1. Three friends keep a record of their scores at ten-pin bowling.

   (a) These are Ben's scores for 8 games.

   104   118   156   78   110   162   176   144

   (i) Work out the mean of Ben's scores.

   ....[3]

   (ii) Work out the range of Ben's scores.

   ....[1]

   (b) This table shows the mean and range for Ben's two friends, Chris and Denzil.

	Chris	Denzil
Mean	135	160
Range	46	72

   Which of the **three** players is the most consistent?
   Give a reason for your decision.

   .... because ....

   ....[1]

2. This stem and leaf diagram shows the lengths of time, in seconds, taken by a group of students to complete a puzzle.

   ```
   2 | 7  9
   3 | 0  3  5  8
   4 | 1  1  2  4  6  9
   5 | 0  3  7
   6 | 4  5
   ```

   Key: 4 | 1 represents 41 seconds

   (a) How many students were in the group?

   ....[1]

   (b) What was the longest time taken to complete the puzzle?

   .... seconds [1]

   (c) How many students took less than 40 seconds to complete the puzzle?

   ....[1]

   (d) What was the median time?

   .... seconds [1]

3. Peter investigated how many people were living in each house in his road.
This table summarises his results.

Number of people in house	Frequency
1	3
2	7
3	4
4	6
5	6
6	3
7	1

Calculate the mean number of people living in a house in Peter's road.

....

[3]

4. Bilal measures the heights of 80 trees.
His results are summarised in this table.

Height (h cm)	Midpoint	Frequency
$0 < h \leq 50$	25	3
$50 < h \leq 100$		14
$100 < h \leq 150$		15
$150 < h \leq 200$		23
$200 < h \leq 250$		17
$250 < h \leq 300$		8

Calculate an estimate of the mean height of the trees.

.... cm

[3]

5. Colin counts the number of matches in 25 boxes of Striker matches.

The results are shown in this stem and leaf diagram.

```
20 | 2  8
21 | 0  3  6  6  6  8
22 | 0  1  1  2  4  6  6  7  8  8
23 | 0  1  2  5  6
24 | 0  3
```

Key: 24│3 = 243

(a) For this information, write down

   (i)   the median,

   ....[1]

   (ii)   the range.

   ....[1]

(b) On each box it states:

Average contents 220 matches.

Using the information in (a), write one comment about the accuracy of this statement.

....[1]

6. Eighty motorists were asked to estimate the distance they each drive in a year.
The results are summarised in the table.

Distance in miles (*m* thousands)	Frequency
$0 < m \le 5$	16
$5 < m \le 10$	38
$10 < m \le 15$	18
$15 < m \le 20$	6
$20 < m \le 25$	2

(a) Calculate an estimate of the **mean** distance.

.... thousand miles

[4]

(b) Explain how you can use the table to justify this statement.
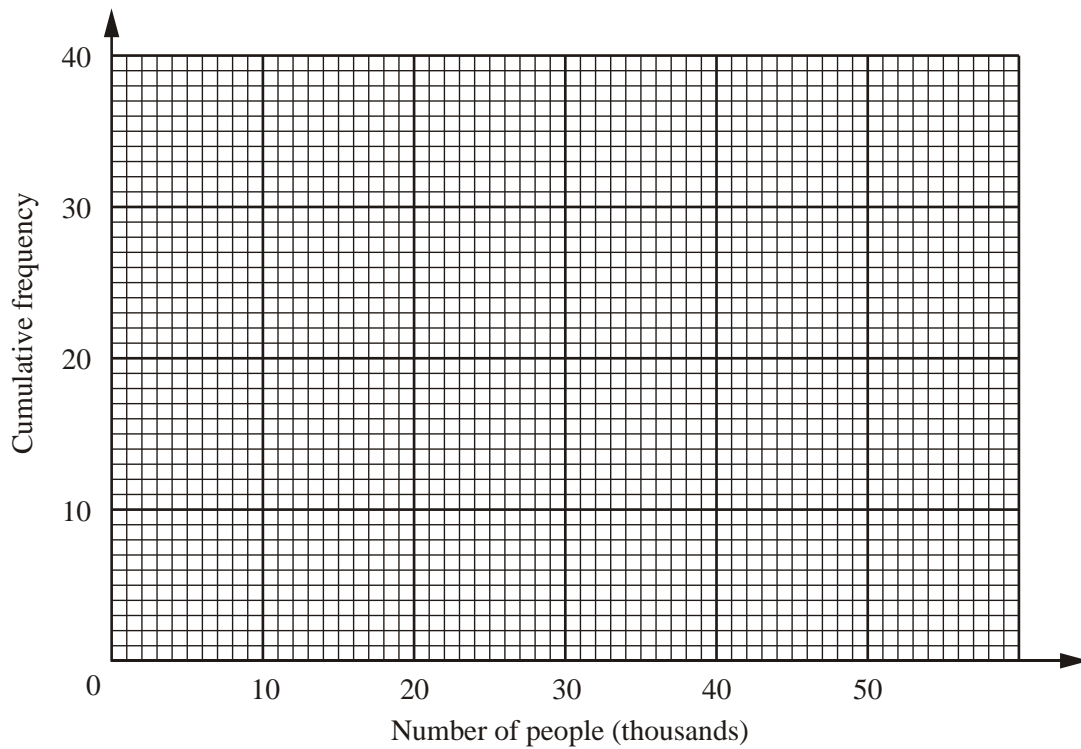
The median distance is in the interval 5 < m ≤ 10.

....

....[1]

7. This table shows the distribution of attendances at FA cup matches one weekend in January 2004.

Number of people (*n* thousands)	Frequency
$0 < n \le 5$	2
$5 < n \le 10$	11
$10 < n \le 20$	12
$20 < n \le 30$	2
$30 < n \le 40$	3
$40 < n \le 50$	2

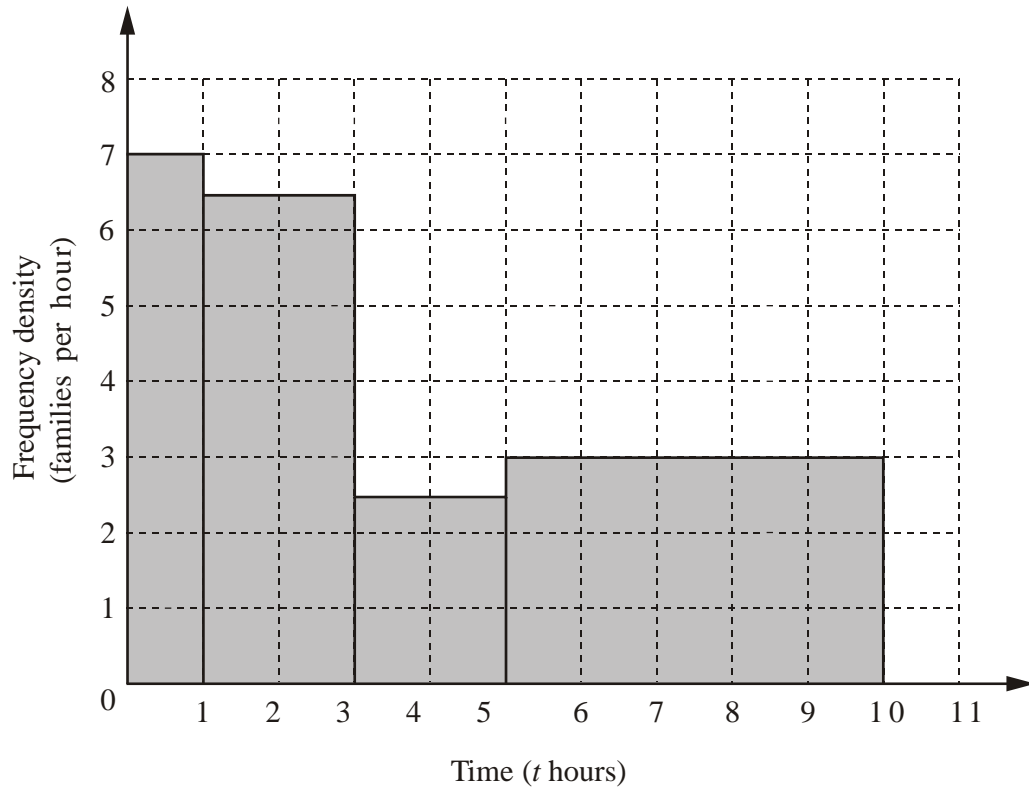(a) Draw a **cumulative frequency** graph for this data.

[3]

(b) Use your cumulative frequency graph to estimate the number of matches attended by **more than** 17 000 people.

....

[2]

8. This histogram shows the time spent on the internet one day by the 40 families who live in Orchard Road.
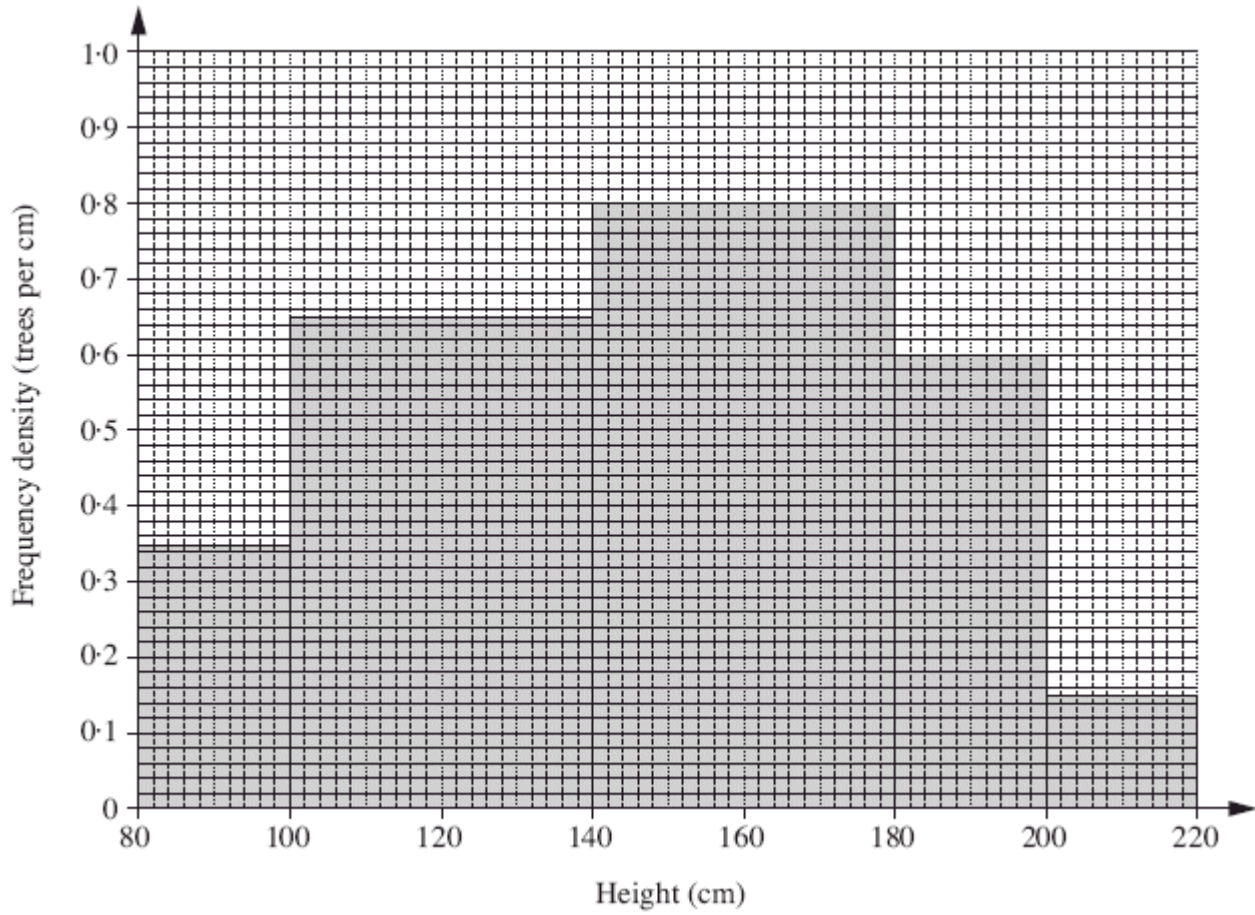

Complete the frequency distribution.
Hence calculate an estimate of the mean time spent on the internet by these families.

Time (t hours)	Frequency
$0 \leq t < 1$	7
$1 \leq t < 3$	

...............................hours

[4]

9. A plant nursery measured the heights of some birch trees and some ash trees two years after planting.
This histogram represents the heights of the birch trees.

Height (cm)

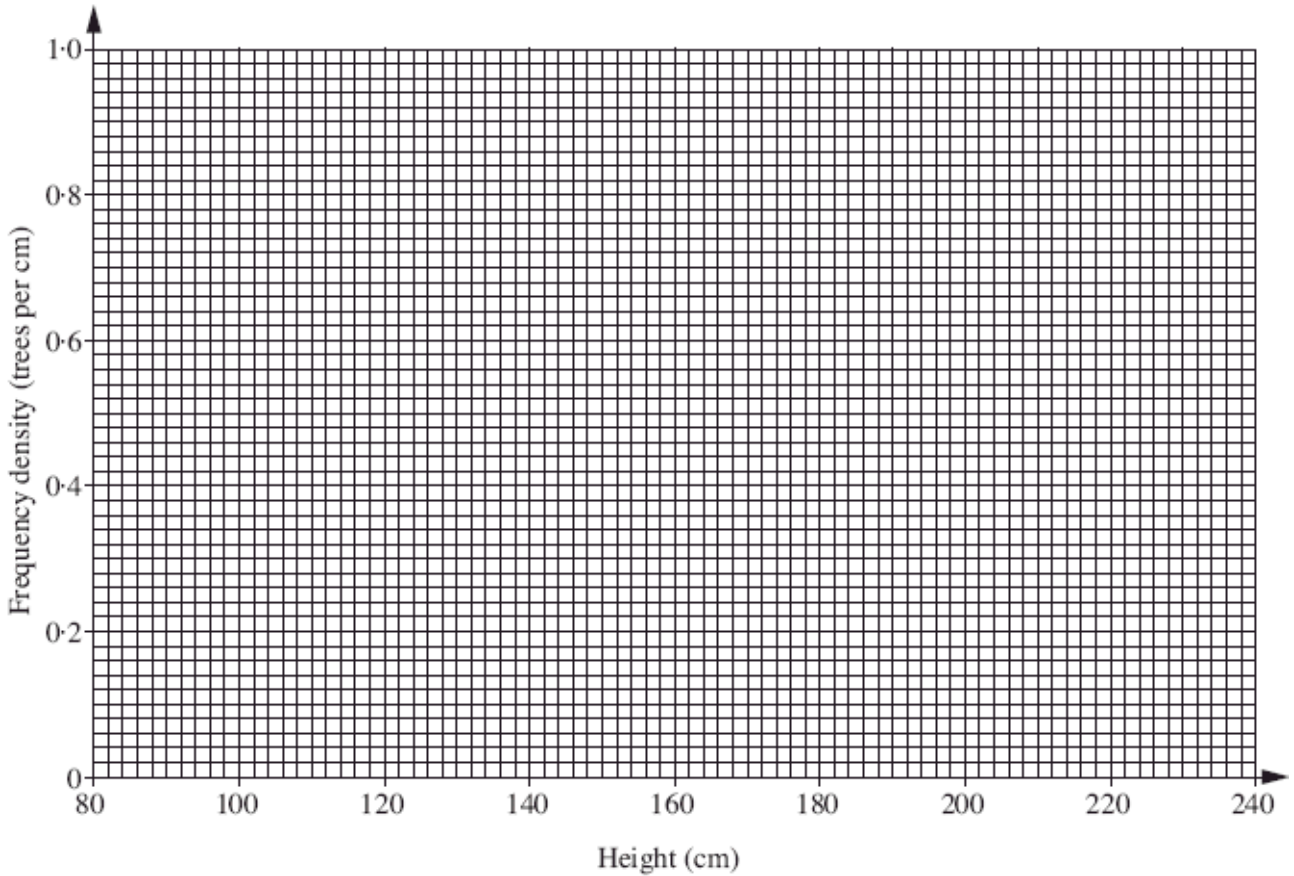(a) How many of these birch trees had height 180 to 200 cm two years after planting?

....

[1]

(b) This table summarises data for the heights of the ash trees.

Height (h cm)	Frequency
$100 < h \leq 140$	12
$140 < h \leq 180$	30
$180 < h \leq 200$	18
$200 < h \leq 220$	14
$220 < h \leq 240$	6

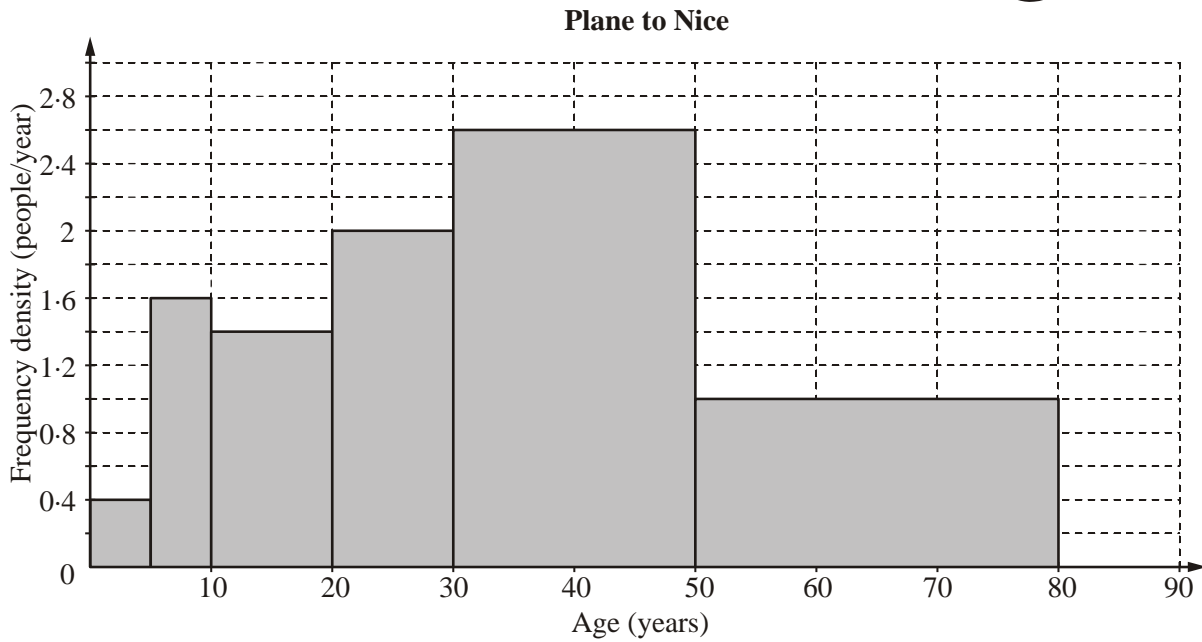On this grid, draw a histogram to represent the heights of the ash trees.

[3]

(c) Make one comparison between the heights of the birch trees and the ash trees.

....

....

[1]

10. (a) This histogram shows the distribution of the ages of the passengers on a plane to Nice.

Plane to Nice

How many passengers aged under 5 years were there on the plane to Nice?

...................................[1]

(b) This histogram shows the distribution of the ages of the passengers on a plane to Frankfurt.

Plane to Frankfurt
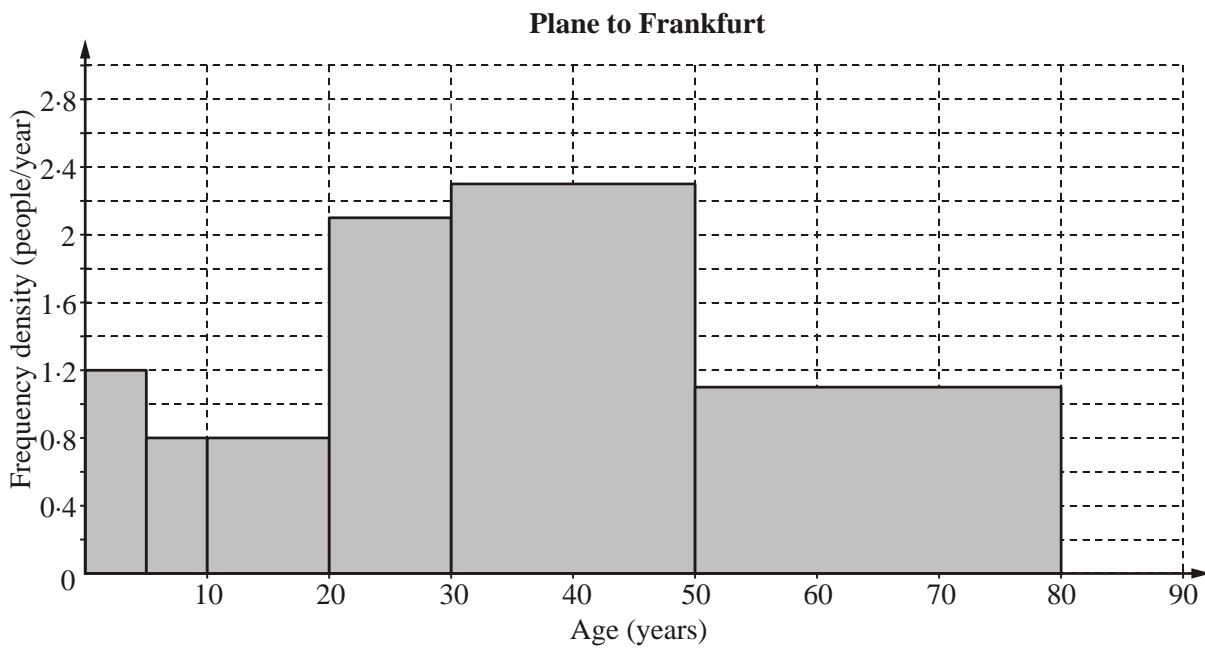
On which plane were there more passengers aged over 30?
Show how you decide.

....

[3]