

Test Bank

Notes

The questions in this test bank are grouped together by chapter. Occasionally in multiple choice questions, a question can give students hints about the correct answer of another question. This is called *cluing*, and it can interfere with gaining an accurate view of the student's knowledge. Efforts have been made to eliminate cluing within each chapter. However, cluing may be present for questions in different chapters. When selecting questions for a test, I recommend that instructors ensure that there is no cluing for items across chapters.

I wrote test questions with two assumptions: (1) students will not have any formulas memorized, and (2) students will not have access to any statistical tables. Instructors who require their students to memorize formulas or who will provide the statistical tables to students may find it advisable to adapt multiple choice questions into short answer questions. Some instructors may also wish to write hand calculation problems if that is an important learning outcome for their students. Additionally, some questions can be adapted to test students' knowledge of similar concepts in other chapters.

Every chapter has at least 20 multiple choice questions and 5 short answer questions in the test bank. Short answer questions are always the last five listed for that chapter. Instructors who desire more short answer questions can adapt multiple choice questions into short answer questions. Instructors who desire calculation questions can adapt the Guided Practice examples in the textbook or end-of-chapter questions for this purpose. If an instructor does this, please ensure that students are provided with the relevant tables. Instructors who require students to memorize formulas should communicate this information clearly to students; other instructors should provide the relevant formulas with their test materials.

Correct answers are marked in **bold**.

Chapter 1

1. The family of research methods that uses statistics to analyze numerical data is called
 - a. Qualitative methods
 - b. Statistical analysis
 - c. **Quantitative methods**
 - d. Descriptive statistics
2. Which of the following is *not* a reason why students in the social sciences need to learn statistics?
 - a. Evaluate the conclusions of researchers
 - b. **To help the social sciences obtain the same respect as the physical sciences**
 - c. Communicate findings to others
 - d. Interpret research to create practical, real-world results
3. Why do students and practitioners in the social sciences need to know how to separate good research from bad research?
 - a. To know which articles should receive media attention and awards.
 - b. To properly select articles to discuss with professors or teachers.
 - c. **The quality of published research varies greatly.**
 - d. All of the above.
4. How do research questions and research hypotheses differ?
 - a. Research questions are not scientific, while research hypotheses are scientific.
 - b. Research hypotheses are appropriate for qualitative methods, while research questions are appropriate for qualitative methods.
 - c. Research questions are part of confirmatory research, while research hypotheses are speculations about the world.
 - d. **Research hypotheses are expected beliefs the researcher has; research questions tend to be more exploratory.**
5. To be scientific, a research hypothesis must be
 - a. Sophisticated
 - b. **Falsifiable**
 - c. Plausible
 - d. Interesting
6. In statistics, what is a *population*?
 - a. **Every person, event, or object that a researcher could wish to study.**
 - b. The particular people who are part of a study.
 - c. All of the people who live in a country where the researchers conducts their study.
 - d. None of the above.
7. Why do researchers rarely have population data?
 - a. It is unethical to force people to participate in a research study.

- b. Constraints of money and time may make it unfeasible to gather data from every population member.
 - c. Many populations are too large.
 - d. **All of the above.**
- 8. A characteristic that is the same for all sample or populations members is a
 - a. Variable
 - b. Invariant characteristic
 - c. **Constant**
 - d. Consistent variable
- 9. A dependent variable is the _____ in the study.
 - a. Constant
 - b. Hypothesized cause
 - c. Operationalization
 - d. **Outcome variable**
- 10. An independent variable is the _____ in the study.
 - a. Constant
 - b. **Hypothesized cause**
 - c. Operationalization
 - d. Outcome variable
- 11. In a _____ study, a researcher does *not* manipulate or control the independent variable.
 - a. Experimental
 - b. **Correlational**
 - c. Analytical
 - d. Laboratory
- 12. Which type of study has more applicability to real-life situations?
 - a. Experimental
 - b. **Correlational**
 - c. Analytical
 - d. Laboratory
- 13. In a _____ study, a researcher manipulates or controls the independent variable.
 - a. **Experimental**
 - b. Correlational
 - c. Analytical
 - d. Laboratory
- 14. What is a common criticism of experimental studies?
 - a. The studies are difficult to understand.
 - b. **They are too artificial.**

- c. The data from experimental research is often not easy to interpret.
 - d. All of the above.
15. The purpose of _____ statistics is to describe the data at hand.
- a. Descriptive**
 - b. Inferential
 - c. Analytical
 - d. Extrapolated
16. What is a model?
- a. A simplification of a complex reality**
 - b. The summary of a study's findings
 - c. An understandable explanation of a study's design
 - d. All of the above
17. The purpose of _____ statistics is to estimate information about the population on the basis of sample data.
- a. Descriptive
 - b. Inferential**
 - c. Analytical
 - d. Extrapolated
18. Why do social scientists often create models?
- a. To simulate a scenario and test whether a scientist's theory is supported by data.
 - b. Because researchers often wish to create a study that can serve as an example of future studies on the same topic.
 - c. Reality is sometimes too messy and complicated to comprehend.**
 - d. All of the above.
19. Which of the following is a type of model?
- a. Statistical models
 - b. Theoretical models
 - c. Visual models
 - d. All of the above**
20. Which type of model is described in numerical terms or as an equation?
- a. Statistical models**
 - b. Theoretical models
 - c. Visual models
 - d. All of the above
21. A bar graph, line graph, and chart are examples of
- a. Statistical models
 - b. Theoretical models
 - c. Visual models**
 - d. All of the above

22. Theoretical models take the form of
- a. Verbal descriptions**
 - b. Numerical equations
 - c. Graphs or charts
 - d. None of the above
23. A theory is
- a. A scientific law which has been shown to display validity across many studies that have been conducted throughout the world.
 - b. A logically consistent system of principles that posit causal explanations for a wide range of phenomena in many contexts.**
 - c. A foundational idea that permits the design, execution, and interpretation of research within a scientific field.
 - d. All of the above.
24. Tony conducted a study where he collected data on two variables: the number of hours a person works and their job satisfaction. He believes that people with more satisfying jobs will choose to work more hours. This is an example of a
- a. Experimental study
 - b. Analytical study
 - c. Correlational study**
 - d. Laboratory study
25. Tony conducted a study where he collected data on two variables: the number of hours a person works and their job satisfaction. He believes that people with more satisfying jobs will choose to work more hours. Which variable is the dependent variable?
- a. Job satisfaction
 - b. Number of hours worked**
 - c. There is not enough information to choose a dependent variable.
 - d. Both are dependent variables.
26. If every model is wrong to some degree, explain how researchers judge a model.
- a. Models are judged by whether they are useful.**
27. Write a research hypothesis.
- a. Answers will vary, but the response should be a testable or falsifiable belief about a study's outcome. It should not be in the form of a question.**
28. Why do researchers never say that their hypothesis or theory has been proven to be true?
- a. Because this would require a scientist to make every possible observation of a phenomenon. Otherwise, there could be a scenario or situation where the theory is disproven.**
29. If a population consists of college students in the social sciences, what would a constant among these individuals be?

- a. **Answers will vary, but student responses should be a characteristic of individuals that is the same for all population members (e.g., status as a college student, species that people belong to).**
30. Explain why demographic variables (e.g., race, sex) are considered independent variables.
- a. **These variables cannot be outcomes—and therefore cannot be dependent variables. It makes much more theoretical sense that these could be theorized causes.**

Chapter 2

1. According to Stevens (1946, p. 677) *measurement* is:
 - a. The application of scientific methods to obtain data
 - b. The use of scientific instruments to measure objects
 - c. The scientific assessment of objects
 - d. **The assignment of numbers to objects**
2. Data at the highest level of measurement:
 - a. Has all qualities shared by the lower levels of measurement.
 - b. Possesses an absolute zero point.
 - c. Can be doubled without causing problems.
 - d. **All of the above.**
3. The process of defining a variable in a way that allows a researcher to collect numerical data about is called
 - a. **Operationalization**
 - b. Objectivism
 - c. Reductionism
 - d. Quantitative defining
4. Data at Stevens's highest level of measurement:
 - a. Has all qualities shared by the lower levels of measurement.
 - b. Possesses an absolute zero point.
 - c. Can be doubled without causing problems.
 - d. **All of the above.**
5. Which option lists the four levels of data in ascending order (i.e., from lowest to highest)?
 - a. Nominal, ordinal, ratio, interval
 - b. Ratio, interval, ordinal, nominal
 - c. **Nominal, ordinal, interval, ratio**
 - d. Ratio, ordinal, interval, nominal
6. According to Stevens (1946, p. 677) *measurement* is:
 - a. The application of scientific methods to obtain data
 - b. The use of carefully designed scientific instruments to measure objects

- c. The scientific assessment of objects using formal methods
 - d. The assignment of numbers to objects or events according to rules**
7. Nominal data must be
- a. Able to preserve the ranking of subjects
 - b. Mutually exclusive and exhaustive**
 - c. Different for different group members within the same group
 - d. All of the above
8. In nominal data, the numbers assigned to the categories
- a. Must be assigned in order so that larger groups receive larger numbers
 - b. Are arbitrary**
 - c. Can never be negative
 - d. Must reflect the rank order of the subjects
9. Which of the following is not an acceptable mathematical function for nominal data?
- a. Counting
 - b. Classification
 - c. Calculating proportions
 - d. Calculating averages**
10. In addition to the characteristics of nominal data, ordinal data must also have
- a. Rank order in the numbers**
 - b. Proportional representation of group members in the population
 - c. Absolute zero
 - d. Proportions calculated from scores
11. Why is it always better to collect data at the highest level possible?
- a. Higher levels of data are easier to collect than lower levels of data.
 - b. Lower levels of data require more preparation of the data before the statistical analysis can begin.
 - c. Higher levels of data can always be converted down to lower levels.**
 - d. All of the above.
12. Which mathematical procedures are acceptable for interval-level data, but not ordinal or ratio data?
- a. Calculating proportions
 - b. Dividing to form averages**
 - c. Ranking subjects
 - d. Dividing to form ratios
13. What is the property that interval data have that ordinal data do not?
- a. Equal spacing between scale points**
 - b. Absolute zero
 - c. Consistent data application rules
 - d. Arbitrary numbers assigned to categories

14. An absolute zero
- Is not present unless it is possible for a person in the sample to obtain a score of zero.
 - Is required to calculate averages.
 - Indicates the total absence of the quality being measured.**
 - All of the above.
15. The number of movies that a person has seen in the past month is what type of data?
- Interval
 - Nominal
 - Ratio**
 - Ordinal
16. Why is it that the Celsius temperature scale *not* a ratio-level scale?
- Negative numbers are possible (and meaningful) in the Celsius scale
 - Because it lacks an absolute zero point
 - The ratios that are formed with its numbers do not represent true ratios between temperatures of the amount of heat
 - All of the above**
17. The level of data of _____ is ambiguous.
- Rating scales**
 - Mental health variables
 - Reaction time
 - Group-level variables (e.g., a nation's average education level)
18. A(n) _____ variable permits a wide range of scores that form a constant scale with no gaps at any point along the scale.
- Ratio
 - Interval
 - Dependent
 - Continuous**
19. A(n) _____ variable has a limited number of possible values and do not form a constant, uninterrupted scale of scores.
- Operationalized
 - Discrete**
 - Ordinal
 - Limited
20. A sociologist asks her subjects their religious affiliation. What type of variable would this be?
- Continuous
 - Interval
 - Nominal**

- d. Ordinal
21. A researcher collects data on the length of individuals' commute to their job. What type of variable is this?
- a. Ordinal
 - b. Ratio**
 - c. Discrete
 - d. Nominal
22. Individuals learning a second language were labeled as “not proficient” (group 1), “basic proficiency” (group 2) “high proficiency” (group 3), and “fully proficient” (group 4). What type of data is this?
- a. Ordinal**
 - b. Nominal
 - c. Continuous
 - d. Ratio
23. The Fahrenheit temperature scale is an example of a(n) _____ variable.
- a. Ordinal
 - b. Independent
 - c. Interval**
 - d. Discrete
24. What is the *minimum* level of data required to calculate proportions?
- a. Ratio
 - b. Ordinal
 - c. Nominal**
 - d. Interval
25. What level of data can be used to rank order scores?
- a. Ratio
 - b. Ordinal
 - c. Interval
 - d. All of the above**
26. Give an example of an operationalization.
- a. Answers will vary, but the response should be a method of defining a construct in a way that allows numerical data to be collected about it.**
27. What does it mean that categories in the data must be “mutually exclusive and exhaustive”?
- a. The categories are non-overlapping (mutually exclusive) and every sample member belongs to a category (exhaustive)**
28. Explain why test scores can be ordinal-, interval-, or ratio-level data, depending on the interpretation.

- a. **If the score is the number of questions correctly, then the variable is ratio-level data. If the score is interpreted as the amount of a trait that the subject possesses, then the variable is interval-level data. If it is possible that there are not equal spaces or intervals between scores on a test, then the variable would be ordinal-level data.**
29. Explain what reductionism is and why it is a shortcoming of quantitative research.
- a. **Reductionism is a philosophy that redefines variables so that they are a shallower version of the construct of interest. It is a problem of quantitative research because it means researchers don't really study their constructs, but rather the operationalizations of the constructs.**
30. Why is it acceptable (and sometimes necessary) to create a "miscellaneous" or "other" category for data?
- a. **Because categories must be exhaustive, which means that every sample member must belong to a category. Creating this "miscellaneous" category ensures that individuals who would otherwise not have a category can belong to one.**