1. Sally knows that babies come from the stork because her mother tells her so. This method of acquiring knowledge is known as
   a. the scientific method.
   b. a logical syllogism.
   c. the method of authority.
   d. the method of tenacity.

   ANSWER: c (p. 4)

2. Paul thinks that day care is bad for children because he’s heard it over and over from various sources. This method of acquiring knowledge is known as
   a. the scientific method.
   b. a logical syllogism.
   c. the method of authority.
   d. the method of tenacity.

   ANSWER: d (pp. 3-4)

3. One problem with acquiring knowledge using the method of tenacity is that
   a. repeating a fact does not necessarily make it true.
   b. it relies on empirical investigations.
   c. it uses independent and dependent variables.
   d. it controls for extraneous variables.

   ANSWER: a (p. 4)

4. The degree to which a knowledge claim is accurate is referred to as
   a. reliability.
   b. validity.
   c. authority.
   d. tenacity.

   ANSWER: b (p. 3)

5. A scheme of formal logic or argument consisting of a major premise, a minor premise, and a conclusion is known as a(n)
   a. logical syllogism.
   b. extraneous variable.
   c. experiment.
   d. theory.
6. Complete the following logical syllogism:

   Beautiful people are good.
   Claudia is a beautiful person.
   Therefore,

   a. Claudia is beautiful.
   b. good people are beautiful.
   c. Claudia is good.
   d. All of the above.

   ANSWER: c (p. 5)

7. James believes that spanking is not detrimental to children because he was spanked as a child and he turned out fine. James is using which method of acquiring knowledge?

   a. Tenacity
   b. Experience
   c. Authority
   d. None of the above.

   ANSWER: b (pp. 4-5)

8. Which of the following is NOT a key element in the scientific method?

   a. Objective measurements
   b. Self-correction of errors
   c. Confirmation of findings
   d. Having extraneous variables

   ANSWER: d (pp. 5-6)

9. Janet conducts a study and finds that, similar to previous research, students by themselves worked harder than students in groups (a phenomenon known as social loafing). In addition, she found that social loafing could be lessened if the students in the group knew each other well. Janet’s study represents

   a. replication.
   b. replication with extension.
   c. lack of control.
   d. the method of tenacity.

   ANSWER: b (p. 7)
10. An empirical study is based on
   a. the method of tenacity.
   b. the method of authority.
   c. the method of experience.
   d. objectively quantifiable observations.

   ANSWER: d (p. 6)

11. Which of the following scenarios correctly depicts the self-correcting nature of science?
   a. Jane controls various extraneous variables in her study on self-esteem.
   b. Mark conducts a replication with extension study on deindividuation and finds that the previous research reached a faulty conclusion.
   c. Kelly conducts a study illustrating a cause-and-effect relationship between distraction and reading comprehension.
   d. Ray conducts an empirical research study on racial discrimination.

   ANSWER: b (p. 7)

12. In one study, half of the rats are given one food pellet each time they correctly run a maze, and the other half of the rats are given two food pellets each time they correctly run a maze. The researchers record the average amount of time it takes the rats to run the maze. In this study, the number of food pellets represents the __________ variable.
   a. independent
   b. dependent
   c. extraneous
   d. intrinsic

   ANSWER: a (p. 8)

13. In one study, students read a fictitious job application. The applications are identical except that half have a female name (“Joan”) and half have a male name (“John”). The students rate the likelihood of the applicant succeeding at the job. What is the dependent variable?
   a. The name on the job application
   b. The students
   c. The students’ ratings of the applicants’ success
   d. The gender of the students

   ANSWER: c (p. 8)
14. Mary is interested in determining if active learning strategies promote better student learning than passive learning strategies. She teaches groups of volunteer students for one hour, using active learning strategies with half of the students and passive learning strategies with the other half of the students. The students are then given a test over the material and Mary records the number of items each student answers correctly. In this study, the independent variable is __________ and the dependent variable is __________.

   a. type of learning strategy; number of correct answers
   b. number of correct answers; type of learning strategy
   c. number of correct answers; the test
   d. type of learning strategy; the test

   ANSWER: a (p. 8)

15. Which of the following is NOT a component of an experiment?

   a. Control of extraneous variables
   b. Manipulation of the independent variable
   c. Measurement of the dependent variable
   d. Manipulation of the dependent variable

   ANSWER: d (p. 8)

16. Undesired variables that could invalidate an experiment are referred to as ________ variables.

   a. independent
   b. dependent
   c. extraneous
   d. intrinsic

   ANSWER: c (p. 9)

17. Cause-and-effect relationships can be determined through

   a. replications.
   b. experiments.
   c. empirical research.
   d. None of the above.

   ANSWER: b (p. 9)
18. Shayla conducts a study in which a confederate dresses up either in nice clothes or shabby clothes. The confederate goes to the mall and asks people for directions. Shayla hypothesizes that more people will help the confederate when he is nicely dressed rather than shabbily dressed. Which of the following represents control of an extraneous variable?
   a. The type of clothing worn by the confederate at the mall
   b. The number of people who stop to give directions
   c. The same student is used as the confederate (sometimes dressed in nice clothes and sometimes dressed in shabby clothes)
   d. None of the above.

   ANSWER: c (p. 9)

19. A theory is designed to
   a. organize existing scientific data.
   b. guide new research.
   c. Both (a) and (b).
   d. None of the above.

   ANSWER: c (p. 14)

20. “Students who have been given extra credit will report more satisfaction with their course than students who have not been given extra credit.” This statement best represents a(n)
   a. theory.
   b. hypothesis.
   c. extraneous variable.
   d. problem.

   ANSWER: b (p. 14)

21. Janell has discovered in her literature review that people often learn by imitation and observation (termed social learning). For example, when children see an adult behave violently toward a doll, they often imitate this violent behavior. Janell decides to do a study in which children who are initially afraid of snakes either view an adult playing with a snake or view nothing at all. She thinks that the children who view an adult playing with a snake will be more likely to later pet a snake than children who view nothing at all. Which of the following statements best represents the hypothesis?
   a. “Social learning refers to the idea that people often learn by imitation and observation.”
   b. “Children who view an adult playing with a snake will be more likely to later pet a snake than children who view nothing at all.”
   c. “Past research has found that when children see an adult behave violently toward a doll, they often imitate the violent behavior.”
   d. All of the above can be considered hypotheses.
ANSWER: b (p. 14)

22. Which of the following components of the research process should be conducted first?
   a. Conducting the experiment
   b. Conducting the literature review
   c. Coming up with the hypothesis
   d. Data analysis

   ANSWER: b (p. 13)

23. The general plan for selecting participants, assigning participants to experimental conditions, controlling extraneous variables, and gathering data is known as the
   a. hypothesis.
   b. theory.
   c. research design.
   d. literature review.

   ANSWER: c (p. 15)

24. Which of the following steps in the research process occurs AFTER the data is collected?
   a. Formulate the hypothesis.
   b. Conduct a literature review.
   c. Make decisions in terms of past research and theory.
   d. Consider theories relevant to your project.

   ANSWER: c (p. 13)

25. Which of the following is a reason given in your textbook for why the Research Methods course is important?
   a. A course in research methods can help with other psychology courses.
   b. A course in research methods can help with research students may conduct in post-graduation jobs.
   c. A course in research methods can help students become more savvy consumers of research.
   d. All of the above.

   ANSWER: d (pp. 20-21)

Chapter 2
1. Joanna, a budding undergraduate researcher, is interested in studying whether people see bright lights after they die. Why is this a poor research idea?
   a. Everyone already knows that people see bright lights after they die.
2. If a research idea just “pops” into your mind unexpectedly, you have gotten your research idea through
   a. serendipity.
   b. past research.
   c. inspiration.
   d. a systematic source.

   ANSWER: c (p. 26)

3. Sources for research ideas that present themselves in an unpredictable manner are known as
   a. nonsystematic sources.
   b. systematic sources.
   c. theories.
   d. research articles.

   ANSWER: a (p. 25)

4. Sources for research ideas that are thoroughly examined and carefully thought out are known as
   a. everyday occurrences.
   b. inspiration.
   c. systematic sources.
   d. nonsystematic sources.

   ANSWER: c (p. 27)
5. _______ refers to those situations where we look for one phenomenon but find something else.
   a. Validity
   b. Reliability
   c. Testability
   d. Serendipity

   ANSWER: d (p. 26)

6. Which of the following is NOT a nonsystematic source of research ideas?
   a. Serendipity
   b. Everyday occurrences
   c. Inspiration
   d. Past research

   ANSWER: d (p. 26)

7. Which of the following is NOT a systematic source of research ideas?
   a. Theory
   b. Everyday occurrences
   c. Classroom lectures
   d. Past research

   ANSWER: b (pp. 27-29)

8. Where should you look if you needed to know synonyms for your key terms in a literature search?
   a. Thesaurus of Psychological Index Terms
   b. PsycINFO
   c. Google Scholar
   d. Psychological Abstracts

   ANSWER: a (p. 30)

9. PsycFIRST is a computer database containing a
   a. comprehensive listing of psychological references dating from 1887 to the present.
   b. listing of psychological research from the last three years.
   c. list of different search terms for various psychological topics.
   d. listing of psychological research from 1887-1890.

   ANSWER: b (p. 31)
10. Jenna has done a series of experiments on the topic of attraction. Each experiment was an extension of a previous experiment. Jenna has engaged in
   a. programmatic research.
   b. unethical behavior.
   c. research with low validity.
   d. None of the above.

   ANSWER: a (p. 39)

11. All of the following would be presented in the Method section EXCEPT:
   a. the number of participants in the experiment.
   b. the results of the statistical tests.
   c. the equipment used by the researcher.
   d. the procedure of the experiment.

   ANSWER: b (p. 36)

12. The reference section of an APA-format paper should contain:
   a. everything you read on the topic, even if those references are not explicitly used in the paper.
   b. the important references from your paper.
   c. all references that are used in your paper (and only those references used in your paper).
   d. nothing; no references are used in an APA-format paper.

   ANSWER: c (p. 46)

13. The experimenter’s predicted outcome of a research project is known as a(n)
   a. theory.
   b. hypothesis.
   c. extraneous variable.
   d. problem.

   ANSWER: b (p. 49)

14. A research hypothesis should consist of a(n) __________ statement.
   a. analytic
   b. synthetic
   c. contradictory
   d. irrational

   ANSWER: b (p. 49)
15. The statement “Daisies are flowers” is an example of a(n) _______ statement.
   a. analytic
   b. synthetic
   c. contradictory
   d. irrational

   ANSWER: a (p. 49)

16. The statement “Students with good study habits earn good grades” is an example of a(n) _______ statement.
   a. analytic
   b. synthetic
   c. contradictory
   d. irrational

   ANSWER: b (p. 49)

17. _______ statements are always true.
   a. Analytic
   b. Synthetic
   c. Contradictory
   d. Irrational

   ANSWER: a (p. 49)

18. _______ statements are always false.
   a. Analytic
   b. Synthetic
   c. Contradictory
   d. Rational

   ANSWER: c (p. 49)

19. _______ statements can be either true or false.
   a. Analytic
   b. Synthetic
   c. Contradictory
   d. Irrational

   ANSWER: b (p. 49)
20. The statement “If children watch violent television, then they will be more violent than children who do not watch violent television” is written in
   a. contradictory form.
   b. general implication form.
   c. analytic form.
   d. iambic pentameter.

   ANSWER: b (p. 50)

21. What is the independent variable in the following statement? “If rats are reinforced with five food pellets for each correct response, then they will make more correct responses than rats that are reinforced with zero food pellets.”
   a. Number of correct responses
   b. Number of food pellets (five or zero)
   c. Number of rats
   d. The researcher

   ANSWER: b (p. 50)

22. What is the dependent variable in the following statement? “If people are put in groups, then they will be less likely to help a stranger than when they are by themselves.”
   a. Group size (group or individual)
   b. Likelihood to help a stranger
   c. The participants
   d. The researcher

   ANSWER: b (p. 50)

23. Which of the following statements about hypotheses is true?
   a. Hypotheses must never be falsifiable.
   b. Psychologists are able to prove their hypotheses to be true or false.
   c. Hypotheses should be composed of analytic statements.
   d. Hypotheses should be stated in general implication form.

   ANSWER: d (p. 50)

24. The principle of falsifiability refers to the idea that
   a. reasoning should proceed from specific cases to general theories.
   b. reasoning should proceed from general theories to specific cases.
   c. research should be capable of producing results that do not support the hypothesis.
   d. hypotheses should be composed of analytic statements.

   ANSWER: c (pp. 50-51)
25. Reasoning that proceeds from specific cases to general theories is referred to as  
   a. the principle of falsifiability.  
   b. inductive logic.  
   c. deductive logic.  
   d. serendipity.  

   ANSWER: b (p. 51)

26. Reasoning that proceeds from general theories to specific cases is referred to as  
   a. the principle of falsifiability.  
   b. inductive logic.  
   c. deductive logic.  
   d. serendipity.  

   ANSWER: c (p. 52)

27. Darley and Latane (1968) conducted a series of experiments after hearing about  
    the murder of Kitty Genovese. On the basis of results from these experiments,  
    they came up with a principle known as the bystander effect. This example  
    illustrates  
    a. inductive logic.  
    b. deductive logic.  
    c. a contradictory statement.  
    d. an analytic statement.  

   ANSWER: a (p. 51)

28. Jasmine uses her knowledge of past research on social facilitation to help  
    formulate a hypothesis for her experiment. This example illustrates  
    a. deductive logic.  
    b. inductive logic.  
    c. serendipity.  
    d. a contradictory statement.  

   ANSWER: a (p. 52)

29. “Depressed individuals who receive therapy will be less depressed than those in  
    the control group who do not receive therapy.” This hypothesis is an example of a  
    a. contradictory statement.  
    b. nondirectional research hypothesis.  
    c. directional research hypothesis.  
    d. non-falsifiable hypothesis.  

   ANSWER: c (p. 54)
30. “Individuals who undergo therapy will differ in their levels of depression from those who do not undergo therapy.” This hypothesis is an example of a
   a. contradictory statement.
   b. nondirectional research hypothesis.
   c. directional research hypothesis.
   d. non-falsifiable hypothesis.

   ANSWER: b (p. 54)

31. Under what circumstances is it best to use a nondirectional hypothesis?
   a. When the researcher is relatively certain of a prediction
   b. When the researcher would like to increase the chances of finding a statistically significant result
   c. When there is a possibility that the results could turn out the opposite of that which is expected
   d. When the researcher has not read the past literature on the topic

   ANSWER: c (pp. 54-55)

32. Which of the following statements is true?
   a. Most researchers adopt nondirectional hypotheses.
   b. Most researchers adopt directional hypotheses.
   c. Most researchers adopt non-falsifiable hypotheses.
   d. Most researchers state their hypotheses using analytic statements.

   ANSWER: a (p. 55)

Chapter 3

1. The medical experiments during World War II were
   a. conducted on healthy volunteers in order to test the effectiveness of new drugs.
   b. instrumental for our current understanding of surgical techniques.
   c. ethical because a full debriefing was provided for each participant.
   d. unethical because the participants had no choice regarding whether they wanted to participate.

   ANSWER: d (p. 58)

2. In the Tuskegee syphilis project,
   a. African American men were purposely infected with syphilis in order to understand how the disease progresses.
   b. African American men with syphilis were recruited to be in a study designed to test the effectiveness of current treatments for syphilis.
c. researchers were interested in understanding how syphilis operated in untreated individuals and so did not allow their sample of infected African American men to receive available treatment.
d. researchers provided a full debriefing for their participants.

ANSWER: c (p. 59)

3. Why was the Tuskegee syphilis project considered unethical?
a. Participants were not told the real purpose of the study.
b. There were excessive risks for the participants.
c. Participants did not have the right to discontinue participation.
d. All of the above.

ANSWER: d (p. 59)

4. In the Willowbrook hepatitis project,
a. mentally retarded individuals were purposely infected with hepatitis in order to understand how the disease develops.
b. mentally retarded individuals with hepatitis were denied treatment so that researchers could understand the course of hepatitis in untreated individuals.
c. mentally retarded individuals with hepatitis were randomly assigned to receive one of three treatments in order to compare the effectiveness of the different treatments.
d. participants were fully informed about the nature of the research project and had the right to discontinue their participation at any time.

ANSWER: a (pp. 58-59)

5. The Milgram obedience experiments had ethical problems because
a. Milgram failed to debrief his participants.
b. the project was not conducted by scientifically qualified personnel.
c. the participants were under extreme emotional distress.
d. the participants did not know they were in a study.

ANSWER: c (p. 59)

6. Which of the following experiments did NOT lead to the development of ethical guidelines by the APA?
a. Milgram obedience experiments
b. Willowbrook hepatitis project
c. Zajonc social facilitation project
d. Tuskegee syphilis project

ANSWER: c (pp. 58-60)
7. The informed consent contains all of the following EXCEPT:
   a. a statement about the deception used in the research.
   b. a sentence stating that participants are free to leave the experiment at any time.
   c. a line for the participant’s signature.
   d. a list of any risks associated with the study.

   ANSWER: a (p. 63)

8. Under which of the following circumstances would deception be allowed in a research project?
   a. Deception is allowed when the research project will involve significant risk, such that otherwise, few people would volunteer to be in the study.
   b. Deception is allowed when a full debriefing will not be used.
   c. Deception is allowed when participants are not permitted to withdraw their data from the study.
   d. Deception is allowed when the results of a study would be contaminated by participants’ knowledge of the experiment.

   ANSWER: d (p. 63)

9. Which ethical guidelines does deception violate?
   a. Full debriefing
   b. Informed consent
   c. Gaining IRB approval
   d. All of the above.

   ANSWER: b (p. 62)

10. Which of the following circumstances would be exempt from having to acquire informed consent?
    a. A researcher compares the effectiveness of two different drugs to treat depression.
    b. A researcher compares the self-esteem of boys versus girls in an inner-city elementary school.
    c. A researcher compares the aggression of college students who watch either violent or nonviolent television programs.
    d. A teacher compares active versus passive learning strategies in two sections of her Abnormal Psychology course.

    ANSWER: d (p. 61)

11. Which of the following best describes the APA guideline regarding inducements for research participation?
    a. It is unethical to pay people to participate in research.
    b. Researchers should avoid excessive inducements to participate in research.
c. Research participation should be a course requirement for college students in introductory psychology classes.

d. Researchers cannot, under any circumstances, offer professional services as an inducement for research participation.

ANSWER: b (pp. 61-62)

12. What is the term for participants who are placed under some type of emotional or physical risk?
   a. Participants at minimal risk
   b. Participants at risk
   c. Participants at no risk
   d. Subjects

   ANSWER: b (p. 64)

13. What is the term for participants who are not placed under physical or emotional risk?
   a. Participants at minimal risk
   b. Participants at risk
   c. Participants at no risk
   d. Subjects

   ANSWER: a (p. 64)

14. All of the following may be considered to be vulnerable populations EXCEPT:
   a. people for whom English is a second language.
   b. children.
   c. patients with mental disorders.
   d. college students.

   ANSWER: d (p. 65)

15. Which of the following occurs LAST in the research process?
   a. IRB approval
   b. Informed consent
   c. Debriefing
   d. Identification of vulnerable populations

   ANSWER: c (p. 66)

16. What is the main goal of the debriefing session?
   a. To gain IRB approval
   b. To identify at risk participants
   c. To explain the nature of the experiment and remove any harmful effect
   d. To deceive participants as to the true nature of the experiment
17. Any deception involved in the experiment is explained to participants
   a. in the informed consent.
   b. in the debriefing session.
   c. before they agree to participate in the experiment.
   d. during the experimental session.

   ANSWER: b (p. 66)

18. Which of the following is NOT one of the recommendations given in the textbook regarding debriefing sessions?
   a. The researcher should repeat all guarantees of confidentiality and anonymity.
   b. The researcher should send an explanation of the results at a later date rather than conducting the session right after the experiment.
   c. The researcher should alleviate any discomforts faced by participants during the experiment.
   d. All of the above are recommendations for the debriefing session.

   ANSWER: b (p. 66)
19. Which of the following is NOT one of the APA guidelines regarding the humane care and use of animals in research?
   a. Psychologists should only subject animals to pain when there are no alternative procedures.
   b. Psychologists should perform surgical procedures under appropriate anesthesia.
   c. All individuals who come in contact with animals should be trained in the appropriate care and handling of the animals.
   d. Psychologists are not permitted to use primates for research purposes.

   ANSWER: d (p. 68)

20. What is an IRB?
   a. A committee responsible for determining whether a proposed research project conforms to ethical standards
   b. A committee responsible for determining whether a proposed research project is scientifically sound
   c. A government panel responsible for evaluating grant proposals
   d. A judicial committee responsible for evaluating plagiarism cases

   ANSWER: a (p. 68)

21. A committee responsible for determining whether a proposed research project conforms to ethical standards is known as a(n)
   a. Ethical Research Committee.
   b. Committee for the Ethical Treatment of Participants.
   c. Institutional Review Board.
   d. Governmental Oversight Committee.

   ANSWER: c (p. 68)

22. Which of the following is FALSE regarding ethical conduct by researchers?
   a. Research with animals needs to undergo ethical review by an IRB.
   b. Research conducted by student researchers does not need to undergo ethical review by an IRB.
   c. Even research categorized as minimal risk should be reviewed by an IRB.
   d. Research involving deception should undergo ethical review by an IRB.

   ANSWER: b (p. 70)
23. **Ethical responsibilities by participants in research studies include all of the following EXCEPT:**
   a. Participants should not ask questions of the researcher, especially during the informed consent procedure.
   b. Participants should not discuss the experiment with others who may be participants in the future.
   c. Participants should take the research seriously and cooperate with the experimenter.
   d. Participants should be on time for their research appointments.

   **ANSWER:** a (p. 70)

24. **Using someone else’s work without giving credit to the original source is known as**
   a. debriefing.
   b. plagiarism.
   c. the Nuremberg Code.
   d. fabrication of data.

   **ANSWER:** b (p. 71)

25. **Which of the following would be considered plagiarism?**
   a. The exact words from a source are put in quotes with the author’s last name, year of publication, and page number of the quote indicated.
   b. A paragraph from a source is used and the writer rearranges a few words in each sentence so that quote marks are unnecessary.
   c. A writer summarizes an article in her own words and uses a parenthetical reference with no quote marks.
   d. All of the above would be considered plagiarism.

   **ANSWER:** b (p. 71)

26. **Which of the following ethical violations occurs AFTER data has already been collected?**
   a. Lying with statistics
   b. Plagiarism
   c. Citing references incorrectly
   d. All of the above.

   **ANSWER:** d (pp. 71-74)
27. After Paul collects his data, he conducts a number of analyses and only presents the results that support his hypothesis, ignoring results that run contrary to his hypothesis. Paul is guilty of
   a. plagiarism.
   b. lying with statistics.
   c. incorrectly citing his references.
   d. putting his participants “at risk.”

   ANSWER: b (pp. 73-74)

28. A secondary source refers to
   a. an article read by a researcher and cited in his/her manuscript.
   b. an article consulted by a researcher as background but not actually cited in his/her manuscript.
   c. an article discussed in another reference and the reader does not have access to the original article.
   d. an article that has been plagiarized from another source.

   ANSWER: c (p. 74)

29. According to the APA Ethical Standards on authorship credit,
   a. faculty advisors should be listed as principal authors on any articles published with students, even if the article is based on a student’s doctoral dissertation.
   b. the department chair should be listed as a co-author on any publications from faculty in that department.
   c. all contributions to an article, whether major or minor, should result in authorship credit.
   d. psychologists should take authorship credit only for work to which they have substantially contributed.

   ANSWER: d (p. 75)

Chapter 4
1. Descriptive research methods
   a. involve manipulation of one independent variable.
   b. involve manipulation of two independent variables.
   c. do not involve manipulation of an independent variable.
   d. are used to assess causality.

   ANSWER: c (p. 79)

2. Research methods that do not involve the manipulation of an independent variable are called
   a. inferential research methods.
b. descriptive research methods.
c. one-factor analysis of variance.
d. two-factor analysis of variance.

ANSWER: b (p. 79)

3. Dana conducts a study in which she compares the graffiti on the walls of male and female restrooms. Dana has conducted a(n)
   a. archival study.
   b. experiment.
   c. case study.
   d. ethnography.

ANSWER: a (p. 79)

4. When researchers answer their research questions by using data recorded by other individuals, it is called a(n)
   a. experiment.
   b. naturalistic observation.
   c. participant observation.
   d. archival study.

ANSWER: d (p. 79)
5. Salhany and Roig (2004) analyzed course catalogues found on the Internet in order to examine differences in academic misconduct policies across different universities. They conducted a(n):
   a. naturalistic observation.
   b. participant observation.
   c. archival study.
   d. case study.

   ANSWER: c (p. 79)

6. Selective deposit refers to:
   a. omissions from archival data that are not under the control of the researcher.
   b. a research method that does not involve the manipulation of an independent variable.
   c. the finding that participants respond differently when they know they are being observed.
   d. research conducted in a natural setting.

   ANSWER: a (p. 80)

7. Which of the following is NOT a potential problem associated with archival research?
   a. The records may not be a representative sample.
   b. The records may be incomplete.
   c. The researcher has no control over how the data was originally collected.
   d. It is usually difficult to obtain IRB approval for archival research.

   ANSWER: d (pp. 80-81)

8. Pete conducts numerous interviews and engages in several observations of a gifted third-grader in order to better understand the adjustment of gifted children to public schools. Pete has conducted a(n):
   a. case study.
   b. experiment.
   c. participant observation.
   d. ethnography.

   ANSWER: a (p. 81)

9. One strength of the case study method is that:
   a. researchers can understand the causes of behavior.
   b. the results exhibit high generalizability.
   c. the research often leads to ideas for future research.
   d. All of the above are strengths of the case study method.
10. All of the following are weaknesses of the case study method EXCEPT:
   a. It is difficult to generalize the results to other people.
   b. The researcher cannot establish cause-and-effect relationships.
   c. The individual under investigation may not be representative of others within the same population.
   d. Too many extraneous variables are controlled.

   ANSWER: d (p. 81)

11. Researchers learned a great deal about memory by studying a man named H. M., who had part of his hippocampus removed in order to alleviate seizures. This research is best characterized as a(n)
   a. experiment.
   b. participant observation.
   c. case study.
   d. ethnography.

   ANSWER: c (p. 81)

12. Leslie and Charlie observe children on a playground and note instances of aggression displayed by the children. They have engaged in what kind of research?
   a. Participant observation
   b. Naturalistic observation
   c. Ethnography
   d. Case study

   ANSWER: b (p. 82)

13. If researchers are neutrally observing behavior in the real world, they are engaging in
   a. participant observation.
   b. naturalistic observation.
   c. ethnography.
   d. an experiment.

   ANSWER: b (p. 82)

14. What is one potential problem associated with the naturalistic observation method?
   a. The setting is very artificial.
   b. There are a limited number of independent variables that can be manipulated.
c. The presence of a researcher may alter participants’ behavior.

d. Because the researcher is also a participant, he/she may lose objectivity.

ANSWER: c (p. 82)

15. Participants sometimes respond differently when they know they are being observed. This is referred to as
   a. reactance.
   b. selective deposit.
   c. reliability.
   d. selective coding.

ANSWER: a (p. 82)

16. Participants in the Hawthorne study increased their productivity regardless of whether conditions were optimal or inferior. The reason for this increased productivity was attributed to
   a. interobserver reliability.
   b. reactance.
   c. time sampling.
   d. selective deposit.

ANSWER: b (pp. 82-83)

17. Which of the following is an advantage associated with naturalistic observation?
   a. The researcher is also a participant and so can gather more in-depth information.
   b. Statements about causality are possible using naturalistic observation.
   c. It is easy to manipulate independent variables using naturalistic observation.
   d. Naturalistic observation may be the only way to examine certain types of variables.

ANSWER: d (p. 83)

18. __________ refers to research in which the observer becomes part of the group being studied.
   a. Naturalistic observation
   b. Participant observation
   c. Archival research
   d. Correlational research

ANSWER: b (p. 83)
19. Jessica wishes to understand the motivations of people who join the Hare Krishna group, so she joins and immerses herself in the group. Jessica has conducted what kind of research?  
   a. Naturalistic observation  
   b. Archival research  
   c. Correlational research  
   d. Participant observation  

   ANSWER: d (p. 83)

20. Which of the following is a drawback to the participant observation method?  
   a. It may take a long time for the researcher to become accepted in the group.  
   b. It is not possible to make causal statements.  
   c. The researcher may lose his/her objectivity.  
   d. All of the above.  

   ANSWER: d (pp. 84-85)

21. A researcher who becomes part of a group by working and interacting extensively with others is called a(n)  
   a. observer as participant.  
   b. participant as observer.  
   c. clinical researcher.  
   d. naturalistic observer.  

   ANSWER: b (p. 84)

22. In one study, researchers studied a Christian school by sitting in the back of the classroom and taking notes without interacting much with anyone. The researcher would be referred to as a(n)  
   a. observer as participant.  
   b. participant as observer.  
   c. clinical researcher.  
   d. naturalistic observer.  

   ANSWER: a (p. 84)

23. Which of the following is an advantage of participant observation?  
   a. The researcher is able to make cause-and-effect statements.  
   b. The researcher is able to gather more in-depth information than is usually the case with other methods.  
   c. The researcher is able to control many extraneous variables.  
   d. All of the above.  

   ANSWER: b (p. 84)
24. When a researcher becomes immersed in an entire culture for a lengthy period of time, it is called a(n)
   a. experiment.
   b. naturalistic observation.
   c. ethnography.
   d. archival study.

   ANSWER: c (p. 84)

25. Dr. Jones spends two years immersed in the Yoruba tribe in Nigeria in order to better understand cross-cultural differences in child-rearing. Dr. Jones is engaged in what kind of research?
   a. Naturalistic observation
   b. Ethnography
   c. Archival research
   d. Case study

   ANSWER: b (p. 84)

26. A research approach aimed at understanding and correcting a particular behavioral problem is referred to as
   a. an ethnography.
   b. archival research.
   c. naturalistic observation.
   d. the clinical perspective.

   ANSWER: d (p. 85)

27. Which of the following is NOT a difference between participant observation and the clinical perspective?
   a. A researcher can remain passive in participant observation but cannot in the clinical perspective.
   b. The goal in participant observation is understanding, whereas the goal in the clinical perspective is helping.
   c. A researcher can be hidden in the clinical perspective but cannot be hidden in participant observation.
   d. In the clinical perspective, the client chooses the clinician, and in participant observation, the observer chooses the group to be studied.

   ANSWER: c (p. 85)

28. ____________ sampling refers to making observations at different time periods.
   a. Situation
   b. Time
   c. Event
   d. Participant
ANSWER: b (p. 86)
29. __________ sampling refers to observing the same behavior in different situations.
   a. Situation
   b. Time
   c. Event
   d. Participant

   ANSWER: a (p. 86)

30. Jasper is conducting an observational study of children’s aggressive behavior on playgrounds, and he decides to observe aggressive behavior at five different playgrounds. Jasper has engaged in __________ sampling.
   a. situation
   b. time
   c. qualitative
   d. participant

   ANSWER: a (p. 86)

31. Abby is conducting an observational study of walking speed by college students between classes. She observes behavior at two time periods in the morning, two in the afternoon, and two in the evening. Abby has engaged in __________ sampling.
   a. situation
   b. time
   c. qualitative
   d. participant

   ANSWER: b (p. 86)

32. One advantage of situation sampling is that
   a. it allows the researcher to be both an observer and a participant.
   b. researchers can get in-depth information on one individual.
   c. there is increased generalizability.
   d. it eliminates the need for independent variables.

   ANSWER: c (p. 86)

33. The extent to which observers in an observational study agree is referred to as
   a. interobserver validity.
   b. grounded theory.
   c. interobserver reliability.
   d. open coding.

   ANSWER: c (p. 87)
34. Joe and Sam are coders in an observational study on sex stereotyping in television commercials. When they have finished collecting their data, they should calculate
   a. open coding.
   b. interobserver validity.
   c. grounded theory.
   d. interobserver reliability.

   ANSWER: d (p. 87)

35. Which of the following is NOT a reason why interobserver reliability might be low?
   a. Observers were not given clear, precise definitions.
   b. The behavior in question can be interpreted by observers in different ways.
   c. The observers are fatigued or bored.
   d. All of the above are reasons why interobserver reliability might be low.

   ANSWER: d (p. 87)

36. If a researcher is developing a narrative description of behavior, then he/she is engaging in
   a. quantitative research.
   b. qualitative research.
   c. situation sampling.
   d. time sampling.

   ANSWER: b (p. 88)

37. Clara has written a research report that contains little scientific jargon but several emotional words. Clara has most likely engaged in
   a. a reliability analysis.
   b. correlational research.
   c. quantitative research.
   d. qualitative research.

   ANSWER: d (p. 88)

38. Quantitative research is more concerned with __________ and qualitative research is more concerned with __________.
   a. generalities; details and emotions
   b. details and emotions; generalities
   c. grounded theory; logic
   d. generalities; interobserver reliability

   ANSWER: a (p. 89)
39. Qualitative research is more likely than quantitative research to focus on
   a. deductive logic.
   b. problems about which little information already exists.
   c. extensive statistical analyses.
   d. specific, narrow hypotheses.

   ANSWER: b (pp. 88-89)

40. An approach to qualitative research that focuses on building theories is known as
   a. the correlational approach.
   b. grounded theory.
   c. archival research.
   d. situation sampling.

   ANSWER: b (p. 89)

41. The grounded theory approach is most likely to use
   a. complicated statistical techniques.
   b. interviews and observations.
   c. independent and dependent variables.
   d. All of the above.

   ANSWER: b (p. 89)

42. Which of the following best describes the order in which coding occurs in the
grounded-theory approach?
   a. Open coding→selective coding→axial coding
   b. Axial coding→selective coding→open coding
   c. Selective coding→axial coding→open coding
   d. Open coding→axial coding→selective coding

   ANSWER: d (p. 90)

43. During ______ coding, the researcher labels and categories the phenomenon
   being studied.
   a. axial
   b. selective
   c. open
   d. closed

   ANSWER: c (p. 90)
44. During ______ coding, the researcher finds links between categories and subcategories.
   a. axial
   b. selective
   c. open
   d. closed

   ANSWER: a (p. 90)

45. During _____ coding, the researcher identifies a core category and relates all other categories to this core.
   a. axial
   b. selective
   c. open
   d. closed

   ANSWER: b (p. 90)

46. An analysis of how actions and interactions relate to their conditions and consequences is known as
   a. time sampling.
   b. a transactional system.
   c. selection sampling.
   d. interobserver reliability.

   ANSWER: b (p. 90)

47. A transactional system is diagrammed in a ______ matrix.
   a. coding
   b. process
   c. conditional
   d. correlational

   ANSWER: c (p. 90)

48. A qualitative research approach that usually attempts to understand the impact of a social program on the community is known as ____________ research.
   a. correlational
   b. participatory action
   c. archival
   d. experimental

   ANSWER: b (p. 91)
49. In ________ research, the researcher examines the relationship between two variables.
   a. archival
   b. systematic
   c. correlational
   d. qualitative

   ANSWER: c (p. 92)

50. “As the amount of exercising decreases, weight increases.” This statement represents a ________ correlation.
   a. zero
   b. positive
   c. negative
   d. curvilinear

   ANSWER: c (p. 92)

51. If there is a positive correlation between number of hours spent studying and exam grades, then the _____ time people spend studying, the _____ their exam grades.
   a. more; lower
   b. more; higher
   c. less; higher
   d. None of the above.

   ANSWER: b (p. 92)

52. Researchers use correlations to
   a. understand cause-and-effect relationships.
   b. make predictions.
   c. understand the axial coding process.
   d. All of the above.

   ANSWER: b (p. 92)

53. If there is a _______ correlation, then the two variables are not related.
   a. positive
   b. negative
   c. zero
   d. curvilinear

   ANSWER: c (p. 93)
54. Bess conducts a study in which she measures self-esteem and grade point average in a sample of 50 college students. She hypothesizes that higher self-esteem will be associated with higher grade point average. This research approach is best described as _________ research.
   a. archival
   b. correlational
   c. grounded theory
   d. ethnographic

   ANSWER: b (p. 94)

Chapter 5

1. What does “ex post facto” mean?
   a. Before the study
   b. After the study
   c. Past due
   d. After the fact

   ANSWER: d (p. 98)

2. When the variables to be studied are selected after they have occurred, the research study is called
   a. manipulated.
   b. positively correlated.
   c. ex post facto.
   d. experimental.

   ANSWER: c (p. 98)

3. Jack conducts a study in which he compares men and women in terms of locus of control. Jack has conducted a(n)
   a. experimental study.
   b. ex post facto study.
   c. archival study.
   d. case study.

   ANSWER: b (p. 98)

4. The defining characteristic of an ex post facto study is that
   a. an independent variable has been manipulated.
   b. only one person has been selected to be a participant.
   c. the variables to be studied are selected after the fact.
   d. observation occurs in a laboratory instead of a natural setting.
5. Brad develops a survey to examine the extent to which self-esteem is related to alcohol abuse. Brad is using a(n) ________ survey.
   a. analytic
   b. descriptive
   c. pilot
   d. demographic

   ANSWER: a (p. 99)

6. Keisha constructs a survey to determine what percentage of students at her school have experienced a violent crime. Keisha is using a(n) ________ survey.
   a. analytic
   b. descriptive
   c. pilot
   d. demographic

   ANSWER: b (p. 99)

7. If you would like to determine how variables are related, you would use a(n) ________ survey.
   a. analytic
   b. descriptive
   c. pilot
   d. demographic

   ANSWER: a (p. 99)

8. If you would like to determine the percentage of the population that engages in a particular behavior, you would use a(n) ________ survey.
   a. analytic
   b. descriptive
   c. pilot
   d. demographic

   ANSWER: b (p. 99)

9. Preliminary testing that is done prior to the completion of a research project is known as ________ testing.
   a. descriptive
   b. pilot
   c. analytic
   d. Likert

   ANSWER: b (p. 100)
10. Shaundra gave her new survey to 10 participants to get their reactions to the questions. She then made modifications to the survey and gave it to a larger sample. Shaundra has engaged in
   a. archival research.
   b. observational research.
   c. random sampling.
   d. pilot testing.

   ANSWER: d (p. 100)

11. Which of the following is NOT one of the steps in developing a good survey?
   a. Identify the types of questions to use.
   b. Pilot test the items.
   c. Develop instructions for the survey.
   d. All of the above are steps in developing a good survey.

   ANSWER: d (p. 100)

12. Suppose a survey contains the following item: “Explain in words your opinion on the death penalty.” This question represents a(n)
   a. Likert-type scale.
   b. multiple choice question.
   c. open-ended question.
   d. forced alternative question.

   ANSWER: c (p. 101)

13. Suppose a survey contains the following item:

   “I am shy when around people I don’t know well.”

   1       2      3     4          5
   Not at all Not very Slightly Fairly Very

   much

   What kind of question is this?
   a. Multiple choice
   b. Forced alternative
   c. Likert-type scale
   d. Open-ended

   ANSWER: c (p. 101)
14. If on a survey a respondent must select between two alternative responses, it is referred to as a(n) ____________ question.
   a. open-ended
   b. multiple choice
   c. Likert-type scale
   d. forced alternative

   ANSWER: d (p. 101)
15. Which of the following types of questions allows the researcher to calculate an average or mean response?
   a. Open-ended
   b. Yes-no
   c. Likert-type scale
   d. Forced alternative

   ANSWER: c (p. 101)

16. Which of the following types of questions allows the researcher to code responses?
   a. Open-ended
   b. Yes-no
   c. Likert-type scale
   d. Forced alternative

   ANSWER: a (p. 101)

17. Which of the following is one of the guidelines for writing good survey questions?
   a. Questions should use familiar vocabulary.
   b. Questions should be lengthy so that participants will be able to understand them better.
   c. Questions should be above the reading level of the individuals you intend to test.
   d. All of the above.

   ANSWER: a (p. 102)

18. Which of the following represents the BEST way to word this question?
   a. “Do you agree that wealthy professional athletes are overpaid?”
   b. “Do you agree that professional athletes are overpaid?”
   c. “Do you disagree that professional athletes are overpaid?”
   d. “Do you believe that professional athletes are overpaid?”

   ANSWER: d (p. 102)

19. “What is your age?” This question falls under the category of ________ data.
   a. demographic
   b. Likert-type scale
   c. analytic
   d. split-half

   ANSWER: a (p. 102)
20. Which of the following is NOT a disadvantage of mail surveys?
   a. The researcher cannot be sure who actually fills out the survey.
   b. Response rates are usually low.
   c. Researchers cannot send out a large number of surveys.
   d. Participants may not answer questions in the order in which they appear on the survey.

   ANSWER: c (p. 103)

21. Dale wants to ensure that he has a high response rate for his survey. Which method would be best?
   a. Mail survey
   b. Personal interview
   c. Telephone interview
   d. Demographic interview

   ANSWER: b (p. 104)

22. Which of the following is NOT a strategy to increase the response rate of mail surveys?
   a. Include a prepaid envelope for the return of the completed survey.
   b. Send a replacement survey if you have not heard from a participant within 2-3 weeks.
   c. The cover letter should give very little information about the study in order to make the survey shorter.
   d. Include a statement about the confidentiality of responses.

   ANSWER: c (p. 104)

23. All of the following are advantages of personal interviews EXCEPT:
   a. There is a high response rate.
   b. The researcher can ensure that the questions are answered in the correct order.
   c. The researcher can answer questions for the respondents.
   d. Data collection is usually very fast compared to other methods.

   ANSWER: d (p. 104)

24. All of the following are disadvantages of personal interviews EXCEPT:
   a. Personal interviews involve a great deal of time.
   b. There is a possibility of interviewer bias.
   c. There is a possibility of danger to the interviewer.
   d. There is a low response rate.

   ANSWER: d (p. 104)
25. All of the following are disadvantages of telephone interviews EXCEPT:
   a. Many people screen or block calls from people whom they do not know.
   b. The researcher is more likely to obtain a biased sample using a telephone
      survey than a mail survey.
   c. The researcher cannot examine nonverbal behavior of the respondent.
   d. It is more difficult to establish rapport over the telephone than in personal
      interviews.

   ANSWER: b (p. 105)

26. _______ refers to the extent to which a test measures what it is supposed to
    measure.
   a. Test-retest reliability
   b. Interrater reliability
   c. Split-half reliability
   d. Validity

   ANSWER: d (p. 105)

27. Veronica intended to develop a test to measure locus of control, but it actually
    measures self-esteem. Veronica’s test has low
   a. test-retest reliability.
   b. validity.
   c. interrater reliability.
   d. split-half reliability.

   ANSWER: b (p. 105)

28. Kimberly’s new depression scale correlates positively with psychologists’ ratings of
    their patients’ depression. Kimberly’s depression scale shows high
   a. criterion validity.
   b. concurrent validity.
   c. split-half reliability.
   d. interrater reliability.

   ANSWER: b (p. 106)

29. Researchers often use a panel of judges to assess the _______ validity of their test items.
   a. criterion
   b. concurrent
   c. content
   d. split-half

   ANSWER: c (p. 106)
30. Researchers have found that SAT scores predict first-semester grade point average. This demonstrates ________ validity.
   a. criterion
   b. concurrent
   c. content
   d. split-half

   ANSWER: a (p. 106)

31. ________ validity is established by comparing the score on a test with a future score on another test.
   a. Criterion
   b. Concurrent
   c. Content
   d. Split-half

   ANSWER: a (p. 106)

32. ________ validity refers to the degree to which the score on a test corresponds with another measure of the designated trait.
   a. Criterion
   b. Concurrent
   c. Content
   d. Split-half

   ANSWER: b (p. 106)

33. ________ refers to the extent to which a test exhibits consistency.
   a. Concurrent validity
   b. Criterion validity
   c. Content validity
   d. Reliability

   ANSWER: d (p. 106)

34. Latoya develops a new scale to measure beliefs in extraterrestrials. She gives her new scale to 100 people twice, two months apart. She finds that in general, people who believe in extraterrestrials at Time 1 also believe in extraterrestrials at Time 2. Latoya’s scale exhibits good
   a. concurrent validity.
   b. content validity.
   c. test-retest reliability.
   d. split-half reliability.

   ANSWER: c (p. 106)
35. Researchers give a test to participants on two separate occasions in order to assess
   a. concurrent validity.
   b. criterion validity.
   c. split-half reliability.
   d. test-retest reliability.

   ANSWER: d (p. 106)

36. What is the main drawback with test-retest reliability?
   a. There are usually not enough items to reliably assess test-retest reliability.
   b. It is difficult to find another test that also measures the same trait of interest.
   c. Participants may remember the questions and answers the second time the test is administered.
   d. It is difficult to achieve high interrater reliability.

   ANSWER: c (p. 107)

37. History effects are associated with
   a. split-half reliability.
   b. criterion validity.
   c. test-retest reliability.
   d. content validity.

   ANSWER: c (p. 107)

38. If a researcher is concerned about history effects, she should use ________ reliability instead of ________ reliability.
   a. test-retest; split-half
   b. split-half; test-retest
   c. criterion; test-retest
   d. split-half; criterion

   ANSWER: b (p. 107)

39. To determine __________ reliability, a researcher divides a test into two subtests and compares the scores made on the two halves.
   a. test-retest
   b. split-half
   c. criterion
   d. content

   ANSWER: b (p. 107)
40. Ken develops a new scale to measure extraversion. In order to assess reliability, he divides his scale into even and odd numbered items and assess the degree of correspondence between the two groups. Ken has used the ________ technique.
   a. criterion
   b. test-retest
   c. split-half
   d. interrater

   ANSWER: c (p. 107)

41. Cathy must take a test in order to be able to practice medicine. What kind of test is Kathy most likely to take?
   a. Personality test
   b. Aptitude test
   c. Achievement test
   d. Demographic test

   ANSWER: c (p. 107)

42. The GRE is an example of a(n) ________ test.
   a. personality
   b. aptitude
   c. achievement
   d. demographic

   ANSWER: b (p. 107)

43. ________ tests are designed to assess an individual’s potential ability or skill in a particular job.
   a. Personality
   b. Aptitude
   c. Achievement
   d. Demographic

   ANSWER: b (p. 107)

44. ________ tests are designed to evaluate an individual’s level of mastery or competence.
   a. Personality
   b. Aptitude
   c. Achievement
   d. Demographic

   ANSWER: c (p. 107)
45. ________ tests are designed to measure a specific aspect of the individual’s motivational state or interpersonal capability.
   a. Personality
   b. Aptitude
   c. Achievement
   d. Demographic

   ANSWER: a (p. 107)

46. Madeleine has developed a new scale to measure conscientiousness. This scale would best be described as a(n)
   a. achievement test.
   b. personality inventory.
   c. aptitude test.
   d. stratified test.

   ANSWER: b (p. 108)

47. The complete set of individuals we wish to examine is called the ________
   a. sample.
   b. stratified sample.
   c. random sample.
   d. population.

   ANSWER: d (p. 109)

48. A ________ is a subset of the ____________.
   a. population; sample
   b. population; random sample
   c. sample; population
   d. None of the above.

   ANSWER: c (p. 109)

49. If every member of the population has an equal likelihood of being included in the study, the researcher has obtained a ________ sample.
   a. cohort
   b. random
   c. convenience
   d. demographic

   ANSWER: b (p. 109)
50. Which of the following is a good strategy to increase the representativeness of a sample?
   a. Use random sampling without replacement.
   b. Use convenience sampling.
   c. Decrease the sample size.
   d. Increase the sample size.

   ANSWER: d (p. 109)

51. Once chosen, a score, event, or participant cannot be returned to the population to be selected again. This technique is referred to as
   a. random sampling without replacement.
   b. random sampling with replacement.
   c. stratified random sampling.
   d. convenience sampling.

   ANSWER: a (p. 109)

52. Once chosen, a score, event, or participant can be returned to the population to be selected again. This technique is referred to as
   a. random sampling without replacement.
   b. random sampling with replacement.
   c. stratified random sampling.
   d. convenience sampling.

   ANSWER: b (p. 109)

53. Janice wishes to ensure that she has equal numbers of freshmen, sophomores, juniors, and seniors in her sample. She separates the population into subpopulations according to class rank and draws random samples from each subpopulation. Janice has engaged in __________ sampling.
   a. convenience
   b. replacement
   c. stratified random
   d. non-random

   ANSWER: c (p. 110)
54. Nigel is interested in studying the exercise habits of inner-city children. He administers his survey once to a random sample of inner-city children. What kind of research strategy has Nigel used?
   a. Cross-sectional approach
   b. Longitudinal approach
   c. Single-strata approach
   d. Split-half approach

   ANSWER: c (p. 110)

55. ________ research involves the comparison of two or more groups of participants during the same time span.
   a. Single-strata
   b. Longitudinal
   c. Random
   d. Cross-sectional

   ANSWER: d (p. 111)

56. Nyla compares the voting preferences of 20-year-olds and 40-year-olds at a single point in time. Nyla has done ________ research.
   a. longitudinal
   b. cross-sectional
   c. single-strata
   d. case study

   ANSWER: b (p. 111)

57. Cliff administers his “Closeness with Family” questionnaire to a sample of children when they are 9 years old and then again when they turn 15. Cliff has done ________ research.
   a. longitudinal
   b. cross-sectional
   c. single-strata
   d. case study

   ANSWER: a (p. 111)

58. Obtaining research data from the same group of participants over an extended period of time is referred to as ____________ research.
   a. longitudinal
   b. cross-sectional
   c. single-strata
   d. case study
59. A group of individuals born during the same time period is known as a
   a. stratum.
   b. pilot group.
   c. stratified random sample.
   d. cohort.

   ANSWER: d (p. 111)

Chapter 6
Multiple Choice

60. An event or behavior that can assume two or more values is known as a
   a. constant.
   b. confound.
   c. carryover effect.
   d. variable.

   ANSWER: d (p. 116)

61. Which of the following is a good operational definition of anxiety?
   a. a feeling of apprehension
   b. a feeling of worry
   c. a feeling of unease
   d. score on the Taylor Manifest Anxiety Scale

   ANSWER: d (p. 117)

62. Defining variables in terms of the operations needed to produce them is called
    using _______ definitions.
    a. dictionary
    b. operational
    c. independent
    d. confounded

   ANSWER: b (p. 117)

63. The variable that the researcher directly manipulates is known as the ________ variable.
   a. dependent
   b. confounded
   c. independent
   d. nuisance

   ANSWER: c (p. 117)
64. When the participants in an experiment are subjected to conditions that alter or change their normal biological state, a(n) ________ independent variable is being used.
   a. stimulus
   b. participant
   c. experience
   d. physiological

   ANSWER: d (p. 117)

65. Natalie conducts an experiment in which she randomly assigns half the individuals to drink alcohol and half to drink tonic water that they think is alcohol. What kind of independent variable is being used?
   a. experience
   b. participant
   c. physiological
   d. stimulus

   ANSWER: c (p. 118)

66. When the effects of amount or type of previous training or learning are manipulated, the researcher is using a(n) ________ independent variable.
   a. physiological
   b. stimulus
   c. experience
   d. participant

   ANSWER: c (p. 118)

67. Boice and Gargano (2001) conducted a study in which some participants received zero cues and others received eight cues when trying to remember items in a list. What kind of independent variable is being used?
   a. participant
   b. experience
   c. stimulus
   d. physiological

   ANSWER: b (p. 118)

68. When researchers manipulate some aspect of the environment, they are using a(n) ________ independent variable.
   a. physiological
   b. stimulus
   c. experience
   d. participant
69. Age is considered a(n) ________ independent variable.
   a. participant
   b. physiological
   c. stimulus
   d. experience
   ANSWER: a (p. 118)

70. Josh compares men versus women on memory performance. Josh is using a(n) __________ independent variable.
   a. stimulus
   b. experience
   c. participant
   d. physiological
   ANSWER: c (p. 118)

71. Why are participant characteristics not true independent variables?
   a. Participant characteristics are extraneous variables, not independent variables.
   b. Participant characteristics are confounded with stimulus independent variables.
   c. Participant characteristics are not manipulated by the researcher.
   d. Participant characteristics are not operationally defined.
   ANSWER: c (p. 118)

72. Uncontrolled variables that can cause unintended changes between groups are known as
   a. independent variables.
   b. dependent variables.
   c. physiological variables.
   d. extraneous variables.
   ANSWER: d (p. 119)

73. An extraneous variable is most similar to a(n) ________ variable.
   a. dependent
   b. independent
   c. reliable
   d. valid
   ANSWER: b (p. 119)
74. Daniel would like to study a new way of teaching research methods. There are two sections of research methods being taught at 2PM on Mondays and Wednesdays, so Daniel has one teacher use the new way and the other teacher use the old way. At the end of the semester, he finds that students who were taught the new way had higher grades than students taught the old way. What is the extraneous variable?
   a. grades at the end of the semester
   b. method of instruction (new versus old)
   c. the two teachers
   d. There is no extraneous variable in this study.

   ANSWER: c (p. 121)
75. Why are extraneous variables problematic?
   a. The operational definitions of extraneous variables are poor.
   b. The extraneous variables are purposely manipulated by the researcher.
   c. Extraneous variables are usually measured on a Likert scale.
   d. The researcher does not know if the results are due to the independent
      variable or to the extraneous variables.

   ANSWER: d (p. 121)

76. The ______ variable is the response or behavior that is measured.
   a. independent
   b. confounded
   c. dependent
   d. nuisance

   ANSWER: c (p. 121)

77. The ______ variable changes as a function of the ______ variable.
   a. dependent; independent
   b. nuisance; dependent
   c. independent; dependent
   d. extraneous; independent

   ANSWER: a (p. 121)

78. Tara compared first-graders and second-graders in the number of words they
    remembered correctly. What kind of dependent variable is this?
   a. degree or amount
   b. rate or frequency
   c. correctness
   d. latency or duration

   ANSWER: c (p. 122)

79. In one study, a group of children watched an adult either hit a Bobo doll or play
    quietly with the doll. The researchers measured the number of times the children
    later hit the Bobo doll. What kind of dependent variable is this?
   a. rate or frequency
   b. latency or duration
   c. correctness
   d. degree or amount

   ANSWER: a (p. 122)
80. A researcher calculates how many times a rat presses a lever after having been either reinforced or punished. What kind of dependent variable is this?
   a. latency or duration
   b. degree or amount
   c. rate or frequency
   d. correctness

   ANSWER: c (p. 122)

81. McKibban and Nelson (2001) assessed satisfaction with life in college students by using their scores on the Satisfaction with Life scale. What kind of dependent variable is this?
   a. degree or amount
   b. correctness
   c. rate or frequency
   d. latency or duration

   ANSWER: a (p. 122)

82. A researcher measures how quickly participants notice a dot that is presented in various places on a computer screen. What kind of dependent variable is this?
   a. rate or frequency
   b. correctness
   c. degree or amount
   d. latency or duration

   ANSWER: d (p. 122)

83. A dependent variable is _____ when it measures what it is supposed to measure.
   a. reliable
   b. confounded
   c. valid
   d. extraneous

   ANSWER: c (p. 124)

84. Janie creates a new scale to measure self-esteem, but it turns out that it really measures extraversion. Janie’s scale has low
   a. latency.
   b. reliability.
   c. constancy.
   d. validity.

   ANSWER: d (p. 124)
85. The degree to which a dependent variable produces consistent measurements is known as
   a. validity.
   b. constancy.
   c. latency.
   d. reliability.

   ANSWER: d (p. 124)

86. George creates a new happiness scale and gives it to a sample of college students twice. Scores were consistent over time, which means that George’s scale is
   a. valid.
   b. reliable.
   c. negatively correlated.
   d. confounded.

   ANSWER: b (p. 124)

87. Unwanted variables that can cause the variability of scores within groups to increase are called ________ variables.
   a. extraneous
   b. confounded
   c. independent
   d. nuisance

   ANSWER: d (p. 125)

88. A researcher is interested in examining the reaction times of first-year students versus senior-year students. She conducts her study in a room that is much colder than the rest of the building due to a heating malfunction. What is the nuisance variable in this study?
   a. college rank (first year versus senior year)
   b. reaction times
   c. room temperature
   d. the researcher

   ANSWER: c (p. 127)

89. Nusiance variables ________ the spread of scores within a distribution.
   a. decrease
   b. increase
   c. first increase, then decrease
   d. first decrease, then increase

   ANSWER: b (p. 127)
90. ________ variables increase the variability of scores within all groups, and ________ variables change the difference between groups.
   a. Extraneous; confounded
   b. Extraneous; nuisance
   c. Nuisance; extraneous
   d. Independent; dependent

   ANSWER: c (p. 127)

91. ________ is a control technique that ensures that each participant has an equal chance of being assigned to any group in an experiment.
   a. Balancing
   b. Counterbalancing
   c. Elimination
   d. Randomization

   ANSWER: d (p. 129)

92. Derek conducts a study in which half of the participants read a job application from a male candidate, and the other half read a job application from a female candidate. He wants to make sure that each participant has an equal chance of reading the male job application as the female job application, so he uses the control technique known as
   a. counterbalancing.
   b. randomization.
   c. constancy.
   d. elimination.

   ANSWER: b (p. 130)

93. How does randomization work to control extraneous variables?
   a. The researcher uses different treatment sequences in order to control order effects.
   b. The researcher ensures that all groups receive the extraneous variables to the same extent.
   c. The researcher creates a constant or uniform condition to control an extraneous variable.
   d. Because all participants have an equal likelihood of being in any group, any individual differences associated with the participants should be equally distributed across the groups.

   ANSWER: d (p. 129)
94. What is the main drawback of randomization?
   a. Randomization increases the risk of differential carryover.
   b. The researcher cannot be sure that all extraneous variables have been equally distributed across the groups.
   c. It is very difficult to implement this technique.
   d. Randomization increases the risk of carryover effects.

   ANSWER: b (p. 130)

95. ____________ is a control technique in which extraneous variables are completely removed from an experiment.
   a. Constancy
   b. Randomization
   c. Elimination
   d. Balancing

   ANSWER: c (p. 130)

96. Sagles et al. (2002) conducted a cross-cultural study of the identification of facial expressions. They were careful to use photographs of faces only so that variables like attire and body type could not influence responses. Sagles et al. used the control technique of
   a. randomization.
   b. balancing.
   c. constancy.
   d. elimination.

   ANSWER: d (p. 130)

97. Joy is conducting her experiment in the same room, with the same temperature, and the same lighting. Joy is using the control technique of
   a. randomization.
   b. elimination.
   c. balancing.
   d. constancy.

   ANSWER: d (p. 130)
98. ________ is a control technique in which an extraneous variable is reduced to a single value that is experienced by all participants.
   a. Balancing
   b. Counterbalancing
   c. Elimination
   d. Constancy

   ANSWER: d (p. 130)

99. Larey (2001) decided to restrict her study on body dissatisfaction to only females because males and females vary greatly on this variable. Larey used the control technique of
   a. counterbalancing.
   b. elimination.
   c. constancy.
   d. randomization.

   ANSWER: c (p. 131)

100. ________ is a control technique that achieves group equality by distributing extraneous variables equally to all groups.
    a. Constancy
    b. Elimination
    c. Randomization
    d. Balancing

    ANSWER: d (p. 131)

101. A researcher is interested in creating equivalent groups in her experiment. If potential extraneous variables are unknown, she should use ________ and if the extraneous variables are known, she should use ________.
    a. balancing; elimination
    b. balancing; randomization
    c. randomization; balancing
    d. elimination; balancing

    ANSWER: c (p. 131)

102. Which of the following control techniques is most applicable to studies in which the participants are in all the conditions of the experiment?
    a. elimination
    b. randomization
    c. counterbalancing
    d. constancy
103. Dennis would like to conduct a study in which participants taste five different brands of jam and decide which one they like best. To control for order effects, Dennis should use
   a. constancy.
   b. randomization.
   c. elimination.
   d. counterbalancing.

   ANSWER: d (p. 133)

104. _________ is a procedure for controlling order effects by presenting different treatment sequences.
   a. Elimination
   b. Randomization
   c. Counterbalancing
   d. Constancy

   ANSWER: c (p. 133)

105. Within-_______ counterbalancing refers to the presentation of different treatment sequences to the same participant, and within-_______ counterbalancing refers to the presentation of different treatment sequences to different participants.
   a. subject; group
   b. group; subject
   c. treatment; subject
   d. treatment; group

   ANSWER: a (p. 133)

106. In _________ counterbalancing, each participant must experience each condition more than once.
   a. within-subject
   b. within-group
   c. complete
   d. incomplete

   ANSWER: a (p. 133)
107. Which of the following is NOT one of the guidelines for within-group counterbalancing?
   a. Each participant must experience each condition more than once.
   b. Each treatment must be presented to each participant an equal number of times.
   c. Each treatment must occur an equal number of times at each testing or practice session.
   d. Each treatment must precede and follow each of the other treatments an equal number of times.

   ANSWER: a (p. 133)

108. Jeremy would like to do a study in which each participant is exposed to four different treatment conditions. In order to do complete counterbalancing, Jeremy will need a minimum of ________ participants.
   a. 4
   b. 16
   c. 24
   d. 48

   ANSWER: c (p. 135)

109. ________ counterbalancing means that all possible treatment sequences are presented.
   a. Total
   b. Differential
   c. Incomplete
   d. Complete

   ANSWER: d (p. 135)

110. Jose would like to do a study in which each participant is exposed to 12 different treatments. Which kind of counterbalancing would be easiest for him to implement?
   a. Within-subject counterbalancing
   b. Complete counterbalancing
   c. Incomplete counterbalancing
   d. Differential counterbalancing

   ANSWER: c (p. 136)

111. In ________ counterbalancing, only a portion of all possible sequences are presented.
   a. complete
   b. incomplete
c. within-subjects  
d. elimination  

ANSWER: b (p. 136)

112. Harry decides to use incomplete counterbalancing for his study in which each participant is exposed to six different treatments over the course of the study. He decides to randomly select the sequences he will use. Which requirement of counterbalancing is he likely to violate?  
a. Each treatment must be presented to each participant an equal number of times.  
b. Each treatment must occur an equal number of times at each testing or practice session.  
c. Each treatment must precede and follow each of the other treatments an equal number of times.  
d. Both b and c.  

ANSWER: d (p. 136)

113. When the position of a treatment in a series determines, in part, the participants’ responses, the researcher is dealing with  
a. order effects.  
b. incomplete counterbalancing.  
c. constancy.  
d. nuisance variables.  

ANSWER: a (p. 137)

114. Susan conducts a study to determine which method is most effective in treating depression. Each participant receives two months of behavioral therapy, two months of cognitive therapy, and two months of humanistic therapy using a completely counterbalanced design. Susan finds that whatever type of therapy is last produces the most benefits. Susan has encountered a problem known as  
a. experimenter bias.  
b. order effects.  
c. demand characteristics.  
d. social desirability.  

ANSWER: b (p. 137)

115. When the effects of one treatment persist and influence responses to the next treatment, the researcher has the problem of  
a. social desirability.  
b. experimenter bias.  
c. carryover effects.  
d. elimination.  

ANSWER: c (p. 137)
ANSWER: c (p. 138)
116. A researcher would like to compare the effectiveness of two drugs to treat anxiety. He gives Drug A to a participant and then gives Drug B to that same participant 12 hours later. Unfortunately, Drug A is not fully out of the participant’s system yet, so the study is contaminated by
   a. response bias.
   b. a carryover effect.
   c. demand characteristics.
   d. experimenter bias.

   ANSWER: b (p. 138)

117. _______ occurs when the response to one treatment depends on which treatment was administered previously.
   a. Experimenter bias
   b. Response bias
   c. Differential carryover
   d. Within-subject counterbalancing

   ANSWER: c (p. 139)

118. Hannah conducts a study in which each participant is exposed to three different reinforcements (A, B, and C) for correct responses on a memory task. She finds that when reinforcement B precedes reinforcement A, the number of correct responses is greatly increased relative to when reinforcement A precedes B. Hannah has encountered the problems of
   a. differential carryover.
   b. response bias.
   c. experimenter bias.
   d. within-subject counterbalancing.

   ANSWER: a (p. 140)

Chapter 7
119. Dawn chose to use college students as her participants because past research did as well. Dawn used _______ in choosing her participants.
   a. availability
   b. precedent
   c. power
   d. an etic

   ANSWER: b (p. 144)

120. One advantage to using precedence to choose participants is that there is
   a. increased power in the experiment.
   b. a lowered chance of experimenter expectancies affecting the research.
c. a body of knowledge about that type of participant.
  d. increased generalizability of the information that is gathered.

ANSWER: c (p. 145)

121. One disadvantage to using precedence to choose participants is that
  a. the researcher will have little past information on that type of participant.
  b. there is an increased chance of experimenter expectancies affecting the research.
  c. there is decreased power in the experiment.
  d. there is limited generalizability of the information that is gathered.

ANSWER: d (p. 145)

122. Which of the following populations is used most often in psychological research?
  a. patients with schizophrenia
  b. patients with depression
  c. the general population
  d. college students

ANSWER: d (p. 145)

123. The ______ the within-group variability, the ______ the number of participants
  the researcher will need.
  a. greater; fewer
  b. lower; greater
  c. greater; greater
  d. None of the above.

ANSWER: c (p. 146)

124. Why will a researcher need more participants when there is a high degree of within-group variability?
  a. The scores are spread out within the groups, which makes it more difficult to see differences between groups.
  b. The scores are clustered together within the groups, which makes it more difficult to see differences between groups.
  c. The scores are spread out within the groups, which makes it easier to see differences between groups.
  d. None of the above.

ANSWER: a (p. 146)

125. The probability that a statistical test will be significant is called
  a. precedent.
  b. the Rosenthal effect.
c. a response set.
d. power.

ANSWER: d (p. 147)

126. The _____ the number of participants, the _____ the power in an experiment.
   a. greater; fewer
   b. fewer; greater
   c. greater; greater
   d. None of the above.

ANSWER: c (p. 147)

127. Which of the following is the best guideline for choosing the number of
    participants to use in a research project?
   a. cost
   b. availability
   c. time
   d. past research

ANSWER: d (p. 147)

128. The apparatus you choose for your research project is most closely associated
    with
   a. IV presentation.
   b. DV recording.
   c. Both a and b.
   d. Neither a nor b.

ANSWER: c (p. 147)

129. Which of the following is a drawback associated with the use of expensive or
    elaborate equipment in your research study?
   a. Often less elaborate equipment can work just as well with less chance of a
      breakdown.
   b. Researchers can unwittingly let their equipment choose the research
      question.
   c. When elaborate equipment breaks down, it can be prohibitively expensive
      to fix.
   d. All of the above.

ANSWER: d (p. 149)

130. Which of the following is true regarding experimenter characteristics?
   a. Physiological characteristics of the experimenter can have an effect on
      participants, but psychological characteristics of the experimenter do not.
b. Past research has shown that female experimenters are more friendly to participants than male experimenters.
c. Both physiological and psychological characteristics of the experimenter can have an effect on participants.
d. Experimenter characteristics are not problematic because experimenters use constancy in their research.

ANSWER: c (p. 151)

131. Experimenter expectancies are best categorized as __________ variables.
   a. extraneous  
b. nuisance  
c. independent  
d. dependent

ANSWER: a (p. 151)

132. Experimenter expectancies refer to expectations that
   a. the participants have about the research process.
   b. the participants have about the experimenter.
   c. the experimenter has about the participants.
   d. All of the above.

ANSWER: c (p. 151)

133. Experimenter expectancies usually result in participants
   a. behaving in a manner opposite of experimenter expectations.
   b. behaving in a manner consistent with experimenter expectations.
   c. behaving in a natural way.
   d. not understanding the directions of the experimenter.

ANSWER: b (p. 151)

134. In the Rosenthal and Jacobson (1968) study involving the IQ scores of grade-school children,
   a. children who were genetically predisposed to achieve an intellectual spurt actually did increase their IQ scores at the end of the school year.
   b. children who came from an intellectually stimulating home environment had increased IQ scores at the end of the school year compared to their peers.
   c. teachers were told that certain randomly selected children were “intellectual bloomers” and those children did in fact experience an IQ increase at the end of the school year.
   d. All of the above.

ANSWER: c (p. 151)
135. In the Rosenthal and Fode (1963) study involving “maze bright” and “maze dull” rats,
   a. rats who were genetically superior (“maze bright”) were better able to run a maze than rats who were genetically inferior (“maze dull”).
   b. rats were able to run a maze better in bright light (“maze bright”) than in low light (“maze dull”).
   c. students who were told that their (randomly selected) rats were “maze bright” ended up with rats who were better able to run mazes than students who were told that their rats were “maze dull.”
   d. All of the above.

   ANSWER: c (p. 151)

136. When the experimenter’s preconceived idea of appropriate responding influences the treatment of participants and their behavior, it is known as
   a. the Rosenthal effect.
   b. precedence.
   c. power.
   d. an etic.

   ANSWER: a (p. 152)

137. Which of the following is a common method for controlling physiological and psychological experimenter effects?
   a. Use standardized methods.
   b. Use careful training to a set standard when the experimenter administers procedures.
   c. Standardize appearance, attitude, etc. as much as possible.
   d. All of the above.

   ANSWER: d (p. 152)
138. Which of the following is true regarding physiological and psychological experimenter effects, according to the text?
   a. Researchers are more concerned with physiological experimenter effects than psychological experimenter effects.
   b. Researchers are more concerned with psychological experimenter effects than physiological experimenter effects.
   c. Researchers are very concerned with both physiological and psychological experimenter effects.
   d. Researchers usually pay little attention to these factors because they are difficult to control.

   ANSWER: d (p. 152)

139. In a single-blind experiment,
   a. the experimenter is unaware of the treatment the participants are receiving.
   b. both the experimenter and the participant are unaware of the treatment the participants are receiving.
   c. participants are more likely to engage in yea-saying than nay-saying.
   d. participants are more likely to engage in nay-saying than yea-saying.

   ANSWER: a (p. 152)

140. Which of the following helps to minimize experimenter expectancies?
   a. precedence in selecting participants
   b. conducting a single-blind experiment
   c. increasing the power in an experiment
   d. using rats instead of human participants

   ANSWER: b (p. 152)

141. Which of the following is NOT a method to minimize experimenter expectancies?
   a. Use a single-blind experiment.
   b. Tape-record instructions to participants.
   c. Increase the number of demand characteristics in the study.
   d. Carefully prepare the instructions given to participants.

   ANSWER: c (p. 152)
142. Which of the following is an accurate depiction of a single-blind experiment?
   a. The experimenter is unaware of the treatment the participants are receiving.
   b. The participants are unaware of the treatment they are receiving.
   c. Both the experimenter and the participant are unaware of the treatment the participants are receiving.
   d. Either a or b.

   ANSWER: d (p. 153)

143. Features of the experiment that inadvertently lead participants to respond in a particular manner are known as
   a. etics.
   b. emics.
   c. demand characteristics.
   d. experimenter expectancies.

   ANSWER: c (p. 153)

144. The tendency for participants to behave as they perceive the experimenter wants them to behave is known as
   a. an emic.
   b. the good participant effect.
   c. an etic.
   d. ethnocentrism.

   ANSWER: b (p. 153)

145. Dickson et al. (2001) did not tell their participants that they were studying racial stereotypes because they were worried about
   a. experimenter expectancies.
   b. demand characteristics.
   c. ethnocentrism.
   d. sampling issues.

   ANSWER: b (p. 153)

146. Demand characteristics act as ________ variables.
   a. extraneous
   b. nuisance
   c. extraneous or nuisance
   d. independent

   ANSWER: c (p. 154)
147. Demand characteristics act as ________ variables when participants know which
group they are in, and demand characteristics act as ________ variables when
participants are not sure which group they are in.
   a. nuisance; extraneous
   b. extraneous; nuisance
   c. extraneous; extraneous
   d. nuisance; nuisance

   ANSWER: b (p. 154)

148. Participants in an experiment figure out that the study is about helping behavior,
but they can’t figure out which group they are in. The demand characteristics in
this study are operating as ________ variables.
   a. nuisance
   b. extraneous
   c. independent
   d. dependent

   ANSWER: a (p. 154)

149. Participants in an experiment figure out that the study is about group size and
helping behavior. They know that some people are in groups of five, and others
are in groups of three. The demand characteristics in this study are operating as
________ variables.
   a. independent
   b. dependent
   c. extraneous
   d. nuisance

   ANSWER: c (p. 154)

150. Participants who tend to answer yes to all questions are known as
   a. good participants.
   b. single-blind participants.
   c. yea-sayers.
   d. yes-men.

   ANSWER: c (p. 155)

151. Participants who tend to answer no to all questions are known as
   a. double-blind participants.
   b. etics.
   c. emics.
   d. nay-sayers.

   ANSWER: d (p. 155)
152. When participants answer yes or no to all questions, the _______ of their scores is called into question.
   a. reliability
   b. validity
   c. power
   d. precedence

   ANSWER: b (p. 155)

153. When the experimental context or testing situation influences the participants’ responses, it is known as a(n)
   a. emic.
   b. etic.
   c. response set.
   d. single-blind experiment.

   ANSWER: c (p. 155)

154. Brenda constructs a questionnaire to assess racial bias. All of the questions are worded such that agreement with each item indicates more racial bias. Brenda runs the risk of creating a(n)
   a. etic.
   b. emic.
   c. response set.
   d. double-blind experiment.

   ANSWER: c (p. 155)

155. Which of the following represents a way of controlling demand characteristics?
   a. Conduct a double-blind experiment.
   b. Use random sampling.
   c. Conduct an experiment rather than a correlational study.
   d. All of the above.

   ANSWER: a (p. 156)

156. An experiment in which both the experimenter and the participants are unaware of which treatment the participants are receiving is known as a ___________ experiment.
   a. single-blind
   b. double-blind
   c. triple-blind
   d. demand-characteristics

   ANSWER: b (p. 156)
157. A researcher conducts a study on the effectiveness of a new drug to alleviate anxiety. Participants are given either the drug or a sugar pill, and they don’t know which they are receiving. Furthermore, the experimenter dispensing the pills does not know which pill he is giving out (the lead researcher, however, is aware of everything). This experiment is known as a _________ experiment.
   a. correlational
   b. double-blind
   c. single-blind
   d. response-set

   ANSWER: b (p. 156)

158. Which of the following is NOT a technique used by researchers to control demand characteristics?
   a. Conduct a single-blind experiment in which participants do not know which group they are in.
   b. Conduct a double-blind experiment.
   c. Use deception in the informed consent.
   d. Use a general population sample rather than a college student sample.

   ANSWER: d (p. 156)

159. Which of the following is a drawback to using deception to control demand characteristics?
   a. Deception creates excessive yea-saying in participants.
   b. Participants might guess erroneously about the true purpose of the experiment, thus creating demand characteristics created by the deception.
   c. Experimenter expectancies make the deception ineffective.
   d. All of the above.

   ANSWER: b (p. 156)

160. Which of the following is a technique used by researchers to control yea-saying?
   a. Conduct a case study instead of an experiment.
   b. Conduct a cross-cultural study.
   c. Rewrite items so that sometimes a negative response represents agreement, and sometimes a negative response represents disagreement.
   d. Avoid ethnocentrism on the part of the experimenter.

   ANSWER: c (p. 157)
161. A researcher reviews her questions to guard against socially desirable responding. The researcher is concerned about  
   a. ethnocentrism.  
   b. response set.  
   c. precedence.  
   d. etics.  
   
   ANSWER: b (p. 157)

162. Research aimed at determining the universality of research results is known as ________ research.  
   a. correlational  
   b. experimental  
   c. archival  
   d. cross-cultural  
   
   ANSWER: d (p. 159)

163. Lasting values, attitudes, and behaviors which are shared by a group define  
   a. the Rosenthal effect.  
   b. culture.  
   c. response sets.  
   d. precedence.  
   
   ANSWER: b (p. 160)

164. Which of the following is true regarding culture?  
   a. Culture is synonymous with race and nationality.  
   b. Each country has a particular culture.  
   c. Each city has a particular culture.  
   d. Several cultures can exist within the same country.  
   
   ANSWER: d (p. 160)

165. A finding that is the same in different cultures is known as a(n)  
   a. emic.  
   b. etic.  
   c. response set.  
   d. precedent.  
   
   ANSWER: b (p. 160)
166. A culture-specific finding is known as a(n)
   a. emic.
   b. etic.
   c. response set.
   d. precedent.
   
   ANSWER: a (p. 160)

167. A finding that is the same in different cultures is known as a(n) ________, and a culture-specific finding is known as a(n) ________.
   a. etic; emic
   b. emic; etic
   c. etic; response set
   d. response set; emic
   
   ANSWER: a (p. 160)

168. Some cultures are individualistic, and others are not. Individualism is a(n)
   a. emic.
   b. etic.
   c. response set.
   d. demand characteristic.
   
   ANSWER: b (p. 160)

169. People of all cultures respond similarly to reinforcers; therefore, reinforcement is a(n)
   a. demand characteristic.
   b. emic.
   c. response set.
   d. etic.
   
   ANSWER: b (p. 160)

170. Researchers are ________ when they view other cultures as an extension of their own culture.
   a. yea-sayers
   b. double-blind
   c. ethnocentric
   d. confounded
   
   ANSWER: c (p. 160)
171. In what way does culture influence the research process?
   a. Culture influences the choice of the research project.
   b. Culture influences the nature of the experimental hypothesis.
   c. Culture influences the selection of the IV and recording of the DV.
   d. All of the above.

   ANSWER: d (p. 161)

172. Which of the following is a methodological question relevant to cross-cultural research?
   a. Are the samples from two cultures equivalent?
   b. Is the sample of participants representative of the culture from which they were drawn?
   c. Do the survey questions mean the same thing in different cultures?
   d. All of the above.

   ANSWER: d (p. 162)

173. What is one way to ensure that a questionnaire is appropriate in multiple cultures?
   a. The researcher should conduct a reliability analysis.
   b. The researcher should conduct a back translation.
   c. The researcher should restrict the study to college students.
   d. The researcher should conduct a validity analysis.

   ANSWER: b (p. 162)

174. What is a back translation?
   a. A researcher conducts a study in at least three different cultures.
   b. A researcher translates a questionnaire into another language.
   c. A researcher translates a questionnaire into another language and then translates it back into the original language.
   d. A researcher ensures that a particular culture responds in the same way.

   ANSWER: c (p. 162)

175. The tendency of a particular culture to respond in a certain manner is known as a(n)
   a. etic.
   b. cultural response set.
   c. demand characteristic.
   d. Rosenthal effect.

   ANSWER: b (p. 163)
176. What is one way in which a researcher may know that a cultural response set is operating?
   a. The participants complain about the deception being used in the experiment.
   b. There are more yea-sayers than nay-sayers in the experiment.
   c. Differences exist among the groups tested in various cultures.
   d. All of the above.

   ANSWER: c (p. 163)

Chapter 8

177. Jerry is concerned about whether his independent variable is the only possible explanation for the results of his experiment. Jerry is concerned about
   a. external validity.
   b. internal validity.
   c. reliability.
   d. convenience sampling.

   ANSWER: b (p. 167)

178. A study with good internal validity
   a. has good environmental generalization.
   b. has good temporal generalization.
   c. is free from confounds.
   d. has at least one interaction with selection.

   ANSWER: c (p. 167)

179. Which of the following is NOT a threat to internal validity?
   a. Multiple-treatment interference
   b. History
   c. Maturation
   d. Statistical regression

   ANSWER: a (pp. 167-170)

180. __________ refers to events that occur between repeated measurements of the dependent variable.
   a. Maturation
   b. Statistical regression
   c. Selection
   d. History

   ANSWER: d (p. 167)
181. Bonnie conducts an experiment to examine the effects of media on college women’s body image. She gives a sample of women a body image questionnaire, then a week later exposes them to magazine photos of very thin models. Then a week later she administers a posttest designed to assess any changes in body image. Right before the posttest, a famous supermodel is reported to be suffering from anorexia; the story is on the cover of several magazines. Bonnie is concerned that the women’s responses on the posttest may be influenced by the supermodel story instead of her independent variable. This example illustrates the potential problem of
   a. mortality.
   b. statistical regression.
   c. selection.
   d. history.

   ANSWER: d (p. 167)

182. Ron is conducting an experiment that lasts several hours. During part of the experiment, a noisy power saw operates outside the room. Ron is concerned that responses may be influenced by the power saw instead of his independent variable. This example illustrates the potential problem of
   a. instrumentation.
   b. testing.
   c. history.
   d. selection.

   ANSWER: c (p. 167)

183. Changes in participants that occur over time during an experiment are referred to as
   a. history.
   b. maturation.
   c. testing.
   d. selection.

   ANSWER: b (p. 167)

184. Stanley conducts a study in which he assesses teasing in a sample of first-graders during the first week of school and again three months later. Because the study is longitudinal, Stanley has to worry about which of the following threats to internal validity?
   a. Selection
   b. Temporal generalization
   c. Demand characteristics
   d. Maturation
ANSWER: d (p. 167)
185. Maturational changes are most likely to occur in an experiment that has
   a. repeated measurements of the dependent variable.
   b. one measurement of the dependent variable.
   c. one measurement of the independent variable.
   d. high external validity.

   ANSWER: a (p. 168)

186. ________ refers to a threat to internal validity that occurs because measuring the
dependent variable causes a change in the dependent variable.
   a. History
   b. Maturation
   c. Testing
   d. Instrumentation

   ANSWER: c (p. 168)

187. Tad takes the SAT twice and his scores improve by a few points the second time.
Tad’s improvement is most likely due to
   a. a practice effect.
   b. selection.
   c. mortality.
   d. diffusion of treatment.

   ANSWER: a (p. 168)

188. Dependent variable measurements that actually change the dependent variable
being measured are known as
   a. nonreactive measures.
   b. reactive measures.
   c. diffusion of treatments.
   d. instrumentation problems.

   ANSWER: b (p. 168)

189. Delia gives students a questionnaire on attitudes toward affirmative action. Then
she shows her participants a movie on affirmative action. Then the participants fill
out the same questionnaire again. Which of the following problems is most likely
in Delia’s study?
   a. Reactive measures
   b. Selection
   c. Nonreactive measures
   d. Type III error

   ANSWER: a (p. 168)
190. Which of the following is used by psychologists to create nonreactive measures?
   a. a representative sample
   b. attitude questionnaires instead of behavioral observations
   c. deception
   d. All of the above.

   ANSWER: c (p. 169)

191. DV measurements that do not influence the DV being measured are known as
   a. reactive measures.
   b. nonreactive measures.
   c. demand characteristics.
   d. maturation problems.

   ANSWER: b (p. 169)

192. Instrumentation can refer to problems with
   a. equipment.
   b. human observers, judges, raters, and coders.
   c. either equipment or human observers, judges, raters, and coders.
   d. neither equipment nor human observers, judges, raters, and coders.

   ANSWER: c (p. 169)

193. __________ refers to a threat to internal validity that occurs if the equipment or human measuring the DV changes the measuring criterion over time.
   a. Mortality
   b. Maturation
   c. History
   d. Instrumentation

   ANSWER: d (p. 169)

194. A coder in an experiment has to code participant responses over a period of several months. The coding that she does during the first month is noticeably different from the coding she does during the last month. The experiment has __________ problems.
   a. statistical regression
   b. instrumentation
   c. mortality
   d. maturation

   ANSWER: b (p. 170)
The “Sports Illustrated jinx” refers to the fact that athletes who appear on the cover of the magazine often then experience a decline in performance afterwards. Some researchers attribute this to the fact that athletes who are placed on the cover are those who are at the top of their game, and performance naturally reverts back to a more normal level after time. These researchers are referring to the problem of
a. statistical regression.
b. mortality.
c. selection.
d. instrumentation.

ANSWER: a (p. 170)

Andy conducts a study to improve reading scores in elementary schools. He obtains a sample of second-graders whose reading level was very much below average. He enrolls these students in a reading program and then measures their reading level six months later. Reading levels were significantly higher after the program than before. Because Andy selected participants on the basis of their extreme scores, he should be concerned about
b. statistical regression.
c. temporal generalization.
d. instrumentation.

ANSWER: b (p. 170)

_________ refers to a threat to internal validity that occurs when low scorers improve or high scorers fall on a second administration of a test as a result of statistical reasons.
   a. Mortality
   b. Selection
   c. Statistical regression
   d. History

ANSWER: c (p. 170)

Emily conducts an experiment in which her experimental group and control group are not equivalent at the beginning of the experiment. Emily has a(n)_________ problem.
   a. regression
   b. selection
   c. maturation
   d. instrumentation

ANSWER: b (p. 171)
199. Why do the groups have to be equivalent at the start of an experiment?
   a. If the groups are not equivalent at the start of an experiment, the experiment is contaminated by ethnocentrism.
   b. If the groups are not equivalent at the start of an experiment, demand characteristics are more likely.
   c. If the groups are not equivalent at the start of an experiment, it is impossible to conduct a replication.
   d. If the groups are not equivalent at the start of an experiment, we cannot be certain that the IV caused any difference observed in the DV.

   ANSWER: d (p. 171)

200. _______ refers to a threat to internal validity that can occur if the experimental participants from different groups drop out of the experiment at different rates.
   a. History
   b. Maturation
   c. Mortality
   d. Selection

   ANSWER: c (p. 171)

201. Ben conducts a study to test the effectiveness of an alcohol treatment program. He surveys the clients twice: once at intake and again six months later. He finds that overall, the treatment program was effective, but approximately 30% of the original sample dropped out of the program so he does not have posttest data for them. Ben has encountered which kind of problem?
   a. Instrumentation
   b. Mortality
   c. Statistical regression
   d. Diffusion of treatment

   ANSWER: b (p. 171)

202. Gary conducts a study to examine the effectiveness of an exercise program on weight loss. The experimental group must exercise for two hours per day for six months. The control group must exercise for 15 minutes per day for six months. Gary finds greater weight loss in the experimental group than the control group. Unfortunately, 60% of the participants in the experimental group dropped out of the study, compared to 10% of the control group participants. Gary has encountered what kind of problem?
   a. Statistical regression
   b. Instrumentation
   c. Mortality
   d. Maturation
203. Sasha conducts a study to compare self-esteem in American versus Swedish school children. She assesses the children at ages 5, 7, and 9. Which of the following interactions is most likely?  
   a. Selection-history interaction  
   b. Selection-instrumentation interaction  
   c. Selection-regression interaction  
   d. Selection-generalization interaction  

ANSWER: a (p. 173)

204. Threats to internal validity that can occur if there are systematic differences between selected treatment groups based on maturation, history, or instrumentation are referred to as interactions with __________.
   a. generalizability  
   b. regression  
   c. selection  
   d. testing  

ANSWER: c (p. 173)

205. An industrial-organizational psychologist is hired to help increase productivity at a company. He teaches one group of workers strategies to improve productivity and has a control group who does not learn the new strategies. However, workers in the experimental group talk to their friends in the control group about the new strategies, and pretty soon everyone is using them. Which kind of problem has the psychologist encountered?  
   a. Mortality  
   b. Maturation  
   c. Diffusion of treatment  
   d. Statistical regression  

ANSWER: c (p. 174)

206. What is the most important property of any experiment?  
   a. Environmental generalization  
   b. Temporal generalization  
   c. Population generalization  
   d. Internal validity  

ANSWER: d (p. 174)
207. Generalizability is most closely associated with
   a. internal validity.
   b. external validity.
   c. statistical regression.
   d. instrumentation.

   ANSWER: b (p. 176)

208. Tracy hopes that the results of her experiment are applicable to college students in
general, not just the 100 students in her study. Tracy is concerned about
   a. internal validity
   b. statistical regression.
   c. external validity.
   d. demand characteristics.

   ANSWER: c (p. 177)

209. A researcher should evaluate ________ validity prior to ________ validity.
   a. external; internal
   b. internal; external
   c. interior; exterior
   d. exterior; interior

   ANSWER: b (p. 177)

210. Which of the following is NOT a type of generalization described in the
textbook?
   a. Population generalization
   b. External generalization
   c. Environmental generalization
   d. Temporal generalization

   ANSWER: b (pp. 177-178)

211. ____________ generalization refers to applying the results from an experiment
to participants outside of those used in the original experiment.
   a. Temporal
   b. Environmental
   c. Population
   d. Selection

   ANSWER: c (p. 177)
212. Sharon hopes that the results of her study generalize beyond the participants in her study. Sharon is concerned about __________ generalization.
   a. environmental  
   b. population  
   c. temporal  
   d. testing

   ANSWER: b (p. 177)

213. __________ generalization refers to applying the results from an experiment to situations that differ from those of the original experiment.
   a. Population  
   b. Treatment  
   c. Temporal  
   d. Environmental

   ANSWER: d (p. 178)

214. Angela conducts a study demonstrating that active learning strategies in a research methods course produce greater understanding of the material than passive learning strategies. She hopes that her results will apply to other research methods courses outside of the one she studied. Angela is concerned with
   a. demand characteristics.  
   b. temporal generalization.  
   c. environmental generalization.  
   d. statistical regression.

   ANSWER: c (p. 178)

215. __________ generalization refers to applying the results from an experiment to a different time period.
   a. Population  
   b. Environmental  
   c. Temporal  
   d. Statistical

   ANSWER: c (p. 178)
216. Research on racial attitudes from the 1950s may not generalize to present-day attitudes. This research exhibits low
a. population generalization.
b. temporal generalization.
c. environmental generalization.
d. internal validity.

ANSWER: b (p. 178)

217. Exhibiting a high degree of control over the experiment _________ internal validity and _________ external validity.
   a. decreases; decreases
   b. increases; increases
   c. increases; decreases
   d. decreases; increases

ANSWER: c (p. 178)

218. Which of the following is NOT a threat to external validity?
   a. Statistical regression
   b. Reactive arrangements
   c. Convenience sampling
   d. Multiple-treatment interference

ANSWER: a (pp. 179-186)

219. When a pretest sensitizes participants to the treatment yet to come, researchers have a problem of
   a. interaction of testing and treatment.
   b. temporal generalization.
   c. multiple-treatment interference.
   d. convenience sampling.

ANSWER: a (p. 179)

220. Pablo gives a racism scale to participants, then gives a half-hour lecture on racism, and then gives participants the racism scale again. Which threat to external validity should Pablo be most concerned about?
   a. Multiple-treatment interference
   b. Interaction of testing and treatment
   c. Interaction of selection and treatment
   d. Statistical regression

ANSWER: b (p. 179)
221. When a treatment effect is found only for a specific sample of participants, it is referred to as a(n)
   b. interaction of testing and treatment.
   c. multiple-treatment interference.
   d. reactive arrangement.

   ANSWER: a (p. 180)

222. A researcher does a study on a new therapy to treat anxiety. All of her participants are men; it turns out the therapy is not effective with women. This example illustrates which of the following threats to external validity?
   a. Reactive arrangements
   b. Multiple-treatment interference
   c. Interaction of selection and treatment
   d. Interaction of testing and treatment

   ANSWER: c (p. 180)

223. Features from the experiment that inadvertently lead participants to respond in a particular manner are known as
   a. demand characteristics.
   b. multiple-treatment interferences.
   c. interactions with selection.
   d. ethnocentric biases.

   ANSWER: a (p. 181)

224. Because the laboratory is such an artificial environment, it is sometimes referred to as a(n)
   a. multiple-treatment interference.
   b. environmental generalization.
   c. reactive arrangement.
   d. practice effect.

   ANSWER: c (p. 181)

225. Reactive arrangements tend to ________ demand characteristics.
   a. increase
   b. decrease
   c. be unrelated to
   d. first increase, then decrease

   ANSWER: a (p. 181)
226. What is multiple-treatment interference?
   a. A threat to external validity that occurs when a set of findings results only when participants experience multiple treatments in the same experiment.
   b. A threat to external validity that occurs when a treatment effect is found only for a specific sample of participants.
   c. A threat to external validity that occurs when a pretest sensitizes participants to the treatment yet to come.
   d. A threat to external validity caused by an experimental situation that alters participants’ behavior, regardless of the IV involved.

   ANSWER: a (p. 181)

227. Ebbinghaus’s research in which he memorized large numbers of nonsense syllables was not applicable to people who learned small numbers of nonsense syllables. Ebbinghaus’s research represents
   a. interaction of testing and treatment.
   b. a reactive arrangement.
   c. multiple-treatment interference.
   d. faulty internal validity.

   ANSWER: c (p. 181)

228. What is comparative psychology?
   a. the study of gender differences
   b. the study of behavior in different species
   c. the study of differences in the subdisciplines of psychology
   d. the study of cultural differences

   ANSWER: b (p. 182)

229. Which of the following groups is overrepresented as participants in psychological research?
   a. Europeans
   b. Primates
   c. College students
   d. Psychology professors

   ANSWER: c (p. 182)
230. Psychologists often use college students enrolled in introductory psychology courses as participants. This is referred to as a
   a. random sample.
   b. representative sample.
   c. stratified random sample.
   d. convenience sample.

   ANSWER: d (p. 183)

231. Early social psychologists were _______ likely to use diverse populations in their research compared to current social psychologists.
   a. more
   b. less
   c. as
   d. None of the above.

   ANSWER: a (p. 183)

232. Sears (1986) argued that research findings that have only been tested in college students may not generalize to other populations, which is referred to as a ________ problem.
   a. reactive arrangements
   b. multiple-treatment interference
   c. selection-treatment interaction
   d. demand characteristics

   ANSWER: c (p. 184)

233. Which of the following are differences between college students and the general population, according to Sears (1986)?
   a. Learning processes
   b. The stability of attitudes
   c. Memory processes
   d. All of the above.

   ANSWER: d (p. 184)

234. If research has been validated cross-culturally, it has ______ external validity.
   a. decreased
   b. increased
   c. no
   d. ethnocentric

   ANSWER: b (p. 186)
235. Ginger conducts a study on infant attachment in the United States and assumes that her results would be applicable around the world. Ginger is exhibiting
   a. an interaction of testing and treatment.
   b. an interaction with selection.
   c. multiple-treatment interference.
   d. ethnocentrism.

   ANSWER: d (p. 186)

236. Which of the following best reflects Mook’s (1983) position on external validity?
   a. External validity is more important than internal validity.
   b. Temporal generalization is more important than environmental generalization.
   c. Environmental generalization is more important than temporal generalization.
   d. External validity is not always necessary.

   ANSWER: d (p. 186)

237. Harlow conducted research on rhesus monkeys and their need for contact comfort. According to Mook (1983),
   a. this study had low external validity and therefore is of little use in understanding the phenomenon of contact comfort.
   b. this study had high external validity and therefore is very useful in understanding the phenomenon of contact comfort.
   c. this study had low external validity but is nonetheless very useful in understanding the phenomenon of contact comfort.
   d. this study had high external validity but is nonetheless of little use in understanding the phenomenon of contact comfort.

   ANSWER: c (p. 187)

238. Which of the following is NOT one of Mook’s (1983) arguments regarding external validity?
   a. If we can demonstrate that a phenomenon occurs in a lab’s unnatural setting, the validity of a finding may actually be strengthened.
   b. Most experiments should be designed to generalize to the real world.
   c. A researcher may be interested in what can happen, not whether it usually happens.
   d. Valuable research is conducted in a laboratory setting that may have no real-world analogy.

   ANSWER: b (p. 187)
239. Which of the following threats to external validity is the most difficult to deal with as a researcher?
   a. Multiple-treatment interference
   b. Reactive arrangements
   c. Demand characteristics
   d. Participant-related threats

   ANSWER: d (p. 188)

240. Which of the following is the best technique to increase external validity?
   a. Conduct a replication.
   b. Conduct a replication with extension.
   c. Conduct a study with reactive arrangements.
   d. Conduct a study with multiple-treatment interference.

   ANSWER: b (p. 188)

Chapter 9

241. The branch of mathematics that involves the collection, analysis, and interpretation of data is referred to as
   a. algebra.
   b. calculus.
   c. statistics.
   d. geometry.

   ANSWER: c (p. 192)

242. ___________ statistics summarize numbers and ___________ statistics determine whether the results are significant.
   a. Descriptive; inferential
   b. Inferential; descriptive
   c. Measurement; inferential
   d. Descriptive; measurement

   ANSWER: a (p. 192)

243. Ethan wants to determine the representative score in his distribution. Ethan will need to calculate
   a. variability.
   b. inferential statistics.
   c. a measure of central tendency.
   d. the range.

   ANSWER: c (p. 192)
244. The assignment of symbols to events according to a set of rules is known as
   a. statistics.
   b. a Type I error.
   c. a Type II error.
   d. measurement.

   ANSWER: d (p. 192)

245. You are using a(n) ________ scale of measurement if events are assigned to
categories.
   a. interval
   b. ordinal
   c. nominal
   d. ratio

   ANSWER: c (p. 192)

246. Which of the following is NOT one of the four scales of measurement?
   a. Ratio
   b. Interval
   c. Ordinal
   d. Variable

   ANSWER: d (p. 192)

247. Karen categorizes people in her sample as either male or female, which represents
which scale of measurement?
   a. Ordinal
   b. Interval
   c. Nominal
   d. Ratio

   ANSWER: c (p. 192)

248. Why is it important to understand scales of measurement?
   a. The scale of measurement for the dependent variable determines the kind
      of statistical test that can be conducted.
   b. Scales of measurement are integral for inferential statistics (but not
      necessarily descriptive statistics).
   c. Scales of measurement are integral for descriptive statistics (but not
      necessarily inferential statistics).
   d. Researchers can only analyze data on interval and ratio levels of
      measurement.

   ANSWER: a (p. 192)
Tammy conducted a study in which participants rank-ordered their favorite free-time activities. Tammy used a(n) ________ scale of measurement.

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

ANSWER: d (p. 193)
250. Which of the following is a limitation of the ordinal scale of measurement?
   a. The ordinal scale of measurement represents a simple classification system.
   b. There is no way to measure central tendency for variables measured on the ordinal scale of measurement.
   c. When variables are measured on an ordinal scale of measurement, the intervals between numbers are not necessarily equal.
   d. All of the above are limitations of the ordinal scale of measurement.

   ANSWER: c (p.193)

251. If we rank the winners of a horse race (first, second, third), we are using a(n) __________ scale of measurement.
   a. ratio
   b. ordinal
   c. interval
   d. nominal

   ANSWER: b (p. 193)

252. If there are equal intervals between numbers but no true zero point, we are using a(n) __________ scale of measurement.
   a. ordinal
   b. ratio
   c. interval
   d. nominal

   ANSWER: c (p. 193)

253. Temperature in Fahrenheit represents a(n) __________ scale of measurement.
   a. ordinal
   b. interval
   c. ratio
   d. nominal

   ANSWER: b (p. 193)

254. Why does temperature in Fahrenheit represent an interval scale of measurement?
   a. Because it has a true zero point
   b. Because there are equal intervals between scores but no true zero point
   c. Because the zero point indicates the absence of heat
   d. None of the above.

   ANSWER: b (p. 193)
255. ACT scores are measured on an interval scale of measurement because
   a. ACT scores are rank ordered and there are not equal intervals between scores.
   b. there is a true zero point.
   c. there are equal intervals between scores but not a true zero point.
   d. the scores represent mutually exclusive categories.

   ANSWER: c (p. 193)

256. The presence of a true zero point is characteristic of the ________ scale of measurement.
   a. nominal
   b. ratio
   c. interval
   d. ordinal

   ANSWER: b (p. 193)

257. Number of errors on a math test represents a(n) __________ scale of measurement.
   a. nominal
   b. interval
   c. ordinal
   d. ratio

   ANSWER: d (p. 193)

258. Which of the following is a property of the ratio scale of measurement?
   a. True zero point
   b. Equal intervals between scores
   c. Scores are rank ordered
   d. All of the above.

   ANSWER: d (p. 193)

259. “Rachel made half as many mistakes as Erin.” This statement represents a(n) __________ level of measurement.
   a. ordinal
   b. interval
   c. ratio
   d. nominal

   ANSWER: c (p. 193)
260. Which scale of measurement provides the least amount of information?
   a. Ratio
   b. Interval
   c. Nominal
   d. Ordinal

   ANSWER: c (p. 194)

261. Which scale of measurement provides the greatest amount of information?
   a. Ratio
   b. Interval
   c. Nominal
   d. Ordinal

   ANSWER: a (p. 194)

262. The most frequently occurring score in a distribution is the
   a. median.
   b. mean.
   c. mode.
   d. range.

   ANSWER: c (p. 194)

263. Consider the following scores: 1, 2, 3, 3, 11. What is the mode?
   a. 3
   b. 4
   c. 11
   d. 20

   ANSWER: a (p. 194)

264. The _______ is the only measure of central tendency that can be used for
    nominal data.
    a. mean
    b. median
    c. mode
    d. range

   ANSWER: c (p. 194)
265. Joseph would like to find a measure of central tendency for his occupation variable (measured as “sales,” “teacher,” or “other”). Joseph should use the
a. median.
b. mode.
c. mean.
d. It is impossible to find central tendency for this variable.

ANSWER: b (p. 194)

266. The _________ is the score that divides the distribution in half.
   a. mean
   b. mode
   c. median
   d. variance

ANSWER: c (p. 194)

267. What is the first step in calculating the median?
   a. Add up all the scores.
b. Locate the most frequently occurring score.
c. Count the number of scores.
d. Rank order the scores from lowest to highest.

ANSWER: d (p. 194)

268. Consider the following scores: 2, 2, 2, 4, 5, 9. What is the median?
   a. 2
   b. 3
   c. 4
   d. 2.5

ANSWER: b (p. 195)

269. Consider the following scores: 1, 1, 2, 2, 3, 3. What is the median?
   a. 2
   b. 3
   c. 2.14
   d. 15

ANSWER: a (p. 195)
270. The median can be calculated for
   a. nominal data only.
   b. interval or ratio data.
   c. ordinal, interval, or ratio data.
   d. nominal, ordinal, interval, or ratio data.

   ANSWER: c (p. 195)

271. Darnell would like to calculate a measure of central tendency for his rank-ordered data. Darnell should use the
   a. mean.
   b. median.
   c. mode.
   d. Central tendency cannot be calculated for this data.

   ANSWER: b (p. 195)

272. The __________ is the arithmetic average.
   a. mode
   b. mean
   c. median
   d. standard deviation

   ANSWER: b (p. 195)

273. What is the first step in calculating the mean?
   a. Add up all the scores.
   b. Locate the most frequently occurring score.
   c. Rank-order the scores from lowest to highest.
   d. Locate the least frequently occurring score.

   ANSWER: a (p. 195)

274. What does ΣX mean?
   a. Add up all the scores and divide by the sample size.
   b. Add up all the scores.
   c. Divide by the sample size.
   d. Multiple the scores together.

   ANSWER: b (p. 195)
275. Consider the following scores: 2, 3, 4, 11. What is \( \Sigma X \)?
   a. 3.5
   b. 4
   c. 20
   d. \( \Sigma X \) cannot be calculated for these scores.

   ANSWER: c (p. 195)

276. What is the formula for calculating the mean?
   a. \( \Sigma X - N \)
   b. \( \Sigma X/N \)
   c. \( N/\Sigma X \)
   d. \( N - \Sigma X \)

   ANSWER: b (p. 195)

277. Consider the following scores: 1, 1, 1, 3, 4. What is the mean?
   a. 1
   b. 2
   c. 10
   d. The mean cannot be calculated for these scores.

   ANSWER: b (p. 195)

278. Isabelle would like to calculate a measure of central for the number of errors rats made while running a maze. Isabelle should calculate the
   a. range.
   b. mean.
   c. mode.
   d. standard deviation.

   ANSWER: b (p. 195)

279. Consider the following ratio-level scores: 1, 2, 3, 4, 24. What is the best choice for central tendency?
   a. Mode
   b. Median
   c. Mean
   d. Variance

   ANSWER: b (p. 195)
280. Which measure of central tendency takes into account the value of every number in the distribution?
   a. Mean
   b. Mode
   c. Median
   d. Variance

   ANSWER: a (p. 195)

281. Which measure of central tendency is favored by most psychologists?
   a. Median
   b. Mean
   c. Mode
   d. Variance

   ANSWER: b (p. 196)

282. Under what circumstances should you calculate the median instead of the mean?
   a. When there are a limited number of extreme scores in the distribution
   b. When scores are measured on a nominal scale of measurement
   c. When the scores form a bimodal distribution
   d. When the scores are all the same

   ANSWER: a (p. 196)

283. Consider the following amounts that were donated to charity: $1, $1, $1, $5, $10, $10, $100. What would be the best measure of central tendency in this case?
   a. Mean
   b. Mode
   c. Median
   d. Standard deviation

   ANSWER: c (p. 196)

284. Casey needs to graph percentages that total 100%. Casey should use which kind of graph?
   a. Histogram
   b. Line graph
   c. Polygon
   d. Pie chart

   ANSWER: d (p. 197)
285. When data are presented in a pie chart,
   a. it is not possible to calculate a mean.
   b. it is not possible to calculate a mode.
   c. it is possible to calculate standard deviation.
   d. it is possible to calculate a correlation coefficient.

   ANSWER: a (p. 197)

286. A graph in which the frequency for each category of a quantitative variable is
     represented as a vertical column which touches the adjacent column is called a
     a. bar graph.
     b. frequency polygon.
     c. histogram.
     d. pie chart.

   ANSWER: c (p. 198)

287. April would like to create a frequency graph of the following quiz scores: 1, 1, 1,
     2, 2, 4, 4, 4, 5, 5, 5, 8, 8, 9, 9, 9, 10. April should use a
     a. bar graph.
     b. pie chart.
     c. histogram.
     d. None of the above.

   ANSWER: c (p. 198)

288. A graph in which the frequency for each category of a qualitative variable is
     represented as a vertical column which does not touch the adjacent column is
     called a
     a. pie chart.
     b. histogram.
     c. line graph.
     d. bar graph.

   ANSWER: d (p. 198)

289. Jordan would like to graph the number of men versus women in her class. Jordan
     should use a
     a. histogram.
     b. line graph.
     c. frequency polygon.
     d. bar graph.

   ANSWER: d (p. 198)
290. If we place a dot in the middle of each bar in a histogram, connect the dots, and remove the bars, we have created a
   a. line graph.
   b. bar graph.
   c. frequency polygon.
   d. pie chart.

   ANSWER: c (p. 198)

291. Which of the following graphs can be used interchangeably with a frequency polygon?
   a. Bar graph
   b. Pie chart
   c. Histogram
   d. Line graph

   ANSWER: c (p. 198)

292. To graph a qualitative variable, use a ________ graph, and to graph a quantitative variable, use a ___________ graph.
   a. pie; bar
   b. bar; histogram
   c. histogram; bar
   d. line; bar

   ANSWER: b (p. 198)

293. Researchers frequently present the results of an experiment in a
   a. line graph.
   b. histogram.
   c. pie chart.
   d. frequency polygon.

   ANSWER: a (p. 199)

294. The vertical or y axis of a graph is known as the
   a. abscissa.
   b. pie axis.
   c. line axis.
   d. ordinate.

   ANSWER: d (p. 199)
295. The horizontal or $x$ axis of a graph is known as the
   a. abscissa.
   b. pie axis.
   c. line axis.
   d. ordinate.

   ANSWER: a (p. 199)

296. The $y$ axis of a graph is also known as the ________ and the $x$ axis of a graph is also known as the ________.
   a. abscissa; ordinate
   b. Type I axis; abscissa
   c. ordinate; Type I axis
   d. ordinate; abscissa

   ANSWER: d (p. 199)

297. Generally, the $y$ axis should be about ________ as tall as the $x$ axis is long.
   a. one-half
   b. one-third
   c. two-thirds
   d. three-fifths

   ANSWER: c (p. 199)

298. For an experiment, the IV is plotted on the ________ and the DV is plotted on the ________.
   a. ordinate; $y$ axis
   b. abscissa; ordinate
   c. $x$ axis; abscissa
   d. ordinate; abscissa

   ANSWER: b (p. 199)

299. Leo randomly assigns half of his participants to read a neutral paragraph and half to read a biased paragraph. Participants rate the extent to which they liked the paragraph. Which kind of graph should he use to depict his results?
   a. Histogram
   b. Polygon
   c. Line graph
   d. Pie chart

   ANSWER: c (p. 199)
300. The extent to which scores spread out around the mean is known as
   a. central tendency.
   b. variability.
   c. a Type II error.
   d. a Type I error.

   ANSWER: b (p. 203)

301. To find the ________, subtract the smallest score from the largest score.
   a. standard deviation
   b. mode
   c. range
   d. variance

   ANSWER: c (p. 203)

302. Consider the following scores: 1, 2, 2, 2, 3, 3, 4, 4, 6, 7, 8, 10. What is the range?
   a. 2
   b. 9
   c. 10
   d. 4.5

   ANSWER: b (p. 203)

303. One limitation of the range is that
   a. it only uses the extreme scores and so does not tell us how variable the scores are between those extreme scores.
   b. it can only be calculated when the variable is measured on a nominal scale of measurement.
   c. calculation of the range increases our risk of a Type I error.
   d. calculation of the range increases our risk of a Type II error.

   ANSWER: a (p. 204)

304. What does a large number for variance mean?
   a. The scores tend to be clustered together.
   b. The scores tend to be spread out.
   c. The distribution must be bimodal.
   d. The distribution must be normal.

   ANSWER: b (p. 204)
305. What is the formula for standard deviation?
   a. $\Sigma X/N$
   b. $(\text{variance})^2$
   c. variance $\times$ 2
   d. square root of variance

   ANSWER: d (p. 205)

306. A symmetrical, bell-shaped curve is known as a
   a. bimodal distribution.
   b. positively skewed distribution.
   c. negatively skewed distribution.
   d. normal distribution.

   ANSWER: d (p. 205)

307. Which of the following accurately depicts a normal distribution?
   a. Most scores occur in the extreme ends of the distribution and few scores occur in the middle.
   b. Most scores cluster on the right-hand side of the graph, with fewer scores on the left-hand side.
   c. Most scores cluster on the left-hand side of the graph, with fewer scores on the right-hand side.
   d. Most scores cluster in the middle, with fewer scores as you move away from the middle.

   ANSWER: d (p. 205)

308. In a normal distribution,
   a. the mean, median, and mode all have the same value.
   b. the mean has a higher value than the median and the mode.
   c. the mean has a lower value than the median and the mode.
   d. the mode has the highest value, followed by the median and then the mean.

   ANSWER: a (p. 205)

309. Suppose exam scores are normally distributed with $M = 70$ and $SD = 10$.
    According to the text, 34.13% of exam scores should fall between _______ and ________.
    a. 60; 80
    b. 70; 80
    c. 69; 71
    d. 70; 100
310. Suppose exam scores are normally distributed with $M = 80$ and $SD = 5$. Approximately what percentage of scores fall between the scores of 75 and 85?
   a. 34.13%
   b. 68.26%
   c. 13.59%
   d. 2.15%

   ANSWER: b (p. 205)

311. Approximately _____ of all scores in a normal distribution occur between 2 $SD$s below the mean and 2 $SD$s above the mean.
   a. 13%
   b. 34%
   c. 68%
   d. 95%

   ANSWER: d (p. 205)

312. In a normal distribution, why isn’t the percentage of scores between 0 and 1 $SD$ above the mean the same as the percentage of scores between 1 and 2 $SD$s above the mean?
   a. As you move away from the mean, the scores occur progressively less frequently.
   b. As you move away from the mean, the scores occur progressively more frequently.
   c. The scores are more spread out as you move away from the mean.
   d. The scores are less spread out as you move away from the mean.

   ANSWER: a (p. 206)

313. Suppose in your English class, you earned a 70 on the first test (the class mean was 65 with $SD = 3$). In Math, you earned a 70 on the first test (the class mean was 65 with $SD = 5$). In Economics, you earned a 70 on the first test (the class mean was 65 with $SD = 2$). In which class did you do the best relative to the other students in the class?
   a. English
   b. Math
   c. Economics
   d. You did the same in all three classes relative to the other students.

   ANSWER: c (p. 207)
314. Suppose you earned an 80 on an exam. The class mean was 82 with $SD = 2$. Your exam score is
   a. 1 $SD$ below the mean.
   b. 1 $SD$ above the mean.
   c. 2 $SD$s below the mean.
   d. 2 $SD$s above the mean.

   ANSWER: a (p. 207)

315. A __________ is a single number representing the degree of relation between two variables.
   a. mean
   b. median
   c. mode
   d. correlation coefficient

   ANSWER: d (p. 210)

316. The value of a correlation coefficient can range from ____ to _____.
   a. 0; +1
   b. –1; 0
   c. –1; +1
   d. –10; +10

   ANSWER: c (p. 210)

317. A correlation of ___ indicates a perfect negative relationship between two variables.
   a. 0
   b. 1
   c. –1
   d. –.5

   ANSWER: c (p. 210)
318. Consider the following scores:

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

These scores depict a _______ correlation.

a. positive  
b. negative  
c. zero  
d. curvilinear

ANSWER: a (p. 210)

319. Correlation coefficients are used for

a. prediction.  
b. understanding causality.  
c. both prediction and understanding causality.  
d. neither prediction nor understanding causality.

ANSWER: a (p. 210)

320. There is a perfect positive correlation in the data below.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>26</td>
<td>43</td>
</tr>
<tr>
<td>27</td>
<td>46</td>
</tr>
<tr>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>29</td>
<td>52</td>
</tr>
</tbody>
</table>

If someone scores a 30 on the X variable, what should we predict the Y value to be?

a. 30  
b. 52  
c. 55  
d. Cannot be determined from the information given.

ANSWER: c (p. 212)
321. Which of the following must be true in order to calculate the Pearson correlation coefficient?
   a. The $x$ variable must be interval or ratio scale of measurement.
   b. The $y$ variable must be interval or ratio scale of measurement.
   c. The data must appear to be linear.
   d. All of the above.

   ANSWER: d (p. 213)

322. The purpose of inferential statistics is to
   a. provide a measure of central tendency and a measure of variability for the data.
   b. determine whether a correlation coefficient is positive, negative, or zero.
   c. determine whether a statistical result is significant.
   d. All of the above.

   ANSWER: c (p. 214)

323. The _______ hypothesis states that all differences between groups are due to chance.
   a. alternative
   b. research
   c. statistical
   d. null

   ANSWER: d (p. 214)

324. If our statistical result occurs often by chance, we conclude that it is
   a. significant.
   b. not significant.
   c. proven.
   d. not proven.

   ANSWER: b (p. 214)

325. If our statistical results occurs rarely by chance, we conclude that it is
   a. significant.
   b. not significant.
   c. proven.
   d. not proven.

   ANSWER: a (p. 214)
326. What does a “.05 level of significance” mean?
   a. A result is considered significant if it would occur 5 (or fewer) times out of 100 when the null hypothesis is true.
   b. There is a 5% chance that the null hypothesis is true.
   c. There is a 5% chance of proving your results.
   d. There is a 5% chance of making a Type II error.

   ANSWER: a (p. 214)

327. An inferential statistical test used to evaluate the difference between two means is known as a
   a. one-factor ANOVA.
   b. \( t \) test.
   c. \( z \) test.
   d. correlational test.

   ANSWER: b (p. 216)

Questions 88-92 refer to the following research scenario:

Nora would like to conduct an experiment to determine whether behavior modification techniques can help children eliminate bedwetting. She obtains a sample of children who wet the bed and randomly assigns half to the behavior modification therapy and half to a control group who receive no therapy. After six months, she measures how often children in each group wet the bed.

328. Suppose the results show that children in the control group wet the bed on average \( M = 5.50 \) times per week and children in the therapy group wet the bed \( M = 1.60 \) times per week. Do these results show that the therapy was effective?
   a. Yes; the means are slightly different from each other.
   b. Yes; the means are very different from each other.
   c. No; the means are not different enough from each other.
   d. Not enough information to determine.

   ANSWER: d (p. 216)

329. In order to determine whether the therapy group is significantly different from the control group, Nora will have to conduct a
   a. two-factor ANOVA.
   b. \( t \) test.
   c. \( z \) test.
   d. correlational test.

   ANSWER: b (p. 216)
330. Consider the following hypothesis: “If children undergo behavioral modification therapy, then they will have different rates of bedwetting than children in the control group.” If this is Nora’s hypothesis, then she should use a
   a. one-tailed test.
   b. two-tailed test.
   c. three-tailed test.
   d. correlational research design.

   ANSWER: b (p. 218)

331. Suppose Nora obtains the following printout of information:

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy</td>
<td>10</td>
<td>1.60</td>
<td>1.07</td>
</tr>
<tr>
<td>Control</td>
<td>10</td>
<td>5.50</td>
<td>0.85</td>
</tr>
</tbody>
</table>

\[ t = -9.00 \quad df = 18 \quad p = .001 \]

What decision should Nora make?

   a. The results are significant; children treated with behavioral modification therapy wet the bed less often than children in the control group.
   b. The results are not significant; children treated with behavioral modification therapy wet the bed less often than children in the control group.
   c. The results are significant; children treated with behavioral modification therapy and children in the control group did not differ in terms of bedwetting.
   d. The results are not significant; children treated with behavioral modification therapy and children in the control group did not differ in terms of bedwetting.

   ANSWER: a (p. 216)

332. Suppose Nora used \( \alpha = .05 \) for a two-tailed test. According to the \( t \) distribution table, what value from the table did Nora’s \( t \) value have to exceed in order for it to be considered significant?

   a. 1.725
   b. 1.734
   c. 2.086
   d. 2.101

   ANSWER: d (p. 217)
The ability of a number in a specified set to assume any value is known as  
   a. degrees of freedom.  
   b. a t test.  
   c. a one-tailed test.  
   d. a Type II error.  
   
   ANSWER: a (p. 217)  

Directional hypotheses are associated with ______ tests and nondirectional hypotheses are associated with _______ tests.  
   a. two-tailed; one-tailed  
   b. one-tailed; two-tailed  
   c. one-tailed; three-tailed  
   d. two-tailed; three-tailed  
   
   ANSWER: b (p. 218)  

It is somewhat easier to find a significant result when using a  
   a. two-tailed test.  
   b. one-tailed test.  
   c. correlational research design instead of an experimental research design.  
   d. case study design instead of an experimental research design.  
   
   ANSWER: b (p. 218)  

It is somewhat easier to find a significant result when using a one-tailed test rather than a two-tailed test because  
   a. the critical region for a one-tailed test is smaller than the critical region for a two-tailed test.  
   b. the critical region for a two-tailed test is smaller than the critical region for a one-tailed test.  
   c. the critical region for a one-tailed test is in the middle of the distribution instead of in the tails.  
   d. the critical region for a two-tailed test is in the middle of the distribution instead of in the tails.  
   
   ANSWER: b (p. 218)
337. A Type I error refers to
   a. accepting the null hypothesis when the experimental hypothesis is true.
   b. accepting the experimental hypothesis when the null hypothesis is true.
   c. accepting both the null hypothesis and the experimental hypothesis when neither is true.
   d. accepting neither the null hypothesis nor the experimental hypothesis when both are true.

   ANSWER: b (p. 221)

338. How can researchers lower the probability of making a Type I error?
   a. Researchers can change their research design from an experiment to a correlational study.
   b. Researchers can decrease the sample size.
   c. Researchers can change the significance level from .05 to .01
   d. Researchers can change the significance level from .01 to .05.

   ANSWER: c (p. 221)

339. Accepting the null hypothesis when the experimental hypothesis is true is called a(n) _________ error.
   a. Type I
   b. Type II
   c. experimental
   d. null

   ANSWER: b (p. 221)

340. The symbol for a Type I error is:
   a. \( \alpha \)
   b. \( \beta \)
   c. \( \Sigma \)
   d. \( \Phi \)

   ANSWER: a (p. 221)

341. The symbol for a Type II error is:
   a. \( \alpha \)
   b. \( \beta \)
   c. \( \Sigma \)
   d. \( \Phi \)

   ANSWER: b (p. 221)
342. By changing the significance level from .05 to .01, you ______ the chance for a Type I error and ______ the chance for a Type II error.
   a. increase; increase
   b. decrease; decrease
   c. increase; decrease
   d. decrease; increase

   ANSWER: d (p. 221)

343. ______ errors are under the direct control of the experimenter, and ______ errors are not under the direct control of the experimenter.
   a. Type I; Type II
   b. Type II; Type I
   c. Type II; hypothesis
   d. Type I; hypothesis

   ANSWER: a (p. 221)

344. Which of the following can help minimize Type II errors?
   a. Decrease the sample size.
   b. Increase the sample size.
   c. Use one dependent variable instead of several.
   d. Use convenience sampling instead of random sampling.

   ANSWER: b (p. 221)

345. ______ is a statistical measure that conveys information about the magnitude of the effect produced by the independent variable.
   a. A t test
   b. Pearson’s product-moment correlation coefficient
   c. Standard deviation
   d. Effect size

   ANSWER: d (p. 222)

346. If our statistical result was significant, what is the value of calculating effect size?
   a. A significant statistical test tells us that the IV had an effect, and the effect size tells us about the size of the significant effect.
   b. Effect size tells us that the IV had an effect, and a significant statistical test tells us about the size of the significant effect.
   c. Effect size tells us if we need to change our test from a one-tailed test to a two-tailed test.
   d. If the statistical result was significant, you do not need to calculate effect size (the information is redundant).

   ANSWER: a (p. 222)
347. Which of the following would be considered a medium effect size?
   a. $d = .20$
   b. $d = .40$
   c. $d = .70$
   d. $d = .80$

   ANSWER: c (p. 222)

348. Eileen calculates an effect size of $d = .45$ for her study. According to Cohen (1977), this is considered a(n) ________ effect size.
   a. small
   b. medium
   c. large
   d. extra-large

   ANSWER: a (p. 222)

Chapter 11

349. Which of the following is the FIRST question researchers should ask themselves when considering any experimental design?
   a. How many groups (levels) will my independent variable have?
   b. What type of participant groups do I have (independent or correlated)?
   c. How many independent variables will my experiment have?
   d. How many confounds should I include?

   ANSWER: c (p. 258)

350. Miguel conducts a study in which he compares the effectiveness of behavioral therapy, cognitive therapy, humanistic therapy, and psychodynamic therapy to treat phobias. In this study, the independent variable is ________ and it has ____ level(s).
   a. type of therapy; one
   b. type of therapy; four
   c. effectiveness of therapy; one
   d. effectiveness of therapy; four

   ANSWER: b (p. 258)

351. The belief that explanations of phenomena should remain simple until the simple explanations are no longer valid is known as the
   a. error variability.
   b. asymptotic principle.
   c. principle of parsimony.
d. placebo principle.

ANSWER: c (p. 258)

352. Suppose you know you would like to conduct a one-IV experiment. What is the second question that you need to answer?
   a. How many levels of the IV will I use?
   b. Will I conduct an experiment or a correlational study?
   c. Will I conduct a confounded experiment or a true experiment?
   d. All of the above.

ANSWER: a (p. 258)
353. A multiple-group design compares ________ level(s) of the independent variable.
   a. one
   b. two
   c. one or two
   d. three or more
   ANSWER: d (p. 258)

354. Participants who receive the IV are referred to as the ________ group.
   a. control
   b. treatment
   c. confound
   d. random
   ANSWER: b (p. 259)

355. Cathy examined the effect of different teaching methods on students’ exam performance. She randomly assigned college students to listen to one of three lectures and then tested them over the material. As hypothesized, she found that students taught by Method 1 earned significantly higher exam grades than students taught by Method 2 or Method 3. Which of the following is the best conclusion to draw from these results?
   a. Because Cathy has not done an experiment, she should not draw any cause-and-effect conclusions.
   b. Cathy has proven that Method 1 is superior to Method 2 and Method 3.
   c. Cathy’s results supported the hypothesis.
   d. Cathy’s study has high external validity.
   ANSWER: c (p. 260)

356. Groups of participants that are formed by random assignment are known as ________ groups.
   a. correlated
   b. independent
   c. matched pairs
   d. natural pairs
   ANSWER: b (p. 260)

357. Groups of participants that are related in some way are known as ________ groups.
   a. random
   b. independent
   c. correlated
358. If each participant in an experiment has an equal chance of being in any of the groups, then the researcher has used __________ assignment.
   a. correlated
   b. random
   c. nonrandom
   d. ex post facto

   ANSWER: b (p. 260)

359. If a researcher has used random assignment, then
   a. the groups should be equalized on potential extraneous variables.
   b. participants are matched on characteristics thought to be important for the dependent variable.
   c. participants experience the dependent variable two or more times.
   d. everyone in the population has an equal chance of being included in the experiment.

   ANSWER: a (p. 260)

360. Which of the following is NOT a control procedure?
   a. Random assignment
   b. Matching
   c. Natural sets
   d. Convenience sampling

   ANSWER: d (p. 261)

361. An experiment in which an extraneous variable varies systematically with the IV is a(n) ________ experiment.
   a. ex post facto
   b. correlated-groups
   c. confounded
   d. true

   ANSWER: c (p. 261)
362. Latitia conducted an experiment in which all the men watched an aggressive television program, and all the women watched a non-aggressive television program. Her results showed that people who watched the aggressive program were later more aggressive than people who watched the non-aggressive program. She concludes that aggressive television programming is detrimental. What is the biggest problem in Latitia’s experiment?
   a. She has not used random selection procedures.
   b. She has confounded gender and type of television program.
   c. She should have used a correlated-groups design instead of an independent-groups design.
   d. None of the above; there are no problems in Latitia’s experiment.

   ANSWER: b (p. 261)

363. Researchers often choose a correlated-groups design over an independent-groups design when
   a. their sample size is small.
   b. they expect small differences owing to their IV.
   c. they want to reduce error variance.
   d. All of the above.

   ANSWER: d (p. 261)

364. Researchers form ________ sets by measuring participants on some variable that will affect their performance on the DV.
   a. random
   b. independent
   c. matched
   d. natural

   ANSWER: c (p. 262)

365. Larry conducts an experiment with three groups: (1) writing about traumatic events, (2) writing about happy events, and (3) writing about neutral events. Larry then measures the number of visits each participant makes to the health center over the next six months. Larry gives the participants a pretest regarding their health visits prior to the study so that he can create sets of participants who are equivalent on that variable. Participants are randomly assigned to condition from each set. Larry has used ________ sets.
   a. natural
   b. independent
   c. repeated measures
   d. matched
What happens when we match participants on a variable that is unrelated to the dependent variable?

a. We increase our chances of finding a significant effect.
b. We decrease our chances of finding a significant effect.
c. We increase the generalizability of our experiment.
d. We decrease our chances of having experimenter bias in the study.

ANSWER: b (p. 262)

When you use ________, each participant must take place in all the various treatment conditions.

a. matched sets
b. natural sets
c. repeated measures
d. random assignment

ANSWER: c (p. 262)

Darryl conducts a study in which participants rate their liking for their professor on the first day of class, at midterm, and on the last day of class. Darryl has used which research design?

a. Matched sets
b. Natural sets
c. Independent groups
d. Repeated measures

ANSWER: d (p. 262)

Lisa is conducting a study using sets of siblings. She assigns each sibling from a family into a different group. Lisa is using _____ sets.

a. repeated
b. matched
c. natural
d. independent

ANSWER: c (p. 263)

Which of the following is NOT a way to create correlated groups?

a. Repeated measures
b. Matched sets
c. Natural sets
d. Random assignment

ANSWER: d (pp. 262-263)
371. In what way is a two-group design different from a multiple-group design?
   a. You add another independent variable.
   b. You add another dependent variable.
   c. You add another level to an independent variable.
   d. You add another level to a dependent variable.

   ANSWER: c (p. 264)

372. Suppose you were interested in conducting a repeated measures experiment with 15 levels. Which of the following might be your greatest concern?
   a. Will participants become bored or fatigued over time?
   b. Will I be able to secure enough participants for that many groups?
   c. Will I be able to find significant effects given that I am using so few groups?
   d. Will the groups be equivalent before the study begins?

   ANSWER: a (p. 265)

373. ________ error variability will _________ your likelihood of finding a significant effect.
   a. Increasing; not affect
   b. Decreasing; decrease
   c. Decreasing; increase
   d. Decreasing; not affect.

   ANSWER: c (p. 266)

374. ________ designs have decreased error variability compared to ________ designs.
   a. Independent groups; correlated groups
   b. Correlated groups; independent groups
   c. Natural sets; correlated groups
   d. Repeated measures; matched sets

   ANSWER: b (p. 266)

375. What is one limitation of using natural sets in a multiple-group design?
   a. The probability of finding a significant result is lower compared to when you use independent groups.
   b. There is not as much control in the experiment compared to an independent-groups design.
   c. Natural sets that are large enough may be difficult to obtain.
   d. There is an increased risk of experimenter bias with natural sets.

   ANSWER: c (p. 266)
376. Which of the following is a practical consideration in a multiple-independent-groups design?
   a. You will need a large number of participants to fill the multiple groups.
   b. You will need a large number of participants to conduct proper matching of a variable of interest.
   c. You will need to guard against participants becoming bored or fatigued over many administrations of the dependent variable.
   d. All of the above.

   ANSWER: a (p. 267)

377. An experimental effect caused by expectation or suggestion rather than the IV is known as
   a. a parsimonious effect.
   b. error variability.
   c. randomization.
   d. a placebo effect.

   ANSWER: d (p. 267)

378. Melinda conducts a study in which some participants receive an antidepressant, others receive a sugar pill that they think is an antidepressant, and the rest receive nothing at all. She finds that both the antidepressant group and the sugar pill group report being less depressed than the control group. Melinda has conducted a(n) ___________ study and the results for the sugar pill group are likely due to a ___________ effect.
   a. repeated measures; placebo
   b. repeated measures; sugar
   c. independent groups; placebo
   d. independent groups; sugar

   ANSWER: c (p. 267)

379. Research conducted with a measured rather than manipulated independent variable is referred to as ___________ research.
   a. ex post facto
   b. repeated measures
   c. correlated groups
   d. independent groups

   ANSWER: a (p. 267)
380. Nina obtains a sample of people who are classified as low, medium, and high in generalized anxiety. She then measures their persistence on a difficult laboratory task. Nina’s research would best be classified as __________ research.
   a. repeated measures
   b. correlated groups
   c. ex post facto
   d. true experiment

   ANSWER: c (p. 267)

381. A statistical test used to analyze data from an experiment with one independent variable that has three or more groups is known as a
   a. two-factor ANOVA.
   b. t-test.
   c. one-way ANOVA.
   d. z-test.

   ANSWER: c (p. 269)

382. Rich has conducted a study in which he compares the reading skills of 6-year-olds, 7-year-olds, and 8-year-olds. What kind of statistical test should Rich use?
   a. one-way ANOVA
   b. t-test
   c. three-way ANOVA
   d. Pearson product-moment correlation coefficient

   ANSWER: a (p. 269)

383. When you assign your participants to multiple groups randomly, you analyze your data using a __________ ANOVA.
   a. repeated-measures
   b. correlated-groups
   c. completely randomized
   d. within-subjects

   ANSWER: c (p. 269)

384. What kind of statistical analysis would you conduct if you used multiple groups and correlated groups of participants?
   a. repeated-measures t-test
   b. repeated-measures ANOVA
   c. completely randomized ANOVA
   d. independent samples t test
385. Courtney conducts a study in which she randomly assigns some rats to receive a high dose of alcohol, other rats to receive a low dose of alcohol, and a final group receives no alcohol. She measures the time it takes them to learn a new maze. Courtney’s study represents a(n) _________ and her statistical technique for analyzing the data should be a ___________.
   a. ex post facto design; repeated-measures ANOVA
   b. ex post facto design; completely randomized ANOVA
   c. true experiment; completely randomized ANOVA
   d. true experiment; repeated-measures ANOVA

   ANSWER: c (p. 269)

386. Daisy conducts a study in which a sample of rats receives a high dose of alcohol on one day, a low dose of alcohol on one day, and no alcohol on one day. Each day, she measures the time it takes them to learn a new maze. What statistical technique should Daisy use to analyze her data?
   a. completely randomized ANOVA
   b. repeated-measures t test
   c. repeated-measures ANOVA
   d. repeated-measures three-factor ANOVA

   ANSWER: c (p. 270)

387. What kind of definitions do researchers use when planning their experiments?
   a. dictionary definitions
   b. operational definitions
   c. ANOVA definitions
   d. summarized definitions

   ANSWER: b (p. 270)

388. ________-groups variability represents the variation in the DV that is due to the IV, and ________-groups variability represents the variation in the DV that is due to such factors as individual differences and errors in measurement.
   a. Between; within
   b. Within; error
   c. Error; within
   d. Within; between

   ANSWER: a (p. 271)
389. The differences among the groups in a multiple-group experiment represent __________ variability.
   a. within-groups
   b. randomized
   c. controlled
   d. between-groups

   ANSWER: d (p. 272)

390. Individual differences among people in each group in a multiple-group experiment represent ________ variability.
   a. within-groups
   b. randomized
   c. controlled
   d. between-groups

   ANSWER: a (p. 272)

391. The ANOVA formula is best conceptualized as:
   a. between-groups variability / within-groups variability
   b. within-groups variability / between-groups variability
   c. (within-groups variability + between-groups variability) / between-groups variability
   d. (within-groups variability – between-groups variability) / within-groups variability

   ANSWER: a (p. 272)

392. If our IV has a strong effect, then the $F$ value should be
   a. close to zero.
   b. close to one.
   c. much larger than one.
   d. negative.

   ANSWER: c (p. 272)

393. If the between-groups variability is much larger than the within-groups variability, then the $F$ value should be ______ and our results will be ______.
   a. small; significant
   b. small; nonsignificant
   c. large; significant
   d. large; nonsignificant

   ANSWER: c (p. 272)
394. A table that contains the results of an ANOVA is referred to as a(n) _________
table.
   a. sum of squares
   b. source
   c. statistics
   d. F-ratio

   ANSWER: b (p. 275)

395. Sum of squares refers to the
   a. sum of the squared deviations around the mean.
   b. between-groups variability squared.
   c. within-groups variability squared.
   d. sum of the squared means.

   ANSWER: a (p. 275)

396. Suppose you conduct a one-way ANOVA and obtain the following means: \( M = 8.78 \) for Group 1, \( M = 6.55 \) for Group 2, and \( M = 4.22 \) for Group 3. Which of the following conclusions is correct?
   a. Group 1 scored significantly higher than Group 2 or Group 3.
   b. All three means are significantly different from each other.
   c. Group 3 scored significantly lower than Group 1 or Group 2.
   d. Not enough information is provided to assess significance.

   ANSWER: d (p. 275)

397. Mean squares are computed by
   a. squaring each source’s sum of squares and dividing by its degrees of
      freedom.
   b. squaring each source’s degrees of freedom and dividing by its sum of
      squares.
   c. dividing each source’s sum of squares by its degrees of freedom.
   d. dividing each source’s degrees of freedom by its sum of squares.

   ANSWER: c (p. 276)

398. What is the formula for within-groups degrees of freedom?
   a. Number of participants – number of groups
   b. Number of groups – number of participants
   c. Number of groups – 1
   d. Number of participants – 1

   ANSWER: a (p. 276)
399. What is the formula for between-groups degrees of freedom?
   a. Number of participants – number of groups
   b. Number of groups – number of participants
   c. Number of groups – 1
   d. Number of participants – 1

   ANSWER: c (p. 276)

400. A mean square is similar to
   a. the range.
   b. variance.
   c. the mode.
   d. the median.

   ANSWER: b (p. 276)

401. What is the formula for the \( F \) ratio?
   a. Mean square within groups / mean square between groups
   b. Mean square between groups / mean square within groups
   c. Mean square between groups / df between groups
   d. Mean square within groups / df within groups

   ANSWER: b (p. 276)

402. If you obtain an \( F \) ratio of 5, this means that the __________-groups variability is five times larger than the __________-groups variability.
   a. within; between
   b. between; within
   c. within; mean square
   d. mean square; between

   ANSWER: b (p. 276)

403. A significant effect in an ANOVA occurs when the probability value is
   a. less than .05.
   b. greater than .05
   c. less than .50.
   d. greater than .50

   ANSWER: a (p. 277)
404. Suppose we conduct a study in which the between-groups df was 2 and the within-groups df was 25. According to the $F$ table, what value does our $F$ ratio have to be in order for our ANOVA to be significant at the .05 level?
   a. 3.38
   b. 5.57
   c. 19.45
   d. 99.46

   ANSWER: a (p. 277)

405. Post-hoc comparisons are conducted after a
   a. significant ANOVA to determine whether the between-groups variability exceeded the within-groups variability.
   b. nonsignificant ANOVA to determine whether the between-groups variability exceeded the within-groups variability.
   c. significant ANOVA to determine which groups differ significantly from each other.
   d. nonsignificant ANOVA to determine which groups differ significantly from each other.

   ANSWER: c (p. 277)

406. The tails of a distribution are asymptotic, which means that the tails
   a. touch the baseline at approximately five standard deviations from the mean.
   b. curve upward from the baseline at approximately five standard deviations from the mean.
   c. approach the baseline but never touch the baseline.
   d. flatten out after approximately five standard deviations from the mean.

   ANSWER: c (p. 281)

407. When the “subjects” source is significant in an ANOVA source table, it means that
   a. there are significant differences associated with the independent variable.
   b. there are significant differences between the participants on the dependent variable.
   c. there is a significant interaction between subjects and the independent variable.
   d. there are significant pairwise comparisons using the Tukey HSD test.

   ANSWER: b (p. 281)
Suppose you find an overall significant \( F \) ratio in your one-way ANOVA. What should you do next?

a. Write up your results in APA format.
b. Conduct a post hoc test to determine which means are significantly different from each other.
c. Conduct a follow-up study with new participants.
d. Check the output to make sure the results are asymptotic.

ANSWER: b (p. 281)

Questions 61 - 67 refer to the following computer output. In this study, participants were randomly assigned to consume one of three doses of alcohol: high, low, or none. Participants then read a scenario in which a male character sexually assaulted a female character. Participants rated the male character’s responsibility for his behavior on a scale ranging from 1 (not at all responsible) to 20 (completely responsible).

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>MEAN</th>
<th>STD DEV</th>
<th>STD ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (high dose)</td>
<td>10</td>
<td>14.80</td>
<td>1.32</td>
<td>0.42</td>
</tr>
<tr>
<td>2 (low dose)</td>
<td>10</td>
<td>16.10</td>
<td>1.79</td>
<td>0.57</td>
</tr>
<tr>
<td>3 (no dose)</td>
<td>10</td>
<td>18.60</td>
<td>1.17</td>
<td>0.37</td>
</tr>
</tbody>
</table>

**ONeway ANOVA: ALCOHOL by RESPONSIBLE**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM OF SQUARES</th>
<th>DF</th>
<th>MEAN SQUARES</th>
<th>F RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETWEEN GROUPS</td>
<td>74.60</td>
<td>2</td>
<td>37.30</td>
<td>17.70</td>
</tr>
<tr>
<td>WITHIN GROUPS</td>
<td>56.90</td>
<td>27</td>
<td>2.11</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>131.50</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**POST HOC TEST: Tukey-HSD with significance level .05**

* Indicates significant differences shown for pairings

\[
\begin{array}{ccc}
G & G & G \\
- & - & - \\
P & P & P \\
1 & 2 & 3
\end{array}
\]

Mean ALCOHOL

<table>
<thead>
<tr>
<th>14.80</th>
<th>Grp 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.10</td>
<td>Grp 2</td>
</tr>
<tr>
<td>18.60</td>
<td>Grp 3</td>
</tr>
</tbody>
</table>

* *
409. Consult Table 11-1. What kind of research design is this?
   a. Multiple-correlated-groups design
   b. Multiple-independent-groups design
   c. Ex post facto research design
   d. Correlational research design

   ANSWER: b (p. 274)

410. Consult Table 11-1. The independent variable in this study is __________ and the
dependent variable in this study is ____________.
   a. sex of character; ratings of responsibility
   b. alcohol dose; sex of character
   c. alcohol dose; ratings of responsibility
   d. ratings of responsibility; alcohol dose

   ANSWER: c (p. 274)

411. Consult Table 11-1. What kind of statistical analysis was conducted?
   a. One-way ANOVA for independent samples
   b. One-way ANOVA for correlated samples
   c. Two-factor ANOVA for independent samples
   d. Two-factor ANOVA for correlated samples

   ANSWER: a (p. 274)

412. Consult Table 11-1. Why are the degrees of freedom between groups equal to 2?
   a. Because there are two groups
   b. Because there are three groups.
   c. Because there are two significant differences
   d. Because the formula for df between is always 1 + 1

   ANSWER: b (p. 276)

413. Consult Table 11-1. The p-value is ______ than .05; therefore, the results of the
statistical analysis _____ significant.
   a. greater; are
   b. greater; are not
   c. less; are
   d. less; are not

   ANSWER: c (p. 277)
414. Consult Table 11-1. Which means are significantly different from each other?
   a. The high dose group is significantly different from the low dose group, and no other comparisons are significant.
   b. The high dose group is significantly different from the no dose group and the low dose group, and the low dose group and the no dose group do not significantly differ from each other.
   c. The high dose group and the low dose group are significantly different from the no dose group, and the high dose and low dose group do not significantly differ from each other.
   d. All three groups are significantly different from each other.

   ANSWER: c (p. 277)

415. Consult Table 11-1. Which of the following is the best written interpretation of the data?
   a. Consuming alcohol affects peoples’ ratings of a sexual assault scenario.
   b. People who consumed alcohol (either a high or low dose) rated a perpetrator of sexual assault as significantly less responsible than people who consumed no alcohol.
   c. People who consumed a high dose of alcohol rated a perpetrator of sexual assault as significantly less responsible than people who consumed a low dose of alcohol or no alcohol at all.
   d. People who consumed a high dose of alcohol rated a perpetrator of sexual assault as significantly less responsible than people who consumed a low dose of alcohol, who rated the perpetrator as significantly less responsible than people who consumed no alcohol at all.

   ANSWER: b (p. 278)
Questions 68 - 75 refer to Table 11-2. In this study, 10 children completed a survey regarding their impressions of smokers at age 8 and then again at age 10 and 12. Scores could range from 1 (extreme negative impression of smokers) to 20 (extreme positive impression of smokers).

Table 11-2

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>MEAN</th>
<th>STD DEV</th>
<th>STD ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (AGE 8)</td>
<td>10</td>
<td>9.70</td>
<td>5.89</td>
<td>1.86</td>
</tr>
<tr>
<td>2 (AGE 10)</td>
<td>10</td>
<td>10.40</td>
<td>5.58</td>
<td>1.76</td>
</tr>
<tr>
<td>3 (AGE 12)</td>
<td>10</td>
<td>11.80</td>
<td>5.94</td>
<td>1.88</td>
</tr>
</tbody>
</table>

ONEWAY ANOVA: SMOKING by AGE (CORR SAMP)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM OF SQUARES</th>
<th>DF</th>
<th>MEAN SQUARES</th>
<th>F RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>22.87</td>
<td>2</td>
<td>11.43</td>
<td>6.76</td>
</tr>
<tr>
<td>SUBJECTS</td>
<td>879.63</td>
<td>9</td>
<td>97.74</td>
<td>34.71</td>
</tr>
<tr>
<td>WITHIN CELLS</td>
<td>30.47</td>
<td>18</td>
<td>1.69</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>932.97</td>
<td>29</td>
<td></td>
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</tr>
</tbody>
</table>

POST HOC TEST: Tukey-HSD with significance level .05

* Indicates significant differences shown for pairings

```
G G G
r r r
p p p
1 2 3
```

Mean  AGE

9.70  Grp 1
10.40 Grp 2
11.80 Grp 3

416. Consult Table 11-2. What kind of research design is this?

a. Multiple-groups design for correlated groups
b. Multiple-groups design for independent groups
c. Single-case experimental design
d. Two-groups design for correlated groups

ANSWER: a (p. 279)
417. Consult Table 11-2. The independent variable in this study is __________ and the dependent variable in this study is ____________.
   a. age of participants; number of participants
   b. age of participants; scores indicating impressions of smokers
   c. scores indicating impressions of smokers; age of participants
   d. scores indicating impressions of smokers; number of participants

   ANSWER: b (p. 280)

418. Consult Table 11-2. What kind of statistical analysis was conducted?
   a. One-way ANOVA for independent samples
   b. One-way ANOVA for correlated samples
   c. Two-factor ANOVA for independent samples
   d. Two-factor ANOVA for correlated samples

   ANSWER: b (p. 280)

419. Consult Table 11-2. Why are the degrees of freedom for the age variable equal to 2?
   a. Because there are two levels of the independent variable.
   b. Because there are three levels of the independent variable.
   c. Because there are two significant differences.
   d. Because the formula for df between is always 1 + 1.

   ANSWER: b (p. 281)

420. Consult Table 11-2. The SUBJECTS effect is significant, which means that
   a. the independent variable had a significant effect on the dependent variable.
   b. the dependent variable had a significant effect on the independent variable.
   c. there were significant differences between the responses of the different children.
   d. there were significant differences in the responses of 8-year-olds versus 10-year-olds versus 12-year-olds.

   ANSWER: c (p. 281)

421. Consult Table 11-2. The p-value for age is ______ than .05; therefore, the results of the statistical analysis _____ significant.
   a. greater; are
   b. greater; are not
   c. less; are
   d. less; are not

   ANSWER: d (p. 281)
ANSWER: c (p. 281)
422. Consult Table 11-2. Which means are significantly different from each other?
   a. The 8-year-old group is significantly different from the 10-year-old group and the 12-year-old group, and the 10- and 12-year old groups do not differ significantly from each other.
   b. The 12-year-old group and the 10-year-old group differ significantly from each other, and no other comparisons are significant.
   c. The 12-year-old group differs significantly from the 10-year-old group, the 12-year-old group differs significantly from the 8-year-old group, and no other comparisons are significant.
   d. All three groups are significantly different from each other.

   **ANSWER:** c (p. 281)

423. Consult Table 11-2. Which of the following is the best written interpretation of the data?
   a. Age affects people’s impressions of smokers.
   b. Eight-year-olds hold more positive impressions of smokers than either 10- or 12-year-olds.
   c. Twelve-year-olds hold more positive impressions of smokers than 10-year-olds, who hold more positive impressions of smokers than 8-year-olds.
   d. Twelve-year-olds hold more positive impressions of smokers than either 10- or 8-year-olds.

   **ANSWER:** d (p. 282)

Chapter 12
Multiple Choice

424. Another word for an independent variable is a
   a. factor.
   b. group.
   c. level.
   d. main effect.

   **ANSWER:** a (p. 287)

425. In a factorial design, researchers use
   a. one independent variable with three or more levels.
   b. one independent variable with three or more levels and one dependent variable.
   c. one independent variable with three or more levels and multiple dependent variables.
   d. two or more independent variables.
426. The simplest possible factorial design has _____ IVs and ____ total treatment groups.
   a. 2; 4
   b. 4; 2
   c. 1; 1
   d. 1; 3

   ANSWER: a (p. 290)

427. If you conduct an experiment with one IV that has four levels, you have used a(n) __________ design, and if you conduct an experiment with two IVs that each have two levels, you have used a(n) __________ design.
   a. factorial; multiple-group
   b. multiple-group; factorial
   c. independent-groups; correlated-groups
   d. correlated-groups; independent-groups

   ANSWER: b (p. 288)
428. A 2 x 2 design means that
   a. there are two independent variables, each with two levels.
   b. there is one independent variable with four levels.
   c. there is one independent variable with two levels, and one dependent
      variable with two levels.
   d. there is one dependent variable with four levels.

   ANSWER: a (p. 290)

429. A 2 x 3 design would require ____ treatment conditions.
   a. 2
   b. 3
   c. 5
   d. 6

   ANSWER: d (p. 290)

430. Which of the following is an impossible factorial design?
   a. 2 x 3
   b. 2 x 6
   c. 1 x 3
   d. 2 x 3 x 4 x 6

   ANSWER: c (p. 290)

431. Suppose you design an experiment that had one IV with two levels, one IV with
    three levels, and another IV with four levels. What is the shorthand notation for
    this design?
   a. 1 x 9
   b. 1 x 24
   c. 2 x 3 x 4
   d. 1 x 2 x 3

   ANSWER: c (p. 290)
432. Suzanne conducts a study with a sample of people whom she classifies as either extreme alcoholics or moderate alcoholics (based on the number of alcoholic beverages consumed per day). She brings them to the lab and randomly assigns them to one of three treatment conditions: a self-help group with no therapist (e.g., AA), group therapy with a licensed therapist, or individual therapy with a licensed therapist. She wonders if extreme alcoholics will react differently to the various treatments than moderate alcoholics. Suzanne’s study represents a ________ design.
   a. 2 x 2 factorial
   b. 2 x 3 factorial
   c. one-way ANOVA for independent samples
   d. one-way ANOVA for correlated samples

   ANSWER: b (p. 290)

433. The sole effect of one IV in a factorial design is called a(n)
   a. interaction.
   b. main effect.
   c. one-way effect.
   d. correlated-groups effect.

   ANSWER: b (p. 292)

434. The joint effect on the DV of more than one IV is called a(n)
   a. interaction.
   b. main effect.
   c. one-way effect.
   d. correlated-groups effect.

   ANSWER: a (p. 292)

435. Lola conducts a study to examine aggression. She has both men and women come to a laboratory room that is either 70 degrees or 90 degrees. Suppose she finds that overall, participants exhibit more aggression in the 90 degree room than the 70 degree room. This finding illustrates a(n)
   a. main effect of sex of participant.
   b. main effect of temperature.
   c. interaction between sex of participant and temperature.
   d. All of the above.

   ANSWER: b (p. 292)
436. Lola conducts a study to examine aggression. She has both men and women come to a laboratory room that is either 70 degrees or 90 degrees. Suppose she finds that overall, men were more aggressive than women. This finding illustrates a(n)
   a. main effect of sex of participant.
   b. main effect of temperature.
   c. interaction between sex of participant and temperature.
   d. All of the above.

   ANSWER: a (p. 292)

437. Lola conducts a study to examine aggression. She has both men and women come to a laboratory room that is either 70 degrees or 90 degrees. Suppose she finds that men in a 90-degree room were significantly more aggressive than all other groups. This finding illustrates a(n)
   a. main effect of sex of participant.
   b. main effect of temperature.
   c. interaction between sex of participant and temperature.
   d. All of the above.

   ANSWER: c (p. 292)

438. The line graph above depicts a(n)
   a. main effect of temperature.
   b. main effect of sex of participant.
   c. interaction between temperature and sex of participant.
   d. Both (a) and (b).

   ANSWER: d (p. 294)
439. The line graph above depicts a(n)
   a. main effect of temperature.
   b. main effect of sex of participant.
   c. interaction between temperature and sex of participant.
   d. Both (a) and (b).

   ANSWER: c (p. 294)

440. Suppose a researcher finds a significant interaction between sex of participant and room temperature on levels of aggression. To explain this interaction, you need to discuss
   a. the temperature variable only.
   b. the sex of participant variable only.
   c. both the temperature variable and the sex of participant variable.
   d. the aggression variable only.

   ANSWER: c (p. 294)

441. Suppose a researcher finds a significant main effect of sex of participant, no main effect of temperature, and no significant interaction between the two variables. To explain this main effect, you need to discuss
   a. the temperature variable only.
   b. the sex of participant variable only.
   c. both the temperature variable and the sex of participant variable.
   d. the aggression variable only.

   ANSWER: b (p. 294)
442. Suppose you were interested in conducting an experiment with two independent variables. Why should you use a factorial design instead of two separate experiments?
   a. The factorial design has greater reliability than two separate experiments.
   b. The factorial design has a decreased chance of experimenter bias affecting the outcome.
   c. The factorial design allows you to test for main effects.
   d. The factorial design allows you to test for interactions.

   ANSWER: d (p. 292)

443. In a line graph, the presence of an interaction would be indicated by
   a. crossing lines.
   b. parallel lines increasing as you go from left to right.
   c. parallel lines decreasing as you go from left to right.
   d. identical lines.

   ANSWER: a (p. 293)

444. A significant interaction means that
   a. there is a significant main effect of one variable and a significant main effect of another IV.
   b. one main effect is significant and one main effect is not significant.
   c. the effects of one IV depend on the particular level of another IV.
   d. the independent variables operate independently from each other.

   ANSWER: c (p. 293)

445. In a two-variable experiment,
   a. if the main effects are significant, then there cannot be a significant interaction.
   b. if the interaction is significant, then there cannot be significant main effects.
   c. if one main effect is significant, then the other main effect cannot be significant.
   d. any combination of main effects and interactions is possible.

   ANSWER: d (p. 294)

446. In a(n) ________ groups design, groups of participants are formed by random assignment.
   a. independent
   b. correlated
   c. repeated measures
   d. natural
ANSWER: a (p. 296)
447. In a(n) _______ groups design, groups of participants are formed by matching, natural pairs, or repeated measures.
   a. independent
   b. correlated
   c. observational
   d. factorial

   ANSWER: b (p. 296)

448. _______ refers to a factorial design in which at least one IV has independent groups and one IV has correlated groups.
   a. Mixed assignment
   b. Natural groups
   c. Matched groups
   d. Varied assignment

   ANSWER: a (p. 296)

449. Sandy conducts a study with two independent variables: one is an independent groups IV and the other is a repeated measures IV. Sandy has used _______ assignment.
   a. variance
   b. factorial
   c. mixed
   d. interaction

   ANSWER: c (p. 296)

450. A factorial design in which both IVs involve random assignment is referred to as a _______ factorial design.
   a. within-subjects
   b. mixed
   c. correlated-groups
   d. between-subjects

   ANSWER: d (p. 296)

451. A factorial design in which both IVs involve repeated measures is referred to as a(n) _______ design.
   a. between-subjects factorial
   b. completely within-groups
   c. mixed factorial
   d. independent groups

   ANSWER: b (p. 296)
452. Kyle is interested in examining how sex of participant (male, female) and self-esteem (high, low) affect perseverance on a novel task. What is the dependent variable in this study?
   a. sex of participant
   b. self-esteem
   c. perseverance on a novel task
   d. the experimenter Kyle

   ANSWER: c (p. 300)

453. Juanita conducted a study to determine the effects of pornography on men. Half of her male participants watched violent pornography for an hour per day over a two-week period, and the other half watched nonviolent pornography for the same amount of time. She measured their attitudes toward rape on three separate occasions: before the study, after one week, and after two weeks. The independent-group IV is __________ and the correlated group IV is __________.
   a. time attitudes were measured; type of pornography
   b. type of pornography; time attitudes were measured
   c. rape attitudes; type of pornography
   d. type of pornography; rape attitudes

   ANSWER: b (p. 300)

454. Which of the following is NOT a consideration for researchers when choosing a factorial design?
   a. Experimental questions
   b. External validity issues
   c. Control issues
   d. Practical considerations

   ANSWER: b (p. 304)

455. In a factorial design, when you add a level to one of your independent variables, you add ___ group(s) to your experiment.
   a. zero
   b. one
   c. two or more
   d. exactly two

   ANSWER: c (p. 305)
456. Expanding a 2 x 2 design to a 4 x 2 design means going from ___ groups (in the 2 x 2) to ____ groups (in the 4 x 2)
   a. 2; 4
   b. 4; 6
   c. 4; 8
   d. 2; 8

   ANSWER: c (p. 305)

457. When we choose to use nonmanipulated IVs in our factorial experiments, we are conducting ________ research.
   a. ex post facto
   b. experimental
   c. correlated-groups
   d. parsimonious

   ANSWER: a (p. 305)

458. Zapatel and Garcia-Lopez (2004) conducted a study in which participants rated song lyrics as a function of participant’s race and genre of music. In their study, ____________ is a measured IV and __________ is a manipulated IV.
   a. participant race; genre of music
   b. genre of music; participant race
   c. song lyrics; genre of music
   d. genre of music; song lyrics

   ANSWER: a (p. 306)

459. A factorial design with three IVs is known as a _______ design.
   a. multiple levels
   b. three-way
   c. three-IV
   d. multiple-IV

   ANSWER: b (p. 306)

460. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. This research represents a _______ design.
   a. correlated-groups
   b. three-way
   c. two-way
   d. main effect

   ANSWER: b (p. 306)
461. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. Which of the following is NOT an independent variable?
   a. sex of participant
   b. sex of confederate
   c. reactions to negative feedback
   d. self-esteem of participants

   ANSWER: c (p. 306)

462. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. How many separate groups are involved in this between-groups study?
   a. 2
   b. 4
   c. 6
   d. 8

   ANSWER: d (p. 306)

463. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. This study is best conceptualized as a ________ design.
   a. 2 x 4
   b. 2 x 2
   c. 2 x 2 x 2
   d. 2 x 3

   ANSWER: c (p. 307)

464. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. How many possible interactions are there in this study?
   a. 2
   b. 3
   c. 4
   d. 5

   ANSWER: c (p. 308)
465. Suppose a researcher is interested in examining the effects of sex of participant, sex of confederate, and self-esteem of participant (high, low) on the participants’ reactions to negative feedback. How many main effects are there in this study?
   a. 2
   b. 3
   c. 4
   d. 5

   ANSWER: b (p. 308)

466. Variability in DV scores due to the effects of the IV is known as ______ variability.
   a. error
   b. treatment
   c. within-subjects
   d. standard

   ANSWER: b (p. 312)

467. Variability in DV scores due to factors other than the IV is known as ______ variability.
   a. error
   b. treatment
   c. within-subjects
   d. standard

   ANSWER: a (p. 312)

468. Treatment variability in a 2 x 2 design comes from
   a. the main effect of factor A.
   b. the main effect of factor B.
   c. the interaction between factors A and B.
   d. All of the above.

   ANSWER: d (p. 312)

469. In a 2 x 2 design, how many F ratios will we calculate?
   a. 1
   b. 2
   c. 3
   d. 4

   ANSWER: c (p. 313)
470. ________ effects occur when the effects of combining two or more conditions are greater than what is individually possible.
   a. Parsimonious
   b. Synergistic
   c. Independent
   d. Correlated

   ANSWER: b (p. 314)

471. If we find a significant interaction in a 2 x 2 design,
   a. we should focus first on the main effect of factor A.
   b. we should focus first on the main effect of factor B.
   c. we should focus first on both main effects.
   d. we should ignore the main effects of factor A and factor B.

   ANSWER: d (p. 314)

472. Suppose you conduct a 2 x 2 ANOVA for independent samples. If your “df total” in the study is 23, how many participants were in the sample?
   a. 21
   b. 22
   c. 23
   d. 24

   ANSWER: d (p. 317)

473. Suppose you conduct a factorial ANOVA for independent samples and for one of the main effects, the degrees of freedom are 1. How many groups exist for that independent variable?
   a. 0
   b. 1
   c. 2
   d. 3

   ANSWER: c (p. 317)

474. If we obtain a probability between .05 and .10, we usually refer to it as
   a. highly significant.
   b. marginally significant.
   c. a Type II error.
   d. a main effect.

   ANSWER: b (p. 317)
475. Marginally significant results have an increased risk of being
   a. a Type I error.
   b. affected by demand characteristics.
   c. a Type II error.
   d. affected by experimenter characteristics.

   ANSWER: a (p. 317)

476. Suppose you have graphed a significant interaction. The lines on the line graph
   should
   a. converge.
   b. cross.
   c. be parallel.
   d. either converge or cross.

   ANSWER: d (p. 318)

477. Suppose you wanted to conduct a study in which students read chapters on the
   same topic from two different textbooks and then take a quiz over each chapter. The
   researcher should NOT use a(n) ______ design.
   a. repeated measures
   b. between-groups
   c. independent-samples
   d. between-subjects

   ANSWER: a (p. 320)

478. A two-way ANOVA for correlated samples is composed of
   a. one IV using repeated measures or matching, and one IV using random
      assignment.
   b. both IVs using random assignment.
   c. both IVs using repeated measures or matching.
   d. three IVs, all of which use random assignment.

   ANSWER: c (p. 319)

479. A two-way ANOVA for independent samples is composed of
   a. one IV using repeated measures or matching, and one IV using random
      assignment.
   b. both IVs using random assignment.
   c. both IVs using repeated measures or matching.
   d. three IVs, all of which use random assignment.

   ANSWER: b (p. 315)
480. A two-way ANOVA for mixed samples is composed of
   a. one IV using repeated measures or matching, and one IV using random
      assignment.
   b. both IVs using random assignment.
   c. both IVs using repeated measures or matching.
   d. three IVs, all of which use random assignment.

   ANSWER: a (p. 321)

481. In an ANOVA for mixed samples, why must the between-subjects effects and
     within-subjects effects be divided in the source table?
   a. They use different error terms.
   b. They use different degrees of freedom.
   c. They have different $F$-values.
   d. They have different $p$-values.

   ANSWER: a (p. 322)

482. Assume you have conducted a 3 x 3 ANOVA for independent samples and you
     have obtained a significant main effect for the first IV, no main effect for the
     second IV, and no interaction. What should you do next?
   a. Write up your results in APA format.
   b. Graph the interaction.
   c. Conduct post hoc tests for the significant main effect.
   d. Create an APA-format table of means.

   ANSWER: c (p. 324)

483. A researcher who conducts a series of experiments concerning a related topic is
     conducting
   a. a 2 x 2 ANOVA for independent samples.
   b. post hoc tests.
   c. synergistic research.
   d. programmatic research.

   ANSWER: d (p. 325)

484. Kyle is interested in examining how sex of participant (male, female) and self-
     esteem (high, low) affect perseverance on a novel task. What kind of analysis will
     Kyle use?
   a. One-way ANOVA for independent samples
   b. Two-way ANOVA for independent samples
   c. Two-way ANOVA for correlated samples
   d. Two-way ANOVA for mixed samples
485. Jason is interested in examining how sex of participant affects liking of a female instructor. Male and female participants are surveyed on the first day of the semester and again on the last day of the semester in terms of their liking for their instructor. What kind of analysis will Jason use?
   a. One-way ANOVA for independent samples
   b. Two-way ANOVA for independent samples
   c. Two-way ANOVA for correlated samples
   d. Two-way ANOVA for mixed samples

   ANSWER: d (p. 315)

486. Charlotte is interested in examining how spouses negotiate housework. She has husbands and wives come to the laboratory to answer two questionnaires: (1) questions about the housework they themselves like to do, and (2) questions about the housework they think their spouse likes to do. The design is a 2 (spouse: husband, wife) x 2 (target of questionnaire: self, other) ANOVA. Which kind of ANOVA will Charlotte use?
   a. One-way ANOVA for independent samples
   b. Two-way ANOVA for independent samples
   c. Two-way ANOVA for correlated samples
   d. Two-way ANOVA for mixed samples

   ANSWER: c (p. 315)
Questions 64 - 70 refer to Table 12-1 below. In this study, male and female participants were randomly assigned to complete questionnaires in either a 70-degree room or a 90-degree room. Later, participants had an opportunity to administer shocks to a confederate who had angered them. The researcher recorded the number of shocks administered (could range from 0 to 20).

Table 12-1

<table>
<thead>
<tr>
<th>TABLE OF MEANS:</th>
<th>ROOM TEMPERATURE</th>
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<tr>
<td></td>
<td>70 DEGREES</td>
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<tr>
<td>Participant</td>
<td></td>
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<tr>
<td>Female</td>
<td>14.20</td>
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<td>Male</td>
<td>12.60</td>
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<td>COLUMN M</td>
<td>13.40</td>
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Pop. M = 13.90

SOURCE TABLE

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<th>MS</th>
<th>F</th>
<th>p</th>
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<tbody>
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<td>Room Temperature</td>
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<td>1</td>
<td>10.00</td>
<td>1.226</td>
<td>.275</td>
</tr>
<tr>
<td>Participant Sex</td>
<td>3.60</td>
<td>1</td>
<td>3.60</td>
<td>0.441</td>
<td>.511</td>
</tr>
<tr>
<td>Temp x Part Sex</td>
<td>48.40</td>
<td>1</td>
<td>48.80</td>
<td>5.935</td>
<td>.020</td>
</tr>
<tr>
<td>W. Cell</td>
<td>293.60</td>
<td>36</td>
<td>8.16</td>
<td></td>
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<tr>
<td>Total</td>
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<td>39</td>
<td></td>
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</tr>
</tbody>
</table>

487. Refer to Table 12-1. This example represents a
a. one-way ANOVA for independent samples.
b. two-way ANOVA for independent samples.
c. two-way ANOVA for correlated samples.
d. two-way ANOVA for mixed samples.

ANSWER: b (p. 315)

488. Refer to Table 12-1. Room temperature is a ______-subjects variable and participant sex is a ______-subjects variable.
a. between; between
b. within; within
c. between; within
d. within; between

ANSWER: a (p. 315)
489. Refer to Table 12-1. What is the dependent variable in this study?
   a. number of shocks
   b. sex of participant
   c. room temperature
   d. the confederate

   ANSWER: a (p. 325)

490. Refer to Table 12-1. The main effect of participant sex ____ significant; therefore, we should conclude that
   a. is; men administered more shocks than women.
   b. is not; men administered more shocks than women.
   c. is; there are no overall differences between men and women in terms of the number of shocks administered.
   d. is not; there are no overall differences between men and women in terms of the number of shocks administered.

   ANSWER: d (p. 319)

491. Refer to Table 12-1. Overall, what is the mean number of shocks administered by women?
   a. 14.20
   b. 13.60
   c. 13.00
   d. 13.40

   ANSWER: b (p. 317)

492. Refer to Table 12-1. Which of the following is true?
   a. There is a significant main effect of room temperature.
   b. There is a significant main effect of participant sex.
   c. There is a significant interaction between room temperature and participant sex.
   d. All of the above.

   ANSWER: c (p. 316)
Refer to Table 12-1. Which of the following is an accurate depiction of the results?

a. In a 90-degree room, men and women administered the same number of shocks, but in a 70-degree room, men administered more shocks than women.

b. In a 70-degree room, women administered more shocks than men, whereas in a 90-degree room, men administered more shocks than women.

c. Men and women administered the same number of shocks when in a 70-degree room, but men administered more shocks than women in the 90-degree room.

d. Men administered more shocks than women in both a 70-degree room and a 90-degree room.

ANSWER: b (p. 317)

Questions 71 - 75 refer to Table 12-2. In this experiment, Caucasian participants viewed a series of slides in which the faces were sometimes of the same ethnicity as the participant and sometimes of a different ethnicity. In addition, sometimes the faces were smiling and sometimes the faces were frowning. Participants later were given a memory test over the material; the researchers recorded the number of faces in each group that were correctly recalled. Scores could range from 0 (recalled none) to 10 (recalled all correctly).

Table 12-2

<table>
<thead>
<tr>
<th></th>
<th>FACIAL EXPRESSION</th>
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<tbody>
<tr>
<td></td>
<td>FROWNING</td>
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<tr>
<td>Ethnicity of Face</td>
<td>Own</td>
</tr>
<tr>
<td></td>
<td>Other</td>
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<tr>
<td>COLUMN M</td>
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Pop. M = 5.85

SOURCE TABLE

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<td>1</td>
<td>140.28</td>
<td>219.74</td>
<td>.000</td>
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<tr>
<td>Facial Expression</td>
<td>9.03</td>
<td>1</td>
<td>9.03</td>
<td>23.25</td>
<td>.002</td>
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<tr>
<td>Ethnicity x Expression</td>
<td>11.28</td>
<td>1</td>
<td>11.28</td>
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<td>.023</td>
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<td>Residual</td>
<td>9.47</td>
<td>7</td>
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</table>

Refer to Table 12-2. This example represents a

a. one-way ANOVA for independent samples.

b. two-way ANOVA for independent samples.

c. two-way ANOVA for correlated samples.
d. two-way ANOVA for mixed samples.

ANSWER: c (p. 315)

495. Refer to Table 12-2. Ethnicity of face is a ______-subjects variable and facial expression is a ______-subjects variable.
   a. between; between
   b. within; within
   c. between; within
   d. within; between

ANSWER: b (p. 319)

496. Refer to Table 12-2. What is the dependent variable in this study?
   a. Ethnicity of face
   b. Ethnicity of participant
   c. Facial expression
   d. Number of faces correctly recalled

ANSWER: d (p. 325)

497. Refer to Table 12-2. Overall, participants recalled an average of _______ frowns and ________ smiles.
   a. 8.00; 7.88
   b. 7.94; 3.76
   c. 5.32; 6.38
   d. 6.38; 5.32

ANSWER: c (p. 320)

498. Refer to Table 12-2. The main effect of facial expression ____ significant; therefore, we should conclude that
   a. is not; there are no differences in recall for the number of smiles versus frowns.
   b. is; there are no differences in recall for the number of smiles versus frowns.
   c. is not; participants had better recall for smiles than frowns.
   d. is; participants had better recall for smiles than frowns.

ANSWER: d (p. 321)
Questions 76 - 81 refer to Table 12-3. A researcher is interested in determining just how much negative interactions with strangers affect our sense of well-being. In this example, participants completed a scale of positive affect. Later, either a pleasant or unpleasant confederate is randomly assigned to interact with each participant. At the end of the experiment, participants’ positive affect is again assessed. Positive affect scores could range from 1 (low positive affect) to 15 (high positive affect).

Table 12-3

<table>
<thead>
<tr>
<th>TABLE OF MEANS:</th>
<th>TIME POSITIVE AFFECT ASSESSED</th>
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<td>BEFORE EXPERIMENT</td>
</tr>
<tr>
<td>ROW M</td>
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<tr>
<td>Confederate</td>
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<td>12.20</td>
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<tr>
<td>Demeanor</td>
<td>Unpleasant</td>
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<tr>
<td>7.05</td>
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<tr>
<td>COLUMN M</td>
<td>10.85</td>
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</table>

Pop. M = 9.63

SOURCE TABLE

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<th>df</th>
<th>MS</th>
<th>F</th>
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499. Refer to Table 12-3. This example represents a
   a. one-way ANOVA for independent samples.
   b. two-way ANOVA for independent samples.
   c. two-way ANOVA for correlated samples.
   d. two-way ANOVA for mixed samples.

   ANSWER: d (p. 321)

500. Refer to Table 12-3. Confederate demeanor is a ______-subjects variable and time is a ______-subjects variable.
   a. between; between
   b. within; within
   c. between; within
   d. within; between
501. Refer to Table 12-3. What is the dependent variable in this study?
   a. Time that positive affect was assessed (before the experiment, after the experiment)
   b. Confederate demeanor
   c. Positive affect score
   d. Ethnicity of experimenter

   ANSWER: c (p. 322)

502. Refer to Table 12-3. Overall, the average positive affect rating before the experiment was _____ and the average positive affect rating after the experiment was ______.
   a. 11.10; 13.30
   b. 10.60; 3.50
   c. 12.20; 7.05
   d. 10.85; 8.40

   ANSWER: d (p. 323)

503. Refer to Table 12-3. The main effect for confederate demeanor ____ significant; therefore, we should conclude that
   a. is; participants felt more positive affect after interacting with a pleasant confederate versus an unpleasant confederate.
   b. is not; participants felt more positive affect after interacting with a pleasant confederate versus an unpleasant confederate.
   c. is; there are no differences in positive affect ratings as a function of interacting with a pleasant versus unpleasant confederate.
   d. is not; there are no differences in positive affect ratings as a function of interacting with a pleasant versus unpleasant confederate.

   ANSWER: a (p. 323)

504. Refer to Table 12-3. Which of the following is the best description of the results?
   a. Participants who interacted with an unpleasant confederate had decreased positive affect from before to after the experiment. Participants who interacted with a pleasant confederate had increased positive affect from before to after the experiment.
   b. Participants who interacted with an unpleasant confederate did not change in positive affect from before to after the experiment, but participants who interacted with a pleasant confederate increased in positive affect.
   c. Before the experiment began participants had low levels of positive affect, but after the experiment participants had greatly increased their levels of positive affect.

   ANSWER: a (p. 323)
d. The results of this study were significant.

ANSWER: a (p. 324)