Chapter 1

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| 1. | Answer True or False. Statistics is a discipline of data-based reasoning. |
|  | Ans:  True Difficulty Level:  Easy Learning Objective:  Define statistical terms |

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| 2. | Answer True or False. Statistics deals exclusively with displays of data and charts pertaining to different aspects of human activity. |
|  | Ans:  False Difficulty Level:  Medium Learning Objective:  Define statistical terms |

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| 3. | Statistics deals with collecting informative \_\_\_\_\_\_, interpreting these \_\_\_\_\_\_, and drawing \_\_\_\_\_\_ about a phenomenon under study. | |
| Ans: | data, data, conclusions |
|  | Difficulty Level:  Medium Learning Objective:  Develop a statement of purpose. | |

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| 4. | The two main branches of statistics are inferential and \_\_\_\_\_\_. | |
| Ans: | Descriptive |
|  | Difficulty Level:  Easy Learning Objective:  Define statistical terms | |

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| 5. | Several months before a presidential election, a consulting firm asks about 2000 voters for their preferences. The final report helps to predict winners and track changes in voter preferences.  The statement "*track changes in voter preferences*" corresponds to \_\_\_\_\_\_ statistics. | |
| Ans: | Descriptive |
|  | Difficulty Level:  Medium Learning Objective:  Define statistical terms | |

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| 6. | After the data are collected, statistical methods used to summarize and describe the prominent features of data are known as \_\_\_\_\_\_. |
|  | A) statistics B) descriptive statistics C) inferential statistics D) charts |
|  | Ans:  B Difficulty Level:  Easy Learning Objective:  Define statistical terms |

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| 7. | The branch of statistics called experimental design can guide the investigator in planning the manner and extent of \_\_\_\_\_\_. | |
| Ans: | data collection |
|  | Difficulty Level:  Easy Learning Objective:  Create a randomly-generated sample using a random number table. | |

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| 8. | The data set that is actually acquired through the process of observations is the statistical population. |
|  | Ans:  False Difficulty Level:  Medium Learning Objective:  Identify the population and sample from a given scenario. |

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| 9. | The vast collection of all potential observations that can be conceived in a given context is the population. |
|  | Ans:  True Difficulty Level:  Medium Learning Objective:  Identify the population and sample from a given scenario. |

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| 10. | A \_\_\_\_\_\_ from a statistical population is the subset of measurements that are actually collected in the course of an investigation. | |
| Ans: | Sample |
|  | Difficulty Level:  Medium Learning Objective:  Identify the population and sample from a given scenario. | |

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| 11. | Consider the population of all athletes in the last Olympic Games. You want to learn the total number of hours per week of training for an athlete.  (a) Specify the population unit.  (b) Specify the variable of interest.  (c) Specify the statistical population. | |
| Ans: | (a) An athlete that participated in the last Olympic Games.  (b) The number of training hours per week.  (c) The collection of all possible number of hours. |
|  | Difficulty Level:  Difficult Learning Objective:  Identify the population and sample from a given scenario. | |

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| 12. | Consider the population of all frequent flyers of an airline. You want to know the number of flights taken by a frequent flyer in a year.  (a) Specify the population unit.  (b) Specify the variable of interest.  (c) Specify the statistical population. | |
| Ans: | (a) A frequent flyer of that airline.  (b) The number of flights taken in a year.  (c) The collection of all possible number of flights taken. |
|  | Difficulty Level:  Difficult Learning Objective:  Identify the population and sample from a given scenario. | |

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| 13. | A college professor asked 35 students the day after the test, to estimate their test score using the scale from 0 to 100.  (a) Specify the population unit.  (b) Specify the statistical population.  (c) Specify the sample. | |
| Ans: | (a) A student.  (b) The collection of all possible responses regarding test scores.  (c) The set of responses given by these 35 students. |
|  | Difficulty Level:  Difficult Learning Objective:  Identify the population and sample from a given scenario. | |

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| 14. | The manager of a bookstore selects a group of customers that have read a specific author and gives them one of the author's books, asking them to complete a questionnaire after reading the book. Should the answers given by these customers considered a random sample? | |
| Ans: | No |
|  | Difficulty Level:  Medium Learning Objective:  Describe how to improve the quality of a sample. | |

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| 15. | Determine whether the following is anecdotal or based on sample?  Your twin neighbors think that the last Indiana Jones movie is the best. | |
| Ans: | Anecdotal |
|  | Difficulty Level:  Easy Learning Objective:  Describe how to improve the quality of a sample. | |

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| 16. | Select the expression that best completes the following statement.  "Once the decision to collect data to answer a question is made, we must develop a \_\_\_\_\_\_ that is both specific and unambiguous." |
|  | A) strategy B) statistical population C) chart D) statement of purpose |
|  | Ans:  D Difficulty Level:  Medium Learning Objective:  Develop a statement of purpose. |

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| 17. | To pursue potential improvements of a process, one needs to focus more closely on particulars. Three questions should always be asked before gathering further data.  Which are these three questions? | | | |
| A) | Why, When, Where | C) | Why, Where, Who |
| B) | Why, When, Who | D) | When, Where, Who |
|  | Ans:  D Difficulty Level:  Medium Learning Objective:  Describe how to improve the quality of a sample. Develop a statement of purpose. | | | |