# Histograms

Questions in past papers often come up combined with other topics.
Topic tags have been given for each question to enable you to know if you can do the question or whether you need to wait to cover the additional topic(s).

Scan the QR code(s) or click the link for instant detailed model solutions!

18 The histogram gives information about the heights, in metres, of the trees in a park.
The histogram is incomplete.
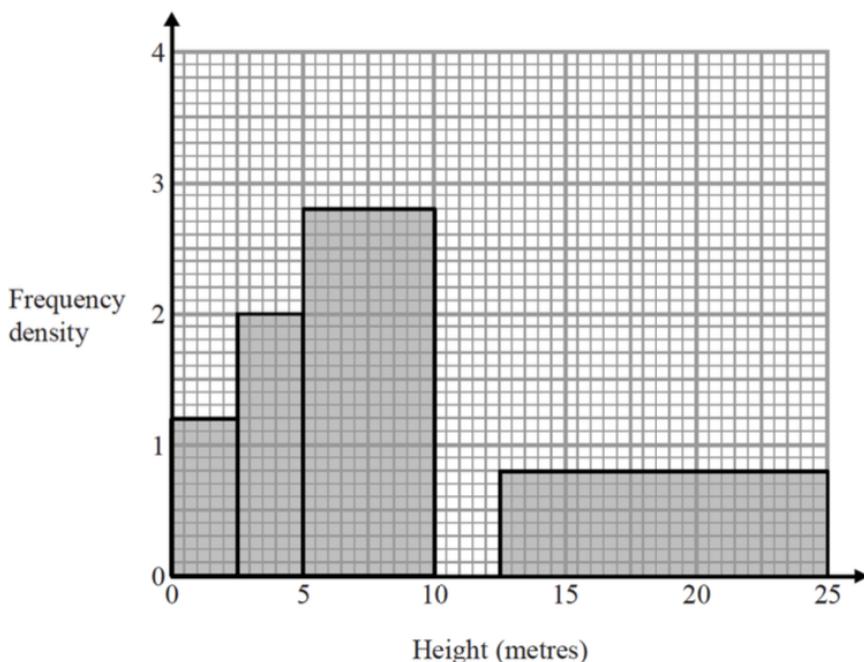
20% of the trees in the park have a height between 10 metres and 12.5 metres.
None of the trees in the park have a height greater than 25 metres.

Complete the histogram.

(Total for Question 18 is 3 marks)

18 The incomplete table and incomplete histogram give information about the times, in minutes, that 140 people waited at a station for a train.

Time (t minutes)	Frequency
$0 < t \leqslant 5$	23
$5 < t \leqslant 15$	
$15 < t \leqslant 30$	
$30 < t \leqslant 40$	18
$40 < t \leqslant 60$	14
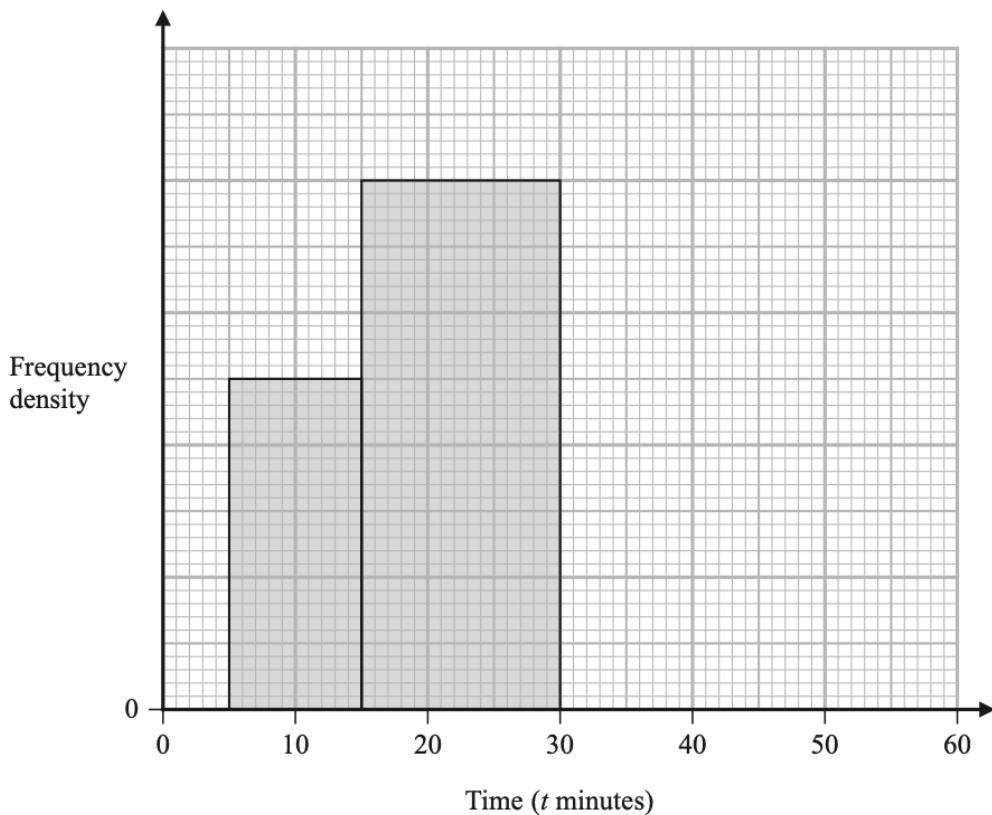
Complete the table and the histogram.

(Total for Question 18 is 4 marks)

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.
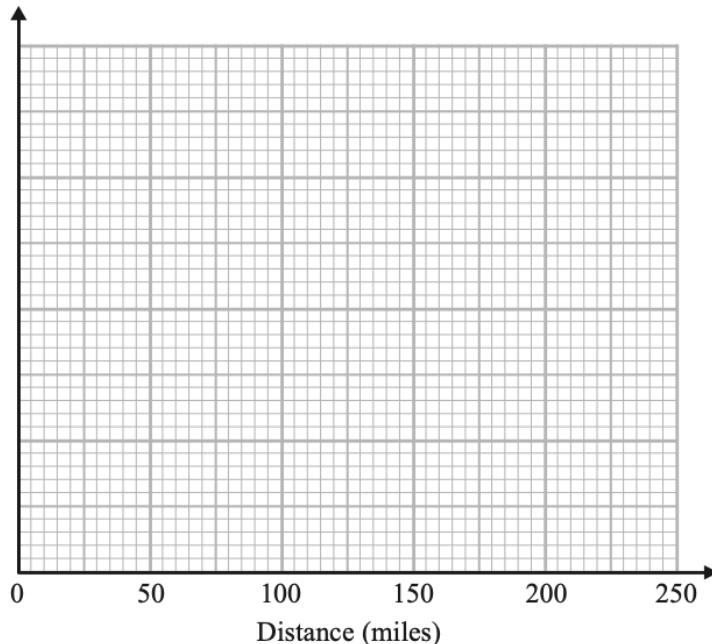
Distance (miles)

(3)

(b) Estimate the median distance.

.... miles

(2)

(Total for Question 17 is 5 marks)

Question 8

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.
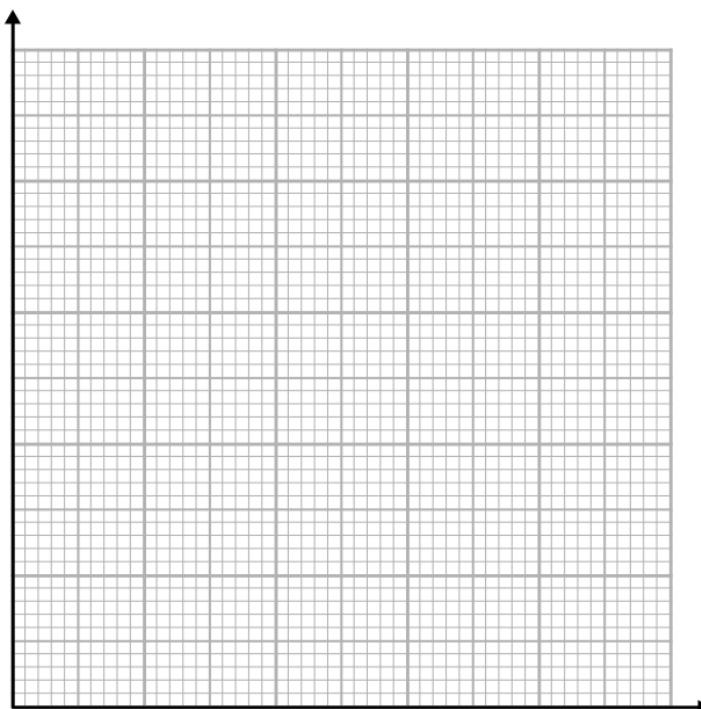
(3)

(b) Find an estimate for the median.

.... km/h

(2)

(Total for Question 14 is 5 marks)

21 The histogram shows information about the total time, m minutes, taken by each child in a school to walk to school every day for one week.
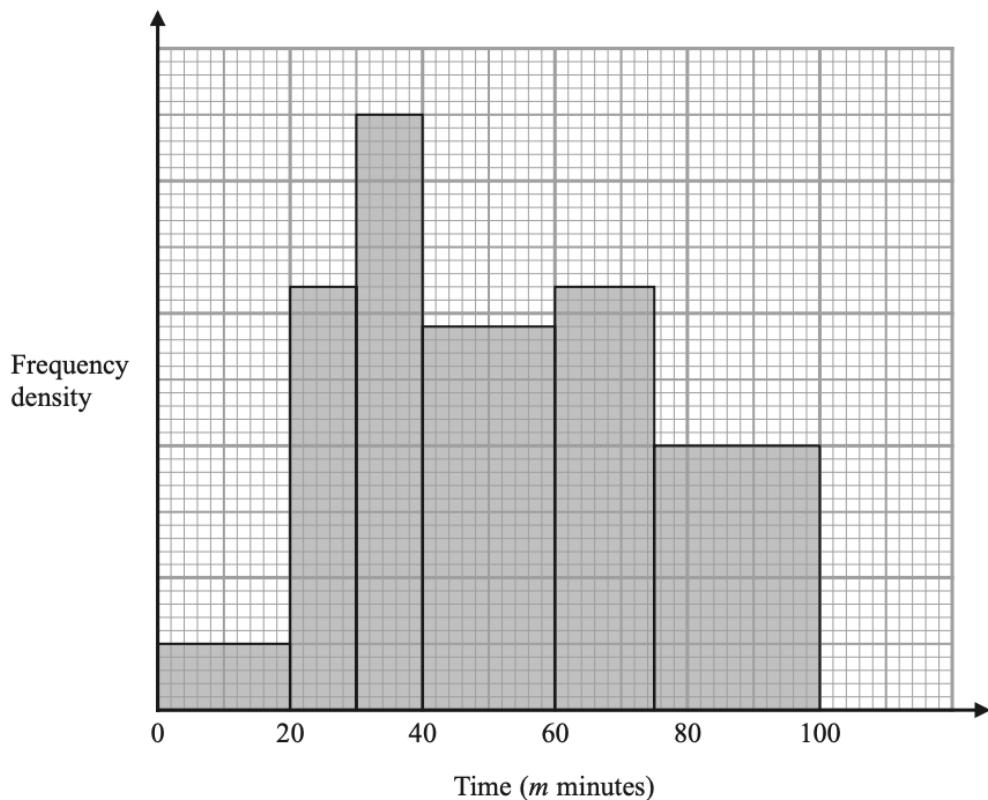
There are no children for whom $m > 100$

There are 10 children for whom $m \leqslant 20$

Work out an estimate for the number of children for whom $50 < m \leqslant 80$

22 Some people attend a concert.
The histogram shows information about the ages of these people.
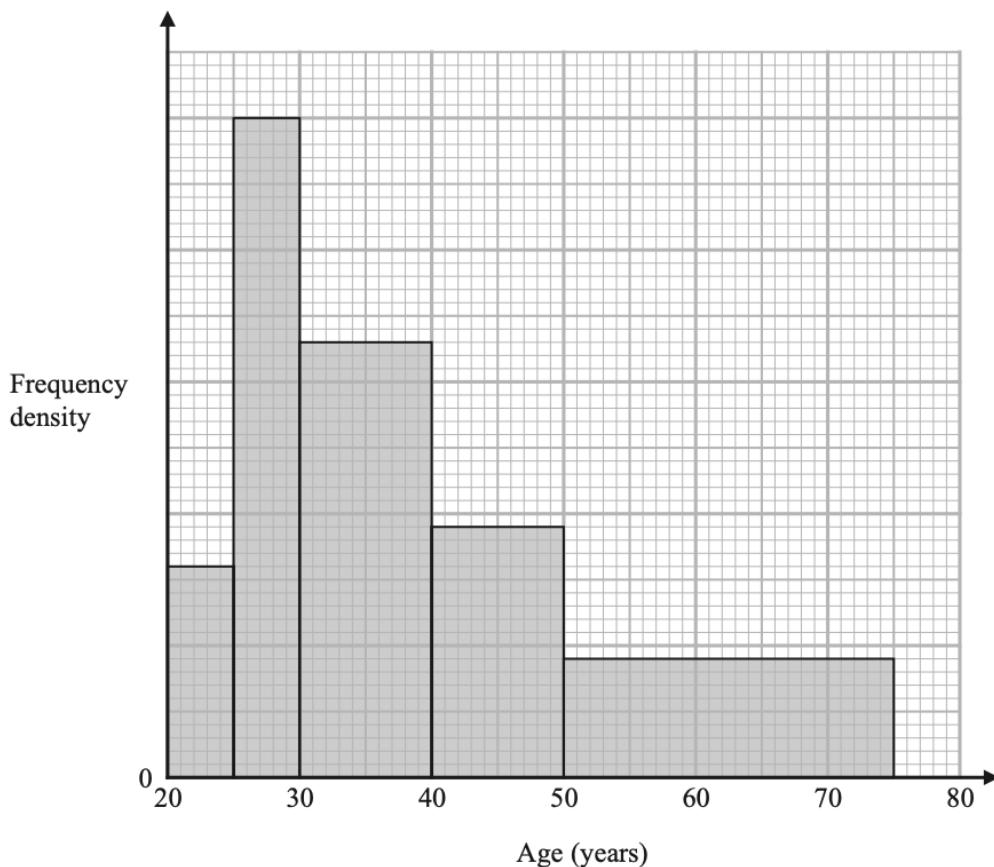
Work out an estimate for the percentage of these people who are aged more than 55 years.
Give your answer correct to one decimal place.

....%

(Total for Question 22 is 4 marks)

19 150 people took part in a survey.
The histogram shows information about the ages of these people.
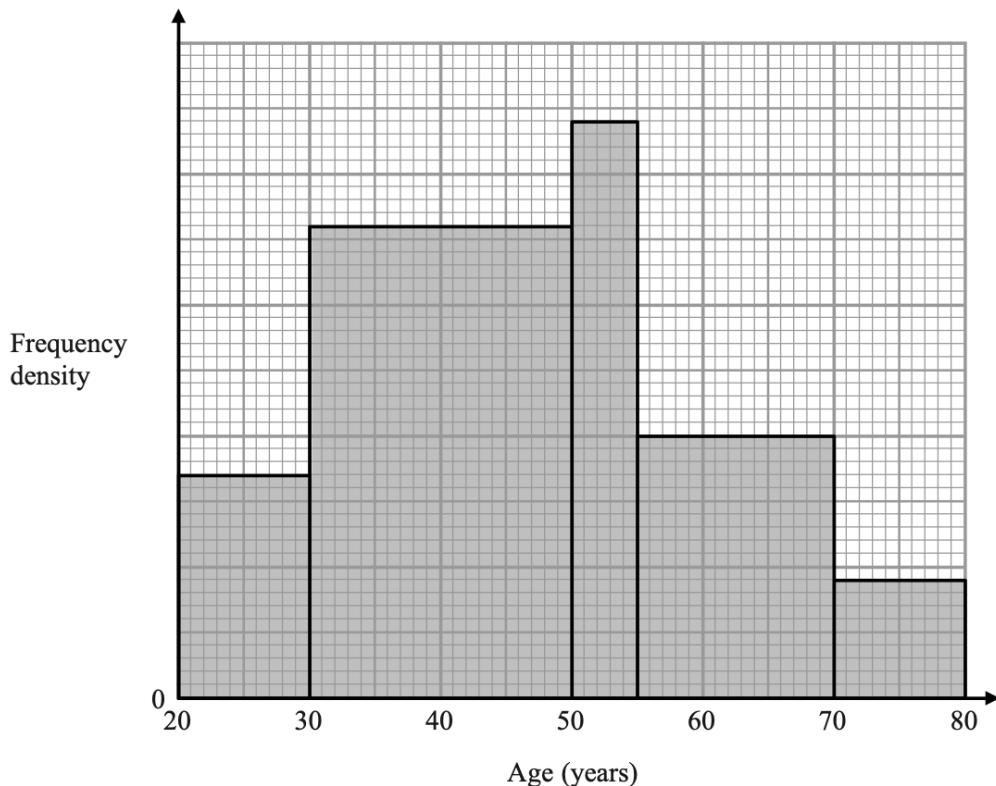
Work out how many of these 150 people are aged between 50 years and 55 years.

(Total for Question 19 is 4 marks)