**Discussion 2**

SCENARIO 2-1

An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. A representative from a local insurance agency selected a random sample of insured drivers and recorded, *X,* the number of claims each made in the last 3 years, with the following results.

***X f***

1 14

2 18

3 12

4 5

5 1

1. Referring to Scenario 2-1, how many drivers are represented in the sample?

a) 5

b) 15

c) 18

d) 50

1. Referring to Scenario 2-1, how many total claims are represented in the sample?

a) 15

b) 50

c) 111

d) 250

1. A type of vertical bar chart in which the categories are plotted in the descending rank order of the magnitude of their frequencies is called a

a) contingency table.

b) Pareto chart.

c) stem-and-leaf display.

d) pie chart.

SCENARIO 2-2

At a meeting of information systems officers for regional offices of a national company, a survey was taken to determine the number of employees the officers supervise in the operation of their departments, where *X* is the number of employees overseen by each information systems officer.

***X*** ***f***

1 7

2 5

3 11

4 8

5 9

1. Referring to Scenario 2-2, how many regional offices are represented in the survey results?

a) 5

b) 11

c) 15

d) 40

1. Referring to Scenario 2-2, across all of the regional offices, how many total employees were supervised by those surveyed?

a) 15

b) 40

c) 127

d) 200

1. The width of each bar in a histogram corresponds to the

a) differences between the boundaries of the class.

b) number of observations in each class.

c) midpoint of each class.

d) percentage of observations in each class.

1. A professor of economics at a small Texas university wanted to determine what year in school students were taking his tough economics course. Shown below is a pie chart of the results. What percentage of the class took the course prior to reaching their senior year?



a) 14%

b) 44%

c) 54%

d) 86%

1. When polygons or histograms are constructed, which axis must show the true zero or "origin"?

a) The horizontal axis.

b) The vertical axis.

c) Both the horizontal and vertical axes.

d) Neither the horizontal nor the vertical axis.

1. When constructing charts, the following is plotted at the class midpoints:

a) frequency histograms.

b) percentage polygons.

c) cumulative percentage polygon (ogives).

d) All of the above.

SCENARIO 2-4

A survey was conducted to determine how people rated the quality of programming available on television. Respondents were asked to rate the overall quality from 0 (no quality at all) to 100 (extremely good quality). The stem-and-leaf display of the data is shown below.

Stem Leaves

3 24

4 03478999

5 0112345

6 12566

7 01

8

9 2

1. Referring to Scenario 2-4, what percentage of the respondents rated overall television quality with a rating of 80 or above?

a) 0

b) 4

c) 96

d) 100

1. Referring to Scenario 2-4, what percentage of the respondents rated overall television quality with a rating of 50 or below?

a) 11

b) 40

c) 44

d) 56

1. Referring to Scenario 2-4, what percentage of the respondents rated overall television quality with a rating from 50 through 75?

a) 11

b) 40

c) 44

d) 56