Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						1	3	8	0	/	3	H	Signature	

Paper Reference(s)

1380/3H

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 3 (Non-Calculator)

Cumulative Frequency

Past Paper Questions

Arranged by Topic

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
You must NOT write on the formulae page.
Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 26 questions in this question paper. The total mark for this paper is 100.
There are 24 pages in this question paper. Any blank pages are indicated.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Turn over

edexcel
advancing learning, changing lives

Leave blank

1. Lucy did a survey about the amounts of money spent by 120 men during their summer holidays.

The cumulative frequency table gives some information about the amounts of money spent by the 120 men.

Amount (£A) spent	Cumulative frequency
$0 \leqslant A < 100$	13
$0 \leqslant A < 150$	25
$0 \leqslant A < 200$	42
$0 \leqslant A < 250$	64
$0 \leqslant A < 300$	93
$0 \leqslant A < 350$	110
$0 \leqslant A < 400$	120

(a) On the grid, draw a cumulative frequency diagram.

(2)

(b) Use your cumulative frequency diagram to estimate the median.

£ .....

(2)

A survey of the amounts of money spent by 200 women during their summer holidays gave a median of £205

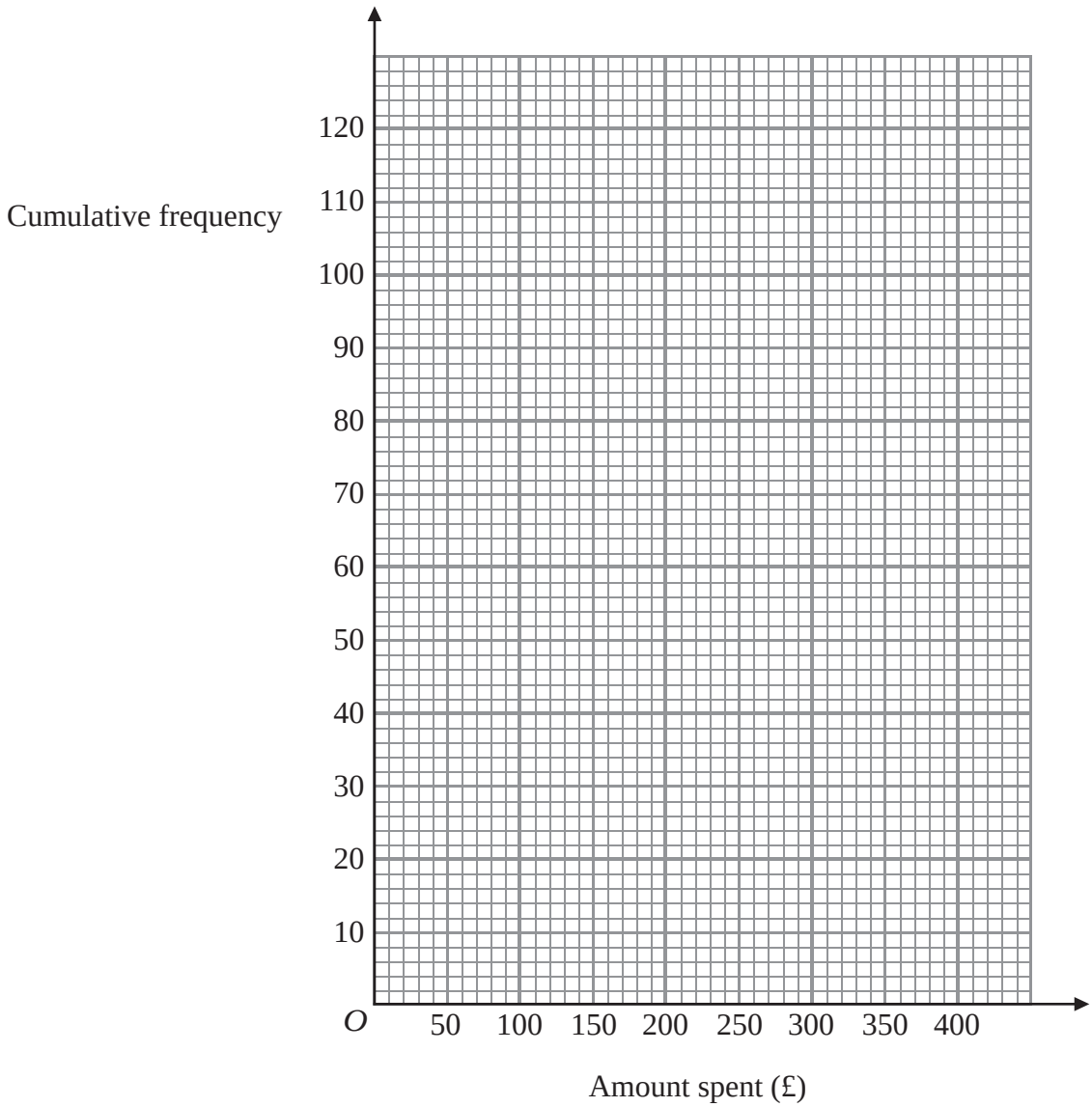
(c) Compare the amounts of money spent by the women with the amounts of money spent by the men.

.....

.....

(1)

Leave blank



Q1

(Total 5 marks)

Leave blank

2. The table shows information about the amount spent by 100 customers in a supermarket.

Amount spent (£*n*)	**Frequency**
$0 < n \leqslant 20$	18
$20 < n \leqslant 40$	22
$40 < n \leqslant 60$	35
$60 < n \leqslant 80$	15
$80 < n \leqslant 100$	8
$100 < n \leqslant 120$	2

(a) Complete the cumulative frequency table for this information.

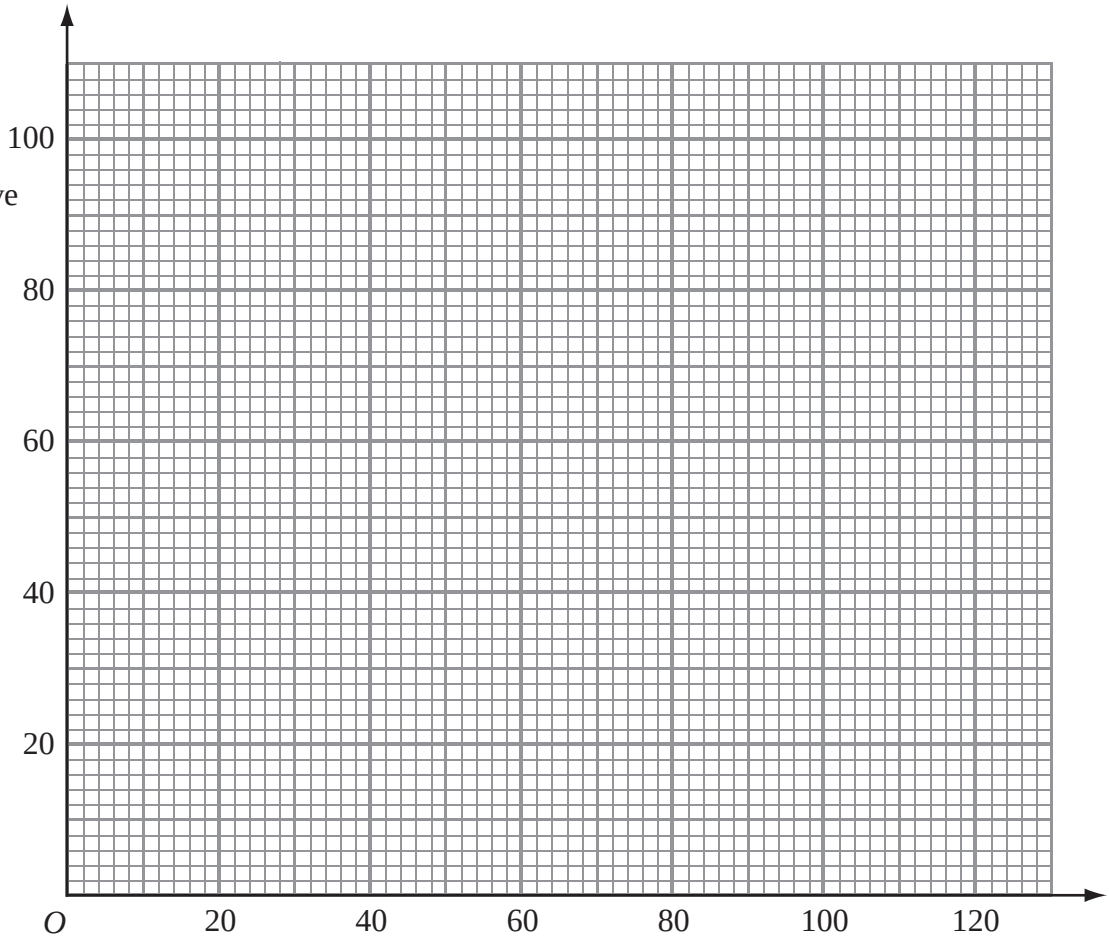
Amount spent (£*n*)	**Cumulative frequency**
$0 < n \leqslant 20$	18
$0 < n \leqslant 40$	
$0 < n \leqslant 60$	
$0 < n \leqslant 80$	
$0 < n \leqslant 100$	
$0 < n \leqslant 120$	

(1)

(b) On the grid, draw a cumulative frequency graph for your table.

(2)

Leave blank



(c) Use your graph to find an estimate for the median amount spent.

£ .....

(1)

Q2

(Total 4 marks)

Leave blank

3. A company tested 100 batteries.

The table shows information about the number of hours that the batteries lasted.

Time (t hours)	Frequency
$50 \leqslant t < 55$	12
$55 \leqslant t < 60$	21
$60 \leqslant t < 65$	36
$65 \leqslant t < 70$	23
$70 \leqslant t < 75$	8

(a) Complete the cumulative frequency table for this information.

(1)

Time (t hours)	Cumulative frequency
$50 \leqslant t < 55$	12
$50 \leqslant t < 60$	
$50 \leqslant t < 65$	
$50 \leqslant t < 70$	
$50 \leqslant t < 75$	

(b) On the grid, draw a cumulative frequency graph for your completed table.

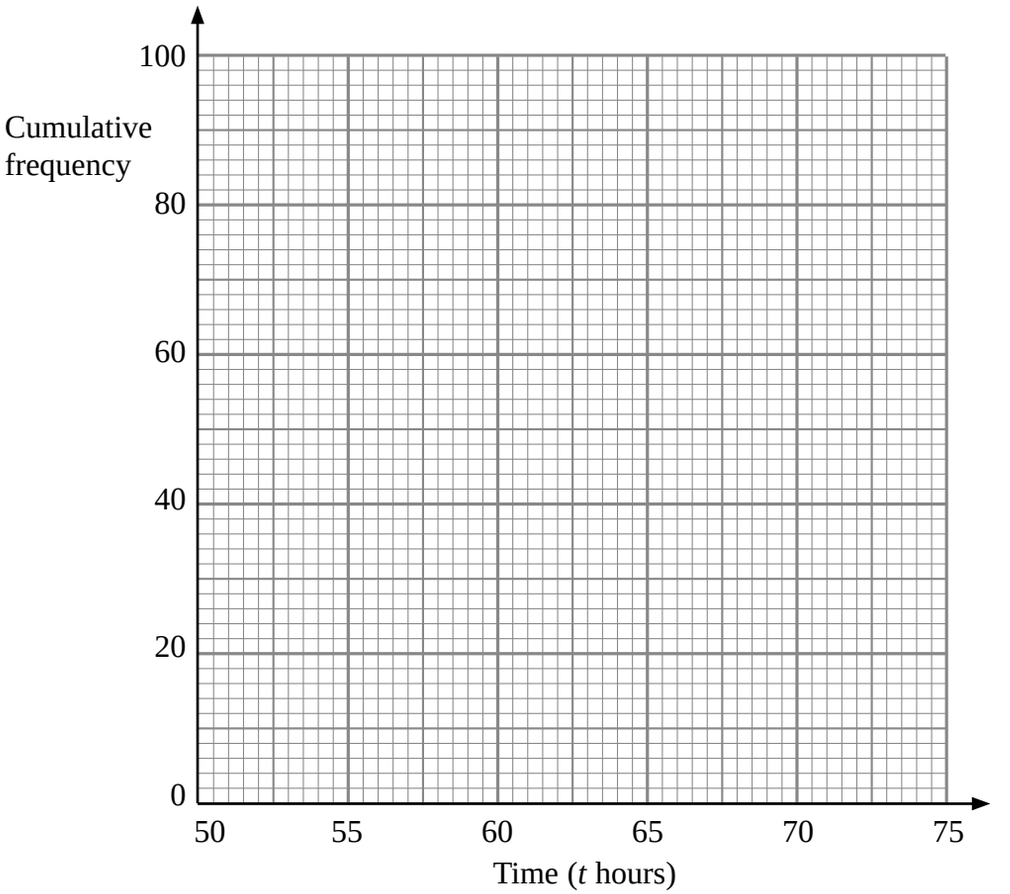
(2)

(c) Use your completed graph to find an estimate for the median time.
You must state the units of your answer.

.....

(2)

Leave blank



Q3

(Total 5 marks)

Leave blank

4. The table gives some information about the delays, in minutes, of 80 flights.

Delay (n minutes)	**Frequency**
$0 < n \leqslant 20$	16
$20 < n \leqslant 30$	26
$30 < n \leqslant 40$	23
$40 < n \leqslant 50$	10
$50 < n \leqslant 60$	5

(a) Write down the modal class interval.

.....

(1)

(b) Complete the cumulative frequency table.

Delay (n minutes)	**Cumulative Frequency**
$0 < n \leqslant 20$	
$0 < n \leqslant 30$	
$0 < n \leqslant 40$	
$0 < n \leqslant 50$	
$0 < n \leqslant 60$	

(1)

(c) On the grid opposite, draw a cumulative frequency graph for your table.

(2)

(d) Use your graph to find an estimate for

(i) the median delay,

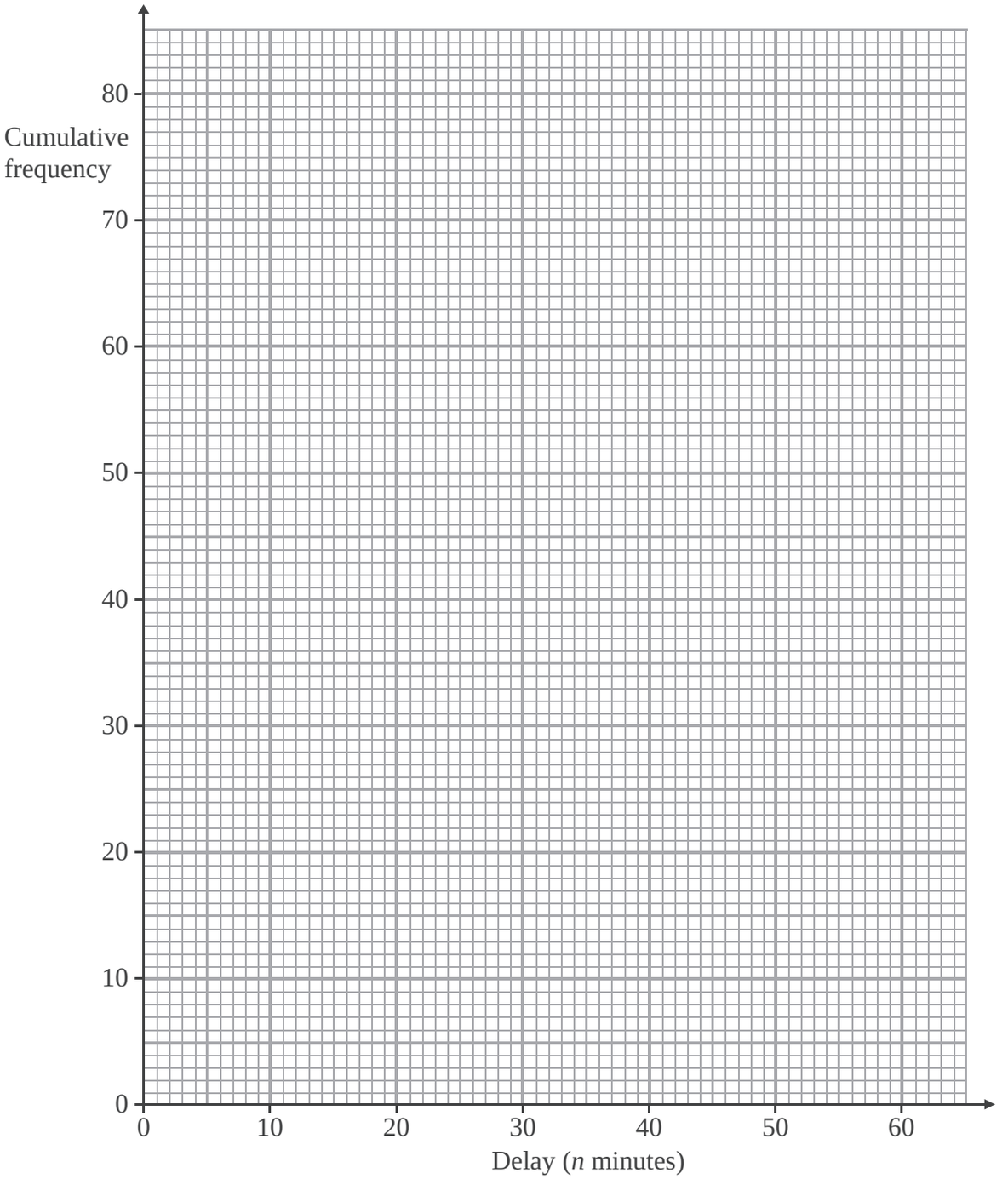
..... minutes

(ii) the interquartile range of the delays.

..... minutes

(3)

Leave blank

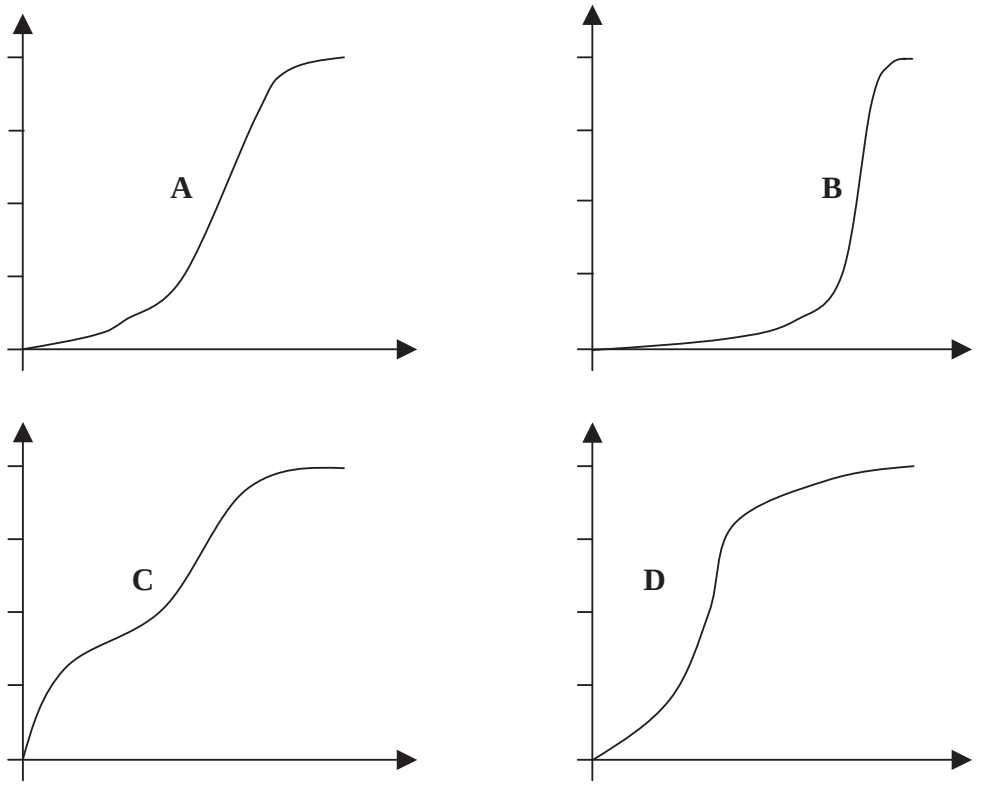


Q4

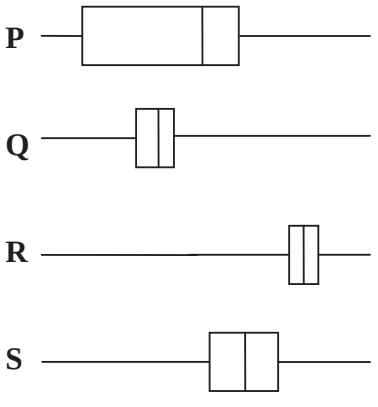
(Total 7 marks)

Leave blank

5. Here are four cumulative frequency diagrams.



Here are four box plots.



For each box plot, write down the letter of the appropriate cumulative frequency diagram.

P and .....

Q and .....

R and .....

S and .....

Q5

(Total 2 marks)

Leave blank

6 . The table shows information about the time, m minutes, it takes to show each of 120 films.

Time (m minutes)	Frequency
$70 < m \leqslant 80$	4
$80 < m \leqslant 90$	12
$90 < m \leqslant 100$	34
$100 < m \leqslant 110$	32
$110 < m \leqslant 120$	26
$120 < m \leqslant 130$	12

(a) Write down the modal class interval.

.....

(1)

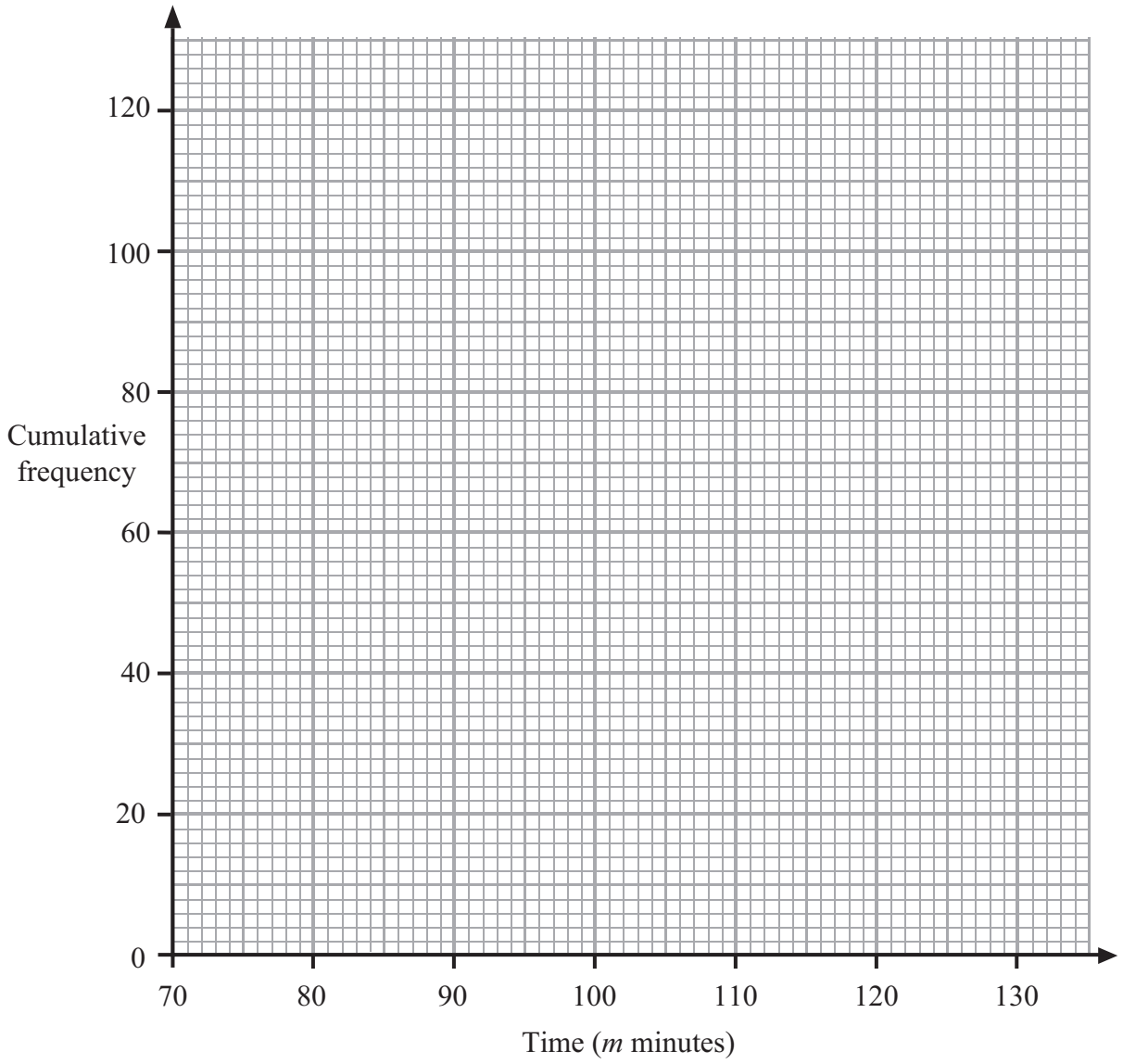
(b) Complete the cumulative frequency table.

Time (m minutes)	Cumulative frequency
$70 < m \leqslant 80$	4
$70 < m \leqslant 90$	
$70 < m \leqslant 100$	
$70 < m \leqslant 110$	
$70 < m \leqslant 120$	
$70 < m \leqslant 130$	

(1)

Leave blank

(c) On the grid, draw a cumulative frequency graph for your cumulative frequency table.



(2)

(d) Use your graph to find an estimate for the median.

..... minutes

(1)

Q6

(Total 5 marks)