Mean Median Mode Tool

Statistics Practice Questions — Beginner, Intermediate & Advanced

Try each question first. Then check the answer and explanation in the answer key. You can also use the online calculator to verify your working.

Beginner

1. Mean

Find the mean of 4, 6, 8 and 10.

Your answer: _____

2. Median

Find the median of 3, 7, 9, 12 and 15.

Your answer: _____

3. Mode

Find the mode of 2, 4, 4, 5 and 7.

Your answer: _____

4. Range

Find the range of -3, 1, 4 and 9.

Your answer: _____

5. Mean + Median + Mode

Find the mean, median and mode of 2, 3, 3, 5 and 7.

Your answer: _____

6. Frequency

In 1, 2, 2, 3, 3, 3, what is the frequency of 3?

Your answer: _____

Intermediate

7. Negative numbers

Find the mean of -5, 0, 5 and 10.

Your answer: _____

8. Median

Find the median of 4, 8, 15, 16, 23 and 42.

Your answer: _____

9. Central tendency

For 2, 3, 4, 5 and 100, which measure better represents a typical value: mean or median?

Your answer: _____

10. Weighted mean

Scores of 80 (weight 3) and 70 (weight 2) are combined. What is the weighted mean?

Your answer: _____

11. Grouped data

A grouped table has classes 10-19 (frequency 2), 20-29 (frequency 3), and 30-39 (frequency 5). Using class midpoints, what is the estimated mean?

Your answer: _____

12. Frequency

A frequency table shows 5 with frequency 2, 6 with frequency 5, and 7 with frequency 3. What is the mode?

Your answer: _____

Advanced

13. Five-number summary

Find the five-number summary and IQR for 2, 4, 5, 7, 8, 10, 12 and 15.

Your answer: _____

14. Weighted mean

Find the weighted mean of 92 (weight 4), 78 (weight 3), and 85 (weight 2).

Your answer: _____

15. Mean + Median + Mode

Find the mean, median and mode of 5, 6, 6, 7 and 100. What does the comparison tell you?

Your answer: _____

16. Five-number summary

Find the five-number summary and IQR for -8, -3, 0, 2, 5, 9, 12 and 20.

Your answer: _____

17. Central tendency

A data set has a strong right-side outlier. Which measure is usually less affected by that outlier: mean or median?

Your answer: _____

18. Frequency + weighted mean

Scores are 70 for 5 students, 80 for 3 students, and 90 for 2 students. Find the weighted mean.

Your answer: _____

Answer Key & Explanations

Use this section after you have attempted the questions.

1. Mean

Answer: 7
Explanation: Add the values: 4 + 6 + 8 + 10 = 28. There are 4 values, so 28 ÷ 4 = 7.

2. Median

Answer: 9
Explanation: The values are already in order and there are 5 of them. The third value is in the middle, so the median is 9.

3. Mode

Answer: 4
Explanation: The value 4 appears twice. Every other value appears once, so 4 has the highest frequency and is the mode.

4. Range

Answer: 12
Explanation: The maximum is 9 and the minimum is -3. Range = 9 - (-3) = 12.

5. Mean + Median + Mode

Answer: Mean = 4, Median = 3, Mode = 3
Explanation: The sum is 20, so the mean is 20 ÷ 5 = 4. The middle value is 3, and 3 is also the only value that repeats.

6. Frequency

Answer: 3
Explanation: The value 3 occurs three times, so its frequency is 3.

7. Negative numbers

Answer: 2.5
Explanation: The sum is 10. Divide by 4 values: 10 ÷ 4 = 2.5.

8. Median

Answer: 15.5
Explanation: There are 6 values, so average the two middle values: (15 + 16) ÷ 2 = 15.5.

9. Central tendency

Answer: Median
Explanation: The value 100 pulls the mean upward. The median is 4 and better represents the typical values in this data set.

10. Weighted mean

Answer: 76
Explanation: 80 × 3 = 240 and 70 × 2 = 140. The weighted total is 380 and the total weight is 5, so 380 ÷ 5 = 76.

11. Grouped data

Answer: 27.5
Explanation: The midpoints are 14.5, 24.5 and 34.5. The weighted midpoint total is 275 and the total frequency is 10, so 275 ÷ 10 = 27.5.

12. Frequency

Answer: 6
Explanation: The highest frequency is 5, and it belongs to the value 6. Therefore, the mode is 6.

13. Five-number summary

Answer: Min = 2, Q1 = 4.5, Median = 7.5, Q3 = 11, Max = 15; IQR = 6.5
Explanation: Median = (7 + 8) ÷ 2 = 7.5. Q1 = (4 + 5) ÷ 2 = 4.5. Q3 = (10 + 12) ÷ 2 = 11. IQR = 11 - 4.5 = 6.5.

14. Weighted mean

Answer: 85.78 approximately
Explanation: The weighted total is 92 × 4 + 78 × 3 + 85 × 2 = 772. Divide by total weight 9: 772 ÷ 9 = 85.777..., or 85.78.

15. Mean + Median + Mode

Answer: Mean = 24.8, Median = 6, Mode = 6
Explanation: The sum is 124, so the mean is 24.8. The middle value is 6 and 6 occurs twice. The large value 100 pulls the mean far above the median and mode.

16. Five-number summary

Answer: Min = -8, Q1 = -1.5, Median = 3.5, Q3 = 10.5, Max = 20; IQR = 12
Explanation: Median = (2 + 5) ÷ 2 = 3.5. Q1 = (-3 + 0) ÷ 2 = -1.5. Q3 = (9 + 12) ÷ 2 = 10.5. IQR = 10.5 - (-1.5) = 12.

17. Central tendency

Answer: Median
Explanation: The mean uses every numerical value, so an unusually large observation can pull it upward. The median depends on position after sorting and is generally less affected by a single extreme value.

18. Frequency + weighted mean

Answer: 77
Explanation: 70 × 5 = 350, 80 × 3 = 240, and 90 × 2 = 180. The total is 770 across 10 students, so the mean is 770 ÷ 10 = 77.