

Unit 1: One-Variable Statistics

ADVANCED • SET 2

Name: _____

Date: _____

Give each answer as a single exact value (a number or yes/no). For standard deviation and variance, use the population formula (divide by n). Show your work, but the final answer is what gets checked.

1. Find the mean of this data set: 47, 82, 63, 91, 58, 74, 39, 66.

Answer: _____

3. Find the interquartile range (IQR) of this data set: 4, 8, 15, 16, 23, 42, 50, 65, 70. (Use the median-splitting method; with an odd count, exclude the overall median from each half.)

Answer: _____

5. The mean of six numbers is 42. Five of the numbers are 38, 51, 29, 47, and 40. Find the sixth number.

Answer: _____

7. The mean of 10 test scores was calculated as 74. Later it was found that one score entered as 56 should have been 92. Find the corrected mean of the 10 scores.

Answer: _____

9. Find the population standard deviation of this data set: 3, 7, 7, 19.

Answer: _____

2. Find the median of this data set: 12, 45, 23, 8, 67, 34, 19, 52, 41, 30.

Answer: _____

4. Find the population standard deviation of this data set: 2, 4, 4, 4, 5, 5, 7, 9.

Answer: _____

6. One class of 18 students has a mean test score of 76. A second class of 12 students has a mean score of 91. Find the mean score of all 30 students combined.

Answer: _____

8. Find the interquartile range (IQR) of this data set: 22, 15, 40, 33, 28, 51, 19, 47, 36, 24, 44, 30.

Answer: _____

10. Find the population variance of this data set: 6, 10, 10, 14.

Answer: _____

11. The mean of seven numbers is 24. If the largest number, 90, is removed from the set, find the mean of the remaining six numbers.

Answer: _____

12. For the data set 12, 15, 18, 20, 22, 25, 60, use the $1.5 \times \text{IQR}$ rule to decide whether 60 is an outlier. Answer yes or no.

Answer: _____