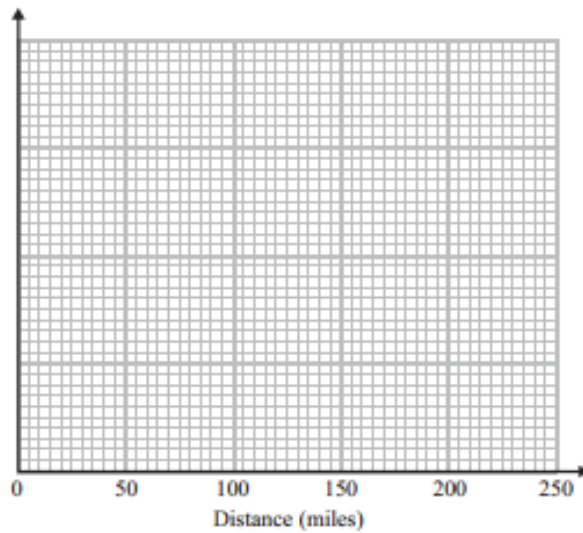**HISTOGRAM**

Pearson Edexcel - Monday 12 November 2018 - Paper 3 (Calculator) Higher Tier

1.

17 The table shows information about the distances 570 students travelled to a university open day.

Distance (*d* miles)	Frequency
$0 < d \leqslant 20$	120
$20 < d \leqslant 50$	90
$50 < d \leqslant 80$	120
$80 < d \leqslant 150$	140
$150 < d \leqslant 200$	100

(a) Draw a histogram for the information in the table.

Distance (miles)

(3)

(b) Estimate the median distance.

.... miles

(2)

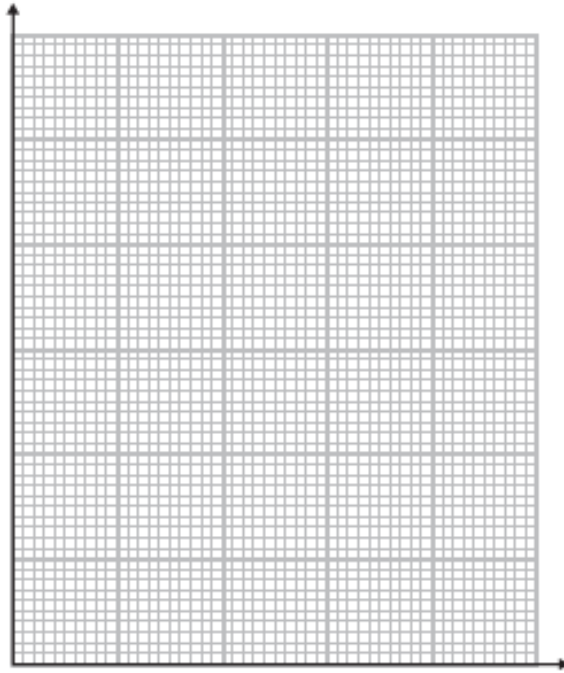(Total for Question 17 is 5 marks)

Pearson Edexcel - Monday 6 November 2017 - Paper 2 (Calculator) Higher Tier

2.

17 The table gives information about the heights of 150 students.

Height (*h* cm)	Frequency
$140 < h \leqslant 150$	15
$150 < h \leqslant 155$	30
$155 < h \leqslant 160$	51
$160 < h \leqslant 165$	36
$165 < h \leqslant 180$	18

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

(3)

(b) Work out an estimate for the fraction of the students who have a height between 150 cm and 170 cm.
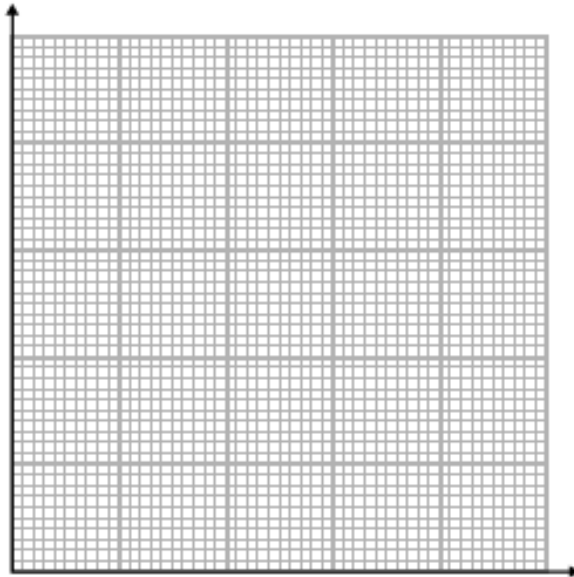
....

(2)

(Total for Question 17 is 5 marks)

Pearson Edexcel - Specimen Papers Set 2 - Paper 3 (Calculator) Higher Tier

3.

14 The table gives information about the speeds, in km/h, of 81 cars.

Speed (s km/h)	Frequency
$90 < s \leqslant 100$	13
$100 < s \leqslant 105$	16
$105 < s \leqslant 110$	18
$110 < s \leqslant 120$	22
$120 < s \leqslant 140$	12

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

(3)

(b) Find an estimate for the median.

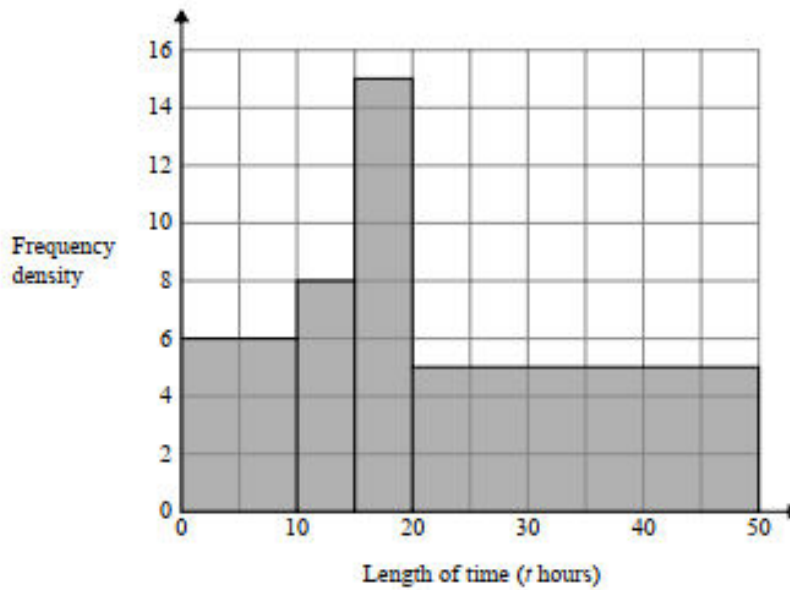.......................................km/h

(2)

(Total for Question 14 is 5 marks)

Pearson Edexcel - Sample Paper 1 - (Non-Calculator) Higher Tier

4.

22 Bhavna recorded the lengths of time, in hours, that some adults watched TV last week.

The table shows information about her results.

Length of time (t hours)	Frequency
$0 \leqslant t < 10$	6
$10 \leqslant t < 15$	8
$15 \leqslant t < 20$	15
$20 \leqslant t < 40$	5

Bhavna made some mistakes when she drew a histogram for this information.

Length of time (t hours)

Write down **two** mistakes Bhavna made.

1 ....

....

2 ....

....

(Total for Question 22 is 2 marks)

Pearson Edexcel - Thursday 9 June 2016 - Paper 2 (Calculator) Higher Tier

5.

23 The table gives information about the lengths of time some people were in a supermarket.

Time (t minutes)	Frequency
$0 < t \leqslant 5$	8
$5 < t \leqslant 15$	32
$15 < t \leqslant 30$	36
$30 < t \leqslant 40$	18
$40 < t \leqslant 60$	6

Draw a histogram for the information in the table.

Time (t minutes)
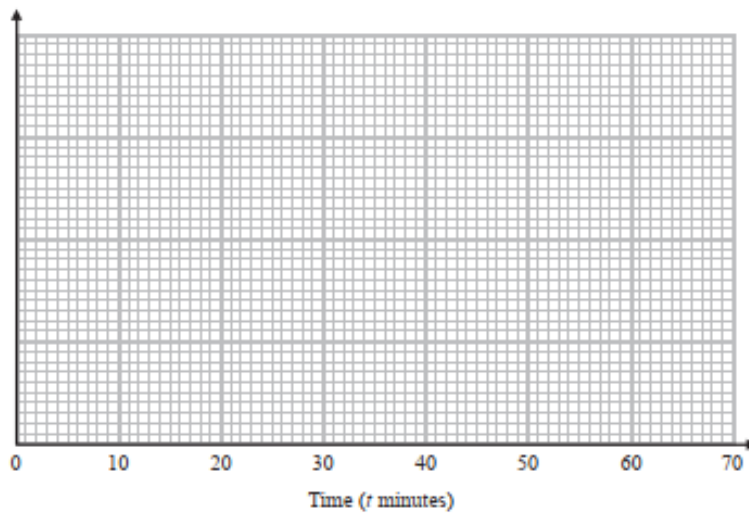
(Total for Question 23 is 3 marks)

Pearson Edexcel - Friday 7 November 2014 - Paper 2 (Calculator) Higher Tier
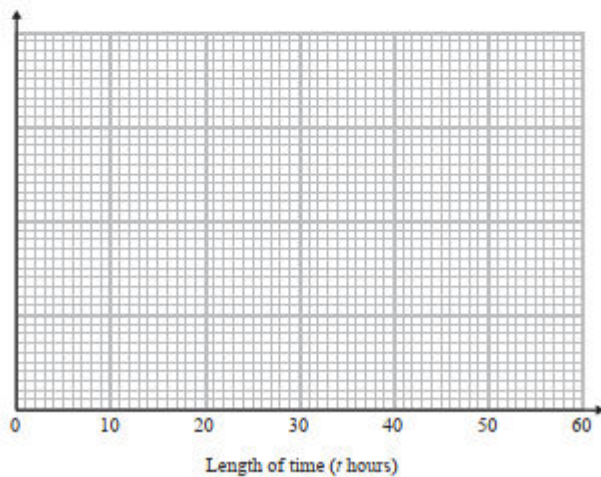
6.

18 The table gives some information about the lengths of time, in hours, that some adults watched TV last week.

Length of time (t hours)	Frequency
$0 \leqslant t < 10$	8
$10 \leqslant t < 15$	15
$15 \leqslant t < 20$	11
$20 \leqslant t < 30$	10
$30 \leqslant t < 50$	6

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

.... hours

(4)

(b) Draw a histogram for the information in the table.

Length of time (t hours)

(3)

(Total for Question 18 is 7 marks)

Pearson Edexcel - Tuesday 11 June 2013 - Paper 1 (Non-Calculator) Higher Tier

7.
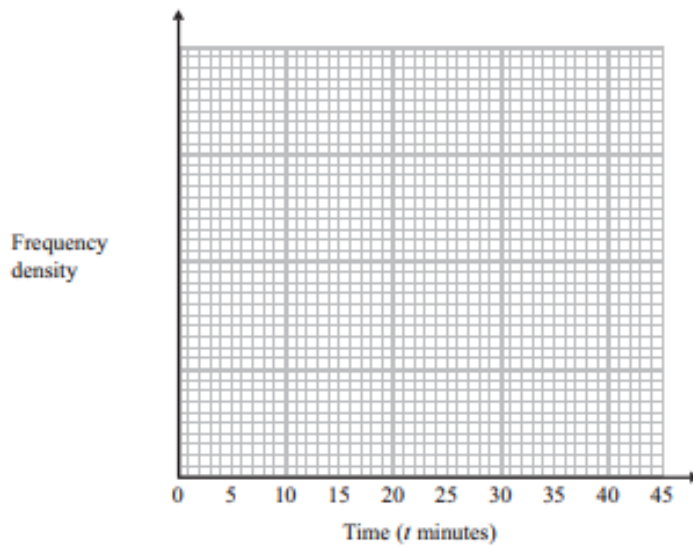
24 Bill works for a computer service centre.

The table shows some information about the length of time, t minutes, of the phone calls Bill had.

Time (t minutes)	$0 < t \leqslant 10$	$10 < t \leqslant 15$	$15 < t \leqslant 20$	$20 < t \leqslant 30$	$30 < t \leqslant 45$
Number of calls	12	15	13	18	3

On the grid, draw a histogram to show this information.

Frequency density

Time (t minutes)

(Total for Question 24 is 3 marks)

Pearson Edexcel - Monday 4 March 2013 - Paper 2 (Calculator) Higher Tier

8.

21 The histogram shows some information about the weights of a sample of apples.
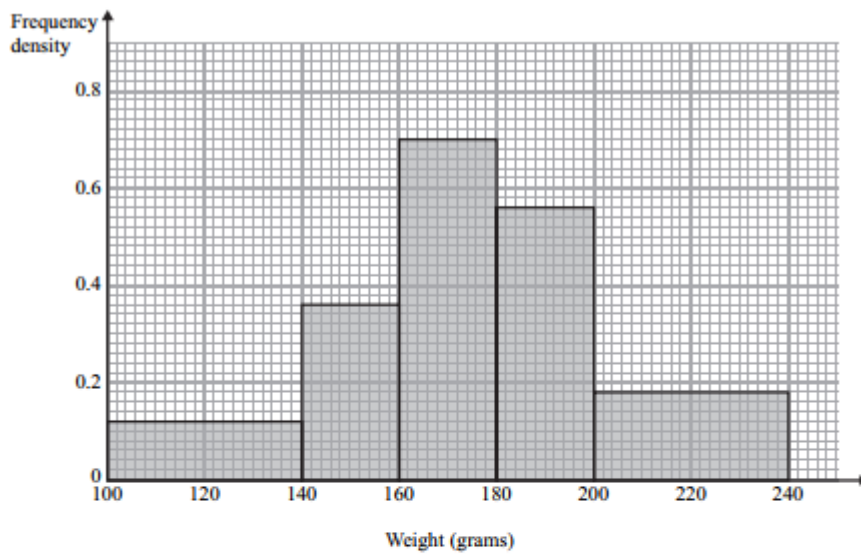
Weight (grams)

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

(Total for Question 21 is 4 marks)

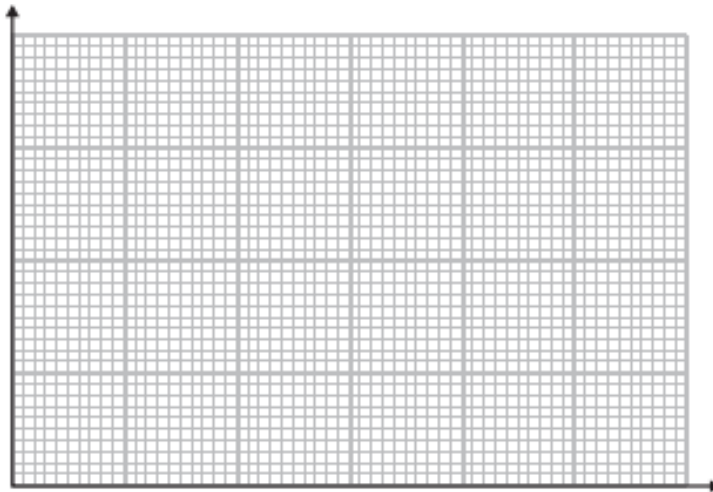**Pearson Edexcel - Thursday 8 November 2012 - Paper 2 (Calculator) Higher Tier**

9.

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

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

Draw a histogram to show this information.

(Total for Question 24 is 3 marks)

Pearson Edexcel - Monday 11 June 2012 - Paper 1 (Non-Calculator) Higher Tier

10.

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

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

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

Speed (s km/h)

(3)
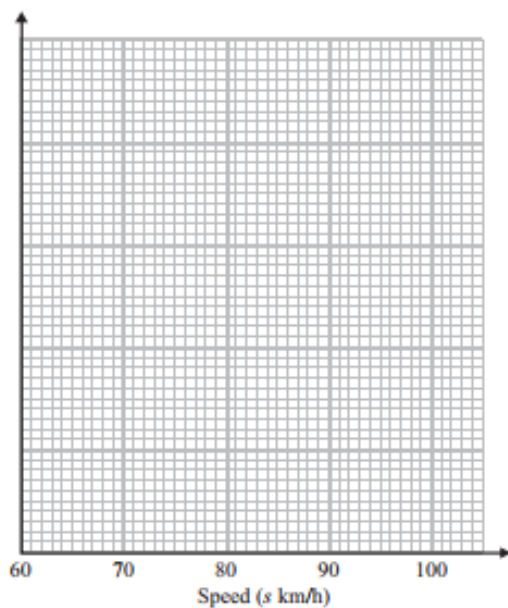
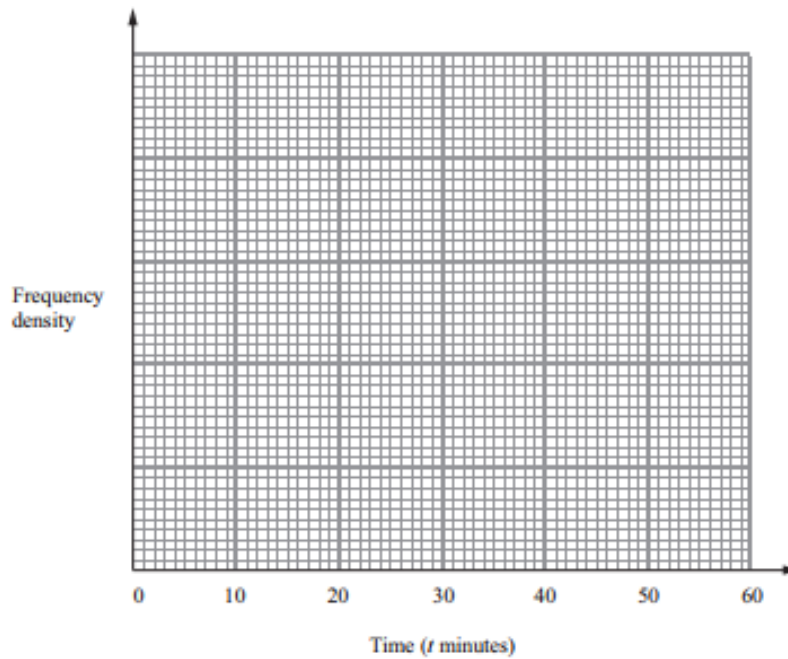(b) Work out an estimate for the number of cars with a speed of more than 85 km/h.

....

(2)

(Total for Question 22 is 5 marks)

Pearson Edexcel - Monday 5 March 2012 - Paper 4 (Calculator) Higher Tier

11.

21. The table shows information about the lengths of time, *t* minutes, it took some students to do their maths homework last week.
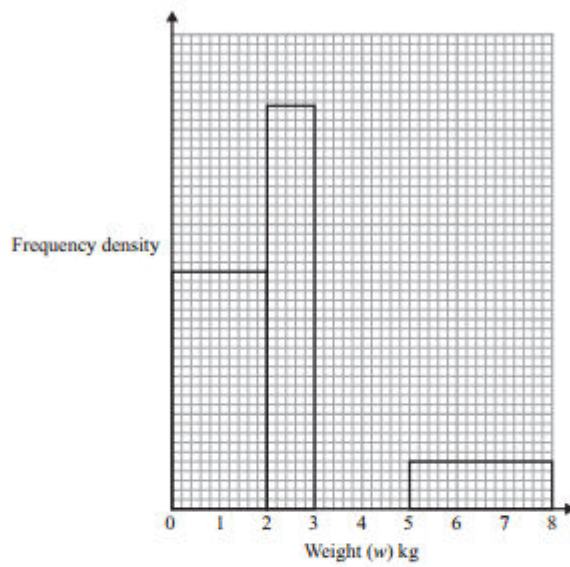
Time (*t* minutes)	Frequency
$0 < t \leqslant 10$	4
$10 < t \leqslant 15$	8
$15 < t \leqslant 20$	24
$20 < t \leqslant 30$	16
$30 < t \leqslant 50$	5

Draw a histogram for this information.

Frequency density

Time (*t* minutes)

(Total 3 marks)

Pearson Edexcel - Monday 14 November 2011 - Paper 4 (Calculator) Higher Tier

12.

21. The table and histogram give some information about the weights of parcels received at a post office during one day.

(a) Use the histogram to complete the frequency table.

Weight (w) kg	Frequency
$0 < w \leqslant 2$	40
$2 < w \leqslant 3$	
$3 < w \leqslant 4$	24
$4 < w \leqslant 5$	18
$5 < w \leqslant 8$	

(2)

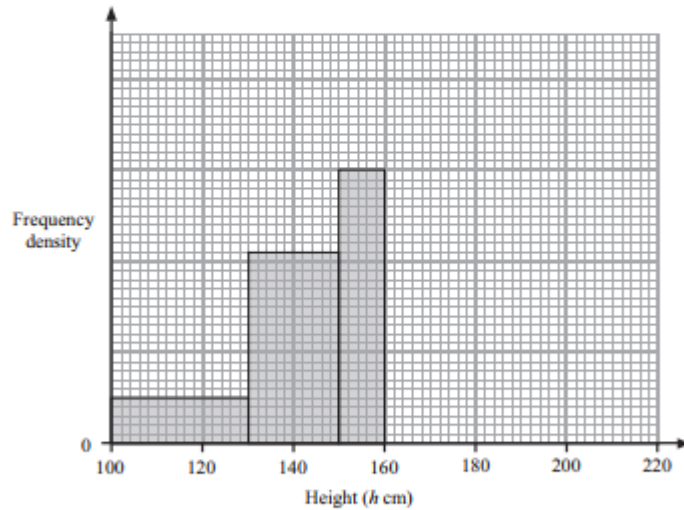(b) Use the table to complete the histogram.

(2)

(Total 4 marks)

Pearson Edexcel - Monday 6 June 2011 - Paper 3 (Non-Calculator) Higher Tier

13.

24. The incomplete table and histogram give some information about the heights (in cm) of some sunflowers.

Height (h cm)	Frequency
$100 < h \leqslant 130$	30
$130 < h \leqslant 150$	
$150 < h \leqslant 160$	
$160 < h \leqslant 180$	40
$180 < h \leqslant 210$	18

(a) Use the histogram to complete the table.

(2)

(b) Use the table to complete the histogram.

(2)

(Total 4 marks)

Pearson Edexcel - Tuesday 9 November 2010 - Paper 3 (Non-Calculator) Higher Tier

14.

24. Tom asked the students in his class how many hours they watched television last week.

The incomplete histogram was drawn using his results.
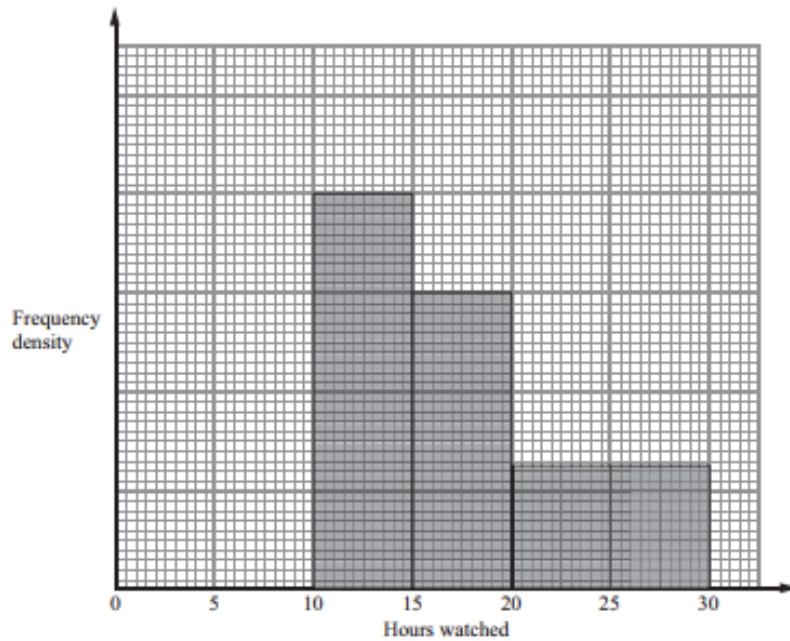
Hours watched

Eight students watched television for between 10 and 15 hours.
Six students watched television for between 0 and 10 hours.

(a) Use this information to complete the histogram.

(2)

No students watched television for more than 30 hours.

(b) Work out how many students Tom asked.

....

(2)

(Total 4 marks)

Pearson Edexcel - Friday 11 June 2010 - Paper 4 (Calculator) Higher Tier

15.

25. Some trains from Manchester to London were late.
The incomplete table and histogram gives some information about how late the trains were.

Minutes late (l)	Frequency
$0 < l \leqslant 5$	16
$5 < l \leqslant 10$	10
$10 < l \leqslant 20$	
$20 < l \leqslant 30$	
$30 < l \leqslant 50$	8
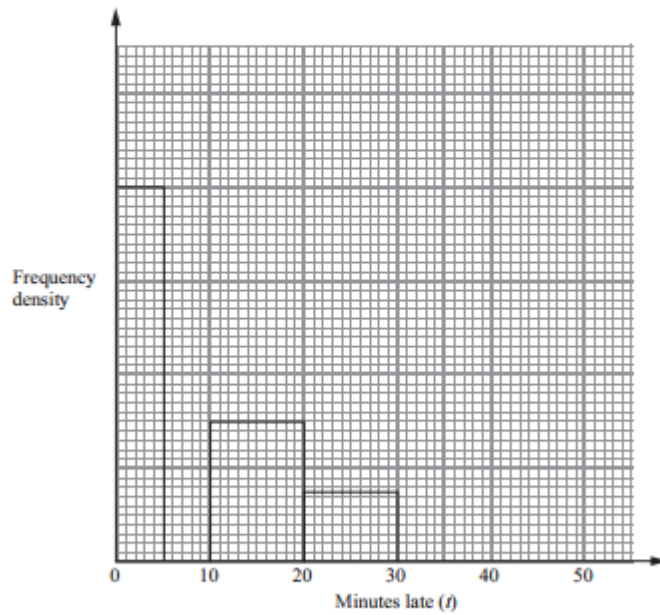
(a) Use the information in the histogram to complete the table.

(2)

(b) Use the information in the table to complete the histogram.

(2)

(Total 4 marks)

Pearson Edexcel - Tuesday 10 November 2009 - Paper 4 (Calculator) Higher Tier

16.

27. The incomplete histogram and table give some information about the times, in minutes, that cars were parked in a car park.
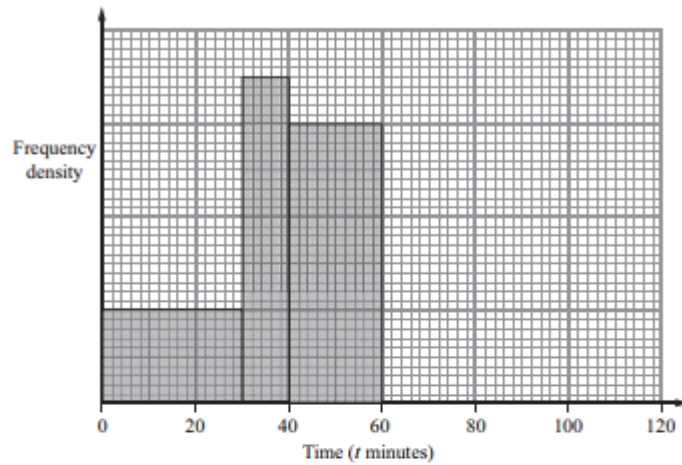
(a) Use the information in the histogram to complete the frequency table.

Time (t minutes)	Frequency
$0 < t \leqslant 30$	
$30 < t \leqslant 40$	35
$40 < t \leqslant 60$	
$60 < t \leqslant 80$	30
$80 < t \leqslant 120$	20

(2)

(b) Use the information in the table to complete the histogram.

(2)

(Total 4 marks)

16 (a) The masses, m kg, of some parcels are shown below.

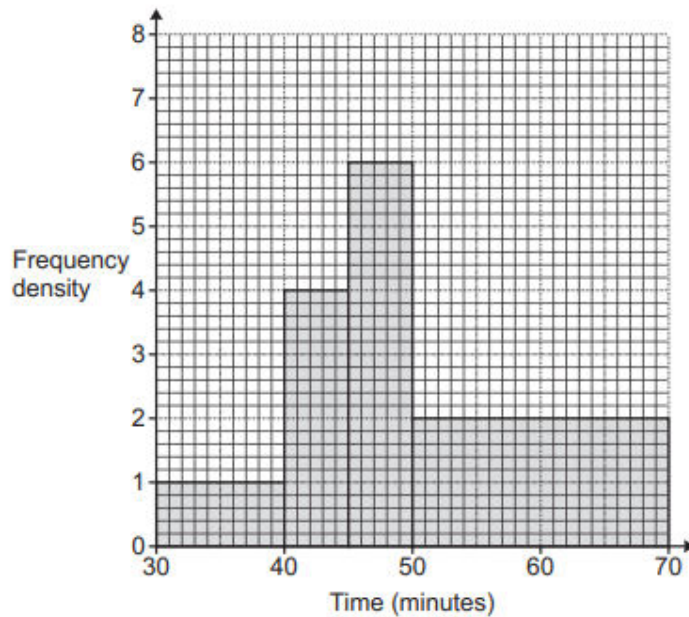4   15   14   11   12   3   1   18   13   2   16   10

Jack constructs this grouped frequency table to record the masses.

Mass (m kg)	Tally	Frequency
$0 \leqslant m \leqslant 5$		
$5 \leqslant m \leqslant 10$		
$10 \leqslant m \leqslant 15$		
$15 \leqslant m \leqslant 20$		

Explain why Jack's table is unsuitable to record the masses.

....

.... [1]

(b) The histogram summarises the times taken, in minutes, by some students to complete a race.

Time (minutes)

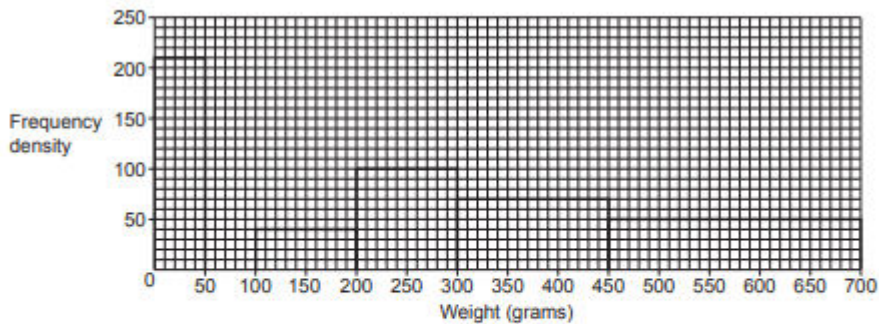**(i)** Show that 70 students took between 45 and 70 minutes to complete the race. **[2]**

(ii) Calculate an estimate of the mean time taken to complete the race.
Show your working.

(b)(ii) ....min **[5]**

15 The histogram shows information about the weights of some of the parcels handled by a delivery company in one month.

(a) Zoe says

There are fewer parcels weighing between 450g and 700g than parcels weighing between 300g and 450g.

Is Zoe correct?
Show how you decide.

....

....

....

.... [4]

(b) The delivery company delivered 6500 parcels weighing between 50g and 100g.

Complete the histogram to show this information. [2]

(c) Zoe uses the histogram to calculate the number of parcels weighing between 200g and 250g.

Explain why Zoe's answer is unlikely to be reliable.

....

.... [1]

12 30 students completed a puzzle and their times were recorded.
All of the students completed the puzzle in less than 50 seconds.
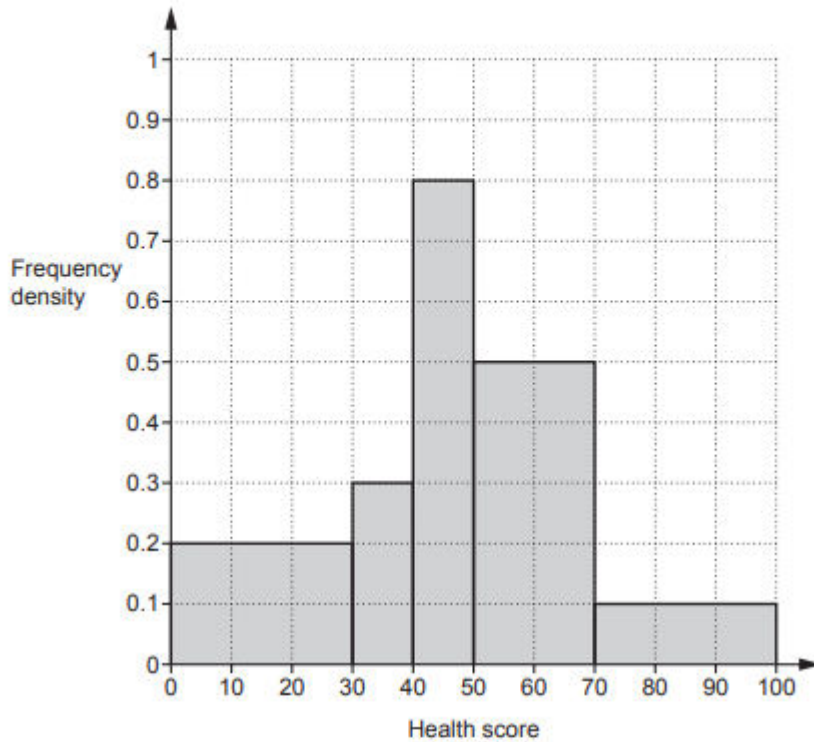The histogram shows information about some of their times.
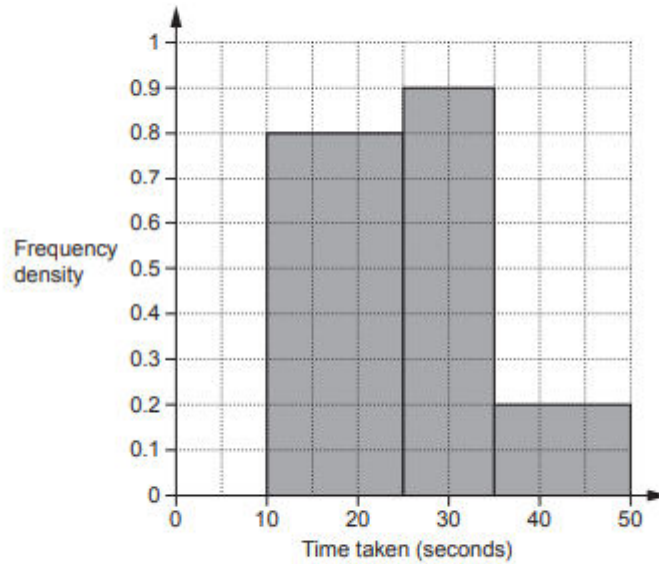
Complete the histogram for those completing the puzzle in less than 10 seconds.　　**[5]**

20.

10 The histogram summarises a health score for a group of people.

(a) Estimate the fraction of the group who had a score of 45 or more.

(a) .... **[4]**

(b) What assumption did you make in answering part **(a)**?

....

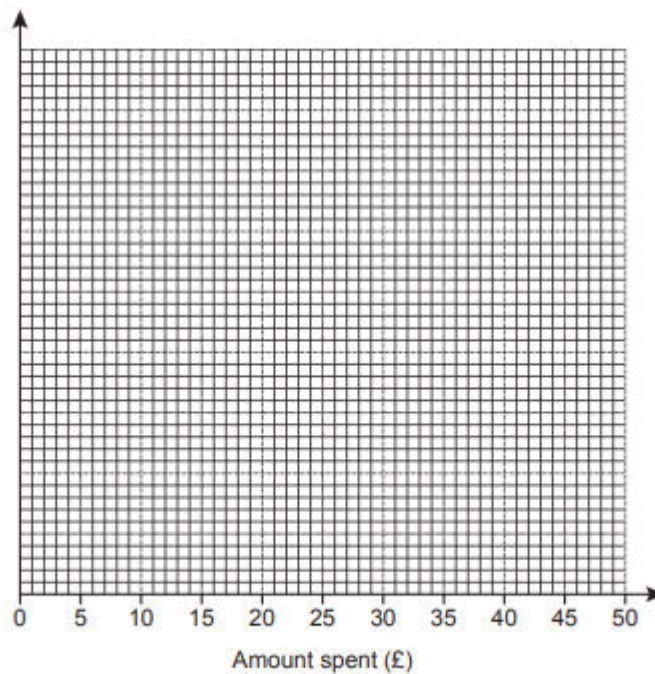.. **[1]**

21.

10 Ana records the amount of money spent by 140 customers in her shop on one day.

Amount spent (£a)	Frequency
$0 < a \leqslant 5$	35
$5 < a \leqslant 10$	42
$10 < a \leqslant 15$	20
$15 < a \leqslant 20$	18
$20 < a \leqslant 30$	14
$30 < a \leqslant 50$	11

(a) Draw a histogram to represent this information.

Amount spent (£)

[4]

(b) Ana wants to offer a discount to the customers who spend the most money in her shop.

> Voucher
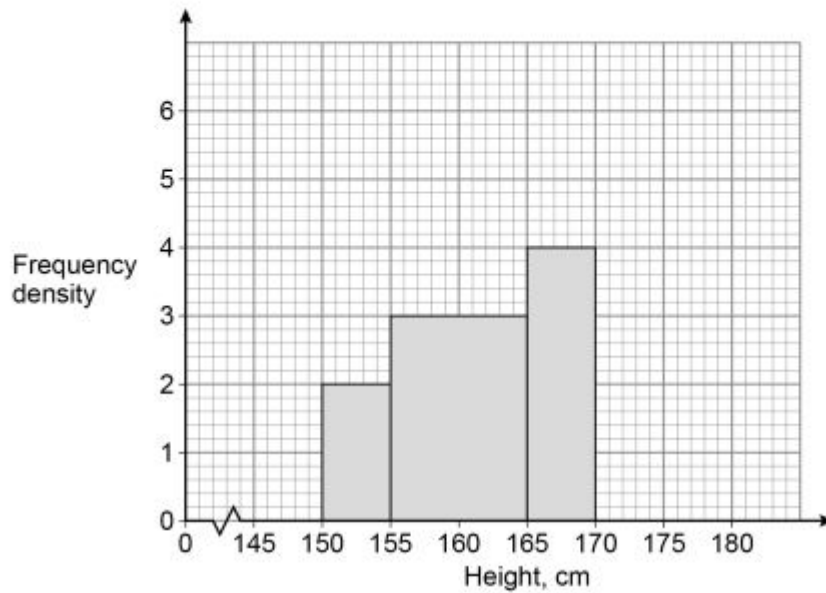> Save 10% when you
> spend more than £…

She wants to give the discount to approximately 25% of her customers.

Suggest a suitable amount of money for Ana to use on her voucher.
Justify your decision.

.... **[4]**

22.

25   A histogram is drawn to represent the heights of a sample of women.

Three of the four bars are shown.

The bar for   170 cm ⩽ height < 180 cm   is missing.

There are 74 women in the sample.

Complete the histogram.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

18   Here is some information about the ages of people at a concert.

Age, x (years)	Frequency
$10 \leqslant x < 15$	8
$15 \leqslant x < 25$	24
$25 \leqslant x < 40$	30
$40 \leqslant x < 70$	39

Draw a histogram to represent the information.

[3 marks]

Ages of people at a concert
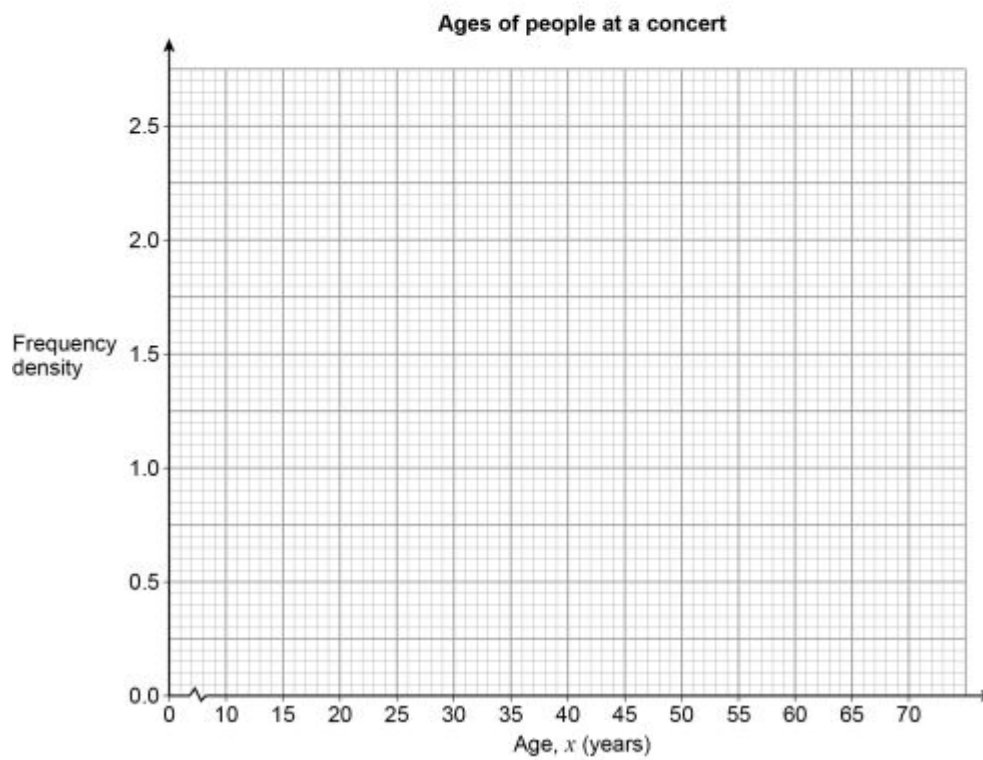
26   The histogram shows information about the speed of cars as they pass a checkpoint.
The scale on the frequency density axis is missing.
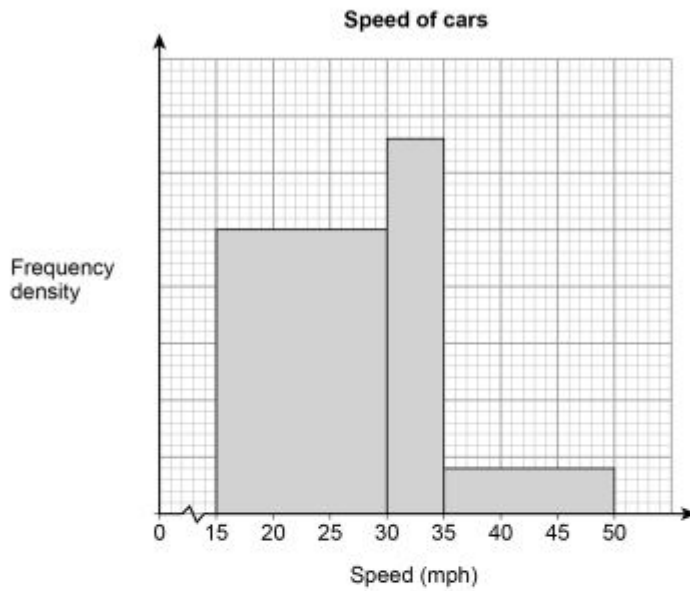
Speed of cars

The histogram shows information about 480 cars.

26 (a)   How many cars does the first bar represent?

[4 marks]

_____

_____

_____

_____

_____

_____

                Answer

26 (b)   Cars with a speed greater than 40 mph are over the speed limit.

Use the histogram to estimate the number of cars that are over the speed limit.

[2 marks]

_____

_____

_____

_____

_____

_____

Answer _____