Edexcel GCSE
Mathematics (Linear) – 1MA0

HISTOGRAMS

Materials required for examination
Ruler graduated in centimetres and
millimetres, protractor, compasses,
pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to
spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication
will be assessed – you should take particular care on these questions with your spelling, punctuation
and grammar, as well as the clarity of expression.

Advice

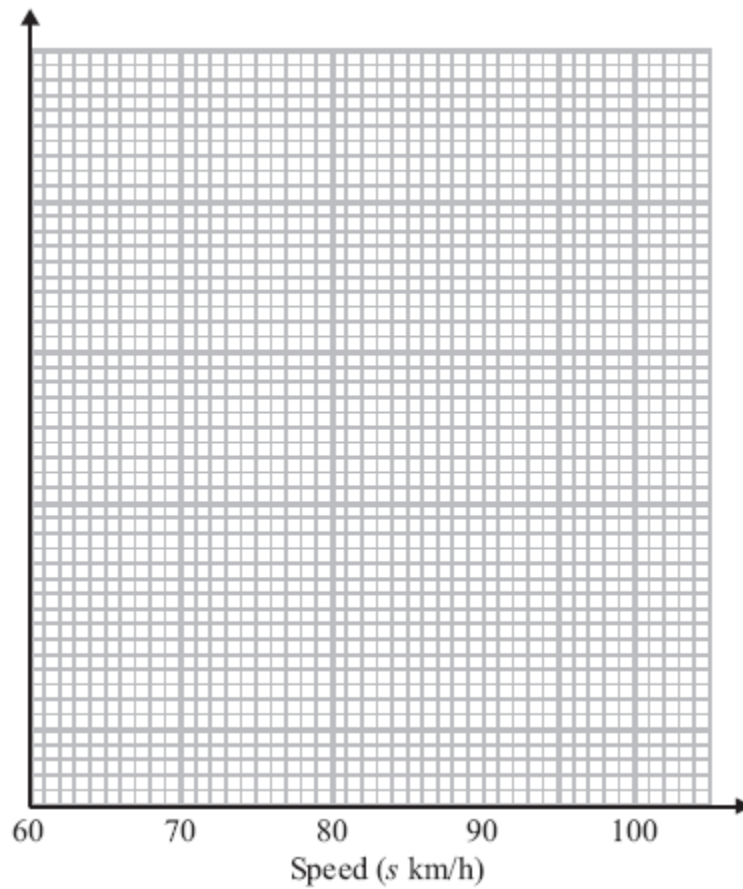Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

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

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

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

(3)

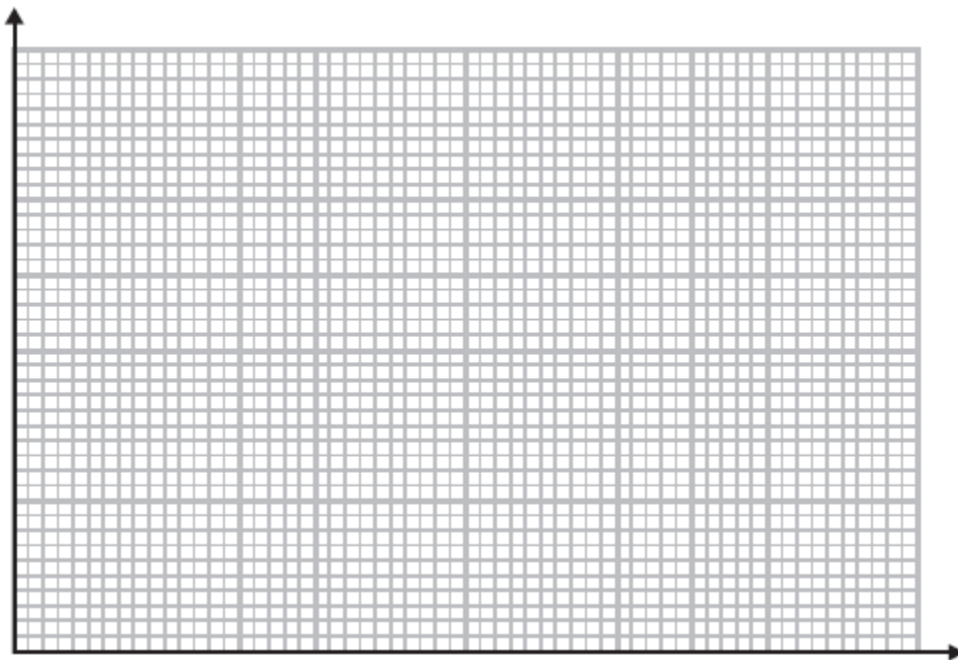(b) Work out an estimate for the number of cars with a speed of more than 85 km/h.

....

(2)

(5 marks)

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

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

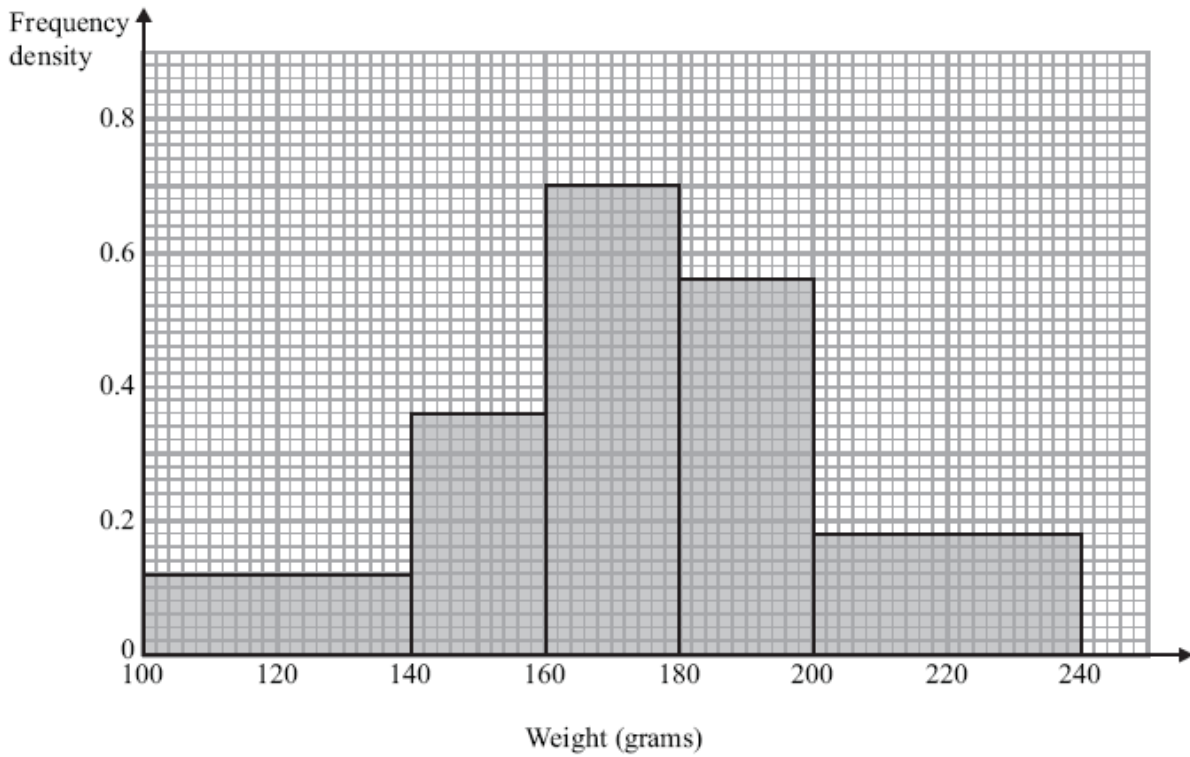Draw a histogram to show this information.

(3 marks)

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

Weight (grams)

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

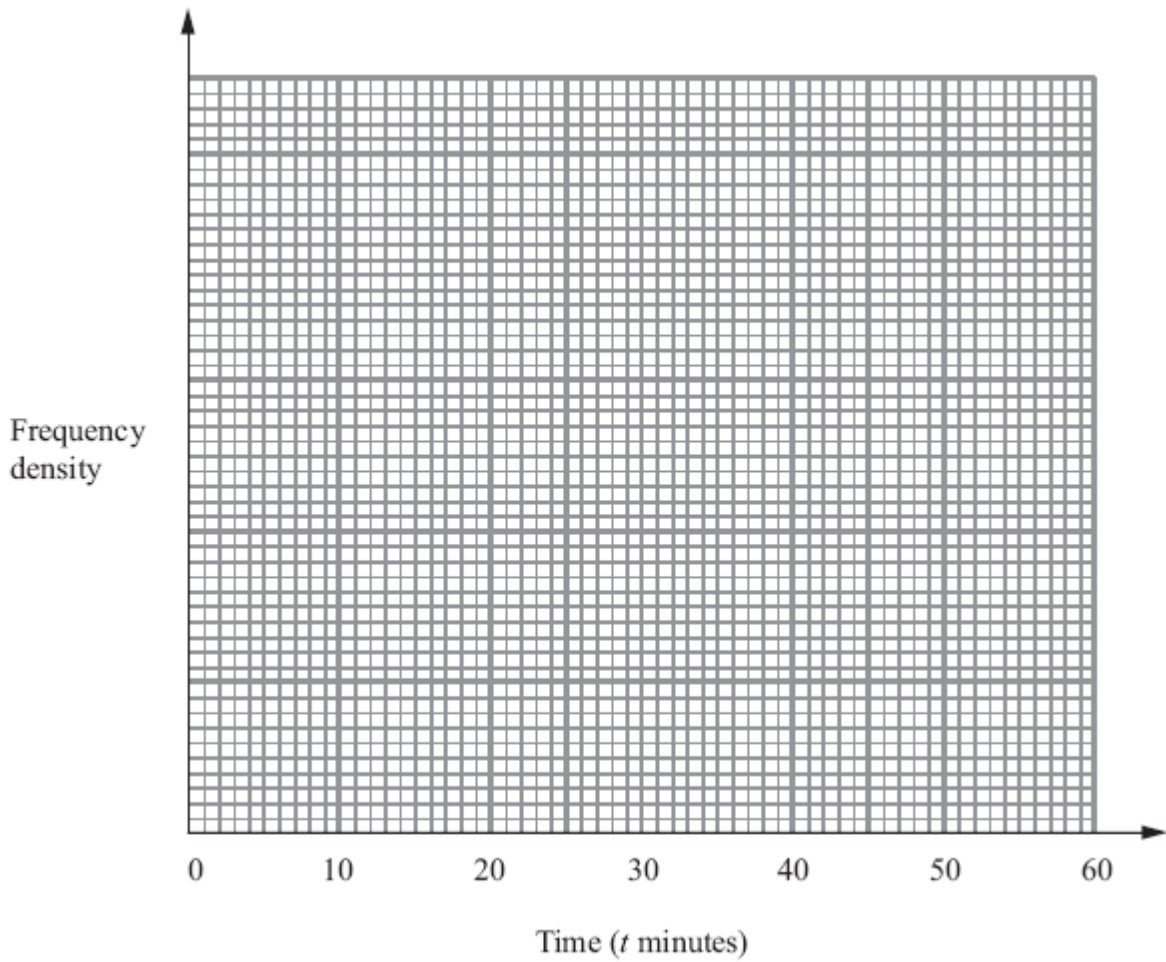..

(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

Draw a histogram for this information.
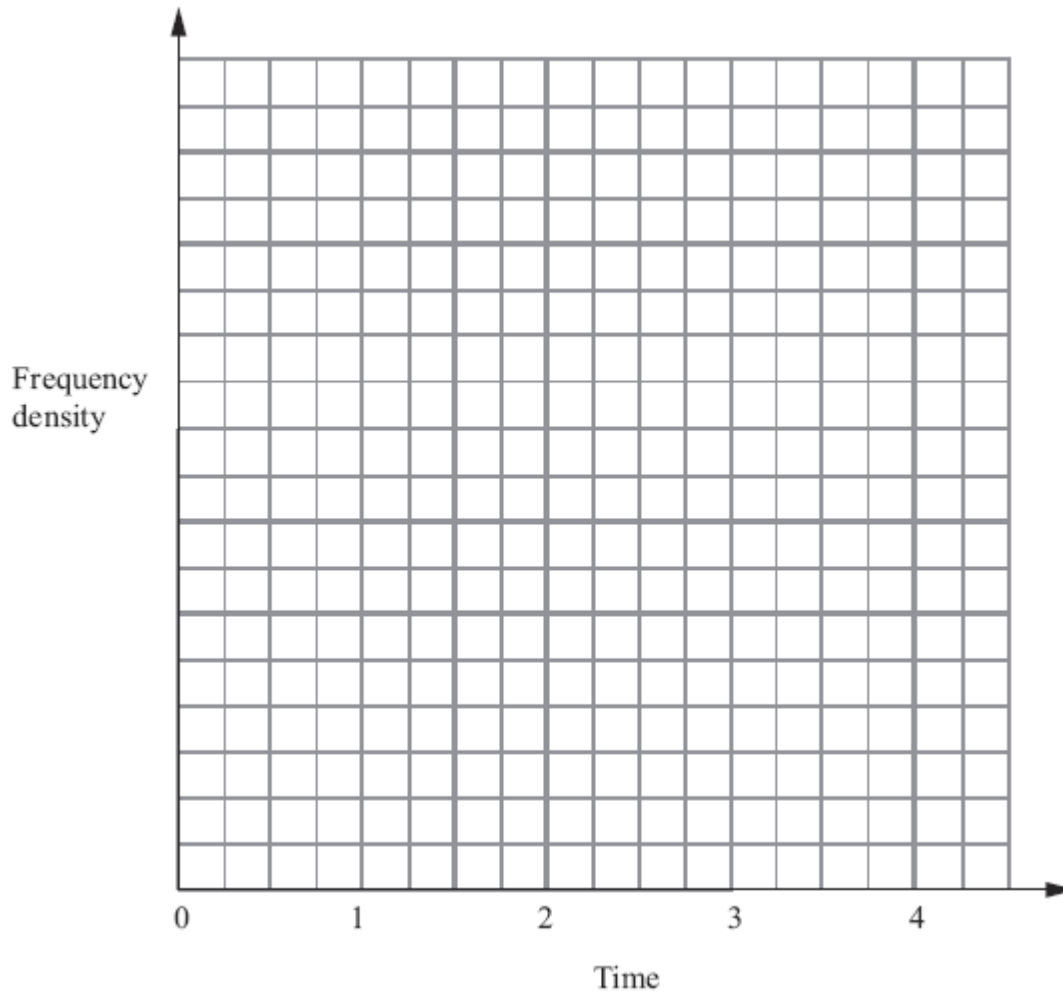

Frequency density

Time (t minutes)

(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
$0 \leqslant h < \dfrac{1}{2}$	8
$\dfrac{1}{2} \leqslant h < 1$	7
$1 \leqslant h < 2$	11
$2 \leqslant h < 4$	9

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

Frequency density

Time

(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.

Frequency density

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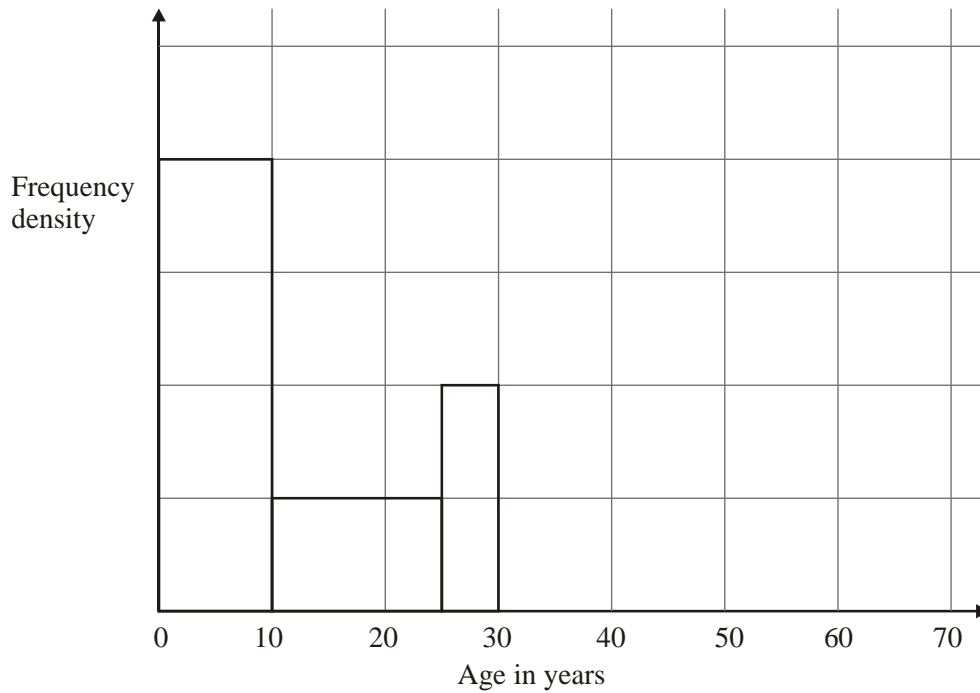
(a) Use the information in the histogram to complete the frequency table below.

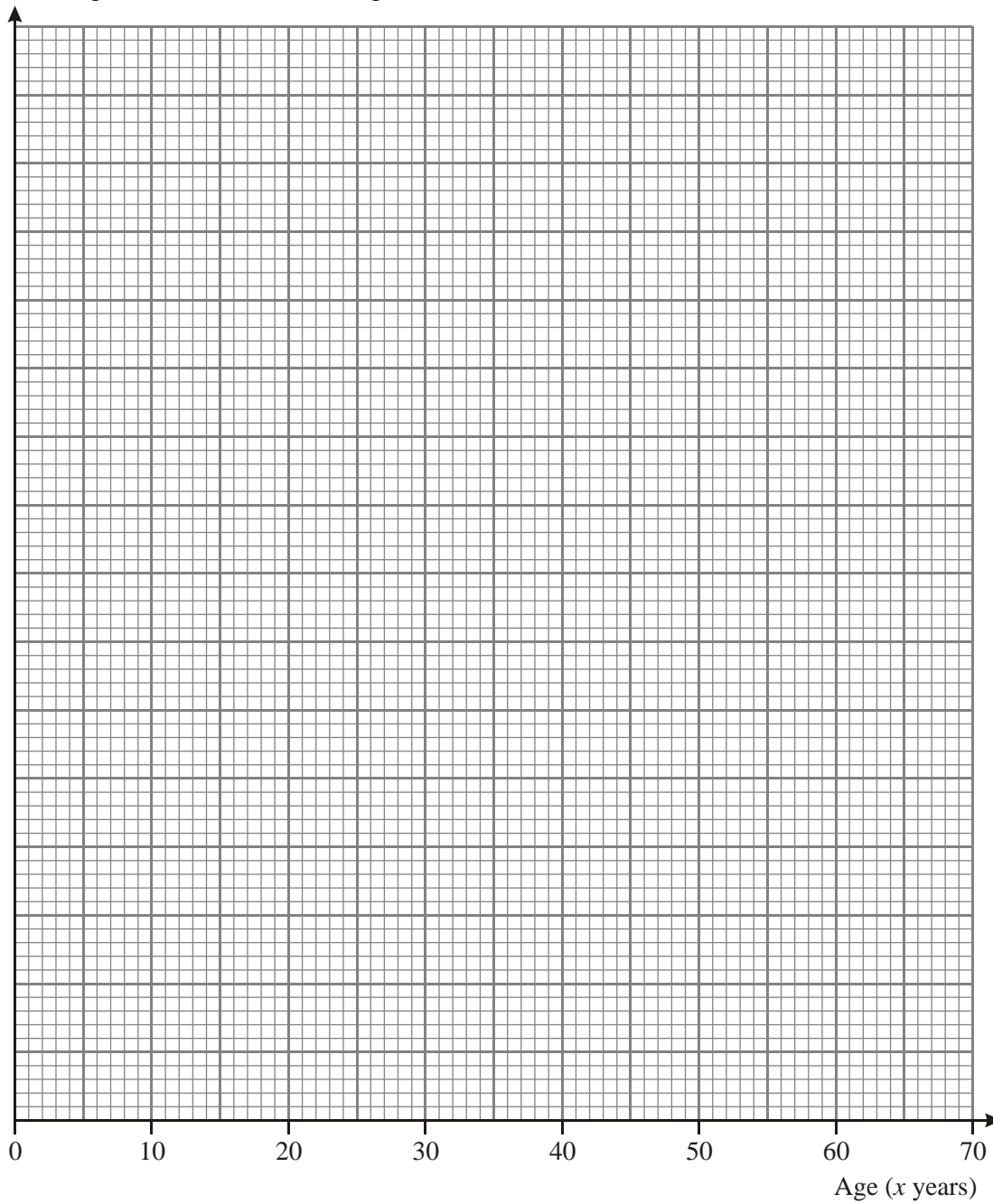| Age (x) in years	Frequency
$0 < x \leq 10$	160
$10 < x \leq 25$	
$25 < x \leq 30$	
$30 < x \leq 40$	100
$40 < x \leq 70$	120

(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
$0 < x \leq 20$	28
$20 < x \leq 35$	36
$35 < x \leq 45$	20
$45 < x \leq 65$	30

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

Age (x years)

(Total 3 marks)