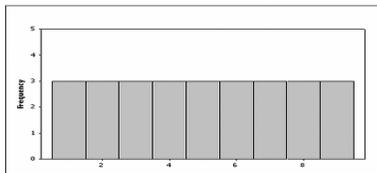# BA 235 – Business Statistics
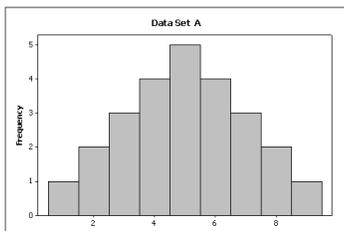## Graphical Techniques Worksheet

NAME: _____

1. The classification of student major (accounting, economics, management, marketing, other) is an example of a(n)
   a. Qualitative variable.
   b. Quantitative variable.
   c. Continuous random variable.
   d. None of these choices.

2. For what type of data are frequencies the **only** calculations that can be done?
   a. Quantitative data
   b. Qualitative data
   c. Ordinational data
   d. None of these choices.

3. Which of the following represents a graphical presentation of quantitative data?
   a. A bar chart.
   b. A histogram.
   c. A pie chart.
   d. All of these choices are true.

4. Which of the following statements about shapes of histograms is true?
   a. A histogram is said to be symmetric if, when we draw a vertical line down the center of the histogram, the two sides are identical in shape and size.
   b. A negatively skewed histogram is one with a long tail extending to the left.
   c. A positively skewed histogram is one with a long tail extending to the right.
   d. All of these choices are true.

5. Observations that are measured at successive points in time is what type of data?
   a. Time-series data
   b. Cross-sectional data
   c. Successive data
   d. None of these choices.

6. The relationship between two quantitative variables is graphically displayed by a
   a. Scatter diagram
   b. Histogram
   c. Bar chart
   d. Pie chart

7. How do you determine whether two quantitative variables have a positive linear relationship?
   a. Most of the points fall close to a straight line with positive slope.
   b. As the X variable increases, the Y variable increases in a linear way.
   c. The scatter diagram shows a linear pattern that is going uphill.
   d. All of these choices are true.

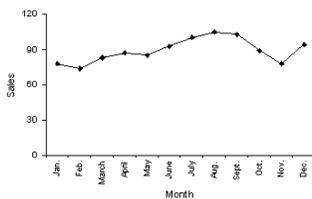8. Which of the following describes the shape of the histogram below?

    a. Positively skewed
    b. Negatively skewed
    c. Symmetric
    d. None of these choices

9. Which of the following describes the histogram below?

    a. The shape of the histogram symmetrical.
    b. The shape of histogram is bell-shaped.
    c. The histogram is unimodal.
    d. All of the above

10. What type of graph depicts the data below?

    a. A line chart
    b. A histogram
    c. A dot plot
    d. A bar chart

Car Buyers

11. Forty car buyers were asked to indicate which car dealer offered the best overall service. The four choices were Cute Motors (C), Modern Chrysler (M), Tiny Auto (T), and Uncomfortable Chevrolet (U). The following data were obtained:

```
T   C   C   C   U   C   M   T   C   U
U   M   C   M   T   C   M   M   C   M
T   C   C   T   U   M   M   C   C   T
T   U   C   U   T   M   M   C   U   T
```

a) Construct a frequency bar chart of this data.

b) Which car dealer came in last place in terms of overall service?

c) Construct a pie chart of this data.

12. If the data in a scatter diagram is scattered completely at random, what do you conclude?
    a. There is no linear relationship between X and Y.
    b. There is a strong linear relationship between X and Y.
    c. There is a strong linear relationship between X and Y that is described by a horizontal (flat) line.
    d. None of these choices.