Chapter 2
Test Bank

Multiple Choice

1. The definition of a variable is
a. anything that can take on more than one value
b. a label for quantitative data
c. a label for qualitative data
d. any numerical value
Ans: A
Cognitive Domain: Knowledge
Answer Location: First Things First
Difficulty Level: Easy

2. Select which of the following would be considered a variable:
a. color of an egg
b. weight of a newborn baby
c. score on SAT
d. all of these
Ans: D
Cognitive Domain: Comprehension
Answer Location: First Things First
Difficulty Level: medium

3. The term measurement means
a. a numerical value or rating
b. the assignment of labels to a variable or outcome
c. the development of a rating scale
d. the utilization of ratio data in statistical analysis
Ans: B
Cognitive Domain: Knowledge
Answer Location: First Things First
Difficulty Level: Easy

4. In 1946, S. S. Stevens helped develop ______.
a. experimental procedure
b. the accepted definition of measurement
c. the levels of measurement
d. the scientific method
Ans: C
Cognitive Domain: Comprehension
Answer Location: First Things First
Difficulty Level: Easy
5. What represents how much information is being provided by an outcome measure?
   a. level of measurement  
   b. interval data  
   c. ratio data  
   d. measurement scale  
   Ans: A  
   Cognitive Domain: Comprehension  
   Answer Location: The Four Horsemen (or Levels) of Measurement  
   Difficulty Level: Medium

6. What is the level of measurement that deals with differences in quality rather than quantity?
   a. nominal  
   b. ratio  
   c. interval  
   d. ordinal  
   Ans: A  
   Cognitive Domain: Knowledge  
   Answer Location: The Nominal Level of Measurement  
   Difficulty Level: Easy

7. Nominal measurements deal with what type of data?
   a. numerical  
   b. statistical  
   c. categorical  
   d. theoretical  
   Ans: C  
   Cognitive Domain: Comprehension  
   Answer Location: The Nominal Level of Measurement  
   Difficulty Level: Easy

8. How many categories can nominal data be placed into?
   a. zero  
   b. one  
   c. multiple  
   d. unlimited  
   Ans: B  
   Cognitive Domain: Application  
   Answer Location: The Nominal Level of Measurement  
   Difficulty Level: Medium

9. If two teams were playing baseball, what would be an example of a type of nominal data?
   a. number of runs scored  
   b. number of hits
c. team names
d. all of these
Ans: C
Cognitive Domain: Application
Answer Location: The Nominal Level of Measurement
Difficulty Level: Medium

10. The color of a car is an example of what type of data?
a. nominal
b. ratio
c. ordinal
d. interval
Ans: A
Cognitive Domain: Application
Answer Location: The Nominal Level of Measurement
Difficulty Level: Medium

11. Categories in a nominal scale are ______.
a. easily defined
b. mutually exclusive
c. inherently controversial
d. well designed
Ans: B
Cognitive Domain: Knowledge
Answer Location: The Nominal Level of Measurement
Difficulty Level: Easy

12. Rank order is a characteristic of what type of measurement?
a. nominal
b. interval
c. ratio
d. ordinal
Ans: D
Cognitive Domain: Knowledge
Answer Location: The Nominal Level of Measurement
Difficulty Level: Easy

13. The ordinal level of measurement
a. creates a ranking of categories
b. describes categories
c. assigns qualitative value to categories
d. eliminates categories
Ans: A
Cognitive Domain: Knowledge
Answer Location: The Ordinal Level of Measurement
Difficulty Level: Easy
14. If a blue car was ranked faster than a red car, what type of measurement would this be?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: B
   Cognitive Domain: Application
   Answer Location: The Ordinal Level of Measurement
   Difficulty Level: Medium

15. Ordinal data tell us
   a. what categories exist
   b. how much difference exists between categories
   c. order of ranking of categories
   d. all of these
   Ans: C
   Cognitive Domain: Knowledge
   Answer Location: The Ordinal Level of Measurement
   Difficulty Level: Easy

16. What would be an application of ordinal measurement?
   a. ranking of stress causes
   b. description of stress causes
   c. analysis of blood pressure changes from stress
   d. a stress test
   Ans: A
   Cognitive Domain: Knowledge
   Answer Location: The Ordinal Level of Measurement
   Difficulty Level: Easy

17. With what level of data do you assign names?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: A
   Cognitive Domain: Knowledge
   Answer Location: The Nominal Level of Measurement
   Difficulty Level: Easy

18. With what level of data do you assign rank?
   a. nominal
   b. ordinal
   c. ratio
d. interval
Ans: B
Cognitive Domain: Application
Answer Location: The Ordinal Level of Measurement
Difficulty Level: Medium

19. With what level of data can you compare position along a continuum?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: D
   Cognitive Domain: Knowledge
   Answer Location: The Interval Level of Measurement
   Difficulty Level: Easy

20. A student could get a 60% on an exam and be ranked number one in the class using what type of measurement?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: D
   Cognitive Domain: Knowledge
   Answer Location: The Interval Level of Measurement
   Difficulty Level: Easy

21. What level of measurement has an absolute zero?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: C
   Cognitive Domain: Knowledge
   Answer Location: The Ratio Level of Measurement
   Difficulty Level: Easy

22. The ability to have a complete absence of a characteristic is related to what level of measurement?
   a. nominal
   b. ordinal
   c. ratio
   d. interval
   Ans: C
   Cognitive Domain: Knowledge
Answer Location: The Ratio Level of Measurement
Difficulty Level: Easy

23. What is the least likely level of measurement to be used in social sciences?
   a. nominal
   b. ordinal
   c. interval
   d. ratio
   Ans: D
Cognitive Domain: Knowledge

Answer Location: The Ratio Level of Measurement
Difficulty Level: Easy

24. Rainfall is an example of what type of measurement?
   a. nominal
   b. ordinal
   c. interval
   d. ratio
   Ans: D
Cognitive Domain: Knowledge

Answer Location: The Ratio Level of Measurement
Difficulty Level: Easy

25. Weight is an example of what type of measurement?
   a. nominal
   b. ordinal
   c. interval
   d. ratio
   Ans: D
Cognitive Domain: Knowledge

Answer Location: The Ratio Level of Measurement
Difficulty Level: Easy

26. What is the level of measurement with the least amount of information?
   a. nominal
   b. ordinal
   c. interval
   d. ratio
   Ans: A
Cognitive Domain: Knowledge

Answer Location: A Summary: How Levels of Measurement Differ
Difficulty Level: Easy

27. What is the level of measurement with the most available information?
   a. nominal
   b. ordinal
c. interval

d. ratio

Ans: D

Cognitive Domain: Knowledge

Answer Location: A Summary: How Levels of Measurement Differ

Difficulty Level: Easy

28. What level of measurement can be assigned an absolute zero?

a. nominal
b. ordinal
c. interval
d. ratio

Ans: D

Cognitive Domain: Knowledge

Answer Location: A Summary: How Levels of Measurement Differ

Difficulty Level: Easy

29. What level of measurement allows you to assign an order to the variable being measured?

a. ratio
b. ordinal
c. interval
d. all of these

Ans: D

Cognitive Domain: Knowledge

Answer Location: A Summary: How Levels of Measurement Differ

Difficulty Level: Easy

30. What level of measurement has high complexity and precision?

a. nominal
b. ordinal
c. interval
d. ratio

Ans: D

Cognitive Domain: Knowledge

Answer Location: Okay, So What’s the Lesson Here?

Difficulty Level: Easy

31. What level of measurement has the lowest complexity and precision?

a. nominal
b. ordinal
c. interval
d. ratio

Ans: A

Cognitive Domain: Knowledge
32. If conducting a weight training course, what type of measurement would be optimal?
   a. nominal  
   b. ordinal  
   c. interval  
   d. ratio  
   Ans: D  
   Cognitive Domain: Knowledge

33. What level of measurement provides the highest likeliness of measuring the true outcome?
   a. nominal  
   b. ordinal  
   c. interval  
   d. ratio  
   Ans: D  
   Cognitive Domain: Knowledge

34. Ratio-level measurement would contain characteristics of what other levels?
   a. nominal  
   b. ordinal  
   c. interval  
   d. all of these  
   Ans: D  
   Cognitive Domain: Knowledge

35. Hair color is an example of what type of measurement?
   a. nominal  
   b. ordinal  
   c. interval  
   d. ratio  
   Ans: A  
   Cognitive Domain: Knowledge

36. Ordinal-level measurement would contain characteristics of what other level(s)?
   a. nominal
37. Interval-level measurement would contain characteristics of what other level(s)?
   a. nominal
   b. ratio
   c. interval
   d. all of these
   Ans: A
   Cognitive Domain: Knowledge
   Answer Location: Okay, So What’s the Lesson Here?
   Difficulty Level: Easy

38. The color of a person’s hat would be what type of measurement?
   a. nominal
   b. ratio
   c. interval
   d. all of these
   Ans: A
   Cognitive Domain: Knowledge
   Answer Location: Okay, So What’s the Lesson Here?
   Difficulty Level: Easy

39. The ranking of a person’s favorite sports teams would be what type of data?
   a. nominal
   b. ratio
   c. interval
   d. ordinal
   Ans: D
   Cognitive Domain: Knowledge
   Answer Location: Okay, So What’s the Lesson Here?
   Difficulty Level: Easy

40. If possible, what would be best level of data be to analyze characteristics?
   a. nominal
   b. ratio
   c. interval
   d. ordinal
   Ans: D
   Cognitive Domain: Knowledge
True/False

1. The color of a bird’s egg would be an example of nominal data.
   Ans: T
   Cognitive Domain: Knowledge
   Answer Location: The Nominal Level of Measurement
   Difficulty Level: Easy

2. Nominal data allow for deep statistical comparison of differences.
   Ans: F
   Cognitive Domain: Knowledge
   Answer Location: The Nominal Level of Measurement
   Difficulty Level: Easy

3. Nominal data place things into categories.
   Ans: T
   Cognitive Domain: Knowledge
   Answer Location: The Nominal Level of Measurement
   Difficulty Level: Easy

4. All levels of measurement allow you to assign order to the variable being measured.
   Ans: F
   Cognitive Domain: Knowledge
   Answer Location: A Summary: How Levels of Measurement Differ
   Difficulty Level: Easy

5. Ratio-level data give you the least amount of information.
   Ans: F
   Cognitive Domain: Knowledge
   Answer Location: A Summary: How Levels of Measurement Differ
   Difficulty Level: Medium

6. Interval-level data have a true zero.
   Ans: F
   Cognitive Domain: Knowledge
   Answer Location: A Summary: How Levels of Measurement Differ
   Difficulty Level: Medium

7. Nominal-level data allow for only categorization of data.
   Ans: T
   Cognitive Domain: Knowledge
   Answer Location: A Summary: How Levels of Measurement Differ
   Difficulty Level: Easy
8. The color of a car is an example of ratio data.  
Ans: F  
Cognitive Domain: Comprehension  
Answer Location: A Summary: How Levels of Measurement Differ  
Difficulty Level: Easy

9. The speed of a runner in seconds would be ordinal data.  
Ans: F  
Cognitive Domain: Knowledge  
Answer Location: A Summary: How Levels of Measurement Differ  
Difficulty Level: Medium

10. The name of a basketball team would be nominal data.  
Ans: T  
Cognitive Domain: Knowledge  
Answer Location: A Summary: How Levels of Measurement Differ  
Difficulty Level: Medium

**Essay**

1. Give three examples of nominal data.  
Ans: gender, color of a pen, team names  
Cognitive Domain: Comprehension  
Answer Location: The Nominal Level of Measurement  
Difficulty Level: Easy

2. Give three examples of ratio level of measurement.  
Ans: rainfall, height, weight  
Cognitive Domain: Comprehension  
Answer Location: The Ratio Level of Measurement  
Difficulty Level: Medium

3. Order the levels of data from the most available information to the least.  
Ans: ratio, interval, ordinal, nominal  
Cognitive Domain: Analysis  
Answer Location: A Summary: How Levels of Measurement Differ  
Difficulty Level: Medium

4. Explain why a student ranked number one in the class based on ratio measurement may be misleading.  
Ans: The student could still have a failing grade but be ranked one.  
Cognitive Domain: Comprehension  
Answer Location: A Summary: How Levels of Measurement Differ  
Difficulty Level: Medium
5. What level(s) of measurement allow for an order to be established?
Ans: ratio, interval, nominal
Cognitive Domain: Comprehension
Answer Location: A Summary: How Levels of Measurement Differ
Difficulty Level: Medium