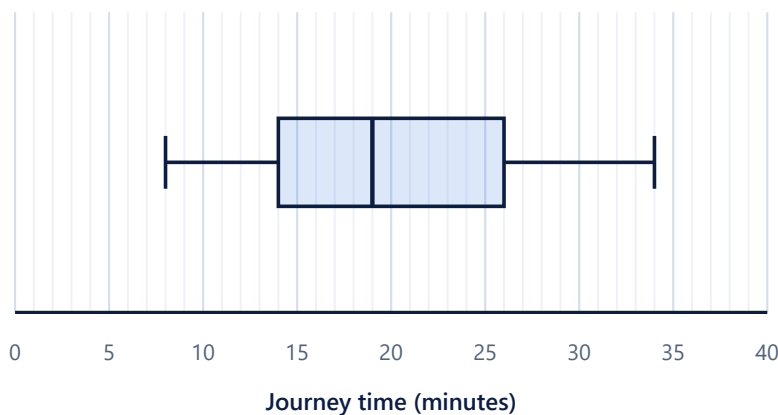




Name: _____ **Date:** _____ **Score:** _____ / 61

1 The box plot shows the journey times, in minutes, of 15 deliveries made by a courier.

- Write down the median journey time.
- Work out the interquartile range of the journey times.
- Work out the range of the journey times.



(3 marks)

Answer _____

2 Here are the numbers of emails Priya received on each of 11 days, written in order.

3 5 6 8 9 11 13 14 16 18 21

- Find the median.
- Find the lower quartile and the upper quartile.
- Work out the interquartile range.

(3 marks)

Answer _____

3 Aisha records how many minutes late her train is on 12 days.

3 8 5 12 9 6 20 11 15 23 14 18

- Work out the median, the lower quartile and the upper quartile.
- Work out the interquartile range.
- Write down the five values you would need to draw a box plot of these data.

(4 marks)

Answer _____

4 The stem and leaf diagram shows the marks of 15 students in a spelling test.

Stem	Leaves
1	2 5 8
2	0 3 4 7 9
3	1 4 6 8
4	0 2 5

Key: 2 | 3 means 23 marks

Work out the five values needed to draw a box plot for this data: the lowest mark, the lower quartile, the median, the upper quartile and the highest mark.

(3 marks)

Answer _____

- 5 Two shops sell second-hand bikes. The tables summarise the prices, in pounds, of the bikes sold last month.

Shop A

Minimum	60
Lower quartile	95
Median	130
Upper quartile	180
Maximum	250

Shop B: median £150, interquartile range £45.

- Work out the interquartile range of the prices at Shop A.
- Compare the prices of bikes at the two shops. Give two comparisons.
- Which shop has the more consistent prices? Give a reason.

(4 marks)

Answer _____

- 6 Two bus companies, Northline and Citygo, record how many minutes late their buses are.

	Minimum	Lower quartile	Median	Upper quartile	Maximum
Northline	2	4	6	9	15
Citygo	1	5	7	8	12

Work out the interquartile range for each company. Which company is more consistent? Which has the shorter typical delay? Give a reason for each answer.

(3 marks)

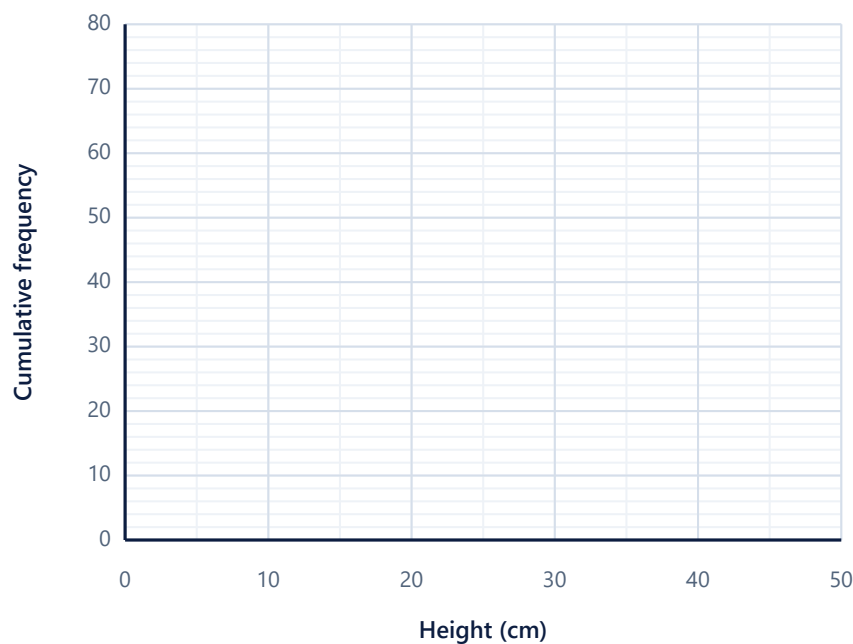
Answer _____

7

The table shows the heights, h cm, of 80 sunflower seedlings.

Height (h cm)	Frequency
$0 < h \leq 10$	6
$10 < h \leq 20$	14
$20 < h \leq 30$	26
$30 < h \leq 40$	22
$40 < h \leq 50$	12

- Complete the cumulative frequency table.
- On the grid, draw a cumulative frequency graph for this information.
- Use your graph to find an estimate for the median height.
- Use your graph to find an estimate for the interquartile range of the heights.



(6 marks)

Answer _____

8

The table shows the times, in minutes, taken by 50 students to complete a puzzle.

Time t (minutes)	$0 < t \leq 10$	$10 < t \leq 20$	$20 < t \leq 30$	$30 < t \leq 40$	$40 < t \leq 50$
Frequency	4	11	19	12	4

- Complete a cumulative frequency table for these data.
- Use the cumulative frequency to estimate the interquartile range. Use the 12.5th and 37.5th values and assume the values are spread evenly within each class. Give your answer to 1 decimal place.

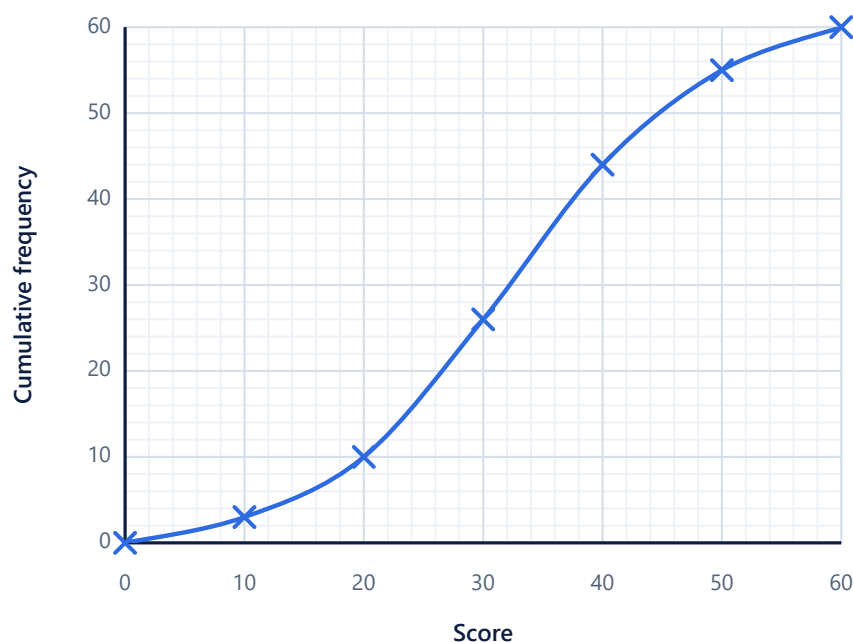
(4 marks)

Answer _____

9

The cumulative frequency graph shows the test scores of the 60 students in Class A.

- Use the graph to find an estimate for the median score.
- Use the graph to find an estimate for the interquartile range of the scores.
- The 60 students in Class B had a median score of 45 and an interquartile range of 12. Compare the scores of the two classes.



(6 marks)

Answer

10 Here are the times, in seconds, taken by the 15 swimmers in Team A to swim 50 metres.

41 38 45 36 50 39 43 47 35 44 40 52 37 46 42

- Find the median, the lower quartile and the upper quartile of the times for Team A.
- Team B's times had a median of 44 seconds and an interquartile range of 13 seconds. Compare the times of the two teams. Give two comparisons.

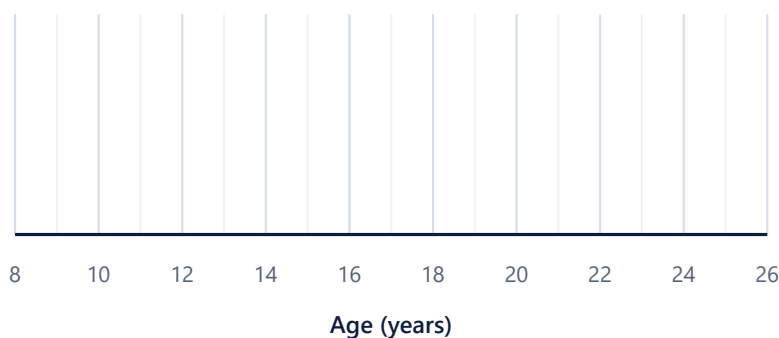
(5 marks)

Answer _____

11 The ages of the members of a youth orchestra are summarised below.

Youngest	Lower quartile	Median	Upper quartile	Oldest
11	13	15	18	24

- On the grid, draw a box plot for these ages.
- Work out the interquartile range.



(3 marks)

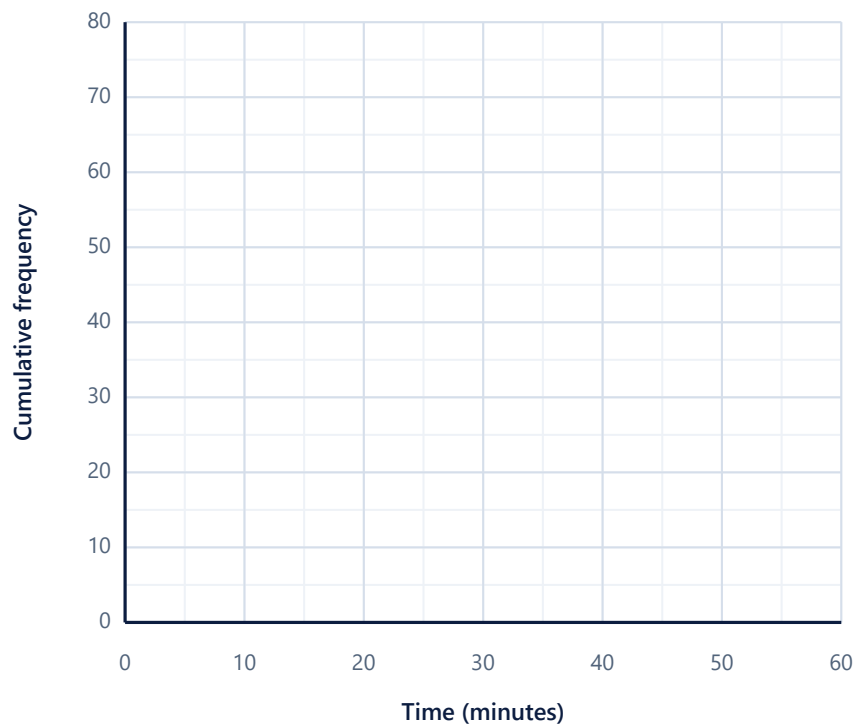
Answer _____

12

80 people took part in a fun run. The table shows the cumulative frequency of their finishing times.

Time, t (minutes)	≤ 10	≤ 20	≤ 30	≤ 40	≤ 50	≤ 60
Cumulative frequency	6	20	46	66	76	80

- On the grid, draw a cumulative frequency graph for these data.
- Use your graph to estimate the interquartile range of the times.



(5 marks)

Answer _____

13

The times, in minutes, taken by 9 runners to finish a race are

21 23 24 25 26 27 28 30 31

- Work out the range and the interquartile range of these times.
- A tenth runner finishes in 58 minutes. Work out the new range and the new interquartile range.
- Which of the range and the interquartile range is affected less by the 58 minute time? Explain why.

(5 marks)

Answer _____

14

80 students sat an exam marked out of 100. The table shows their scores, s marks.

Score (s marks)	Frequency
$0 < s \leq 20$	6
$20 < s \leq 40$	18
$40 < s \leq 60$	28
$60 < s \leq 80$	20
$80 < s \leq 100$	8

- Complete the cumulative frequency table.
- Write down the class interval that contains the median score.
- A cumulative frequency graph of the data gives these estimates: median 51, lower quartile 37, upper quartile 66. Work out an estimate for the interquartile range.
- The pass mark was 60. Work out the percentage of students who scored more than 60.
- Last year the same exam had a median of 46 and an interquartile range of 24. Compare this year's scores with last year's.

(7 marks)

Answer _____

End of questions | Total 61 marks