

CHAPTER 1
Statistics or Sadistics? It's Up to You

Part I. Multiple-Choice Questions (20 items)

1. What term is used to describe the science of organizing and analyzing information to make the information more easily understood?

- a. Analysis
- b. Data
- c. Interpretation
- d. Statistics

Ans: d

2. Which of the following individuals used statistics methods during the 17th century to study the intelligence of his family members?

- a. Charles Darwin
- b. Francis Galton
- c. Isaac Newton
- d. Alfred Binet

Ans: b

3. Which of the following would be used to describe the type of statistical methods used to organize and describe the characteristics of a collection of data?

- a. Inferential statistics
- b. Descriptive statistics
- c. Sampling methods
- d. Population methods

Ans: b

4. Which of the following would be used to describe the type of statistical methods used to make inferences about the population based on a sample?

- a. Inferential statistics
- b. Descriptive statistics
- c. Sampling methods
- d. Population methods

Ans: a

5. What is a mathematical operator used to perform a mathematical task called?

- a. function
- b. formula
- c. average
- d. range

Ans: b

6. Which of the following would be considered a formula?

- a. SUM(A1:A3)
- b. AVERAGE(A1:A9)
- c. SUM(3,4)
- d. 2+5

Ans: d

7. Which of the following is an example of an Excel formula for taking the number 6 to the power of 2?

- a. =6+2
- b. =6^2
- c. 6+2
- d. 6^2

Ans: b

8. What symbol is used for representing the mathematical operator “division” when using Excel?

- a. =
- b. *
- c. /
- d. –

Ans: c

9. What symbol is used for representing the mathematical operator “multiplication” when using Excel?

- a. =
- b. *
- c. /
- d. –

Ans: b

10. What symbol is used for representing the mathematical operator “subtraction” when using Excel?

- a. =
- b. *
- c. /
- d. –

Ans: d

11. In Excel, what is a collection of cells called?

- a. average
- b. sum
- c. range
- d. mean

Ans: c

12. Which of the following formulas subtracts the value of 3 from 6 and multiplies the outcome by 2?

- a. SUM(3,6)*2
- b. =6-3*2
- c. SUM(3,6,2)
- d. =(6-3)*2

Ans: d

13. Which of following formulas averages the values of 6, 5, 7, 4, and 10?

- a. AVERAGE(A4:A10)
- b. SUM(4,5,6,7,10)
- c. AVERAGE (10,4,5,6,7)
- d. 6+5+7+4/10

Ans: c

14. What was the first ever Excel-like computer application called?

- a. Visicalc
- b. Calcgraph
- c. Excel-graph
- d. Excelcalc

Ans: a

15. Most of the basic statistical procedures were first developed and used in agriculture and which of the following fields?

- a. biology
- b. botany
- c. astronomy
- d. geology

Ans: c

16. Every formula contains the name of the function and the function's what?

- a. operator
- b. argument
- c. average
- d. population

Ans: b

17. An argument in mathematical terms is which of the following?

- a. a disagreement
- b. a set of premises
- c. an operator
- d. an average

Ans: b

18. Which of the following formulas will add each of the scores together and divide the sum by 3?

- a. $x + y + z/3$
- b. $x + y + (z)/3$
- c. $(x + y + z)/3$
- d. $x + y + z:3$

Ans: c

19. You can see the formula behind the screens in a worksheet by entering what?

- a. Ctrl+'
- b. Ctrl+Alt
- c. Ctrl F10
- d. Ctrl Page Dn

Ans: a

20. Where will the results of the formula appear when you hit the Enter key?

- a. in the selected cell
- b. in the formula bar
- c. in the toolpak
- d. in the operator

Ans: a

Part II. Short-Answer Questions (10 items)

1. According to the text, statistical procedures were first developed in what field of study?

Ans: Statistical procedures were first developed in the fields of agriculture, astronomy, and politics.

2. What is a formula?

Ans: A formula is a set of mathematical operators that performs a specific mathematical task.

3. What is a function?

Ans: A function is a predefined formula.

4. When might a person use descriptive statistics?

Ans: Descriptive statistics are used to describe the characteristics of a data set.

5. When might a person use inferential statistics?

Ans: Inferential statistics are used when you want to make an inference about the population based on a sample.

6. What is a population?

Ans: A population is a complete data set of objects or participants such as all the undergraduate students in a particular University.

7. What is a sample?

Ans: A sample is a smaller subset of data taken from the larger population such as class of undergraduate students in the University.

8. How can a course in statistics make you a better student in the sciences?

Ans: Having some background in statistics makes you a better student in the sciences because you will have a better understanding not only of what you read in journals but also what your professors and colleagues may be discussing and doing in and out of class.

9. Explain the steps in creating a function that would add the data in a range of cells?

Ans: Enter the function in the cell where you want the results to appear, enter the range of cells on which you want the function to operate, and press the Enter key.

10. What function would you enter to find the average of the data in cells A1 through A10?

Ans: To find the average of the data in cells A1 through A10, enter the function
`=AVERAGE(A1:A10)`.