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1. What is the name of an important function not appearing in Excel and that represents the standard deviation as a percentage of the mean value?
  - **The coefficient of variation is the name of an important function not appearing in Excel that represents the standard deviation as a percentage of the mean value.**
2. In quantitative analytical methods, for what purpose is the coefficient of variation used?
  - **The coefficient of variation is used as a measure of precision in quality control.**
3. What is the formula for the coefficient of variation?
  - **The formula for the coefficient of variation is standard deviation/mean\*100%**
4. This is produced by drawing a line graph with the midpoint of data connected on both sides from that point.
  - **Drawing a line graph with the midpoint of data connected on both sides from that point produces a frequency polygon.**
5. This depicts the item just cited above but with a graphical display of bars (a bar chart) of different heights with numbers grouped into ranges.
  - **A histogram depicts data in a frequency polygon but with a graphical display of bars of different heights with numbers grouped into ranges.**
6. For a bell-shaped frequency polygon (bell-shaped curve), how do the values for the mean and median compare?
  - **The values for the mean and median are virtually identical for a bell-shaped frequency polygon.**
7. A positive skew of the distribution means that the distribution contains more what?
  - **A positive skew of the distribution means that the distribution contains more extremely large values than extremely small ones.**
8. Conversely, a negative skew of the distribution means that the distribution contains what?
  - **A negative skew of the distribution means that more extremely small values exist than do extremely large values.**
9. What is suggested about the data when the shape of the distribution appears as if two normal distributions have been combined together?

- **This suggests that there is a mixed population which might arise where a population contains two species.**
10. What is the usual rule for dividing data into intervals?
- **The usual rule for dividing data into intervals is that the more intervals that the data are to be divided into, the more well defined the curve becomes with more than 10 but not less than 5.**
11. To determine how many groups to divide your data into, what does the author recommend you doing based on the total number of observations conducted on your data?
- **To determine how many groups to divide data into, the number of observations should be counted and square rooted.**
12. Assuming you recognize the numerical depiction of the six classes for the data listed in table 4.5 at the bottom of page 90, what number is the lower class boundary for the third class? \_\_\_\_\_ What number is the upper class boundary for the fifth class?  
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13. If sample represented by the histogram in figure 4.6 (page 92) were larger, how could we increase the number of bars?
- **The number of bars by setting classes closer together could be increased if a sample represented by a histogram becomes larger.**
14. The starting point in determining if an association exists between two variables of interest is by the researcher visually examining what?
- **The starting point in determining if an association exists between two variables of interest is by the researcher visually examining the data in the form of a scatter graph.**
15. In demonstrating correlation of variables (x and y), the author on page 94 states that it is very easy to plot a scattergraph, determine a correlation between variables, etc by inserting what between data points?
- **After inserting a trendline between data points it is very easy to plot a scattergraph that determines a correlation between variables.**