1. **What is the primary purpose of using histograms in graphical data analysis?**
   - **Answer: B. To display the frequency of observations within categories of equal width**
     - Histograms sort data into bins or categories of equal width to display the distribution of the data, particularly its central tendency, variability, and symmetry.
2. **Which plot is particularly useful for assessing the fit of sample data to a theoretical distribution?**
   - **Answer: D. Probability (Q-Q) Plot**
     - Q-Q (Quantile-Quantile) plots compare the quantiles of a sample dataset against the quantiles of a theoretical distribution, making them particularly useful for assessing how well the sample data fit the theoretical distribution.
3. **What does a boxplot primarily represent?**
   - **Answer: C. The median, interquartile range, and potential outliers in a dataset**
     - Boxplots summarize the distribution of a dataset by showing its central tendency (median), variability (interquartile range), and outliers.
4. **In the context of graphical data analysis, what advantage do quantile plots have over histograms?**
   - **Answer: C. Quantile plots display each data point, offering a more comprehensive view than boxplots.**
     - Unlike histograms, which categorize data into bins, quantile plots display the cumulative distribution of the data, showing each data point and providing a more detailed view of the distribution.
5. **Which of the following is NOT a correct application or characteristic of Q-Q plots based on the chapter summary?**
   - **Answer: B. Q-Q plots are used to evaluate the central tendency of a dataset.**
     - The primary use of Q-Q plots is to assess the distributional fit of a dataset to a theoretical distribution, not to evaluate its central tendency, which is more directly assessed with measures like the mean or median.