

Averages and Measures of Spread

Calculating from Individual Data Items

1) Find the median and interquartile range of each of the following sets of numbers:

(a) 12 13 13 16 17 18 19 19 20 23 24 27 28 28 31 41

(b) 17 23 26 26 27 36 39 42 47 53 67 73 73 82 83 91 92

(c) 34 36 28 32 29 38 41 34 29 26 37 32 35 27 29 31 37 100

2) Find the mean and median of each of the following sets of data:

(a) Lengths of leaves from tree A (measured in cm)

4.6 4.7 5.1 5.2 5.4 5.4 5.5 5.6 5.6 5.6
5.7 5.9 6.0 6.1 6.1 6.2 6.4 6.7 6.9 7.1

(b) Times (in minutes) taken to complete a jigsaw puzzle by a group of girls:

23 26 27 28 28 28 30 31 32 32 34 35 37 39 42

(c) Times (in minutes) taken to complete a jigsaw puzzle by a group of boys:

34 29 31 36 38 27 35 39 32 35 32 67 31 32 33 37 30

3) For the data in 2(c), if you had to use either the mean or the median as the “average”, which one would you prefer to use, and why?

4) For each set of data in question 2, calculate the range and the interquartile range.

5) A sample of leaves from tree B was found to have median length 7.3cm, with interquartile range 0.35cm. Write a brief comparison of the leaves from tree A (see 2(a)) and tree B.

6) The same group of girls as in question 2(b) were timed on another jigsaw. The median time taken was 24 minutes, with interquartile range 13.5 minutes. What does this tell you about the two jigsaws?

7) Two classes sat a test. Class A had a median mark of 67, with interquartile range 23. Class B had median 79, with interquartile range 9. Write briefly about the differences between the performance of the two classes.

8) For the data in 2(b) and (c), does comparing the range of the girls’ times with the range of the boys’ times give a true picture of how spread out the boys are relative to the girls? If not, why not? Does the interquartile range give a better picture?

Averages and Measures of Spread

Calculating from Individual Data Items

1) Find the median and interquartile range of each of the following sets of numbers:

(a) 12 13 13 16 17 18 19 19 20 23 24 27 28 28 31 41

(b) 17 23 26 26 27 36 39 42 47 53 67 73 73 82 83 91 92

(c) 34 36 28 32 29 38 41 34 29 26 37 32 35 27 29 31 37 100

2) Find the mean and median of each of the following sets of data:

(a) Lengths of leaves from tree A (measured in cm)

4.6 4.7 5.1 5.2 5.4 5.4 5.5 5.6 5.6 5.6
5.7 5.9 6.0 6.1 6.1 6.2 6.4 6.7 6.9 7.1

(b) Times (in minutes) taken to complete a jigsaw puzzle by a group of girls:

23 26 27 28 28 28 30 31 32 32 34 35 37 39 42

(c) Times (in minutes) taken to complete a jigsaw puzzle by a group of boys:

34 29 31 36 38 27 35 39 32 35 32 67 31 32 33 37 30

3) For the data in 2(c), if you had to use either the mean or the median as the “average”, which one would you prefer to use, and why?

4) For each set of data in question 2, calculate the range and the interquartile range.

5) A sample of leaves from tree B was found to have median length 7.3cm, with interquartile range 0.35cm. Write a brief comparison of the leaves from tree A (see 2(a)) and tree B.

6) The same group of girls as in question 2(b) were timed on another jigsaw. The median time taken was 24 minutes, with interquartile range 13.5 minutes. What does this tell you about the two jigsaws?

7) Two classes sat a test. Class A had a median mark of 67, with interquartile range 23. Class B had median 79, with interquartile range 9. Write briefly about the differences between the performance of the two classes.

8) For the data in 2(b) and (c), does comparing the range of the girls’ times with the range of the boys’ times give a true picture of how spread out the boys are relative to the girls? If not, why not? Does the interquartile range give a better picture?