

Name \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) In a recent poll, 64% of the respondents supported stricter gun laws. Is this an example of statistic or a parameter? 1) \_\_\_\_\_

A) Statistic

B) Parameter

Answer: A

Diff: 0 Type: BI

- 2) The names of all 126 students in a professor's class are written on identical slips of paper, and the slips are placed into a large glass jar. Then, the professor selects 14 random slips from the jar. Identify the kind of sample that is being used. 2) \_\_\_\_\_

A) systematic sample

B) sample of convenience

C) simple random sample

D) cluster sample

Answer: C

Diff: 1 Type: MC

- 3) A pollster randomly samples 145 Democrats, 154 Republicans and 19 Independents (all registered voters) in Metro City and asks each poll participant which mayoral candidate he or she prefers. Identify the kind of sample that the pollster is using. 3) \_\_\_\_\_

A) sample of convenience

B) stratified sample

C) voluntary response sample

D) cluster sample

Answer: B

Diff: 1 Type: MC

- 4) When experimental units are people, they are sometimes called \_\_\_\_\_. 4) \_\_\_\_\_

A) topics

B) human units

C) personnel

D) subjects

Answer: D

Diff: 1 Type: BI

- 5) Choose the answer below that best completes the following statement. 5) \_\_\_\_\_

A \_\_\_\_\_ is a number that describes a population.

A) parameter

B) summary

C) sample

D) statistic

Answer: A

Diff: 1 Type: MC

- 6) Which of the following sample types should you always regard as unreliable? 6) \_\_\_\_\_

A) stratified samples

B) simple random samples

C) cluster samples

D) voluntary response samples

Answer: D

Diff: 1 Type: MC

- 7) Which one of the following data are discrete? 7) \_\_\_\_\_
- A) the pre-season ranking of Duke University's men's basketball team
  - B) the average preseason ranking of the University of Connecticut's women's basketball team over the past 10 years
  - C) the average height of players on the University of Connecticut's women's basketball team
  - D) the height of the tallest player on Duke University's men's basketball team

Answer: A  
Diff: 1 Type: MC

- 8) A middle school student passes out leaflets to the adults at a school function. The leaflets ask the recipient to indicate whether they believe in anthropogenic global warming. The bottom of the leaflet indicates that the completed leaflet should be returned to the student. Identify the kind of sample that is being used. 8) \_\_\_\_\_
- A) systematic sample
  - B) sample of convenience
  - C) stratified sample
  - D) cluster sample

Answer: B  
Diff: 1 Type: MC

- 9) Determine which of the following describes quantitative data. 9) \_\_\_\_\_
- i). the length of an object in feet
  - ii). the speed of an object in meters per second
  - iii). the number of objects that are blue
- A) i only                      B) i, ii, and iii                      C) i and ii only                      D) iii only

Answer: B  
Diff: 1 Type: MC

- 10) By visiting homes door-to-door, a municipality surveys all the households in 149 randomly-selected neighborhoods to see how residents feel about a proposed property tax increase. Identify the type of sample that is being used. 10) \_\_\_\_\_
- A) systematic sample
  - B) stratified sample
  - C) voluntary response sample
  - D) cluster sample

Answer: D  
Diff: 1 Type: MC

- 11) In a survey of 1000 teenagers, 23% of them said they use tobacco products. Is this an example of statistic or a parameter? 11) \_\_\_\_\_
- A) Statistic
  - B) Parameter

Answer: A  
Diff: 0 Type: BI

12) You ask your friends who they plan to vote for in the next congressional election. Based on their responses, you conclude that the candidate you favor cannot lose! 12) \_\_\_\_\_

This is most likely an example of ...

- A) randomized sampling
- B) sampling bias
- C) voluntary response bias
- D) self-interest bias

Answer: B

Diff: 1 Type: MC

13) Determine which of the following describes qualitative data. 13) \_\_\_\_\_

- i). the make of the car with license plate number VNS-862
- ii). the license plate number VNS-862
- iii). the number of vehicles whose license plate number begins with "VNS"

- A) i and ii only
- B) neither i, nor ii, nor iii
- C) iii only
- D) i only

Answer: A

Diff: 1 Type: MC

14) Determine which of the following describes qualitative data. 14) \_\_\_\_\_

- i). the volume of a shipping container, in gallons
- ii). the name of the material from which the container is made
- iii). the shape of the container

- A) ii and iii only
- B) i, ii, and iii
- C) i and ii only
- D) i and iii only

Answer: A

Diff: 1 Type: MC

15) Which one of the following data are continuous? 15) \_\_\_\_\_

- A) the rankings of the trees, from most numerous to least numerous
- B) the number of species of trees in a park
- C) the average height of a sample of trees
- D) the number of representatives of each species in the park

Answer: C

Diff: 1 Type: MC

16) In a randomized experiment, if there are large differences in outcomes among the treatment groups, we can conclude that the differences are due to \_\_\_\_\_.

- A) experimental error
- B) deliberate data manipulation
- C) the treatments
- D) random luck

Answer: C

Diff: 1 Type: MC

- 17) An experiment that tends to overestimate or underestimate the true value is said to be \_\_\_\_\_ 17) \_\_\_\_\_
- A) randomized  
C) flagrant
- B) un-randomized  
D) biased
- Answer: D  
Diff: 1 Type: BI
- 18) Choose the answer below that best completes the following statement. 18) \_\_\_\_\_
- A \_\_\_\_\_ is a number that describes a sample.
- A) parameter                      B) population                      C) statistic                      D) measurement
- Answer: C  
Diff: 1 Type: MC
- 19) Which one of the following data are continuous? 19) \_\_\_\_\_
- A) the number of times the file has been downloaded  
B) the time remaining for an MP3 music download  
C) the number of musicians performing in the MP3 file  
D) all of these represent continuous data
- Answer: B  
Diff: 1 Type: MC
- 20) Determine which of the following describes ordinal data. 20) \_\_\_\_\_
- i. My best friends are Georgia, Amithaba, and Raphael.  
ii. My favorite numbers are 2, 7 and 13.
- A) ii only                      B) i only                      C) both i and ii                      D) neither i nor ii
- Answer: D  
Diff: 1 Type: MC
- 21) Determine which of the following describes nominal data. 21) \_\_\_\_\_
- i. My favorite days of the week are Friday, Saturday, and Tuesday.  
ii. My favorite day of the week is Friday, my second-favorite is Saturday, and third-favorite is Tuesday.
- A) neither i nor ii                      B) i only                      C) ii only                      D) both i and ii
- Answer: B  
Diff: 1 Type: MC
- 22) Which of the following is the best description of a randomized experiment? 22) \_\_\_\_\_
- A) an experiment in which the treatments are assigned randomly to experimental units  
B) an experiment in which the experimental units are selected at random  
C) an experiment in which the investigators are chosen at random  
D) an experiment in which the outcomes are random
- Answer: A  
Diff: 1 Type: MC

- 23) Determine which of the following describes nominal data. 23) \_\_\_\_\_
- i. Michaelangelo's sells small, medium, large, and jumbo pizzas.
  - ii. Michaelangelo's most-requested toppings are pepperoni, black olives, and mushrooms.
- A) neither i nor ii      B) i only      C) both i and ii      D) ii only

Answer: D  
Diff: 1    Type: MC

- 24) Which one of the following data are discrete? 24) \_\_\_\_\_
- A) the latitude and longitude of the boat's port of departure
  - B) the speed of the boat's propeller, in revolutions per minute
  - C) the latitude and longitude of a boat at sea
  - D) the number of crew members on the boat

Answer: D  
Diff: 1    Type: MC

- 25) People are reluctant to admit to behavior that may reflect negatively on them. This can lead to ... 25) \_\_\_\_\_
- A) social acceptability bias      B) hurt feelings
  - C) voluntary response bias      D) sampling bias

Answer: A  
Diff: 1    Type: MC

- 26) Which of the following is the best description of a double-blind experiment? 26) \_\_\_\_\_
- A) an experiment in which the subjects are blindfolded so they cannot see which treatment is applied to them
  - B) an experiment in which both the investigators and the subjects are hidden from the others' views
  - C) an experiment in which neither the investigators nor the subjects know how the treatments have been assigned
  - D) an experiment in which neither the investigators nor the subjects know the others' names

Answer: C  
Diff: 1    Type: MC

- 27) An electronics manufacturer test every 50<sup>th</sup> cell phone to verify that it is functioning properly. Identify the kind of sample that is being used. 27) \_\_\_\_\_
- A) cluster sample      B) simple random sample
  - C) systematic sample      D) stratified sample

Answer: C  
Diff: 1    Type: MC

28) When rolling two six-sided dice, your total roll ranges from 2 (double ones) to 12 (double sixes). Characterize the nature of the roll total. 28) \_\_\_\_\_  
A) quantitative and continuous                      B) quantitative and discrete  
C) qualitative and continuous                      D) qualitative and discrete

Answer: B  
Diff: 1    Type: MC

29) In a small town, 84% of the residents, aged 16 or more years old, own a car. Is this an example of statistic or a parameter? 29) \_\_\_\_\_  
A) Statistic    B) Parameter

Answer: B  
Diff: 0    Type: BI

30) Of the televisions offered at an electronics store, 42% cost less than \$500.00. Is this an example of statistic or a parameter? 30) \_\_\_\_\_  
A) Statistic    B) Parameter

Answer: B  
Diff: 0    Type: BI

31) In an experiment, subjects are put into two categories according to sex, and then each subject is randomly assigned a treatment . This is an example of... 31) \_\_\_\_\_  
A) confounding                                      B) randomized blocking  
C) observational studies                      D) gender bias

Answer: B  
Diff: 1    Type: MC

32) In an experiment, the \_\_\_\_\_ is what is measured on each experimental unit. 32) \_\_\_\_\_  
A) treatment                      B) outcome                      C) category                      D) subject

Answer: B  
Diff: 1    Type: BI

33) The question... 33) \_\_\_\_\_  
"Do you favor a higher standard of living, even though it produces unclean air and water?"  
... is an example of ...  
A) leading question bias                      B) framing  
C) sampling bias                      D) random sampling

Answer: A  
Diff: 1    Type: MC



## Answer Key

Testname: CH1

- 1) A  
Diff: 0 Page Ref:  
Topic:
- 2) C  
Diff: 1 Page Ref:  
Topic:
- 3) B  
Diff: 1 Page Ref:  
Topic:
- 4) D  
Diff: 1 Page Ref:  
Topic:
- 5) A  
Diff: 1 Page Ref:  
Topic:
- 6) D  
Diff: 1 Page Ref:  
Topic:
- 7) A  
Diff: 1 Page Ref:  
Topic:
- 8) B  
Diff: 1 Page Ref:  
Topic:
- 9) B  
Diff: 1 Page Ref:  
Topic:
- 10) D  
Diff: 1 Page Ref:  
Topic:
- 11) A  
Diff: 0 Page Ref:  
Topic:
- 12) B  
Diff: 1 Page Ref:  
Topic:
- 13) A  
Diff: 1 Page Ref:  
Topic:
- 14) A  
Diff: 1 Page Ref:  
Topic:
- 15) C  
Diff: 1 Page Ref:  
Topic:
- 16) C  
Diff: 1 Page Ref:  
Topic:



## Answer Key

Testname: CH1

- 17) D  
Diff: 1 Page Ref:  
Topic:
- 18) C  
Diff: 1 Page Ref:  
Topic:
- 19) B  
Diff: 1 Page Ref:  
Topic:
- 20) D  
Diff: 1 Page Ref:  
Topic:
- 21) B  
Diff: 1 Page Ref:  
Topic:
- 22) A  
Diff: 1 Page Ref:  
Topic:
- 23) D  
Diff: 1 Page Ref:  
Topic:
- 24) D  
Diff: 1 Page Ref:  
Topic:
- 25) A  
Diff: 1 Page Ref:  
Topic:
- 26) C  
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- 27) C  
Diff: 1 Page Ref:  
Topic:
- 28) B  
Diff: 1 Page Ref:  
Topic:
- 29) B  
Diff: 0 Page Ref:  
Topic:
- 30) B  
Diff: 0 Page Ref:  
Topic:
- 31) B  
Diff: 1 Page Ref:  
Topic:
- 32) B  
Diff: 1 Page Ref:  
Topic:

## Answer Key

Testname: CH1

33) A

Diff: 1 Page Ref:  
Topic:

34) A

Diff: 1 Page Ref:  
Topic:

35) A

Diff: 0 Page Ref:  
Topic:

36) D

Diff: 0 Page Ref:  
Topic:

37) C

Diff: 0 Page Ref:  
Topic:

38) B

Diff: 1 Page Ref:  
Topic:

39) A

Diff: 1 Page Ref:  
Topic: