

Unit 8: Data Sets, Distributions, and Sampling

ADVANCED

Name: _____ Date: _____

Show all work. Give each answer as an exact number or fraction in lowest terms.

1. Find the mean of this data set: 47, 52, 38, 61, 55, 43, 58, 49, 64, 33.

Answer: _____

3. For the data set 12, 15, 9, 14, 20, find the mean absolute deviation (MAD).

Answer: _____

5. A data set is 22, 25, 27, 24, 26, 23, 89, 25. The value 89 is an outlier. After removing that one outlier, what is the range of the remaining values?

Answer: _____

7. A dot plot is summarized by this value:frequency table — 2 appears 3 times, 3 appears 5 times, 4 appears 7 times, 5 appears 3 times, 6 appears 2 times. Find the mean of the data set.

Answer: _____

9. Five numbers have a mean of 40. Four of the numbers are 35, 42, 38, and 50. What is the fifth number?

Answer: _____

2. Find the median of these 12 values: 18, 23, 15, 29, 31, 22, 27, 19, 25, 20, 33, 16.

Answer: _____

4. For the ordered data set 4, 7, 8, 11, 13, 14, 16, 18, 21, 25, find the interquartile range (IQR). (Split into a lower half of 5 values and an upper half of 5 values; Q1 and Q3 are the medians of those halves.)

Answer: _____

6. A bag holds 6 red, 9 blue, and 5 green marbles. One marble is drawn at random. What is the probability it is NOT blue? Give the answer as a fraction in lowest terms.

Answer: _____

8. A histogram has these bins and frequencies: 0-10: 5, 10-20: 8, 20-30: 14, 30-40: 9, 40-50: 6. How many data values fall in the interval from 20 up to 40?

Answer: _____

10. A fair spinner is numbered 1 through 8. You spin it once and flip a fair coin once. What is the probability of getting an even number AND heads? Give the answer as a fraction in lowest terms.

Answer: _____

11. In a random sample of 50 light bulbs, 14 were defective. Based on this sample, predict how many defective bulbs would be expected in a shipment of 1500 bulbs.

Answer: _____

12. A student's mean score on 8 tests is 82. She scores 91 on a 9th test. What is the mean of all 9 test scores?

Answer: _____