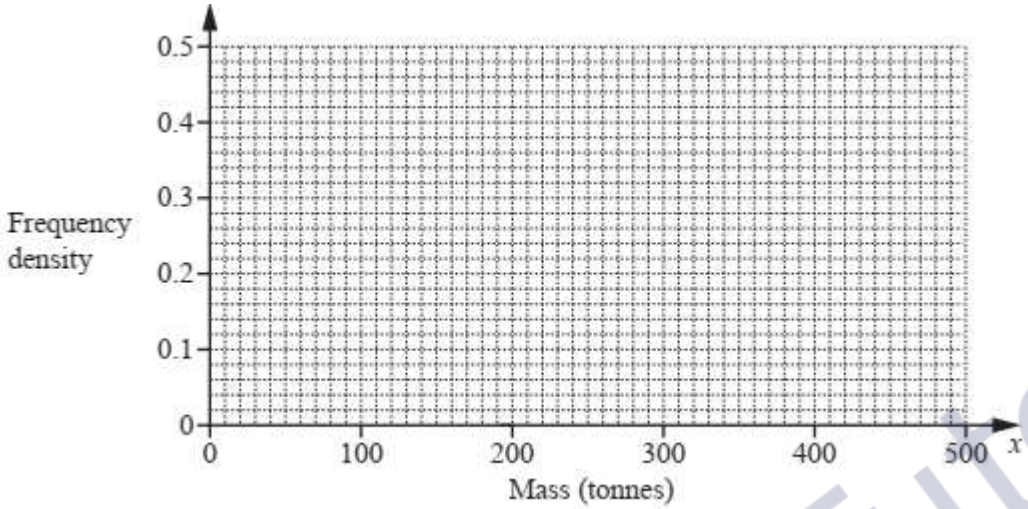
3. A factory recycles metal.

The mass, x tonnes, of metal is measured each week.

The table shows the results for 52 weeks.

Mass (x tonnes)	$100 < x \leqslant 200$	$200 < x \leqslant 250$	$250 < x \leqslant 300$	$300 < x \leqslant 500$
Frequency	8	20	12	12

On the grid, draw a histogram to show the information in the table. [4]



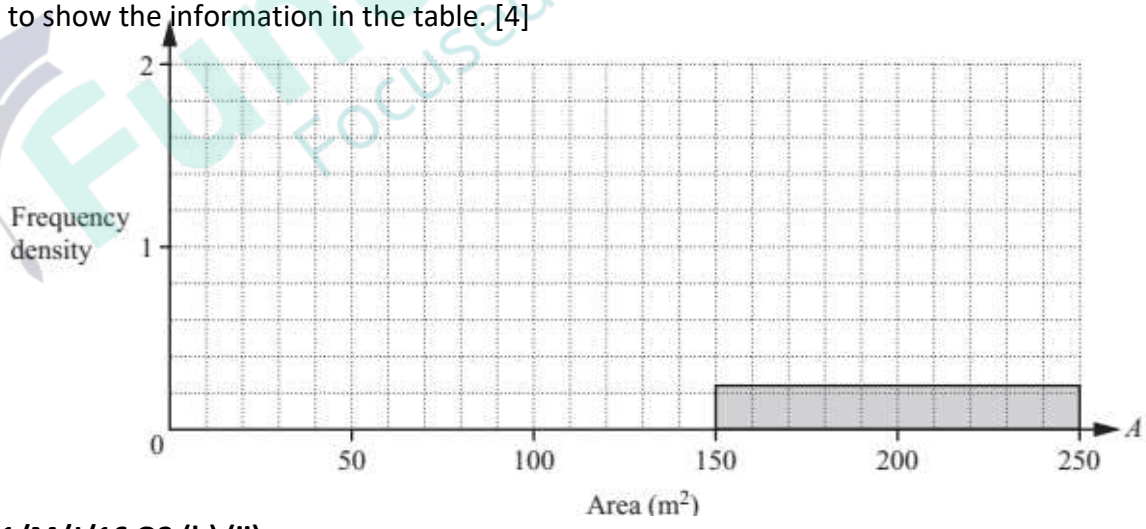
0580/43/O/N/18 Q5(a) (ii)

4. In a school 200 students estimate the total area, Am^2, of the windows in the classroom.

The results are shown in the table.

Area (A m^2)	$20 < A \leqslant 60$	$60 < A \leqslant 100$	$100 < A \leqslant 150$	$150 < A \leqslant 250$
Frequency	32	64	80	24

Complete the histogram to show the information in the table. [4]



0580/41/M/J/16 Q3 (b) (ii)

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5. The time, t seconds, taken for each of 50 chefs to cook an omelette is recorded

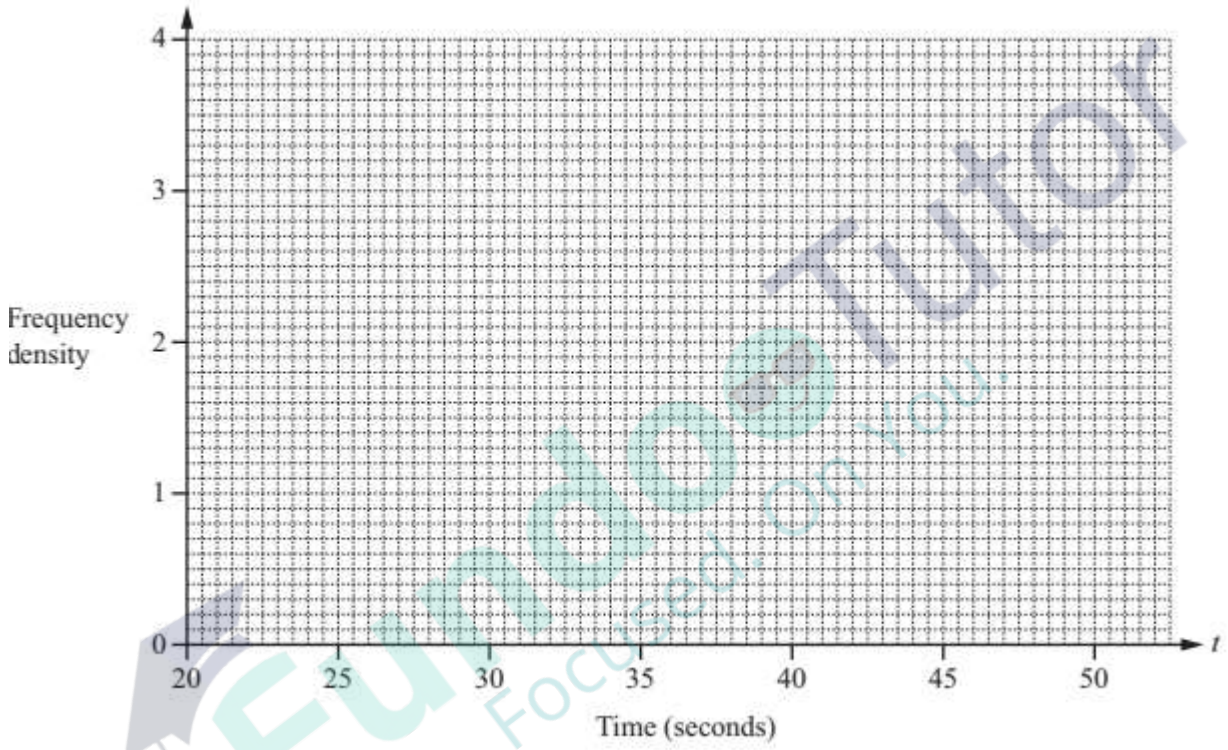
Time (t seconds)	$20 < t \leqslant 25$	$25 < t \leqslant 30$	$30 < t \leqslant 35$	$35 < t \leqslant 40$	$40 < t \leqslant 45$	$45 < t \leqslant 50$
Frequency	2	6	7	19	9	7

A new frequency table is made from the results shown in the table opposite.

Time (t seconds)	$20 < t \leqslant 35$	$35 < t \leqslant 40$	$40 < t \leqslant 50$
Frequency			

(i) Complete the table. [1]

(ii) On the grid, draw a histogram to show the information in this new table. [3]



0580/42/O/N/14 Q3 (c)

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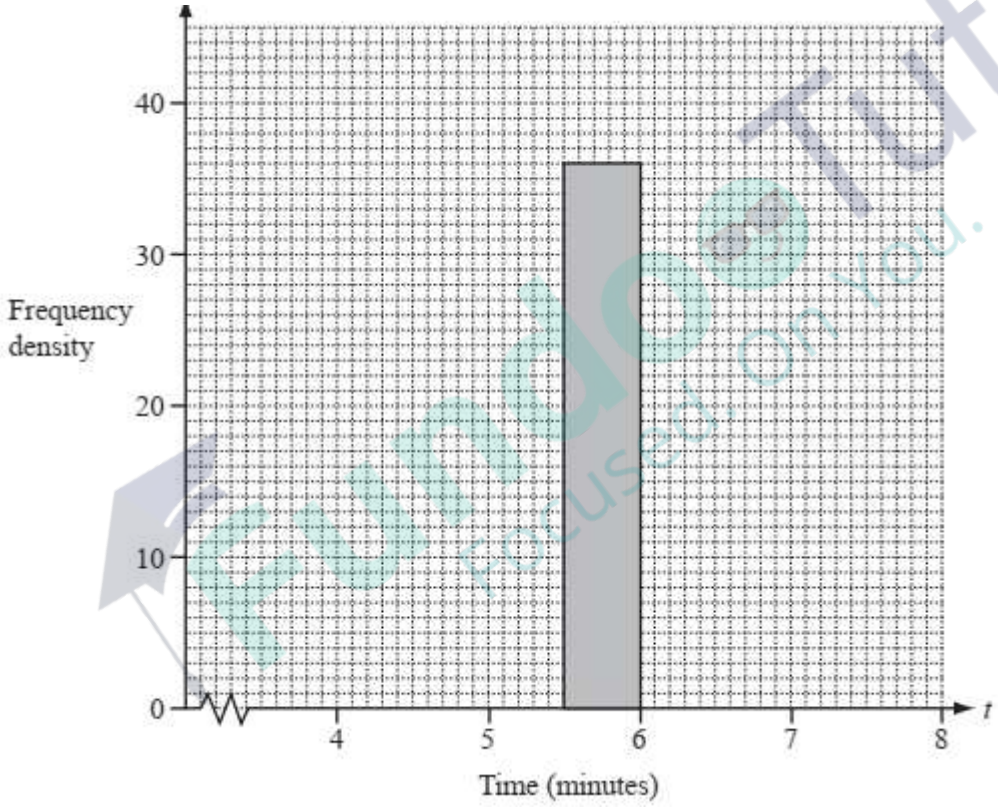
6. Fifty students are timed when running one kilometre.
The results are shown in the table.

Time (t minutes)	$4.0 < t \leqslant 4.5$	$4.5 < t \leqslant 5.0$	$5.0 < t \leqslant 5.5$	$5.5 < t \leqslant 6.0$	$6.0 < t \leqslant 6.5$	$6.5 < t \leqslant 7.0$
Frequency	2	7	8	18	10	5

A new frequency table is made from the results shown in the table above.

Time (t minutes)	$4.0 < t \leqslant 5.5$	$5.5 < t \leqslant 6.0$	$6.0 < t \leqslant 7.0$
Frequency		18	

(i) Complete the table by filling in the two empty boxes. [1]
(ii) On the grid below, complete an accurate histogram to show the information in this new table. [3]



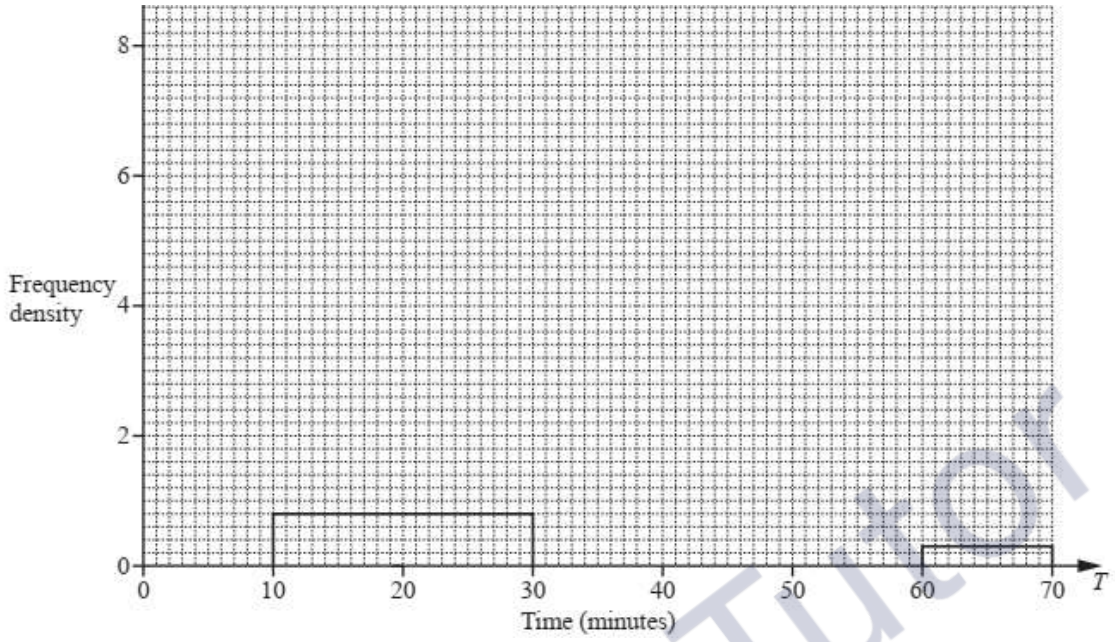
(iii) Find the number of students represented by 1 cm^2 on the histogram. [1]
0580/04/O/N/09 Q8 (c)

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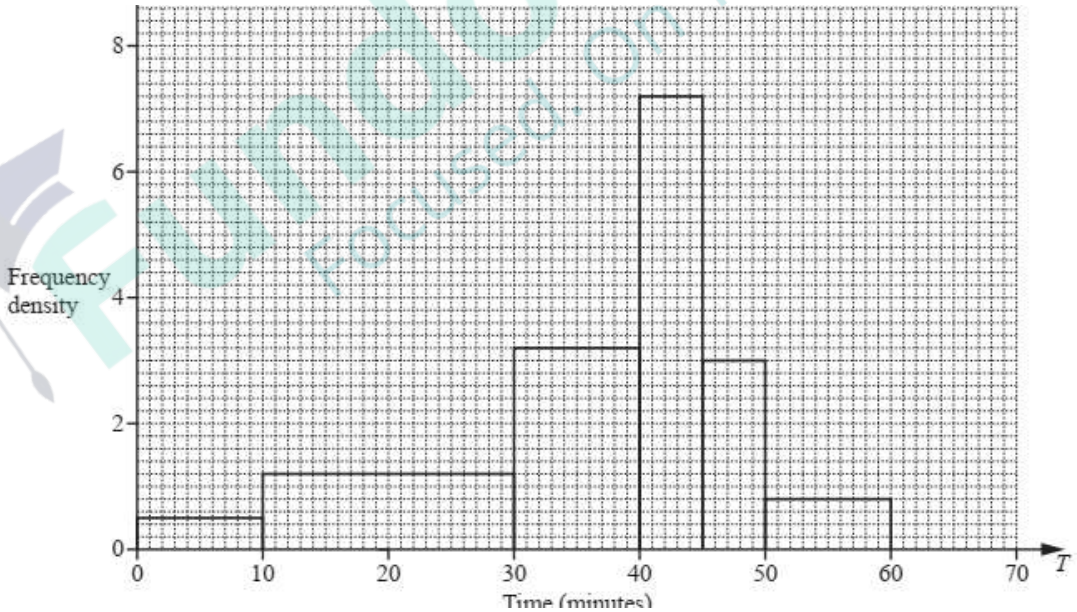


7. (a) The table shows the amount of time, T minutes, 120 people each spend in a supermarket one Saturday.
(ii) Complete this histogram to show the information in the table. [4]

Time (T minutes)	Number of people
$10 < T \leqslant 30$	16
$30 < T \leqslant 40$	18
$40 < T \leqslant 45$	22
$45 < T \leqslant 50$	40
$50 < T \leqslant 60$	21
$60 < T \leqslant 70$	3



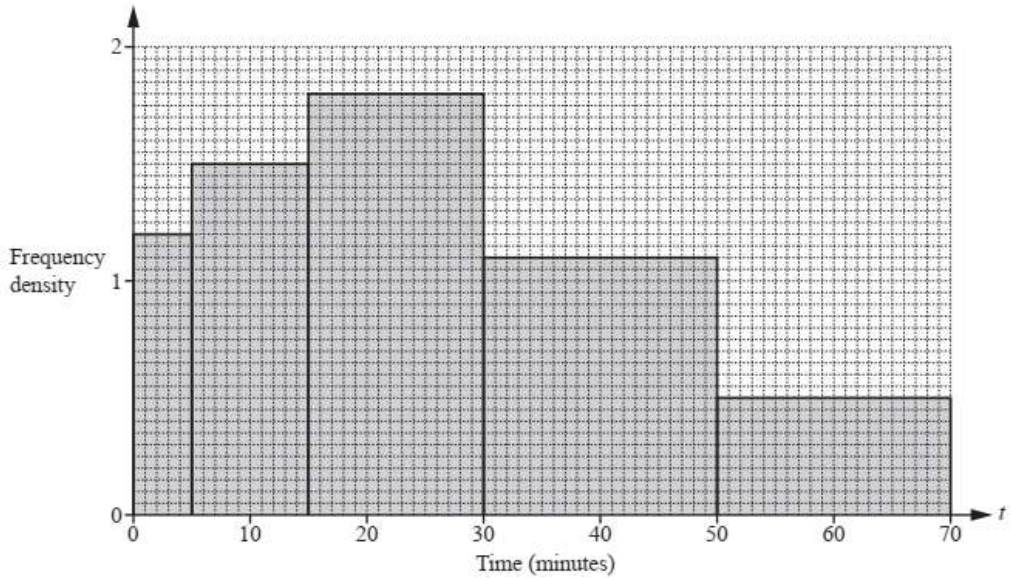
(b) This histogram shows the amount of time, T minutes, 120 people each spend in the supermarket



one Wednesday. Make a comment comparing the distributions of the times for the two days. [1]
0580/42/O/N/18 Q9)

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8. The histogram shows information about the time, t minutes, spent in a shop by each of 80 people

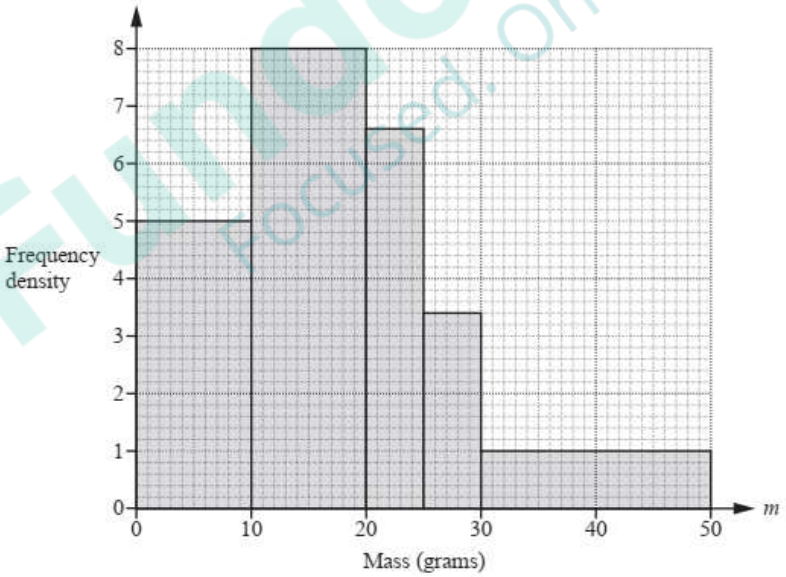


Complete the frequency table. [2]

Time (t minutes)	$0 < t \leqslant 5$	$5 < t \leqslant 15$	$15 < t \leqslant 30$	$30 < t \leqslant 50$	$50 < t \leqslant 70$
Number of people	6		27		10

0580/22/M/J/18 Q13)

9. (a) Haroon has 200 letters to post.
The histogram shows information about the masses, m grams, of the letters.
(i) Complete the frequency table for the 200 letters. [3]



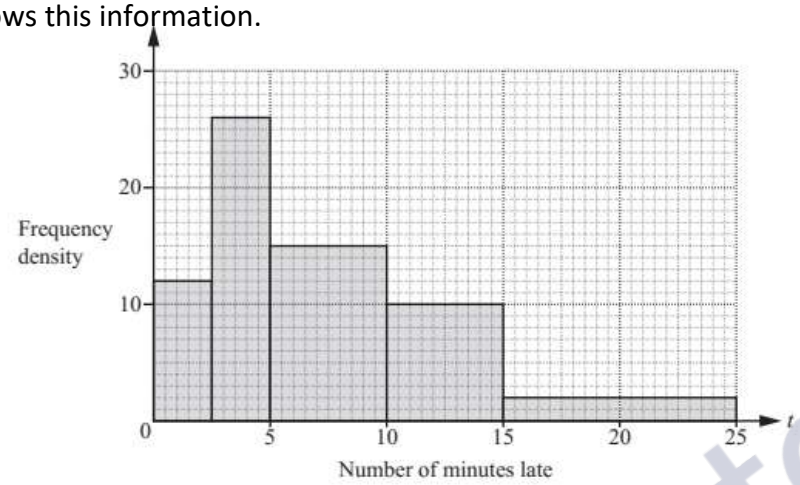
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Mass (m grams)	$0 < m \leqslant 10$	$10 < m \leqslant 20$	$20 < m \leqslant 25$	$25 < m \leqslant 30$	$30 < m \leqslant 50$
Frequency	50			17	

0580/43/M/J/17 Q5 (a) (i)

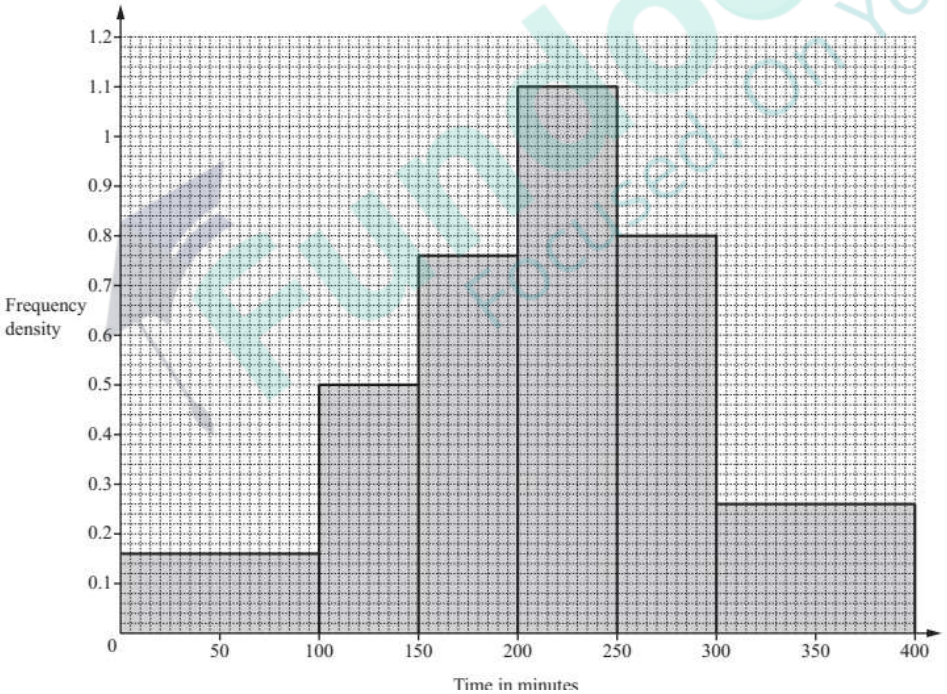
10. Deborah records the number of minutes late, t, for trains arriving at a station.
The histogram shows this information.



(a) Find the number of trains that Deborah recorded. [2]

(b) Calculate the percentage of the trains recorded that arrived less than 2 minutes and 30 seconds late. [2] **0580/22/M/J/16 Q20)**

11. The histogram shows the length of time that 200 cars were parked.



(i) Calculate the number of cars that were parked for 100 minutes or less. [1]

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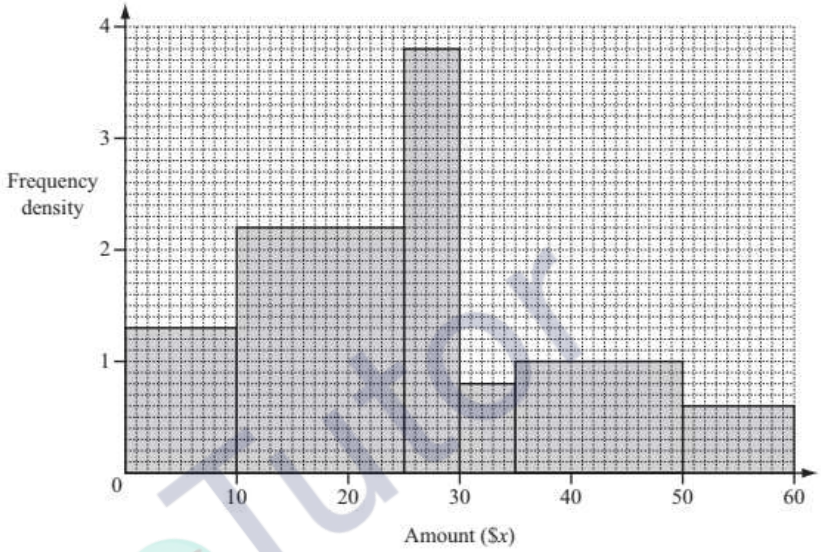
(ii) Calculate the percentage of cars that were parked for more than 250 minutes. [2]

0580/43/M/J/16 Q4 (d)

12. A survey asked 90 people how much money they gave to charity in one month.
The histogram shows the results of the survey.
Complete the frequency table for the six columns in the histogram. [5]

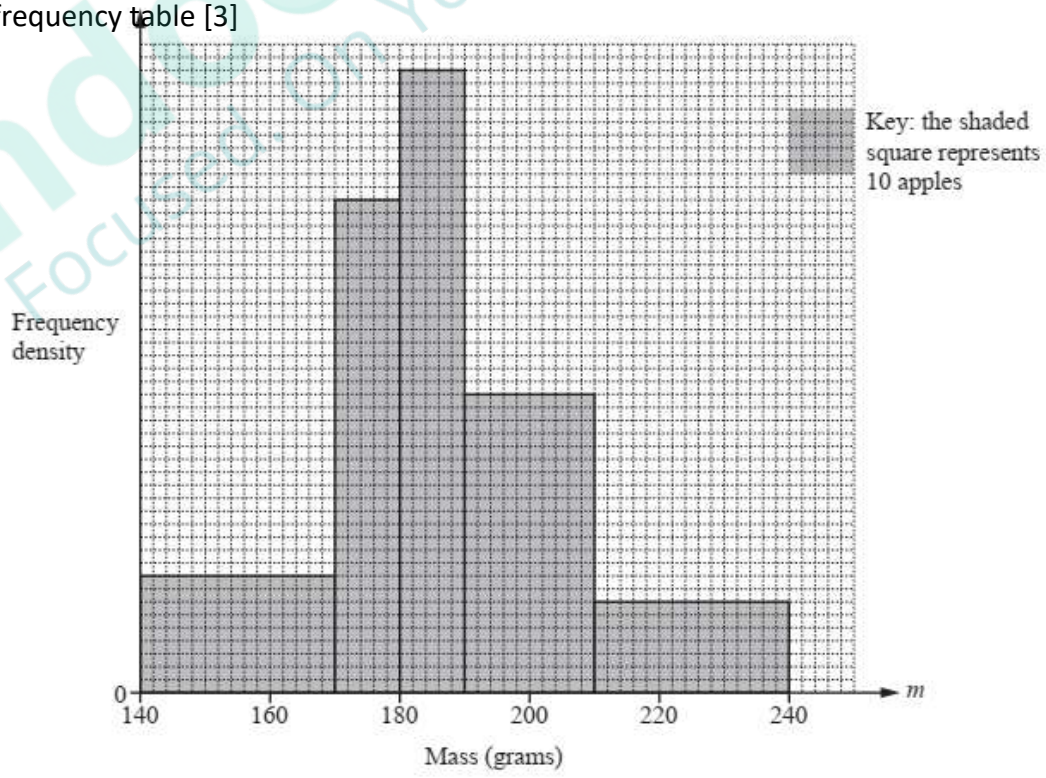
Amount ($\$x$)	$0 < x \leqslant 10$					
Frequency				4		

0580/43/M/J/14 Q2(a)



13. The histogram shows the distribution of the masses, m grams, of 360 apples
Use the histogram to complete the frequency table [3]

Mass (m grams)	Number of apples
$140 < m \leqslant 170$	
$170 < m \leqslant 180$	
$180 < m \leqslant 190$	
$190 < m \leqslant 210$	92
$210 < m \leqslant 240$	42



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0580/41/O/N/17 Q5 (a)

14. The table shows the number of people in different age groups at a cinema.

Age (y years)	$15 < y \leqslant 25$	$25 < y \leqslant 30$	$30 < y \leqslant 50$	$50 < y \leqslant 80$
Number of people	35	32	44	12

Dexter draws a histogram to show this information.
The height of the bar he draws for the group $15 < y \leq 25$ is 7 cm.
Calculate the height of each of the remaining bars. [3]
0580/22/M/J/19 Q18)

15. A school nurse records the height, h cm, of each of 180 children.
The table shows the information.

Height (h cm)	$60 < h \leqslant 70$	$70 < h \leqslant 90$	$90 < h \leqslant 100$	$100 < h \leqslant 110$	$110 < h \leqslant 115$	$115 < h \leqslant 125$
Frequency	8	26	35	67	28	16

In a histogram showing the information, the height of the bar for the interval $60 < h \leq 70$ is 0.4cm.
Calculate the height of the bar for each of the following intervals
$115 < h \leq 125$ $110 < h \leq 115$ $70 < h \leq 90$ [3]
0580/41/O/N/18 Q4 (b)

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16. The table shows information about the time, t minutes,
taken for each of 150 girls to complete an essay.

Time (t minutes)	$60 < t \leqslant 65$	$65 < t \leqslant 70$	$70 < t \leqslant 80$	$80 < t \leqslant 100$	$100 < t \leqslant 150$
Frequency	10	26	34	58	22

(f) The information in the frequency table is shown in a histogram.
The height of the block for the $60 < t \leq 65$ interval is 5cm.
Complete the table. [3]

Time (t minutes)	$60 < t \leqslant 65$	$65 < t \leqslant 70$	$70 < t \leqslant 80$	$80 < t \leqslant 100$	$100 < t \leqslant 150$
Height of block (cm)	5				

0580/43/O/N/17 Q4 (f)

17. Some students each record the mass, m kg, of their school bag.
Adil wants to draw a histogram to show this information.
Complete the table below. [2]

Mass (m kg)	$0 < m \leqslant 4$	$4 < m \leqslant 6$	$6 < m \leqslant 7$	$7 < m \leqslant 10$
Frequency	32			42
Height of bar on histogram (cm)	1.6	2	1.2	2.8

0580/42/F/M/19 Q7(b)

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18. The table shows information about the times, t seconds, taken by each of 100 students to solve a puzzle.

Time (t seconds)	$0 < t \leqslant 10$	$10 < t \leqslant 15$	$15 < t \leqslant 20$	$20 < t \leqslant 40$	$40 < t \leqslant 75$
Frequency	9	18	22	30	21

Emmanuel draws a histogram to show this information.
The table shows the heights, in cm, of some of the bars for this histogram.
Complete the table. [3]

Time (t seconds)	$0 < t \leqslant 10$	$10 < t \leqslant 15$	$15 < t \leqslant 20$	$20 < t \leqslant 40$	$40 < t \leqslant 75$
Height of bar (cm)	3.6	14.4	17.6		

0580/23/O/N/20 Q22) (b)

Answer

Q1) correct blocks with height 5, 20, 24, 1	Q10) (a)240 (b) 12.5
Q2) correct blocks with height 13 , 18 and 9	Q11) (i)16 (ii)33
Q3) correct blocks with heigts 0.08 , 0.4 , 0.24 , 0.06	Q12) $10 < x \leq 25$ $25 < x \leq 30$ $30 < x \leq 35$ $35 < x \leq 50$ $50 < x \leq 60$ 13 33 19 [4] 15 6
Q4) correct blocks with height 0.8, 1.6, 1.6	Q13) 54, 76, 96
Q5) (i) 15, 19, 16 (ii) rectangular bars of height 1, 3.8 and 1.6 correct widths of 15, 5,10 and no gaps	Q14) 12.8 , 4.4 , 0.8
Q6) (i)17 , 15 (ii) Rectangular bars of heights 11.3 and 15 (iii) 2.5	Q15) 0.8 2.8 0.65
Q7) (a) (ii) Blocks of height 1.8 4.4 8 2.1 with correct widths (b) e.g. [On average], shoppers spend less time shopping on Wednesday	Q16) 13, 8.5, 7.25, 1.1
Q8) 15 and 22	Q17) 20 , 6
Q9) 80 33 20	Q18) 6 and 2.4

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