SHEET SOLUTION

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 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

22. What is the primary disadvantage of using a bar chart?

a. Difficulty in comparing individual data points

b. Limited to categorical data

c. Inability to show trends over time

d. Not suitable for large datasets

23. When should a histogram be preferred over a bar chart?

a. When comparing individual data points

b. When showing proportions

c. When representing parts of a whole

d. When displaying the distribution of numerical data

24. What type of data is typically suitable for a pie chart?

a. Numerical

b. Categorical

c. Time series

d. Geospatial

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

a. Left side

b. Right side

c. Center

d. Equally distributed on both sides

26. What does a negative skewness value indicate?

a. Skewed left

b. Skewed right

c. Symmetric distribution

d. No skewness

27. When is a bar chart more appropriate than a histogram?

a. When comparing individual data points

b. When showing proportions

c. When representing parts of a whole

d. When displaying the distribution of numerical data

28. What is the primary purpose of a pie chart?

a. Comparing individual data points

b. Showing proportions

c. Representing trends over time

d. Comparing categories

29. What is the key difference between a bar chart and a histogram?

a. The type of data they represent

b. The presence of gaps between bars

c. The orientation of the bars

d. The number of categories

30. 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

31. What does a positive skewness value indicate?

a. Skewed left

b. Skewed right

c. Symmetric distribution

d. No skewness

32. 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

33. 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

34. 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

35. 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

36. 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

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

a. Categories

b. Frequency

c. Percentage

d. Range of values

38. 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

39. What is the primary purpose of a histogram?

a. Comparing categories

b. Showing proportions

c. Representing parts of a whole

d. Displaying the distribution of numerical data

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

a. Numerical

b. Categorical

c. Time series

d. Geospatial