

CHAPTER 2

Means to an End: Computing and Understanding Averages

Part I. Multiple-Choice Questions (20 items)

1. The mode measures central tendency in terms of which of these?

- a. the most common score
- b. the most central case
- c. the most important score
- d. the most average case

Ans: a

2. Which of the following is the easiest way to describe data?

- a. average
- b. correlation
- c. descriptive
- d. frequency

Ans: a

3. Which of the following measures of central tendency is the midpoint for a set of scores?

- a. average
- b. mean
- c. mode
- d. median

Ans: d

4. What is the most common type of average reported?

- a. sum
- b. mean
- c. mode
- d. median

Ans: b

5. When using the AVERAGE function in Excel, which of these are you calculating?

- a. sum
- b. mean

- c. mode
 - d. median
- Ans: b

6. Which of the following is the correct function for calculating the midpoint?

- a. MEAN(A1:A15)
- b. MEDIAN(A1+A2+A3)/3
- c. MODE(A1:A12)
- d. MEDIAN(A1:A10)

Ans: d

7. To identify the point in a distribution at which 50% of scores fall above and 50% fall below a given score, which measure of central tendency would you report?

- a. average
- b. mean
- c. mode
- d. median

Ans: d

8. If you wanted to identify the most frequently occurring score in a distribution, which measure of central tendency would you report?

- a. average
- b. mean
- c. mode
- d. median

Ans: c

9. Which of the following is the correct function for calculating the score occurring most often in a distribution?

- a. MEAN(A1:A15)
- b. MEDIAN(A1+A2+A3)/3
- c. MODE (A1:A12)
- d. MEDIAN(A1:A10)

Ans: c

10. The median is the score of the middle case when the number of cases in the data set is which of the following?

- a. an odd number
- b. an even number
- c. more than 20
- d. less than 2

Ans: a

11. Which of the following requires you to multiply a set of scores by the frequency of their occurrence, add the total of these products, and divide by the total number of scores?

- a. arithmetic mean
- b. harmonic mean
- c. geometric mean
- d. weighted mean

Ans: d

12. Which of the following is like the fulcrum on a seesaw?

- a. mode
- b. median
- c. mean
- d. moving average

Ans: c

13. What is the term associated with scores that are at the extreme ends of the distribution?

- a. variability
- b. outliers
- c. skew
- d. percentile

Ans: b

14. What is the term for a distribution that is significantly distorted?

- a. variability
- b. outliers
- c. skew
- d. percentile

Ans: c

15. In the formula for computing the mean, what does the letter “X” represent?

- a. summation
- b. sample size
- c. mean value of the group
- d. individual scores

Ans: d

16. In the formula for computing the mean, what does the Greek letter “ Σ ” represent?

- a. summation
- b. sample size
- c. mean value of the group
- d. individual scores

Ans: a

17. In the formula for computing the mean, what does the letter “ n ” represent?

- a. summation
- b. sample size
- c. mean value of the group
- d. individual scores

Ans: b

18. In a ranked list of 25 scores, the median is the score of

- a. the 12th case
- b. the 13th case
- c. the average of the scores of the 12th and 13th cases
- d. the average of all of the scores

Ans: b

19. Which of the following is the correct formula for calculating the mean?

- a. $\Sigma X + n$
- b. $\Sigma X / X$
- c. $\Sigma X / n$
- d. $\Sigma X + X$

Ans: c

20. Who was the inventor of the correlation?

- a. Sigmund Freud
- b. Charles Darwin
- c. Francis Galton
- d. Jacob Cohen

Ans: c

Part II. Short-Answer Questions (10 items)

1. What are the measures of central tendency discussed in the textbook?

Ans: Mean, median, mode

2. What is the formula for calculating the mean?

Ans: $\bar{X} = \frac{\sum X}{n}$

3. When might you want to use the moving average tool?

Ans: A moving average might be used when you have a distribution that has outliers in order to obtain a more accurate representation.

4. What is the easiest and most commonly made mistake when computing the mode?

Ans: Selecting the number of times a category occurs, rather than the label of the category itself.

5. When the data are categorical in nature and values can fit into only one class, such as hair color or political affiliation, which of the measures of central tendency should be used?

Ans: When the data are categorical, use the mode.

6. Determine the mode of the following set of scores: 10, 15, 12, 18, 19, 16, 12

Ans: The mode is 12

7. Calculate the median of the following set of scores: 10, 15, 12, 18, 19, 16, 12

Ans: The median is 15

8. What is the mean of the following set of scores? 10, 15, 12, 18, 19, 16, 12

Ans: The mean is 14.57

9. Determine the median for the following data set: 11, 14, 18, 19, 20, 25

Ans: The median is 18.5

10. Calculate the median for the following data set: 5, 15, 10, 15, 5, 10, 10, 20, 25, 15

Ans: The median is 12.5