

Grade 6 - Mean, Median, Spread and Box Plots - Quiz

Common Core 6.SP.A.3, 6.SP.B.5c, 6.SP.B.5d · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This quiz has 10 multiple-choice questions on mean, median, spread, and box plots (Common Core 6.SP.A.3 and 6.SP.B.5). Choose one answer for each and read the explanation.

Grade 6 · Common Core State Standards: **6.SP.A.3, 6.SP.B.5c, 6.SP.B.5d**

Questions

Question 1

What is the mean of 5, 7, 9, 11?

- A. 8
- B. 7
- C. 9
- D. 32

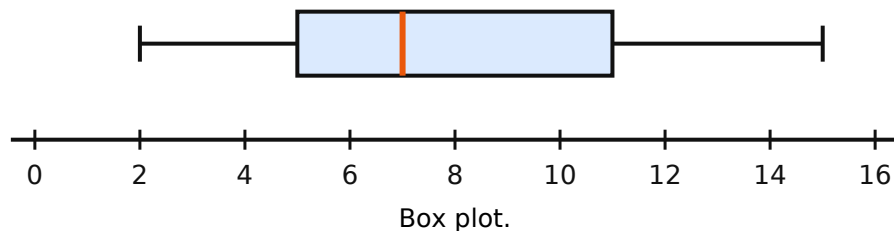
Question 2

What is the median of 3, 8, 5, 9, 10?

- A. 7
- B. 8
- C. 5
- D. 9

Question 3

What is the IQR in this box plot?



- A. 6

- B. 13
- C. 9
- D. 4

Question 4

Which measure is least affected by an outlier?

- A. The mean
- B. The range
- C. The sum
- D. The median

Question 5

The mean of 4 numbers is 10. Three are 8, 9, and 12. What is the fourth?

Total	40			
Parts	8	9	12	?

Four numbers with total 40.

- A. 10
- B. 9
- C. 11
- D. 13

Question 6

What is the range of 12, 3, 19, 8, 15?

- A. 19
- B. 3
- C. 57
- D. 16

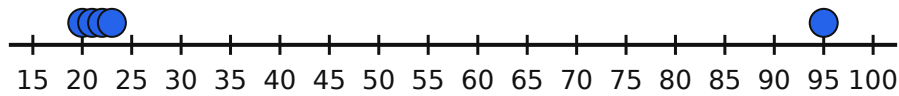
Question 7

The MAD of a data set is 2 and the mean is 10. What does the MAD measure?

- A. The average distance from the mean
- B. The middle value
- C. The most common value
- D. The largest value

Question 8

Which is the best measure of center for 20, 22, 21, 23, 95?



Dot plot.

- A. The mean
- B. The median
- C. The range
- D. The maximum

Question 9

In a box plot, the box shows

- A. all the data
- B. the middle half of the data
- C. the mean
- D. the outliers only

Question 10

Data set A has IQR 4 and data set B has IQR 10. Which statement is true?

- A. A has more variability
- B. They are equal
- C. B has more variability in its middle half
- D. A has a larger median

Answers

1. **A** - $32 \div 4 = 8$.
2. **B** - Order: 3, 5, 8, 9, 10; the middle is 8.
3. **A** - $Q3 - Q1 = 11 - 5 = 6$.
4. **D** - The median depends on the middle value.
5. **C** - Total 40; $8 + 9 + 12 = 29$; $40 - 29 = 11$.
6. **D** - $19 - 3 = 16$.
7. **A** - MAD stands for mean absolute deviation.
8. **B** - The outlier 95 pulls the mean up; the median is 22.
9. **B** - The box runs from Q1 to Q3.
10. **C** - A larger IQR means more spread.

Remember

- Mean = sum divided by the number of values; median = middle value.
- Range = greatest minus least; IQR = Q3 minus Q1.
- MAD is the average distance of the values from the mean.
- A box plot shows the minimum, Q1, median, Q3, and maximum.
- Outliers pull the mean but not the median.