Test Bank for Statistics for The Behavioral Sciences 10th Gravetter

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TRUE/FALSE

1 : A researcher surveys a sample of n = 200 college students and asks each person to identify his or her favorite movie from the past year. If the data were organized in a frequency distribution table, the first column would be a list of movies.
A : true
B : false

Correct Answer : A

2 : A group of quiz scores ranges from 3 to 10, but no student had a score of X = 5. If the scores are put in a frequency distribution table, X = 5 would not be listed in the X column.
A : true
B : false

Correct Answer : B

3 : It is customary to list the score categories in a frequency distribution from the highest down to the lowest.
A : true
B : false

Correct Answer : A

4 : There is a total of n = 5 scores in the distribution shown in the following table. X f 5 2 4 8 3 5 2 3 1 2
A : true
B : false

Correct Answer : B

5 : For the following distribution of scores, 20% of the individuals have scores of X = 1. X f 5 2 4 8 3 5 2 3 1 2
A : true
B : false

Correct Answer : B

6 : For the following distribution of scores, SX = 18. X f 4 1 3 2 2 3 1 2
A : true
B : false

Correct Answer : A

7 : For the following distribution of scores, SX2 = 92. X f 4 1 3 2 2 3 1 2
A : true
B : false

Correct Answer : B

8 : A grouped frequency distribution table lists one interval as, 20-29. The width of this interval is 9 points.

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A : true
B : false

Correct Answer : B

9 : In a grouped frequency distribution table, one interval is identified as 30-34. This interval has a width of 5 points.
A : true
B : false

Correct Answer : A

10 : If a set of scores covers a range of 80 points, the grouped frequency table should use an interval width of 8 points.
A : true
B : false

Correct Answer : B

11 : A set of scores ranges from X = 18 to X= 91. If the scores are put in a grouped frequency distribution table with an interval width of 10 points, the top interval would be 91-100.
A : true
B : false

Correct Answer : B

12 : In a grouped frequency distribution table, the top value in each class interval should be a multiple of the interval width.
A : true
B : false

Correct Answer : B

13 : A set of scores ranges from a low of X = 18 to a high of X = 98. If the scores are put in a grouped frequency distribution table with an interval width of 10 points, the bottom interval should be 10-19.
A : true
B : false

Correct Answer : A

14 : A grouped frequency distribution table does not provide enough information to obtain a complete listing of the original set of scores.
A : true
B : false

Correct Answer : A

15 : For the following distribution, seven people have scores greater than X = 14. X f 20-24 2 15-19 5 10-14 4 5-9 1
A : true
B : false

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Correct Answer : A

16 : In the following distribution, the scores are grouped into class intervals that are each 5 points wide. X f 20-24 2 15-19 5 10-14 4 5-9 1
A : true
B : false

Correct Answer : A

17 : A professor records the number of students who are absent each day for the semester. Because this is a numeric, discrete variable, a bar graph should be used to show the frequency distribution.
A : true
B : false

Correct Answer : B

18 : A researcher surveys a sample of n = 200 college students and asks each person to identify his or her favorite movie from the past year. If the results are presented in a frequency distribution graph, the researcher should use a bar graph.
A : true
B : false

Correct Answer : A

19 : If it is appropriate to present a distribution of scores in a polygon, then it would also be appropriate to present the scores in a bar graph.
A : true
B : false

Correct Answer : B

20 : A histogram is constructed so that adjacent bars touch.
A : true
B : false

Correct Answer : A

21 : The normal distribution is an example of a symmetrical distribution.
A : true
B : false

Correct Answer : A

22 : In February in New York, the daily high temperatures are typically low with only a few relatively warm days. A frequency distribution showing the daily high temperatures would probably form a negatively skewed distribution.
A : true
B : false

Correct Answer : B

23 : The scores for a very easy exam would probably form a positively skewed distribution.

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A : true
B : false

Correct Answer : B

24 : If a set of exam scores forms a negatively skewed distribution, it suggests that the majority of the students did not score well on the exam.
A : true
B : false

Correct Answer : B

25 : A score equal to the 5th percentile is one of the highest scores in the distribution.
A : true
B : false

Correct Answer : B

26 : For the distribution in the following table, the 80th percentile is X = 24. X c% 25-29 100% 20-24 80% 15-19 20%
A : true
B : false

Correct Answer : B

27 : For the distribution in the following table, the percentile rank for X = 19.5 is 20%. X c% 25-29 100% 20-24 80% 15-19 20%
A : true
B : false

Correct Answer : A

28 : For the distribution in the following table, the 90th percentile is X = 27.5. X c% 25-29 100% 20-24 80% 15-19 20%
A : true
B : false

Correct Answer : B

29 : For the distribution in the following table, the percentile rank for X = 25 is 82%. X c% 25-29 100% 20-24 80% 15-19 20%
A : true
B : false

Correct Answer : A

30 : A stem and leaf display does not provide enough information to obtain a complete listing of the original set of scores.
A : true
B : false

Correct Answer : B

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MULTIPLE CHOICE

31 : What is the total number of scores for the distribution shown in the following table? X f 4 3 3 5 2 4 1 2
A : 4
B : 10
C : 14
D : 37

Correct Answer : C

32 : A sample of n = 15 scores ranges from a high of X = 11 to a low of X = 3. If these scores are placed in a frequency distribution table, how many X values will be listed in the first column of that table?
A : 8
B : 9
C : 11
D : 15

Correct Answer : B

33 : For the following frequency distribution of quiz scores, how many individuals took the quiz? X f 5 6 4 5 3 5 2 3 1 2
A : n = 5
B : n = 7
C : n = 15
D : n = 21

Correct Answer : D

34 : For the following distribution of quiz scores, if a score of X = 3 or higher is needed for a passing grade, how many individuals passed? X f 5 6 4 5 3 5 2 3 1 2
A : 3
B : 11
C : 16
D : 21

Correct Answer : C

35 : For the following distribution of quiz scores, How many individuals had a score of X = 2? X f 5 6 4 5 3 5 2 3 1 2
A : 1
B : 2
C : 3
D : 5

Correct Answer : C

36 : For the following frequency distribution of exam scores, what is the lowest possible reported score on the exam? X f 90-94 3 85-89 4 80-84 5 75-79 2 70-74 1

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A : x = 70
B : x = 74
C : x = 90
D : x=94

Correct Answer : A

37 : For the following frequency distribution of exam scores, how many students had scores lower than X = 80? X f 90-94 3 85-89 4 80-84 5 75-79 2 70-74 1
A : 2
B : 3
C : 7
D : 8

Correct Answer : B

38 : In a grouped frequency distribution one interval is listed as 50-59. Assuming that the scores are measuring a continuous variable, what are the real limits of this interval?
A : 50 and 59
B : 50.5 and 59.5
C : 49.5 and 59.5
D : 49.5 and 60.5

Correct Answer : C

39 : For the following distribution, how many people had scores less than X = 20? X f 20-25 2 15-19 5 10-14 4 5-9 1
A : 5
B : 10
C : 11
D : 12

Correct Answer : B

40 : For the following distribution, what is the highest possible score? X f 20-25 2 15-19 5 10-14 4 5-9 1
A : 5
B : 20
C : 25
D : 26

Correct Answer : C

41 : For the following distribution, how many people had scores greater than X = 14? X f 20-25 2 15-19 5 10-14 4 5-9 1
A : 5
B : 7
C : 10
D : 11

Correct Answer : B

42 : For the following distribution, what is the width of each class interval? X f 20-24 2 5-19 5

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10-14 4 5-9 1
A : 4
B : 4.5
C : 5
D : 10

Correct Answer : C

43 : If the following continuous distribution was shown in a histogram, the bar above the 15-19 interval would reach from ____ to ____. X f 20-25 2 15-19 5 10-14 4 5-9 1
A : X = 14.5 to X = 19.5
B : X = 15.0 to X = 19.0
C : X = 15.5 to X = 18.5
D : X = 15.5 to X = 19.5

Correct Answer : A

44 : In a frequency distribution graph, frequencies are presented on the ____ and the scores (categories) are listed on the ____.
A : X axis; Y axis
B : horizontal line; vertical line
C : Y axis; X axis
D : class interval ;horizontal line

Correct Answer : C

45 : What frequency distribution graph is appropriate for scores measured on a nominal scale?
A : only a histogram
B : only a polygon
C : either a histogram or a polygon
D : only a bar graph

Correct Answer : D

46 : The classrooms in the Psychology department are numbered from 100 to 108. A professor records the number of classes held in each room during the fall semester. If these values are presented in a frequency distribution graph, what kind of graph would be appropriate?
A : a histogram
B : a polygon
C : a histogram or a polygon
D : a bar graph

Correct Answer : D

47 : A researcher records the number of traffic tickets issued in each county along the New York State thruway. If the results are presented in a frequency distribution graph, what kind of graph should be used?
A : a bar graph
B : a histogram
C : a polygon
D : either a histogram or a polygon

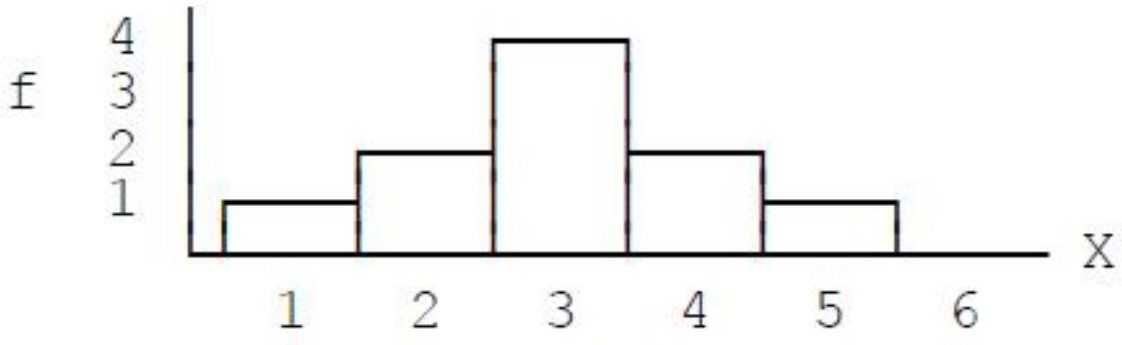
Correct Answer : A

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48 : What kind of frequency distribution graph shows the frequencies as bars, with no space between adjacent bars?
A : a bar graph
B : a histogram
C : a polygon
D : a pie chart

Correct Answer : B

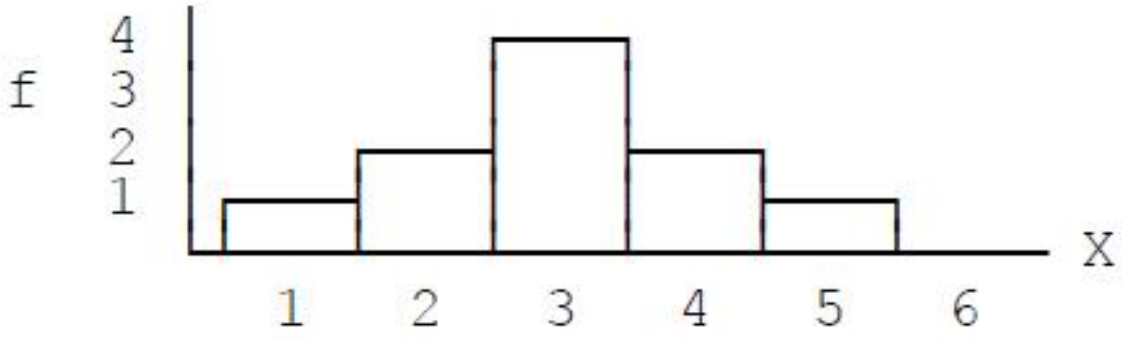
49 : Figure 2.1



What scale of measurement was used to measure the scores in the distribution shown in the accompanying graph, Figure 2.1?
A : nominal
B : ordinal
C : interval or ratio
D : non-numeric

Correct Answer : C

50 : Figure 2.1



For the distribution in the accompanying graph, Figure 2.1, what is the value of X?
A : 10
B : 15
C : 21
D : 30

Correct Answer : D

51 : What kind of frequency distribution graph shows the frequencies as bars that are separated by spaces?
A : a bar graph
B : a histogram
C : a polygon
D : a pie chart

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Correct Answer : A

52 : If a frequency distribution is shown in a bar graph, what scale was used to measure the scores?
A : nominal
B : nominal or ordinal
C : ratio
D : interval or ratio

Correct Answer : B

53 : The normal distribution is ____.
A : asymmetric
B : skewed to the right
C : skewed to the left
D : symmetric

Correct Answer : D

54 : If a set of exam scores forms a symmetrical distribution, what can we conclude about the students scores?
A : Most of the students had relatively high scores.
B : Most of the students had relatively low scores.
C : About 50% of the students had high scores and the rest had low scores.
D : It is not possible the draw any conclusions about the students scores.

Correct Answer : C

55 : What term is used to describe the shape of a distribution in which the scores pile up on the left-hand side of the graph and taper off to the right?
A : symmetrical
B : positively skewed
C : negatively skewed
D : normal

Correct Answer : B

56 : Figure 2-2



What is the shape for the distribution shown in the accompanying graph in Figure 2.2?
A : positively skewed
B : negatively skewed

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C : symmetrical
D : normal

Correct Answer : A

57 : A skewed distribution typically has ____ tail(s) and a normal distribution has ____ tail(s).
A : 1; 1
B : 1; 2
C : 2,;1
D : 2; 2

Correct Answer : B

58 : The students in a psychology class seemed to think that the midterm exam was very easy. If they are correct, what is the most likely shape for the distribution of exam scores?
A : symmetrical
B : positively skewed
C : negatively skewed
D : normal

Correct Answer : C

59 : In a distribution with positive skew, scores with the highest frequencies are ____.
A : on the right side of the distribution
B : on the left side of the distribution
C : in the middle of the distribution
D : represented at two distinct peaks

Correct Answer : B

60 : What is the shape of the distribution for the following set of data? Scores: 1, 2, 3, 3, 4, 4, 4 5, 5, 5, 5, 6
A : symmetrical
B : positively skewed
C : negatively skewed
D : cumulative

Correct Answer : C

61 : For the distribution in the following table, what is the 50th percentile? X c% 9 100% 8 80% 7 50% 6 25%
A : X = 8
B : X = 7.5
C : X = 7
D : X = 6.5

Correct Answer : B

62 : For the distribution in the following table, what is the percentile rank for X = 8.5? X c% 9 100% 8 80% 7 50% 6 25%
A : X = 90%
B : X = 80%
C : X = 65%

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D : X = 50%

Correct Answer : B

63 : For the distribution in the following table, what is the 90th percentile? X c% 9 100% 8 80% 7 50% 6 25%
A : X = 9.5
B : X = 9
C : X = 8.5
D : X = 8

Correct Answer : B

64 : For the distribution in the following table, what is the percentile rank for X = 7? X c% 9 100% 8 80% 7 50% 6 25%
A : X = 80%
B : X = 65%
C : X = 50%
D : X = 37.5%

Correct Answer : D

65 : For the distribution in the following table, what is the 90th percentile? X c% 30-34 100% 25-29 90% 20-24 60% 15-19 20%
A : X = 24.5
B : X = 25
C : X = 29
D : X = 29.5

Correct Answer : D

66 : For the distribution in the following table, what is the percentile rank for X = 24.5? X c% 30-34 100% 25-29 90% 20-24 60% 15-19 20%
A : 40%
B : 60%
C : 75%
D : 90%

Correct Answer : B

67 : For the distribution in the following table, what is the 50th percentile? X c% 50-59 100% 40-49 90% 30-39 60% 20-29 20%
A : X = 32
B : X = 35
C : X = 35
D : X = 39

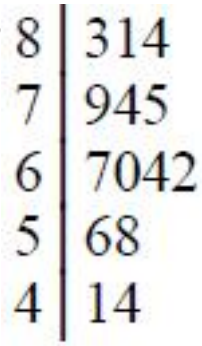
Correct Answer : C

68 : For the distribution in the following table, what is the percentile rank for X = 32? X c% 30-34 100% 25-29 90% 20-24 60% 15-19 20%
A : 92%
B : 92.5

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C : 95%
D : 97.5%

Correct Answer : C

69 : Figure 2-3 

For the scores shown in the accompanying stem and leaf display, Figure 2-3, what is the highest score in the distribution?
A : 8
B : 83
C : 84
D : 7042

Correct Answer : C

70 : If the following scores were placed in a stem and leaf display, how many leaves would be associated with a stem of 6? Scores: 26, 45, 62, 11, 21, 55, 66 64, 55, 46, 38, 41, 27, 29 36, 51, 32, 25, 34, 44, 59
A : 1
B : 2
C : 3
D : 4

Correct Answer : C

ESSAY

71 : Find each value requested for the set of scores in the following frequency distribution table. a. n Score f b. X 5 1 c. X2 4 2 3 3 2 5 1 2

Correct Answer : a. n = 13 b. ?X = 34 c. ?X2 = 106 ?

72 : Briefly explain what information is available in a regular frequency distribution table that is not available in a grouped table.

Correct Answer : A regular table identifies each individual score exactly. However, in a grouped table, you simply know that an individual score is located in a particular interval, but you do not know its exact value.

73 : For the following scores: a. Construct a frequency distribution table. b. Sketch a histogram of the frequency distribution. 6, 4, 3, 5, 4, 2, 4 5, 4, 6, 1, 4, 5, 2

Correct Answer : ?

74 : For the distribution shown in the following table: a. Find the percentile rank for X = 14.5. X f

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cf c% b. Find the 60th percentile. 25-29 4 25 100% c. Find the percentile rank for X = 11. 20-24 6 21 84% d. Find the 66th percentile. 15-19 7 15 60% 10-14 5 8 32% 5-9 3 3 12%

Correct Answer : a. 32% b. X = 19.5 c. 18% d. X = 20.75

75 : Construct a stem and leaf display for the following scores. 30, 23, 58, 28, 35, 67, 27, 42, 46, 35 51, 33, 18, 33, 25, 38, 48, 36, 31, 39

Correct Answer : 6 | 7 5 | 18 4 | 826 3 | 033586159 2 | 3857 1 | 8 Key: 6|7 = 67

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