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| 1. Annette believes that everyone should walk 10,000 steps a day to be healthy. She vaguely remembers reading this in the newspaper and is convinced that it is true. What would you suggest Annette do to confirm or disconfirm this information?   |  |  |  | | --- | --- | --- | |  | a. | conduct her own study on this to confirm the information | |  | b. | try to find the source of the information so that she can quote it when sharing the information with others | |  | c. | make sure that she shares this valuable information with others | |  | d. | use critical thinking when presented with such round, undocumented numbers  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 2. Researchers use descriptive statistics to   |  |  |  | | --- | --- | --- | |  | a. | organize their data. | |  | b. | demonstrate a relationship between variables. | |  | c. | calculate the reliability of their data. | |  | d. | determine the statistical significance of their data.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 3. Professor Balantec has just finished collecting data on the relationship between weather changes and depression. She will use \_\_\_\_\_\_\_\_ to organize her data.   |  |  |  | | --- | --- | --- | |  | a. | inferential statistics | |  | b. | the correlation coefficient | |  | c. | descriptive statistics | |  | d. | measures of statistical significance  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 4. James is a graduate student and has just finished collecting data for a study he is conducting. What is the first thing he is likely to do?   |  |  |  | | --- | --- | --- | |  | a. | He will organize the data using descriptive statistics. | |  | b. | He will analyze the data using correlational analysis. | |  | c. | He will calculate a standard deviation. | |  | d. | He will analyze the data using inferential statistics.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 5. The percentage of students whose average grades fall into various performance levels could be represented by a   |  |  |  | | --- | --- | --- | |  | a. | standard deviation. | |  | b. | bar graph. | |  | c. | scatterplot. | |  | d. | coefficient.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 6. Measures of central tendency are most useful for   |  |  |  | | --- | --- | --- | |  | a. | constructing scatterplots. | |  | b. | summarizing data. | |  | c. | extrapolating from the sample to the population. | |  | d. | preventing skewed distributions.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 7. Elena is a college freshman taking an introductory statistics course. Her professor has assigned the class the task of organizing data on the relationship between level of income and happiness. What will Elena use to summarize her data in a single score?   |  |  |  | | --- | --- | --- | |  | a. | a measure of central tendency | |  | b. | inferential statistics | |  | c. | a measure of variation | |  | d. | the correlation coefficient  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 8. Dr. Woodcock has organized his data on the relationship between climate change and the emission of greenhouse gases. Dr. Woodcock will summarize his data in a single score using   |  |  |  | | --- | --- | --- | |  | a. | a measure of central tendency. | |  | b. | inferential statistics. | |  | c. | a measure of variation. | |  | d. | the correlation coefficient.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 9. The mode, median, and mean are measures of   |  |  |  | | --- | --- | --- | |  | a. | central tendency. | |  | b. | variation. | |  | c. | correlation. | |  | d. | statistical significance.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 10. The mode of a distribution of scores is the   |  |  |  | | --- | --- | --- | |  | a. | score exceeded by 50 percent of all the scores. | |  | b. | most frequently occurring score. | |  | c. | arithmetic average of all the scores. | |  | d. | difference between the highest and lowest scores. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 11. Seven teenagers spent $12, $14, $5, $17, $14, $16, and $7, respectively, on a new T-shirt. The mode of this group’s clothing expenditures is   |  |  |  | | --- | --- | --- | |  | a. | $9. | |  | b. | $11. | |  | c. | $13. | |  | d. | $14.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 12. The arithmetic average of a distribution of scores is the   |  |  |  | | --- | --- | --- | |  | a. | mode. | |  | b. | median. | |  | c. | standard deviation. | |  | d. | mean.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 13. The most familiar measure of central tendency is the   |  |  |  | | --- | --- | --- | |  | a. | mode. | |  | b. | mean. | |  | c. | median. | |  | d. | standard deviation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 14. During the last three weeks, Joe and Lois each ate 14 snack bars, while John ate 6, Terri ate 4, and Tammy ate only 2. The mean number of snack bars eaten by these individuals was   |  |  |  | | --- | --- | --- | |  | a. | 5. | |  | b. | 7. | |  | c. | 8. | |  | d. | 10.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 15. In any distribution of scores, an equal number of scores are both greater than and less than   |  |  |  | | --- | --- | --- | |  | a. | the mode. | |  | b. | the mean. | |  | c. | the median. | |  | d. | any of these measures of central tendency.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 16. Jan and Arthur Douglas have seven children ages 2, 3, 5, 7, 8, 9, and 9. The median age of the Douglas children is   |  |  |  | | --- | --- | --- | |  | a. | 6. | |  | b. | 7. | |  | c. | 8. | |  | d. | 9.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 17. Seven members of a girls’ club reported the following individual earnings from their sale of raffle tickets: $5, $9, $4, $11, $6, $4, and $3. In this distribution of individual earnings, the   |  |  |  | | --- | --- | --- | |  | a. | median is greater than the mean and greater than the mode. | |  | b. | median is less than the mean and less than the mode. | |  | c. | median is greater than the mean and less than the mode. | |  | d. | median is less than the mean and greater than the mode.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 18. Seven members of a debate club reported the following individual earnings from their sale of cakes: $7, $13, $3, $5, $2, $9, and $3. In this distribution of individual earnings, the   |  |  |  | | --- | --- | --- | |  | a. | mean is greater than the mode and greater than the median. | |  | b. | mean is equal to the mode and less than the median. | |  | c. | mean is greater than the mode and equal to the median. | |  | d. | mean is less than the mode and less than the median.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 19. In a distribution of refrigerator prices, which measure of central tendency would likely be the most affected by two extremely high prices?   |  |  |  | | --- | --- | --- | |  | a. | median | |  | b. | mode | |  | c. | standard deviation | |  | d. | mean  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 20. The mode, median, and mean are most likely to have different values when they   |  |  |  | | --- | --- | --- | |  | a. | describe a skewed distribution. | |  | b. | are derived from a limited range of scores. | |  | c. | represent the central tendency of a random sample. | |  | d. | represent the central tendency of an entire population.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 21. For which of the following distributions of scores would the median most clearly be a more appropriate measure of central tendency than the mean?   |  |  |  | | --- | --- | --- | |  | a. | 16, 28, 4, 8, 24 | |  | b. | 9, 6, 9, 12, 9 | |  | c. | 8, 9, 12, 10, 16 | |  | d. | 6, 18, 4, 5, 2  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 22. Variation is to central tendency as range is to   |  |  |  | | --- | --- | --- | |  | a. | median. | |  | b. | bar graph. | |  | c. | scatterplot. | |  | d. | correlation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 23. Which of the following provides only a rough indication of the degree of variation among a set of scores?   |  |  |  | | --- | --- | --- | |  | a. | correlation coefficient | |  | b. | scatterplot | |  | c. | range | |  | d. | median  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 24. The range is the   |  |  |  | | --- | --- | --- | |  | a. | difference between the highest and lowest scores in a distribution. | |  | b. | most commonly used measure of variation. | |  | c. | average deviation of scores from the mean. | |  | d. | most frequently occurring score in a distribution of scores.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 25. The formula for the \_\_\_\_\_\_\_\_ can be described as the lowest score subtracted from the highest score.   |  |  |  | | --- | --- | --- | |  | a. | mean | |  | b. | median | |  | c. | range | |  | d. | standard deviation  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 26. Jessica is applying for a new job. The lowest pay advertised is $48,000 a year. The highest pay advertised is $75,000. The difference between the lowest and highest pay is referred to as the   |  |  |  | | --- | --- | --- | |  | a. | mean. | |  | b. | median. | |  | c. | range. | |  | d. | standard deviation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 27. The intelligence test scores of the five children in the Meinsen family are 100, 78, 104, 96, and 120. For this distribution of scores, the range is   |  |  |  | | --- | --- | --- | |  | a. | 14. | |  | b. | 42. | |  | c. | 56. | |  | d. | 100.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 28. Two students in an art class are at least 20 years older than the others. Which measure of variation of class members’ ages is most affected by the ages of these two students?   |  |  |  | | --- | --- | --- | |  | a. | standard deviation | |  | b. | mode | |  | c. | median | |  | d. | range  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 29. Standard deviation is to mean as \_\_\_\_\_\_\_\_ is to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | median; mode | |  | b. | variation; central tendency | |  | c. | scatterplot; bar graph | |  | d. | correlation; range  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 30. The standard deviation is a measure of   |  |  |  | | --- | --- | --- | |  | a. | central tendency. | |  | b. | variation. | |  | c. | statistical significance. | |  | d. | correlation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 31. The formula for the \_\_\_\_\_\_\_\_ is the square root of the sum of deviations from the mean squared divided by the total number of scores.   |  |  |  | | --- | --- | --- | |  | a. | mean | |  | b. | median | |  | c. | range | |  | d. | standard deviation  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 32. After calculating her students’ scores, Dr. Chan found that the range of their scores on the last sociology test had an extremely small standard deviation. This indicates that the   |  |  |  | | --- | --- | --- | |  | a. | test was given to a very small class of students. | |  | b. | test was a poor measure of the students’ knowledge. | |  | c. | students generally performed very well on the test. | |  | d. | students’ scores tended to be very similar to one another.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 33. To calculate the numerical value of the standard deviation, it would be most reasonable to first compute the value of the   |  |  |  | | --- | --- | --- | |  | a. | mean. | |  | b. | mode. | |  | c. | correlation coefficient. | |  | d. | median.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 34. The bell-shaped distribution of data is so typical in research that it is called a   |  |  |  | | --- | --- | --- | |  | a. | bar graph. | |  | b. | normal curve. | |  | c. | range. | |  | d. | standard deviation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 35. A normal curve would be LEAST likely to characterize a large random sample of   |  |  |  | | --- | --- | --- | |  | a. | body weights. | |  | b. | intelligence scores. | |  | c. | family incomes. | |  | d. | professional baseball batting averages.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 36. Mieko’s ride to school generally arrives at the same time every day, although sometimes her friend’s mother is a bit early or late. If the arrival times are distributed on a normal curve, which of the following statistics would enable Mieko to estimate the probability that her ride will arrive within five minutes of its scheduled arrival time on any given day?   |  |  |  | | --- | --- | --- | |  | a. | median | |  | b. | mean | |  | c. | standard deviation | |  | d. | mode  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 37. Approximately 68 percent of the cases represented by the normal curve fall within \_\_\_\_\_\_\_\_ standard deviation(s) of the mean.   |  |  |  | | --- | --- | --- | |  | a. | 1 | |  | b. | 2 | |  | c. | 3 | |  | d. | 34  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 38. Approximately what percentage of the cases represented by the normal curve fall between –2 and +2 standard deviations from the mean?   |  |  |  | | --- | --- | --- | |  | a. | 34 | |  | b. | 68 | |  | c. | 95 | |  | d. | 100  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 39. If IQ scores are normally distributed, having a mean of 100 and a standard deviation of 15, approximately what percentage of people have IQ scores between 85 and 115?   |  |  |  | | --- | --- | --- | |  | a. | 34 | |  | b. | 50 | |  | c. | 68 | |  | d. | 95  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 40. If IQ scores are normally distributed, having a mean of 100 and a standard deviation of 15, approximately what percentage of people have IQ scores between 55 and 145?   |  |  |  | | --- | --- | --- | |  | a. | 34 | |  | b. | 68 | |  | c. | 95 | |  | d. | 100  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 41. Assume that the test scores of a sociology class are normally distributed, having a mean of 85 and a standard deviation of 8, approximately 95 percent of the scores are somewhere between   |  |  |  | | --- | --- | --- | |  | a. | 82 and 88. | |  | b. | 85 and 101. | |  | c. | 79 and 91. | |  | d. | 69 and 101.  ​  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 42. Asking how closely related are the personality test scores for identical twins is asking how strongly two \_\_\_\_\_\_\_\_ are related.   |  |  |  | | --- | --- | --- | |  | a. | means | |  | b. | standard deviations | |  | c. | modes | |  | d. | variables  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 43. Professor Alonzo is conducting a research study to determine the relationship between test performance and amount of time spent studying among college students. A variable in this study is   |  |  |  | | --- | --- | --- | |  | a. | Professor Alonzo. | |  | b. | college students. | |  | c. | participants. | |  | d. | amount of time studying.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 44. For her thesis, Regina is conducting a study on the relationship between video game playing and aggression. Which type of statistic would be best for this type of research study?   |  |  |  | | --- | --- | --- | |  | a. | inferential statistics | |  | b. | a correlation | |  | c. | descriptive statistics | |  | d. | a score distribution  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 45. A correlation coefficient is a statistical measure of the   |  |  |  | | --- | --- | --- | |  | a. | difference between the highest and lowest scores in a distribution. | |  | b. | extent to which two factors vary together. | |  | c. | statistical significance of a difference between two sample means. | |  | d. | frequency of scores at each level of some measure.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 46. Which of the following statistical measures is most helpful for indicating the extent to which people’s happiness predicts the number of friends they have?   |  |  |  | | --- | --- | --- | |  | a. | standard deviation | |  | b. | median | |  | c. | mean | |  | d. | correlation coefficient  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 47. Which of the following correlations between annual income and education level would best enable you to predict annual income on the basis of level of education?   |  |  |  | | --- | --- | --- | |  | a. | +.05 | |  | b. | –.01 | |  | c. | +.10 | |  | d. | +.50  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 48. Which of the following correlations expresses the strongest degree of relationship between two variables?   |  |  |  | | --- | --- | --- | |  | a. | +.10 | |  | b. | –.67 | |  | c. | –.10 | |  | d. | +.59  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 49. A scatterplot graphically depicts the   |  |  |  | | --- | --- | --- | |  | a. | standard deviation of a distribution of scores. | |  | b. | arithmetic average of a distribution of scores. | |  | c. | total population from which samples may be drawn. | |  | d. | degree of relationship between two variables.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 50. A positive correlation indicates   |  |  |  | | --- | --- | --- | |  | a. | a direct relationship in which two sets of scores increase together or decrease together. | |  | b. | an inverse relationship in which scores for one variable increase as scores for another variable decrease. | |  | c. | a measure of how much scores vary around the mean score. | |  | d. | the difference between the highest and lowest scores in a distribution.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 51. If the points on a scatterplot are clustered in a pattern that extends from lower left to upper right, this would suggest that the two variables depicted are   |  |  |  | | --- | --- | --- | |  | a. | normally distributed. | |  | b. | positively correlated. | |  | c. | negatively correlated. | |  | d. | not correlated.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 52. Dr. Constantin creates a scatterplot to display the relationship between intelligence test scores and career advancement. The points on the scatterplot are most likely clustered in a pattern that   |  |  |  | | --- | --- | --- | |  | a. | resembles a U-shaped curve. | |  | b. | extends from the upper left to the lower right of the plot. | |  | c. | resembles a bell-shaped curve. | |  | d. | extends from the lower left to the upper right of the plot.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 53. A negative correlation indicates   |  |  |  | | --- | --- | --- | |  | a. | a direct relationship in which two sets of scores increase together or decrease together. | |  | b. | an inverse relationship in which scores for one variable increase as scores for another variable decrease. | |  | c. | a measure of how much scores vary around the mean score. | |  | d. | the difference between the highest and lowest scores in a distribution.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 54. Maira created a scatterplot to display the relationship between university students’ self-confidence and their pessimism. The points on the scatterplot are most likely clustered in a pattern that   |  |  |  | | --- | --- | --- | |  | a. | resembles a bell-shaped curve. | |  | b. | extends from the upper left to the lower right. | |  | c. | resembles a U-shaped curve. | |  | d. | extends from the lower left to the upper right.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 55. The perception of a relationship between two variables that does not exist is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | illusory correlation. | |  | b. | positive correlation. | |  | c. | negative correlation. | |  | d. | regression toward the mean.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 56. Chase tells his friend that if he purchases lottery tickets from a particular store, he is much more likely to find a winning ticket. Chase’s belief best illustrates   |  |  |  | | --- | --- | --- | |  | a. | regression toward the mean. | |  | b. | a normal curve. | |  | c. | an illusion of control. | |  | d. | a scatterplot.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 57. Gabriel had a dream that the beautiful woman he met yesterday would call him and ask him for a date. The woman did call the next day, so Gabriel believes that dreams accurately predict future events. His belief best illustrates a(n)   |  |  |  | | --- | --- | --- | |  | a. | normal curve. | |  | b. | illusory correlation. | |  | c. | standard deviation. | |  | d. | scatterplot.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 58. Which statistical phenomenon refers to the tendency for extraordinary or unusual events to be followed by more ordinary events?   |  |  |  | | --- | --- | --- | |  | a. | the standard deviation | |  | b. | the normal curve | |  | c. | regression toward the mean | |  | d. | illusory correlation  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 59. Students who score much higher on an exam than they usually do can reasonably anticipate \_\_\_\_\_\_\_\_ scores when they are retested.   |  |  |  | | --- | --- | --- | |  | a. | very low | |  | b. | somewhat lower | |  | c. | equally high | |  | d. | even higher  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 60. Unusual ESP subjects who defy chance when first tested nearly always lose their “psychic powers” when retested. This decline is best explained in terms of   |  |  |  | | --- | --- | --- | |  | a. | illusory correlation. | |  | b. | regression toward the mean. | |  | c. | the standard deviation. | |  | d. | the normal curve.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 61. Although Iker once scored three touchdowns during a single high school football game, he was never able to beat or match that record in future games. His experience may be at least partially explained in terms of   |  |  |  | | --- | --- | --- | |  | a. | an illusion of control. | |  | b. | regression toward the mean. | |  | c. | illusory correlation. | |  | d. | the standard deviation.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 62. After she was robbed by a group of 16-year-olds, Mrs. Seymour formed the opinion that most if not all young people are delinquents. Mrs. Seymour ought to be reminded that accurate generalizations depend on   |  |  |  | | --- | --- | --- | |  | a. | a realization that random events may not look random. | |  | b. | detecting cause-effect relationships. | |  | c. | the observation of representative samples. | |  | d. | the selection of samples from a skewed population.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 63. We can most accurately estimate the mean of a population if a sample is   |  |  |  | | --- | --- | --- | |  | a. | large in size and low in variability. | |  | b. | small in size and high in variability. | |  | c. | large in size and high in variability. | |  | d. | small in size and low in variability.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 64. The average scores of two samples taken from the same population are most likely to differ if   |  |  |  | | --- | --- | --- | |  | a. | the samples are both small. | |  | b. | the standard deviations of the samples are both small. | |  | c. | the samples differ from each other in size. | |  | d. | the sample means are both similar to the sample medians.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 65. Antonio, a member of his school’s tennis team, has an opportunity to play against a nationally acclaimed professional tennis player. How many sets should Antonio choose to play with the professional in order to maximize his own slim chances of winning?   |  |  |  | | --- | --- | --- | |  | a. | 3 | |  | b. | 6 | |  | c. | 9 | |  | d. | 12  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 66. If half the students at Marsh College have brown eyes, which of the following events is most probable?   |  |  |  | | --- | --- | --- | |  | a. | In a class consisting of 15 students, 80 percent or more have brown eyes. | |  | b. | In a class consisting of 30 students, 80 percent or more have brown eyes. | |  | c. | In a class consisting of 45 students, 80 percent or more have brown eyes. | |  | d. | All of these answers are equally probable.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 67. One of the best ways to infer a population difference from a sample difference is to   |  |  |  | | --- | --- | --- | |  | a. | make sure that the sample has a standard mean. | |  | b. | conduct a meta-analysis. | |  | c. | create a bar graph. | |  | d. | do a correlational analysis.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 68. Statistical significance refers to whether research   |  |  |  | | --- | --- | --- | |  | a. | variables are causally related. | |  | b. | participants were randomly assigned to particular conditions. | |  | c. | findings are due to chance variations. | |  | d. | results add support to previous findings.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 69. Dr. Heider is studying the differences in athletic ability between tall and short people. What would be his null hypothesis?   |  |  |  | | --- | --- | --- | |  | a. | There is no difference in athletic ability between tall and short people. | |  | b. | There is a difference in athletic ability between tall and short people. | |  | c. | Tall people have greater athletic ability than short people. | |  | d. | Short people have greater athletic ability than tall people.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 70. A random sample of females was observed to exhibit a lower average level of self-esteem than a random sample of males. To assess the likelihood that this observed difference reflects a real difference in the average self-esteem of the total population of males and females, you should   |  |  |  | | --- | --- | --- | |  | a. | construct a scatterplot. | |  | b. | calculate a correlation coefficient. | |  | c. | plot the distribution of self-esteem levels among all males and females. | |  | d. | conduct a test of statistical significance.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 71. The size of the difference found between groups in a research study is referred to as the   |  |  |  | | --- | --- | --- | |  | a. | effect size. | |  | b. | meta-analysis. | |  | c. | statistical significance. | |  | d. | null hypothesis.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 72. An observed difference between two sample groups is more likely to be statistically significant if   |  |  |  | | --- | --- | --- | |  | a. | the observed difference is small. | |  | b. | the sample groups are small. | |  | c. | the standard deviations of the sample groups are small. | |  | d. | both samples are drawn from the same population.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 73. Dr. Washington is examining the difference in science academic achievement among boys and girls in middle school. He has collected data from thousands of students across the country and has found that there is a significant difference between boys’ and girls’ scores, with boys performing two points higher (out of 100) than girls, on average. While his findings are statistically significant, they lack   |  |  |  | | --- | --- | --- | |  | a. | reliability. | |  | b. | validity. | |  | c. | a clear relationship. | |  | d. | practical significance.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |