Box plots and comparing distributions

Grade 5 | Foundation and Higher | 5 questions, 21 marks

GCSE Statistics topic practice

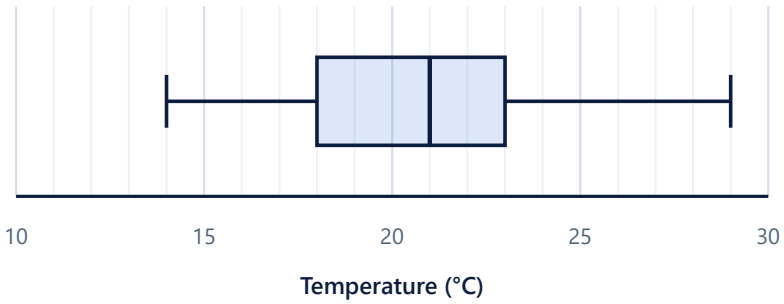
Name: _____ **Date:** _____ **Score:** _____ **/ 21**

1 The box plot shows the highest temperature, in °C, recorded in Leeds on each day in July.

a. Write down the median temperature. (1)

b. Work out the range of the temperatures. (1)

c. Work out the interquartile range of the temperatures. (1)



(3 marks)

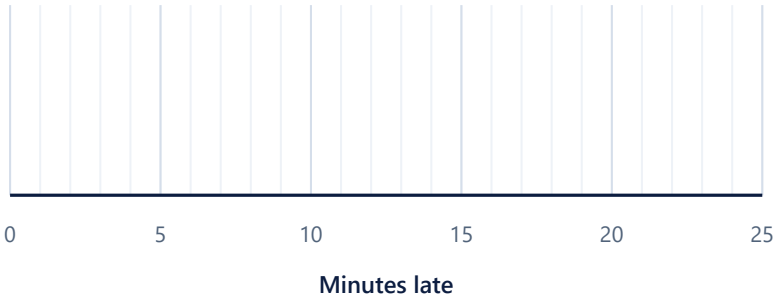
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2 Here are the numbers of minutes that 11 trains were late arriving at York. The numbers are in order.

2 3 5 6 8 9 11 14 15 18 24

a. Find the median, the lower quartile and the upper quartile. (2)

b. On the grid, draw a box plot for this information. (2)



(4 marks)

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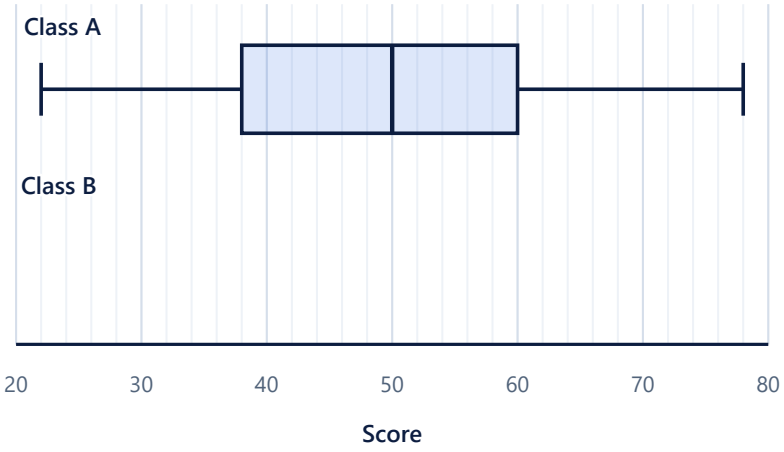
3 Class A and Class B sat the same statistics test. The box plot shows the scores for Class A. The table gives information about the scores for Class B.

Class B	Lowest score	Lower quartile	Median	Upper quartile	Highest score
Score	30	44	56	62	70

a. Work out the interquartile range of the scores for Class A. (1)

b. On the grid, draw a box plot for Class B. (2)

c. Compare the distributions of the scores for Class A and Class B. (2)



(5 marks)

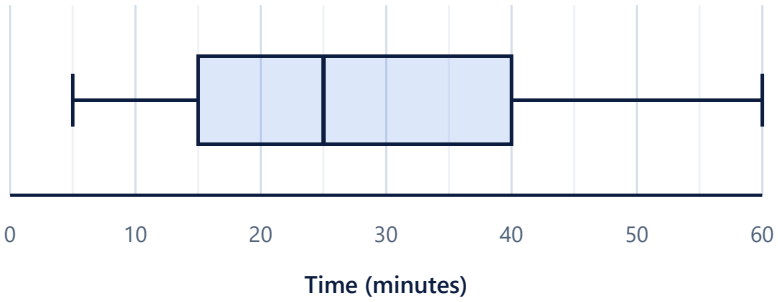
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4 The box plot shows the times, in minutes, that 200 pupils take to travel to school.

a. Work out the number of pupils who take more than 40 minutes. (2)

b. Write down the percentage of pupils who take between 15 minutes and 40 minutes. (1)

c. Abena says, "More pupils take between 25 and 40 minutes than between 15 and 25 minutes, because that part of the box is wider." Explain why Abena is wrong. (1)



(4 marks)

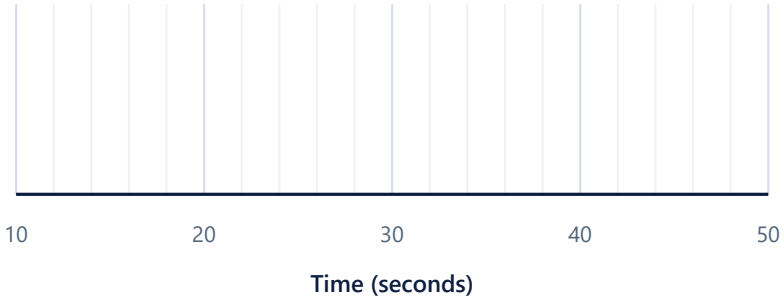
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5 Lin records the time, in seconds, that each pupil in Year 10 takes to solve a puzzle. Here is some information about the times.

Shortest time	Range	Lower quartile	Interquartile range	Median
12	36	20	14	6 more than the lower quartile

a. On the grid, draw a box plot for the Year 10 times. (3)

b. For the pupils in Year 11, the median time is 23 seconds and the interquartile range is 20 seconds. Compare the distributions of the times for Year 10 and Year 11. (2)



(5 marks)

End of questions | Total 21 marks

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