# *Business Statistics 11th edition Black Test Bank*

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***Business Statistics, 11e*** **(Black)**
**Chapter 1 Introduction to Statistics**

1) Virtually all areas of business use statistics in decision making.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

2) Statistics can be used to predict business in the future.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

3) Statistics are used to market vitamins.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

4) A list of final grades in an introductory class in business is an example of statistics.
Answer: FALSE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

5) A graph of purchases made from one store location would be an example of statistics within a business context.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

6) The complete collection of all entities under study is called the sample.
Answer: FALSE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.



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7) A portion or subset of the entities under study is called the statistic.
Answer: FALSE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

8) A descriptive measure of the population is called a parameter.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

9) A census is the process of gathering data on all the entities in the population.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

10) Statistics is commonly divided into two branches called descriptive statistics and summary statistics.
Answer: FALSE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

11) A descriptive measure of the sample is called a statistic.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

12) Gathering data from a sample to reach conclusions about the population from which the sample was drawn is called descriptive statistics.
Answer: FALSE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.



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13) Calculation of population parameters is usually either impossible or excessively time consuming and costly.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

14) The basis for inferential statistics is the ability to make decisions about population parameters without having to complete a census of the population.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

15) A variable is a numerical description of each of the possible outcomes of an experiment.
Answer: TRUE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.3: Explain the difference between variables, measurement, and data.

16) Variables and measurement data are interchangeable terms.
Answer: FALSE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.3: Explain the difference between variables, measurement, and data.

17) Measurements occur when a standard process is used to assign numbers to attributes or characteristics of a variable.
Answer: TRUE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.3: Explain the difference between variables, measurement, and data.

18) One piece of data includes a variety of variables.
Answer: FALSE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.3: Explain the difference between variables, measurement, and data.

19) A variable can take on different values.
Answer: TRUE
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.3: Explain the difference between variables, measurement, and data.



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20) All numerical data must be analyzed statistically in the same way because all of them are represented by numbers.
Answer: FALSE
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

21) The manner in which numerical data can be analyzed statistically depends on the level of data measurement represented by numbers being analyzed.
Answer: TRUE
Diff: 2
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

22) The lowest level of data measurement is the ratio level.
Answer: FALSE
Diff: 1
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

23) The highest level of data measurement is the ratio level.
Answer: TRUE
Diff: 1
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

24) Numbers which are used only to classify or categorize the observations represent data measured at the nominal level.
Answer: TRUE
Diff: 2
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

25) Numbers which are used to rank-order the performance of workers represent data measured at the interval level.
Answer: FALSE
Diff: 2
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.



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26) Nominal and ordinal data are sometimes referred to as qualitative data.
Answer: TRUE
Diff: 1
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

27) Nominal and ordinal data are sometimes referred to as quantitative data.
Answer: FALSE
Diff: 1
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

28) With interval data, the zero point is a matter of convention and does not mean the absence of the phenomenon under observation.
Answer: TRUE
Diff: 2
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

29) Interval and Ratio data are sometimes referred to as quantitative data.
Answer: TRUE
Diff: 1
Response: See section 1.2 Data Measurement
Learning Objective: 1.4: Compare the four different levels of data: nominal, ordinal, interval, and ratio.

30) Big data refers to a standard set of variables collected from customers, suppliers, and staff.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.5: Define important business analytics terms including big data, business analytics, data mining, and data visualization.

31) One goal of data visualization is to make complex data easier to understand.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.5: Define important business analytics terms including big data, business analytics, data mining, and data visualization.



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32) The main objective of business analytics is to transform data into meaningful information for business managers.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.5: Define important business analytics terms including big data, business analytics, data mining, and data visualization.

33) Extracting and transforming data are two steps in data visualization.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.5: Define important business analytics terms including big data, business analytics, data mining, and data visualization.

34) If a manager relies on his/her gut instinct to make critical business decisions, this is an example of business analytics in action.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.5: Define important business analytics terms including big data, business analytics, data mining, and data visualization.

35) If big data has variety, then it can be said that the data are from several different sources such as videos, retail scanners, and the internet.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.6: List the four dimensions of big data and explain the differences between them.

36) Velocity refers to the speed with which data are available to the business for analysis.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.6: List the four dimensions of big data and explain the differences between them.

37) The term "garbage in, garbage out" refers to the volume of the data used by a business.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.6: List the four dimensions of big data and explain the differences between them.



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38) Big data can include unstructured data such as writings and photographs.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.6: List the four dimensions of big data and explain the differences between them.

39) Big data should encompass all four characteristics of variety, velocity, virtuous, and volume.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.6: List the four dimensions of big data and explain the differences between them.

40) Descriptive statistics focuses on what has happened or is happening within the business.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.7: Compare and contrast the three categories of business analytics.

41) Prescriptive analytics is the second step in big data analysis, following descriptive statistics.
Answer: FALSE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.7: Compare and contrast the three categories of business analytics.

42) Prescriptive analytics is optimal for taking risk and uncertainty into account by looking at the effects of future actions.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.7: Compare and contrast the three categories of business analytics.

43) Simulation is a mathematical strategy one would expect to find within both predictive and prescriptive analytics.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.7: Compare and contrast the three categories of business analytics.

44) The three categories of business analytics could be described as describing what has happened, predicting potential relationships among data, and prescribing future decisions under uncertainty.
Answer: TRUE
Diff: 1
Response: See section 1.3 Introduction to Business Analytics
Learning Objective: 1.7: Compare and contrast the three categories of business analytics.



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45) Which of the following statements about business statistics is *not* true?
A) Virtually every area of business uses statistics in decision making.
B) Presenting business statistics always requires the use of a specific graph called a bar chart.
C) There is a wide variety of uses and applications of statistics in business.
D) Business statistics can be used to forecast future values and predict trends.
Answer: B
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

46) A book publisher uses statistics in decision-making. Of the following statistics, which would this publisher not consider in their decisions?
A) Trends in purchases of hard copy and ebooks
B) The cost of paper
C) Trends in attendance at book clubs
D) Trends in local grocery stores
E) Revenue of competitors
Answer: D
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

47) Which of the following would be the least helpful type of data to a car manufacturer when making business decisions?
A) Economic data
B) School attendance data
C) Financial data
D) Competitor data
E) Employment data
Answer: B
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.



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48) Which of the following is *not* a graphical example of business statistics?
A) A table that lists all customers
B) A pie chart of careers at the company
C) A graph of profits for the last ten years
D) A bar graph of sales by product
E) A chart of dividends paid out the past few years
Answer: A
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

49) A news report states that sales of U.S. homes declined 3% during the previous month. Which type of business would be most likely to include this information in their business decisions?
A) Car manufacturer
B) Business attire
C) Lumber company
D) Deli stores
E) Gas and oil companies
Answer: C
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

50) If the U.S. Census indicated that in general, the population was moving to the northern states, what business decisions might that information impact?
A) How much inventory to hold
B) Whether to increase product prices
C) Whether to build a new plant
D) How much to spend on a new plant
E) Where to locate a new plant
Answer: E
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.



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51) If the U.S. Census indicated that in general, wages having increased, what business decisions might that information impact?
A) How much inventory to hold
B) Whether to increase product prices
C) Whether to build a new plant
D) How much to spend on a new plant
E) Where to locate a new plant
Answer: B
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

52) If data indicated that a new product could serve as a cheaper substitute for a company's product, the CEO of the latter company might _____.
A) increase prices
B) decrease costs
C) look for a new, unique use of his/her product
D) try to put the competitor out of business
E) close several production plans
Answer: C
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.1: List quantitative and graphical examples of statistics within a business context.

53) Many companies sponsor local sporting teams and events. What data is least likely to be part of the decision to sponsor that event?
A) Whether that event is somehow tied to their product
B) Whether costs will be decreased through the sponsorship
C) The overlap of event attendees and the company's customers
D) The perceived goodwill in the community of such a sponsorship
E) Potential sales that could occur at the event
Answer: B
Diff: 2
Response: See section 1.1 Basic Statistical Concepts
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54) Rebecca Sear, Marketing Director of a regional restaurant chain, is directing a study to identify and assess the in-dining experience of the customers at one of the restaurants. She directs her staff to design a web-based market survey for distribution to all of the restaurant's 1265 customers who enjoyed a meal during the past 6 months. For this study, the set of 1265 customers is _____.
A) a parameter
B) a sample
C) the population
D) a statistic
E) the frame
Answer: C
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

55) Rebecca Sear, Marketing Director of a regional restaurant chain, is directing a study to identify and assess the in-dining experience of the customers at one of the restaurants. She directs her staff to design a web-based market survey for distribution to 100 of all the restaurant's customers who enjoyed a meal during the past 6 months. For this study, the set of 100 customers is _____.
A) a parameter
B) a sample
C) the population
D) a statistic
E) the frame
Answer: B
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

56) Sue Taylor, Director of Global Industrial Sales, is concerned by a deteriorating sales trend. Specifically, the number of industrial customers is stable at 1,500, but they are purchasing less each year. She orders her staff to search for causes of the downward trend by surveying all 1,500 industrial customers. For this study, the set of 1,500 industrial customers is _____.
A) a parameter
B) a sample
C) the population
D) a statistic
E) the frame
Answer: C
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.



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57) Sue Taylor, Director of Global Industrial Sales, is concerned by a deteriorating sales trend. Specifically, the number of industrial customers is stable at 1,500, but they are purchasing less each year. She orders her staff to search for causes of the downward trend by selecting a focus group of 40 industrial customers. For this study, the set of 40 industrial customers is _____.
A) a parameter
B) a sample
C) the population
D) a statistic
E) the frame
Answer: B
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

58) Miguel Hernandez, Senior Vice President of Human Resources at Memorial Hospital, is exploring the usage of nursing overtime hours in the emergency department during the last operating year (January 1, 2021, through December 31, 2021). Miguel intends to survey the emergency department nurses regarding their perception of overtime needs. For this survey the set of all emergency department nurses who worked at Memorial Hospital during the last operating year is _____.
A) a parameter
B) a sample
C) the population
D) a statistic
E) the frame
Answer: C
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.

59) Miguel Hernandez, Senior Vice President of Human Resources at Memorial Hospital is exploring the usage of nursing overtime hours in the emergency department during the last operating year. Staffing records and emergency department visits for 20 days between the period of January 1, 2021, and December 31, 2021, are selected for analysis. For this study, the group of 20 days is a _____.
A) parameter
B) sample
C) population
D) statistic
E) frame
Answer: B
Diff: 1
Response: See section 1.1 Basic Statistical Concepts
Learning Objective: 1.2: Define important statistical terms, including population, sample, and parameter, as they relate to descriptive and inferential statistics.



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