

Statistics Review Day:

1. To use _____ sampling, you must order the population and then select from it at regular intervals.
2. How does the mean compare to the rest of the data in a positively skewed distribution?
3. How do the measures of central tendency compare in a normal distribution?
4. For a daily airline flight between two cities, the number of pieces of checked luggage has a mean of 380 and a standard deviation of 20. On what percent of the flights would you expect from 340 to 420 pieces of checked luggage?
{Hint: Draw a normal distribution bell curve and use percentages based on empirical rule}
5. In a class of 25, one student receives a score of 100 on a test. The grades are distributed normally with a mean of 78 and a standard deviation of 5. Do you think the student's score is an outlier? Explain.
6. The scores on a trigonometry final are approximately normally distributed with a mean of 88 and a standard deviation of 3. {Hint: Draw a normal distribution bell curve and use percentages based on empirical rule}
 - What percentage of the students who took the test scored above an 85?
 - If 250 students took the final exam, approximately how many scored below a 79?
7. The county road department wants to know which roads cause the most concern among the residents of the county. They ask the local restaurants to hand out survey forms for customers to return by mail. Identify the sampling method.
 - a. Convenience sampling
 - b. Random sampling
 - c. Voluntary sampling
 - d. Systematic sampling
8. Survey, observation, or experiment: Survey, experiment, or observational study:

Students in a science class record the height of bean plants as they grow.
9. How is a categorical variable different from a quantitative variable?

10. The following list shows the scores that Jade received on her math tests:

94	86	92
100	66	99
91	99	83

Mean: _____ Median: _____ Mode: _____

Which measure(s) of central tendency would be appropriate to describe Jade’s math test scores. Explain your choice.

11. The teacher decided NOT to count the lowest score. Find the mean, median and mode with the remaining 8 scores.

Mean: _____ Median: _____ Mode: _____

Which measure of central tendency is affected most by a very low score? Explain your answer.

12. Why should Oscar be careful using the mean for the following data set?

23, 30, 51, 19, 32, 41, 38, 25, 48, 41, 8

- A. The mean is not a whole number.
- B. The data set has no mode.
- C. The data set has an outlier of 8, which will affect the mean.
- D. The data set has an odd number of values

Directions: Use the tables for questions 13-14.

The tables show the quiz scores of students in two seventh grade social studies classes.

Quiz Scores

Class A			
9	8	8	9
10	9	8	10
9	9	10	

Class B			
9	10	8	10
10	9	10	6
5	7	8	10

13. Which best describes the comparison between the mode quiz scores?

- A. The modes are the same.
- B. The mode score for Class A is 2 points higher than for Class B.
- C. The mode score for Class A is 1 point higher than for Class B.
- D. The mode score for Class A is 1 point lower than for Class B.

14. Which best describes the comparison between the mean quiz scores?

- A. The means are the same.
- B. The mean score for Class A is 0.5 point higher than for Class B.
- C. The mean score for Class A is 1 point higher than for Class B.
- D. The mean score for Class A is 1 point lower than for Class B.

15.

The maximum length in feet of several whales is listed below.

46, 53, 33, 53, 79

If the maximum length of the Blue Whale, 98 feet, is added to this list, which of the following statements would be true?

- A The mode would decrease. C The mean would increase.
- B The median would decrease. D The mean would decrease.

16.

The table below shows the number of soup labels collected in one week by each homeroom in grade 7.

Classroom	Number of Soup Labels
Mr. Martin	138
Ms. Davis	125
Mr. Cardona	89
Mrs. Turner	110
Mr. Wilhelm	130
Mrs. LaBash	?

Which number could be added to the set of data in order for the mode and median of the set to be equal?

- A 89 C 125
- B 110 D 130