

Data Science Foundations

Data Science · Answer Key · 18 Questions

1. Which type of graph is specifically designed to show how parts of a whole compare to each other?

- A) Bar graph
- B) Line graph
- C) Pie chart**
- D) Histogram

2. What is the term for the value that appears most frequently in a set of data?

- A) Mean
- B) Median
- C) Mode**
- D) Range

3. In a data table, what is the vertical column of information usually called?

- A) Field**
- B) Record
- C) Entry
- D) Row

4. Which of these is a way to collect data by asking a specific question to a group of people?

- A) Simulation
- B) Survey**
- C) Observation
- D) Experiment

5. What is the difference between the highest and lowest values in a data set called?

- A) Average
- B) Total
- C) Range**
- D) Frequency

6. When we represent data using pictures or icons, what is this type of graph called?

- A) Pictograph**
- B) Scatter plot
- C) Stem-and-leaf plot
- D) Box plot

7. What do we call the middle value when a set of numbers is arranged from smallest to largest?

- A) Mean
- B) Median**
- C) Mode
- D) Sum

8. Which tool is most commonly used to record observations about the weather over several weeks?

- A) Frequency table
- B) Tally chart**
- C) Venn diagram
- D) Flowchart

9. What does a 'data point' represent?

- A) The entire data set
- B) A single piece of information**
- C) The title of a graph
- D) The range of the data

10. If a bar graph has bars that are not touching, what type of data does it likely represent?

- A) Continuous data
- B) Categorical data**
- C) Time-series data
- D) Ratio data

11. What is the name for the sum of all numbers in a set divided by the count of the numbers?

- A) Average (Mean)**
- B) Median
- C) Mode
- D) Standard deviation

12. In a Venn diagram, what does the overlapping section represent?

- A) Data that belongs to neither group
- B) Data that belongs to both groups**
- C) The total number of items
- D) Data that is missing

13. Which term describes data that is sorted into groups, such as colours or animal types?

- A) Numerical data
- B) Categorical data**
- C) Random data
- D) Continuous data

14. What is the primary purpose of a tally mark?

- A) To show the average
- B) To count occurrences quickly**
- C) To display percentages
- D) To calculate the range

15. When looking at a line graph, what does a steep upward slope represent?

- A) A decrease in value
- B) No change in value
- C) A rapid increase in value**
- D) A stable average

16. Which of these is considered a 'quantitative' piece of data?

- A) The colour of a shirt
- B) The height of a student**
- C) The name of a pet
- D) The weather type

17. What do we call the list of items or names down the side of a bar graph?

- A) Labels**
- B) Variables
- C) Units
- D) Scale

18. What is the first step in a data investigation?

- A) Drawing a graph
- B) Asking a question**
- C) Calculating the mean
- D) Collecting information