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| Multiple Choice |

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| 1. Different methods of developing useful information from large data bases are dealt with under     |  |  |  | | --- | --- | --- | |  | a. | data manipulation. | |  | b. | data warehousing. | |  | c. | big data. | |  | d. | data mining. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 2. The process of capturing, storing, and maintaining data is known as   |  |  |  | | --- | --- | --- | |  | a. | data manipulation. | |  | b. | data mining. | |  | c. | data warehousing. | |  | d. | big data. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 3. The subject of **data mining** deals with   |  |  |  | | --- | --- | --- | |  | a. | methods for developing useful decision-making information from large data bases. | |  | b. | keeping data secure so that unauthorized individuals cannot access the data. | |  | c. | computational procedure for data analysis. | |  | d. | computing the average for data. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 4. In a questionnaire, respondents are asked to mark their gender as male or female. The scale of measurement for gender is     |  |  |  | | --- | --- | --- | |  | a. | ordinal scale. | |  | b. | nominal scale. | |  | c. | ratio scale. | |  | d. | interval scale. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 5. The scale of measurement that is used to rank order the observation for a variable is called the   |  |  |  | | --- | --- | --- | |  | a. | ratio scale. | |  | b. | ordinal scale. | |  | c. | nominal scale. | |  | d. | interval scale. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 6. Some hotels ask their guests to rate the hotel's services as excellent, very good, good, and poor. This is an example of the   |  |  |  | | --- | --- | --- | |  | a. | ordinal scale. | |  | b. | ratio scale. | |  | c. | nominal scale. | |  | d. | interval scale. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 7. The data measured on ordinal scale exhibits all the properties of data measured on     |  |  |  | | --- | --- | --- | |  | a. | ratio scale. | |  | b. | interval scale. | |  | c. | nominal scale. | |  | d. | nominal and interval scales. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 8. Temperature is an example of a variable that uses   |  |  |  | | --- | --- | --- | |  | a. | the ratio scale. | |  | b. | the interval scale. | |  | c. | the ordinal scale. | |  | d. | either the ratio or the ordinal scale. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 9. Arithmetic operations provide meaningful results for variables that   |  |  |  | | --- | --- | --- | |  | a. | use any scale of measurement except nominal. | |  | b. | appear as non-numerical values. | |  | c. | are quantitative. | |  | d. | have non-negative values. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 10. Income is an example of a variable that uses the   |  |  |  | | --- | --- | --- | |  | a. | ratio scale. | |  | b. | interval scale. | |  | c. | nominal scale. | |  | d. | ordinal scale. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 11. Data measured a nominal scale   |  |  |  | | --- | --- | --- | |  | a. | must be alphabetic. | |  | b. | can be either numeric or nonnumeric. | |  | c. | must be numeric. | |  | d. | must rank order the data. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 12. The scale of measurement that has an inherent zero value defined is the   |  |  |  | | --- | --- | --- | |  | a. | ratio scale. | |  | b. | nominal scale. | |  | c. | ordinal scale. | |  | d. | interval scale. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 13. The measurement scale suitable for quantitative data is     |  |  |  | | --- | --- | --- | |  | a. | ordinal scale. | |  | b. | nominal scale. | |  | c. | either interval or ratio scale. | |  | d. | only interval scale. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 14. Data   |  |  |  | | --- | --- | --- | |  | a. | are always numeric. | |  | b. | are always non-numeric. | |  | c. | are the raw material of statistics. | |  | d. | are always categorical. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 15. The entities on which data are collected are   |  |  |  | | --- | --- | --- | |  | a. | elements. | |  | b. | populations. | |  | c. | samples. | |  | d. | observations. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 16. The set of measurements collected for a particular element are called   |  |  |  | | --- | --- | --- | |  | a. | variables. | |  | b. | observations. | |  | c. | samples. | |  | d. | populations. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 17. A characteristic of interest for the elements is called a   |  |  |  | | --- | --- | --- | |  | a. | sample. | |  | b. | data set. | |  | c. | variable. | |  | d. | quality. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 18. All the data collected in a particular study are referred to as the   |  |  |  | | --- | --- | --- | |  | a. | inference. | |  | b. | variable. | |  | c. | data set. | |  | d. | population. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 19. Quantitative data   |  |  |  | | --- | --- | --- | |  | a. | are always non-numeric. | |  | b. | may be either numeric or non-numeric. | |  | c. | are always numeric. | |  | d. | are never numeric. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 20. In a questionnaire, respondents are asked to mark their gender as male or female. Gender is an example of a(n)   |  |  |  | | --- | --- | --- | |  | a. | categorical variable. | |  | b. | quantitative variable. | |  | c. | interval-scale variable. | |  | d. | ordinal-scale variable.​ |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 21. The number of observations will always be the same as the   |  |  |  | | --- | --- | --- | |  | a. | number of variables. | |  | b. | number of elements. | |  | c. | population size. | |  | d. | sample size. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 22. Categorical data   |  |  |  | | --- | --- | --- | |  | a. | must be numeric. | |  | b. | must be nonnumeric. | |  | c. | cannot be numeric. | |  | d. | may be either numeric or nonnumeric. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 23. Categorical data   |  |  |  | | --- | --- | --- | |  | a. | indicate either how much or how many. | |  | b. | cannot be numeric | |  | c. | are labels used to identify attributes of elements. | |  | d. | must be nonnumeric. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 24. Ordinary arithmetic operations are meaningful   |  |  |  | | --- | --- | --- | |  | a. | only with categorical data. | |  | b. | only with quantitative data. | |  | c. | either with quantitative or categorical data. | |  | d. | with neither quantitative or categorical data. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 25. Social security numbers consist of numeric values. Therefore, social security number is an example of   |  |  |  | | --- | --- | --- | |  | a. | a quantitative variable. | |  | b. | either a quantitative or a categorical variable. | |  | c. | an exchange variable. | |  | d. | a categorical variable. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 26. Temperature is an example of   |  |  |  | | --- | --- | --- | |  | a. | a categorical variable. | |  | b. | a quantitative variable. | |  | c. | either a quantitative or categorical variable. | |  | d. | neither a quantitative nor categorical variable. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 27. For ease of data entry into a university database, 1 denotes that the student is an undergraduate and 2 indicates that the student is a graduate student. In this case data are   |  |  |  | | --- | --- | --- | |  | a. | categorical. | |  | b. | quantitative. | |  | c. | either categorical or quantitative. | |  | d. | neither categorical nor quantitative. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 28. Arithmetic operations are inappropriate for   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | quantitative data. | |  | c. | both categorical and quantitative data. | |  | d. | large data sets. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 29. Income is an example of   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | either categorical or quantitative data. | |  | c. | nominal data. | |  | d. | quantitative data. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 30. Data collected at the same, or approximately the same point in time are   |  |  |  | | --- | --- | --- | |  | a. | time series data. | |  | b. | approximate time series data. | |  | c. | cross-sectional data. | |  | d. | approximate data. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 31. Data collected over several time periods are   |  |  |  | | --- | --- | --- | |  | a. | time series data. | |  | b. | time controlled data. | |  | c. | cross-sectional data. | |  | d. | categorical data. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 32. Statistical studies in which researchers do not control variables of interest are   |  |  |  | | --- | --- | --- | |  | a. | experimental studies. | |  | b. | uncontrolled experimental studies. | |  | c. | not of any value. | |  | d. | observational studies. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 33. Statistical studies in which researchers control variables of interest are   |  |  |  | | --- | --- | --- | |  | a. | experimental studies. | |  | b. | control observational studies. | |  | c. | non-experimental studies. | |  | d. | observational studies. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 34. The summaries of data, which may be tabular, graphical, or numerical, are referred to as   |  |  |  | | --- | --- | --- | |  | a. | inferential statistics. | |  | b. | descriptive statistics. | |  | c. | statistical inference. | |  | d. | data analytics. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Remember | |

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| 35. Statistical inference   |  |  |  | | --- | --- | --- | |  | a. | refers to the process of drawing inferences about the sample based on the characteristics of the population. | |  | b. | is the same as descriptive statistics. | |  | c. | is the process of drawing inferences about the population based on the information taken from the sample. | |  | d. | is the same as a census. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 36. The collection of all elements of interest in a particular study is   |  |  |  | | --- | --- | --- | |  | a. | the population. | |  | b. | the sample. | |  | c. | statistical inference. | |  | d. | descriptive statistics. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Remember | |

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| 37. A portion of the population selected to represent the population is called   |  |  |  | | --- | --- | --- | |  | a. | statistical inference. | |  | b. | descriptive statistics. | |  | c. | a census. | |  | d. | a sample. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 38. In a sample of 800 students in a university, 240 or 30% are Business majors. The 30% is an example of   |  |  |  | | --- | --- | --- | |  | a. | a sample. | |  | b. | a population. | |  | c. | statistical inference. | |  | d. | descriptive statistics. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Understand | |

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| 39. In a sample of 400 students in a university, 80 or 20%  are Business majors. Based on the above information, the school's paper reported that "20% of all the students at the university are Business majors." This report is an example of   |  |  |  | | --- | --- | --- | |  | a. | a sample. | |  | b. | a population. | |  | c. | statistical inference. | |  | d. | descriptive statistics. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 40. Five hundred residents of a city are polled to obtain information on voting intentions in an upcoming city election. The five hundred residents in this study is an example of a(n)   |  |  |  | | --- | --- | --- | |  | a. | census. | |  | b. | sample. | |  | c. | observation. | |  | d. | population. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 41. A statistics professor asked students in a class their ages. On the basis of this information, the professor states that the average age of all the students in the university is 24 years. This is an example of   |  |  |  | | --- | --- | --- | |  | a. | a census. | |  | b. | descriptive statistics. | |  | c. | an experiment. | |  | d. | statistical inference. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 42. The owner of a factory regularly requests a graphical summary of all employees' salaries. The graphical summary of salaries is an example of   |  |  |  | | --- | --- | --- | |  | a. | a sample. | |  | b. | descriptive statistics. | |  | c. | statistical inference. | |  | d. | an experiment. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Understand | |

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| 43. The Department of Transportation of a city has noted that on the average there are 17 accidents per day. The average number of accidents is an example of​   |  |  |  | | --- | --- | --- | |  | a. | ​descriptive statistics. | |  | b. | ​statistical inference. | |  | c. | ​a sample. | |  | d. | ​a population. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Understand | |

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| 44. The process of analyzing sample data in order to draw conclusions about the characteristics of a population is called   |  |  |  | | --- | --- | --- | |  | a. | descriptive statistics. | |  | b. | statistical inference. | |  | c. | data analysis. | |  | d. | data summarization. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Remember | |

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| 45. In a post office, the mailboxes are numbered from 1 to 4,500. These numbers represent   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | quantitative data. | |  | c. | either categorical or quantitative data. | |  | d. | since the numbers are sequential, the data is quantitative. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 46. The average age in a sample of 190 students at City College is 22. As a result of this sample, it can be concluded that the average age of all the students at City College   |  |  |  | | --- | --- | --- | |  | a. | must be more than 22, since the population is always larger than the sample. | |  | b. | must be less than 22, since the sample is only a part of the population. | |  | c. | could not be 22. | |  | d. | is around 22. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 47. Since a sample is a subset of the population, the sample mean   |  |  |  | | --- | --- | --- | |  | a. | is always smaller than the mean of the population. | |  | b. | is always larger than the mean of the population. | |  | c. | must be equal to the mean of the population. | |  | d. | varies around the mean of the population. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 48. The scale of measurement used for variable data that is simply a label for the purpose of identifying the attribute of an element is the   |  |  |  | | --- | --- | --- | |  | a. | ratio scale. | |  | b. | nominal scale. | |  | c. | ordinal scale. | |  | d. | interval scale. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 49. In a data set, the number of elements will always be the same as the number of   |  |  |  | | --- | --- | --- | |  | a. | independent variables. | |  | b. | observations. | |  | c. | data points. | |  | d. | dependent variables. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 50. Which of the following is ***not*** a scale of measurement?   |  |  |  | | --- | --- | --- | |  | a. | Nominal | |  | b. | Ordinal | |  | c. | Interval | |  | d. | Primal |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 51. Which of the following is a scale of measurement?   |  |  |  | | --- | --- | --- | |  | a. | Ratio | |  | b. | Primal | |  | c. | Divisional | |  | d. | Remedial |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 52. Which scale of measurement can be either numeric or non-numeric?   |  |  |  | | --- | --- | --- | |  | a. | Nominal | |  | b. | Ratio | |  | c. | Interval | |  | d. | Quantitative |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 53. Which of the following variables use the ratio scale of measurement?   |  |  |  | | --- | --- | --- | |  | a. | Social security number | |  | b. | Temperature | |  | c. | Gender | |  | d. | Income |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 54. The weight of a candy bar in ounces is an example of   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | either categorical or quantitative data. | |  | c. | weight data. | |  | d. | quantitative data. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 55. The height of a building, measured in feet, is an example of   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | either categorical or quantitative data. | |  | c. | feet data. | |  | d. | quantitative data. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 56. An interviewer has made an error in recording the data. This type of error is known as   |  |  |  | | --- | --- | --- | |  | a. | an experimental error. | |  | b. | a data acquisition error. | |  | c. | a non-experimental error. | |  | d. | a conglomerate error. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 57. Census refers to   |  |  |  | | --- | --- | --- | |  | a. | an experimental study to collect data on the entire population. | |  | b. | an experimental study to collect data on a sample. | |  | c. | a survey to collect data on a sample. | |  | d. | a survey to collect data on the entire population. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Remember | |

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| 58. In experimental studies, the variable of interest   |  |  |  | | --- | --- | --- | |  | a. | is not controlled. | |  | b. | is controlled. | |  | c. | must be numerical. | |  | d. | cannot be numerical. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 59. In observational studies, the variable of interest   |  |  |  | | --- | --- | --- | |  | a. | is not controlled. | |  | b. | is controlled. | |  | c. | must be numerical. | |  | d. | cannot be numerical. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 60. How many scales of measurement exist?   |  |  |  | | --- | --- | --- | |  | a. | 2 | |  | b. | 4 | |  | c. | 6 | |  | d. | 8 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 61. Which of the following scales of measurement are appropriate for quantitative data?   |  |  |  | | --- | --- | --- | |  | a. | Interval and ordinal | |  | b. | Ratio and ordinal | |  | c. | Nominal and ordinal | |  | d. | Interval and ratio |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 62. The sample size   |  |  |  | | --- | --- | --- | |  | a. | can be larger than the population size. | |  | b. | is always smaller than the population size. | |  | c. | can be larger or smaller than the population size. | |  | d. | is always equal to the size of the population. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 63. A population is   |  |  |  | | --- | --- | --- | |  | a. | the same as a sample. | |  | b. | the selection of a random sample. | |  | c. | the collection of all items of interest in a particular study. | |  | d. | always the same size as the sample. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 64. In a random sample of 200 items, 5 items were defective. An estimate of the percentage of defective items in the population is   |  |  |  | | --- | --- | --- | |  | a. | 5%. | |  | b. | 2.5%. | |  | c. | 20%. | |  | d. | 10%. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Apply | |

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| 65. On a street, the houses are numbered from 300 to 450. The house numbers are examples of   |  |  |  | | --- | --- | --- | |  | a. | categorical data. | |  | b. | quantitative data. | |  | c. | both quantitative and categorical data. | |  | d. | neither quantitative nor categorical data. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 66. A survey to collect data on the entire population is   |  |  |  | | --- | --- | --- | |  | a. | a census. | |  | b. | a sample. | |  | c. | a population. | |  | d. | an inference. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Remember | |

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| 67. In a sample of 1,600 registered voters, 912 or 57%  approve of the way the President is doing his job. The 57% approval is an example of   |  |  |  | | --- | --- | --- | |  | a. | a sample. | |  | b. | descriptive statistics. | |  | c. | statistical inference. | |  | d. | a population. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Understand | |

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| 68. In a sample of 1,600 registered voters, 912 or 57% approve of the way the President is doing his job. A political pollster estimates: "Fifty-seven percent of all voters approve of the President." This statement is an example of   |  |  |  | | --- | --- | --- | |  | a. | a sample. | |  | b. | descriptive statistics. | |  | c. | statistical inference. | |  | d. | a population. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 69. Many data analysts define big data by referring to the three V’s of data, which include all of the following except​   |  |  |  | | --- | --- | --- | |  | a. | ​Volume. | |  | b. | ​Validity. | |  | c. | ​Variety. | |  | d. | ​Velocity. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 70. Data dash-board is an analytical technique that falls in the category of​   |  |  |  | | --- | --- | --- | |  | a. | ​prescriptive analytics. | |  | b. | ​predictive analytics. | |  | c. | ​descriptive analytics. | |  | d. | ​diagnostic analytics. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.06 - Analytics | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 71. ​Optimization models, which generate solutions that maximize or minimize some objective subject to a set of constraints, fall into the category of   |  |  |  | | --- | --- | --- | |  | a. | ​prescriptive analytics. | |  | b. | ​predictive analytics. | |  | c. | ​descriptive analytics. | |  | d. | ​diagnostic analytics. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.06 - Analytics | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Understand | |

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| 72. ​Simulation, which is the use of probability and statistical computer models to better understand risk, falls under the category of   |  |  |  | | --- | --- | --- | |  | a. | ​prescriptive analytics. | |  | b. | ​predictive analytics. | |  | c. | ​descriptive analytics. | |  | d. | ​diagnostic analytics. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.06 - Analytics | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Understand | |

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| 73. The set of analytical techniques that yield a best course of action is​   |  |  |  | | --- | --- | --- | |  | a. | ​prescriptive analytics. | |  | b. | ​predictive analytics. | |  | c. | ​descriptive analytics. | |  | d. | ​diagnostic analytics. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Understand | |

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| 74. Analytics is generally thought to comprise three broad categories of techniques that include all of the following except​   |  |  |  | | --- | --- | --- | |  | a. | ​prescriptive analytics. | |  | b. | ​predictive analytics | |  | c. | ​descriptive analytics. | |  | d. | ​diagnostic analytics. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 75. The largest experimental statistical study ever conducted is believed to be for​   |  |  |  | | --- | --- | --- | |  | a. | ​Cholera. | |  | b. | ​Polio. | |  | c. | ​Diphtheria. | |  | d. | ​Malaria. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 76. Which of the following is a categorical variable?​   |  |  |  | | --- | --- | --- | |  | a. | ​Your age on your last birthday | |  | b. | ​Your cell phone area code | |  | c. | ​Your accounting class start time | |  | d. | ​Your high school graduation year |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 77. The major applications of data mining have been made by companies with a strong \_\_\_\_\_\_\_ focus.​   |  |  |  | | --- | --- | --- | |  | a. | ​wholesale | |  | b. | ​manufacturing | |  | c. | consumer | |  | d. | ​research and development |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Understand | |

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| 78. Dr. Kurt Thearling, a leading practitioner in the field, defines data mining as “the \_\_\_\_\_\_\_\_\_ extraction of \_\_\_\_\_\_\_\_\_ information from databases”.​   |  |  |  | | --- | --- | --- | |  | a. | ​thorough, insightful | |  | b. | ​timely, accurate | |  | c. | ​automated, predictive | |  | d. | ​intentional, useful |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.07 - Big Data and Data Mining | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 79. Which of the following is not an example of a firm that sells or leases business database services to clients?   |  |  |  | | --- | --- | --- | |  | a. | ​Dun & Bradstreet | |  | b. | ​Bloomberg | |  | c. | ​Census Bureau | |  | d. | ​Dow Jones & Co. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Remember | |

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| 80. Which of the following variables uses the interval scale of measurement?​   |  |  |  | | --- | --- | --- | |  | a. | ​Standardized test score | |  | b. | ​Time duration | |  | c. | ​Student ID number | |  | d. | ​Vehicle miles-per-gallon |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's : Understand | |

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| 81. The number observations in a complete data set having 10 elements and 5 variables is ​   |  |  |  | | --- | --- | --- | |  | a. | ​5. | |  | b. | ​10. | |  | c. | ​25. | |  | d. | ​50. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | |

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| 82. ​Which of the following is not an example of descriptive statistics?   |  |  |  | | --- | --- | --- | |  | a. | ​A histogram depicting the age distribution for 30 randomly selected students | |  | b. | ​An estimate of the number of Alaska residents who have visited Canada | |  | c. | ​A table summarizing the data collected in a sample of new-car buyers | |  | d. | ​The proportion of mailed-out questionnaires that were returned |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Understand | |

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| 83. ​Facts and figures that are collected, analyzed and summarized for presentation and interpretation are   |  |  |  | | --- | --- | --- | |  | a. | ​variables. | |  | b. | ​elements. | |  | c. | ​time series data. | |  | d. | ​data. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| 84. The most common type of observational study is​   |  |  |  | | --- | --- | --- | |  | a. | ​an experiment. | |  | b. | ​a survey. | |  | c. | ​a debate. | |  | d. | ​a statistical inference. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.03 - Data Sources | | *NATIONAL STANDARDS:* | United States - BUSPROG:Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Remember | |

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| Subjective Short Answer |

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| 85. After graduation ceremonies at a university, six graduates were asked whether they were in favor of (identified by 1) or against (identified by 0) abortion. Some information about these graduates is shown below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Graduate** | **Sex** | **Age** | **Abortion Issue** | **Class Rank** | | Marissa | F | 24 | 1 | 1 | | Jason | M | 22 | 1 | 2 | | Wendy | F | 41 | 0 | 3 | | Edward | M | 38 | 0 | 20 | | Jennifer | F | 25 | 1 | 4 | | Tim | M | 19 | 0 | 8 |   ​   |  |  | | --- | --- | | a. | How many elements are in the data set? | | b. | How many variables are in the data set? | | c. | How many observations are in the data set? | | d. | Which of the above variables (Sex, Age, Abortion Issue, Class rank) are categorical and which are quantitative variables? | | e. | Are arithmetic operations appropriate for the variable "abortion issue"? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 6 | | b. | 4 | | c. | 6 | | d. | Sex: categorical | |  | Age: quantitative | |  | Abortion Issue: categorical | |  | Class Rank: categorical | | e. | No | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 86. A recent issue of Fortune Magazine reported that the following companies had the lowest sales per employee among the Fortune 500 companies.   |  |  |  | | --- | --- | --- | |  | **Sales per Employee (In $1,000s)** | **Sales Rank** | | **Company** | | Seagate Technology | 42.20 | 285 | | SSMC | 42.19 | 414 | | Russel | 41.99 | 480 | | Maxxam | 40.88 | 485 | | Dibrell Brothers | 22.56 | 470 |   ​   |  |  | | --- | --- | | a. | How many elements are in the above data set? | | b. | How many variables are in the above data set? | | c. | How many observations are in the above data set? | | d. | Name the variables and indicate whether they are categorical or quantitative. |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 5 | | b. | 2 | | c. | 5 | | d. | Sales per employee: quantitative; Sales rank: categorical | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 87. The following shows the temperatures (high, low) and weather conditions in a given Sunday for some selected world cities. For the weather conditions, the following notations are used: c = clear; cl = cloudy; sh = showers; pc = partly cloudy.   |  |  |  |  | | --- | --- | --- | --- | | **City** | **Hi** | **Lo** | **Condition** | | Acapulco | 99 | 77 | pc | | Bangkok | 92 | 78 | pc | | Mexico City | 77 | 57 | sh | | Montreal | 72 | 56 | pc | | Paris | 77 | 58 | c | | Rome | 88 | 68 | cl | | Toronto | 78 | 61 | c |   ​   |  |  | | --- | --- | | a. | How many elements are in this data set? | | b. | How many variables are in this data set? | | c. | How many observations are in this data set? | | d. | Name the variables and indicate whether they are categorical or quantitative. | | e. | For which variables are arithmetic operations appropriate and for which are they not appropriate? |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 7 | | b. | 3 | | c. | 7 | | d. | Hi: quantitative, Lo: quantitative, Condition: categorical | | e. | Hi: appropriate, Lo: appropriate, Condition: not appropriate | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 88. The following data shows the yearly income distribution of a sample of 200 employees at MNM, Inc.   |  |  | | --- | --- | | **Yearly Income (In $1,000s)** | **Number of Employees** | | 20 - 24 | 2 | | 25 - 29 | 48 | | 30 - 34 | 60 | | 35 - 39 | 80 | | 40 - 44 | 10 |   ​   |  |  | | --- | --- | | a. | What percentage of employees have yearly incomes of $35,000 or more? | | b. | Does the figure computed in part a exemplify statistical inference? If no, what kind of statistical information does it represent? | | c. | Based on this sample, the president of the company said that "45% of all our employees' yearly incomes are $35,000 or more." What kind of statistical information does the president's statement represent? | | d. | With the statement made in Part c, can we be assured that more than 45% of all employees' yearly incomes are at least $35,000? Explain. | | e. | What percentage of employees of the sample have yearly incomes of $29,000 or less? | | f. | How many variables are presented in the above data set? | | g. | How many observation results are represented in the above data set? |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 45% | | b. | No, it is descriptive statistics. | | c. | statistical inference | | d. | No, this is simply an inference and approximation based on the sample information. | | e. | 25% | | f. | 2 | | g. | 200 | | | *POINTS:* | 1 | | *DIFFICULTY:* | Challenging | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data BSST.ASWC.17.01.04 - Descriptive Statistics BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: United States - AK - DISC: Descriptive Statistics United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Apply | Bloom's: Understand | |

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| 89. A recent issue of a national magazine reported that in a national public opinion survey conducted among 2,000 individuals, 56% were in favor of gun control, 40% opposed gun control, and 4% had no opinion on the subject.   |  |  | | --- | --- | | a. | What is the sample in this survey? | | b. | Based on the sample, what percentage of the population would you think is in favor of gun control? | | c. | Based on the sample, what percentage of the population would you think have no opinion on the subject? |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | The 2000 individuals who were approached | | b. | 56% | | c. | 4% | | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |

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| 90. The following table shows the starting salaries of a sample of recent business graduates.   |  |  | | --- | --- | | **Income (In $1,000s)** | **Number of Graduates** | | 15 - 19 | 40 | | 20 - 24 | 60 | | 25 - 29 | 80 | | 30 - 34 | 18 | | 35 - 39 | 2 |   ​   |  |  | | --- | --- | | a. | What percentage of graduates in the sample had starting salaries of at least $30,000? | | b. | Of the graduates in the sample, what percentage had starting salaries of less than $25,000? | | c. | Based on this sample, what percentage of all business graduates do you estimate to have starting salaries of at least $20,000? |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 10% | | b. | 50% | | c. | 80% | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Apply | |

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| 91. Michael, Inc., a manufacturer of electric guitars, is a small firm with 50 employees. The table below shows the hourly wage distribution of the employees.   |  |  | | --- | --- | | **Hourly Wages (In Dollars)** | **Number of Employees** | | 10 - 13 | 8 | | 14 - 17 | 12 | | 18 - 21 | 20 | | 22 - 25 | 10 |   ​   |  |  | | --- | --- | | a. | How many employees receive hourly wages of at least $18? | | b. | What percentage of the employees have hourly wages of at least $18? | | c. | What percentage of the employees have hourly wages of less than $14? |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 30 | | b. | 60% | | c. | 16% | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.04 - Descriptive Statistics | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Descriptive Statistics | | *KEYWORDS:* | Bloom's: Apply | |

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| 92. The following information regarding the top eight Fortune 500 companies was presented in an issue of *Fortune Magazine*.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **Sales** **$ Millions** | **Sales Rank** | **Profit $ Millions** | **Profit Rank** | | **Company** | | General Motors | 161,315 | 1 | 2,956 | 30 | | Ford Motor | 144,416 | 2 | 22,071 | 2 | | Wal-Mart Stores | 139,208 | 3 | 4,430 | 14 | | Exxon | 100,697 | 4 | 6,370 | 5 | | General Electric | 100,469 | 5 | 9,269 | 3 | | Int'l Business Machines | 81,667 | 6 | 6,328 | 6 | | Citigroup | 76,431 | 7 | 5,807 | 8 | | Philip Morris | 57,813 | 8 | 5,372 | 9 | | Boeing | 56,154 | 9 | 1,120 | 82 | | AT&T | 53,588 | 10 | 6,398 | 4 |   ​   |  |  | | --- | --- | | a. | How many elements are in the above data set? | | b. | How many variables are in this data set? | | c. | How many observations are in this data set? | | d. | Which variables are categorical and which are quantitative variables? | | e. | What measurement scale is used for each variable? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 10 | | b. | 4 | | c. | 10 | | d. | Sales and Profits are quantitative | |  | Sales Rank, and Profits Rank are categorical | | e. | Sales: ratio | |  | Sales Rank: ordinal | |  | Profits: ratio | |  | Profits Rank: ordinal | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 93. The following information regarding a sample of seven students is provided.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | ​  **Student** | **Identification Number** | **Grade Point Average** | ​  **Classification** | ​  **Gender** | **Rank in Class** | | Adam | 1234 | 2.89 | Senior | Male | 15 | | Brandon | 8978 | 2.01 | Junior | Male | 25 | | Jason | 6578 | 3.97 | Freshman | Male | 3 | | Marissa | 2345 | 3.98 | Sophomore | Female | 2 | | Michelle | 8901 | 2.67 | Senior | Female | 18 | | Wendy | 7789 | 4.00 | Senior | Female | 1 | | Webster | 6780 | 3.77 | Freshman | Male | 4 |   ​   |  |  | | --- | --- | | a. | How many elements are in the above data set? | | b. | How many variables are in this data set? | | c. | How many observations are in this data set? | | d. | Which variables are categorical and which are quantitative variables? | | e. | What measurement scale is used for each variable? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  |  | | --- | --- | --- | | a. | 7 | | | b. | 5 | | | c. | 7 | | | d. | Grade point average is quantitative. All others are categorical. | | | e. | Identification Number: nominal | | |  | Grade Point Average: ratio |  | |  | Classification: ordinal | | |  | Gender: nominal | | |  | Rank in Class: ordinal | | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 94. The following information regarding the ten richest Americans was reported in a recent issue of *Forbes*.  ​   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Name** | **Ranking** | **Worth ($Billions)** | **Age** | **Marital Status** | **Source** | | Gates, William | 1 | 59.0 | 51 | married | Microsoft | | Buffett, Warren | 2 | 52.0 | 77 | married | Berkshire Hathaway | | Adelson, Sheldon | 3 | 28.0 | 74 | married | casinos, hotels | | Ellison, L. J. | 4 | 26.0 | 63 | married | Oracle | | Brin, Sergey | 5 | 18.5 | 34 | married | Google | | Page, Larry | 5 | 18.5 | 34 | single | Google | | Kerkorian, Kirk | 7 | 18.0 | 90 | divorced | investments, casinos | | Dell, Michael | 8 | 17.2 | 42 | married | Dell | | Koch, Charles | 9 | 17.0 | 71 | married | oil, commodities | | Koch, David | 9 | 17.0 | 67 | married | oil, commodities |   ​   |  |  | | --- | --- | | a. | How many elements are in the above data set? | | b. | How many variables are in this data set? | | c. | How many observations are in this data set? | | d. | Which variables are categorical and which are quantitative? | | e. | What measurement scale is used for each variable? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  |  | | --- | --- | --- | | a. | 10 | | | b. | 5 | | | c. | 10 | | | d. | Worth and Age are quantitative | | |  | Ranking, Marital Status, and Source are categorical | | | e. | Ranking: ordinal | | |  | Worth: ratio |  | |  | Age: ratio | | |  | Marital Status: nominal | | |  | Source: nominal | | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 95. The following national weather report gives the temperatures and weather conditions on the previous day in cities across the nation.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | City | Hi | Lo | Condition | |  | Albany, N.Y. | 88 | 60 | cloudy | |  | Chicago | 92 | 64 | clear | |  | Dallas-Ft.Worth | 89 | 72 | cloudy | |  | Denver | 75 | 54 | clear | |  | Hartford | 88 | 61 | cloudy | |  | Honolulu | 86 | 70 | clear | |  | Kansas City | 93 | 74 | clear | |  | Los Angeles | 80 | 62 | cloudy | |  | Nashville | 94 | 72 | rain | |  | New York City | 90 | 69 | rain | |  | Philadelphia | 90 | 67 | rain |   ​   |  |  | | --- | --- | | a. | How many elements are in this data set? | | b. | How many variables are in this data set? | | c. | How many observations are there in the above data set? | | d. | Which variables are categorical and which are quantitative? | | e. | What measurement scale is used for temperature and weather conditions? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 11 | | b. | 3 | | c. | 11 | | d. | Temperature is quantitative | |  | Weather Condition is categorical | | e. | Temperature (Hi and Lo): interval | |  | Weather Condition: nominal | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: | | *KEYWORDS:* | Bloom's: Understand | |

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| 96. The following table shows the age distribution of a sample of 180 students at a local college.  ​   |  |  |  | | --- | --- | --- | |  | **Age of Students** | **Number of Students** | |  | 15 - 19 | 36 | |  | 20 - 24 | 44 | |  | 25 - 29 | 60 | |  | 30 - 34 | 38 | |  | 35 - 39 | 2 | |  | Total | 180 |   ​   |  |  | | --- | --- | | a. | Of the students in the sample, what percentage is younger than 20 years of age? | | b. | What percentage is at least 30 years of age? | | c. | Based on this sample, what percentage of the students at the college do you estimate to be younger than 25 years of age? |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | 20% | | b. | 22.22% | | c. | 44.44% | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Apply | |

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| 97. The highway patrol is interested in determining the average speed of automobiles traveling on I-75 between Chattanooga and Atlanta. To accomplish this task, the speed of every tenth car passing a particular point on I-75 is recorded.   |  |  | | --- | --- | | a. | What is the population for this study? | | b. | What constitutes the sample? | | c. | Is speed a categorical or a quantitative variable? | | d. | What type of measurement scale is used? |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *ANSWER:* | |  |  | | --- | --- | | a. | All the automobiles on I-75 | | b. | All the tenth cars | | c. | quantitative | | d. | ratio | | | *POINTS:* | 1 | | *DIFFICULTY:* | Moderate | | *LEARNING OBJECTIVES:* | BSST.ASWC.17.01.02 - Data BSST.ASWC.17.01.05 - Statistical Inference | | *NATIONAL STANDARDS:* | United States - BUSPROG: Analytic | | *STATE STANDARDS:* | United States - AK - DISC: United States - AK - DISC: Statistical Inference | | *KEYWORDS:* | Bloom's: Understand | |