🔲 Chapter Quiz

Determine whether each statement is true or false. If the statement is false, explain why.

(items 1–3 redacted)

4. When the population of college professors is divided into groups according to their rank (<u>instructor</u>, <u>assistant professor</u>, etc.) and then several are selected from each group to make up a sample, the sample is called a <u>cluster sample</u>. *False (stratified)*

5. The variable <u>temperature</u> is an example of a <u>quantitative variable</u>. *True*

6. The <u>height</u> of basketball players is considered a continuous variable. *True*

7. The boundary of a value such as 6 inches would be 5.9–6.1 inches. *False* 5.5 — 6.5

Select the best answer.

8. The number of <u>ads</u> on a one-hour television show is what type of data?
   a. Nominal
   b. Qualitative
   c. Discrete ⭕
   d. Continuous

   25.60 25.55   25.65

9. What are the boundaries of <u>25.6</u> ounces?
   a. 25–26 ounces
   b. 25.55–25.65 ounces ⭕
   c. 25.5–25.7 ounces
   d. 20–39 ounces

10. A researcher divided subjects into two groups according to <u>gender</u> and then selected <u>members</u> from each group for her sample. What <u>sampling method</u> was the researcher using?
    a. Cluster
    b. Random
    c. Systematic
    d. Stratified ⭕

11. Data that can be classified according to <u>color</u> are measured on what scale?
    a. Nominal ⭕
    b. Ratio
    c. Ordinal
    d. Interval

12. A study that involves no researcher <u>intervention</u> is called   متدخل
    a. An experimental study.
    b. A noninvolvement study.
    c. An observational study. ⭕
    d. A quasi-experimental study.

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13. A <u>variable</u> that <u>interferes</u> with <u>other</u> <u>variables</u> in the study is called
    a. A confounding variable. ⭕
    b. An explanatory variable.
    c. An outcome variable.
    d. An interfering variable.

Use the best answer to complete these statements.

14. Two major branches of statistics are ⸻ *Descriptive* and *Inferential*

(item 15 redacted)

16. The group of <u>all subjects</u> under study is called a(n) ✓ *Population*

17. A group of subjects selected from the group of all subjects under study is called a(n) *Sample*. ✓

18. Three reasons why samples are used in statistics:
    a. *Save money*   b. *Save time*,   c. *used when population is infinity*

19. The four basic sampling methods are
    a. *Simple random* b. *Systematic* c. *Stratified* d. *Cluster*

(items 20–21 redacted)

22. For each statement, decide whether <u>descriptive</u> or <u>inferential</u> statistics is used.
    a. The average life expectancy in New Zealand is 78.49 years (*Source: World Factbook*). *Descriptive*
    b. A diet high in fruits and vegetables will lower blood pressure (*Source:* Institute of Medicine). *Inferential*
    c. The total amount of estimated losses for Hurricane Katrina was <u>$125</u> billion (*Source: The World Almanac and Book of Facts*). *Descriptive*
    d. Researchers stated that the shape of a person's ears is relative to the person's aggression *Inferential* (*Source: American Journal of Human Biology*).

e. In 2050, it is estimated that there will be 18 million Americans who are age 85 and over (*Source:* U.S. Census Bureau). *Inferential*

23. Classify each as nominal-level, ordinal-level, interval-level, or ratio-level of measurement.

a. Rating of movies as G, PG, and R *Nominal*
b. Number of candy bars sold on a fund drive *Ratio*
c. Classification of automobiles as subcompact, compact, standard, and luxury *Ordinal*
d. Temperatures of hair dryers *Interval*
e. Weights of suitcases on a commercial airliner *Ratio*

24. Classify each variable as discrete or continuous.

a. Ages of people working in a large factory *Continuous*
b. Number of cups of coffee served at a restaurant *Discrete*

c. The amount of drug injected into a guinea pig *Continous*
d. The time it takes a student to drive to school *Continous*
e. The number of gallons of milk sold each day at a grocery store *Discrete*

25. Give the boundaries of each.

a. 32 minutes
b. 0.48 millimeter
c. 6.2 inches
d. 19 pounds
e. 12.1 quarts

a) $32 = 31.5 - 32.5$

b) $0.48 = 0.480$
   $0.475 \quad 0.485$

c) $6.2 = 6.20$
   $6.15 \quad 6.25$

d) $19 = 18.5 - 19.5$

e) $12.1 = 12.10$
   $12.05 \quad 12.15$