

1. What type of data visualisation is a histogram?
 - a. Scatter plot
 - b. Line chart
 - c. Bar chart
 - d. Frequency distribution
2. In a histogram, what is represented on the x-axis?
 - a. Categories
 - b. Frequency
 - c. Percentage
 - d. Range of values
3. What is the primary purpose of a histogram?
 - a. Showing proportions
 - b. Displaying trends over time
 - c. Representing categorical data
 - d. Presenting the distribution of numerical data
4. How is the number of bins determined in a histogram?
 - a. Subjective choice
 - b. Fixed formula
 - c. Data range
 - d. All of the above
5. In a bar chart, what is represented by the length of the bars?
 - a. Frequency
 - b. Percentage
 - c. Range
 - d. Standard deviation
6. Which type of data is best represented by a bar chart?
 - a. Numerical
 - b. Categorical
 - c. Time series
 - d. Geospatial
7. What is the main difference between a histogram and a bar chart?
 - a. The type of data they represent
 - b. The presence of gaps between bars
 - c. The orientation of the bars
 - d. The number of bars
8. What does each slice in a pie chart represent?
 - a. Frequency
 - b. Percentage
 - c. Range
 - d. Standard deviation

9. When is it appropriate to use a pie chart?
- a. Showing trends over time
 - b. Comparing individual data points
 - c. Representing parts of a whole
 - d. Displaying geospatial data
10. What type of data is commonly visualised using a heatmap?
- a. Categorical
 - b. Numerical
 - c. Time series
 - d. Geospatial
11. In a heatmap, what do the colours represent?
- a. Frequency
 - b. Intensity or value
 - c. Range
 - d. Standard deviation
12. What is a violin plot used for?
- a. Displaying distribution of numerical data
 - b. Comparing categorical data
 - c. Showing geospatial trends
 - d. Representing time series data
13. What does the width of the "violin" in a violin plot indicate?
- a. Range of values
 - b. Frequency
 - c. Density of data points
 - d. Skewness
14. In a skewed right distribution, where is the tail of the data located?
- a. Left side
 - b. Right side
 - c. Center
 - d. Both sides equally
15. What does a negative skewness value indicate?
- a. Skewed left
 - b. Skewed right
 - c. Symmetric distribution
 - d. No skewness
16. In a perfectly symmetrical distribution, what is the skewness value?
- a. 0
 - b. 1
 - c. -1
 - d. Cannot be determined

17. What type of data is best visualised using a dot plot?

- a. Numerical
- b. Categorical
- c. Time series
- d. Geospatial

18. How are individual data points represented in a dot plot?

- a. Bars
- b. Dots
- c. Lines
- d. Areas

19. What is the main purpose of a stem-and-leaf plot?

- a. Displaying distribution of numerical data
- b. Comparing categorical data
- c. Showing geospatial trends
- d. Representing time series data

20. In a stem-and-leaf plot, what does the stem represent?

- a. Individual data points
- b. Ranges of values
- c. Frequency
- d. Skewness

21. In a left-skewed distribution, where is the tail of the data located?

- a. Left side
- b. Right side
- c. Center
- d. Equally distributed on both sides

22. What does a positive skewness value indicate?

- a. Skewed left
- b. Skewed right
- c. Symmetric distribution
- d. No skewness

23. When is a pie chart considered misleading?

- a. When there are too many categories
- b. When the data is evenly distributed
- c. When it represents a small dataset
- d. When comparing individual data points

24. What is the primary purpose of a histogram?

- a. Displaying the distribution of numerical data
- b. Comparing individual data points
- c. Representing trends over time
- d. Comparing categories

25. In a right-skewed distribution, where is the majority of the data located?

- a. Left side
- b. Right side
- c. Center
- d. Equally distributed on both sides

26. What is the main drawback of using a pie chart?

- a. Limited to categorical data
- b. Difficult to interpret
- c. Cannot represent percentages
- d. Not suitable for small datasets

27. Which of the following is a characteristic of a left-skewed distribution?

- a. Median > Mean
- b. Median < Mean
- c. Median = Mean
- d. Median is not affected by skewness

28. In a histogram, what is typically shown on the y-axis?

- a. Categories
- b. Frequency
- c. Percentage
- d. Range of values

29. When is it appropriate to use a pie chart?

- a. Showing proportions
- b. Comparing individual data points
- c. Representing trends over time
- d. Displaying geospatial data

30. What type of data is best represented by a bar chart?

- a. Numerical
- b. Categorical
- c. Time series
- d. Geospatial