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| 1. What is the total number of scores for the distribution shown in the following table?  *X*          f  4           7  3           5  2           4  1           2   |  |  |  | | --- | --- | --- | |  | a. | 4 | |  | b. | 10 | |  | c. | 18 | |  | d. | 39 |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 2. A sample of *n* = 12 scores ranges from a high of *X* = 7 to a low of *X* = 4. If these scores are placed in a frequency distribution table, how many *X* values will be listed in the first column?   |  |  |  | | --- | --- | --- | |  | a. | 4 | |  | b. | 12 | |  | c. | 3 | |  | d. | 7 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 3. For the following data, *N* = \_\_\_\_\_.  *X*          f  4           2  3           3  2           1  1           2   |  |  |  | | --- | --- | --- | |  | a. | 8. | |  | b. | 10. | |  | c. | 20. | |  | d. | 18. |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 4. For the data in the following table, what is the value of Σ*X*?  *X*         f  4          1  3          0  2          2  1          1   |  |  |  | | --- | --- | --- | |  | a. | 4 | |  | b. | 9 | |  | c. | 10 | |  | d. | 13 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 5. For the scores in the following table, what is the value of Σ*X*2?  *X*         f  3          1  2          2  1          4   |  |  |  | | --- | --- | --- | |  | a. | 23 | |  | b. | 15 | |  | c. | 11 | |  | d. | 21 |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 6. 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. | 5 | |  | b. | 21 | |  | c. | 15 | |  | d. | 14 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 7. For the following distribution of quiz scores, if a score of *X* = 4 or lower is a failing grade, how many individuals failed the quiz?  *X*         f  6         3  5         6  4         5  3         5  2         3  1         2   |  |  |  | | --- | --- | --- | |  | a. | 9 | |  | b. | 14 | |  | c. | 10 | |  | d. | 15 |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 8. For the following distribution of quiz scores, how many individuals had a score of *X* = 4?  *X*         f  6          1  5          6  4          4  3          4  2          2  1          2   |  |  |  | | --- | --- | --- | |  | a. | 4 | |  | b. | 2 | |  | c. | 5 | |  | d. | 6 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 9. A researcher surveys a sample of *n* = 10 adults and asks them to indicate their favorite day of the week. If the data were organized in a frequency distribution table, what would be included in the first column?   |  |  |  | | --- | --- | --- | |  | a. | a list of students | |  | b. | a list of days of the week | |  | c. | a list of frequencies | |  | d. | a list of averages |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 10. A researcher surveys a sample of *n* = 20 college students and asks each person to identify their favorite movie. If the data were organized in a frequency distribution table, what would be included in the last column?   |  |  |  | | --- | --- | --- | |  | a. | a list of movies | |  | b. | a list of students | |  | c. | a list of frequencies | |  | d. | a list of averages |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 11. A set of scores ranges from a high of *X* = 63 to a low of *X* = 28. If these scores were put in a grouped frequency distribution table, what would be the best choice for the interval width?   |  |  |  | | --- | --- | --- | |  | a. | 2 points | |  | b. | 5 points | |  | c. | 7 points | |  | d. | 10 points |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Analyze | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 12. A set of scores ranges from a high of *X* = 18 to a low of *X* = 5. If these scores were put in a grouped frequency distribution table with an interval width of 2 points, which of the following would be the top interval in the table?   |  |  |  | | --- | --- | --- | |  | a. | 4-5 | |  | b. | 5-6 | |  | c. | 18-19 | |  | d. | 17-18 |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 13. Which of the following is not an appropriate interval width to use when constructing a grouped frequency distribution table.   |  |  |  | | --- | --- | --- | |  | a. | 5 points | |  | b. | 2 points | |  | c. | 4 points | |  | d. | 10 points |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 14. Using the frequency distribution table below, what is the proportion of individuals that scored a 4?  *X*         f  6          4  5          3  4          7  3          2  2          2  1          2   |  |  |  | | --- | --- | --- | |  | a. | .2 | |  | b. | .7 | |  | c. | .35 | |  | d. | .1 |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 15. Which statement below is correct regarding a grouped frequency distribution table?   |  |  |  | | --- | --- | --- | |  | a. | The ∑f cannot be determined. | |  | b. | The ∑x cannot be determined. | |  | c. | Interval widths should be restricted to either 10 or 20. | |  | d. | The bottom score in each class interval should be divisible by 5. |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 16. For the following grouped frequency distribution table of exam scores, how many students had scores higher than *X* = 54?  *X*               f  60-64        3  55-59        4  50-54        5  45-49        2  40-44        1  ​   |  |  |  | | --- | --- | --- | |  | a. | 7 | |  | b. | 12 | |  | c. | 8 | |  | d. | 3 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 17. For the following grouped frequency distribution table of exam scores, what is the lowest score on the exam?  *X*                 f  90-99          3  80-89          1  70-79          2  60-69          3  50-59          4     |  |  |  | | --- | --- | --- | |  | a. | *X* = 70 | |  | b. | *X* = 74 | |  | c. | *X* = 90 | |  | d. | Cannot be determined |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 18. For the following grouped frequency distribution table of exam scores, how many students had scores lower than *X* = 75?  *X*               f  95-99        6  90-94        3  85-89        4  80-84        5  75-79        2  70-74        1     |  |  |  | | --- | --- | --- | |  | a. | 2 | |  | b. | 3 | |  | c. | 6 | |  | d. | 1 |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 19. In a grouped frequency distribution table, one interval is listed as 35-39. If the scores represent a continuous variable, what are the real limits for this interval?   |  |  |  | | --- | --- | --- | |  | a. | 34.5 and 39.5 | |  | b. | 35.5 and 39.5 | |  | c. | 34 and 40 | |  | d. | 35.25 and 39.25 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 20. For the following grouped frequency distribution table, how many people had scores less than *X* = 14?  *X*               f  30-34        3  25-29        2  20-24        2  15-19        5  10-14        4  5-9            1     |  |  |  | | --- | --- | --- | |  | a. | 5 | |  | b. | 1 | |  | c. | 12 | |  | d. | Cannot be determined |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 21. Percentile ranks are closely tied to which of the following terms?   |  |  |  | | --- | --- | --- | |  | a. | stem and leaf displays | |  | b. | Σf | |  | c. | cumulative percentages | |  | d. | Σ*X* |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 22. For the following grouped frequency distribution table, how many people have scores greater than *X* = 45?  *X*                f  60-69         4  50-59         3  40-49         7  30-39         2     |  |  |  | | --- | --- | --- | |  | a. | 2 | |  | b. | 4 | |  | c. | 7 | |  | d. | cannot be determined |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 23. For the following grouped frequency distribution table, what is the width of each class interval?  *X*               f  20-29        2  30-39        5  40-49        4  50-59        1  ​   |  |  |  | | --- | --- | --- | |  | a. | 9 | |  | b. | 10 | |  | c. | 5 | |  | d. | 2 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 24. If the following grouped frequency distribution table pertaining to a continuous variable were shown in a histogram, the width of the bar above the 15-19 interval would reach from \_\_\_\_\_ to \_\_\_\_\_.  ​  *X*               f  20-24        2  15-19        5  10-14        4  5-9            1  ​   |  |  |  | | --- | --- | --- | |  | a. | *X* = 14.5 to *X* = 19.5 | |  | b. | *X* = 15.5 to *X* = 18.5 | |  | c. | *X* = 15.5 to *X* = 19.5 | |  | d. | *X* = 15.0 to *X* = 19.0 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 25. 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; axis. |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Remember | |

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| 26. Which type(s) of frequency distribution graph(s) should be used for data that come from an interval scale of measurement?   |  |  |  | | --- | --- | --- | |  | a. | histograms or bar graphs | |  | b. | bar graphs | |  | c. | histograms or polygons | |  | d. | histograms, bar graphs, or polygons |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 27. Which type(s) of frequency distribution graph(s) should be used for data that come from a nominal scale of measurement?   |  |  |  | | --- | --- | --- | |  | a. | histograms | |  | b. | bar graphs | |  | c. | histograms or bar graphs | |  | d. | bar graphs or polygons |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 28. If a distribution of scores is shown in a bar graph, the scores were measured using a(n) \_\_\_\_\_ scale of measurement.   |  |  |  | | --- | --- | --- | |  | a. | nominal or ordinal | |  | b. | ordinal or interval | |  | c. | interval or ratio | |  | d. | nominal or interval |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 29. A researcher surveys a sample of *n* = 200 college students and asks each person to identify their favorite movie. Which kind of graph should be used to present these results?   |  |  |  | | --- | --- | --- | |  | a. | histogram | |  | b. | polygon | |  | c. | pie chart | |  | d. | bar graph |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 30. A researcher collects a sample of *n* = 20 Introductory Psychology textbooks and records the number of pages in each book. The results are then placed in a grouped frequency distribution table using intervals of 0-99 pages, 100-199 pages, 200-299 pages, and so on. If the results were converted into a frequency distribution graph, which kind of graph(s) would be appropriate?   |  |  |  | | --- | --- | --- | |  | a. | a bar graph | |  | b. | a histogram or bar graph | |  | c. | a histogram | |  | d. | a histogram or polygon |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 31. A biologist records the number and types of fish caught in a local lake during a 2- year period. The biologist reports that 7% of the fish caught during this period were trout, whereas 43% of the fish caught were bass. These reports of the number of trout and bass at this lake are examples of \_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | cumulative frequencies. | |  | b. | percentile ranks. | |  | c. | relative frequencies. | |  | d. | smooth curves. |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 32. After recording the final grade (A, B, C, D, F) for each individual in a class of *N* = 26 students, the professor would like to display the grade distribution in a frequency distribution graph. Which kind of graph should be used?   |  |  |  | | --- | --- | --- | |  | a. | bar graph | |  | b. | histogram | |  | c. | polygon | |  | d. | pie chart |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 33. What is the percentile rank for a score of 4 in the frequency distribution table below?  *X* f  6 4  5 5  4 1  3 3  2 6  1 1   |  |  |  | | --- | --- | --- | |  | a. | 45th | |  | b. | 60th | |  | c. | 50th | |  | d. | 55th |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 34. If a set of scores for a variable is displayed in a frequency distribution polygon, which scale of measurement was used to measure the variable?   |  |  |  | | --- | --- | --- | |  | a. | nominal or ordinal | |  | b. | ordinal or interval | |  | c. | ratio or ordinal | |  | d. | interval or ratio |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 35. A frequency distribution graph represents frequencies associated with scores for a variable with vertical bars that have space between them. Which scale of measurement was used to measure this variable?   |  |  |  | | --- | --- | --- | |  | a. | nominal | |  | b. | ordinal | |  | c. | interval | |  | d. | ratio |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 36. If a set of scores is displayed using a smooth curve, which scale of measurement was used to measure the scores?   |  |  |  | | --- | --- | --- | |  | a. | nominal | |  | b. | interval | |  | c. | nominal or ordinal | |  | d. | interval or ratio |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 37. For the scores shown in the following stem and leaf display, what is the highest score in the distribution?         Stem and Leaf Display                4               159                3               098                2               89103                1               39  ​   |  |  |  | | --- | --- | --- | |  | a. | 43 | |  | b. | 49 | |  | c. | 13 | |  | d. | 159 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Understand | |

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| 38. How many individual scores are in the following distribution?  ​   |  |  |  | | --- | --- | --- | |  | a. | *N* = 5 | |  | b. | *N* = 6 | |  | c. | *N* = 10 | |  | d. | *N* = 4 |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 39. For the following distribution of quiz scores, what is Σ*X*?  ​   |  |  |  | | --- | --- | --- | |  | a. | 28 | |  | b. | 15 | |  | c. | 23 | |  | d. | 10 |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 40. The normal distribution is an example of a \_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | histogram showing data from a sample. | |  | b. | polygon showing data from a sample. | |  | c. | bar graph showing data from a population. | |  | d. | smooth curve showing data from a population. |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Remember | |

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| 41. Consider the distribution of exam scores for the first exam within a college course. If the set of exam scores forms a symmetrical distribution, what can be concluded about the students’ scores?   |  |  |  | | --- | --- | --- | |  | a. | Most of the students had relatively high scores. | |  | b. | Most of the students had relatively low scores. | |  | c. | About an equal number of students had relatively high and relatively low scores. | |  | d. | A substantial number of students had very high scores and a substantial number of students had very low scores. |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 42. If a set of exam scores forms a negatively skewed distribution, what can you likely 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 an equal number of students had relatively high and relatively low scores. | |  | d. | It is not possible to draw any conclusions about students’ scores with this information. |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 43. Which term is used to describe the shape of a frequency distribution graph in which most 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 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 44. Which of the following statements pertaining to skewed and normal distributions is correct?   |  |  |  | | --- | --- | --- | |  | a. | A skewed distribution tends to have lower scores, and a normal distribution tends to have higher scores. | |  | b. | A skewed distribution tends to have higher scores, and a normal distribution tends to have lower scores. | |  | c. | A skewed distribution tends to have two tails, and a normal distribution tends to have one tail. | |  | d. | A skewed distribution tends to have one tail, and a normal distribution tends to have two tails. |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Remember | |

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| 45. The students in a psychology class seem to think that the midterm exam was very difficult. 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 |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 46. In a frequency distribution graph with negative skew, scores with the highest frequencies are \_\_\_\_\_ of the distribution.   |  |  |  | | --- | --- | --- | |  | a. | on the right side | |  | b. | on the left side | |  | c. | in the middle | |  | d. | represented at two distinct peaks |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 47. What is the shape of the distribution for the following set of data? Scores: 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 4, 5   |  |  |  | | --- | --- | --- | |  | a. | symmetrical | |  | b. | positively skewed | |  | c. | negatively skewed | |  | d. | normal |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 48. What is the shape of the frequency distribution for the following set of data?  *X* f  5 5  4 4  3 2  2 2  1 1   |  |  |  | | --- | --- | --- | |  | a. | symmetrical | |  | b. | positively skewed | |  | c. | negatively skewed | |  | d. | normal |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 49. What is the shape of the frequency distribution for the following set of data regarding students’ scores on a 10-item quiz?  *X* f  9 1  8 1  7 3  6 6  5 6   |  |  |  | | --- | --- | --- | |  | a. | symmetrical | |  | b. | positively skewed | |  | c. | negatively skewed | |  | d. | normal |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 50. Compared to a grouped frequency distribution table, a stem and leaf plot offers the advantage of being able to identify every individual score from a data set.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Understand | |

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| 51. A group of quiz scores ranges from 3 to 10, but no student had a score of *X* = 7. If the scores are put in a frequency distribution table, *X* = 7 would not be listed in the *X* column.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 52. It is customary to list the score categories in a frequency distribution table from the highest down to the lowest.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Remember | |

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| 53. For the distribution shown in the table below, 60% of scores are less than *X* = 3.  *X* f  5 2  4 5  3 3  2 8  1 7   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 54. For the following frequency distribution of quiz scores, 10% of students have scores of *X* = 2.  *X* f  5 4  4 4  3 6  2 4  1 2   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 55. For the following distribution of scores, 80% of individuals scored either a 2 or greater than 2.  *X* f  5 4  4 3  3 6  2 3  1 4   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 56. For the following distribution of scores that come from a continuous variable, the upper real limit for the interval that includes *X* = 2 is 2.  *X* f  5 3  4 2  3 5  2 1  1 3   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 57. A grouped frequency distribution table lists one interval as 15-20. The width of this interval is 5 points.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 58. Consider the following scores: 15, 33, 41, 29, 18, 47, 21, 26. The stem and leaf display below accurately represents these scores.                    Stem and Leaf Display                            1           58                            2           916                            3           3                            4           17   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Apply | |

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| 59. In a grouped frequency distribution table, scores range from *X* = 15 to *X* = 52 with class interval widths of 5. The bottom class interval should be 15-19..   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 60. If a set of scores covers a range of 70 points, then the grouped frequency table for the scores should use an interval width of 7 points.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 61. A set of scores ranges from *X* = 13 to *X* = 73. If the scores were put in a grouped frequency distribution table with an interval width of 10 points, the top interval would be 73-82.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 62. In a grouped frequency distribution table, the bottom value in each class interval should be a multiple of the interval width.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 63. A set of quiz scores ranges from a low of *X* = 58 to a high of *X* = 93. If the scores are place in a grouped frequency distribution table with an interval width of 5 points, the bottom interval should be 55-60.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 64. Consider that a sample of individuals each report how many siblings they have, and this data is then put into a grouped frequency distribution table. This grouped frequency distribution table will not provide enough information to obtain a complete listing of the original responses of individuals.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 65. This grouped frequency distribution appropriately adheres to the guidelines pertaining to creating grouped frequency distribution tables.  *X*               f                             25-29          1                             20-24          6                             15-19          5                             10-14          8                               5-9            3                               0-4            2   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 66. In general, more information is lost in a grouped frequency distribution table that has class intervals with a width of 10 than a grouped frequency distribution table that has class intervals with a width of 5.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 67. A professor records the number of students who are absent each day for the semester. Given the scale of measurement used when measuring this variable, a bar graph should be used to show the frequency distribution.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 68. Smooth curves and relative frequencies are more often used to describe population than sample data.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 69. A sports historian records the number of times that the Minnesota Twins finished 1st, 2nd, 3rd, 4th, or 5th in their division for each of the last 20 years. If the results are presented in a frequency distribution graph, then a histogram should be used.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 70. No space is left between adjacent bars in a histogram.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Remember | |

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| 71. A set of scores ranging from a high of 41 to a low of 5 is organized into a grouped frequency distribution table using an interval width of 5 points. If the distribution is shown in a graph, then a bar graph should be used.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 72. The classrooms in a Psychology department are numbered from 200 to 210. The department chair records the number of classes held in each room during the spring semester. If the results needed to be presented in a frequency distribution graph, the professor should use a bar graph.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 73. Consider the following scores pertaining to a data set: 12, 30, 40, 25. To complete a stem and leaf display, leaves of 2, 0, 0, and 5 should be created.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Apply | |

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| 74. A bar graph is constructed so that adjacent bars touch.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Remember | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Remember | |

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| 75. A distribution of scores on a driver’s license test forms is normally shaped. This is an example of a symmetrical distribution.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 76. In August in Florida, the daily high temperatures are typically high with only a few relatively cool days. A frequency distribution graph showing daily average temperatures in Florida for August would probably form a negatively skewed distribution.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 77. Consider the following scores pertaining to a data set: 22, 31, 43, 19. To complete a stem and leaf display, stems of 2, 1, 3, and 9 should be created.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Apply | |

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| 78. Consider the following scores: 10, 19, 21, 28, 26, 22, 30, 15, 18, 20. The stem and leaf display below accurately depicts this data.                  Stem and leaf display                    1               0958                    2               08620                    3               1   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Apply | |

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| 79. In a negatively skewed distribution, scores either pile up on the left side of the distribution or pile up on the right side of the distribution.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 80. For the scores shown in the following stem and leaf display, how many individuals had scores in the 20s?         Stem and Leaf Display                4               674                3               09817                2               891652                1               39   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.4 Stem and Leaf Displays | | *KEYWORDS:* | Bloom’s: Understand | |

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| 81. A set of scores ranges from a high of *X* = 45 to a low of *X* = 11. If these scores were placed in an appropriately designed grouped frequency distribution table, which of the following would be the bottom interval in the table?   |  |  |  | | --- | --- | --- | |  | a. | 40-45 | |  | b. | 40-44 | |  | c. | 10-15 | |  | d. | 10-14 |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |

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| 82. Find each value requested for the set of scores in the following frequency distribution table.              a.   *N*                                            *X*          f              b.   Σ*X*                                          5          3              c.   Σ*X*2                                        4          4                                                                   3          2                                                                   2          1                                                                   1          3   |  |  | | --- | --- | | *ANSWER:* | a. *N* = 13  b. Σ*X* = 42  c. Σ*X*2 = 164 | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.1 Frequency Distributions and Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Understand | |

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| 83. Briefly explain the appropriate manners in which to graphically represent data measured using a nominal, ordinal, interval, or ratio scale of measurement.   |  |  | | --- | --- | | *ANSWER:* | Data measured using either a nominal or ordinal scale of measurement should be graphically represented using a bar graph. Data measured using either an interval or ratio scale of measurement should be graphically represented using either a histogram or polygon. | | *DIFFICULTY:* | Understand | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Understand | |

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| 84. For the following scores:              a.  Construct a frequency distribution table.              b.  Sketch a histogram of the frequency distribution.                    1, 2, 3, 1, 1, 4, 2                    1, 5, 6, 2, 2, 1, 3   |  |  | | --- | --- | | *ANSWER:* | a.       *X*       f            6        1            5        1            4        1            3        2            2        4            1        5  ​  b. | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.3 Frequency Distribution Graphs | | *KEYWORDS:* | Bloom’s: Apply | |

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| 85. For the following scores, construct a grouped frequency distribution table using an appropriate width. Based on the table, what is the shape of the distribution?  62, 73, 91, 92, 90, 94, 87, 81, 68, 80, 92, 85  63, 92, 94, 78, 84, 90, 80, 74, 82, 92, 93, 73   |  |  | | --- | --- | | *ANSWER:* | *X*                f      Negatively skewed  60-64         2  65-69         1  70-74         3  75-79         1  80-84         5  85-89         2  90-94       10 | | *DIFFICULTY:* | Apply | | *REFERENCES:* | 2.2 Grouped Frequency Distribution Tables | | *KEYWORDS:* | Bloom’s: Apply | |