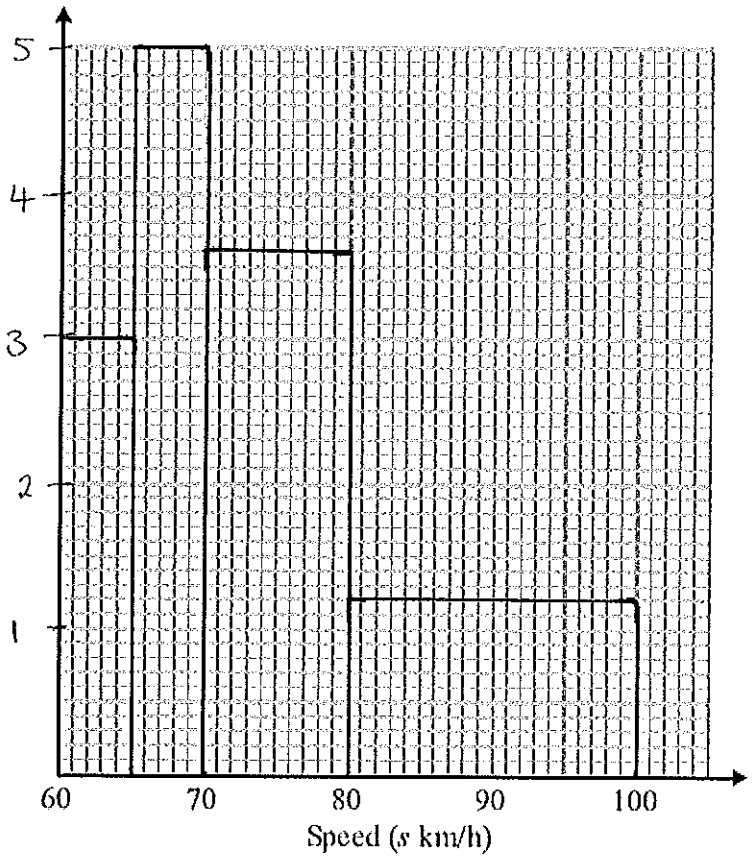
F.d = Frequency / Class Width

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

Speed (s km/h) c.w	Frequency	F.d.
$60 < s \leq 65$ (5)	15	3
$65 < s \leq 70$ (5)	25	5
$70 < s \leq 80$ (10)	36	3.6
$80 < s \leq 100$ (20)	24	1.2

(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.

15×1.2

18

(2)

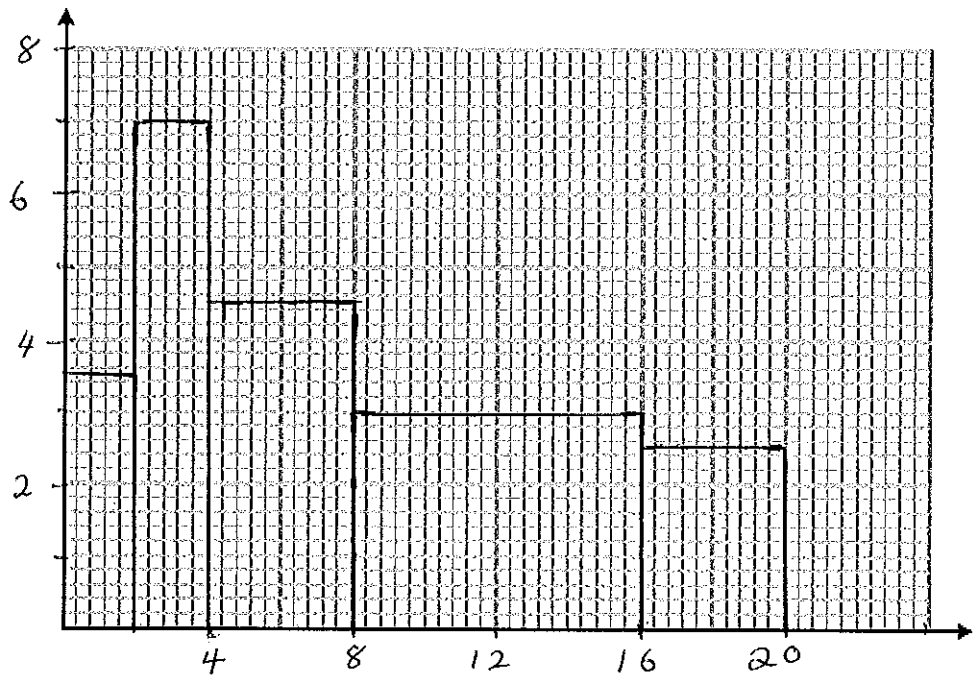
(5 marks)

2. The table gives information about the heights, h metres, of trees in a wood.

Height (h metres)	Frequency
$0 < h \leq 2$ 2	7
$2 < h \leq 4$ 2	14
$4 < h \leq 8$ 4	18
$8 < h \leq 16$ 8	24
$16 < h \leq 20$ 4	10

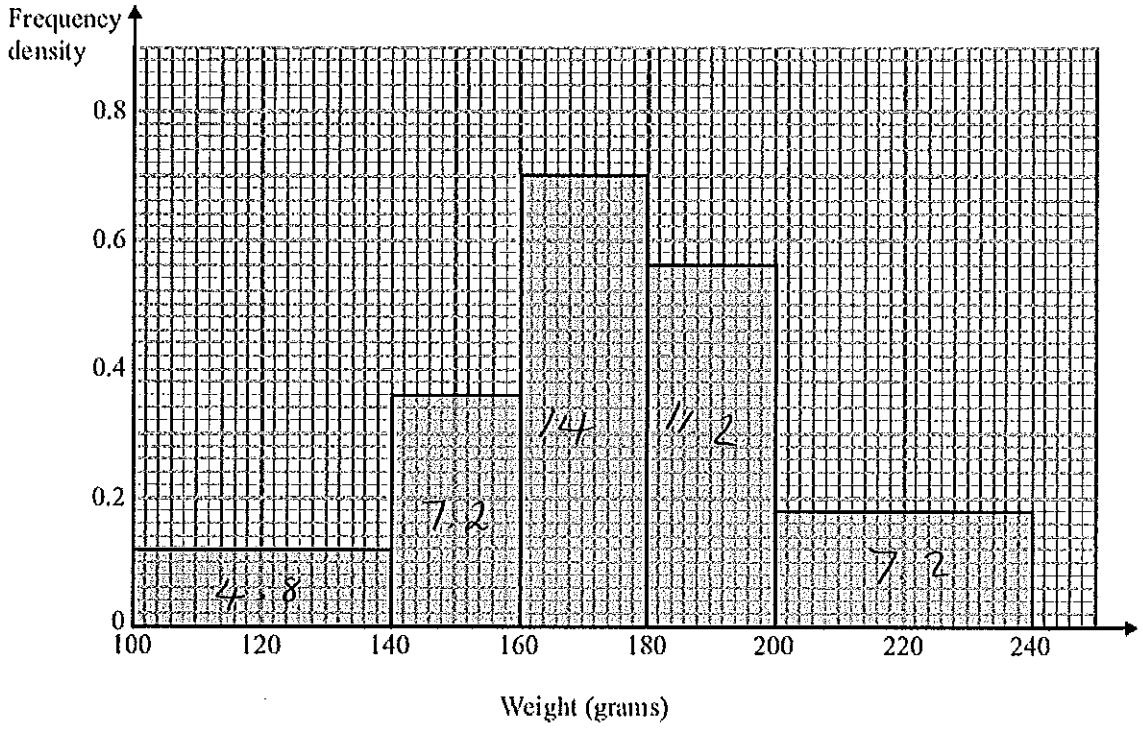
F.d
3.5
7
4.5
3
2.5

Draw a histogram to show this information.



(3 marks)

3. The histogram shows some information about the weights of a sample of apples.



Work out the proportion of apples in the sample with a weight between 140 grams and 200 grams.

$$\frac{7.2 + 14 + 11.2}{4.8 + 7.2 + 14 + 11.2 + 7.2}$$

$$\frac{32.4}{44.4} = \frac{27}{37} \quad \text{or} \quad 73.0\%$$

$\frac{27}{37}$

.....

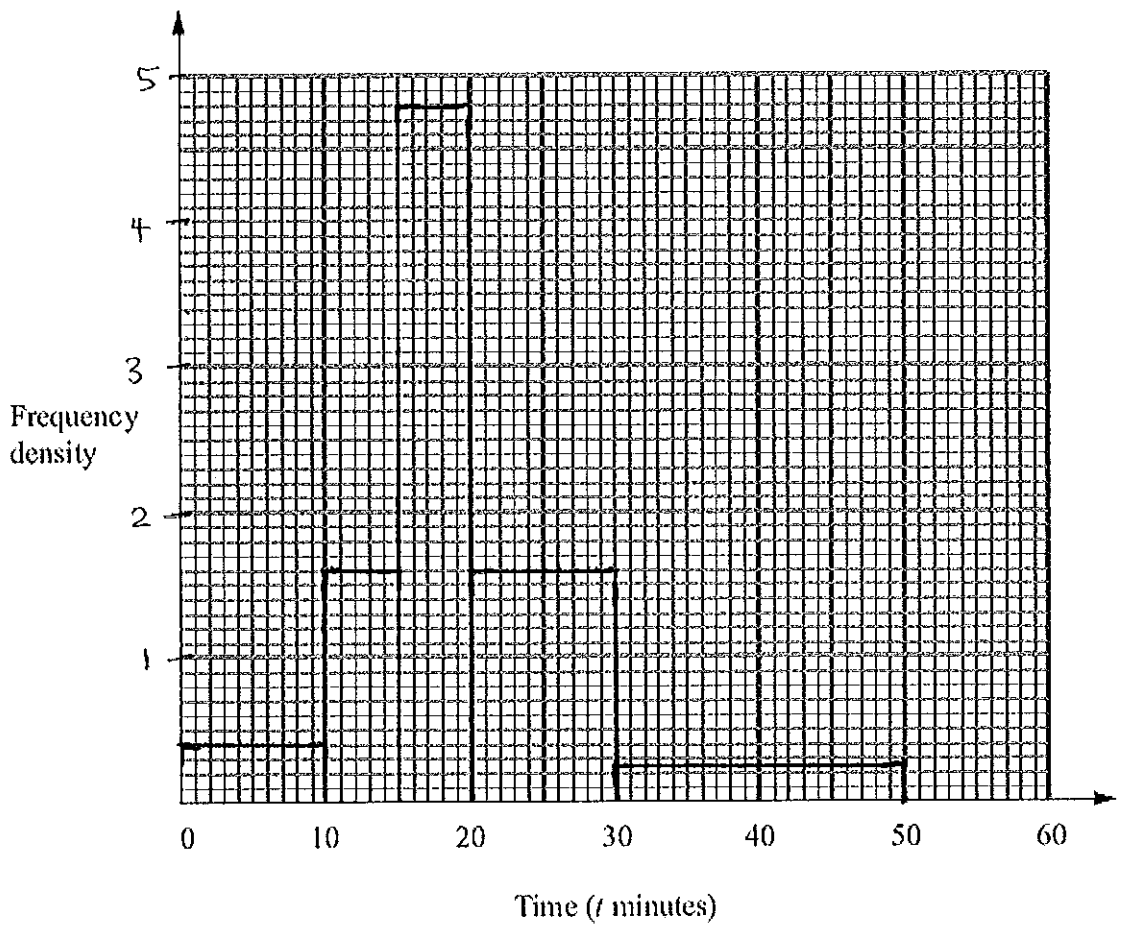
(4 marks)

4. The table shows information about the lengths of time, t minutes, it took some students to do their maths homework last week.

Time (t minutes)	Frequency
$0 < t \leq 10$	4
$10 < t \leq 15$	8
$15 < t \leq 20$	24
$20 < t \leq 30$	16
$30 < t \leq 50$	5

F .d.
0.4
1.6
4.8
1.6
0.25

Draw a histogram for this information.



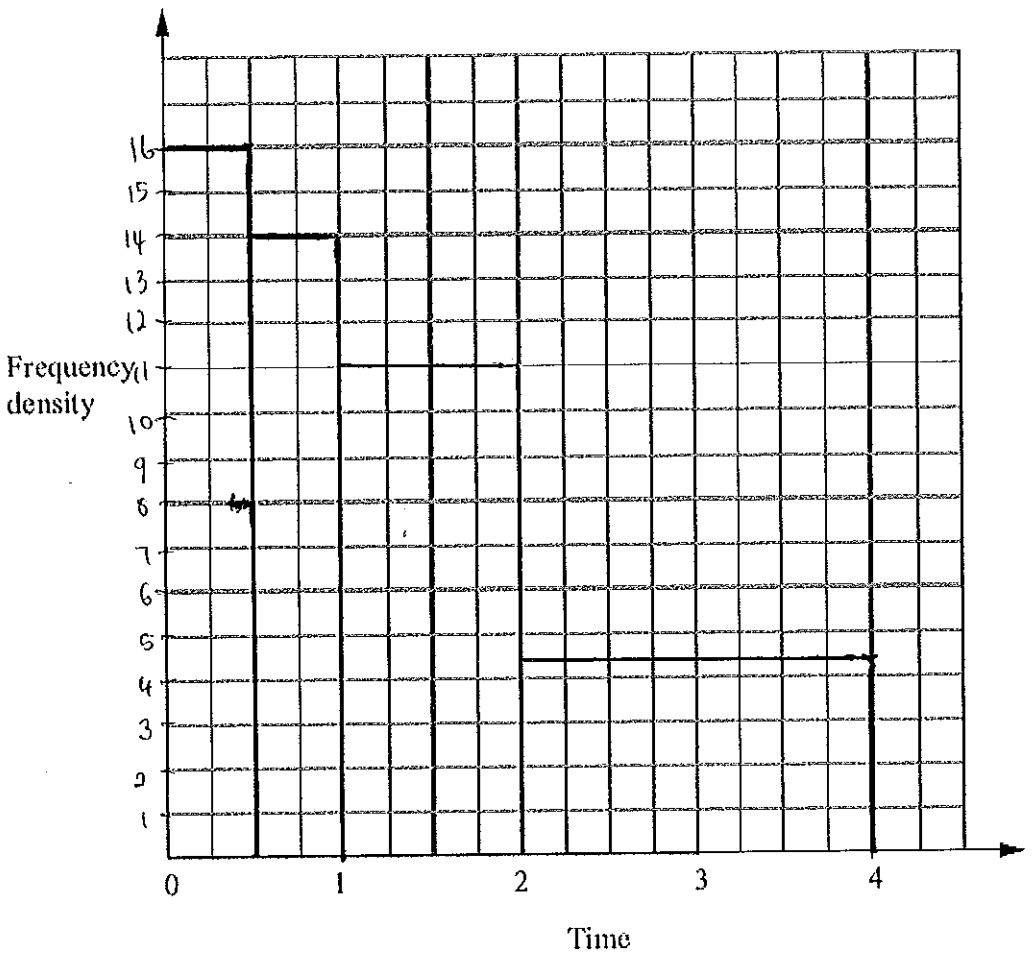
(Total 3 marks)

5. The table shows information about the total times that 35 students spent using their mobile phones one week.

Time (h hours)	Frequency
$0 \leqslant h < \frac{1}{2}$	8
$\frac{1}{2} \leqslant h < 1$	7
$1 \leqslant h < 2$	11
$2 \leqslant h < 4$	9

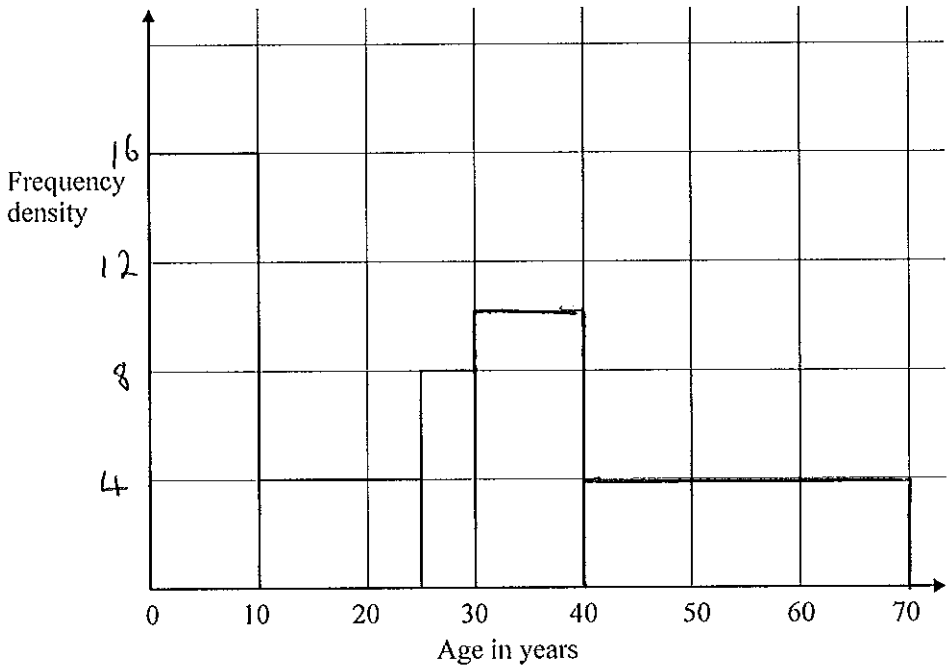
F.d
16
14
11
4.5

On the grid below, draw a histogram for this information.



(Total for Question 23 = 3 marks)

6. The incomplete table and histogram give some information about the ages of the people who live in a village.



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

Age (x) in years	Frequency
$0 < x \leq 10$	160
$10 < x \leq 25$	60
$25 < x \leq 30$	40
$30 < x \leq 40$	100
$40 < x \leq 70$	120

F . d
16
4
8
10
4

(2)

(b) Complete the histogram.

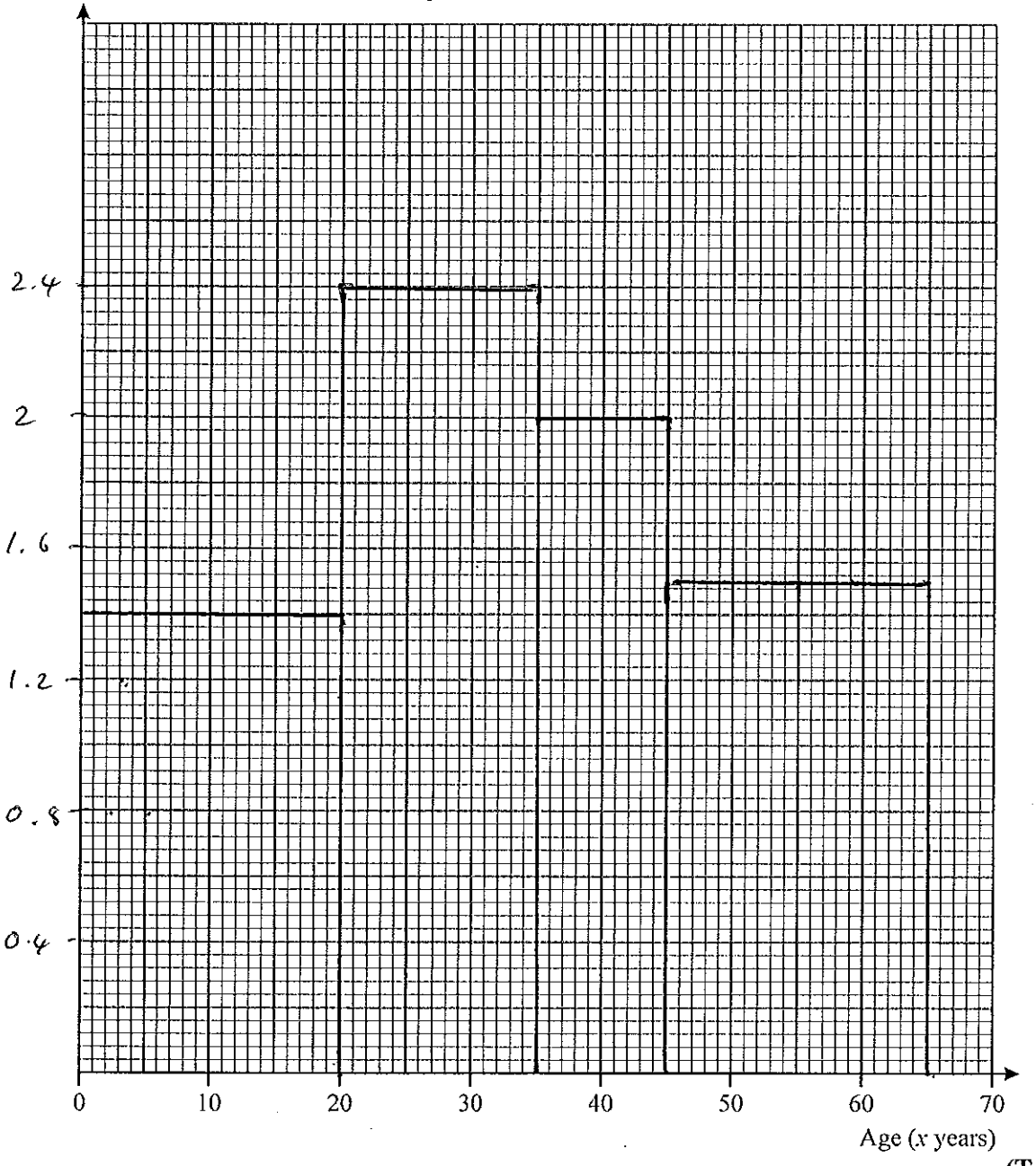
(2)

(Total 4 marks)

7. The table shows the distribution of the ages of passengers travelling on a plane from London to Belfast.

Age (x years)	Frequency	F.d
$0 < x \leq 20$	28	1.4
$20 < x \leq 35$	36	2.4
$35 < x \leq 45$	20	2
$45 < x \leq 65$	30	1.5

On the grid below, draw a histogram to show this distribution.



(Total 3 marks)