TOTAL ASSESSMENT GUIDE

Chapter 2

HOW PSYCHOLOGISTS DO RESEARCH

Topic/ Learning Objective		Remember the Facts	Understand the Concepts	Apply What You Know	Analyze It
POP QUIZ 1	Multiple Choice	1-6,8,10	9		7
POP QUIZ 2	Multiple Choice	1,2,4,7-10	3,5,6		
What Makes Psychological Research Scientific? 2.1.A – Distinguish among a theory, a hypothesis, and an operational definition. 2.1.B – Explain why skepticism in science involves more than just disbelief. 2.1.C – Explain why falsifiability is an important component of scientific research. 2.1.D – Describe why openness and replication are important qualities of the scientific enterprise.	Multiple Choice	2-6,8,18,21-23	1,7,9,10,14,17	11-13,19	
	True/False	1-5,7-12	6		
	Short Answer	1	4	2,3	
	Essay				1
	Integrative Essay				1,3
Descriptive Studies: Examining the Facts 2.2.A – Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes. 2.2.B – Discuss the advantages and disadvantages of using case studies as a means of data collection. 2.2.C – Discuss the advantages and disadvantages of using observational methods as a means of data collection. 2.2.D – Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test. 2.2.E –Describe the advantages and limitations of using surveys in data collection. 2.2.F – Describe the importance and challenges of conducting cross-cultural research.	Multiple Choice	24,25,27-29,38, 44-47,49,50,54, 60,61,63,69	26,30-32,34,37, 39,55,59,62,67, 70-75	33,35,40-43,48, 51-53,56-58, 64-66	36,68
	True/False	13-16,20-34	17-19		
	Short Answer		5	6,7	
	Essay				2
	Integrative Essay				

(Continued on next page)

Topic/ Learning Objective		Remember the Facts	Understand the Concepts	Apply What You Know	Analyze It
Correlational Studies: Looking for Relationships 2.3.A – Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables. 2.3.B – Explain why a correlation between two variables does not establish a causal relationship between those variables.	Multiple Choice	76-80,93,98,104, 107	86,87,89,90,94, 96,97,99,100, 103,105	81,85,88,91,101, 106	82-84,92,95,102
	True/False	35-41			
	Short Answer		8,9		
	Essay				
	Integrative Essay				2
Experiments: Hunting for Causes 2.4.A – Distinguish an independent variable from a dependent variable, and give an example of each. 2.4.B – Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group. 2.4.C – Discuss the methodological advantages and limitations of experimental research design.	Multiple Choice	108-111,116,117, 124,130,131,133	112,125,127, 132,134,135	113-115,118-123,126,128,129	
	True/False	42-48,50-60		49	
	Short Answer		10		
	Essay			3,4	
	Integrative Essay				
Evaluating the Findings 2.5.A – Explain how descriptive statistics can be used to compare the performance of two groups of research participants. 2.5.B – Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented. 2.5.C – Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.	Multiple Choice	136,138,140-142, 144,147,149,150	143,148	137,139,145,146	
	True/False	61-72,74,75	73		
	Short Answer				
	Essay				5-7
	Integrative Essay				
Keeping the Enterprise Ethical 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics. 2.6.B – Discuss the advantages and ethical considerations of using animals in research.	Multiple Choice	151-154	155		
	True/False	76-80			
	Short Answer				
	Essay				8
	Integrative Essay				

Name_____

Chapter 2 – Pop Quiz 1

1. An organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships is called a(n) _____.
   a. hypothesis
   b. operational definition
   c. research design
   d. theory

2. The tendency to look for information that supports one's own belief is called _____.
   a. the principle of falsifiability
   b. confirmation bias
   c. denialism
   d. cognitive inertia

3. Research methods that depict behavior, but do not necessarily yield direct explanations, are called _____.
   a. experimental methods
   b. blind studies
   c. significance tests
   d. descriptive methods

4. In a(n) _____ study, a researcher carefully and systematically watches and records behavior, taking care to avoid affecting the subjects being studied.
   a. observational
   b. exploratory
   c. experimental
   d. double-blind

5. Assessment instruments that are designed to tap unconscious feelings or motives are called _____.
   a. objective tests
   b. projective tests
   c. double-blind tests
   d. single-blind tests

6. A _____ is a measure of how strongly two variables are related to one another.
   a. relationship coefficient
   b. meta-analysis
   c. Bayesian statistic
   d. correlation

7. Which of the following pairs of variables are likely to be positively correlated?
   a. outdoor temperature and hot chocolate sales
   b. damage to a car and speed at the time of accident
   c. the price of a car and the age of a car
   d. hours spent watching TV and grade point average

8. Which variable does an experimenter manipulate when conducting experimental research?
   a. control variable
   b. confounding variable
   c. independent variable
   d. dependent variable

9. A result that is significant at the .05 level indicates that _____.

a. the result was obtained purely by chance and is not real
b. the probability that the result is due to real differences between groups is .05
c. there is a positive relationship between variables
d. the probability that the result occurred by chance is low, and therefore the result is probably real

10. People who participate in research studies must participate voluntarily and must know enough about the study to make an intelligent decision about participating. This concept is known as _____.
a. the Milgram doctrine
b. the APA code
c. informed consent
d. human welfare

Chapter 2 – Pop Quiz 1
Answer Key

1. d Rationale: A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships. (Remember the Facts, Easy, LO 2.1.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

2. b Rationale: Confirmation bias occurs when people look for and accept evidence that supports their pet theories and assumptions and ignore or reject evidence that contradicts their beliefs. (Remember the Facts, Easy, LO 2.1.C, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

3. d Rationale: Descriptive methods are methods that yield descriptions of behavior but not direct explanations. (Remember the Facts, Easy, LO 2.2.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

4. a Rationale: An observational study is defined as a study in which a researcher carefully and systematically observes and records behavior (naturalistically or in a laboratory) without interfering with the behavior. (Remember the Facts, Easy, LO 2.2.C, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

5. b Rationale: Projective tests are designed to tap unconscious feelings or motives. (Remember the Facts, Easy, LO 2.2.D, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

6. d Rationale: Correlation is a measure of how strongly two variables are related to one another. (Remember the Facts, Easy, LO 2.3.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

7. b Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another. (Analyze It, Moderate, LO 2.3.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

8. c Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable. (Remember the Facts, Easy, LO 2.4.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

9. d Rationale: A .05 level of significance means that there is less than 5 percent probability that the results were due to chance. If, however, the significance test shows that the *p* value is greater than .05, many researchers would have little confidence in the study's result. (Understand the Concepts, Difficult, LO 2.5.B, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

10. c Rationale: Informed consent is the doctrine that anyone who participates in human research must do so voluntarily and must know enough about the study to make an intelligent decision about whether to take part. (Remember the Facts, Easy, LO 2.6.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

Name_____

Chapter 2 – Pop Quiz 2

1. A statement that attempts to describe or explain a given behavior is called a(n) _____.
   a. hypothesis
   b. axiom
   c. corollary
   d. theory

2. The ability to see the same results when you repeat your study is critical to science. It is called _____.
   a. openness
   b. repeatability
   c. replication
   d. review

3. Which of the following is an advantage of case studies?
   a. Case studies produce a more detailed picture of an individual than other methods do.
   b. The information produced in a case study is easy to interpret.
   c. Data collected during a case study can be easily generalized to other individuals.
   d. Case studies are less susceptible to researcher bias than other methods.

4. Katy is doing a study using _____ for her advanced psychology class. She goes to the university dining hall and makes notes on her fellow students' behavior and activities. She is careful to avoid drawing attention to herself so her subjects will behave as usual.
   a. naturalistic observation
   b. laboratory observation
   c. exploratory research
   d. experimental research

5. People who are willing to take part in surveys usually have opinions and views that are different from those who decline to take part. This phenomenon can lead to _____.
   a. a biased sample being used for a survey
   b. an experimenter fulfilling their beliefs by knowing the specific participants that would play a role in their research
   c. people participating who will only confirm what an experimenter is looking for
   d. errors in content validity of the survey

6. Which of the following pairs of variables would illustrate a negative correlation?
   a. ocean temperature and the number of people at the beach
   b. adult shoe size and IQ scores
   c. the price of a car and the mileage on the odometer
   d. height and weight

7. Apparent associations between two things that are not really related are called _____ correlations.
   a. illusory
   b. positive
   c. negative
   d. erroneous

8. A variable that is predicted to be affected by an experimenter's manipulations in experimental research is called a(n) _____ variable.
   a. extraneous
   b. dependent
   c. confounding
   d. independent

9. _____ is a technique that allows a researcher to combine data from numerous studies..
   a. Significance testing
   b. Meta-analysis
   c. Cross-sectional research
   d. Longitudinal research

10. Which of the following is one of the reasons for the use of animals in psychological research?
   a. because what is true for animals will also be true for humans
   b. animals are more complex than humans, so they provide us with more detailed information about behavior
   c. to improve human welfare
   d. to improve the treatment of laboratory animals

Chapter 2 – Pop Quiz 1
Answer Key

1. a Rationale: A hypothesis is a statement that attempts to predict or to account for a set of phenomena, specifying relationships among events or variables that can be empirically tested. (Remember the Facts, Easy, LO 2.1.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

2. c Rationale: Science depends on the free flow of ideas and full disclosure of the procedures used in a study. Secrecy is a big "no-no"; scientists must be willing to tell others where they got their ideas, how they tested them, and what the results were. They must do this clearly and in detail so that other scientists can repeat, or replicate, their studies and verify—or challenge—the findings. (Remember the Facts, Easy, LO 2.1.D, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

3. a Rationale: Case studies are most commonly used by clinicians, but sometimes academic researchers use them as well, especially when they are just beginning to study a topic or when practical or ethical considerations prevent them from gathering information in other ways. (Understand the Concepts, Easy, LO 2.2.B, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

4. a Rationale: An observational study is defined as a study in which a researcher carefully and systematically observes and records behavior (naturalistically or in a laboratory) without interfering with the behavior. Psychologists use naturalistic observation wherever people happen to be. (Remember the Facts, Easy, LO 2.2.C, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

5. a Rationale: People who are willing to take part in surveys usually have opinions and views that are different from those who decline to take part. A nonrepresentative sample does not necessarily mean that a survey is worthless or uninteresting, but it does mean that the results may not hold true for other groups. (Understand the Concepts, Moderate, LO 2.2.E, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

6. c Rationale: A negative correlation means that high values of one variable are associated with low values of the other. There is a negative relationship between the price of a car and its mileage. The more miles driven, the less a car is typically worth. (Understand the Concepts, Moderate, LO 2.3.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

7. a Rationale: Illusory correlations are apparent associations between two things that are not really related. Illusory correlations can create dangerous beliefs and cause great social harm. (Remember the Facts, Easy, LO 2.3.B, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

8. c Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable. (Remember the Facts, Easy, LO 2.4.A, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

9. b Rationale: A meta-analysis is a set of techniques for combining data from a number of related studies to determine the explanatory strength of a particular independent variable. (Remember the

Facts, Easy, LO 2.5.C, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

10. c Rationale: One of the reasons psychologists conduct experiments with animals is to improve human welfare. (Remember the Facts, Easy, LO 2.6.B, APA 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research)

Multiple Choice Questions

1. In the cycle of scientific research, a theory is _____ when new evidence is gathered.
   a. proven
   b. replaced
   c. revised
   d. a law
   Answer: c
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Understand the Concepts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: By examining the evidence, modifications, extensions, and revisions to the theory can take place, thereby generating new hypotheses and continuing the cycle of research investigation.

2. Which of the following is the correct order for scientific research?
   a. Evidence, prediction, hypothesis, theory
   b. Prediction, evidence, hypothesis, theory
   c. Hypothesis, evidence, theory, prediction
   d. Theory, hypothesis, prediction, evidence
   Answer: d
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Moderate
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: Theories allow a researcher to derive testable hypotheses, and make predictions about the pattern of results that should occur. Hypotheses are tested empirically by gathering data on operationally defined variables. By examining the evidence, modifications, extensions, and revisions to the theory can take place, thereby generating new hypotheses and continuing the cycle of research investigation.

3. An organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships is called a(n) _____.
   a. hypothesis
   b. operational definition
   c. research design
   d. theory
   Answer: d
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships.

4. In the scientific use of the term, a "theory" is _____.
   a. a prediction about the outcome of a given experiment or study
   b. an organized system of assumptions and principles that purports to explain a set of observations and how they are related
   c. a precise definition of a term in a hypothesis, which specifies how it will be observed and measured
   d. a scientist's best guess about the cause of an event or phenomenon

Answer: b
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships.

5. A scientific theory can be thought of as a(n) _____.
   a. personal opinion
   b. established truth
   c. system of assumptions
   d. empirical proof
   Answer: c
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships.

6. A statement that attempts to describe or explain a given behavior is called a(n) _____.
   a. hypothesis
   b. axiom
   c. corollary
   d. theory
   Answer: a
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: A hypothesis is a statement that attempts to predict or to account for a set of phenomena, specifying relationships among events or variables that can be empirically tested.

7. Which of the following statements about a hypothesis is true?
   a. It is a sentence negating the assumption that is considered correct by a researcher.
   b. It is a theory that has not yet been accepted by most scientists.
   c. It is a statement about a relationship between variables that may be empirically tested.
   d. It is a precise definition of a term used in a theory.
   Answer: c
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Understand the Concepts
   Difficulty Level: Moderate
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: A hypothesis is a statement that attempts to predict or to account for a set of phenomena, specifying relationships among events or variables that can be empirically tested.

8. An operational definition is _____.
   a. a statement that attempts to describe or explain a given behavior
   b. an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships
   c. a specification of precisely how to observe and measure a variable in a hypothesis
   d. a statement that is accepted without proof and regarded as fundamental to a subject
   Answer: c
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: An operational definition is a specification of precisely how to observe and measure a variable in a hypothesis.

9. An operational definition specifies _____.
   a. how something is to be observed and measured
   b. how the purpose of a study will be explained to the participants
   c. the meaning of a term in commonly used, non-scientific language
   d. which research methods will be used in a study
   Answer: a
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Understand the Concepts
   Difficulty Level: Moderate
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
   Rationale: In a prediction, terms for the phenomena to be tested are given operational definitions, which specify how the phenomena in question are to be observed and measured.

10. Before research can proceed, the hypothesis must be made more _____ through the use of operational definitions.
    a. empirical
    b. accurate
    c. precise
    d. theoretical
    Answer: c
    Topic: What Makes Psychological Research Scientific?
    Skill Level: Understand the Concepts
    Difficulty Level: Moderate
    Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: From a theory, a psychological scientist derives a hypothesis, which may be quite general. But before any research can be done, the hypothesis must be made more precise in order to leads to predictions about what will happen in a particular situation. Terms are given operational definitions, which specify how the phenomena in question are to be observed and measured.

11. Marcy is trying to define “anxiety” in such a way that it specifies how it is to be observed, measured, and empirically tested. She is attempting to find an appropriate _____.
    a. hypothesis
    b. corollary
    c. theoretical definition
    d. operational definition
    Answer: d

Topic: What Makes Psychological Research Scientific?
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An operational definition is a specification of precisely how to observe and measure a variable in a hypothesis.

12. Hannah decides to test whether engineering majors have greater visual-spatial abilities than students with other majors. Hannah decides to define visual-spatial ability in terms of how long it takes each participant to complete a jigsaw puzzle. This is an example of a(n) _____.
a. operational definition
b. theoretical definition
c. corollary
d. hypothesis
Answer: a
Topic: What Makes Psychological Research Scientific?
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An operational definition is a specification of precisely how to observe and measure a variable in a hypothesis.

13. Empirical evidence is information that _____.
a. is easily obtained
b. confirms your beliefs
c. is observable and verifiable
d. makes anecdotes part of scientific research
Answer: c
Topic: What Makes Psychological Research Scientific?
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Empirical evidence must eventually confirm any theory. It is information that is observable and verifiable.

14. Skepticism in scientific research means _____.
a. acquiring knowledge by means of observation or experimentation
b. refusing to accept empirical evidence
c. believing a claim is true unless you have evidence that it is wrong
d. treating conclusions, both new and old, with caution
Answer: d
Topic: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.1.B Explain why skepticism in science involves more than just disbelief.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In the world of science, skepticism means treating conclusions, both new and old, with caution.

15. Which of the following statements about skepticism is true?

a. Skepticism about a claim is generally unnecessary if the person making the claim is an authority on the topic.
b. Skepticism in science is the willingness to accept an idea without empirical evidence.
c. Skepticism means always refusing to believe the claims of authorities in the field.
d. Good scientists must balance skepticism and openness to new ideas.

Answer: d
Topic: What Makes Psychological Research Scientific?
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.1.B Explain why skepticism in science involves more than just disbelief.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: "Skepticism" is not simply about debunking some claim, but showing why the claim is invalid—so that better methods can replace it. Skepticism and caution, however, must be balanced by openness to new ideas and evidence.

16. Your text discusses how skepticism led to the falsifying of _____.
a. medicine for the treatment of autism
b. facilitated communication in autism
c. the potential cause of autism
d. behavioral modification in the treatment of autism

Answer: b
Topic: What Makes Psychological Research Scientific?
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.1.B Explain why skepticism in science involves more than just disbelief.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The text describes clearly the research done that falsifies the use of facilitated communication with autistic children.

17. The principle of falsifiability means that _____.
a. scientists must be careful not to falsify their results
b. all theories will eventually be shown to be false
c. a scientist must state an idea in such a way that it can be refuted or disproved by counterevidence
d. theories that have not been proven are considered false

Answer: c
Topic: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The principle of falsifiability states that a scientific theory must make predictions that are specific enough to expose the theory to the possibility of disconfirmation; that is, the theory must predict not only what will happen but also what will not happen.

18. The tendency to look for information that supports one's own belief is called _____.
a. the principle of falsifiability
b. confirmation bias
c. denialism
d. cognitive inertia

Answer: b
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy

Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Confirmation bias occurs when people look for and accept evidence that supports their pet theories and assumptions and ignore or reject evidence that contradicts their beliefs.

19. Dennis believes that women are worse drivers than men. He always notices examples of poor women drivers, but ignores evidence to the contrary, such as poor male drivers or good female drivers. Dennis' behavior is an example of _____.
a. the principle of falsifiability
b. critical thinking
c. the confirmation bias
d. skepticism
Answer: c
Topic: What Makes Psychological Research Scientific?
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Confirmation bias occurs when people look for and accept evidence that supports their pet theories and assumptions and ignore or reject evidence that contradicts their beliefs.

20. Which of the following statements is true?
a. Scientists should keep their research covert so as to protect their ideas from plagiarism.
b. It is a waste of time and money to replicate a study that has already been done.
c. Disclosure of the details of a study is important so that others can verify or refute the findings.
d. Peer reviews take place after research findings are announced publicly.
Answer: c
Topic: What Makes Psychological Research Scientific?
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Science depends on the free flow of ideas and full disclosure of the procedures used in a study. Secrecy is a big "no-no"; scientists must be willing to tell others where they got their ideas, how they tested them, and what the results were. They must do this clearly and in detail so that other scientists can repeat, or replicate, their studies and verify—or challenge—the findings.

21. The ability to see the same results when you repeat your study is critical to science. It is called _____.
a. openness
b. repeatability
c. replication
d. review
Answer: c
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: Science depends on the free flow of ideas and full disclosure of the procedures used in a study. Secrecy is a big "no-no"; scientists must be willing to tell others where they got their ideas, how they tested them, and what the results were. They must do this clearly and in detail so that other scientists can repeat, or replicate, their studies and verify—or challenge—the findings.

22. _____ is the ability to repeat a study and see the same results.
a. Reliance
b. Replication
c. Plausibility
d. Falsifiability
Answer: b
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Science depends on the free flow of ideas and full disclosure of the procedures used in a study. Secrecy is a big "no-no"; scientists must be willing to tell others where they got their ideas, how they tested them, and what the results were. They must do this clearly and in detail so that other scientists can repeat, or replicate, their studies and verify—or challenge—the findings.

23. Harry found that there was a relationship between consumption of chocolate and the ability to draw well. He knows that he must be cautious about trusting his data until he is able to _____ his study.
a. publish
b. replicate
c. restore
d. falsify
Answer: b
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Science depends on the free flow of ideas and full disclosure of the procedures used in a study. Secrecy is a big "no-no"; scientists must be willing to tell others where they got their ideas, how they tested them, and what the results were. They must do this clearly and in detail so that other scientists can repeat, or replicate, their studies and verify—or challenge—the findings.

24. Researchers prefer to select participants who accurately represent the larger population that the researchers are interested in. This type of a group is called a _____ sample.
a. double-blind
b. cross-cultural
c. volunteer
d. representative
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A representative sample is a group of individuals, selected from a population for study, that matches the population on important characteristics.

25. A group of individuals that matches the population on important characteristics such as age and sex is called a(n) _____.
a. volunteer group
b. representative sample
c. unrepresentative sample
d. general sample
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A representative sample is a group of individuals, selected from a population for study, which matches the population on important characteristics.

26. Which of the following would be considered a good example of a representative sample of college students in the United States?
a. all the students from a particular rural college
b. every male student from three colleges in Texas
c. a diverse population in both urban and rural college classrooms in several states
d. self-identified student volunteers who found your survey on the Internet
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Difficult
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A representative sample is a group of individuals, selected from a population for study, which matches the population on important characteristics.

27. In a psychological research study, a sample made up of those who happen to be available at the time of study is called a _____ sample.
a. representative
b. quota
c. random
d. convenience
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Psychologists and others who study human behavior must often settle for a sample of people who happen to be available—a "convenience" sample—and often this means undergraduate students.

28. Research methods that depict behavior, but do not necessarily yield direct explanations, are called _____.
a. experimental methods
b. single-blind studies
c. significance tests
d. descriptive methods
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Descriptive methods are methods that yield descriptions of behavior but not direct explanations.

29. Which of the following is a descriptive method used in psychological research?
a. experiment
b. case study
c. double-blind study
d. single-blind study
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A case study (or case history) is a detailed description of a particular individual based on careful observation or formal psychological testing.

30. A detailed description of a particular individual based on careful observation or formal psychological testing is called a(n) _____.
a. observational study
b. correlational study
c. case study
d. survey
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A case study (or case history) is a detailed description of a particular individual based on careful observation or formal psychological testing.

31. Which of the following is an advantage of case studies?
a. They can be used to study existing situations when ethical considerations would prevent using randomized trials.
b. They have no serious drawbacks because they are easy to interpret.
c. Data collected provides causal explanations of descriptive behavior.
d. Case studies are less susceptible to researcher bias than other methods.
Answer: a

Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Case studies are most commonly used by clinicians, but sometimes academic researchers use them as well, especially when they are just beginning to study a topic or when practical or ethical considerations prevent them from gathering information in other ways.

32. Which of the following is a disadvantage of case studies?
a. Case studies produce a less detailed picture of an individual than other methods.
b. Case studies have only limited usefulness for deriving general principles of behavior.
c. Data from case studies is more abstract, vague, and general than data from other methods.
d. The amount of control used in case studies makes them very artificial.
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Because one person may be unrepresentative of the group the researcher is interested in, case studies have only limited usefulness for deriving general principles of behavior.

33. A researcher studies the history of a suicide bomber who attempted to blow up a police station. The researcher's goal is to understand the events and personality traits that led the person to become a bomber. This type of research is called a(n) _____.
a. case study
b. observational study
c. correlational study
d. survey study
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A case study (or case history) is a detailed description of a particular individual based on careful observation or formal psychological testing.

34. An academic researcher would use the case study method for a research study when _____.
a. a new discovery has been made regarding a cause-and-effect relationship
b. the relationship between two variables needs to be established
c. ethical considerations prevent the use of other sources of information
d. the purpose of the research is to track down a cause
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Case studies are most commonly used by clinicians, but sometimes academic researchers use them as well, especially when they are just beginning to study a topic or when practical or ethical considerations prevent them from gathering information in other ways.

35. Dr. Sardonicus wants to know whether or not the first three years of life are critical for acquiring language. She decides to study a child who was tragically deprived of human language by her parents. This type of research is called a(n) _____.
a. correlational study
b. experiment
c. survey
d. case study
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Case studies are most commonly used by clinicians, but sometimes academic researchers use them as well, especially when they are just beginning to study a topic or when practical or ethical considerations prevent them from gathering information in other ways.

36. Which of the following statements is true about case studies?
a. Case studies require a large number of participants.
b. Case studies are extremely useful for deriving general principles of behavior.
c. Conclusions obtained from case studies are highly reliable.
d. Researchers often resort to case studies when other methods would be unethical.
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Case studies are most commonly used by clinicians, but sometimes academic researchers use them as well, especially when they are just beginning to study a topic or when practical or ethical considerations prevent them from gathering information in other ways.

37. _____ are usually sources of hypotheses, rather than tests of hypotheses.
a. Correlational studies
b. Case studies
c. Psychological tests
d. Regression analyses
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: The case study method has only limited usefulness for deriving general principles of behavior; case studies are usually only sources, rather than tests, of hypotheses.

38. In a(n) _____ study, a researcher carefully and systematically watches and records behavior, taking care to avoid affecting the subjects being studied.
a. observational
b. exploratory
c. experimental
d. double-blind
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An observational study is defined as a study in which a researcher carefully and systematically observes and records behavior (naturalistically or in a laboratory) without interfering with the behavior.

39. An advantage of observational studies is that _____.
a. they can provide accurate descriptions of behavior
b. the presence of observers can alter the behavior being observed
c. they can answer questions about cause and effect
d. they allow experimenters to manipulate variables
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Often, an observational study is the first step in a program of research; it is helpful to have a good description of behavior before you try to explain it.

40. Dawn is systematically recording the behaviors of the kids in a nursery school, taking pains to avoid being obvious about what she is doing. Dawn is engaging in a(n) _____.
a. observational study
b. exploratory research
c. experimental research
d. double-blind study
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An observational study is defined as a study in which a researcher carefully and systematically observes and records behavior (naturalistically or in a laboratory) without interfering with the behavior.

41. Katy is doing a study using _____ for her advanced psychology class. She goes to the university dining hall and makes notes on her fellow students' behavior and activities. She is careful to avoid drawing attention to herself so her subjects will behave as usual.

a. naturalistic observation
b. laboratory observation
c. exploratory research
d. experimental research
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An observational study is defined as a study in which a researcher carefully and systematically observes and records behavior (naturalistically or in a laboratory) without interfering with the behavior. Psychologists use naturalistic observation wherever people happen to be.

42. To test whether people in bars drink more when they are in groups than when they are alone, researchers visited all the pubs in a city. They ordered beers and recorded observations on napkins and pieces of newspaper. Why did they keep their identities in disguise?
a. They were conducting a double-blind study.
b. They wanted to make sure the study had test-retest reliability.
c. They needed to determine the experimenter effects in the study at a later point in time.
d. They wanted the people they were observing to behave naturally.
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Observers take pains to avoid being obvious about what they are doing so that those who are being observed will behave naturally.

43. Tess agrees to sleep in an artificial setting for three nights so that researchers can obtain information about her brain and muscle activity during sleep. She is taking part in a research method called _____.
a. a single-blind study
b. a double-blind study
c. naturalistic observation
d. laboratory observation
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In laboratory observation, researchers have more control over the situation. They can use sophisticated equipment, determine the number of people who will be observed, minimize disruptions, and so forth.

44. Psychologists sometimes prefer to make observations in a laboratory setting rather than a naturalistic setting. The primary advantage of laboratory observation over naturalistic observation is _____.
a. it costs less money
b. participants take their participation more seriously in a professional environment

c. researchers have more control over the research study
d. laboratory observation is more natural
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In laboratory observation, researchers have more control over the situation. They can use sophisticated equipment, determine the number of people who will be observed, minimize disruptions, and so forth.

45. A major disadvantage of using laboratory observation in a research study is that _____.
a. the presence of researchers may cause participants to act differently than they would in their natural surroundings
b. it can be used only for explaining behavior and not for describing it
c. it is often considered unethical
d. researchers have less control of the situation than they do in a naturalistic observation
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One shortcoming of laboratory observation is that the presence of researchers and special equipment may cause people to behave differently than they would in their usual surroundings.

46. Procedures used to measure and evaluate personality traits, emotional states, aptitudes, interests, and abilities are called _____.
a. laboratory observations
b. psychological tests
c. significance tests
d. meta-analyses
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Psychological tests, sometimes called assessment instruments, are procedures for measuring and evaluating personality traits, emotional states, aptitudes, interests, and abilities.

47. Assessment instruments that are designed to tap unconscious feelings or motives are called _____.
a. objective tests
b. projective tests
c. double-blind tests
d. single-blind tests
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts

Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Projective tests are designed to tap unconscious feelings or motives.

48. Greta agrees to an evaluation designed to tap her unconscious feelings and motives. Greta will be given a(n) _____.
a. objective test
b. projective test
c. double-blind test
d. single-blind test
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Projective tests are designed to tap unconscious feelings or motives.

49. Assessment instruments that are designed to measure beliefs, feelings, or behaviors of which an individual is aware are called _____.
a. projective tests
b. objective tests
c. double-blind tests
d. single-blind tests
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Objective tests, also called inventories, measure beliefs, feelings, or behaviors of which an individual is aware.

50. If a psychological test is standardized, _____.
a. it has been approved for use by the APA
b. it is always administered to a random sample of participants
c. it has been demonstrated to be valid
d. uniform procedures have been developed for giving and scoring the test
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One criterion of a good test is standardization, meaning that uniform procedures are in place for giving and scoring the test.

51. When Haylee takes a personality test, the researcher gives her detailed instructions and plenty of time to complete it. But Tyler takes the same test and is given only vague instructions and a limited amount of time. This procedural difference shows that the test lacks _____.
a. validity
b. standardization
c. reliability
d. variability
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One criterion of a good test is standardization, meaning that uniform procedures are in place for giving and scoring the test.

52. Hadley is told that the achievement test he is taking is a standardized test. This means that _____.
a. the test has been approved by the APA
b. the test will be measuring what is it intended to measure
c. similar scores occur when the test is given in a standard laboratory setting or in a naturalistic setting
d. uniform procedures exist for giving and scoring the test
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One criterion of a good test is standardization, meaning that uniform procedures are in place for giving and scoring the test.

53. When Hoshi takes a personality test, she is told that the resulting score is compared to norms; that is, the test _____.
a. measures what it is designed to measure
b. results are compared to established standards of performance
c. produces the same results from one time to the next
d. predicts other criteria of the personality trait in question
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Scoring on standardized tests is usually done by referring to norms, or established standards of performance. The usual procedure for developing norms is to give the test to a large group of people who resemble those for whom the test is intended. Norms determine which scores can be considered high, low, or average.

54. Reliability in psychological testing means that the test _____.
a. actually measures what it is supposed to measure
b. is fair

c. is unbiased
d. produces the same results from one time and place to the next
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Reliable tests are consistent. If a test yields consistent scores from one time and place to another time and place, it is reliable.

55. In order to be useful, a psychological test must be reliable; that is, it must _____.
a. measure what it is designed to measure
b. compare results against established standards of performance
c. produce the same results from one time to the next
d. predict other criteria of the trait in question
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Reliable tests are consistent. If a test yields consistent scores from one time and place to another time and place, it is reliable.

56. When Joyce takes a personality test, she is told that the test is reliable; that is, it _____.
a. measures what it is designed to measure
b. compares its results against established standards of performance
c. produces the same results from one time to the next
d. predicts other criteria of the personality trait in question
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Reliable tests are consistent. If a test yields consistent scores from one time and place to another time and place, it is reliable.

57. Juan is given a vocational-interest test and is then asked to attempt the same test a week later. The test administrator wants to measure the _____ of the test.
a. content validity
b. test-retest reliability
c. alternate-forms reliability
d. criterion validity
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy

Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Psychologists can measure test–retest reliability by giving the test twice to the same group of people and comparing the two sets of scores statistically.

58. Ken is given a vocational-interest test and then takes a test, similar in format but with different questions, a week later. The test administrator wants to measure the _____ of the test.
a. content validity
b. test-retest reliability
c. alternate-forms reliability
d. criterion validity
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: People tend to do better the second time they take a test, after they have become familiar with it. A solution is to compute alternate-forms reliability by giving different versions of the same test to the same group on two separate occasions.

59. If a psychological test measures what it is supposed to measure, it has which of the following properties?
a. reliability
b. validity
c. variability
d. standardization
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Validity is the ability of a test to measure what it was designed to measure.

60. A psychological test is said to have content validity if _____.
a. the items in the test broadly represent the trait in question
b. its results are comparable to established standards of performance
c. it produces the same results from one time to the next
d. it predicts other measures of the personality trait in question
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: If the items in a test broadly represent the trait in question, the test is said to have content validity.

61. A psychological test is said to have criterion validity if _____.
    a. it measures what it is designed to measure
    b. its results are comparable to established standards of performance
    c. it produces the same results from one time to the next
    d. it predicts other criteria of the personality trait in question
    Answer: d
    Topic: Descriptive Studies: Establishing the Facts
    Skill Level: Remember the Facts
    Difficulty Level: Moderate
    Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: Criterion validity, the ability to predict independent measures, or criteria, of the trait in question.

62. When considering the use of testing in psychology, which of the following statements is true?
    a. Tests used in employment and school acceptance have been widely accepted by people.
    b. Tests used in employment and school acceptance have been questioned with regards to how useful they are.
    c. Tests used in employment and school acceptance fail to have validity or reliability.
    d. Tests used in employment and school acceptance are not really accepted by the populations who use them.
    Answer: b
    Topic: Descriptive Studies: Establishing the Facts
    Skill Level: Understand the Concepts
    Difficulty Level: Moderate
    Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: Criticisms and reevaluations of psychological tests keep psychological assessment honest and scientifically rigorous. Many currently used tests of IQ and tests like the SAT have been questioned with regards to their usefulness.

63. _____ gather information by asking people directly about their experiences, attitudes, or opinions.
    a. Surveys
    b. Inventories
    c. Projective tests
    d. Naturalistic observations
    Answer: a
    Topic: Descriptive Studies: Establishing the Facts
    Skill Level: Remember the Facts
    Difficulty Level: Easy
    Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: Surveys are questionnaires and interviews that ask people directly about their experiences, attitudes, or opinions.

64. Which descriptive method would be most appropriate for studying the attitudes of a random sample of people toward stem cell research?
    a. observation
    b. case study
    c. survey
    d. test
    Answer: c

Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Whereas psychological tests usually generate information about people indirectly, surveys are questionnaires and interviews that gather information by asking people directly about their experiences, attitudes, or opinions.

65. The magazine *Lover's Delight* publishes a survey of its female readers called "The Sex Life of the American Wife." It reports that 87 percent of all wives like to make love in rubber boots. The critical flaw in this research would be that _____.
a. the sample is not representative of American wives
b. a psychological test, rather than a survey, should have been given
c. rubber boots are not equally available in all regions of the country
d. "making love" has not been operationally defined
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A nonrepresentative sample does not necessarily mean that a survey is worthless or uninteresting, but it does mean that the results may not hold true for other groups.

66. A magazine called *Teen's Delight* publishes a survey of its readers called "School Life of a Typical American Teen." A critical flaw in this research is the fact that _____.
a. the sample surveyed is not necessarily representative of American teens
b. the survey is valid but is not reliable
c. a projective test would have produced more accurate results than a survey
d. an objective test would have produced more accurate results than a survey
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A nonrepresentative sample does not necessarily mean that a survey is worthless or uninteresting, but it does mean that the results may not hold true for other groups.

67. People who are willing to take part in surveys usually have opinions and views that are different from those who decline to take part. This phenomenon can lead to _____.
a. a biased sample being used for a survey
b. an experimenter fulfilling their beliefs by knowing the specific participants that would play a role in their research
c. people participating who will only confirm what an experimenter is looking for
d. errors in content validity of the survey
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: People who are willing to take part in surveys usually have opinions and views that are different from those who decline to take part. A nonrepresentative sample does not necessarily mean that a survey is worthless or uninteresting, but it does mean that the results may not hold true for other groups.

68. Which of the following statements is true?
a. A sample's size is more critical than its representativeness.
b. Surveys are procedures used to measure and evaluate people's abilities and aptitudes.
c. The likelihood of lying on a survey is the same even when respondents are guaranteed anonymity.
d. A problem with surveys is that sometimes people lie.
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One problem with surveys, and with self-reports in general, is that people sometimes lie, especially when the survey is about a touchy or embarrassing topic.

69. According to your textbook, the likelihood of lying about a sensitive topic on a survey is reduced when respondents _____.
a. are paid for their participation in the survey
b. receive explanations regarding the importance of the survey
c. are questioned by an interviewer of the same age
d. are guaranteed anonymity
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The likelihood of lying on surveys is reduced when respondents are guaranteed anonymity and allowed to respond in private.

70. When doing cross-cultural research, one of the challenges involves _____.
a. how accurately one language translates into another
b. whether or not subjects understand what research is
c. whether or not the culture values research
d. how willing other cultures are to participate in research studies
Answer: a
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Often translation issues will make it difficult when the test subjects do not understand what you are asking for, or the terminology may mean something different in their culture.

71. When doing cross-cultural research you must make sure your samples match on everything except _____.
a. education
b. language

c. economics
d. culture
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Well-controlled research makes sure that samples are the same on all factors except the one in question. In cross-cultural research, that is culture.

72. Sometime researchers oversimplify cross-cultural research, leading to _____.
a. reification
b. reliability issues
c. validity issues
d. stereotyping
Answer: d
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Stereotyping can result when shortcuts are taken in describing research findings.

73. Which of the following is a major concern that can affect cross-cultural research?
a. stereotyping all members of a culture as being the same
b. restrictions placed on foreign researchers
c. lack of norms for standardization
d. anti-science bias in unsophisticated cultures
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: When researchers describe average differences across societies, they may be tempted to oversimplify their findings, which can lead to stereotyping.

74. When Salomea was trying to describe how she feels, she stated that her sadness feels like a black insect living inside her heart. Salomea was using _____ in her description.
a. stereotyping
b. rationalizing
c. reification
d. anthropomorphizing
Answer: c
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: To reify means to regard an intangible process, such as a feeling, as if it were a literal object.

75. _____ means to regard an intangible process, such as a feeling, as if it were a literal object.
a. Reestablishment
b. Reification
c. Rationalization
d. Surmising
Answer: b
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: To reify means to regard an intangible process, such as a feeling, as if it were a literal object.

76. A _____ is a measure of how strongly two variables are related to one another.
a. relationship coefficient
b. meta-analysis
c. Bayesian statistic
d. correlation
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation is a measure of how strongly two variables are related to one another.

77. A statistical measure of the relationship between two variables is known as _____.
a. correlation
b. the association coefficient
c. association
d. arbitrage
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation is a measure of how strongly two variables are related to one another. Specifically, a correlation is a numerical measure of the strength of the relationship between two things.

78. A _____ study is a descriptive study that looks for a consistent relationship between two phenomena.
a. causal
b. case
c. correlational
d. exploratory
Answer: c
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A descriptive study that looks for a consistent relationship between two or more phenomena is called a correlational study.

79. A correlation is a numerical measure of the _____.
a. unintended changes in subjects' behavior due to cues from the experimenter
b. strength of the relationship between two variables
c. behaviors of subjects of different ages compared at a given time
d. behaviors of subjects followed and periodically assessed over time
Answer: b
Topic: Correlational Studies: Looking for Relationships
Difficulty Level: Easy
Skill Level: Remember the Facts
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation means a measure of how strongly two variables are related to one another. Specifically, a correlation is a numerical measure of the strength of the relationship between two things.

80. A negative correlation means that _____.
a. the high values of one variable are associated with the low values of the other
b. the high values of one variable are associated with the high values of the other
c. the low values of one variable are associated with the low values of the other
d. there is no relationship between the two variables
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A negative correlation is an association between increases in one variable and decreases in another.

81. Julie finds that the more she sleeps on the eve of an exam, the higher the score she gets on the exam. There is _____ correlation between the amount Julie sleeps and her exam scores.
a. a negative
b. a positive
c. a perfect
d. no actual
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another.

82. Which of the following pairs of variables are likely to be positively correlated?
a. outdoor temperature and hot chocolate sales

b. damage to a car and speed at the time of accident
c. the price of a car and the age of a car
d. hours spent watching TV and grade point average
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another.

83. Which of the following pairs of variables are likely to be negatively correlated?
a. room size and time required to paint walls
b. amount of studying and test grade
c. value of a collectable item and the number of those items known to exist
d. ocean temperature and the number of people at the beach
Answer: c
Topic: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A negative correlation means that high values of one variable are associated with low values of the other. Rare collectables (i.e., few are known to exist) are typically more expensive than ones that are more common. As the number known to exist goes down, the cost goes up.

84. Which of the following pairs of variables are likely to be uncorrelated?
a. average income and the incidence of dental disease
b. adult shoe size and IQ scores
c. the price of a car and the age of a car
d. hours spent watching TV and grade point average
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: If no relationship exists between two variables, we say that they are uncorrelated. Shoe size and IQ scores are uncorrelated.

85. Which of the following is an example of a positive correlation?
a. The more kumquats Jane ate, the higher she scored on successive IQ tests.
b. The more kumquats Mark ate, the lower he scored on successive IQ tests.
c. Jane ate kumquats, while Mark took an IQ test.
d. Mark ate oranges because Jane ate all the kumquats.
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Apply What You Know
Difficulty Level: Moderate

Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another.

86. Which of the following pairs of variables illustrates a negative correlation?
    a. ocean temperature and the number of people at the beach
    b. adult shoe size and IQ scores
    c. the price of a car and the mileage on the odometer
    d. height and weight
    Answer: c
    Topic: Correlational Studies: Looking for Relationships
    Skill Level: Understand the Concepts
    Difficulty Level: Moderate
    Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: A negative correlation means that high values of one variable are associated with low values of the other. There is a negative relationship between the price of a car and its mileage. The more miles driven, the less a car is typically worth.

87. Two sets of observations assessing students' heights and their respective weights are compared. Which of the following is most likely true?
    a. The two variables will be both positively and negatively correlated.
    b. The two variables will be uncorrelated.
    c. The two variables will be negatively correlated.
    d. The two variables will be positively correlated.
    Answer: d
    Topic: Correlational Studies: Looking for Relationships
    Skill Level: Understand the Concepts
    Difficulty Level: Easy
    Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
    Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another. Height and weight are positively correlated; that is, in general, the taller a person is, the more he or she weighs.

88. Which of the following represents a positive correlation?
    a. Jack has a higher level of education and a higher income than his brother, Tim.
    b. Tim has less education than his brother, Jack, but he makes more money.
    c. Jack has a high level of education, and Tim likes to waterski.
    d. Jack has more education than his brother, Tim, and also has children.
    Answer: a
    Topic: Correlational Studies: Looking for Relationships
    Skill Level: Apply What You Know
    Difficulty Level: Moderate
    Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
    APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: A positive correlation is an association between increases in one variable and increases in another or between decreases in one and decreases in another. In this case, Jack's high level of education correlates with his higher income.

89. Which of the following is the correct definition of "correlation"?
a. characteristics of behavior or experience that cause other phenomenon
b. characteristics of behavior or experience that can be measured or described by a numeric scale
c. a measure of how strongly two variables are related to one another
d. a descriptive study that looks for a consistent relationship between two phenomena
Answer: c
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation is defined as a measure of how strongly two variables are related to one another.

90. Which of the following is the correct definition of "positive correlation"?
a. A measure of how strongly two variables are related to one another.
b. An association between increases in one variable and decreases in another.
c. An association between increases in one variable and increases in another or between decreases in one and decreases in another.
d. A measure that shows that two variables have no relationship to each other.
Answer: c
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A positive correlation is a defined as an association between increases in one variable and increases in another or between decreases in one and decreases in another.

91. In his research on male pattern baldness, Dr. Toupee has observed that, on average, men with less hair tend to be older than men with more hair. This would be considered a(n) _____ correlation.
a. positive
b. false
c. negative
d. causational
Answer: c
Topic: Correlational Studies: Looking for Relationships
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: : A negative correlation means that high values of one variable are associated with low values of the other. According to Dr. Toupee's findings, as a man's age increases, his amount of hair decreases.

92. Two sets of observations assessing hat size and seasonal allergies are compared. Which of the following is the most likely outcome?
a. The two variables will be both positively and negatively correlated.

b. The two variables will be uncorrelated.
c. The two variables will be negatively correlated.
d. The two variables will be positively correlated.
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: It is unlikely that hat size and seasonal allergies are related in any way.

93. The correlation coefficient conveys _____.
a. the size and direction of the relationship between two variables
b. whether one variable causes the other variable to happen
c. the unintended changes in a subject's behavior due to the experimenter's cues
d. whether or not the principle of falsifiability applies to each variable
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The statistic used to express a correlation is called the correlation coefficient. This number conveys both the size of the correlation and its direction.

94. Which of the following correlation coefficient values indicate the strongest relationship between two variables?
a. +.50
b. –.80
c. +.70
d. –.10
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: If the correlation between two variables is +.80, it means that they are strongly related. If the correlation is −.80, the relationship is just as strong, but it is negative. When there is no association between two variables, the coefficient is zero or close to zero.

95. A correlation coefficient of +1.73 means that _____.
a. the relationship between the two variables is very strong
b. the relationship between the two variables is very weak
c. as one variable increases, so does the other
d. a calculation error has been made
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Difficult

Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlations can only range from –1.00 to +1.00, therefore a calculation error has been made.

96. When two variables are not related, the correlation coefficient will be close to _____.
a. .00
b. –1.00
c. +1.00
d. +.50
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The closer the correlation coefficient is to 0, the weaker the relationship. A correlation coefficient of 0 indicates no relationship.

97. When two variables have a strong positive correlation, the correlation coefficient will be close to _____.
a. .00
b. +1.00
c. –1.00
d. +.50
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation coefficients close to +1.00 indicate strong positive relationships.

98. When two variables have a strong negative correlation, the correlation coefficient will be close to _____.
a. .00
b. –1.00
c. +1.00
d. .50
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation coefficients close to –1.00 indicate strong negative relationships.

99. Which of the following correlation coefficient values indicate the strongest relationship between two variables?

a. –.74
b. –.42
c. –.35
d. +.05
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: When there is no association between two variables, the coefficient is zero or close to zero, so a strong correlation coefficient will be closer to either +1.00 or –1.00.

100. Which of the following correlation coefficient values indicate the strongest relationship between two variables?
a. +.74
b. +.68
c. +.69
d. +.71
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: When there is no association between two variables, the coefficient is zero or close to zero, so a strong correlation coefficient will be closer to either +1.00 or –1.00.

101. Marguerita conducts a study in which she finds that there is no correlation between the number of calories a person consumes in a day and his or her IQ. The correlation coefficient here would be close to _____.
a. +1.00
b. +0.50
c. –0.50
d. .00
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: When there is no association between two variables, the coefficient is zero or close to zero.

102. Which of the following statements is true about correlation?
a. Positive correlations are meaningful, but negative ones are not.
b. Negative correlations are weak, but positive ones are strong.
c. Correlations close to +1.00 or –1.00 are strong, whereas correlations close to zero are weak.
d. A strong correlation is indicative of a causal relationship between variables.
Answer: c
Topic: Correlational Studies: Looking for Relationships

Skill Level: Analyze It
Difficulty Level: Difficult
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The closer the correlation coefficient is to zero, the weaker the relationship and the closer the correlation coefficient is to +1.00 or –1.00, the stronger the relationship.

103. A correlational study determined that the higher a male monkey's level of testosterone, the more aggressive it is likely to be. This would mean that _____.
a. testosterone causes aggression
b. testosterone and aggression are uncorrelated
c. testosterone and aggression are negatively correlated
d. testosterone and aggression are positively correlated
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlations indicate strength and direction of relationships, but do not indicate cause and effect. A positive correlation is a defined as an association between increases in one variable and increases in another or between decreases in one and decreases in another.

104. Apparent associations between two things that are not really related are called _____ correlations.
a. illusory
b. positive
c. negative
d. erroneous
Answer: a
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Illusory correlations are apparent associations between two things that are not really related. Illusory correlations can create dangerous beliefs and cause great social harm.

105. Some correlational studies have found that people who are chronically depressed are more likely than non-depressed people to develop cancer. Which of the following can be derived from the study?
a. Chronic depression causes cancer.
b. Early, undetected cancer causes depression.
c. Depressed people tend to smoke, causing cancer.
d. Chronic depression and cancer occur in the same people in these studies.
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation tells us about relationships, but not causal relationships. Even when a correlation is real, it does not necessarily demonstrate a causal relationship between the variables.

106. Dr. Friday observes that more muggings tend to occur during hot weather. Which of the following is true?
a. This is a negative correlation because both muggings and hot weather are negative.
b. This is an example of a correlation that demonstrates causation.
c. This research proves that criminal behavior is caused by hot weather.
d. This is a positive correlation that does not demonstrate causation.
Answer: d
Topic: Correlational Studies: Looking for Relationships
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Correlation tells us about relationships, but not causal relationships. Even when a correlation is real, it does not necessarily demonstrate a causal relationship between the variables.

107. Why can it be difficult to interpret a correlation between two variables?
a. Correlation does not establish a relationship.
b. A correlation does not establish causation.
c. Most correlations are illusory.
d. Most correlations are negative.
Answer: b
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Even when correlations are meaningful, they can still be hard to interpret because a correlation does not establish causation.

108. A controlled test of a hypothesis, in which the researcher manipulates one variable in order to discover its effect on another variable, is called a(n) _____.
a. correlational study
b. experiment
c. survey
d. single-blind study
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An experiment is defined as a controlled test of a hypothesis in which the researcher manipulates one variable to discover its effect on another.

109. A(n) _____ allows a researcher to control and manipulate the situation being studied.
a. survey

b. experiment
c. case study
d. correlational study
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An experiment is defined as a controlled test of a hypothesis in which the researcher manipulates one variable to discover its effect on another.

110. Experiments are more valuable than other research methods because _____.
a. they are always double-blind
b. they can determine correlations
c. they require informed consent
d. they allow a determination of cause-effect relationships
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Experiments are the only method that allows a determination of cause and effect.

111. Ideally, in an experimental situation everything is held constant except for the _____, which is manipulated by the researchers.
a. control variable
b. dependent variable
c. independent variable
d. extraneous variable
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

112. In an experimental situation, the independent variable is _____.
a. a placebo
b. measured
c. held constant
d. manipulated
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

113. Milton is a researcher who wants to know whether eating chocolate makes people nervous. Some participants are given two bars of chocolate to eat and some are given no chocolate at all, and then all of the participants are tested for nervousness an hour later. In this experiment, the amount of chocolate eaten _____.
a. would be a dependent variable
b. would be a placebo
c. would be an independent variable
d. may be either an independent or dependent variable
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

114. Professor Marshall wants to know whether eating sweets before bedtime causes children to take longer to fall asleep. In his experiment, whether or not a sweet is given before bedtime is the _____.
a. independent variable
b. dependent variable
c. control variable
d. extraneous variable
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

115. A researcher plans to conduct an experiment to test whether a cup of hot milk at night helps people fall asleep faster than usual. In this study, the independent variable is _____.
a. the amount of time it takes participants to fall asleep
b. the consumption of hot milk at bedtime
c. the number of participants drinking hot milk at bedtime
d. the number of hours each participant sleeps
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

116. Which variable does an experimenter manipulate when conducting experimental research?
a. control variable
b. confounding variable
c. independent variable
d. dependent variable
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

117. A variable that is predicted to be affected by an experimenter's manipulations in experimental research is called a(n) _____ variable.
a. extraneous
b. dependent
c. confounding
d. independent
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A dependent variable is a variable that an experimenter predicts will be affected by manipulations of the independent variable.

118. Dr. Robert's research hypothesis proposes that consuming a low carbohydrate diet will result in increased weight loss. One group of participants follows a low-carb diet for three weeks, whereas a second group follows a high-carb diet containing the same number of calories for three weeks. The average number of pounds lost for each group is then is compared. What is the dependent variable?
a. number of pounds lost
b. length of time on the diet
c. the amount of carbs in each diet
d. the number of calories in each diet
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A dependent variable is a variable that an experimenter predicts will be affected by manipulations of the independent variable.

119. In a laboratory, smokers are asked to drive using a computerized driving simulator and cover the maximum distance possible, while avoiding rear-end collisions. Some volunteers are given a real cigarette to smoke immediately before the test. Others smoke a fake cigarette without nicotine. The number of collisions the two groups make is to be compared. In this study, the independent variable is _____.
a. the use of nicotine
b. the use of a driving simulator
c. the number of collisions
d. the speed of each driver
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The aspect of an experimental situation manipulated or varied by the researcher is known as the independent variable.

120. In a laboratory, smokers are asked to drive using a computerized driving simulator and cover the maximum distance possible, while avoiding rear-end collisions. Some volunteers are given a real cigarette to smoke immediately before the test. Others smoke a fake cigarette without nicotine. The number of collisions the two groups make is to be compared. In this study, the dependent variable is _____.
a. the use of nicotine
b. the use of a driving simulator
c. the number of collisions
d. the speed of each driver
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A dependent variable is a variable that an experimenter predicts will be affected by manipulations of the independent variable.

121. In a laboratory, smokers are asked to drive using a computerized driving simulator and cover the maximum distance possible, while avoiding rear-end collisions. Some volunteers are given a real cigarette to smoke immediately before the test. Others smoke a fake cigarette without nicotine. The number of collisions the two groups make is to be compared. The control group in this scenario consists of _____.
a. volunteers who smoke real cigarettes
b. volunteers who smoke fake cigarettes
c. all the experimenters
d. all the volunteers
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: In an experiment, a comparison condition is required in which participants are not exposed to the same treatment as in the experimental condition. These participants are the control group.

122. In a laboratory, smokers are asked to drive using a computerized driving simulator and cover the maximum distance possible, while avoiding rear-end collisions. Some volunteers are given a real cigarette to smoke immediately before the test. Others smoke a fake cigarette without nicotine. The number of collisions the two groups make is to be compared. The experimental group in this scenario consists of _____.
a. volunteers who smoke real cigarettes
b. volunteers who smoke fake cigarettes
c. all the experimenters
d. all the volunteers
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The experimental group is the group that is exposed to the manipulations of the independent variable.

123. In a laboratory, smokers are asked to drive using a computerized driving simulator and cover the maximum distance possible, while avoiding rear-end collisions. Some volunteers are given a real cigarette to smoke immediately before the test. Others smoke a fake cigarette without nicotine. The number of collisions the two groups make is to be compared. In this study, the cigarette without nicotine is a(n) _____.
a. dependent variable
b. placebo
c. double-blind procedure
d. hypothesis
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A placebo is an inactive substance or fake treatment used as a control in an experiment.

124. _____ are fake treatments or inactive substances used as a control in an experiment.
a. Double-blinds
b. Alternative medicines
c. Clinical trials
d. Placebos
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A placebo is an inactive substance or fake treatment used as a control in an experiment.

125. Which of the following is critical in testing new drugs because of the optimism that the new drugs may create in the minds of the users?
a. standardization
b. having a small sample size
c. laboratory observation
d. use of a placebo
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A placebo is an inactive substance or fake treatment used as a control in an experiment. If the placebo produces the same result as the real thing, the reason must be the participants' expectations rather than the treatment itself.

126. An experiment is conducted to test a new antianxiety drug. After taking the drug, 35 percent of the participants receiving the medication report less anxiety, compared to 36 percent of those taking a placebo. The researchers should conclude that _____.
a. participants knew which group they were in
b. the medication itself probably has no real effect on anxiety
c. the drug actually increases anxiety
d. the drug is an effective treatment for anxiety
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A placebo is an inactive substance or fake treatment used as a control in an experiment. If the placebo produces the same result as the real thing, the reason must be the participants' expectations rather than the treatment itself.

127. Subjects are randomly assigned to experimental and control groups to _____.
a. make the two groups as similar as possible in all major characteristics
b. eliminate the placebo effect
c. establish possible correlations between the independent and dependent variables
d. eliminate experimenter effects
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: If we have enough participants in our study, individual characteristics that could possibly affect the results are likely to be roughly balanced in randomly assigned groups, so we can safely ignore them.

128. Professor Villanueva has developed a new form of therapy that he believes reduces anxiety. When he explains the experiment to his research assistants, he tells them that the participants in Group A are highly

anxious and the participants in Group B are slightly anxious. Group C shows no signs of anxiety. Why might a scientist be skeptical of his claim?
a. There is no control group to compare to the people in his program.
b. He lacks a well-developed hypothesis.
c. Over 30 percent of the people did not improve.
d. There may be experimenter effects caused by the researchers' expectations about the participants.
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Experimenter effects are unintended changes in study participants' behavior due to cues that the experimenter inadvertently conveys.

129. The participants for an experiment are randomly assigned to either the experimental or control group. Although the researchers know which group each participant has been assigned to, the participants do not know if they are in the experimental or control group. Which type of study is this an example of?
a. single-blind
b. correlational
c. field research
d. double-blind
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A single-blind study is an experiment in which participants do not know whether they are in an experimental or a control group.

130. Unintended changes in subjects' behavior due to cues inadvertently given by the experimenter in an experimental study are called _____.
a. conformation biases
b. experimenter effects
c. volunteer biases
d. reifications
Answer: b
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Experimenter effects are unintended changes in study participants' behavior due to cues that the experimenter inadvertently conveys.

131. A _____ is an experiment in which neither the participants nor the individuals running the experiment know if a given participant is in the experimental or the control group until after the results are tallied.
a. double-blind study

b. single-blind study
c. meta-analysis
d. correlational study
Answer: a
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A double-blind study is an experiment in which neither the participants nor the individuals running the experiment know if participants are in the experimental or the control group until after the results are tallied.

132. The main advantage of a _____ study is that the results cannot be influenced by the expectations of either the participants or the experimenters.
a. correlational
b. single-blind
c. double-blind
d. observational
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A double-blind study is an experiment in which neither the participants nor the individuals running the experiment know if participants are in the experimental or the control group until after the results are tallied.

133. Empirical investigation that is conducted in a natural setting outside of the laboratory is called _____.
a. double-blind
b. single-blind
c. field research
d. correlational research
Answer: c
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Field research is defined as empirical investigation conducted in a natural setting outside the laboratory.

134. Some psychologists have called for more field research because experimental studies _____.
a. cannot identify cause and effect
b. often involve artificial situations
c. do not allow firm conclusions to be drawn
d. may miss vital information due to participants' inaccurate memories
Answer: b
Topic: Experiments: Hunting for Causes

Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In an experiment, the researcher designs and sets up what is often a rather artificial situation, and the participants try to do as they are told. For this reason, many psychologists have called for more field research, the careful study of behavior in natural contexts such as schools and the workplace.

135. Field research may yield more applicable results than laboratory research because _____.
a. placebos are not used
b. there is no experimental group
c. there is no control group
d. the situation is less artificial
Answer: d
Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In an experiment, the researcher designs and sets up what is often a rather artificial situation, and the participants try to do as they are told. For this reason, many psychologists have called for more field research, the careful study of behavior in natural contexts such as schools and the workplace.

136. Researchers use descriptive statistics when they want to _____.
a. draw inferences about how statistically meaningful a study's results are
b. organize and summarize research data
c. combine and analyze data from many studies
d. assess how likely it is that a study's results occurred merely by chance
Answer: b
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Descriptive statistics are defined as statistical procedures that organize and summarize research data.

137. A statistician adds all of the test scores for a group of participants and then divides the sum by the number of participants. The result of his calculation is the _____ of the test scores.
a. arithmetic mean
b. effect size
c. *p* value
d. standard deviation
Answer: a
Topic: Evaluating the Findings
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: An arithmetic mean is an average calculated by adding up a set of quantities and dividing the sum by the total number of quantities in the set.

138. The _____ tells us how clustered or spread out individual scores are around an arithmetic mean.
a. arithmetic mean
b. *p* value
c. confidence interval
d. standard deviation
Answer: d
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The standard deviation tells us how clustered or spread out the individual scores are around the mean; the more spread out they are, the less "typical" the mean is.

139. A researcher is studying the amount of sleep college students get each night. She notices that there is a lot of variability in the data, with some students typically sleeping for around eight hours a night and some sleeping around five hours a night. One way to measure how spread out the data scores are is to use _____.
a. the arithmetic mean
b. meta-analysis
c. inferential statistics
d. the standard deviation
Answer: d
Topic: Evaluating the Findings
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The standard deviation tells us how clustered or spread out the individual scores are around the mean; the more spread out they are, the less "typical" the mean is.

140. Inferential statistics are _____.
a. statistical procedures that allow researchers to draw conclusions about how statistically reliable a study's results are
b. statistical procedures that organize and summarize research data
c. averages that are calculated by adding up a set of quantities and multiplying the sum by the total number of quantities in the set
d. a set of techniques for combining data from a number of related studies to determine the explanatory strength of a particular independent variable
Answer: a
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: Inferential statistics are defined as statistical procedures that allow researchers to draw conclusions about how statistically reliable a study's results are.

141. Which of the following is a type of inferential statistic?
a. median
b. significance test
c. arithmetic mean
d. standard deviations
Answer: b
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Historically, the most commonly used inferential statistics have been significance tests, which tell researchers how likely it is that a result occurred by chance.

142. Psychologists typically consider a result to be significant if it would be expected to occur by chance _____ times in 100 repetitions of the study.
a. 5 or fewer
b. 10 or fewer
c. 20 or fewer
d. 40 or fewer
Answer: a
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Psychologists consider a result to be significant if it would be expected to occur by chance 5 or fewer times in 100 repetitions of the study.

143. A result that is significant at the .05 level indicates that _____.
a. the result was obtained purely by chance and is not real
b. the probability that the result is due to real differences between groups is .05
c. there is a positive relationship between variables
d. the probability that the result occurred by chance is low, and therefore the result is probably real
Answer: d
Topic: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Difficult
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A .05 level of significance means that there is less than 5 percent probability that the results were due to chance. If, however, the significance test shows that the *p* value is greater than .05, many researchers would have little confidence in the study's result.

144. A _____ draws a range a little higher and lower than the sample mean to help depict where the true mean probably lies.
a. confidence interval

b. standard deviation
c. significance test
d. descriptive statistic
Answer: a
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A confidence interval is defined as a statistical measure that provides, with a specified probability, a range of values within which a population mean is likely to lie.

145. A psychologist is studying gender relationships in childhood and early adolescence. Students from each grade are separately observed during lunchtime at school in order to assess their seating preferences. The researcher is conducting a _____.
a. cross-sectional study
b. longitudinal study
c. single-blind study
d. double-blind study
Answer: a
Topic: Evaluating the Findings
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: In a cross-sectional study, people (or animals) of different ages are compared at a given time.

146. After their marriage, Patrick and Mary Anne agreed to participate in a research project that investigated differences in the level of marital satisfaction over time. Every five years they had to complete a survey that indicated their marital satisfaction. Patrick and Mary Anne are participants in a _____.
a. single-blind study
b. double-blind study
c. longitudinal study
d. cross-sectional study
Answer: c
Topic: Evaluating the Findings
Skill Level: Apply What You Know
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A longitudinal study is a study in which people (or animals) are followed and periodically reassessed over a period of time.

147. _____ is an objective, standardized way of describing the strength of the independent variable's influence on the dependent variable.
a. Effect size
b. Significance level
c. Meta-analysis
d. Bayesian statistics
Answer: a

Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Effect size is defined as an objective, standardized way of describing the strength of the independent variable's influence on the dependent variable.

148. Techniques such as meta-analysis are useful in psychology because _____.
a. they help reduce unintended changes in subjects' behavior due to cues given by the experimenter
b. they allow for the careful study of behavior in schools, workplaces, and other natural contexts
c. they provide a range of values within which the mean of a population is likely to lie
d. rarely does one study alone prove anything, and this technique analyzes data from many studies
Answer: d
Topic: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A meta-analysis is a set of techniques for combining data from a number of related studies to determine the explanatory strength of a particular independent variable.

149. _____ is a technique that allows a researcher to combine data from numerous studies.
a. Significance testing
b. Meta-analysis
c. Cross-sectional research
d. Longitudinal research
Answer: b
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: A meta-analysis is a set of techniques for combining data from a number of related studies to determine the explanatory strength of a particular independent variable.

150. _____ involve a formula for calculating the likelihood of a hypothesis being true and meaningful, taking into account relevant prior knowledge.
a. Mathematical statistics
b. Descriptive statistics
c. Inferential statistics
d. Bayesian statistics
Answer: d
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Rationale: Bayesian statistics uses a formula for calculating the likelihood of a hypothesis being true and meaningful, taking into account relevant prior knowledge.

151. People who participate in research studies must participate voluntarily and must know enough about the study to make an intelligent decision about participating. This concept is known as _____.
a. the Milgram doctrine
b. the APA code
c. informed consent
d. human welfare
Answer: c
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: Informed consent is the doctrine that anyone who participates in human research must do so voluntarily and must know enough about the study to make an intelligent decision about whether to take part.

152. As a result of controversy over the use of deception in research, _____.
a. the APA now does not allow deception
b. debriefing is required when deception is used
c. participants who are deceived must receive therapy free of charge if requested
d. deception is allowed only if the participants are volunteers
Answer: b
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The APA code requires that participants be thoroughly debriefed when the study is over and told why deception was necessary. In addition to debriefing, the APA's ethical guidelines require researchers to show that any deception is justified by a study's potential value and to consider alternative procedures.

153. Before deception can be used, it must be _____.
a. included as part of the informed consent
b. justified by the study's potential value and alternative procedures are not feasible
c. tested on other participants to see if it causes anyone any harm
d. built in as part of the independent variable so that only part of the test participants receive deception
Answer: b
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The APA code requires that participants be thoroughly debriefed when the study is over and told why deception was necessary. In addition to debriefing, the APA's ethical guidelines require researchers to show that any deception is justified by a study's potential value and to consider alternative procedures.

154. Which of the following is one of the reasons for the use of animals in psychological research?
a. because what is true for animals will also be true for humans
b. animals are more complex than humans, so they provide us with more detailed information about behavior
c. to improve human welfare
d. to improve the treatment of laboratory animals
Answer: c
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: One of the reasons psychologists conduct experiments with animals is to improve human welfare.

155. If a scientist designs a study to see if the presence of noise in a field where a crop is grown will scare away animals who forage on the crop, the scientist would be studying _____ using an animal model.
a. practical applications
b. how to clarify theoretical questions
c. how to improve human welfare
d. how to understand basic research on a species
Answer: a
Topic: Keeping the Enterprise Ethical
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research
Rationale: The problem of having animals forage on a crop is a practical issue as many crops are ruined by damage caused by animals. Therefore, this researcher is studying a “practical” application in his research.

True-False Questions

1. A hypothesis is an organized system of assumptions and principles that purports to explain a specified set of phenomena.
   Answer: False
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

2. A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena.
   Answer: True
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

3. A hypothesis is a statement that attempts to predict or account for a set of phenomena.
   Answer: True
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

4. A theory is a statement that attempts to predict or account for a set of phenomena.
   Answer: False
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

5. Operational definitions specify how the phenomena in question are to be observed and measured.
   Answer: True
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Easy
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

6. Violations of the principle of falsifiability rarely take place in everyday life.
   Answer: False
   Topic: What Makes Psychological Research Scientific?
   Skill Level: Understand the Concepts
   Difficulty Level: Easy
   Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

7. The principle of falsifiability is the tendency to avoid information that would prove one's belief to be false.
Answer: False
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

8. Confirmation bias is the tendency to look for information that supports one's beliefs.
Answer: True
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

9. Replication is an essential part of the scientific process.
Answer: True
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

10. Replication occurs when scientists repeat a study in order to verify or challenge its findings.
Answer: True
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

11. In order to maintain scientific objectivity, psychologists do not work on research that is sponsored by private industry.
Answer: False
Topic: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

12. Scientists are expected to submit their study's results for peer review before any announcements regarding the study are made to the public.
Answer: True
Topic: What Makes Psychological Research Scientific?

Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

13. A representative sample is a group of participants that accurately represents the larger population that the researcher is interested in.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

14. Descriptive methods yield characterizations of behavior but not necessarily causal explanations.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

15. Experiments yield descriptions of behavior but cannot provide causal explanations.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

16. Case studies are most commonly used by clinicians.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

17. Case studies are usually sources of hypotheses, rather than tests of hypotheses.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

18. Observational studies are more useful for describing behavior than for explaining behavior.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

19. A shortcoming of laboratory observation is that the presence of researchers may cause participants to behave differently than they would in their usual surroundings.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Easy
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

20. The usual procedure for developing norms for a test is to give the test to a large group of people who resemble those for whom the test is intended.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

21. When psychologists say that a test has been standardized, they mean that uniform procedures for giving and scoring the test have been developed.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

22. The ability of a test to measure what it is designed to measure is called its reliability.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

23. The ability of a test to measure what it is designed to measure is called standardization.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

24. The ability of a test to measure what it is designed to measure is called validity.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

25. Psychologists measure test-retest reliability by giving different versions of the same test to the same group on two separate occasions.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

26. Psychologists measure alternate-forms reliability by giving different versions of the same test to the same group on two separate occasions.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

27. Psychologists measure test-retest reliability by giving the same test twice to the same group of people.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

28. Psychologists measure alternate-forms reliability by giving the same test twice to the same group of people.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts

Difficulty Level: Easy
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

29. If a survey covers a sensitive or embarrassing topic, it is more likely that people will lie.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

30. The likelihood of lying in surveys is reduced when the respondents are guaranteed anonymity.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

31. Controlling extraneous variables in cross-cultural research is easier than research that does not span various cultures.
Answer: False
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

32. In cross-cultural research, the translation of language can cause challenges in conducting the research.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

33. Researchers may oversimplify findings in cross-cultural research and end up stereotyping participants.
Answer: True
Topic: Descriptive Studies: Establishing the Facts
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.2.F Describe the importance and challenges of conducting cross-cultural research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

34. To reify means to regard an intangible process, such as a feeling, as if it were a literal object.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts

Difficulty Level: Moderate
Learning Objective: 2.2.F Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

35. The word "correlation" is often used as a synonym for "relationship."
Answer: True
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

36. A correlation is a numerical measure indicating the cause-and-effect relationship between two variables.
Answer: False
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

37. An association between increases in one variable and decreases in the other variable is called a negative correlation.
Answer: True
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

38. An association between decreases in one variable and decreases in the other variable is called a negative correlation.
Answer: False
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

39. An association between increases in one variable and decreases in the other variable indicates that the two variables are uncorrelated.
Answer: False
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.3.A Illustrate with an example how the correlation coefficient gives both the size and direction of the relationship between two variables.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

40. When a correlation coefficient indicates a strong relationship between two variables, one variable is causing the other.
Answer: False
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

41. When two variables are correlated, one variable may or may not be causing the other.
Answer: True
Topic: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

42. An experiment is a controlled test of a hypothesis in which the researcher manipulates one variable to discover its effect on another.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

43. A laboratory observation is a controlled test of a hypothesis in which the researcher manipulates one variable to discover its effect on another.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

44. The variable that an experimenter manipulates is called the dependent variable in an experiment.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

45. Ideally, everything in an experiment except the independent variable is held constant.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

46. The variable that an experimenter manipulates is called the independent variable.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

47. Ideally, everything in an experiment except the dependent variable is held constant.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

48. The value of the independent variable is affected by manipulations to the dependent variable.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

49. A researcher wants to know whether eating chocolate makes people nervous. Some participants are given two bars of chocolate to eat and some are given no chocolate at all, and then all of the participants are tested for nervousness an hour later. In this experiment, the amount of chocolate eaten is the independent variable.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

50. In a control condition, subjects are not exposed to the same treatment of the independent variable as in an experimental condition.
Answer: True

Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

51. The practice of placing participants into conditions at random increases the likelihood that the different conditions are equivalent to begin with.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

52. Medical placebos usually take the form of pills or injections that contain active ingredients.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

53. In a single-blind experiment, participants do not know if they are in an experimental group or a control group.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.

54. If a placebo produces the same results as the real treatment, the reason must be the participants' expectations about the treatment, rather than the treatment itself.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

55. An experimenter's friendly smile or cold demeanor can affect people's responses in an experiment.
Answer: True
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

56. Single-blind studies are conducted in order to avoid the powerful influence of experimenter effects on the results of an experiment.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

57. When compared to other methods, an advantage of experiments is that the participants are always representative of the larger population.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

58. Field research refers to empirical investigation that is conducted on agricultural issues.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

59. A disadvantage of experimental research is that it does not permit identification of cause and effect.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

60. An advantage of field research is that it allows the use of sophisticated equipment.
Answer: False
Topic: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

61. Descriptive statistics are statistical procedures that organize and summarize research data.

Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

62. Inferential statistics are statistical procedures that organize and summarize research data.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

63. The arithmetic mean is a commonly used measure of variability.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

64. The arithmetic mean is an average that is calculated by adding up a set of quantities and dividing the sum by the total number of quantities in the set.
Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

65. The standard deviation is an average that is calculated by adding up a set of quantities and dividing the sum by the total number of quantities in the set.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

66. The standard deviation is a commonly used measure of variability that indicates the average difference between scores in a distribution.
Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts

Difficulty Level: Easy
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

67. Descriptive statistics allow researchers to draw conclusions about how statistically meaningful a study's results are.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

68. Inferential statistics allow researchers to draw conclusions about how statistically meaningful a study's results are.
Answer: True
Topic: Evaluating the Findings
Difficulty Level: Easy
Skill Level: Remember the Facts
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

69. If a significance test shows that the *p* value of a result is greater than .05, researchers would have high confidence in the study's result.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

70. A result is considered significant if it would occur by chance more than 5 times in 100 repetitions of the study.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Moderate
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

71. A study in which subjects of different ages are compared at a given time is called a cross-sectional study.
Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy

Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

72. A study in which subjects of different ages are compared at a given time is called a longitudinal study.
Answer: False
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

73. A result may be statistically significant, yet be of little consequence in everyday life.
Answer: True
Topic: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

74. Meta-analysis combines data from a number of related studies instead of assessing each study's results separately.
Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

75. Bayesian statistics involve a formula that takes prior knowledge into consideration when evaluating any finding.
Answer: True
Topic: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

76. The American Psychological Association (APA) has a code of ethics that all of its members are supposed to follow.
Answer: True
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

77. The APA's ethical guidelines require researchers to show that any deceptive procedures are justified by a study's potential value.
Answer: True
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

78. The American Psychological Association's ethical guidelines require researchers to avoid studies that involve volunteer deception.
Answer: False
Topic: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

79. A majority of psychological research studies involve animals.
Answer: False
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

80. Research on animals is easiest as there are no ethical constraints.
Answer: False
Skill Level: Remember the Facts
Difficulty Level: Easy
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Short Answer Questions

1. What is the difference between a theory and a hypothesis?
   Answer: A good answer will include the following key points:
   - A theory is an organized system of assumptions and principles that purports to explain a specified set of phenomena and their interrelationships.
   - A hypothesis is a statement that attempts to predict or to account for a set of phenomena, specifying relationships among events or variables that can be empirically tested.
   - A theory precedes hypothesis; the hypothesis is based on the theory.

   Topic: What Makes Psychological Research Scientific?
   Skill Level: Remember the Facts
   Difficulty Level: Moderate
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

2. Ralph Waldo Emerson wrote "Nothing great was ever achieved without enthusiasm." How would you frame this question in clear and concrete terms so that it could be tested? Specify an operational definition for the major terms.
   Answer: A good answer could include any of the following options:
   - To achieve something great, a person must have enthusiasm.
   - A possible operational definition for a great achievement might be an achievement that is reported in a national news magazine.
   - A possible operational definition of enthusiasm might be an average rating of 8 or higher on a 10-point rating scale on a standardized test of enthusiasm.

   Topic: What Makes Psychological Research Scientific?
   Skill Level: Apply What You Know
   Difficulty Level: Moderate
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

3. Dr. Benjamin Rush treated yellow fever by bloodletting. He attributed each recovery to the bloodletting and each death to the severity of the yellow fever. What rule of science did he violate?
   Answer: A good answer will include the following key points.
   - Rush violated the principle of falsifiability.
   - There was no possible counterevidence that could refute his theory.
   - He also did not look for contradictory evidence and so was guilty of confirmation bias.

   Topic: What Makes Psychological Research Scientific?
   Skill Level: Apply What You Know
   Difficulty Level: Difficult
   Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

4. Explain the purpose and process of peer review.
   Answer: A good answer will include the following key points.
   - The purpose of peer review is to ensure that research lives up to accepted scientific standards.
   - When a scientist sends research results to a professional journal for publication, the report is sent to experts in the field for evaluation before deciding whether to publish them.

   Topic: What Makes Psychological Research Scientific?
   Skill Level: Understand the Concepts
   Difficulty Level: Moderate
   Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.

APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

5. What are the disadvantages associated with psychological case study research?
Answer: A good answer will include the following key points.
- Case studies have only limited usefulness for deriving general principles of behavior.
- This is especially true when information is missing or hard to interpret.
- It is also true if the individual being studied is unrepresentative of the group that a researcher is interested in.

Topic: Descriptive Studies: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

6. A psychologist is planning to gather information about a group of subjects through the use of psychological tests. What will ensure that the tests provide useful results?
Answer: A good answer will include the following key points.
- Standardization: one criterion of a good test is whether it is standardized, having uniform procedures for giving and scoring the test.
- Reliability: producing the same results from one time and place to the next or from one scorer to another.
- Validity: measuring what it sets out to measure.

Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

7. Jamal comes across some survey results on the Internet that conclude that people who watch cat videos with hip-hop music are cooler than people who watch cat videos with dubstep music. What are some things he should look out for before deciding to believe the results of this survey?
Answer: A good answer will include the following key points:
- People who are willing to volunteer their opinions may differ from those who decline to take part.
- Which questions were (and were not) asked and how the questions were phrased? These aspects of a survey's design may reflect assumptions about the topic or encourage certain responses.
- What are the credentials of those designing the test or survey? Are they likely to use a well-designed survey or just make something up?

Topic: Descriptive Studies: Establishing the Facts
Skill Level: Apply What You Know
Difficulty Level: Moderate
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

8. A correlation between "A" and "B" does not necessarily mean that "A" causes "B." Why? Explain using this example: The higher a male monkey's level of the hormone testosterone, the more aggressive he is likely to be.
Answer: A good answer will include the following key points.
- Correlation does not indicate causation.

- A positive correlation between testosterone levels and aggression could mean that testosterone causes aggression.
- It could also mean that aggressive behavior causes an increase in testosterone levels.
- It could also mean that some other unspecified variable causes both high testosterone levels and high aggression.
- It could also mean that unknown variables affect each phenomenon, which are only related in time.

Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

9. If TV watching is positively correlated with children's aggressiveness, then in what possible ways could this relationship be explained?
Answer: A good answer will include the following key points:
- Watching TV could cause children to behave aggressively.
- Aggressiveness in children could cause them to watch more TV.
- Another unspecified variable could cause both TV watching and increased aggressiveness.
- Other unspecified variables could affect either TV watching or increased aggressiveness.

Topic: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

10. Experiments have long been the method of choice in psychology. However, the experiment does have its limitations. Describe these limitations and explain why many psychologists have called for more field research.
Answer: A good answer will include the following key points.
- One limitation of experiments is experimenter effects. That is, if participants know whether they are in the experimental or control group, their expectations may affect the results.
- A researcher's expectations can also influence the results of an experiment.
- If participants are not representative of the larger population of interest, the results cannot be generalized.
- Controlled experiments may result in artificial situations in which behavior is not normal and cannot be generalized to the real world.
- Field research can at least partially overcome this last objection.

Topic: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Essay Questions

1. What are the different parts of the cycle of scientific research? Distinguish what happens during each part of the cycle by providing an example.
   Answer: A good answer will include the following key points:
   - The cycle of scientific research begins with theory, then developing a hypothesis, making predictions, and gathering evidence.
   - Theories allow a researcher to derive testable hypotheses, and make predictions about the pattern of results that should occur. (Example: Frustration occurs faster in young people.)
   - Hypotheses are tested empirically by gathering data on operationally defined variables. (Hypothesis: People under the age of 30 will report frustration more quickly than people over 30 when given an impossible puzzle to solve)
   - By examining the evidence, modifications, extensions, and revisions to the theory can take place, thereby generating new hypotheses and continuing the cycle of research investigation. (Example: Data is gathered, analyzed, and conclusions drawn. Data informs future hypotheses to be tested.)

   Topic: What Makes Psychological Research Scientific?
   Skill Level: Analyze It
   Difficulty Level: Difficult
   Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

2. The president of the Parent Teacher Association (PTA) is concerned after reading that during puberty, children have increased needs for sleep. She wants to find out if other parents of middle-school children would support a later starting time for school. At one of the Tuesday night meetings, she conducts a survey of the PTA members in order to address this question. When she asks those parents in support of the change to raise their hands, she discovers that 85 percent of the parents support a later starting time. Identify what information she has gained by conducting this survey. Analyze what shortcomings exist in her survey. Describe how she might improve the quality of the data she gathers.
   Answer: A good answer will include the following key points.
   - She has learned that a majority of other PTA members who attend meetings support a later starting time.
   - A major shortcoming is that the PTA members at the meeting may not be representative of all parents of students at the school in question.
   - She should either select a random sample from all parents of the school, or possibly include all parents in her sample.

   Topic: Descriptive Studies: Establishing the Facts
   Skill Level: Analyze It
   Difficulty Level: Difficult
   Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

3. A researcher hypothesizes that adults will respond differently to the same baby depending on how whether the child is dressed in “girl clothes” or “boy clothes.” Her colleague, on the other hand, hypothesizes that boys and girls are treated equally and that only temperamental differences lead to differences in their handling. Design a research study to test their hypotheses.
   Answer: A good answer will include the following key points.
   - Two babies with similar temperament should be selected, one male and one female.
   - Participants in the experimental group will be exposed to a baby dressed in clothing usually considered appropriate to the opposite sex.
   - Participants in the control group will be exposed to an infant dressed in clothing usually considered appropriate for that sex.
   - All participants will be observed for 10 minutes while interacting with the baby and their behaviors carefully noted.

- Behaviors of participants in the experimental and control groups will be compared.
- This would be a single-blind study, since the participants do not know the actual sex of either child but the researchers do.

Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Difficult
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

4. You are a scientist who is intrigued by the idea that stress results in increased illness. Design a study by stating your hypothesis and define your variables and their operational definitions. Identify your selection strategy for participants and describe how you will conduct your study.
Answer: A good answer will include the following key points.
- Hypothesis: Stress will result in more cases of colds in people.
- Operational Definitions: Stress will be exposure to unsolvable puzzles. Colds will be measured by symptoms of a cold as identified by a doctor.
- Randomly select and assign people to two groups. The control group comes into your facility and you squirt a virus up their nose. They stay with you for 7 days.
- The experimental group gets the virus up their nose and they are subjected multiple times daily to unsolvable puzzles.
- At the end of 7 days, the number of cold symptoms suffered by each individual is gathered and data is analyzed.

Topic: Experiments: Hunting for Causes
Skill Level: Apply What You Know
Difficulty Level: Difficult
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

5. Why is it important to go beyond averages when summarizing data? What other descriptive statistics are used to help interpret data?
Answer: A good answer will include the following key points:
- An average (arithmetic mean) may not actually occur in any individual case.
- Descriptive statistics are needed to organize and summarize research data.
- The standard deviation tells us how clustered or spread out the individual scores are around the mean; the more spread out they are, the less "typical" the mean is. Even a range of scores will provide information about how variable the group is.

Topic: Evaluating the Findings
Skill Level: Analyze It
Difficulty Level: Difficult
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

6. Rarely does a psychological study have completely straightforward results. Usually there is some possibility that the difference between two groups could be due to chance. Explain how inferential statistics help us determine how statistically meaningful a study's results are.
Answer: A good answer will include the following key points:
- Inferential statistics allow researchers to draw conclusions about how statistically meaningful a study's results are.

- Significance tests, which tell researchers how likely it is that their result occurred by chance, are the most commonly used inferential statistics.
- If research is statistically significant, there is a good probability that the difference found in the study is real.
- Psychologists consider a result to be significant if it would be expected to occur by chance 5 or fewer times in 100 repetitions of the study.

Topic: Evaluating the Findings
Skill Level: Analyze It
Difficulty Level: Difficult
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

7. When the relationship between age and mental abilities is studied through cross-sectional methods, the results often conflict with the findings from longitudinal studies. Explain the basic procedures in each type of study and then discuss why the two methods sometimes yield different results.
Answer: A good answer will include the following key points.
- Longitudinal studies examine the same people over a period of time, reassessing them periodically.
- Cross-sectional studies examine groups of people of different ages at the same time.
- Longitudinal studies are especially useful to study changes in individuals over time. However, you may lose some participants because they must stay committed to the study for such a long time.
- The two types of studies can reach different conclusions because cross-sectional studies measure generational differences, in addition to changes that occur as people age.

Topic: Evaluating the Findings
Skill Level: Analyze It
Difficulty Level: Difficult
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

8. Psychologists follow a code of ethics that has been developed by the American Psychological Association (APA). Explain the APA code in regard to research with human participants.
Answer: A good answer will include the following key points.
- The APA code of ethics expects scientists to respect the dignity and welfare of human participants and specifies a number of guidelines to guarantee this.
- People must participate in research voluntarily—informed consent should be obtained.
- Participants should be protected from physical and mental harm—if risks exist, participants must be informed in advance.
- Participants must be given the right to withdraw from research at any time without penalty.
- If deception is involved, participants must be debriefed.

Topic: Keeping the Enterprise Ethical
Skill Level: Analyze It
Difficulty Level: Difficult
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Integrative Essay Questions: Linking the Chapters

1. What makes psychological research scientific? This chapter points out the importance of precision in the pursuit of knowledge. How does this principle of good science correspond to the critical thinking step, "Define Your Terms," discussed in Chapter 1?
   Answer: A good answer will include the following key points.
   - The requirement for precision in science includes both stating specific hypotheses and providing operational definitions of all variables.
   - This directly corresponds with the guideline requiring that critical thinkers define the terms that they use.

   Topic: 1.2 Thinking Critically about Psychology, 2.1 What Makes Psychological Research Scientific?
   Skill Level: Analyze It
   Difficulty Level: Difficult
   Learning Objective: 1.2.B Identify important steps to critical thinking, and give an example of how each applies to the science of psychology. 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

2. In Chapter 2, we read about the disastrous consequences that can take place when conclusions are drawn solely on the basis of case studies. How does the alleged connection between autism and vaccinations illustrate the importance of the critical thinking guidelines discussed in Chapter 1?
   Answer: A good answer will include the following key points:
   - No convincing evidence exists between autism and vaccinations.
   - Once the suspect elements were removed from vaccinations, the incidence of autism did not decline.
   - The coincidence seems to be that the symptoms of autism occur about the same time that children are vaccinated.
   - Even when a correlation is meaningful, a correlation does not establish causation.
   - Critical thinking step: Examine the evidence. Critical thinkers avoid oversimplification, resist easy generalizations, and reject either/or thinking. Critical thinkers want more evidence than one or two anecdotes before drawing sweeping conclusions.

   Topic: 1.2 Thinking Critically about Psychology, 2.3 Correlational Studies: Looking for Relationships
   Skill Level: Analyze It
   Difficulty Level: Difficult
   Learning Objective: 1.2.B Identify important steps to critical thinking, and give an example of how each applies to the science of psychology. 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

3. Unlike plays and poems, scientific theories are not judged by how pleasing they are. Instead, a theory must be backed by empirical evidence if it is to be taken seriously. Integrate this information from Chapter 2 with the critical thinking step, "Analyze Assumptions and Biases," that you studied in Chapter 1.
   Answer: A good answer will include the following key points:
   - Theories must be based on empirical evidence.
   - They should not be based on emotion, intuition, or appeal to authority.
   - Critical thinking step: Analyze assumptions and biases. It is important to avoid relying too much on emotional reasoning. Emotion has a place in critical thinking, but when gut feelings replace clear thinking, the results can be dangerous. The fact that you really, really feel strongly that something is true—or want it to be—doesn't make it so.

   Topic: 1.2 Thinking Critically about Psychology, 2.1 What Makes Psychological Research Scientific?
   Skill Level: Analyze It
   Difficulty Level: Difficult

Learning Objective: 1.2.B Identify important steps to critical thinking, and give an example of how each applies to the science of psychology. 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

4. In Chapter 1, we present the idea that pop psychology lacks experimental evidence for its value. Now that you have read Chapter 2, design a research study in order to test this idea. Provide your reasoning in selecting a particular research method, subjects, and other key details.
Answer: A good answer will include the following key points.
   - One method that could be used is laboratory observation. Have participants read a self-help book about a specific issue in their life and watch to determine if they are able to apply the principles in the self-help book and see if it helps resolve the problem.
   - A representative group of people with similar problems should be selected.
   - A measure of the severity of the problem should be taken before reading the book and then after reading the book.

   Topic: 1.1 Psychology, Pseudoscience, and the Perils of Common Sense, 2.2 Descriptive Studies: Establishing the Facts
   Skill Level: Apply What You Know
   Difficulty Level: Difficult
   Learning Objective: 1.1.B Explain what separates psychological science from pseudoscience, pop psychology, and other sources of dubious claims regarding psychological issues. 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

5. Which research method did Sigmund Freud rely upon? Analyze what you know about his theory given your understanding of research methods. What are the strengths and limitations of his approach?
Answer: A good answer will include the following key points:
   - Freud's theory was based on case studies.
   - Case studies are useful for studying unusual or rare cases and for generating hypotheses for further research.
   - One drawback to case studies is that information is often missing or hard to interpret.
   - Observers may have biases that influence which facts get noticed and which are ignored.
   - Memory of observers may be selective or inaccurate, making conclusions unreliable.
   - Most important, the person studied may be unrepresentative of the group that a researcher is interested in.
   - The case study method has only limited usefulness for deriving general principles of behavior.
   - The limitations of the case study method make it likely that Freud's theory has only limited usefulness.

   Topic: 1.3 A History of Psychology: From the Armchair to the Laboratory, 2 2 Descriptive Studies: Establishing the Facts
   Skill Level: Analyze It
   Difficulty Level: Difficult
   Learning Objective: 1.3.B Discuss some of the influential perspectives and individuals in the early years of modern psychology. 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
   APA Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology, 2.4 Interpret, design, and conduct basic psychological research

Revel Quizzes

The following questions appear at the end of each module and at the end of the chapter in Revel for *Psychology*, 13e.

End of Module Quiz: 2.1 What Makes Psychological Research Scientific?

EOM Q2.1.1

An organized system of assumptions and principles that seeks to explain a phenomenon is known as a(n) _____.
a) theory
b) hypothesis
c) operational definition
d) prediction
Consider This: The definition given here describes an important aspect of conducting scientific research. 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Answer: a
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Module: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.1.2

Natasha tells her psychology professor that she wants to study why similarity leads to attraction. "That's great," her professor replies. "But what do you mean, exactly, by ‘similarity' and ‘attraction'?" What is Natasha's professor urging her to do?
a) Create operational definitions of the variables she wants to study.
b) Formulate a hypothesis about the relationship between her variables of interest.
c) Propose a theory to explain why similarity is correlated with attraction.
d) Design a field experiment to test her hypothesis.
Consider This: Natasha's got a good idea, but what's her next step for turning that idea into a scientifically testable question? 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Answer: a
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.1.3

Luis tells his friend Meeta, "Since I've been wearing this copper bracelet, my joint pain has decreased. It must really work!" "Hmm…," replies Meeta. "I'm sure you believe that, and I'm glad you're feeling better. But I'd want to know how, when, and why copper would have that effect on pain." Which characteristic of being a good scientist is Meeta demonstrating?
a) skepticism
b) replication
c) transparency
d) argument from authority
Consider This: There are several characteristics that ideal scientists possess. Think about what Meeta is saying and decide which characteristic she's exhibiting. 2.1.B Explain why skepticism in science involves more than just disbelief.
Answer: a

Learning Objective: 2.1.B Explain why skepticism in science involves more than just disbelief.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.1.4

"All swans are white" is a poor example of a scientific hypothesis. Gathering more and more examples of white swans would never really confirm the conclusion. However, finding a single *black* swan would be enough to disprove the hypothesis. Which scientific principle does this logic demonstrate?
a) the principle of falsifiability
b) the exception to the rule
c) the Code of Hammurabi
d) the principle of precision
Consider This: After finding 100,000 white swans, the 100,001 doesn't add much to the argument; yet finding a single contradictory example is a much more efficient test of the hypothesis. 2.1.C Explain why falsifiability is an important component of scientific research.
Answer: a
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.1.5

Waleska wants to publish the results of her scientific study, but before she does so she collects more data using the same variables but with a new sample of research participants and a slightly different procedure. The results of the second study are consistent with those of the first, and Waleska publishes both sets of results with greater confidence in her contribution to science. Which good scientific practice is Waleska following?
a) replication
b) risky predictions
c) peer review
d) confirmation control
Consider This: A hallmark of good science is being able to demonstrate the same phenomenon under the same conditions. 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
Answer: a
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

End of Module Quiz: 2.2 Descriptive Studies: Establishing the Facts

EOM Q2.2.1

Pedro wants to gauge the nation's attitudes toward handguns, so he polls a very large sample of National Rifle Association (NRA) members and asks them what they think. Despite having a lot of data, Pedro's conclusions are likely to be flawed. Why?
a) The sample he used wasn't representative of the population he's interested in learning about.
b) He used a survey when he should have used an interview to collect the data.
c) Samples should always include about 13 percent of the population being studied.
d) He didn't use alternate-forms reliability when constructing his measurements.

Consider This: There's a fundamental problem with Pedro's approach to data collection. 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
Answer: a
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Difficult

EOM Q2.2.2

Trixie has been assigned to do a research project on human development for her Introductory Psychology course. She decides to conduct a case study of her Uncle Joe and devises a days-long set of interview questions for him, ranging from his childhood experiences through the ensuing 60 years of his life. Although her intentions are admirable, Trixie might have spent the time more profitably by using a different methodology. Why?
a) Case studies are of limited usefulness in deriving general conclusions about behavior.
b) Case studies always produce biased and inaccurate results.
c) By definition, case studies involve studying, and Trixie didn't devote enough time to this project.
d) Case studies are a technique typically used by biologists but not by psychologists.
Consider This: Case studies can illuminate the details of a particular individual's life, a single important event, or an unusual occurrence. Why might this not be a main approach to adopt as a general method of science? 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
Answer: a
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Difficult

EOM Q2.2.3

Both Huong and Asli are interested in developmental psychology, specifically the types of play five-year-olds engage in. Huong visits a local park and unobtrusively makes notes about the children she sees. Asli invites parents and their children to a specially designed room in the psychology building and watches the children through a one-way mirror. Both approaches are sensible. The difference is that Huong is using _____ whereas Asli is using _____.
a) naturalistic observation; laboratory observation
b) laboratory observation; the case study method
c) the case study method; cross-cultural research
d) cross-cultural research; naturalistic observation
Consider This: Both Huong and Asli are taking the same basic approach to studying their research question; only the setting of the research differs. 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
Answer: a
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.2.4

Desmond administers a test of mathematical aptitude to a group of 25 incoming ninth graders, and then inspects their final grades in their geometry class at the end of the school year. He finds that those students who were predicted to have high mathematical skills (based on the test) did well on their geometry class (based on their final grades) and that those who were predicted to do poorly did indeed do poorly. Desmond has collected some evidence for the _____ of his aptitude test.
a) criterion validity
b) test–retest reliability
c) content validity
d) projective content
Consider This: Desmond was able to demonstrate that his test correctly predicted independent, yet relevant, outcomes. 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
Answer: a
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.2.5

Sandeep wants to know whether drug use is widespread on his college campus. He asks the members of his Chemical Dependency class if they'd be willing to respond to a short survey that he's constructed on this topic. Half the class agrees to participate. When Sandeep analyzes the data, he concludes that drug use indeed takes place at a high rate. What's the flaw in this research process?
a) Those students who agreed to participate might be quite different in their drug-taking attitudes or habits than those who chose not to participate.
b) Content validity is at issue; Sandeep's survey probably had little to do with drug-taking policies and more to do with drug-taking attitudes.
c) Sandeep's sample was representative of his college population, but it may not have been representative of the average of college populations in his home state.
d) Sandeep relied on a standardized test; an assessment instrument should have been used instead, to assure that the confirmation effect was in place.
Consider This: Sandeep might want to give more thought to the generalizability of the responses he obtained. 2.2.E Describe the advantages and limitations of using surveys in data collection.
Answer: a
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Difficult

End of Module Quiz: 2.3 Correlational Studies: Looking for Relationships

EOM Q2.3.1

Question: You notice a correlation coefficient of +.02 between two variables you're studying. What conclusion should you reach about their relatedness?
a) The two variables are pretty much unrelated to one another; scores on one variable show no consistent pattern with scores on the other variable.
b) The two variables show a near-perfect positive correlation; +.02 is close to ideal, and high scores on one variable are associated with high scores on the other.
c) The two variables show a near-perfect negative correlation; +.02 is close to ideal, and high scores on one variable are associated with low scores on the other.
d) A correlation of +.02 is under the ".10 threshold"; therefore, the data should be reexamined using a new group of research participants.

Consider This: Correlation coefficients range along a finite scale, and their gradations indicate differing degrees of association between two variables. 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Answer: a
Learning Objective: 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.3.2

Question: A negative correlation coefficient indicates that as scores on one variable _____, scores on the other variable _____.
a) increase; decrease
b) decrease; decrease
c) increase; increase
d) level out; decrease
Consider This: Picture in your mind what a graph of a negative correlation would look like. 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Answer: a
Learning Objective: 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.3.3

Question: Which of the following values for a correlation coefficient indicates the strongest degree of relationship?
a) –.69
b) –.35
c) +.03
d) +.59
Consider This: Correlation coefficients measure both the strength and direction of a relationship between two variables. 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Answer: a
Learning Objective: 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.3.4

Roya believes that every time the moon is full, her left knee feels shaky. "It's true," she insists. "My knee is shaky when the moon is full, and not shaky when the moon isn't full." Because there's probably not a reliable association between lunar phases and joint mobility, what does Roya's belief illustrate?
a) an illusory correlation
b) a negative correlation coefficient
c) variable skew
d) a positive correlation coefficient

Consider This: Roya believes there is an association between two variables when there most likely isn't. 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Answer: a
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.3.5

Variable A is strongly associated with variable B. Therefore, it logically follows that _____.
a) variable A and variable B are correlated with one another
b) variable A causes variable B to happen
c) variable B causes variable A to happen
d) variable C causes both variable A and variable B to happen
Consider This: There are many possible ways to explain the association between two variables. 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Answer: a
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate

End of Module Quiz: 2.4 Experiments: Hunting for Causes

EOM Q2.4.1

Question: In a study where college students are given herbal memory supplements to see whether this will improve their scores in their psychology course, what is the *independent variable*?
a) whether students were given supplements or not
b) students' scores on the next psychology midterm
c) students' previous scores (or baseline) on psychology midterms
d) students' scores on the next midterm minus the baseline score
Consider This: Some students were given supplements and some were not; both groups were later compared on some outcome. 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
Answer: a
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
Module: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.4.2

Question: Inigo is conducting a psychological experiment with the help of his professor. As research participants come to the laboratory, Inigo flips a coin. If the coin lands on heads, the participant takes part in the experimental group; if the coin lands on tails, the participant goes into the control group. What principle of experimental design is Inigo utilizing?
a) random assignment
b) a double-blind procedure
c) controlling the dependent variable
d) placebo activation

Consider This: Participants are equally likely to end up in either the experimental group or the control group. 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
Answer: a
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
Module: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.4.3

Margo is studying people's moods during a stressful laboratory situation. Wanting to be nice, she smiles at each participant who enters the experimental condition (where they'll be stressed) and remains neutral toward participants in the control group. Surprisingly, she finds that participants in the stressful condition report being in better moods at the end of the experiment, compared to participants in the control group. Margo's professor is not so surprised, however, because she realizes the outcomes are plagued by _____.
a) experimenter effects
b) random assignment
c) field study problems
d) placebo effects
Consider This: Can the differences in participants' moods be attributed solely to the experimental treatments they received, or is there another explanation for why one group is in a better mood than the other? 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Answer: a
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Module: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.4.4

An experiment in which neither the participants nor the experimenter knows who is in the control group and who is in the experimental group is called _____.
a) double-blind
b) single-blind
c) omni-blind
d) placebo-neutral
Consider This: Both the experimenter and participants remain uninformed about how the participants were assigned to experimental conditions. 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Answer: a
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Module: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.4.5

_____ is a general term referring to studies that take place in a natural setting.
a) Field research
b) Experiment
c) Sampling expansion
d) Dependent control

Consider This: Research often takes place in the controlled conditions of a laboratory, but sometimes it doesn't.
2.4.C Discuss the methodological advantages and limitations of experimental research design.
Answer: a
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Module: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy

End of Module Quiz: 2.5 Evaluating the Findings

EOM Q2.5.1

"I'm so confused!" sputters Henry. "I collected all this data for my research project, but I don't know which numbers to pay attention to. The highest values? The lowest values? The most common value? Argh!" "Why don't you look at the arithmetic mean of all the values?" suggests Raelynn. "Finding the average score would be a good indicator of what the values look like in general." How would you advise Henry to go about finding the arithmetic mean?
a) Add up all the individual scores, then divide the result by the number of scores.
b) Figure out how far away each score is from every other one.
c) Subtract the lowest score from the highest score, then multiply the answer by 2.
d) Add the five lowest scores to the five highest scores, then divide the result by 2.
Consider This: The arithmetic mean is the average of a set of measurements. 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
Answer: a
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
Module: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.5.2

Question: Calculations that allow a researcher to draw conclusions about how statistically reliable a result is are collectively called _____ statistics.
a) inferential
b) descriptive
c) qualitative
d) quantitative
Consider This: After a researcher collects data from a specific group of participants, she or he usually wants to draw some larger conclusion about what's likely to be true in general. 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Answer: a
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Module: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.5.3

What threshold do psychological scientists usually adopt when deciding if a result is statistically significant?
a) whether the outcome would occur by chance alone less than 5 times out of 100
b) whether the outcome would occur by chance alone less than 20 times out of 100
c) whether the outcome matches what was predicted in the researcher's original hypothesis
d) whether 60 percent of other researchers would reach the same conclusion when examining the data

Consider This: In order to be considered a statistically significant result, an outcome must meet a generally-agreed upon standard. 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Answer: a
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Module: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.5.4

Guillermo and Eva are both interested in developmental psychology. Guillermo wants to compare a group of five-year-olds to a group of eight-year-olds to see how their reasoning skills differ. Eva wants to study a group of five-year-olds over the next three years to see how their reasoning skills change over time. Both designs have merit. The main difference is that Guillermo is proposing _____ whereas Eva wants to conduct _____.
a) cross-sectional research; a longitudinal study
b) cross-sectional research; cross-cultural research
c) a longitudinal study; cross-sectional research
d) a time-series design; a meta-analysis
Consider This: Both Guillermo and Eva will be able to answer their questions about age differences in reasoning skills, although they're approaching the question with different tactics. 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Answer: a
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Module: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.5.5

Yvonne reviewed the scientific literature on the effects of gum-chewing on attention among middle schoolers and found that 23 experiments had been conducted on this topic. She performed a series of statistical tests to reach an overall conclusion from these studies as a group. What technique was Yvonne using?
a) meta-analysis
b) cross-sectional encumbrance
c) Bayesian sampling
d) confidence inference
Consider This: Rather than relying on the outcomes within any one experiment, Yvonne is utilizing a technique to determine the strength of an overall pattern of results across many studies. 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Answer: a
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Module: Evaluating the Findings
Skill Level: Understand the Concepts
Difficulty Level: Moderate

End of Module 2.6 Keeping the Enterprise Ethical

EOM Q2.6.1

Guidelines for the ethical treatment of human and animal research participants have been published (and are updated) by the _____.
a) American Psychological Association (APA)
b) National Bureau of Standards (NBS)
c) International Federation of Psychological Scientists (IFPS)
d) Coalition for Psychological Justice (CPJ)
Consider This: Although research standards and guidelines exist at national and local levels, there is also a code of conduct maintained by an independent governing body. 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Answer: a
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Module: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.6.2

The ethical principle of _____ means that research participants are given enough information about a study to make a reasonable decision about whether they will participate.
a) informed consent
b) debriefing
c) briefing
d) noblesse oblige
Consider This: Research participants cannot be coerced into taking part in a psychological study. 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Answer: a
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Module: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.6.3

The ethical principle of _____ requires that researchers reveal the true nature and purpose of a psychological study to subjects at the conclusion of their participation, and explain any deception that was used during the study.
a) debriefing
b) briefing
c) informed consent
d) falsification
Consider This: For example, in studies that require a bit of deception, when the study is over, participants must be told why the deception was necessary. 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Answer: a
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Module: Keeping the Enterprise Ethical
Skill Level: Remember the Facts
Difficulty Level: Easy

EOM Q2.6.4

Question: Which statement is true concerning the use of animals in psychological studies?

a) Animals are used in only a small percentage of psychological studies.
b) Animals are used as research subjects when it is too expensive to recruit human participants.
c) Animal research has been banned in psychological science, although it is common in medical research.
d) Animals are used in roughly 50 percent of all psychological research.
Consider This: Animal studies can provide important findings for many sciences, including psychology. 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Answer: a
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Module: Keeping the Enterprise Ethical
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOM Q2.6.5

Which of the following is a reason psychologists might study animals?
a) to improve human welfare
b) to avoid criticism from human participants
c) to take advantage of relaxed ethical standards
d) to test vague hypotheses without ethical repercussions
Consider This: There are many reasons why it might be advantageous to study animals; the text highlights four reasons in particular. 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Answer: a
Learning Objective: 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Module: Keeping the Enterprise Ethical
Skill Level: Understand the Concepts
Difficulty Level: Moderate

Chapter 2 Quiz: How Psychologists Do Research

EOC Q2.1

A statement that specifies the relationships among events and is derived from a theory is called _____.
a) a hypothesis
b) an operational definition
c) a predicate
d) an extension
Consider This: Science advances through the formulation and testing of the types of statements described in this question. 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Answer: a
Learning Objective: 2.1.A Distinguish among a theory, a hypothesis, and an operational definition.
Module: What Makes Psychological Research Scientific?
Skill Level: Remember the Facts
Difficulty Level: Easy

EOC Q2.2

Tammy believes everything she reads in her sociology textbook. Keiko disagrees with every point her political science professor makes. Peter listens to his astronomy professor but routinely asks "Why is that?" and "Could this also be true?" Which student is skeptical?
a) Peter
b) Tammy
c) Keiko
d) All three students are practicing skepticism.

Consider This: Being skeptical is a good practice for scientists and critical thinkers in general. Think about how a skeptic responds to information. 2.1.B Explain why skepticism in science involves more than just disbelief.
Answer: a
Learning Objective: 2.1.B Explain why skepticism in science involves more than just disbelief.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.3

Jorge argues that personality characteristics are fully formed prenatally, while babies are still in their mothers' wombs. Upon birth and exposure to the external environment, personality begins to change. Why is Jorge's hypothesis a poor one?
a) It violates the principle of falsifiability; it can't be disconfirmed.
b) It is a stage theory of development, but it needs more stages.
c) It is based on a small sample of measurements; Jorge should collect more data.
d) It is grounded in biological uncertainty; some mothers don't know the sex of their unborn child.
Consider This: Jorge is proposing a hypothesis and making a prediction, presumably based on a theory he has constructed regarding personality development. Many aspects of the scientific process are present, but something crucial is missing. 2.1.C Explain why falsifiability is an important component of scientific research.
Answer: a
Learning Objective: 2.1.C Explain why falsifiability is an important component of scientific research.
Module: What Makes Psychological Research Scientific?
Skill Level: Analyze It
Difficulty Level: Difficult

EOC Q2.4

Under carefully controlled experimental conditions, Aldo finds that ninth graders who study an additional two hours raise their test scores by 5 percent. Before publicizing his results, he repeats the experiment with a different group of ninth graders, another group of ninth graders studying different material, and a group of 10th graders; in all cases the same pattern of results emerges. What important feature of the scientific process is Aldo demonstrating?
a) replication
b) falsifiability
c) operationalization
d) divergence
Consider This: Aldo has taken steps to assure that his initial results are not a one-time fluke. 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
Answer: a
Learning Objective: 2.1.D Describe why openness and replication are important qualities of the scientific enterprise.
Module: What Makes Psychological Research Scientific?
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.5

Lluvia administers a questionnaire on dating habits to the 35 students in her Introductory Psychology class. What type of sample do those participants constitute?
a) a convenience sample
b) a representative sample
c) a population sample
d) a dependent sample

Consider This: Think about how and where Lluvia got her research participants, and also think about the quality of the conclusions she can reach from her study. 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
Answer: a
Learning Objective: 2.2.A Describe the ways participants are selected for psychological studies and how the method of selection can influence interpretations of a study's outcomes.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.6

Janelle wants to learn about the psychological impact of war on combat veterans, so she conducts an in-depth interview with her grandfather who served in the Vietnam War. What type of research approach is Janelle using?
a) case study
b) observational study
c) survey
d) experiment
Consider This: Janelle will no doubt learn much about her grandfather's individual experiences, and this will provide some information relevant to her research interests. 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
Answer: a
Learning Objective: 2.2.B Discuss the advantages and disadvantages of using case studies as a means of data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.7

A researcher wants to study whether people using laptops in a public setting are more likely to sit near one another or more likely to sit near someone not using a computer. She sits in a local coffee shop for two hours each day for a week and counts the number of other patrons with or without a laptop and whether they sit next to someone with or without a laptop. What type of research methodology is being used in this study?
a) naturalistic observation
b) laboratory observation
c) survey
d) case study
Consider This: The researcher is recording typical behavior in a typical setting, without intervening in any way or manipulating the situation in any way. 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
Answer: a
Learning Objective: 2.2.C Discuss the advantages and disadvantages of using observational methods as a means of data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.8

Compared to a group of 25,000 other test takers, Casey discovered she scored within the top 10 percent on an intelligence test. She was suitably proud and impressed with her achievement. What allowed her to interpret her score so readily?
a) The intelligence test provided norms based on a large comparison group.

b) She had been randomly assigned to the control condition of the intelligence experiment.
c) The intelligence test had alternate-forms reliability.
d) The other test takers formed the basis for test–retest reliability.
Consider This: Which aspect of standardized tests was Casey relying on? 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
Answer: a
Learning Objective: 2.2.D Explain why norms, reliability, and validity are the three key hallmarks of any standardized psychological test.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Analyze It
Difficulty Level: Difficult

EOC Q2.9

Florence is interested in college students' morality, so she administers a survey to 100 classmates asking how many times they've vandalized public property, shoplifted a small item, lied to a loved one, taken office supplies from a workplace, or kept miscounted change from a cashier. Florence was pleased to find that a staggering 92 percent of her participants reported little to none of these activities and concluded that today's students are a highly moral bunch. Why might this conclusion not be entirely warranted?
a) People may not always respond accurately to self-report measures, such as surveys.
b) Florence should have polled a more focused sample of known transgressors.
c) Interviews with those 100 participants would have been a more efficient methodology.
d) She should have conducted case studies on the 8 percent of respondents who were immoral.
Consider This: Florence is making an assumption about the motives and abilities of the respondents to her survey. 2.2.E Describe the advantages and limitations of using surveys in data collection.
Answer: a
Learning Objective: 2.2.E Describe the advantages and limitations of using surveys in data collection.
Module: Descriptive Statistics: Establishing the Facts
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.10

Which of the following values for a coefficient of correlation indicates the weakest degree of relationship?
a) +.04
b) –.29
c) –.75
d) +.42
Consider This: Correlation coefficients measure both the strength and direction of a relationship between two variables. 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables
Answer: a
Learning Objective: 2.3.A Illustrate with an example how a correlation coefficient gives both the size and direction of the relationship between two variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.11

Question: Dalisay conducts a correlational study between two variables, X and Y. She conducts a statistical analysis and writes out the following conclusion: *The correlation coefficient for X and Y is – .67, meaning that the more there is of X, the more there tends to be of Y.* Dalisay has made a mistake. What is it?
a) This is a negative correlation, but she's explaining it as if it were a positive correlation.

b) She must have run the analysis wrong because that is an invalid correlation coefficient.
c) She can't draw a conclusion about the relationship between X and Y if the study was only correlational.
d) By definition, a correlational study must have at least three variables in it.
Consider This: A correlation coefficient can be any number between –1 and 1, with positive and negative numbers referring to different directions for the relationship between variables. 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Answer: a
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate

EOC Q2.12

Ximena conducts a study and finds that worker satisfaction and worker productivity are highly positively correlated. What conclusion should she reach from her research?
a) Higher levels of satisfaction are systematically related to higher levels of productivity.
b) Greater satisfaction causes workers to be more productive.
c) Higher productivity causes workers to be more satisfied with their jobs.
d) Salary causes both increased productivity and increased satisfaction.
Consider This: Ximena has established that a relationship exists between two variables. 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Answer: a
Learning Objective: 2.3.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Module: Correlational Studies: Looking for Relationships
Skill Level: Analyze It
Difficulty Level: Moderate

EOC Q2.13

Carmen wants to test whether putting people in a good mood versus a bad mood affects the size of a donation they give to a homeless person. In this experiment, the dependent variable is _____.
a) the size of the donation
b) being in a good mood
c) being in a bad mood
d) a person's mood state
Consider This: The dependent variable in an experiment "depends" on the independent variable. 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
Answer: a
Learning Objective: 2.4.A Distinguish an independent variable from a dependent variable, and give an example of each.
Module: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.14

One group of research participants is given a new pain medication being tested by a pharmaceutical company. A second group of participants reports to the same study as the first group, goes through the same procedures, meets with the same researchers, but is given a sugar pill that has the same size, shape, and texture as the actual medication. What did this second group receive in this experiment?
a) a placebo

b) the dependent variable
c) an agentic marker
d) a baseline
Consider This: In order to reach sound conclusions from an experiment, both an experimental group and a control group need to be present. Think about the experiences of the two groups of participants described here. 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
Answer: a
Learning Objective: 2.4.B Explain how random assignment helps create conditions in an experiment, and explain the difference between an experimental group and a control group.
Module: Experiments: Hunting for Causes
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.15

When only the experimenter knows whether a given participant is in the experimental or control group (and the participants themselves do not), the study can be classified as a _____.
a) single-blind experiment
b) double-blind experiment
c) repeated-measures design
d) failure
Consider This: Several safeguards need to be in place in order for psychological research to be valid; think about the type of safeguard described in this question. 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Answer: a
Learning Objective: 2.4.C Discuss the methodological advantages and limitations of experimental research design.
Module: Experiments: Hunting for Causes
Skill Level: Remember the Facts
Difficulty Level: Easy

EOC Q2.16

Vihaan collects data on the number of hours college students study each day, and finds that his respondents typically study for three hours, give or take one and a half hours in either direction. "Typically" in this context refers to the _____, whereas "give or take" refers to the _____.
a) arithmetic mean; standard deviation
b) standard deviation; arithmetic mean
c) arithmetic mean; *p*-value
d) *p*-value; standard deviation
Consider This: Vihaan no doubt compiled some descriptive statistics as a first step in understanding his measurements. 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
Answer: a
Learning Objective: 2.5.A Explain how descriptive statistics can be used to compare the performance of two groups of research participants.
Module: Evaluating the Findings
Skill Level: Analyze It
Difficulty Level: Difficult

EOC Q2.17

"The arithmetic mean of the ratings in the experimental group was 45, although the mean could reasonably be as high as 52 or as low as 37 if the test were repeated with a new group of subjects." Which inferential statistic is being utilized in that statement?
a) confidence intervals
b) effect size
c) canonical correlation
d) significance testing
Consider This: The statement provides a range of values that show where the arithmetic mean is likely to be in the majority of cases. 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Answer: a
Learning Objective: 2.5.B Explain what a statistically significant research result does and does not indicate, and identify ways in which statistics can be misused or misrepresented.
Module: Evaluating the Findings
Skill Level: Analyze It
Difficulty Level: Difficult

EOC Q2.18

Bayesian statistics approaches the results of an experiment by _____.
a) taking into account relevant prior knowledge about the topic under study and the likelihood of a result's occurrence
b) assuming the result is incorrect, then reasoning backward to show how it could be accurate
c) setting a *p* value at 1 time out of 1,000
d) comparing the effect size if the result were correct to the effect size if the result were wrong Consider This: Bayesian statistics offers a different approach from traditional significance tests. Which aspects make it different? 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Answer: a
Learning Objective: 2.5.C Compare cross-sectional and longitudinal studies, and discuss how effect size, meta-analysis, and Bayesian statistics allow us to judge the importance of a research outcome.
Module: Evaluating the Findings
Skill Level: Remember the Facts
Difficulty Level: Easy

EOC Q2.19

Anna reported to the psychology laboratory to participate in an experiment. Before she began, however, she was given a form to read and sign, outlining what her participation would require, detailing her options should she choose not to participate, and requesting her permission to take part in the study. Anna was given a(n) _____.
a) consent form
b) debriefing form
c) indemnity form
d) issuance notice
Consider This: Anna was not coerced into participating but rather she was given enough information to make a reasonable decision regarding her participation. 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Answer: a
Learning Objective: 2.6.A Discuss why the principles of informed consent and debriefing are two key characteristics of a researcher's code of ethics.
Module: Keeping the Enterprise Ethical
Skill Level: Understand the Concepts
Difficulty Level: Moderate

EOC Q2.20

Which of the following is a reason psychologists might study animals?
a) to conduct basic research on a particular species
b) to test the limitations of new and dangerous equipment
c) to avoid having to deal with APA ethical guidelines
d) because animals don't require payment, and human research subjects always get paid for their participation
Consider This: There are many reasons why it might be advantageous to study animals; the text highlights four reasons in particular. 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Answer: a
Learning Objective: . 2.6.B Discuss the advantages and ethical considerations of using animals in research.
Module: Keeping the Enterprise Ethical
Skill Level: Understand the Concepts
Difficulty Level: Moderate