



JP Maths

Revision



Attempt the paper
before watching the
solutions!

[https://www.youtube.com/
@JPMathsRevision](https://www.youtube.com/@JPMathsRevision)



HIGHER TIER

Histograms



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.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



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.*



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.

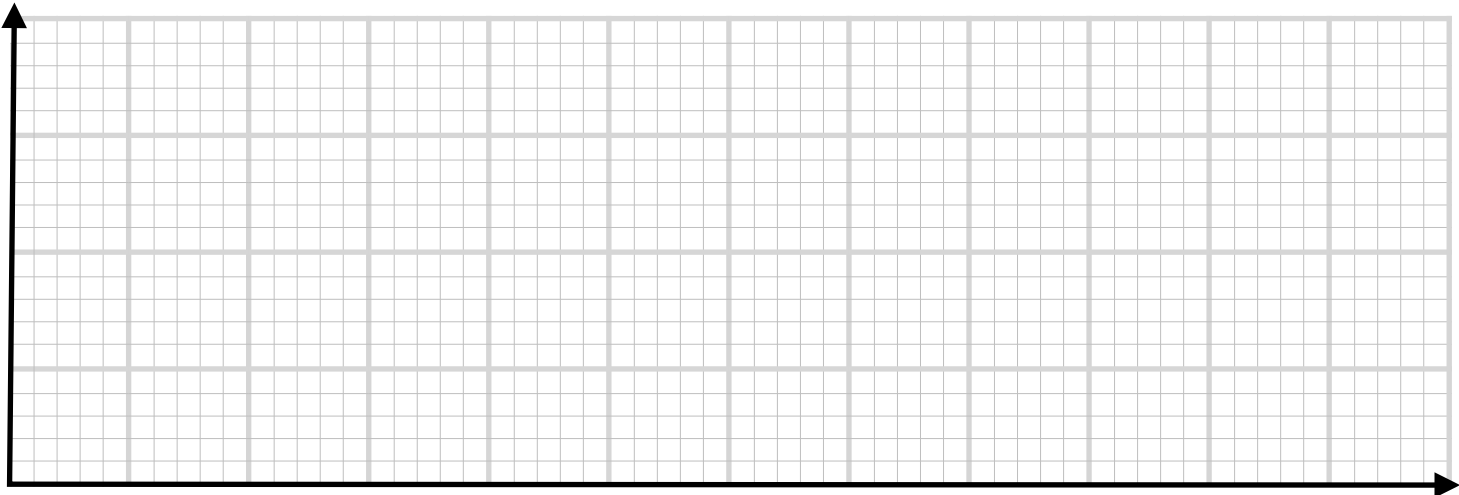


You've got this! ❤️

1. The table shows the times taken by some students to complete a puzzle.

Time, t minutes	Frequency
$0 < t \leq 10$	8
$10 < t \leq 20$	14
$20 < t \leq 40$	30
$40 < t \leq 60$	18

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

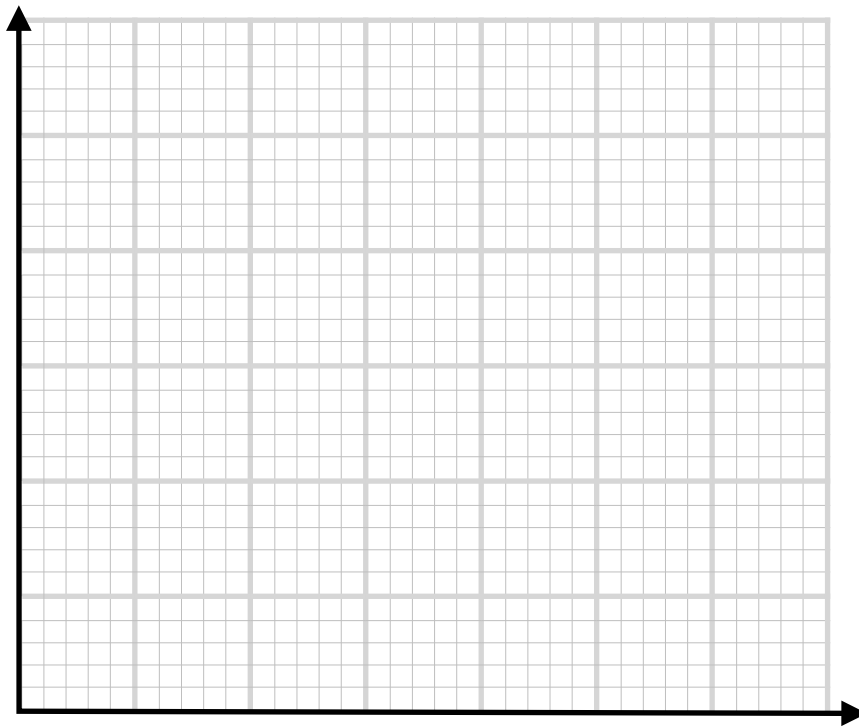


(Total for Question 1 is 3 marks)

2. The table shows the masses of some parcels.

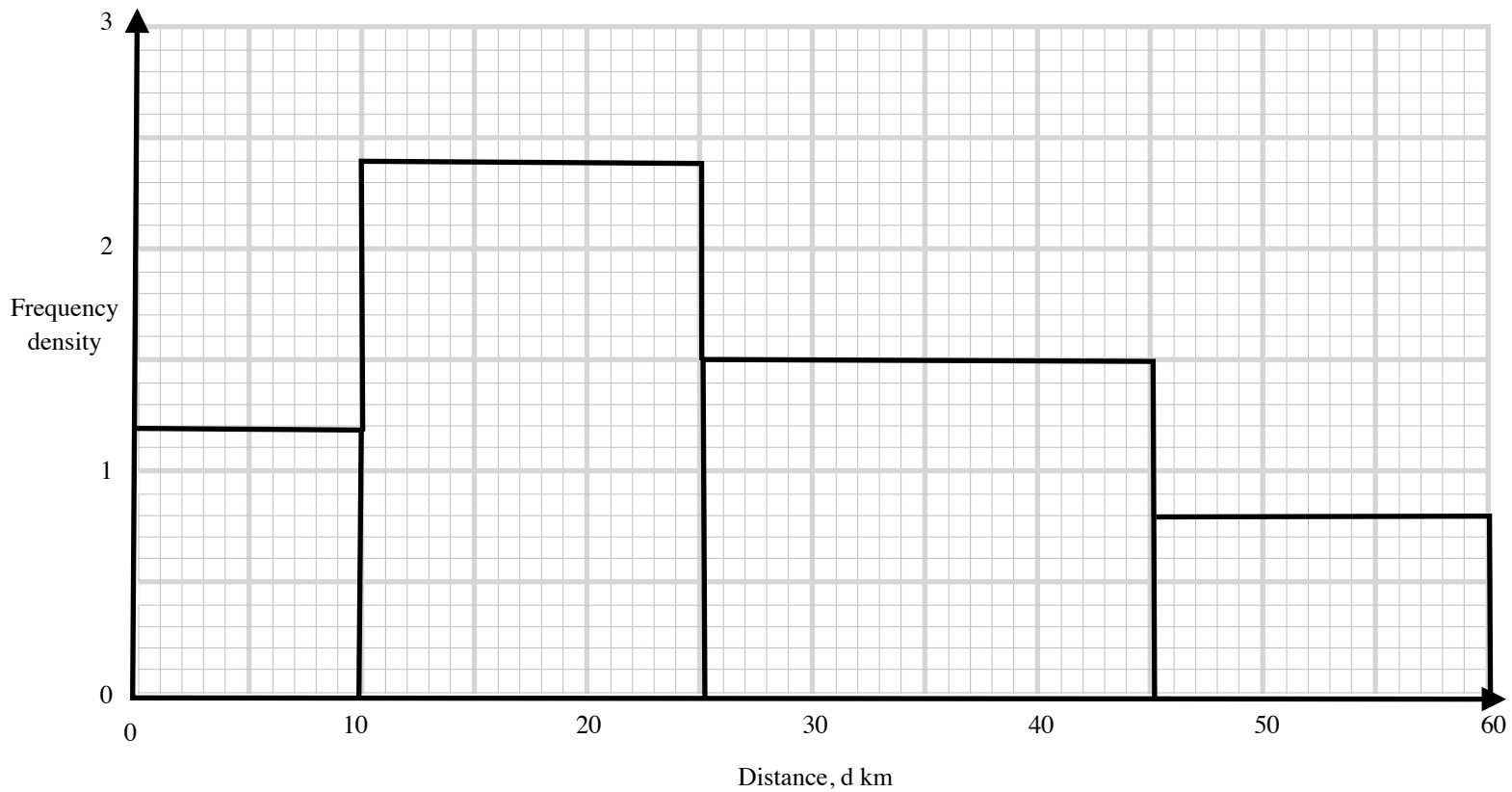
Mass, m kg	Frequency
$0 < t \leq 5$	12
$5 < t \leq 15$	30
$15 < t \leq 25$	26
$25 < t \leq 50$	40
$50 < t \leq 70$	16

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



(Total for Question 2 is 3 marks)

3. The histogram shows the distances travelled by some cyclists.

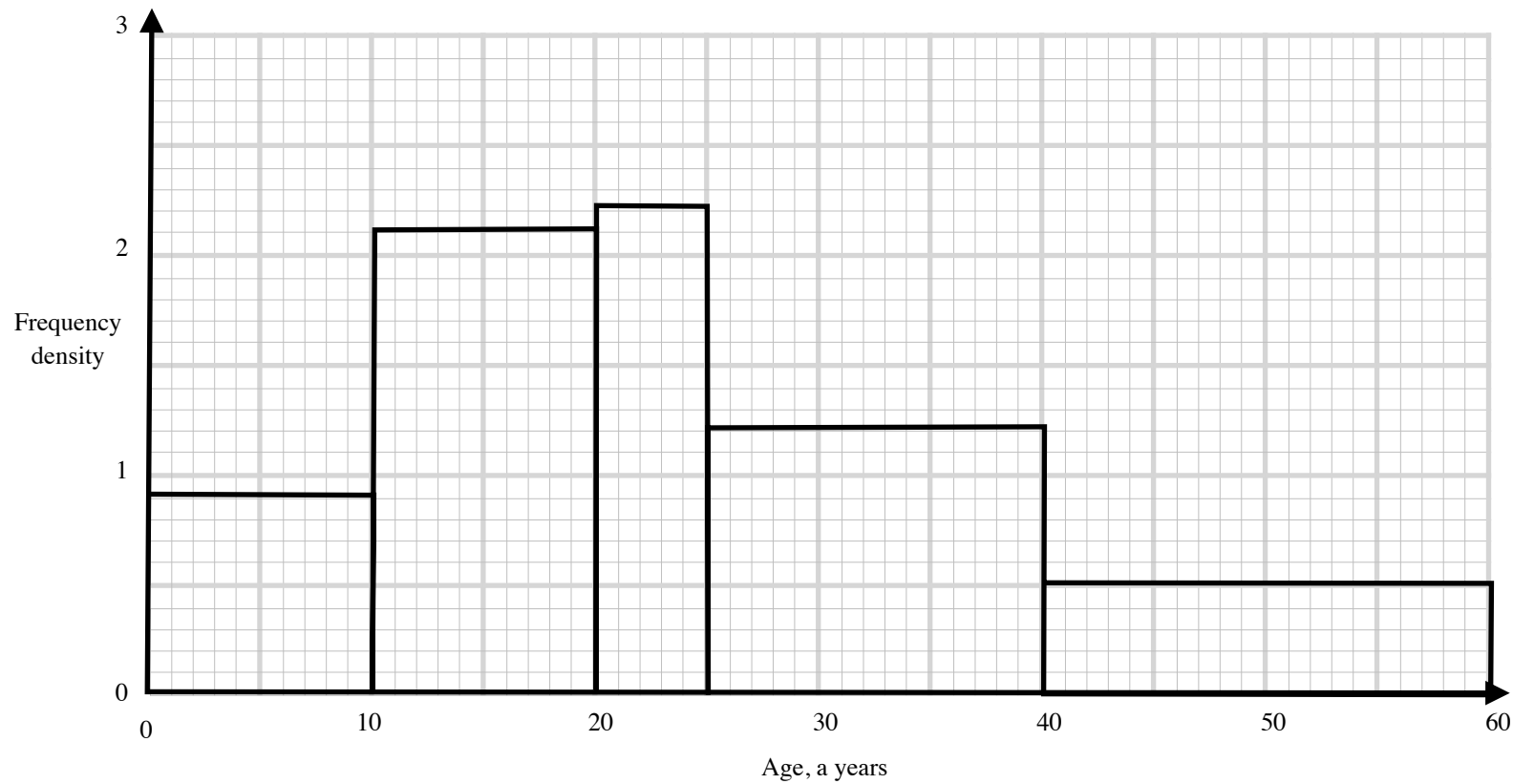


Use the histogram to complete the table.

Distance, d km	Frequency
$0 < t \leq 10$	
$10 < t \leq 25$	
$25 < t \leq 45$	
$45 < t \leq 60$	

(Total for Question 3 is 2 marks)

4. The histogram shows the ages of people at a swimming club.



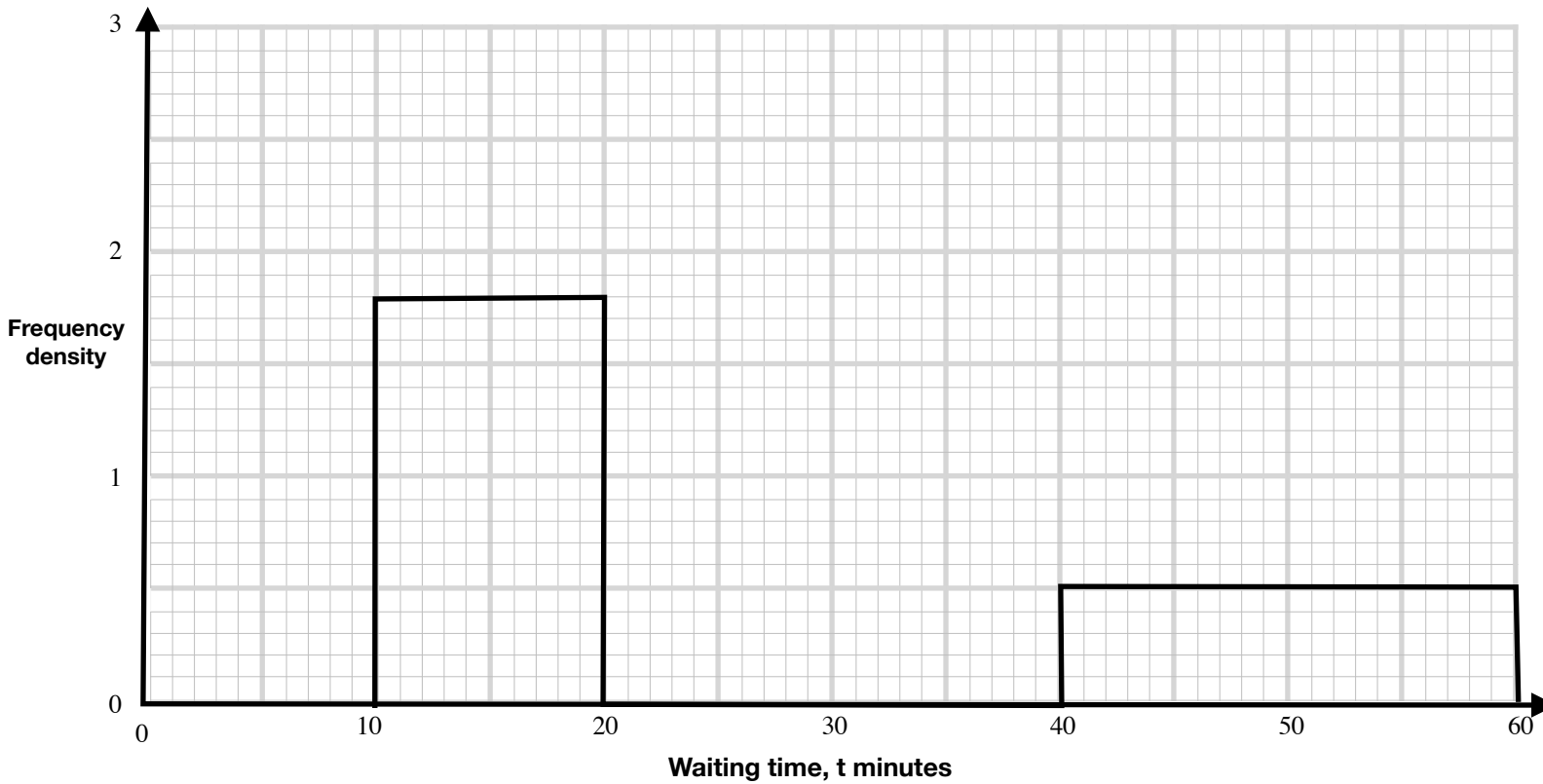
Use the histogram to complete the table.

Age, a years	Frequency
$0 < t \leq 10$	
$10 < t \leq 20$	
$20 < t \leq 25$	
$25 < t \leq 40$	
$40 < t \leq 60$	

(Total for Question 4 is 2 marks)

5. The table shows times people waited at a restaurant.

Waiting time, t minutes	Frequency
$0 < t \leq 10$	6
$10 < t \leq 20$	
$20 < t \leq 40$	32
$40 < t \leq 60$	



(a) Use the histogram to complete the table.

(2)

(b) Use the table to complete the histogram.

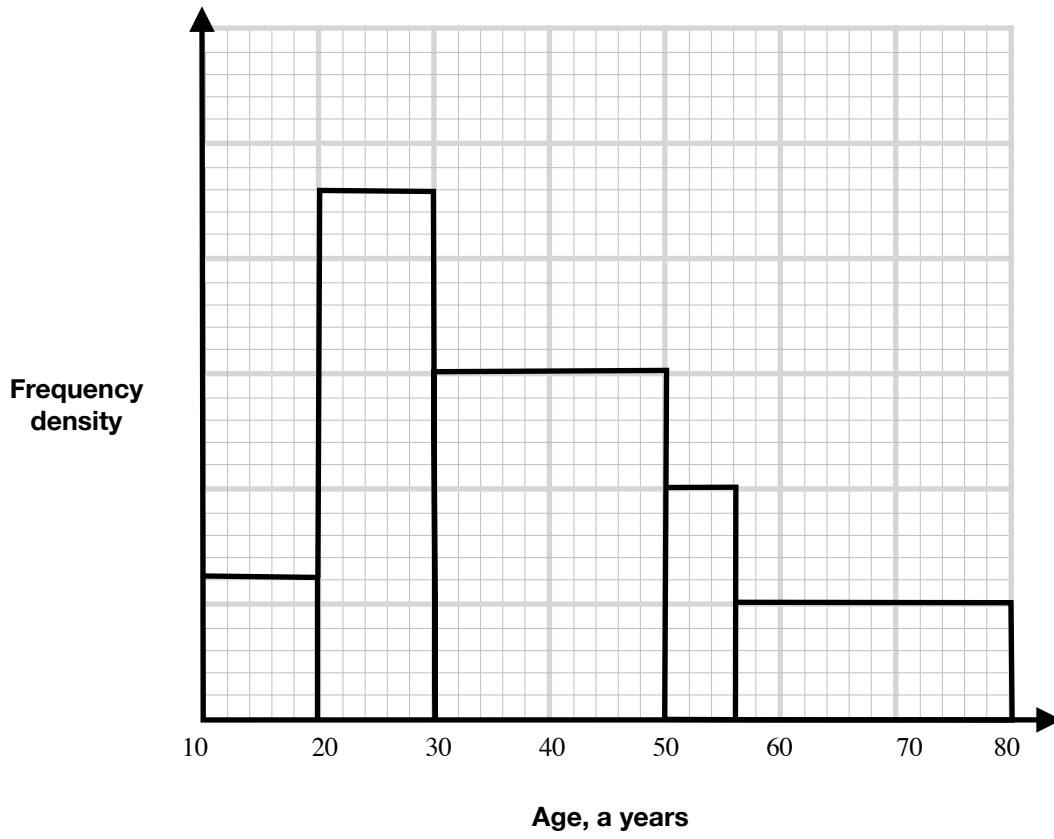
(2)

(c) How many people waited for more than 30 minutes?

.....
(2)

(Total for Question 5 is 6 marks)

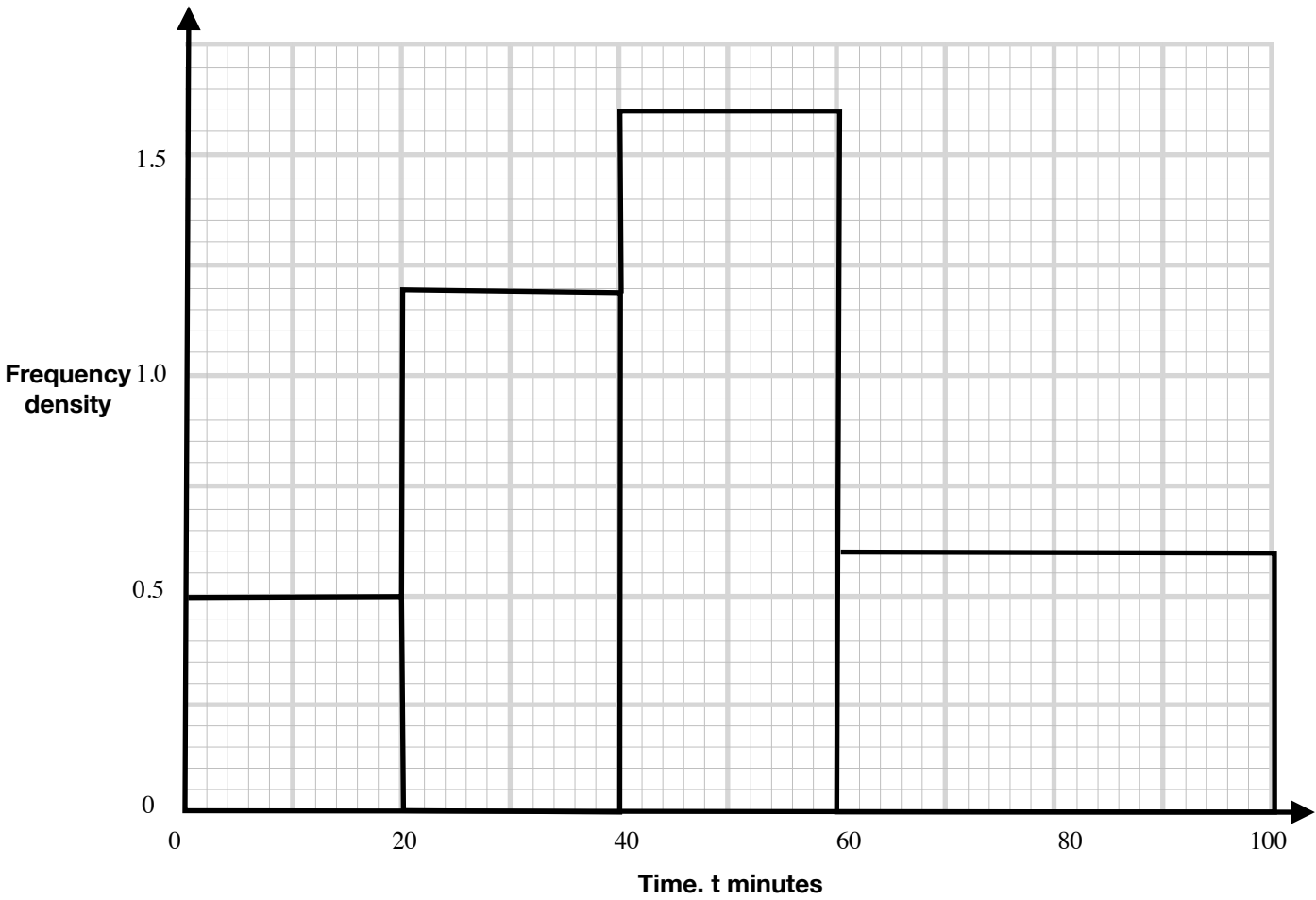
6. The histogram shows the ages of some people at a gym.



12 people are aged between 10 and 20.

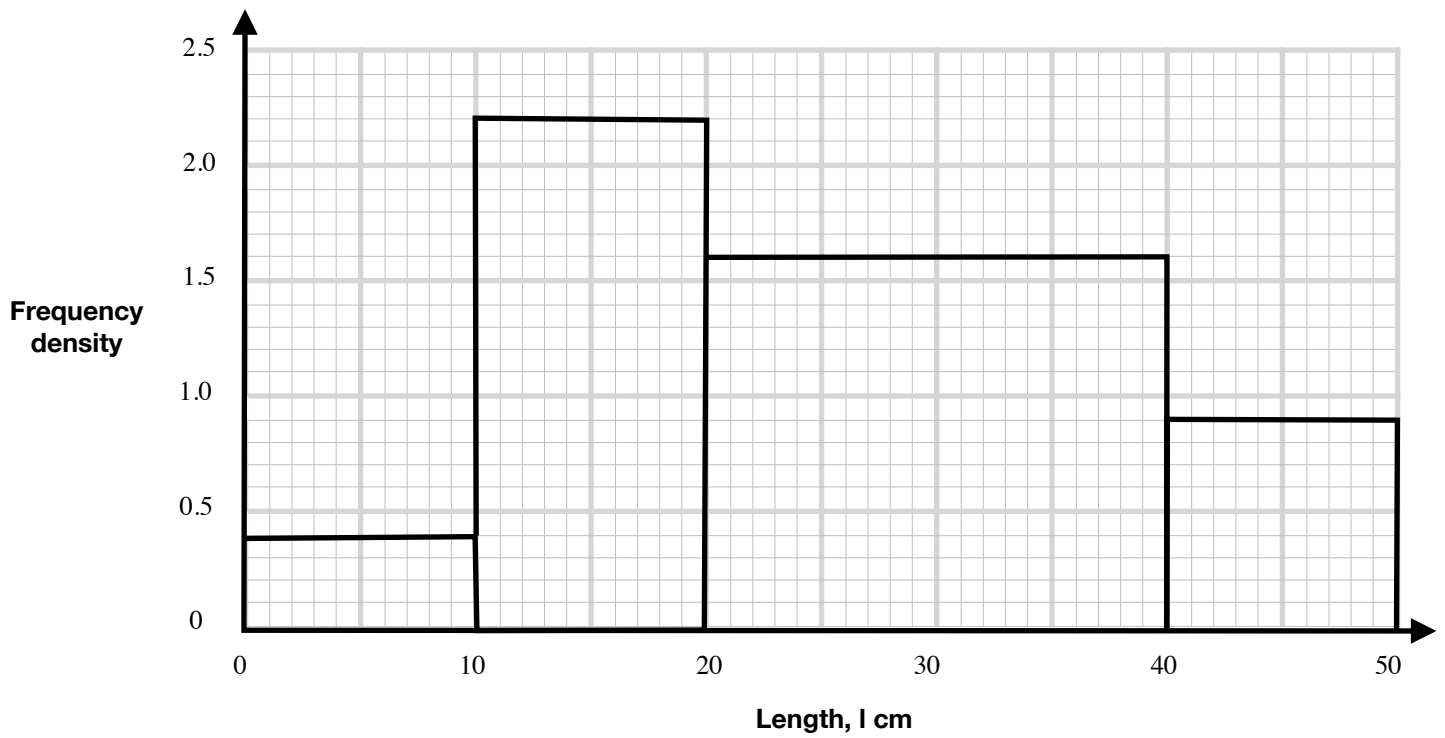
Find the probability that a randomly selected person is older than 45.

7. The histogram shows the times spent by students revising.



Work out an estimate for the median.

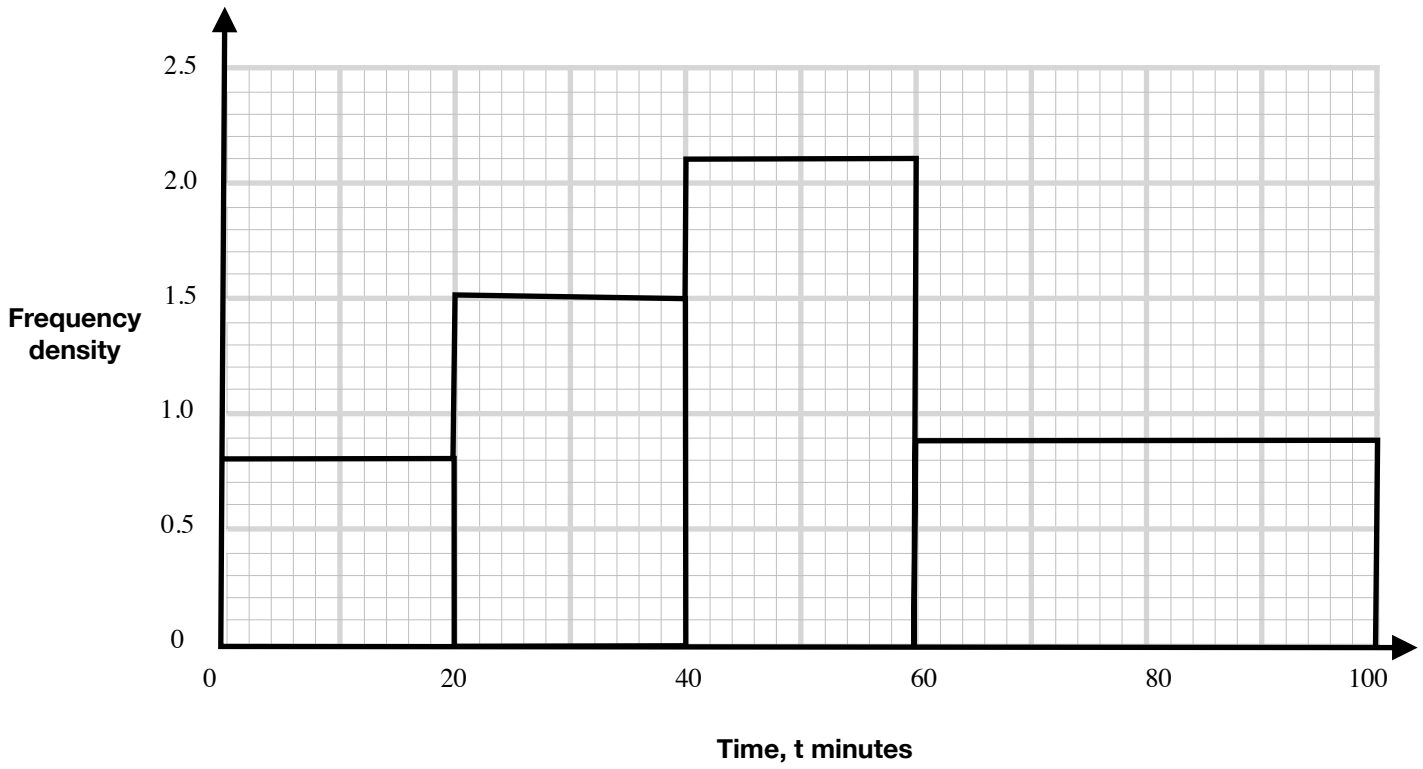
8. The histogram shows the lengths of some fish.



Work out an estimate for the median.

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(Total for Question 8 is 4 marks)

9. The histogram shows the times students spent exercising.



Work out an estimate for the mean time taken.

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(Total for Question 9 is 4 marks)