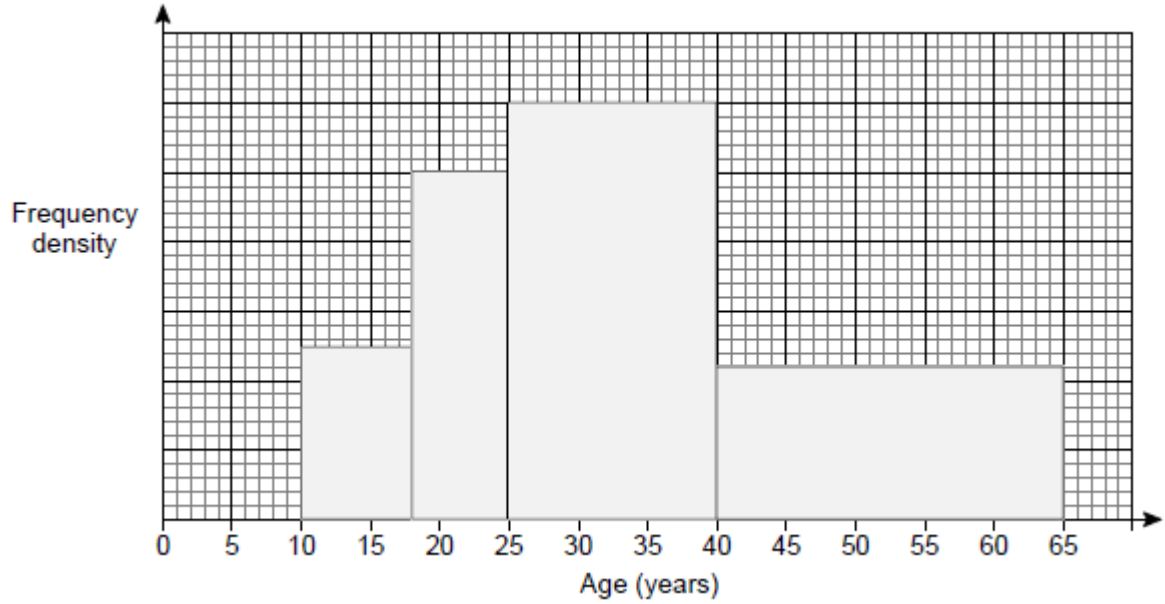


Q1.

The histogram shows the ages, in years, of members of a chess club.



There are 22 members with ages in the range $40 \leq \text{age} < 65$

Work out the number of members with ages in the range $25 \leq \text{age} < 40$

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Answer

(Total 4 marks)

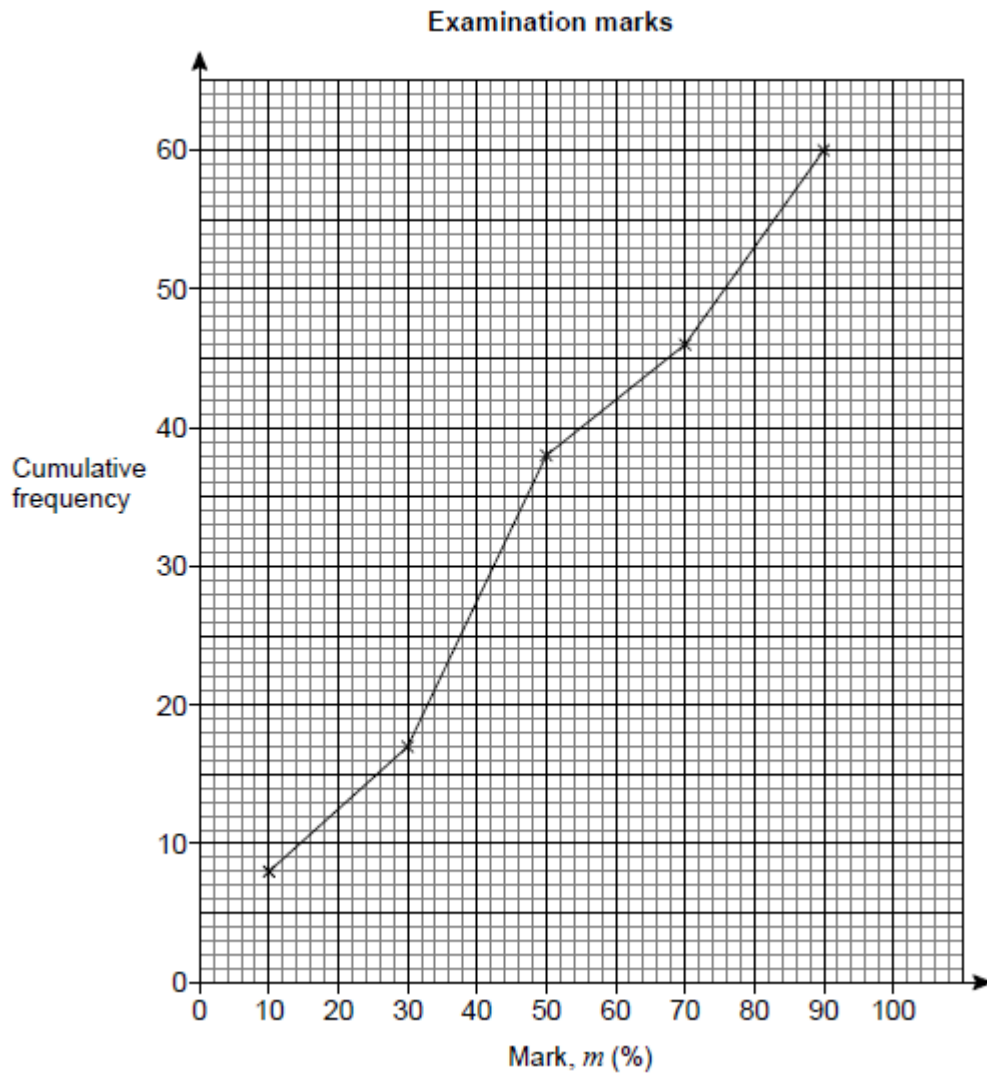
Q2.

Here are the examination marks for 60 pupils.

mark, m (%)	Frequency
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$0 \leq m < 20$	8
$20 \leq m < 40$	9
$40 \leq m < 60$	21
$60 \leq m < 80$	10
$80 \leq m < 100$	12

Molly drew this cumulative frequency graph to show the data.



Make **two** criticisms of Molly's graph.

Criticism 1

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Criticism 2

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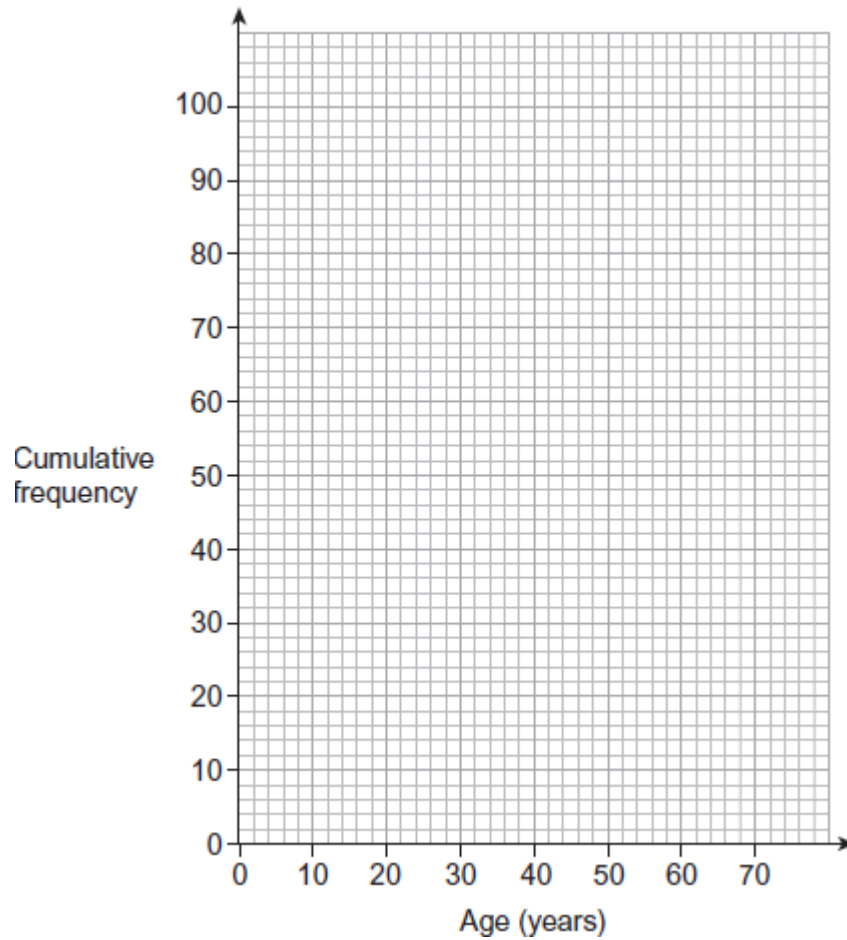
(Total 2 marks)

Q3.

The table shows information about the ages of 100 rugby supporters.

Age, a (years)	Frequency	
$5 \leq a < 15$	12	
$15 \leq a < 20$	11	
$20 \leq a < 40$	25	
$40 \leq a < 55$	39	
$55 \leq a < 70$	13	

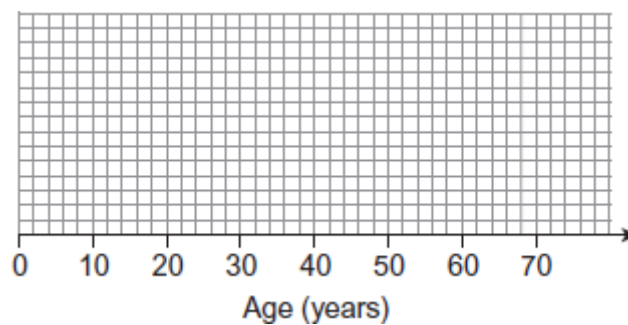
(a) Plot a cumulative frequency diagram for the data.



(4)

- (b) The youngest supporter is 8 years old.
The oldest supporter is 69 years old.

Draw a box plot for the data.

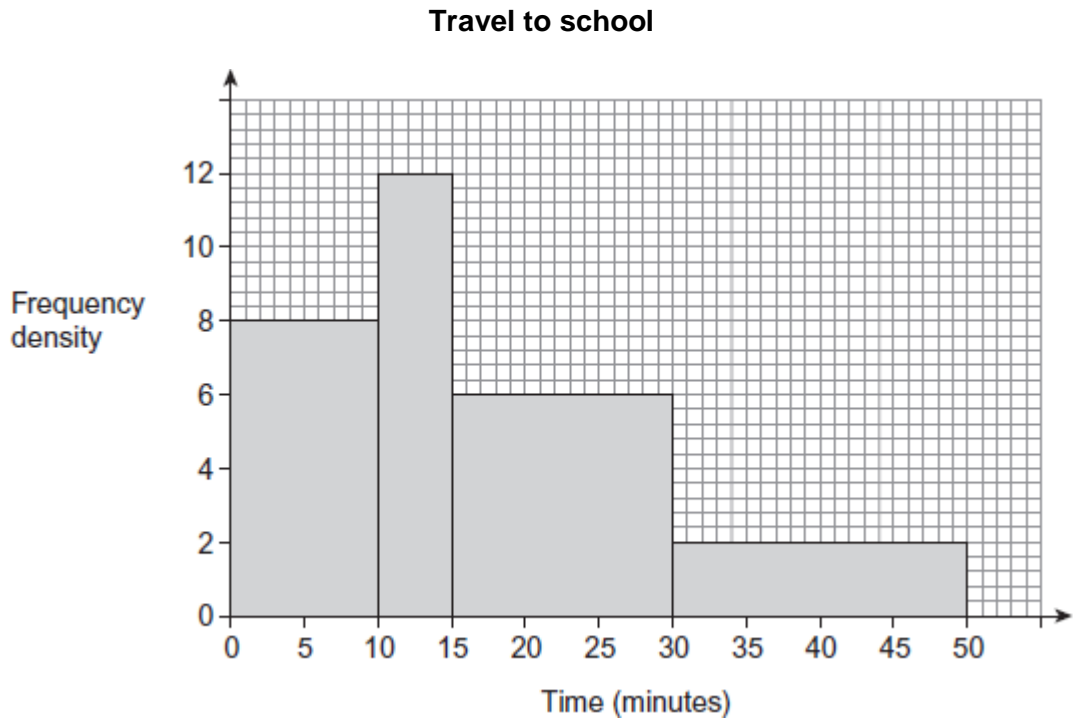


(3)

(Total 7 marks)

Q4.

The histogram shows the time it takes 270 students to travel to school.



Kirsty says 30% of the students take more than 25 minutes to travel to school.

Is she correct?

Use the histogram to decide.

You **must** show your working.

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Answer

(Total 5 marks)

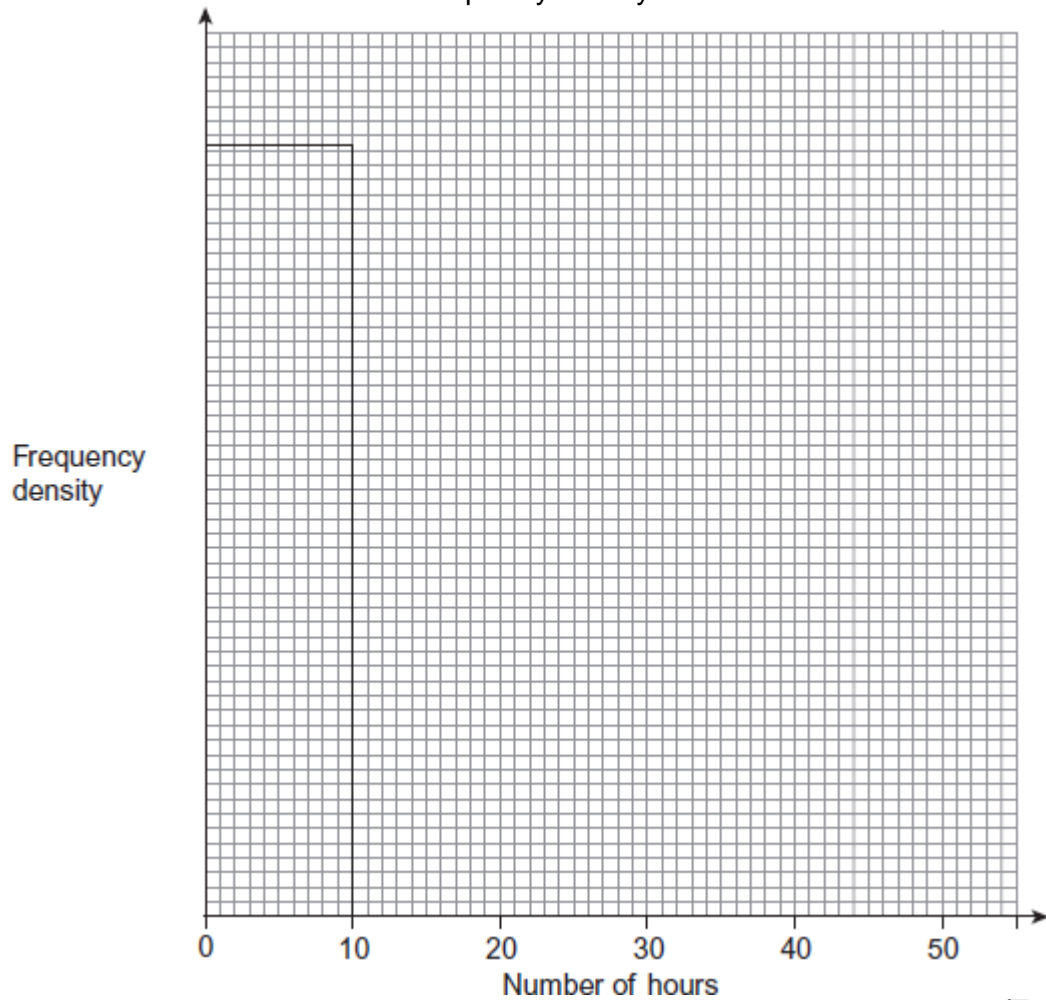
Q5.

70 people gave information about the number of hours they worked in one week. The table and histogram show some of that information.

Number of hours, n	Frequency
$0 < n \leq 10$	21
$10 < n \leq 20$	x
$20 < n \leq 40$	y
$40 < n \leq 50$	17

$$x : y = 3 : 5$$

Complete the histogram.
Remember to label the **scale** on the frequency density axis.

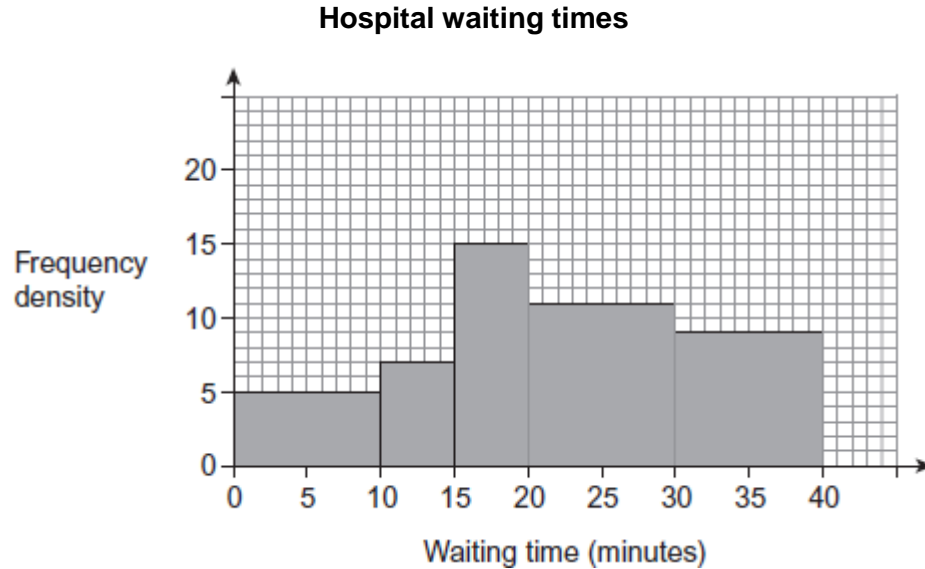


(Total 6 marks)

Q6. Hamza made this hypothesis,

“60% of hospital patients wait between 20 and 40 minutes”.

He collects data about the waiting times of 360 patients.



Does the data support his hypothesis?
You **must** show your working.

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(Total 5 marks)

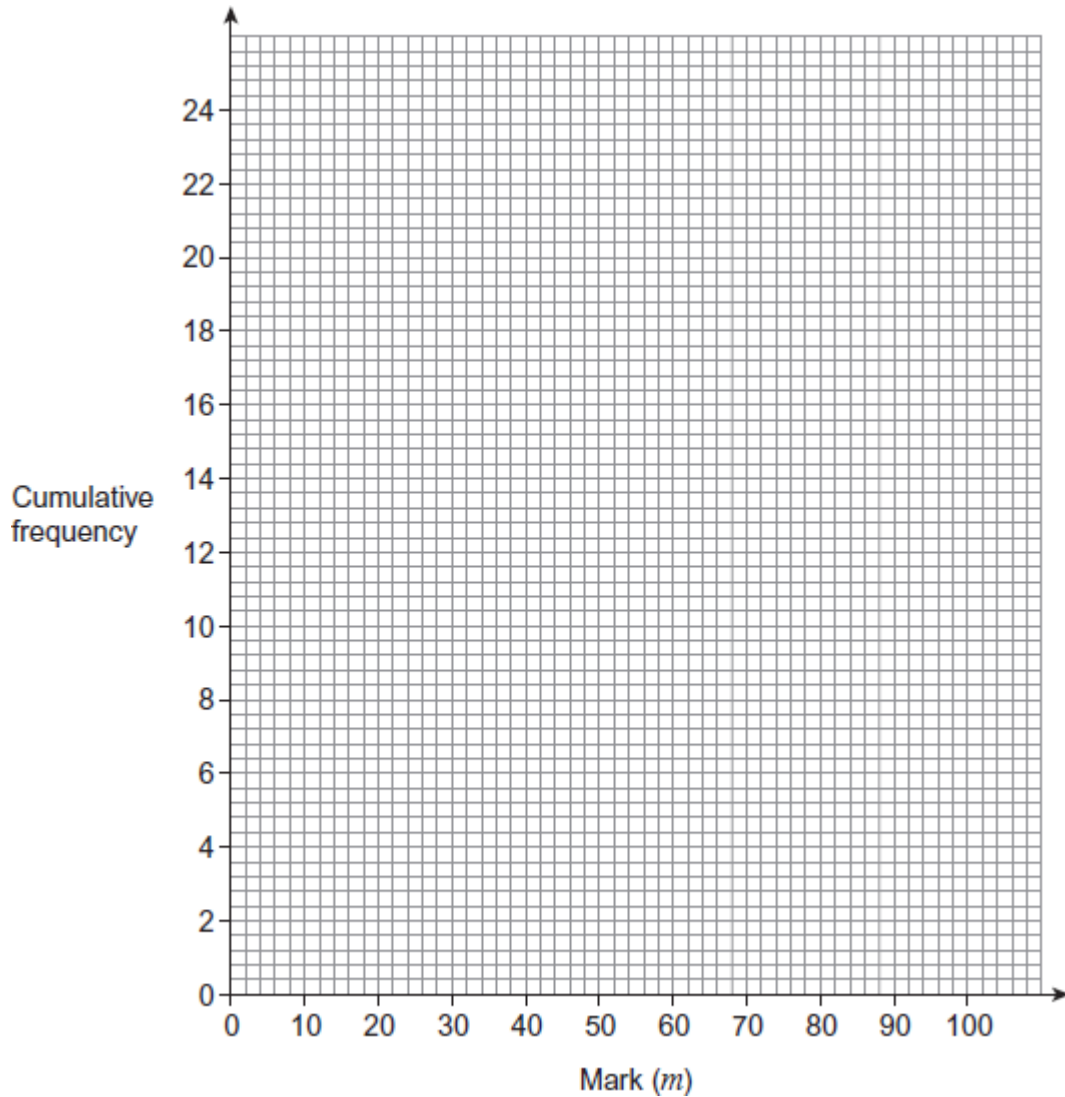
Q7. 24 students took a test.

The table shows information about their marks.

Mark (m)	Frequency
$20 < m \leq 40$	3

$40 < m \leq 60$	5
$60 < m \leq 80$	12
$80 < m \leq 100$	4

(a) Draw a cumulative frequency diagram for their marks.



(3)

(b) Use the cumulative frequency diagram to estimate the interquartile range.

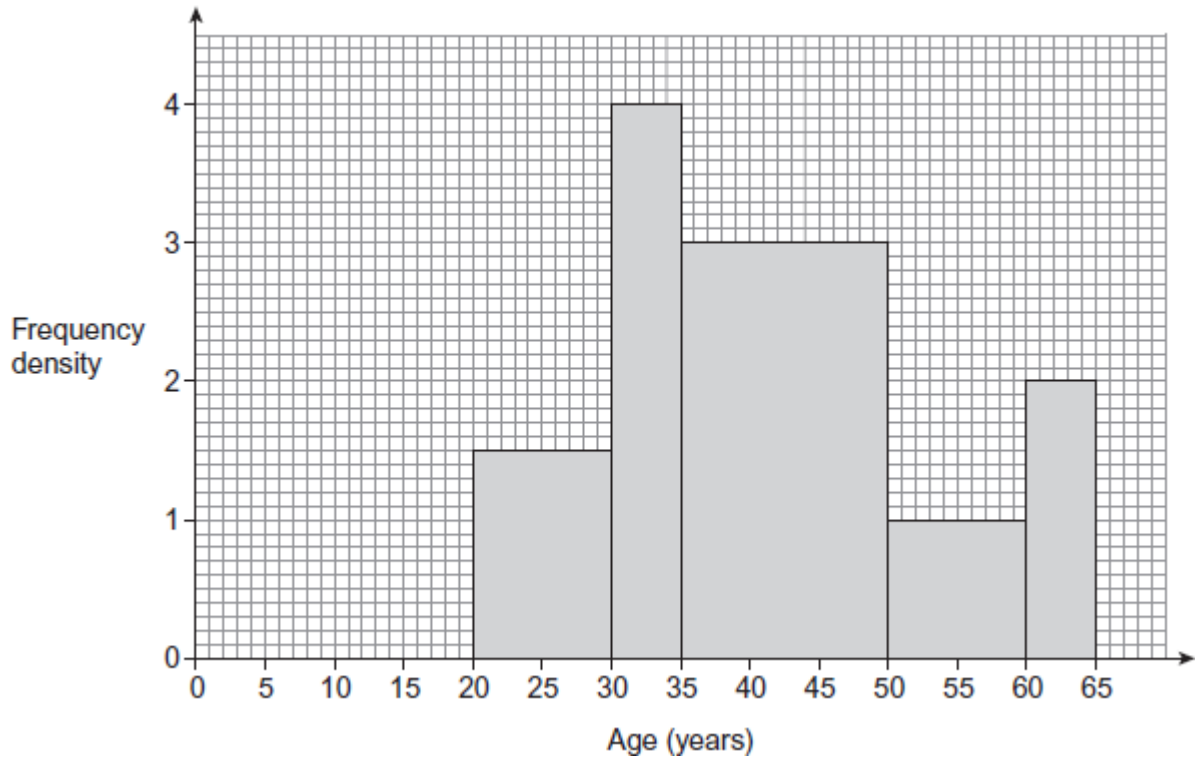
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Answer

(2)
(Total 5 marks)

Q8. The histogram shows information about the ages of 100 employees.



Work out an estimate of the median age of the employees.

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(Total 4 marks)

Q9.

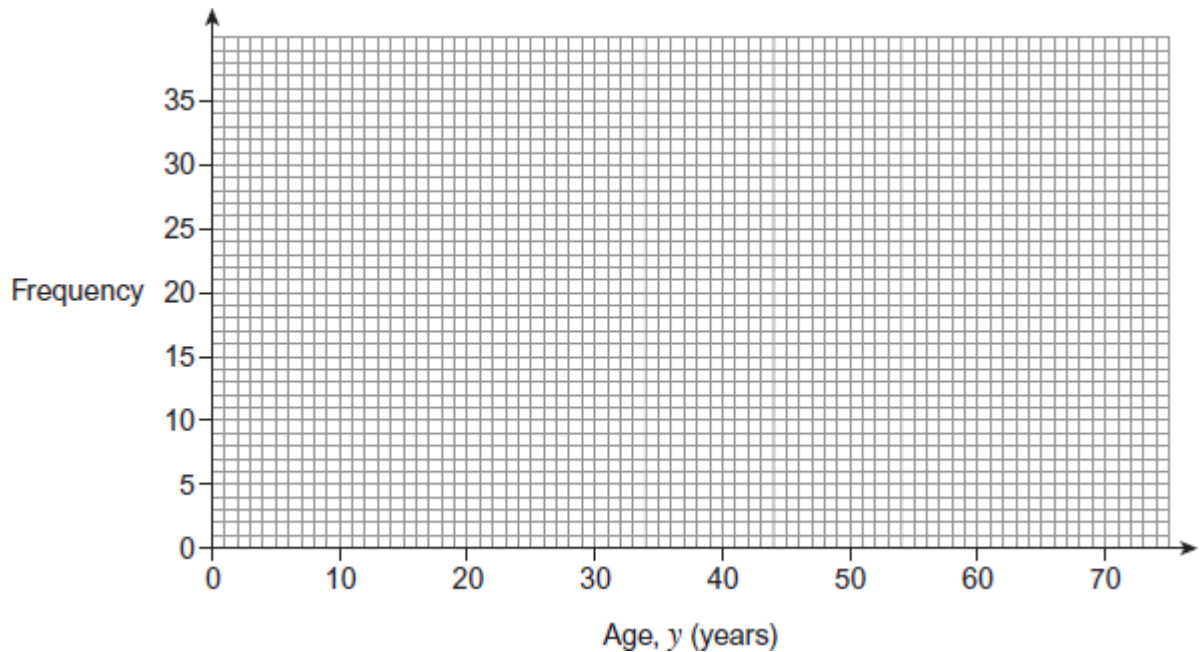
A chess club has both male and female members.

(a) The table shows the age distribution of the male club members.

Age, y (years)	Frequency
$10 \leq y < 20$	5
$20 \leq y < 30$	9
$30 \leq y < 40$	16
$40 \leq y < 50$	34
$50 \leq y < 60$	28
$60 \leq y < 70$	19

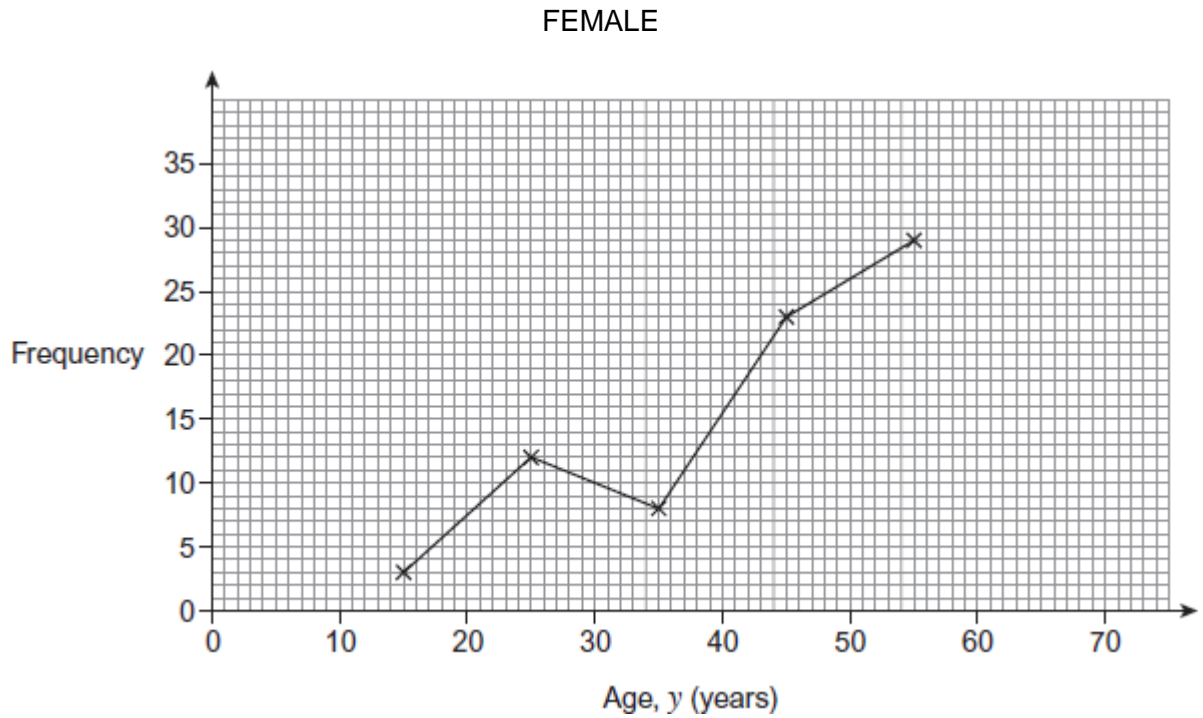
Draw a frequency polygon for these data.

MALE



(2)

(b) The frequency polygon below shows the age distribution of the female club members.



Write down **two** comparisons between the age distributions of the male and female club members.

Comparison 1

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Comparison 2

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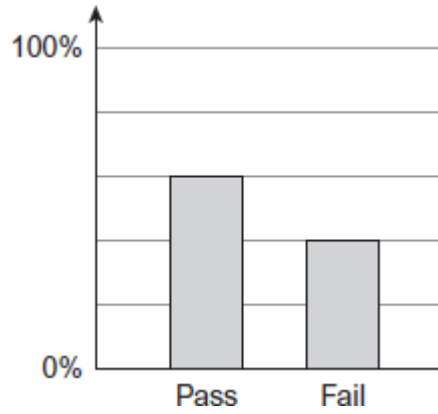
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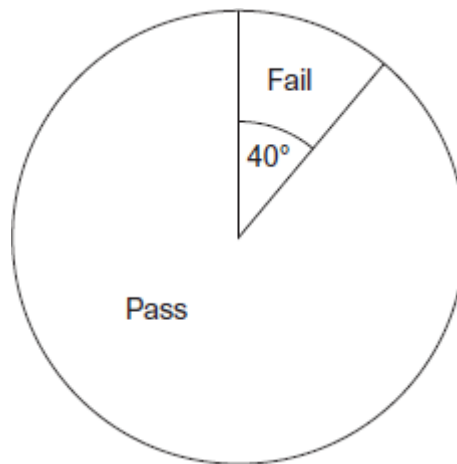
(2)
(Total 4 marks)

Q10.

Some students take a cycling test.
The percentage bar chart shows the results.



The students who fail the test take it a second time.
The pie chart shows the results.



Two students fail the second test.

How many students pass the test first time?

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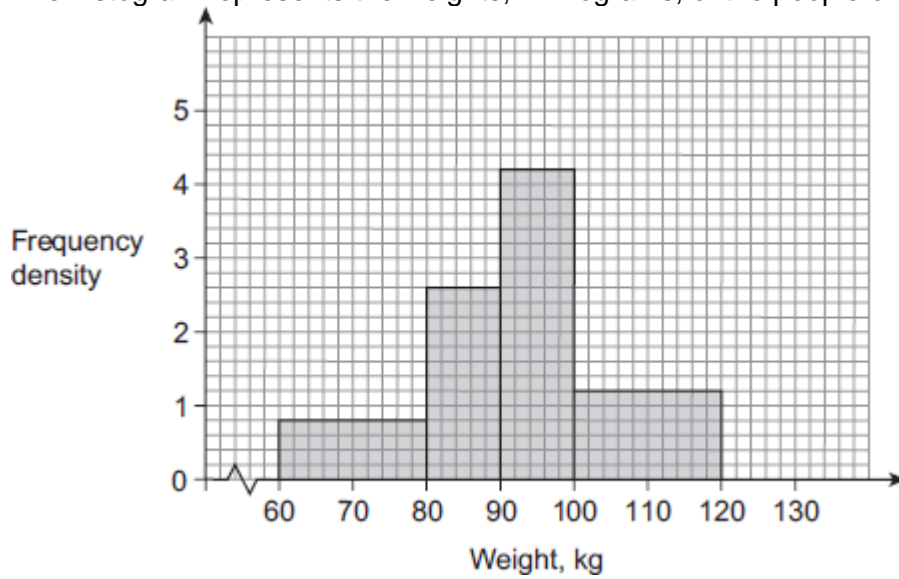
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Answer

(Total 5 marks)

Q11.

The histogram represents the weights, in kilograms, of the people on a fitness course.



(a) Work out the total number of people on the fitness course.

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Answer

(3)

(b) Six more people join the course.
They each weigh between 120 kilograms and 130 kilograms.

Complete the histogram.

(1)

(Total 4 marks)