Name:

Exam Style Questions

Frequency Polygons

Corbettmaths

Equipment needed: Pencil, Ruler, Pen and Calculator

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

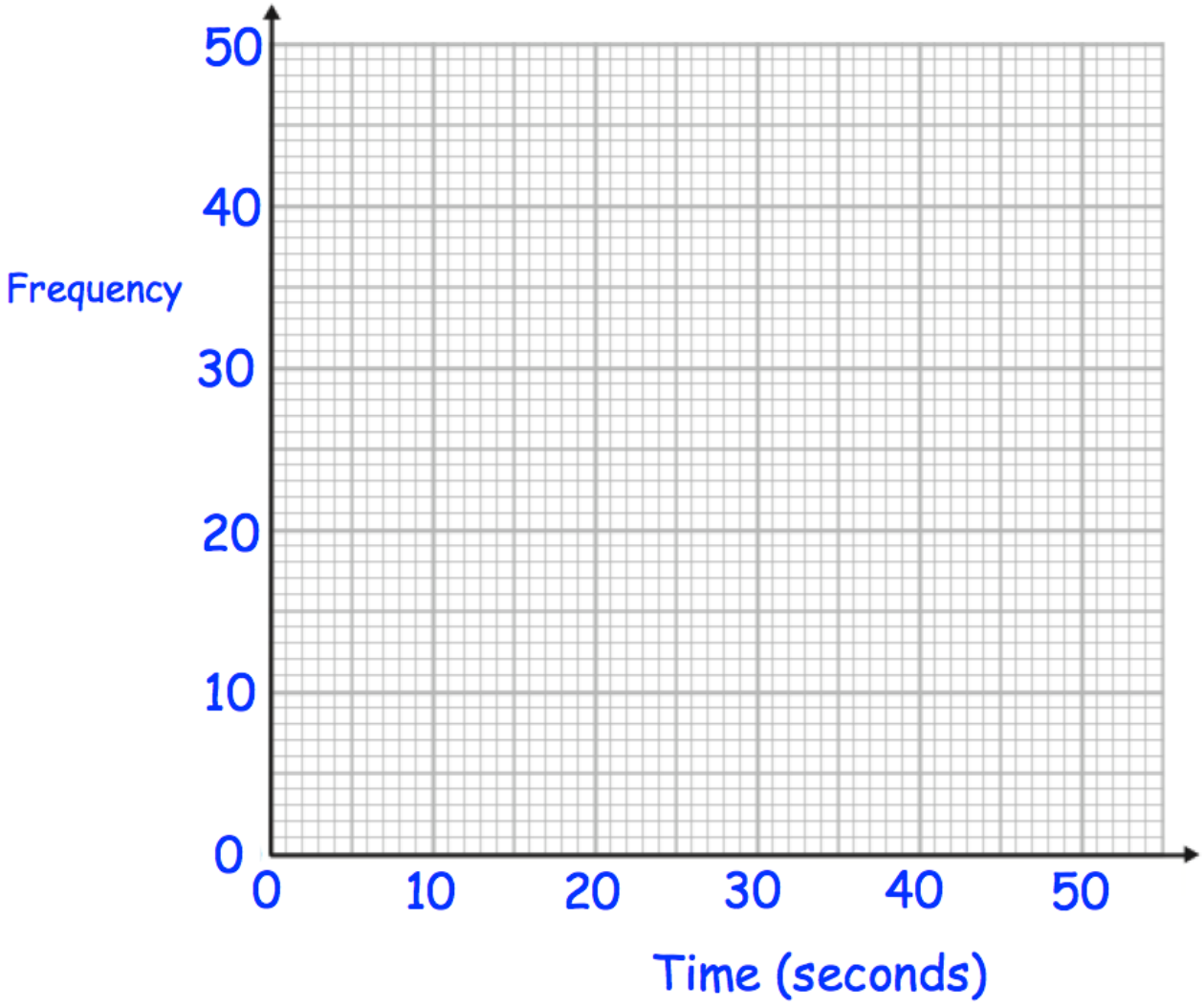
Videos 155, 156

Answers and Video Solutions

1. The table gives information about the time taken, in seconds, for students to complete a puzzle.

Time (seconds)	Frequency
$0 < t \leq 10$	7
$10 < t \leq 20$	25
$20 < t \leq 30$	38
$30 < t \leq 40$	16
$40 < t \leq 50$	12

Draw a frequency polygon for the information in the table.

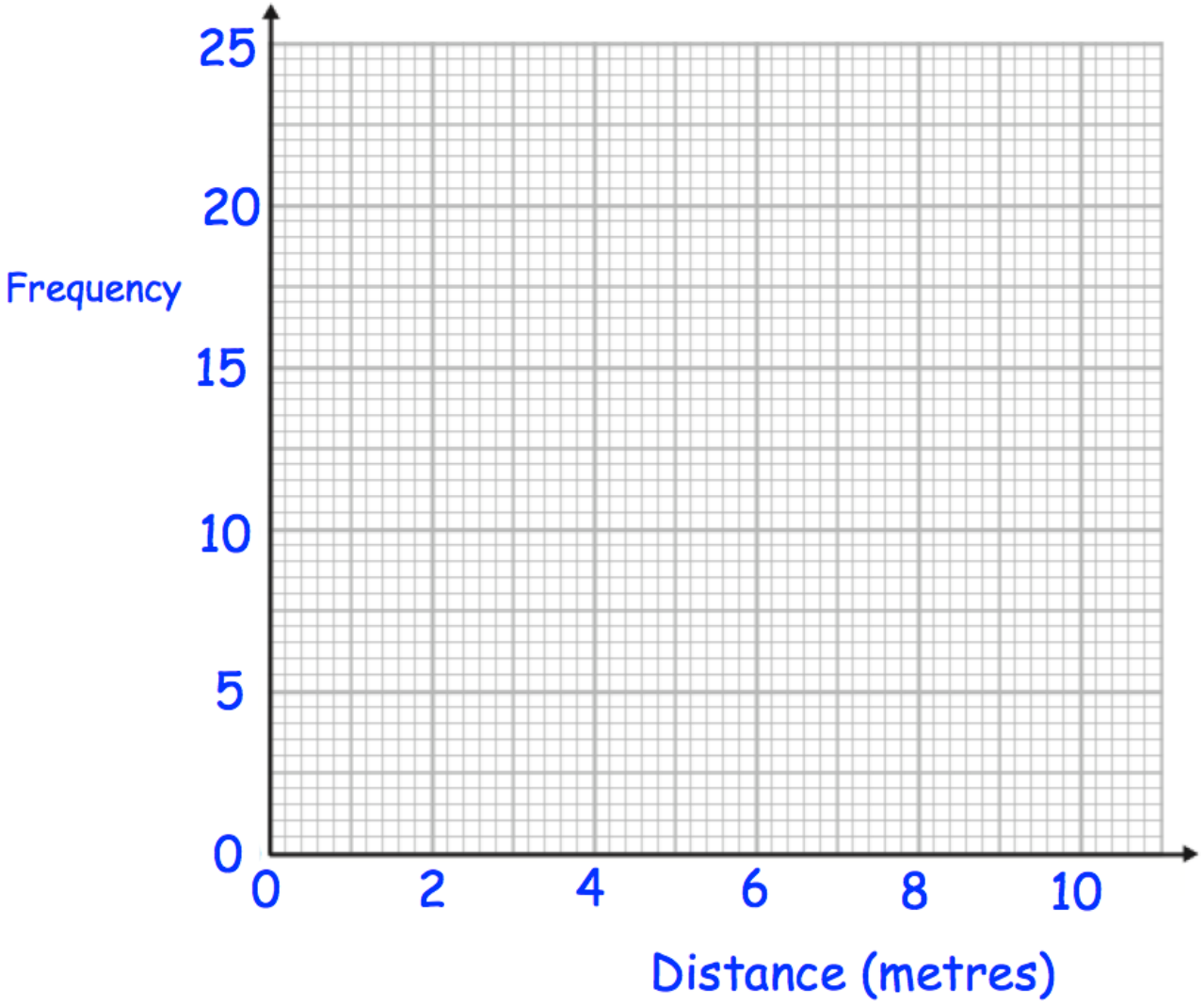


(2)

2. The table gives information about the distances thrown, in metres, at a school sports day.

Distance (m)	Frequency
$0 < d \leq 2$	5
$2 < d \leq 4$	10
$4 < d \leq 6$	21
$6 < d \leq 8$	18
$8 < d \leq 10$	1

Draw a frequency polygon for the information in the table.

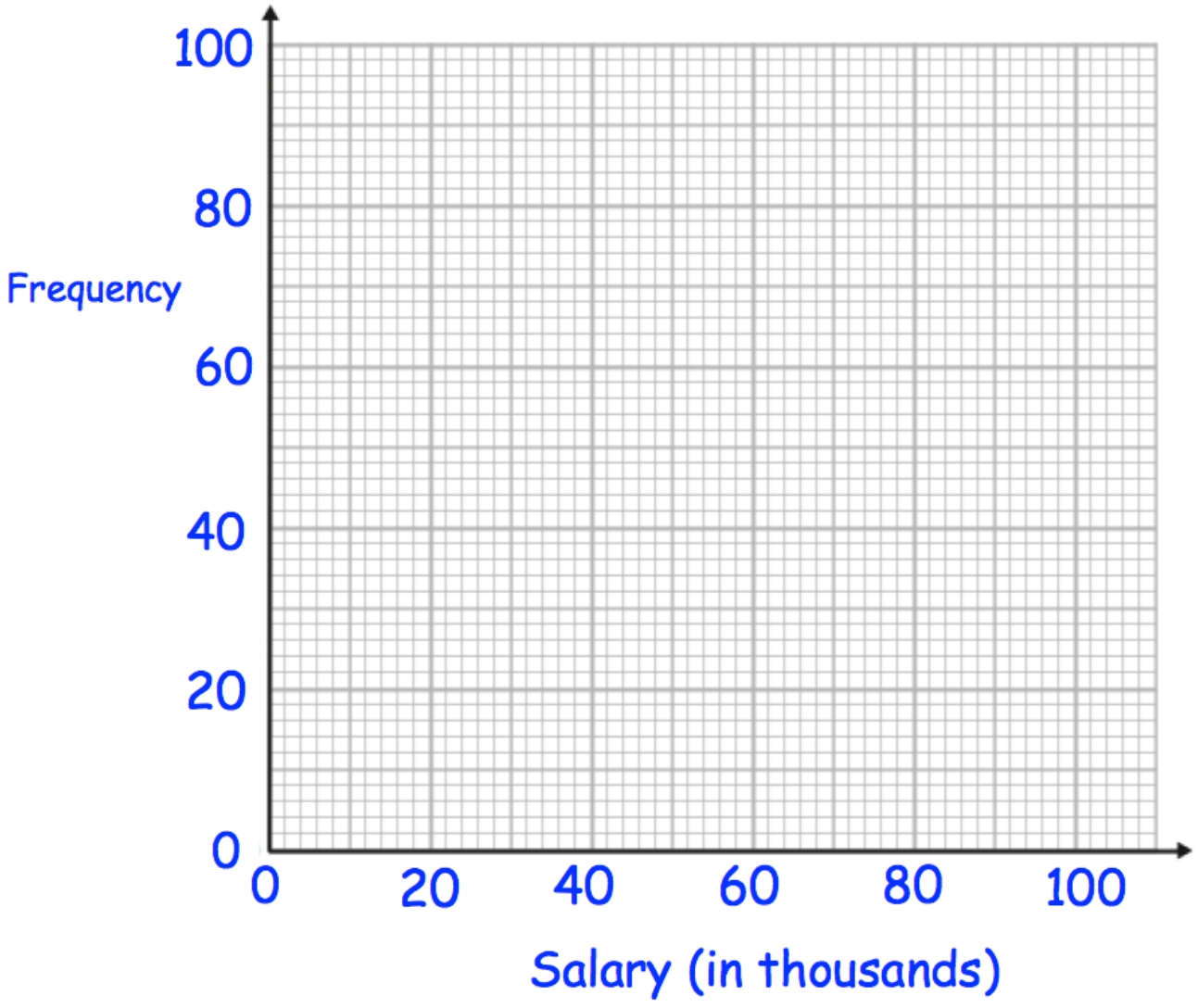


(2)

3. The table gives information about the income of 200 households in a village.

Income (thousands)	Frequency
$0 < I \leq 20$	40
$20 < I \leq 40$	75
$40 < I \leq 60$	64
$60 < I \leq 80$	20
$80 < I \leq 100$	1

Draw a frequency polygon for the information in the table.

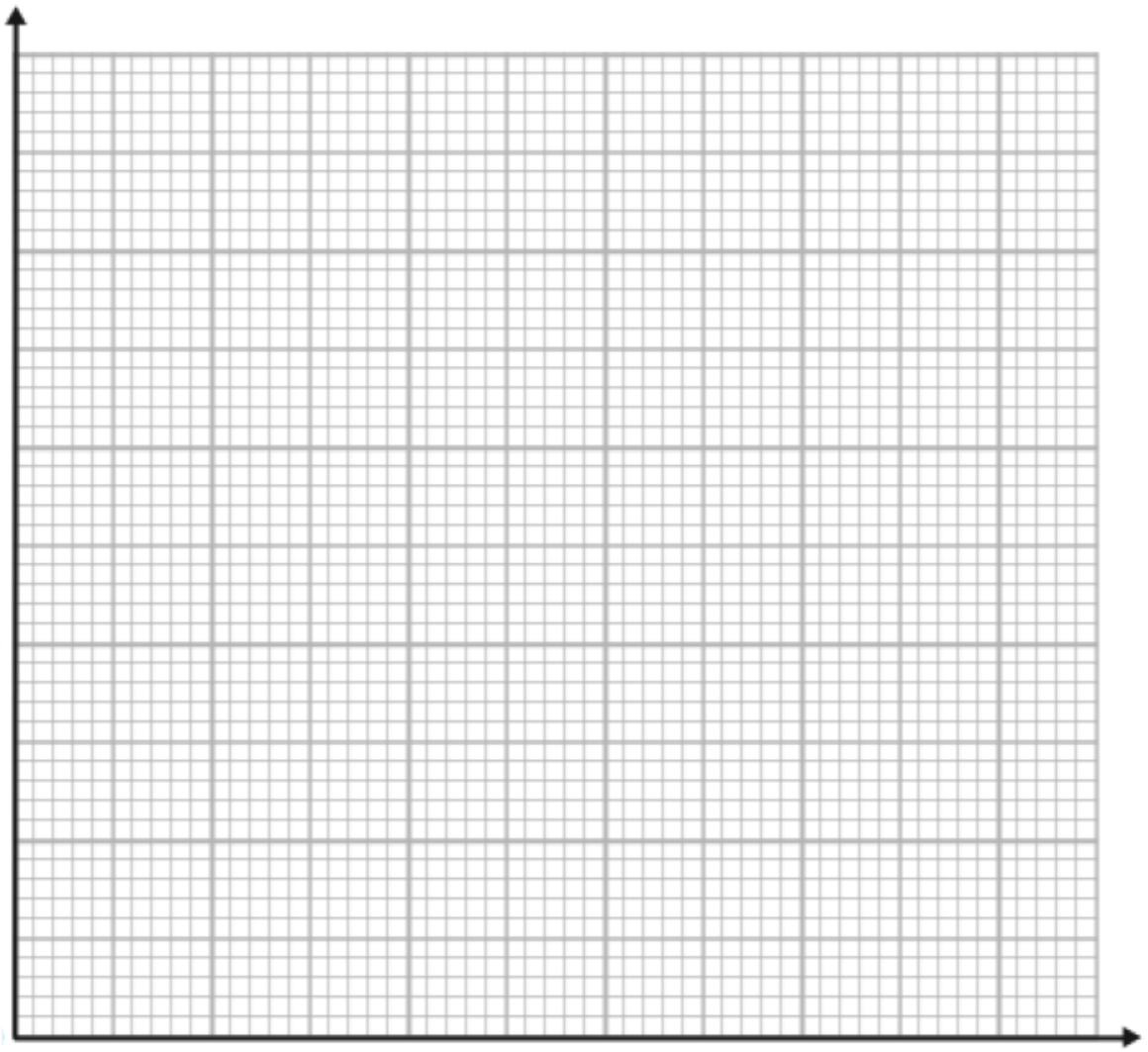


(2)

4. The table shows information about the time taken for teachers to travel to work.

Time (minutes)	Frequency
$0 < t \leq 10$	10
$10 < t \leq 20$	28
$20 < t \leq 30$	46
$30 < t \leq 40$	23
$40 < t \leq 50$	12

Draw a frequency polygon for the information in the table.

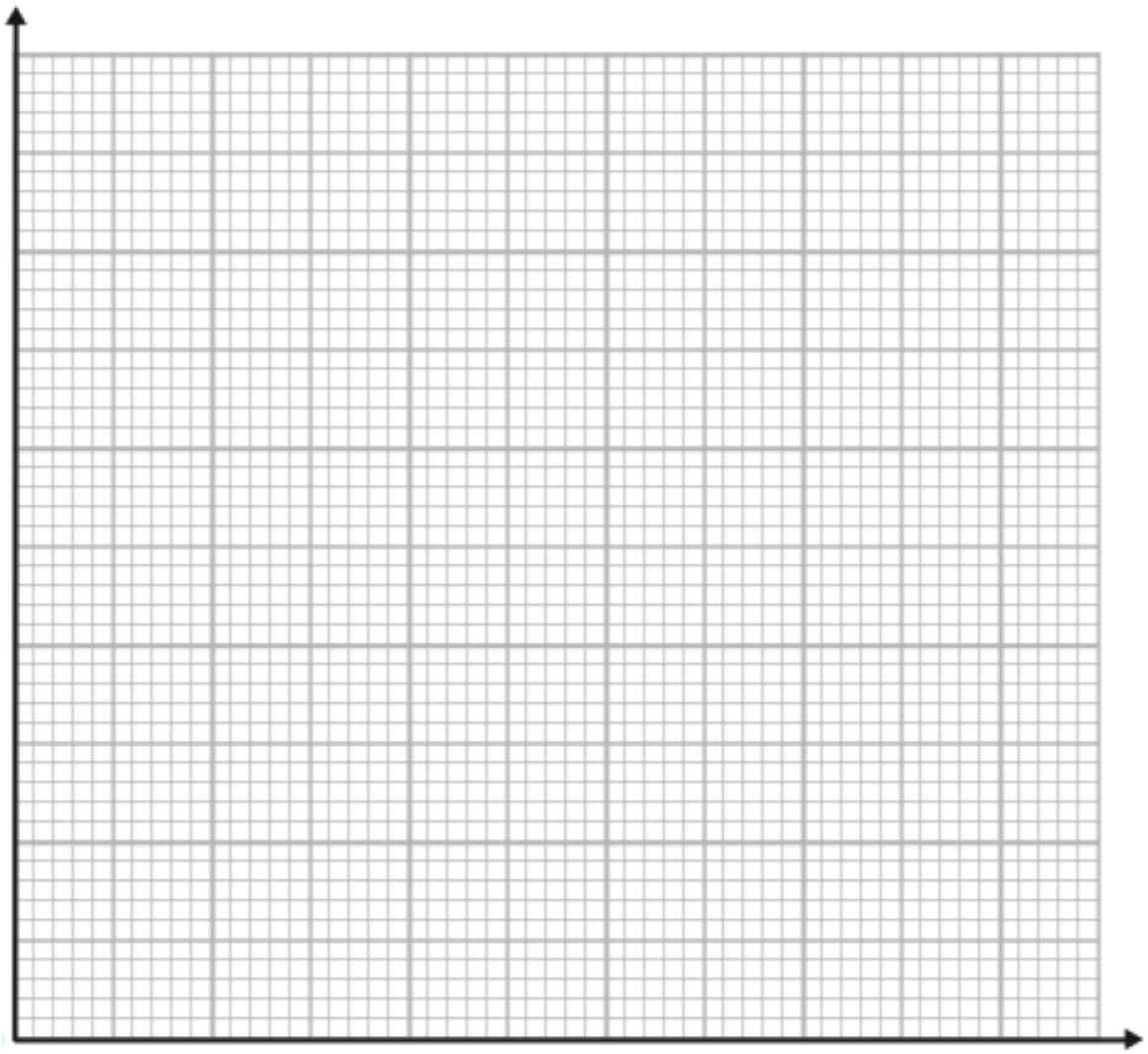


(4)

5. The table shows information about the lengths of 60 spiders.

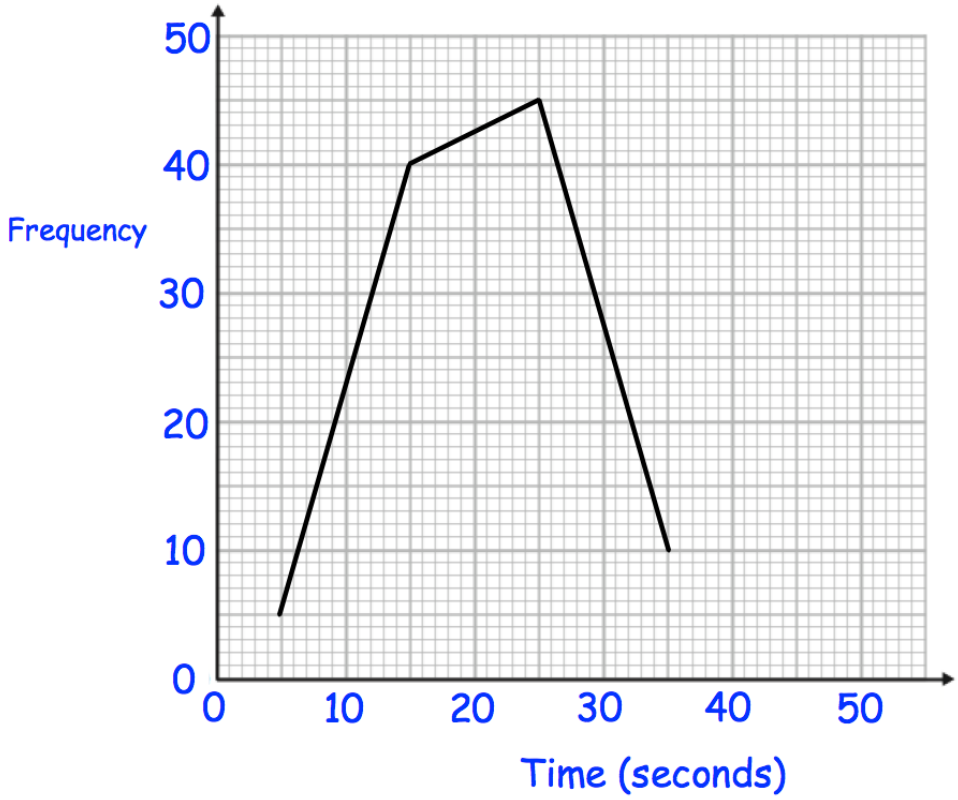
Lengths (cm)	Frequency
$0 < L \leq 0.5$	8
$0.5 < L \leq 1$	17
$1 < L \leq 1.5$	20
$1.5 < L \leq 2$	10
$2 < L \leq 2.5$	5

Draw a frequency polygon for the information in the table.



(4)

6. The frequency polygon shows the time taken for 100 students in Class A to solve a maths question.



The table shows the times taken by 100 students in Class B to answer the same question.

Time (seconds)	Frequency
$0 < t \leq 10$	2
$10 < t \leq 20$	33
$20 < t \leq 30$	42
$30 < t \leq 40$	14
$40 < t \leq 50$	9

(a) Draw a frequency polygon to show this information on the diagram above.

(2)

(b) Compare the times taken by the students in Class A and Class B.

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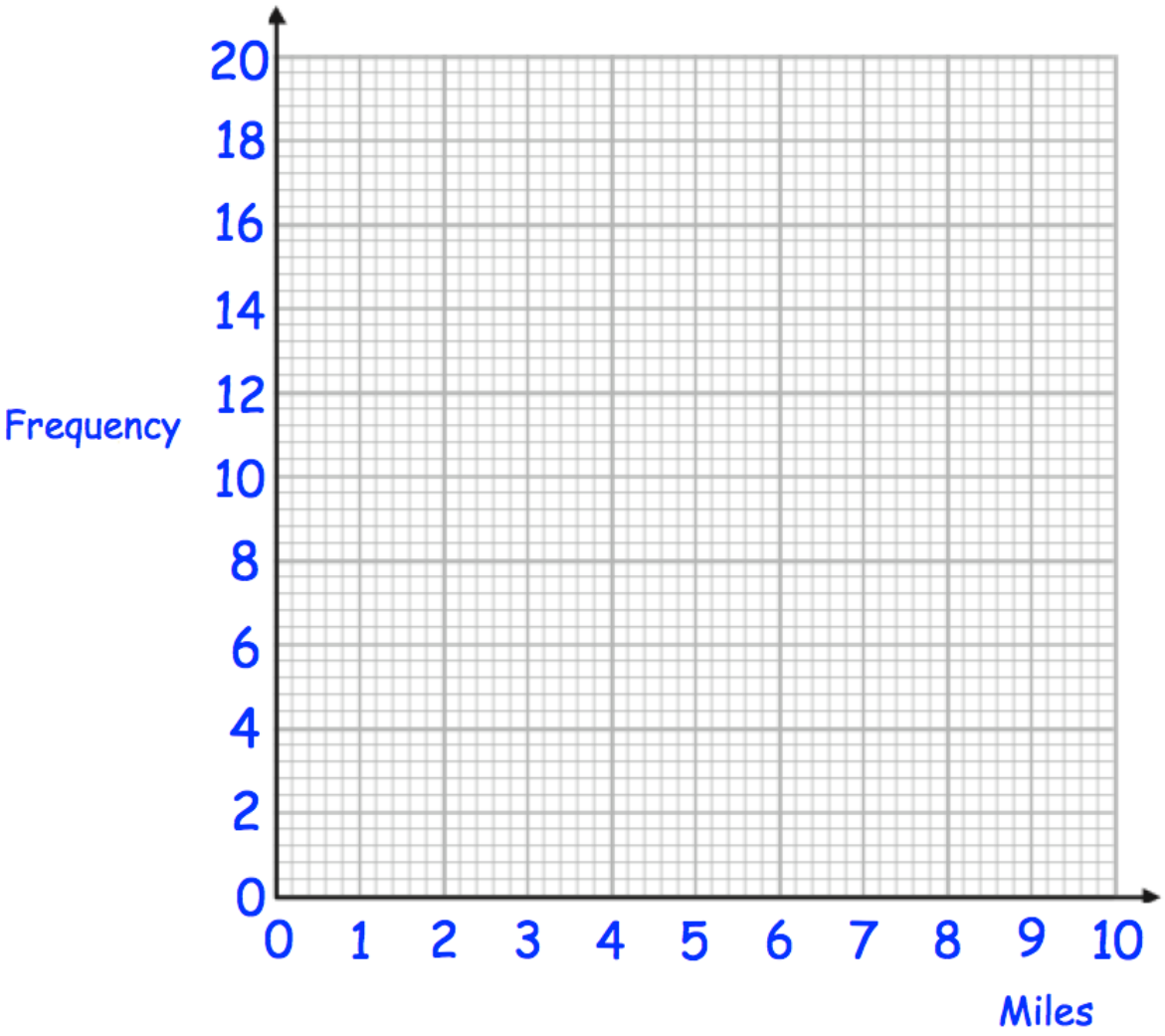
(2)

7. The table shows the distance travelled to school by 48 students.

Distance (miles)	Frequency
$0 < d \leq 2$	20
$2 < d \leq 4$	10
$4 < d \leq 6$	11
$6 < d \leq 8$	4
$8 < d \leq 10$	3

(a) Draw a frequency polygon to represent this data.

(2)



One student is chosen at random.

(b) Work out the probability that this student travels more than 6 miles to school.

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(1)

8. The table shows the speeds of cars travelling through a village.

Speed, x mph	Frequency
$0 < x \leq 10$	6
$10 < x \leq 20$	22
$20 < x \leq 30$	90
$30 < x \leq 40$	80
$40 < x \leq 50$	42

(a) Find the class interval that contains the median.

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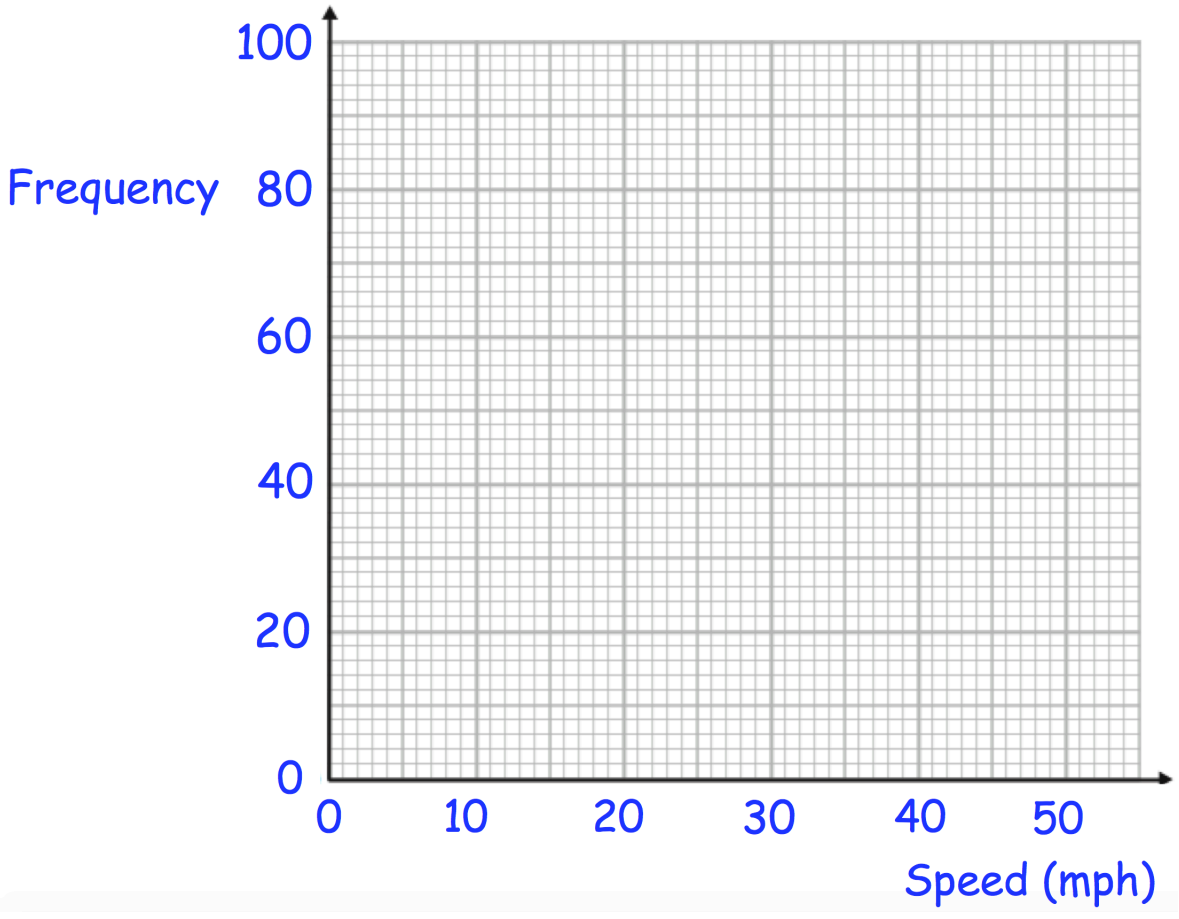
(1)

(b) Draw a frequency polygon for the information in the table.

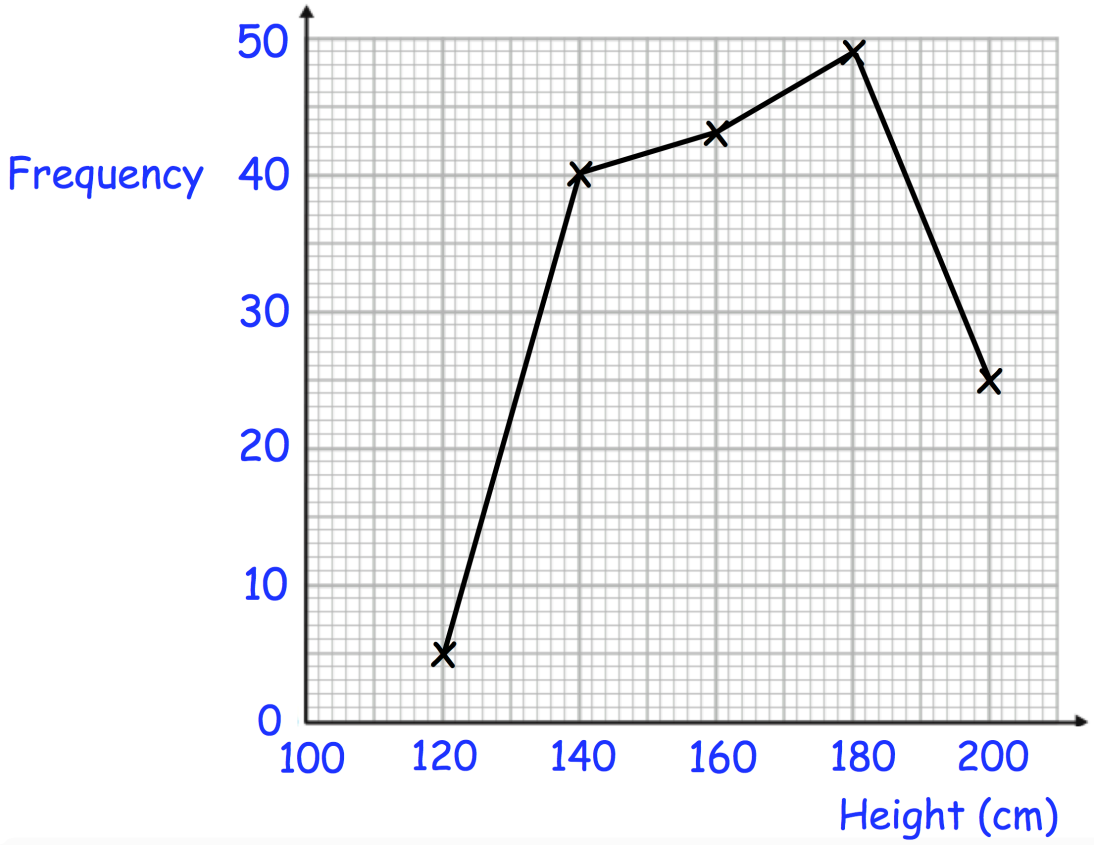


(2)

9. The table shows information about the heights of 152 people.

Height (h cm)	Frequency
$100 < h \leq 120$	5
$120 < h \leq 140$	30
$140 < h \leq 160$	43
$160 < h \leq 180$	49
$180 < h \leq 200$	25

Zoey draws a frequency polygon for the information in the table.



Write down two mistakes that Zoey has made.

Mistake 1 .....

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Mistake 2 .....

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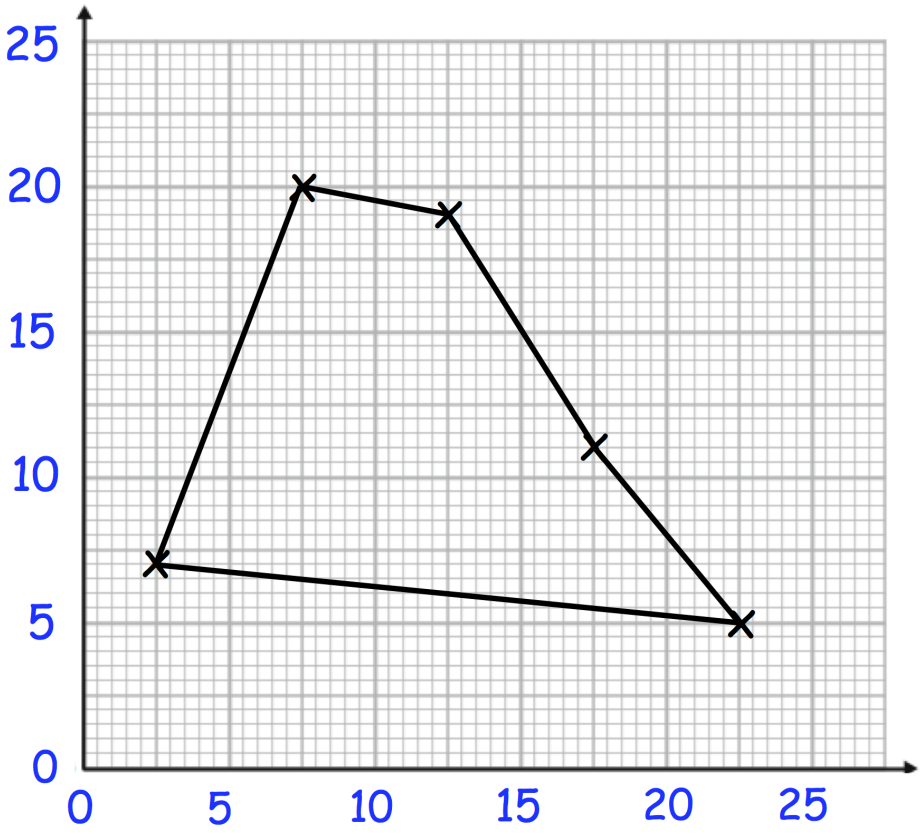
(2)

10. The table shows information about the donations 62 people made to charity.

Donation, £x	Frequency
$0 < x \leq 5$	7
$5 < x \leq 10$	20
$10 < x \leq 15$	19
$15 < x \leq 20$	11
$20 < x \leq 25$	5

Humphrey draws a frequency polygon for the information in the table.



Write down two mistakes that Humphrey has made.

Mistake 1 ……

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Mistake 2 ……

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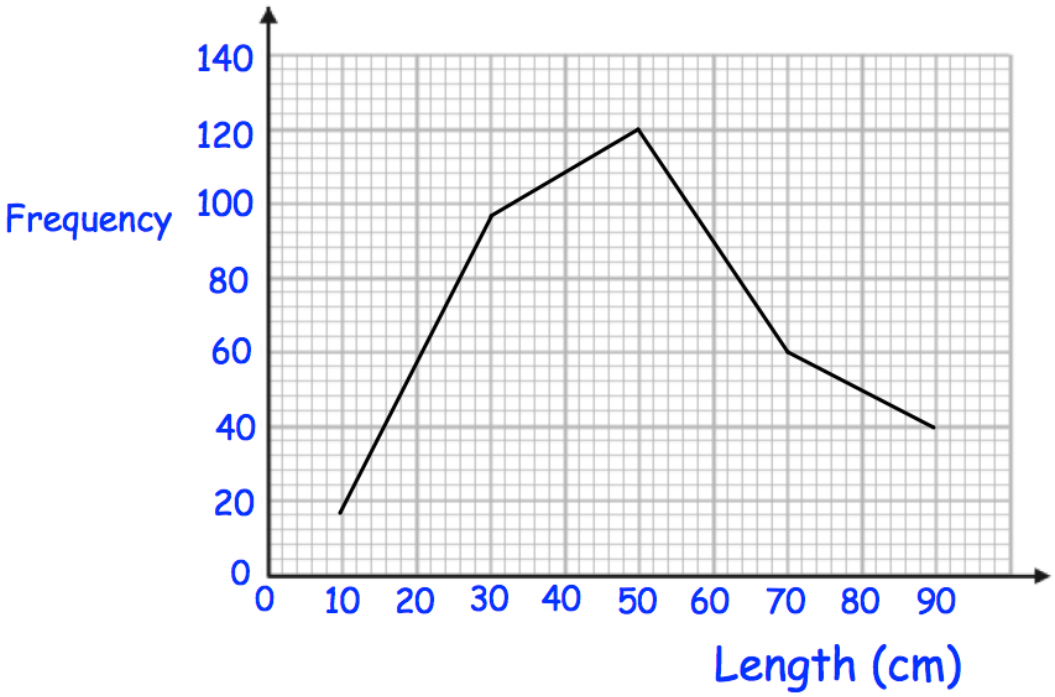
(2)

11. The frequency polygon shows the length of 330 river eels.



The table shows the lengths of 330 sea eels.

Length (cm)	Frequency
$0 < t \leq 20$	12
$20 < t \leq 40$	60
$40 < t \leq 60$	108
$60 < t \leq 80$	90
$80 < t \leq 100$	60

(a) Draw a frequency polygon to show this information on the diagram above.

(2)

(b) Calculate an estimate of the mean length of a sea eel.

.....cm

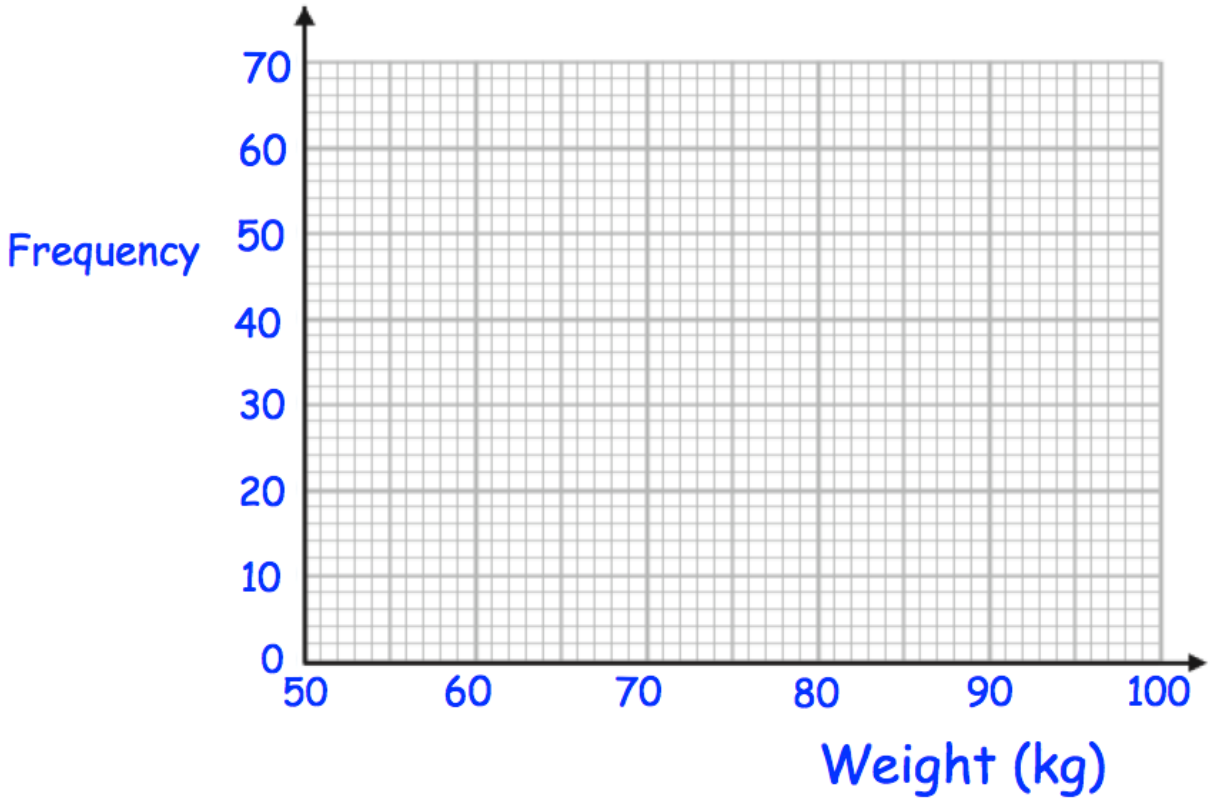
(3)

12. The frequency table gives information about the weights of some rugby players.

Weight (kg)	Frequency
$50 < w \leq 60$	14
$60 < w \leq 70$	22
$70 < w \leq 80$	50
$80 < w \leq 90$	64
$90 < w \leq 100$	20

(a) Draw a frequency polygon to represent this data.

(2)



(b) Write down the modal class interval.

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(1)

One player is chosen at random.

(c) Work out the probability that this player is more than 90kg.

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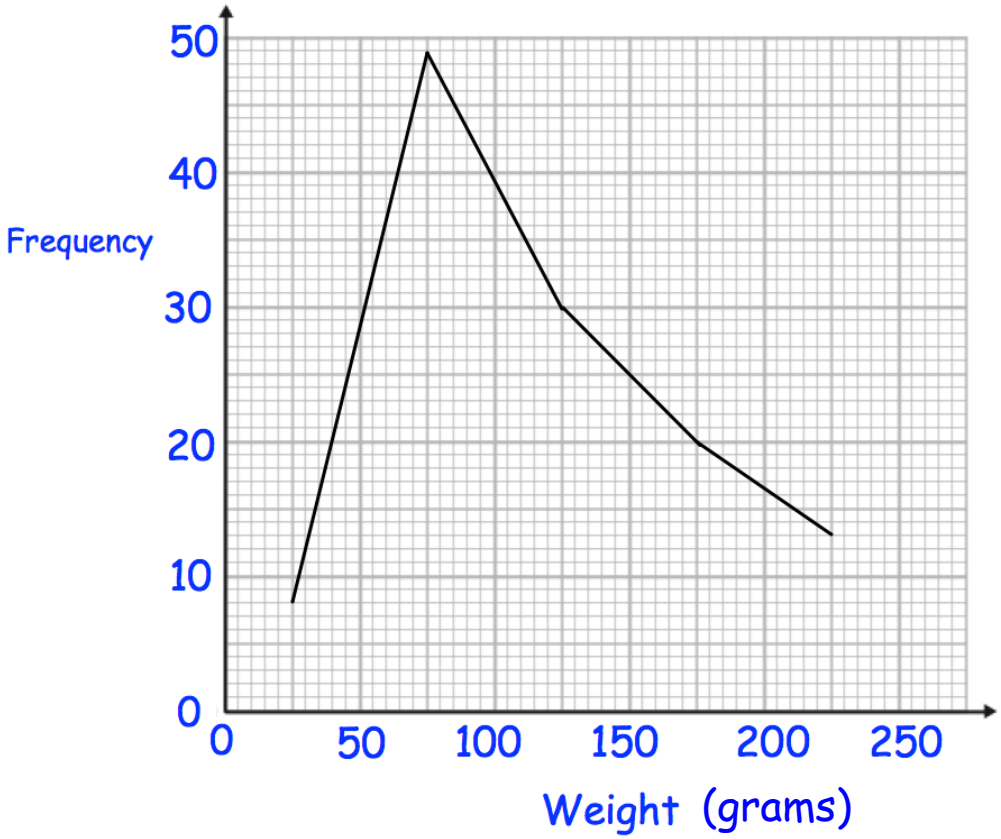
(1)

13. The frequency polygon shows the weights of 120 red apples from an orchard.



The table shows the weights of 120 green apples from the same orchard.

Weight (grams)	Frequency
$0 < w \leq 50$	4
$50 < w \leq 100$	12
$100 < w \leq 150$	40
$150 < w \leq 200$	48
$200 < w \leq 250$	16

(a) Draw a frequency polygon to show this information on the diagram above.

(2)

(b) Compare the two distributions.

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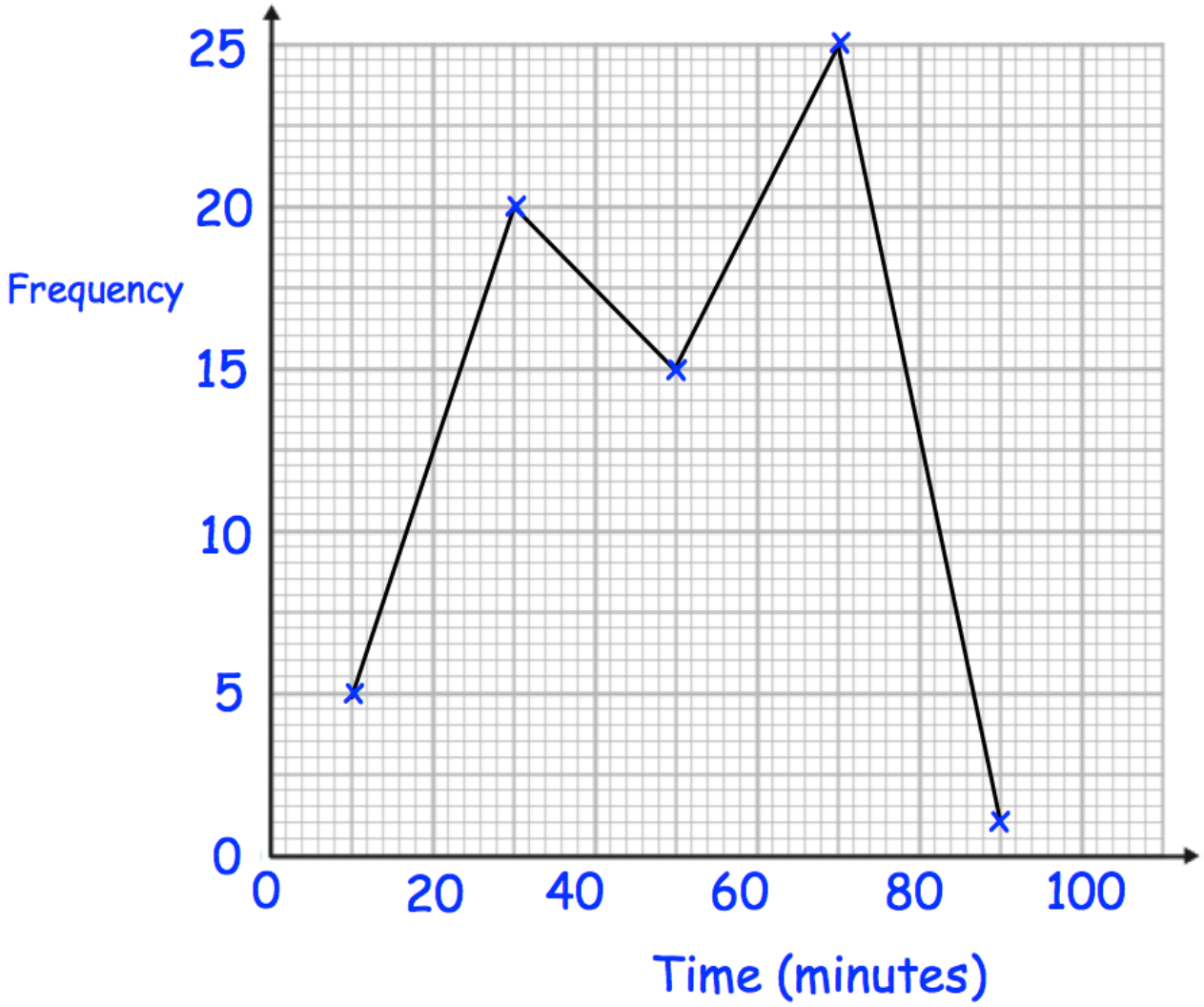
(2)

14. The frequency polygon shows information on how long people spend in a swimming pool.



Calculate an estimate of the mean time spent in the swimming pool.

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(3)