## GRAPHICAL REPRESENTATION OF DATA

Choose the correct options:

1. What is the purpose of a summary table?

   (a) To see differences between or among categories.
   (b) To list data to create a bar or pie chart.
   (c) To sum the values of responses to a survey.
   (d) This is the only way to present categorical data in numerical form.

2. A graphical representation of a frequency distribution is called a_____ .

   (a) scatter diagram
   (b) stem-and-leaf plot
   (c) time-series plot
   (d) histogram

3. You have a summary table and a simple bar chart (like the ones at the beginning of the chapter) indicating where customers prefer to do their banking. How could you enhance the bar chart to provide both visual and actual information?

   (a) Use vertical lines on the bar chart to show the values more precisely.
   (b) The bar chart and summary table must be presented together in order to represent this data.
   (c) Only the summary table can show the actual values for the data.
   (d) Add values to the bar chart like what is commonly done on a pie chart.

4. A grouping of data into mutually exclusive classes showing the number of observations in each class is called:
   (a) Frequency polygon   (b) Relative frequency
   (c) Frequency distribution   (d) Cumulative frequency

5. The width of a class interval in a frequency distribution (or bar chart) will be approximately equal to the range of the data divided by the _____ .

   (a) number of class intervals
   (b) highest value in the data set
   (c) lowest value in the data set
   (d) average of the data set

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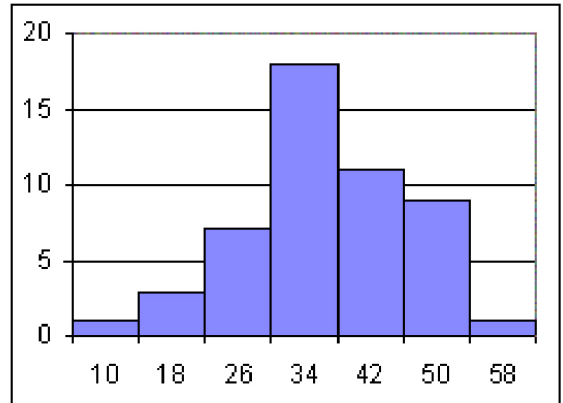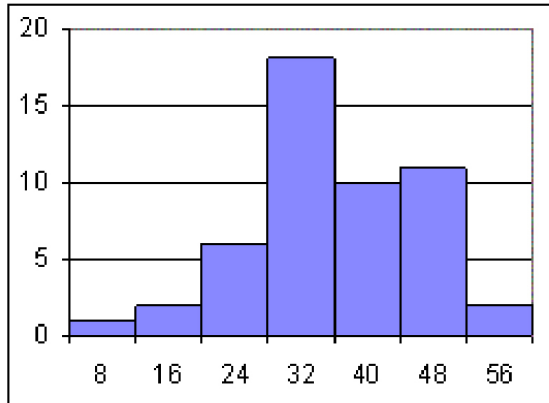
6.
Which of the above histograms represents the graph of city restaurant meal prices with an interval of $8?

(a) Both histograms
(b) Only the histogram on the right
(c) Neither histogram
(d) Only the histogram on the left

7. When constructing a frequency distribution, which of the following rules must be followed?

(a) The width of each class is equal to the lowest value in the data set.
(b) Adjacent classes cannot overlap.
(c) The midpoint of each class must be an integer.
(d) The number of classes must be an even number.
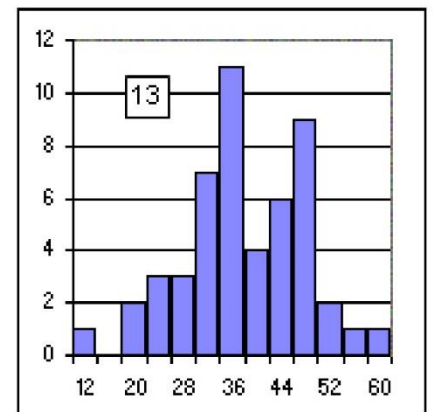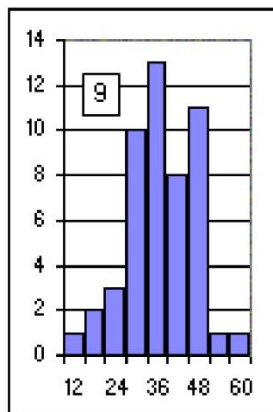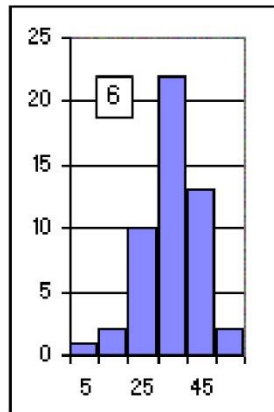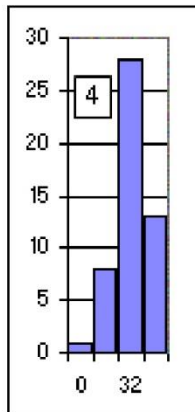
8. The rule of thumb for creating a frequency distribution is to divide the data into 5-15 classes. While larger numbers of classes allow for larger data sets, how do you know exactly how many classes to use?

   a. If in doubt about the number of classes, select 10 since it is the midpoint between 5 and 15 classes.
   b. Determine the width of the class interval, then calculate the number of classes.
   c. Any number of classes between 5 and 15 is sufficient.
   d. Select the number of classes that provides definition to the shape of the data.

9. The series

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Country	Pakistan	India	Britain	Egypt	Japan
Birth rate	45	40	10	35	10

is of the type:

(a) Discrete (b) Continuous (c) Individual (d) Time series

10. The number of tally sheet count for each value or a group is called:
    (a) Class limit (b) Class width (c) Class boundary (d) Frequency

11. Frequency of a variable is always in:
    (a) Fraction form (b) Percentage form (c) Less than form (d) Integer form

12. The cumulative frequency for a particular class is equal to 35. The cumulative frequency for the next class will be _____ .

    (a) 35 minus the next class frequency.
    (b) 35 plus the next class frequency.
    (c) less than 35.
    (d) equal to 65.

13. Which of the following would be most helpful in the construction of a pie chart?

    (a) frequency distribution
    (b) ogive
    (c) relative frequencies
    (d) cumulative percentages

Cost per Restaurant Meal ($)	City Frequency	City Relative Frequency
8 but less than $16	1	0.02
16 but less than $24	2	0.04
24 but less than $32	6	0.12
32 but less than $40	18	0.36
40 but less than $48	10	0.20
48 but less than $56	11	0.22
56 but less than $64	1	0.04

14. The table above shows the frequency and relative frequencies for 7 groups of restaurant meal prices. How was the value of 0.36 obtained for the relative frequency of meals costing $32 but less than $40?

    (a) The number of data points is 50, so divide 18 by 50.
    (b) The midpoint of the class is $36, so divide 36 by 100.
    (c) (18 x 2)/100 = 0.36.
    (d) (18/100) x 2 = 0.36.

15. The highest bar in a histogram represents?

(a) The class with the lowest frequency.
(b) The class with the highest frequency.
(c) The class with the lowest relative frequency.
(d) The class with the highest cumulative frequency.