

TEST BANK



SIXTH EDITION
BUSINESS STATISTICS
A FIRST COURSE



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CHAPTER 2: PRESENTING DATA IN TABLES AND CHARTS

TABLE 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.

<u>X</u>	<u>f</u>
1	14
2	18
3	12
4	5
5	1

1. Referring to Table 2-1, how many drivers are represented in the sample?
 - a) 5
 - b) 15
 - c) 18
 - d) 50

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: frequency distribution

2. Referring to Table 2-1, how many total claims are represented in the sample?
 - a) 15
 - b) 50
 - c) 111
 - d) 250

ANSWER:

c

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: interpretation, frequency distribution

3. 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
- contingency table.
 - Pareto diagram.
 - dot plot.
 - pie chart.

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: Pareto diagram

TABLE 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.

<u>X</u>	<u>f</u>
1	7
2	5
3	11
4	8
5	9

4. Referring to Table 2-2, how many regional offices are represented in the survey results?
- 5
 - 11
 - 15
 - 40

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: interpretation, frequency distribution

5. Referring to Table 2-2, across all of the regional offices, how many total employees were supervised by those surveyed?
- 15
 - 40
 - 127
 - 200

ANSWER:

c

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: interpretation, frequency distribution

6. The width of each bar in a histogram corresponds to the
- differences between the boundaries of the class.
 - number of observations in each class.
 - midpoint of each class.
 - percentage of observations in each class.

ANSWER:

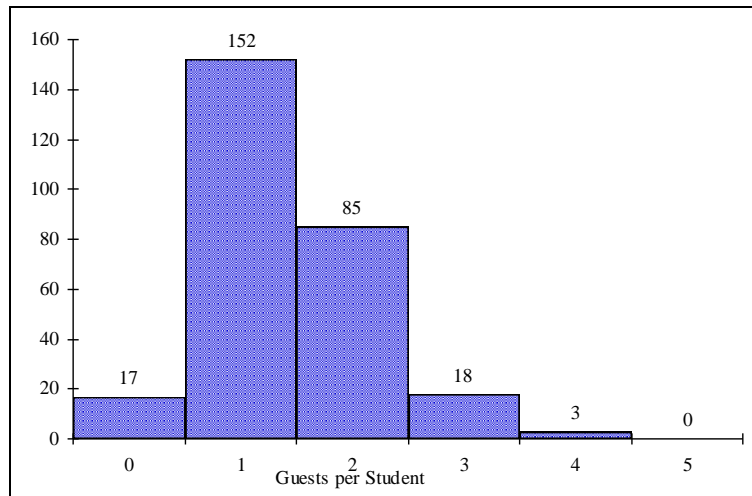
a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: frequency distribution

TABLE 2-3

Every spring semester, the School of Business coordinates with local business leaders a luncheon for graduating seniors, their families, and friends. Corporate sponsorship pays for the lunches of each of the seniors, but students have to purchase tickets to cover the cost of lunches served to guests they bring with them. The following histogram represents the attendance at the senior luncheon, where X is the number of guests each graduating senior invited to the luncheon and f is the number of graduating seniors in each category.



7. Referring to the histogram from Table 2-3, how many graduating seniors attended the luncheon?
- 4
 - 152
 - 275
 - 388

ANSWER:

c

TYPE: MC DIFFICULTY: Difficult

EXPLANATION: The number of graduating seniors is the sum of all the frequencies, f .

KEYWORDS: interpretation, histogram

8. Referring to the histogram from Table 2-3, if all the tickets purchased were used, how many guests attended the luncheon?
- 4
 - 152
 - 275
 - 388

ANSWER:

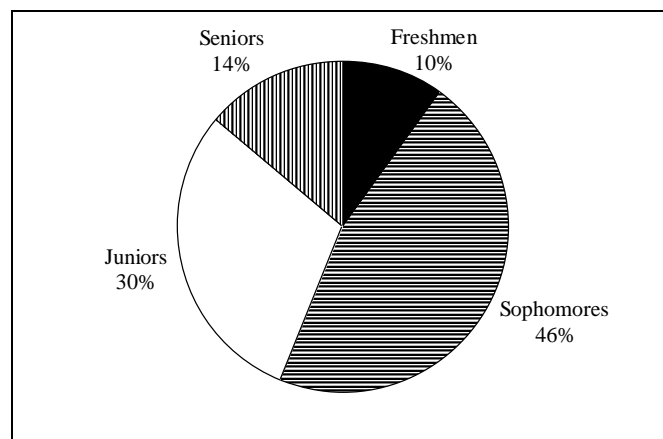
d

TYPE: MC DIFFICULTY: Difficult

EXPLANATION: The total number of guests is $\sum_{i=1}^6 X_i f_i$

KEYWORDS: interpretation, histogram

9. 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?



- 14%
- 44%
- 54%
- 86%

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: interpretation, pie chart

10. When polygons or histograms are constructed, which axis must show the true zero or "origin"?
- The horizontal axis.
 - The vertical axis.
 - Both the horizontal and vertical axes.
 - Neither the horizontal nor the vertical axis.

ANSWER:

b

TYPE: MC DIFFICULTY: Easy
KEYWORDS: polygon, histogram

11. When constructing charts, the following is plotted at the class midpoints:
- frequency histograms.
 - percentage polygons.
 - cumulative relative frequency ogives.
 - All of the above.

ANSWER:

b

TYPE: MC DIFFICULTY: Easy
KEYWORDS: percentage polygon

TABLE 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.

<u>Stem</u>	<u>Leaves</u>
3	24
4	03478999
5	0112345
6	12566
7	01
8	
9	2

12. Referring to Table 2-4, what percentage of the respondents rated overall television quality with a rating of 80 or above?
- 0
 - 4
 - 96
 - 100

ANSWER:

b

TYPE: MC DIFFICULTY: Easy
KEYWORDS: stem-and-leaf display, interpretation

13. Referring to Table 2-4, what percentage of the respondents rated overall television quality with a rating of 50 or below?
- 11
 - 40
 - 44
 - 56

ANSWER:

c

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

14. Referring to Table 2-4, what percentage of the respondents rated overall television quality with a rating between 50 and 75?

- a) 11
- b) 40
- c) 44
- d) 56

ANSWER:

d

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

TABLE 2-5

The following are the durations in minutes of a sample of long-distance phone calls made within the continental United States reported by one long-distance carrier.

<u>Time (in Minutes)</u>	<u>Relative Frequency</u>
0 but less than 5	0.37
5 but less than 10	0.22
10 but less than 15	0.15
15 but less than 20	0.10
20 but less than 25	0.07
25 but less than 30	0.07
30 or more	0.02

15. Referring to Table 2-5, what is the width of each class?

- a) 1 minute
- b) 5 minutes
- c) 2%
- d) 100%

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: class interval, relative frequency distribution

16. Referring to Table 2-5, if 1,000 calls were randomly sampled, how many calls lasted under 10 minutes?

- a) 220
- b) 370
- c) 410
- d) 590

ANSWER:

d

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, interpretation

17. Referring to Table 2-5, if 100 calls were randomly sampled, how many calls lasted 15 minutes or longer?
- a) 10
 - b) 14
 - c) 26
 - d) 74

ANSWER:

c

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, interpretation

18. Referring to Table 2-5, if 10 calls lasted 30 minutes or more, how many calls lasted less than 5 minutes?
- a) 10
 - b) 185
 - c) 295
 - d) 500

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, interpretation

19. Referring to Table 2-5, what is the cumulative relative frequency for the percentage of calls that lasted under 20 minutes?
- a) 0.10
 - b) 0.59
 - c) 0.76
 - d) 0.84

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: cumulative relative frequency

20. Referring to Table 2-5, what is the cumulative relative frequency for the percentage of calls that lasted 10 minutes or more?
- a) 0.16
 - b) 0.24
 - c) 0.41
 - d) 0.90

ANSWER:

c

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: cumulative relative frequency

21. Referring to Table 2-5, if 100 calls were randomly sampled, _____ of them would have lasted at least 15 minutes but less than 20 minutes
- a) 0.10
 - b) 0.16
 - c) 10
 - d) 16

ANSWER:

c

TYPE: MC DIFFICULTY: Easy

KEYWORDS: relative frequency distribution, interpretation

22. Referring to Table 2-5, if 100 calls were sampled, _____ of them would have lasted less than 15 minutes.
- a) 26
 - b) 74
 - c) 10
 - d) None of the above.

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, interpretation

23. Referring to Table 2-5, if 100 calls were sampled, _____ of them would have lasted 20 minutes or more.
- a) 26
 - b) 16
 - c) 74
 - d) None of the above.

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, interpretation

24. Referring to Table 2-5, if 100 calls were sampled, _____ of them would have lasted less than 5 minutes or at least 30 minutes or more.
- a) 35
 - b) 37
 - c) 39
 - d) None of the above.

ANSWER:

c

TYPE: MC DIFFICULTY: Difficult

KEYWORDS: relative frequency distribution, interpretation

25. When studying the simultaneous responses to two categorical questions, we should set up a
- a) contingency table.
 - b) frequency distribution table.
 - c) cumulative percentage distribution table.
 - d) histogram.

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table

26. Data on 1,500 students' height were collected at a larger university in the East Coast. Which of the following is the best chart for presenting the information?
- a) A pie chart.
 - b) A Pareto diagram.
 - c) A scatter plot.
 - d) A histogram.

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, histogram

27. Data on the number of part-time hours students at a public university worked in a week were collected. Which of the following is the best chart for presenting the information?
- a) A pie chart.
 - b) A Pareto diagram.
 - c) A percentage table.
 - d) A percentage polygon.

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, percentage polygon

28. Data on the number of credit hours of 20,000 students at a public university enrolled in a Spring semester were collected. Which of the following is the best for presenting the information?
- a) A pie chart.
 - b) A Pareto diagram.
 - c) A stem-and-leaf display.
 - d) A contingency table.

ANSWER:

c

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, stem-and-leaf

29. A survey of 150 executives were asked what they think is the most common mistake candidates make during job interviews. Six different mistakes were given. Which of the following is the best for presenting the information?
- a) A bar chart.
 - b) A histogram
 - c) A stem-and-leaf display.
 - d) A contingency table.

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, bar chart

30. You have collected information on the market share of 5 different search engines used by U.S. Internet users in May 2007. Which of the following is the best for presenting the information?
- a) A pie chart.
 - b) A histogram
 - c) A stem-and-leaf display.
 - d) A contingency table.

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, pie chart

31. You have collected information on the market share of 5 different search engines used by U.S. Internet users in May 2007. Which of the following is the best for presenting the information?
- a) A pie chart.
 - b) A histogram
 - c) A stem-and-leaf display.
 - d) A contingency table.

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, pie chart

32. You have collected information on the consumption by the 15 largest coffee-consuming nations. Which of the following is the best for presenting the share of the consumption?
- a) A pie chart.
 - b) A Pareto diagram
 - c) A scatter plot.
 - d) A contingency table.

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: choice of chart, Pareto diagram

NOTE: Even though a pie chart can also be used, the Pareto diagram is preferable for separating the “vital few” from the “trivial many”.

33. You have collected data on the approximate retail price (in \$) and the energy cost per year (in \$) of 15 refrigerators. Which of the following is the best for presenting the data?
- a) A pie chart.
 - b) A scatter diagram.
 - c) A Pareto diagram.
 - d) A contingency table.

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, scatter diagram

34. You have collected data on the number of U.S. households actively using online banking and/or online bill payment from 1995 to 2007. Which of the following is the best for presenting the data?
- a) A pie chart.
 - b) A stem-and-leaf display
 - c) A Pareto diagram.
 - d) A time-series plot.

ANSWER:

d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, time-series plot

35. You have collected data on the monthly seasonally adjusted civilian unemployment rate for the United States from 1998 to 2007. Which of the following is the best for presenting the data?
- a) A contingency table.
 - b) A stem-and-leaf display
 - c) A time-series plot.
 - d) A Pareto diagram.

ANSWER:

c

TYPE: MC DIFFICULTY: Easy

KEYWORDS: choice of chart, time-series plot

36. You have collected data on the responses to two questions asked in a survey of 40 college students majoring in business—What is your gender (Male = M; Female = F) and What is your major (Accountancy = A; Computer Information Systems = C; Marketing = M). Which of the following is the best for presenting the data?
- a) A contingency table.
 - b) A stem-and-leaf display
 - c) A time-series plot.
 - d) A Pareto diagram.

ANSWER:

a

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: choice of chart, contingency table

TABLE 2-6

A sample of 200 students at a Big-Ten university was taken after the midterm to ask them whether they went bar hopping the weekend before the midterm or spent the weekend studying, and whether they did well or poorly on the midterm. The following table contains the result.

	Did Well in Midterm	Did Poorly in Midterm
Studying for Exam	80	20
Went Bar Hopping	30	70

37. Referring to Table 2-6, of those who went bar hopping the weekend before the midterm in the sample, _____ percent of them did well on the midterm.

- a) 15
- b) 27.27
- c) 30
- d) 55

ANSWER:

c

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table, interpretation

38. Referring to Table 2-6, of those who did well on the midterm in the sample, _____ percent of them went bar hopping the weekend before the midterm.

- a) 15
- b) 27.27
- c) 30
- d) 50

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table, interpretation

39. Referring to Table 2-6, _____ percent of the students in the sample went bar hopping the weekend before the midterm and did well on the midterm.

- a) 15
- b) 27.27
- c) 30
- d) 50

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table, interpretation

40. Referring to Table 2-6, _____ percent of the students in the sample spent the weekend studying and did well on the midterm.
- a) 40
 - b) 50
 - c) 72.72
 - d) 80

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table, interpretation

41. Referring to Table 2-6, if the sample is a good representation of the population, we can expect _____ percent of the students in the population to spend the weekend studying and do poorly on the midterm.
- a) 10
 - b) 20
 - c) 45
 - d) 50

ANSWER:

a

TYPE: MC DIFFICULTY: Easy

KEYWORDS: contingency table, interpretation

42. Referring to Table 2-6, if the sample is a good representation of the population, we can expect _____ percent of those who spent the weekend studying to do poorly on the midterm.
- a) 10
 - b) 20
 - c) 45
 - d) 50

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: contingency table, interpretation

43. Referring to Table 2-6, if the sample is a good representation of the population, we can expect _____ percent of those who did poorly on the midterm to have spent the weekend studying.
- a) 10
 - b) 22.22
 - c) 45
 - d) 50

ANSWER:

b

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: contingency table, interpretation

44. In a contingency table, the number of rows and columns
- a) must always be the same.
 - b) must always be 2.
 - c) must add to 100%.
 - d) None of the above.

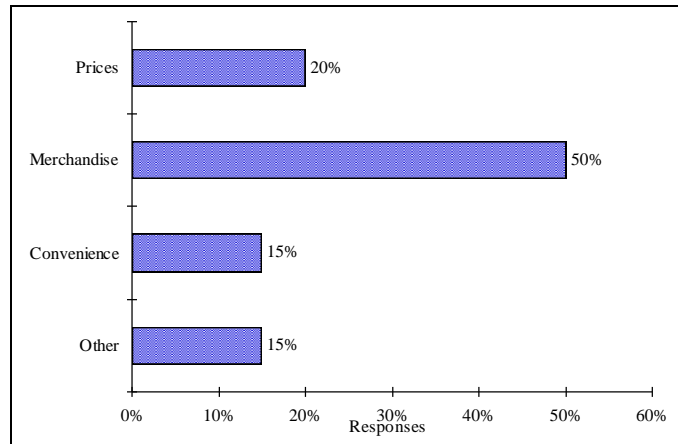
ANSWER:

d

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: contingency table

45. Retailers are always interested in determining why a customer selected their store to make a purchase. A sporting goods retailer conducted a customer survey to determine why its customers shopped at the store. The results are shown in the bar chart below. What proportion of the customers responded that they shopped at the store because of the merchandise or the convenience?



- a) 35%
- b) 50%
- c) 65%
- d) 85%

ANSWER:

c

TYPE: MC DIFFICULTY: Easy

KEYWORDS: bar chart, interpretation

TABLE 2-7

The Stem-and-Leaf display below contains data on the number of months between the date a civil suit is filed and when the case is actually adjudicated for 50 cases heard in superior court.

<u>Stem</u>	<u>Leaves</u>
1 L	2 3 4 4 4
1 H	7 8 9 9
2 L	2 2 2 2 3 4
2 H	5 5 6 7 8 8 8 9
3 L	0 0 1 1 1 3
3 H	5 7 7 8
4 L	0 2 3 4
4 H	5 5 7 9
5 L	1 1 2 4
5 H	6 6
6 L	1 5
6 H	8

Note: 1L means the “low teens” – 10, 11, 12, 13, or 14; 1H means the “high teens” – 15, 16, 17, 18, or 19; 2L means the “low twenties” – 20, 21, 22, 23, or 24, etc.

46. Referring to Table 2-7, locate the first leaf, i.e., the lowest valued leaf with the lowest valued stem. This represents a wait of _____ months.

ANSWER:

12

TYPE: FI DIFFICULTY: 1 Easy

KEYWORDS: stem-and-leaf display, interpretation

47. Referring to Table 2-7, the civil suit with the longest wait between when the suit was filed and when it was adjudicated had a wait of _____ months.

ANSWER:

68

TYPE: FI DIFFICULTY: Easy

KEYWORDS: stem-and-leaf display, interpretation

48. Referring to Table 2-7, the civil suit with the fourth shortest waiting time between when the suit was filed and when it was adjudicated had a wait of _____ months.

ANSWER:

14

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

49. Referring to Table 2-7, _____ percent of the cases were adjudicated within the first 2 years.

ANSWER:

30

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

50. Referring to Table 2-7, _____ percent of the cases were not adjudicated within the first 4 years.

ANSWER:

20

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

51. Referring to Table 2-7, if a frequency distribution with equal sized classes was made from this data, and the first class was "10 but less than 20," the frequency of that class would be _____.

ANSWER:

9

TYPE: FI DIFFICULTY: Easy

KEYWORDS: stem-and-leaf display, interpretation

52. Referring to Table 2-7, if a frequency distribution with equal sized classes was made from this data, and the first class was "10 but less than 20," the relative frequency of the third class would be _____.

ANSWER:

0.20 or 20% or 10/50

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, relative frequency distribution

53. Referring to Table 2-7, if a frequency distribution with equal sized classes was made from this data, and the first class was "10 but less than 20," the cumulative percentage of the second class would be _____.

ANSWER:

46% or 0.46 or 23/50

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, cumulative percentage distribution

TABLE 2-8

The Stem-and-Leaf display represents the number of times in a year that a random sample of 100 "lifetime" members of a health club actually visited the facility.

Stem	Leaves
0	012222233333344566666667789999
1	11112222344444455669999
2	00011223455556889
3	0000446799
4	011345567
5	0077
6	8
7	67
8	3
9	0247

54. Referring to Table 2-8, the person who has the largest leaf associated with the smallest stem visited the facility _____ times.

ANSWER:

9

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

55. Referring to Table 2-8, the person who visited the health club less than anyone else in the sample visited the facility _____ times.

ANSWER:

0 or no

TYPE: FI DIFFICULTY: Easy

KEYWORDS: stem-and-leaf display, interpretation

56. Referring to Table 2-8, the person who visited the health club more than anyone else in the sample visited the facility _____ times.

ANSWER:

97

TYPE: FI DIFFICULTY: Easy

KEYWORDS: stem-and-leaf display, interpretation

57. Referring to Table 2-8, _____ of the 100 members visited the health club at least 52 times in a year.

ANSWER:

10

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

58. Referring to Table 2-8, _____ of the 100 members visited the health club no more than 12 times in a year.

ANSWER:

38

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, interpretation

59. Referring to Table 2-8, if a frequency distribution with equal sized classes was made from this data, and the first class was "0 but less than 10," the frequency of the fifth class would be _____.

ANSWER:

9

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, frequency distribution

60. Referring to Table 2-8, if a frequency distribution with equal sized classes was made from this data, and the first class was "0 but less than 10," the relative frequency of the last class would be _____.

ANSWER:

4% or 0.04 or 4/100

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, relative frequency distribution

61. Referring to Table 2-8, if a frequency distribution with equal sized classes was made from this data, and the first class was "0 but less than 10," the cumulative percentage of the next-to-last class would be _____.

ANSWER:

96% or 0.96 or 96/100

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, cumulative percentage distribution

62. Referring to Table 2-8, if a frequency distribution with equal sized classes was made from this data, and the first class was "0 but less than 10," the class midpoint of the third class would be _____.

ANSWER:

25 or $(20+30)/2$

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: stem-and-leaf display, class midpoint

TABLE 2-9

The frequency distribution below represents the rents of 250 randomly selected federally subsidized apartments in Minneapolis.

<u>Rent in \$</u>	<u>Frequency</u>
300 but less than 400	113
400 but less than 500	85
500 but less than 600	32
600 but less than 700	16
700 but less than 800	4

63. Referring to Table 2-9, _____ apartments rented for at least \$400 but less than \$600.

ANSWER:

117

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution

64. Referring to Table 2-9, _____ percent of the apartments rented for no less than \$600.

ANSWER:

8% or 20/250

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution, cumulative percentage distribution

65. Referring to Table 2-9, _____ percent of the apartments rented for at least \$500.

ANSWER:

20.8% or 52/250

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: frequency distribution, cumulative percentage distribution

66. Referring to Table 2-9, the class midpoint of the second class is _____.

ANSWER:

450

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution, class midpoint

67. Referring to Table 2-9, the relative frequency of the second class is _____.

ANSWER:

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85/250 or 17/50 or 34% or 0.34

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution, relative frequency distribution

68. Referring to Table 2-9, the percentage of apartments renting for less than \$600 is _____.

ANSWER:

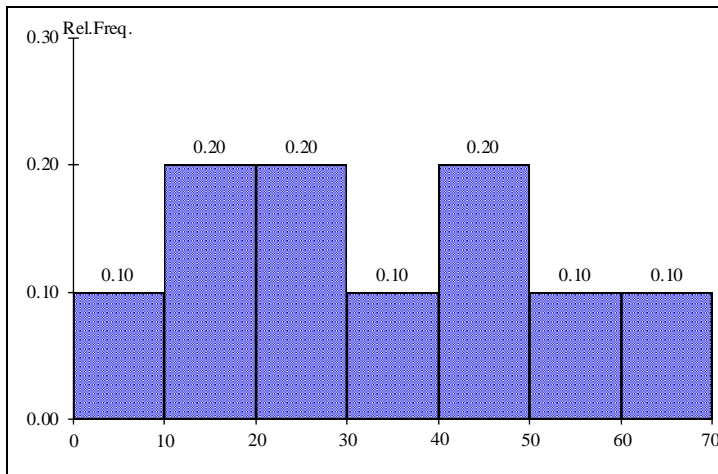
230/250 or 23/25 or 92% or 0.92

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: frequency distribution, cumulative percentage distribution

TABLE 2-10

The histogram below represents scores achieved by 200 job applicants on a personality profile.



69. Referring to the histogram from Table 2-10, _____ percent of the job applicants scored between 10 and 20.

ANSWER:

20%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: histogram, percentage distribution

70. Referring to the histogram from Table 2-10, _____ percent of the job applicants scored below 50.

ANSWER:

80%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram, percentage distribution

71. Referring to the histogram from Table 2-10, the number of job applicants who scored between 30 and below 60 is _____.

ANSWER:

80

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram

72. Referring to the histogram from Table 2-10, the number of job applicants who scored 50 or above is _____.

ANSWER:

40

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram

73. Referring to the histogram from Table 2-10, 90% of the job applicants scored above or equal to _____.

ANSWER:

10

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram, cumulative percentage distribution

74. Referring to the histogram from Table 2-10, half of the job applicants scored below _____.

ANSWER:

30

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram, cumulative percentage distribution

75. Referring to the histogram from Table 2-10, _____ percent of the applicants scored below 20 or at least 50.

ANSWER:

50%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram, cumulative percentage distribution

76. Referring to the histogram from Table 2-10, _____ percent of the applicants scored between 20 and below 50.

ANSWER:

50%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: histogram, cumulative percentage distribution

TABLE 2-11

The ordered array below resulted from taking a sample of 25 batches of 500 computer chips and determining how many in each batch were defective.

Defects

1 2 4 4 5 5 6 7 9 9 12 12 15
17 20 21 23 23 25 26 27 27 28 29 29

77. Referring to Table 2-11, if a frequency distribution for the defects data is constructed, using "0 but less than 5" as the first class, the frequency of the "20 but less than 25" class would be _____.

ANSWER:

4

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution

78. Referring to Table 2-11, if a frequency distribution for the defects data is constructed, using "0 but less than 5" as the first class, the relative frequency of the "15 but less than 20" class would be _____.

ANSWER:

0.08 or 8% or 2/25

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution

79. Referring to Table 2-11, construct a frequency distribution for the defects data, using "0 but less than 5" as the first class.

ANSWER:

Defects	Frequency
0 but less than 5	4
5 but less than 10	6
10 but less than 15	2
15 but less than 20	2
20 but less than 25	4
25 but less than 30	7

TYPE: PR DIFFICULTY: Easy

KEYWORDS: frequency distribution

80. Referring to Table 2-11, construct a relative frequency or percentage distribution for the defects data, using "0 but less than 5" as the first class.

ANSWER:

Defects	Percentage
0 but less than 5	16
5 but less than 10	24
10 but less than 15	8
15 but less than 20	8
20 but less than 25	16
25 but less than 30	28

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, percentage distribution

81. Referring to Table 2-11, construct a cumulative percentage distribution for the defects data if the corresponding frequency distribution uses "0 but less than 5" as the first class.

ANSWER:

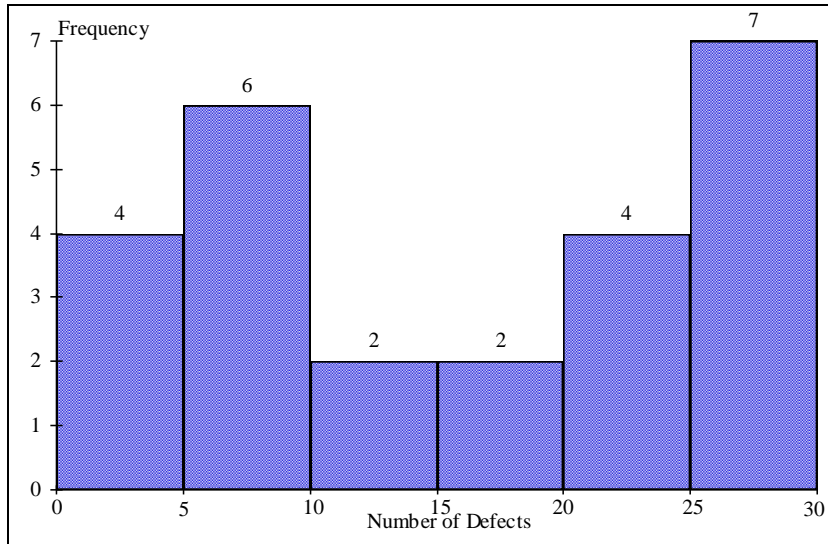
Defects	CumPct
0	0
5	16
10	40
15	48
20	56
25	72
30	100

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: cumulative percentage distribution

82. Referring to Table 2-11, construct a histogram for the defects data, using "0 but less than 5" as the first class.

ANSWER:



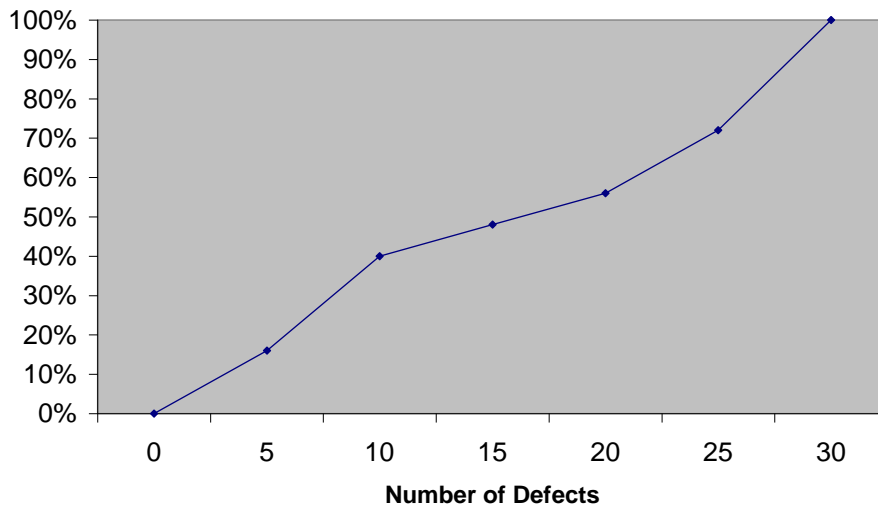
TYPE: PR DIFFICULTY: Easy

KEYWORDS: histogram, frequency distribution

83. Referring to Table 2-11, construct a cumulative percentage polygon for the defects data if the corresponding frequency distribution uses "0 but less than 5" as the first class.

ANSWER:

Cumulative Percentage Polygon



TYPE: PR DIFFICULTY: Moderate

KEYWORDS: cumulative percentage polygon

84. The point halfway between the boundaries of each class interval in a grouped frequency distribution is called the _____.

ANSWER:

class midpoint

TYPE: FI DIFFICULTY: Easy

KEYWORDS: cumulative percentage polygon, frequency distribution

85. A _____ is a vertical bar chart in which the rectangular bars are constructed at the boundaries of each class interval.

ANSWER:

histogram

TYPE: FI DIFFICULTY: Easy

KEYWORDS: histogram

86. It is essential that each class grouping or interval in a frequency distribution be _____.

ANSWER:

non-overlapping and of equal width

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: frequency distribution, class interval

87. In order to compare one large batch of numerical data to another, a _____ distribution must be developed from the frequency distribution.

ANSWER:

relative frequency or percentage

TYPE: FI DIFFICULTY: Easy

KEYWORDS: relative frequency distribution, percentage distribution

88. When comparing two or more large batches of numerical data, the distributions being developed should use the same _____.

ANSWER:

class boundaries.

TYPE: FI DIFFICULTY: Easy

KEYWORDS: class boundaries

89. The width of each class grouping or interval in a frequency distribution should be _____.

ANSWER:

the same or equal

TYPE: FI DIFFICULTY: Easy

KEYWORDS: class interval, frequency distribution

90. In constructing a polygon, each class grouping is represented by its _____ and then these are consecutively connected to one another.

ANSWER:

midpoint

TYPE: FI DIFFICULTY: Easy

KEYWORDS: polygon, class interval, midpoint

91. A _____ is a summary table in which numerical data are tallied into class intervals or categories.

ANSWER:

frequency distribution

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution, class interval

92. True or False: In general, grouped frequency distributions should have between 5 and 15 class intervals.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: frequency distribution, number of classes

93. True or False: The sum of relative frequencies in a distribution always equals 1.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: relative frequency

94. True or False: The sum of cumulative frequencies in a distribution always equals 1.

ANSWER:

False

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: cumulative frequency distribution

95. True or False: When constructing a frequency distribution, classes should be selected in such a way that they are of equal width.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: frequency distribution

96. True or False: A research analyst was directed to arrange raw data collected on the yield of wheat, ranging from 40 to 93 bushels per acre, in a frequency distribution. He should choose 30 as the class interval width.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: frequency distribution, class interval

97. True or False: If the values of the seventh and eighth class in a cumulative frequency distribution are the same, we know that there are no observations in the eighth class.

ANSWER:

True

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: cumulative frequency distribution

98. True or False: Research on Human perception concludes that the bar chart is preferred to the pie chart, because the human eye can more accurately judge length comparisons against a fixed scale (as in a bar chart) than angular measures (as in a pie chart).

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: bar chart, pie chart

99. True or False: One of the advantages of a pie chart is that it clearly shows that the total of all the categories of the pie adds to 100%.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: pie chart

100. True or False: The larger the number of observations in a numerical data set, the larger the number of class intervals needed for a grouped frequency distribution.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: class interval, frequency distribution

101. True or False: Determining the class boundaries of a frequency distribution is highly subjective.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: class boundaries, frequency distribution

102. True or False: The original data values cannot be assessed once they are grouped into a frequency distribution table.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: frequency distribution

103. True or False: The percentage distribution cannot be constructed from the frequency distribution directly.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: percentage distribution, frequency distribution

104. True or False: The stem-and-leaf display is often superior to the frequency distribution in that it maintains the original values for further analysis.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: stem-and-leaf display, frequency distribution

105. True or False: The relative frequency is the frequency in each class divided by the total number of observations.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: relative frequency distribution

106. True or False: Ogives are plotted at the midpoints of the class groupings.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: ogives, midpoint

107. True or False: Percentage polygons are plotted at the boundaries of the class groupings.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: percentage polygons

108. True or False: The main principle behind the Pareto diagram is the ability to track the "vital few" from the "trivial many."

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: Pareto diagram

109. True or False: A histogram can have gaps between the bars, whereas bar charts cannot have gaps.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: histogram, bar chart

110. True or False: Histograms are used for numerical data while bar charts are suitable for categorical data.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: histogram, bar chart

111. True or False: A Wal-Mart store in a small town monitors customer complaints and organizes these complaints into six distinct categories. Over the past year, the company has received 534 complaints. One possible graphical method for representing these data would be a Pareto chart.

ANSWER:

True

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: Pareto diagram

112. True or False: Apple Computer, Inc. collected information on the age of their customers. The youngest customer was 12 and the oldest was 72. To study the distribution of the age among its customers, it can use a Pareto diagram.

ANSWER:

False

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: Pareto diagram

113. True or False: Apple Computer, Inc. collected information on the age of their customers. The youngest customer was 12 and the oldest was 72. To study the distribution of the age among its customers, it is best to use a pie chart.

ANSWER:

False

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: pie chart

114. True or False: Apple Computer, Inc. collected information on the age of their customers. The youngest customer was 12 and the oldest was 72. To study the distribution of the age among its customers, it can use a percentage polygon.

ANSWER:

True

TYPE: TF DIFFICULTY: Moderate
KEYWORDS: percentage polygon

115. True or False: Apple Computer, Inc. collected information on the age of their customers. The youngest customer was 12 and the oldest was 72. To study the percentage of their customers who are below a certain age, it can use an ogive.

ANSWER:

True

TYPE: TF DIFFICULTY: Moderate
KEYWORDS: ogive

116. True or False: If you wish to construct a graph of a relative frequency distribution, you would most likely construct an ogive first.

ANSWER:

False

TYPE: TF DIFFICULTY: Moderate
KEYWORDS: Ogive

117. True or False: An ogive is a cumulative percentage polygon.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy
KEYWORDS: Ogive, cumulative percentage polygon

118. True or False: A good choice for the number of class groups to use in constructing frequency distribution is to have at least 5 but no more than 15 class groups.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy
KEYWORDS: number of classes

119. True or False: In general, a frequency distribution should have at least 8 class groups but no more than 20.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy
KEYWORDS: number of classes

120. True of False: To determine the width of class interval, divide the number of class groups by the range of the data.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy
KEYWORDS: class interval

121. True or False: The percentage polygon is formed by having the lower boundary of each class represent the data in that class and then connecting the sequence of lower boundaries at their respective class percentages.

ANSWER:

False

TYPE: TF DIFFICULTY: Easy

KEYWORDS: percentage polygon

122. True or False: A polygon can be constructed from a bar chart.

ANSWER:

False

TYPE: TF DIFFICULTY: Moderate

KEYWORDS: polygon

123. To evaluate two categorical variables at the same time, a _____ could be developed.

ANSWER:

contingency or cross-classification table

TYPE: FI DIFFICULTY: Easy

KEYWORDS: contingency table, cross-classification table

124. Relationships in a contingency table can be examined more fully if the frequencies are converted into _____ .

ANSWER:

percentages or proportions

TYPE: FI DIFFICULTY: Easy

KEYWORDS: contingency table

TABLE 2-12

The table below contains the opinions of a sample of 200 people broken down by gender about the latest congressional plan to eliminate anti-trust exemptions for professional baseball.

	<u>For</u>	<u>Neutral</u>	<u>Against</u>	<u>Totals</u>
Female	38	54	12	104
Male	12	36	48	96
Totals	50	90	60	200

125. Referring to Table 2-12, construct a table of row percentages.

ANSWER:

	<u>For</u>	<u>Neutral</u>	<u>Against</u>	<u>Totals</u>
Female	36.54	51.92	11.54	100.00

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Male	<u>12.50</u>	<u>37.50</u>	<u>50.00</u>	<u>100.00</u>
Totals	25.00	45.00	30.00	100.00

TYPE: PR DIFFICULTY: Easy

KEYWORDS: row percentages

126. Referring to Table 2-12, construct a table of column percentages.

ANSWER:

	<u>For</u>	<u>Neutral</u>	<u>Against</u>	<u>Totals</u>
Female	76.00	60.00	20.00	52.00
Male	<u>24.00</u>	<u>40.00</u>	<u>80.00</u>	<u>48.00</u>
Totals	100.00	100.00	100.00	100.00

TYPE: PR DIFFICULTY: Easy

KEYWORDS: column percentages

127. Referring to Table 2-12, construct a table of total percentages.

ANSWER:

	<u>For</u>	<u>Neutral</u>	<u>Against</u>	<u>Totals</u>
Female	19.00	27.00	6.00	52.00
Male	<u>6.00</u>	<u>18.00</u>	<u>24.00</u>	<u>48.00</u>
Totals	25.00	45.00	30.00	100.00

TYPE: PR DIFFICULTY: Easy

KEYWORDS: total percentages

128. Referring to Table 2-12, of those for the plan in the sample, _____ percent were females.

ANSWER:

76%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

129. Referring to Table 2-12, of those neutral in the sample, _____ percent were males.

ANSWER:

40%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

130. Referring to Table 2-12, of the males in the sample, _____ percent were for the plan.

ANSWER:

12.50%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

131. Referring to Table 2-12, of the females in the sample, _____ percent were against the plan.

ANSWER:

11.54%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

132. Referring to Table 2-12, of the females in the sample, _____ percent were either neutral or against the plan.

ANSWER:

63.46% or (51.92+11.54)%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

133. Referring to Table 2-12, _____ percent of the 200 were females who were against the plan.

ANSWER:

6%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

134. Referring to Table 2-12, _____ percent of the 200 were males who were neutral.

ANSWER:

18%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

135. Referring to Table 2-12, _____ percent of the 200 were females who were either neutral or against the plan.

ANSWER:

33%

TYPE: FI DIFFICULTY: Difficult

KEYWORDS: contingency table

136. Referring to Table 2-12, _____ percent of the 200 were males who were not against the plan.

ANSWER:

24%

TYPE: FI DIFFICULTY: Difficult

KEYWORDS: contingency table

137. Referring to Table 2-12, _____ percent of the 200 were not neutral.

ANSWER:

55%

TYPE: FI DIFFICULTY: Difficult

KEYWORDS: contingency table, row percentages

138. Referring to Table 2-12, _____ percent of the 200 were against the plan.

ANSWER:

30%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, row percentages

139. Referring to Table 2-12, _____ percent of the 200 were males.

ANSWER:

48%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: contingency table, column percentages

140. Referring to Table 2-12, if the sample is a good representation of the population, we can expect _____ percent of the population will be for the plant.

ANSWER:

25%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, row percentages

141. Referring to Table 2-12, if the sample is a good representation of the population, we can expect _____ percent of the population will be males.

ANSWER:

48%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

142. Referring to Table 2-12, if the sample is a good representation of the population, we can expect _____ percent of those for the plan in the population will be males.

ANSWER:

24%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

143. Referring to Table 2-12, if the sample is a good representation of the population, we can expect _____ percent of the males in the population will be against the plan.

ANSWER:

50%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

144. Referring to Table 2-12, if the sample is a good representation of the population, we can expect _____ percent of the females in the population will not be against the plan.

ANSWER:

88.46% or (36.54+51.92)

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table

TABLE 2-13

Given below is the stem-and-leaf display representing the amount of detergent used in gallons (with leaves in 10ths of gallons) in a month by 25 drive-through car wash operations in Phoenix.

```

9 | 147
10 | 02238
11 | 135566777
12 | 223489
13 | 02

```

145. Referring to Table 2-13, if a frequency distribution for the amount of detergent used is constructed, using "9.0 but less than 10.0 gallons" as the first class, the frequency of the "11.0 but less than 12.0 gallons" class would be _____.

ANSWER:

9

TYPE: FI DIFFICULTY: Easy

KEYWORDS: frequency distribution

146. Referring to Table 2-13, if a percentage histogram for the detergent data is constructed, using "9.0 but less than 10.0 gallons" as the first class, the percentage of drive-through car wash operations that use "12.0 but less than 13.0 gallons" of detergent would be _____.

ANSWER:

24%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, percentage distribution

147. Referring to Table 2-13, if a percentage histogram for the detergent data is constructed, using "9.0 but less than 10.0 gallons" as the first class, what percentage of drive-through car wash operations use less than 12 gallons of detergent in a month?

ANSWER:

68%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: percentage distribution, cumulative relative frequency

148. Referring to Table 2-13, if a relative frequency or percentage distribution for the detergent data is constructed, using "9.0 but less than 10.0 gallons" as the first class, what percentage of drive-through car wash operations use at least 10 gallons of detergent in a month?

ANSWER:

88%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: relative frequency distribution, percentage distribution

149. Referring to Table 2-13, if a relative frequency or percentage distribution for the detergent data is constructed, using "9.0 but less than 10.0 gallons" as the first class, what percentage of drive-through car wash operations use at least 10 gallons but less than 13 gallons of detergent in a month?

ANSWER:

80%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: relative frequency distribution, percentage distribution

150. Referring to Table 2-13, construct a frequency distribution for the detergent data, using "9.0 but less than 10.0 gallons" as the first class.

ANSWER:

Purchases (gals)	Frequency
9.0 but less than 10.0	3
10.0 but less than 11.0	5
11.0 but less than 12.0	9
12.0 but less than 13.0	6
13.0 but less than 14.0	2

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: frequency distribution

151. Referring to Table 2-13, construct a relative frequency or percentage distribution for the detergent data, using "9.0 but less than 10.0" as the first class.

ANSWER:

Gasoline

Purchases (gals)	Percentage
9.0 but less than 10.0	12%
10.0 but less than 11.0	20
11.0 but less than 12.0	36
12.0 but less than 13.0	24
13.0 but less than 14.0	8

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: relative frequency distribution, percentage distribution

152. Referring to Table 2-13, construct a cumulative percentage distribution for the detergent data if the corresponding frequency distribution uses "9.0 but less than 10.0" as the first class.

ANSWER:

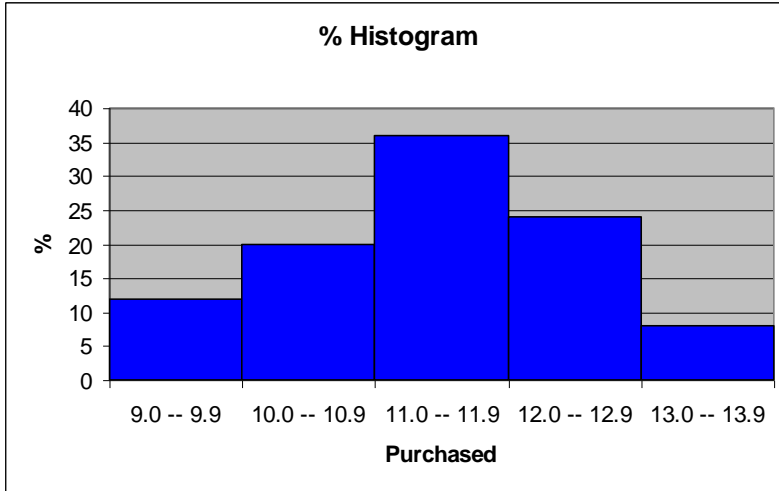
Gasoline Purchases (gals)	Frequency Less Than	Percentage Less Than
9.0 but less than 10.0	3	12
10.0 but less than 11.0	8	32
11.0 but less than 12.0	17	68
12.0 but less than 13.0	23	92
13.0 but less than 14.0	25	100

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: cumulative percentage distribution

153. Referring to Table 2-13, construct a percentage histogram for the detergent data, using "9.0 but less than 10.0" as the first class.

ANSWER:

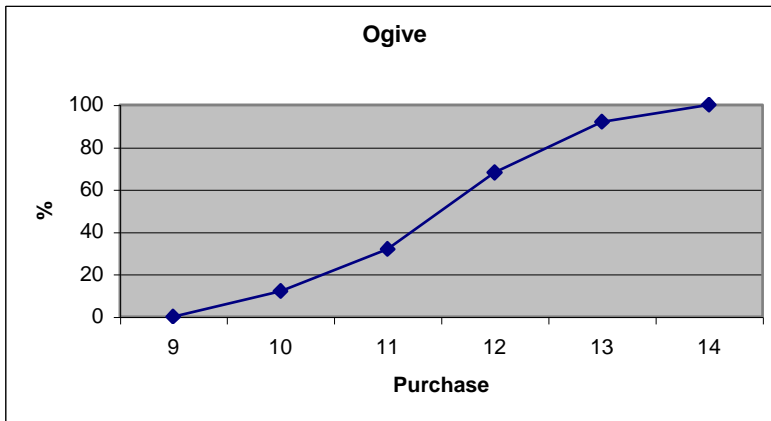


TYPE: PR DIFFICULTY: Moderate

KEYWORDS: histogram, frequency distribution

154. Referring to Table 2-13, construct a cumulative percentage polygon for the detergent data if the corresponding frequency distribution uses "9.0 but less than 10.0" as the first class.

ANSWER:

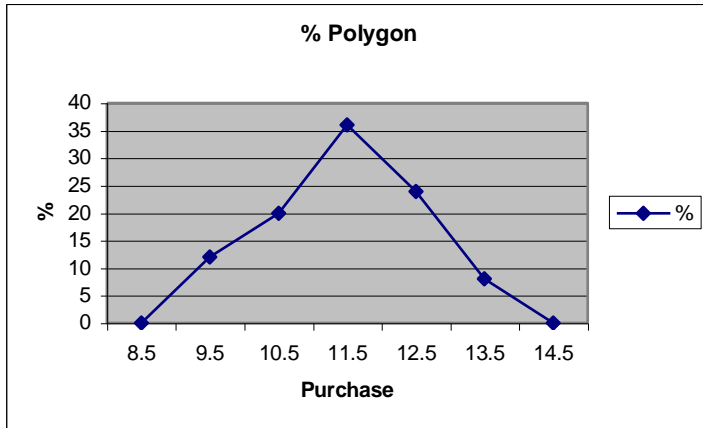


TYPE: PR DIFFICULTY: Moderate

KEYWORDS: cumulative percentage polygon

155. Referring to Table 2-13, construct a percentage polygon for the detergent data if the corresponding frequency distribution uses "9.0 but less than 10.0" as the first class.

ANSWER:



TYPE: PR DIFFICULTY: Moderate
 KEYWORDS: percentage distribution

TABLE 2-14

The table below contains the number of people who own a portable DVD player in a sample of 600 broken down by gender.

Own a Portable DVD Player	Male	Female
Yes	96	40
No	224	240

156. Referring to Table 2-14, construct a table of row percentages.

ANSWER:

Own	Male	Female	Total
Yes	70.59%	29.41%	100.00%
No	48.28%	51.72%	100.00%
Total	53.33%	46.67%	100.00%

TYPE: PR DIFFICULTY: Easy
 KEYWORDS: row percentages

157. Referring to Table 2-14, construct a table of column percentages.

ANSWER:

Own	Male	Female	Total
Yes	30.00%	14.29%	22.67%

No	70.00%	85.71%	77.33%
Total	100.00%	100.00%	100.00%

TYPE: PR DIFFICULTY: Easy

KEYWORDS: column percentages

158. Referring to Table 2-12, construct a table of total percentages.

ANSWER:

Own	Male	Female	Total
Yes	16.00%	6.67%	22.67%
No	37.33%	40.00%	77.33%
Total	53.33%	46.67%	100.00%

TYPE: PR DIFFICULTY: Easy

KEYWORDS: total percentages

159. Referring to Table 2-14, of those who owned a portable DVD in the sample, _____ percent were females.

ANSWER:

29.41%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, row percentages

160. Referring to Table 2-14, of those who did not own a portable DVD in the sample, _____ percent were males.

ANSWER:

48.28%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, row percentages

161. Referring to Table 2-14, of the males in the sample, _____ percent owned a portable DVD.

ANSWER:

30%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

162. Referring to Table 2-14, of the females in the sample, _____ percent did not own a portable DVD.

ANSWER:

85.71%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

163. Referring to Table 2-14, of the females in the sample, _____ percent owned a portable DVD.

ANSWER:

14.29%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

164. Referring to Table 2-14, _____ percent of the 600 were females who owned a portable DVD.

ANSWER:

6.67%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, total percentage

165. Referring to Table 2-14, _____ percent of the 600 were males who owned a portable DVD.

ANSWER:

16%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, total percentage

166. Referring to Table 2-14, _____ percent of the 600 were females who either owned or did not own a portable DVD.

ANSWER:

46.67%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, total percentage

167. Referring to Table 2-14, _____ percent of the 600 were males who did not own a portable DVD.

ANSWER:

37.33%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, total percentage

168. Referring to Table 2-14, _____ percent of the 600 owned a portable DVD.

ANSWER:

22.67%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

169. Referring to Table 2-14, _____ percent of the 600 did not own a portable DVD.

ANSWER:

77.33%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

170. Referring to Table 2-14, _____ percent of the 600 were females.

ANSWER:

46.67%

TYPE: FI DIFFICULTY: Easy

KEYWORDS: contingency table, row percentages

171. Referring to Table 2-14, if the sample is a good representation of the population, we can expect _____ percent of the population will own a portable DVD.

ANSWER:

22.67%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

172. Referring to Table 2-14, if the sample is a good representation of the population, we can expect _____ percent of the population will be males.

ANSWER:

53.33%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

173. Referring to Table 2-14, if the sample is a good representation of the population, we can expect _____ percent of those who own a portable DVD in the population will be males.

ANSWER:

70.59%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, row percentages

174. Referring to Table 2-14, if the sample is a good representation of the population, we can expect _____ percent of the males in the population will own a portable DVD.

ANSWER:

30%

TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

175. Referring to Table 2-14, if the sample is a good representation of the population, we can expect _____ percent of the females in the population will not own a portable DVD.

ANSWER:

85.71%

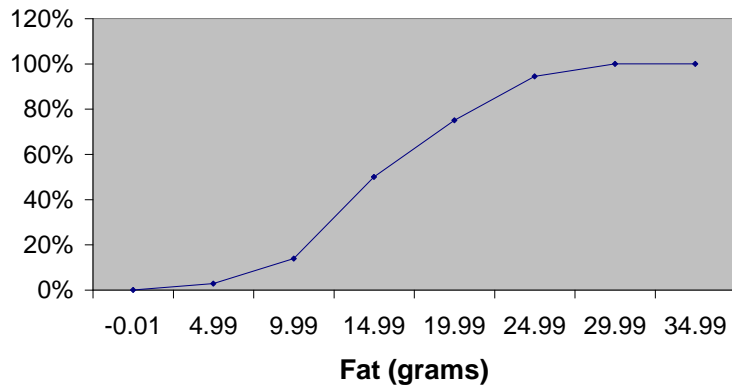
TYPE: FI DIFFICULTY: Moderate

KEYWORDS: contingency table, column percentages

TABLE 2-15

The figure below is the ogive for the amount of fat (in grams) for a sample of 36 pizzas products where the upper boundaries of the intervals are: 5, 10, 15, 20, 25, and 30.

Cumulative Percentage Polygon for Fat



176. Referring to Table 2-14, roughly what percentage of pizza products contains less than 10 grams of fat?

- a) 3%
- b) 14%
- c) 50%
- d) 75%

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: cumulative percentage polygon, ogive, interpretation

177. Referring to Table 2-14, what percentage of pizza products contains at least 20 grams of fat?

- a) 5%
- b) 25%
- c) 75%
- d) 96%

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: cumulative percentage polygon, ogive, interpretation

178. Referring to Table 2-14, what percentage of pizza products contains between 10 and 25 grams of fat?

- a) 14%
- b) 44%
- c) 62%
- d) 81%

ANSWER:

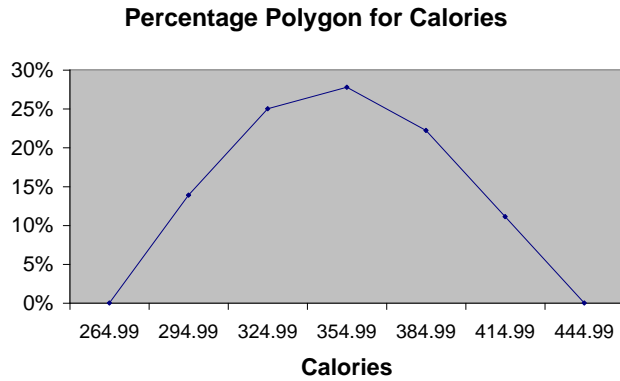
d

TYPE: MC DIFFICULTY: Easy

KEYWORDS: cumulative percentage polygon, ogive, interpretation

TABLE 2-16

The figure below is the percentage polygon for the amount of calories for a sample of 36 pizzas products where the upper limits of the intervals are: 310, 340, 370, 400 and 430.



179. Referring to Table 2-15, roughly what percentage of pizza products contains between 400 and 430 calories?

- a) 0%
- b) 11%
- c) 89%
- d) 100%

ANSWER:

b

TYPE: MC DIFFICULTY: Easy

KEYWORDS: percentage polygon, interpretation

180. Referring to Table 2-15, roughly what percentage of pizza products contains between 340 and 400 calories?

- a) 22%
- b) 25%
- c) 28%
- d) 50%

ANSWER:

d

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: percentage polygon, interpretation

181. Referring to Table 2-15, roughly what percentage of pizza products contains at least 340 calories?

- a) 25%
- b) 28%
- c) 39%
- d) 61%

ANSWER:

d

TYPE: MC DIFFICULTY: Moderate

KEYWORDS: percentage polygon, interpretation

TABLE 2-17

The following table presents total retail sales in millions of dollars for the leading apparel companies during April 2001 and April 2002.

APPAREL COMPANY	April 01	April 02
Gap	1,159.00	962
TJX	781.7	899
Limited	596.5	620.4
Kohl's	544.9	678.9
Nordstrom	402.6	418.3
Talbots	139.9	130.1
AnnTaylor	114.2	124.8

182. Referring to Table 2-17, construct a table of column percentages.

ANSWER:

Apparel Company	April 2001	April 2002
Gap	31.00%	25.09%
TJX	20.91%	23.45%
Limited	15.95%	16.18%
Kohl's	14.57%	17.71%
Nordstrom	10.77%	10.91%
Talbots	3.74%	3.39%
AnnTaylor	3.05%	3.26%
Total	100.00%	100.00%

TYPE: PR DIFFICULTY: Moderate

KEYWORDS: column percentages

183. True or False: Referring to Table 2-17, in general, retail sales for the apparel industry have seen a modest growth between April 2001 and April 2002.

ANSWER:

True

TYPE: TF DIFFICULTY: Easy

KEYWORDS: column percentages, interpretation

184. Referring to Table 2-17, among the 8 stores, _____ saw a sales decline.

ANSWER:

Gap and Talbots

TYPE: FI DIFFICULTY: Easy

KEYWORDS: column percentages, interpretation