Chapter 2 Quick Quiz

1. When a psychologist is discussing heuristics, he or she is referring to
   a. biased information processing strategies.
   b. mental decision-making strategies.
   c. mental techniques to improve memory recall.
   d. mental techniques to increase deliberation in our decision making.

2. The _____ heuristic involves estimating the likelihood of an occurrence based on the ease with which it comes to our minds.
   a. Availability
   b. hindsight
   c. base rate
   d. representativeness

3. Dr. Watson wanted to know which gender was better at sharing at the sixth-grade level, so he went to the local middle school to observe lunch periods. This is a form of
   a. case study.
   b. naturalistic observation.
   c. experimental design.
   d. confirmation bias.

4. Although Professor Smith went to great lengths to conduct a study using naturalistic observation and has confidence in his findings, he should be most concerned with which limitation of this research technique?
   a. The generalizibility of results
   b. Whether the correlations will be significant
   c. An inability to draw cause-and-effect conclusions
   d. External validity

5. It would be LEAST advisable to attempt to apply the results gathered from a(n) _____ design to a larger population of interest.
   a. case study
   b. correlational
   c. experimental
   d. observational

6. A graph that can be used to represent the pattern of relationship between scores from two variables is called a
   a. bar graph.
   b. frequency polygon.
   c. histogram.
   d. Scatterplot.

7. The most important characteristic for a psychological measure to have is
   a. objectivity.
   b. readability.
   c. reliability.
   d. validity.

8. Brittany, a softball player who plays catcher for the local college, has thrown out base stealers at a 42, 39, and 41 percent rate over her three years. Her performance could be considered which of the following?
   a. Valid
   b. Invalid
   c. Reliable
   d. Not reliable

9. The major advantage of self-report measures, like surveys, is that they
   a. are easy to administer.
   b. are extremely reliable and valid.
   c. help establish causality.
   d. are unaffected by the wording or phrasing of the questions.

10. What is the purpose of an institutional review board?
    a. To help protect the rights and dignity of the research participants
    b. To hinder the research process by placing unnecessary hurdles in the way of researchers
    c. To help protect the university from lawsuits from unhappy research participants
    d. To encourage the use of deception in medical and psychological research with humans

Chapter 2 Quick Quiz Answers

1. **Chapter Section:** Heuristics: How We Can Be Fooled
   Answer: b **Page(s):** 44 **Type:** Conceptual **Diff:** 2
   Rationale: Heuristics are mental shortcuts that streamline our thinking and help make sense of the world.

2. **Chapter Section:** Heuristics: How We Can Be Fooled
   Answer: a **Page(s):** 46 **Type:** Factual **Diff:** 1
   Rationale: This is a factual question.

3. **Chapter Section:** Naturalistic Observation: Studying Humans "in the Wild"
   Answer: c **Page(s):** 48 **Type:** Applied **Diff:** 2
   Rationale: Naturalistic observation entails watching behavior in a real-world settings.

4. **Chapter Section:** Naturalistic Observation: Studying Humans "in the Wild"
   Answer: c **Page(s):** 48 **Type:** Applied **Diff:** 3
   Rationale: The main disadvantage of naturalistic observation is that we can't determine cause and effect.

5. **Chapter Section:** Case Study Designs: Getting to Know You
   Answer: a **Page(s):** 48–49 **Type:** Conceptual **Diff:** 3
   Rationale: Case studies are difficult to generalize; even if you know a lot about one case, you may know nothing about the population at large.

6. **Chapter Section:** Correlational Designs
   Answer: d **Page(s):** 51 **Type:** Factual **Diff:** 1
   Rationale: This is a factual question.

7. **Chapter Section:** Experimental Designs
   Answer: d **Page(s):** 54 **Type:** Applied **Diff:** 2
   Rationale: Validity is necessary but not sufficient for a psychological measure to be useful.

8. **Chapter Section:** Experimental Designs
   Answer: c **Page(s):** 54 **Type:** Applied **Diff:** 1
   Rationale: Reliability refers to the extent to which performance is consistent.

9. **Chapter Section:** Asking People About Themselves and Others
   Answer: a **Page(s):** 58–59 **Type:** Factual **Diff:** 1
   Rationale: This is a factual question.

10. **Chapter Section:** Ethical Guidelines for Human Research
    Answer: a **Page(s):** 62 **Type:** Conceptual **Diff:** 2
    Rationale: IRBs work to protect research participants against abuses.

Chapter 2: Research Methods

Multiple Choice

2.1-1. What is the main take-home message from the authors' discussion of autism and facilitated communication?

a. Autistic children want to communicate with their parents but need someone to facilitate the process.
b. Even in the face of overwhelming evidence, some people won't abandon their erroneous beliefs.
c. Psychological research is dangerous because it allows anyone to find support for any idea or opinion.
d. The scientific method is not an effective means for finding solutions for persons who live with autism and other psychological disorders.

Difficulty: 2
Question ID: 2.1-1
Page Ref: 42–43
Topic: Introduction
Skill: Conceptual
Objective: 2.1
Answer: b. Even in the face of overwhelming evidence, some people won't abandon their erroneous beliefs.
Rationale: Proponents of facilitated communication clung to their belief that it worked, and failed to provide extraordinary evidence for their extraordinary claim.

2.1-2. The discussion on the topic of facilitated communication demonstrated the importance of

a. developing falsifiable hypotheses.
b. parsimonious theories.
c. replication of earlier research findings.
d. ruling out rival hypotheses.

Difficulty: 2
Question ID: 2.1-2
Page Ref: 42–43
Topic: Introduction
Skill: Factual
Objective: 2.1
Answer: d. ruling out rival hypotheses.

2.1-3. What is an important limitation of using common sense to understand human behavior and mental processes?

a. Common sense is almost always impossible to state as testable hypotheses.
b. Common sense is always wrong in its explanations about human behavior.
c. Common sense is extremely limited in its ability to test hypotheses.
d. Common sense is needlessly complicated in its explanations about human behavior.

Difficulty: 2
Question ID: 2.1-3
Page Ref: 43–44
Topic: Why We Need Research Designs
Skill: Factual
Objective: 2.1
Answer: c. Common sense is extremely limited in its ability to test hypotheses.

2.1-4. When a psychologist is discussing heuristics, he or she is referring to
   a. biased information processing strategies.
   b. mental decision-making strategies.
   c. mental techniques to improve memory recall.
   d. mental techniques to increase deliberation in our decision making.

Difficulty: 2
Question ID: 2.1-4
Page Ref: 44
Topic: Heuristics: How We Can Be Fooled
Skill: Conceptual
Objective: 2.2
Answer: b. mental decision-making strategies.
Rationale: Heuristics are mental shortcuts that streamline our thinking and help make sense of the world.

2.1-5. A mental shortcut that helps us to streamline our thinking and make sense of our world is called a
   a. theory.
   b. heuristic.
   c. schema.
   d. mental reference.

Difficulty: 1
Question ID: 2.1-5
Page Ref: 44
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: b. heuristic.

2.1-6. Dr. Fortner is discussing cognitive psychology with his introductory psychology class and says that we act as cognitive misers when making decisions or judgments about others. What does Dr. Fortner mean with this statement?
   a. We are frequently incorrect in our judgments and decision making.
   b. We value accuracy in our judgments and decisions.
   c. We value simplicity in understanding our social world.
   d. We will use heuristics only as long as they give us the correct answer.

Difficulty: 2
Question ID: 2.1-6
Page Ref: 44
Topic: Heuristics: How We Can Be Fooled
Skill: Conceptual
Objective: 2.2
Answer: c. We value simplicity in understanding our social world.
Rationale: The term "cognitive miser" is used to indicate that people are mentally lazy and use various strategies to simplify the world.

2.1-7. An important danger of heuristics and cognitive biases is that they lead us to
   a. become anxious or depressed about our place in the world.
   b. believe in observations about our world that are not true.
   c. doubt our intuition and gut feelings in important real-life circumstances.
   d. underestimate our general levels of cognitive abilities and skills.

Difficulty: 2
Question ID: 2.1-7
Page Ref: 44–47
Topic: The Beauty and Necessity of Good Research Design
Skill: Conceptual
Objective: 2.1
Answer: b. believe in observations about our world that are not true.
Rationale: It is vital to remember that we need the scientific method to prevent us from drawing false conclusions that we have become convinced are true.

2.1-8. When confronted with an overwhelming number of facts and figures, most people simply make decisions based on "gut" feelings. For example, when buying a car, many people will bypass the process of comparing and contrasting all the particular cars from a certain category and buy the one that "feels" right. This tendency is best explained by which concept?
   a. Logistics
   b. Hierarchial thinking
   c. Intuition
   d. Heuristics

Difficulty: 2
Question ID: 2.1-8
Page Ref: 44
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: d. Heuristics
Rationale: Heuristics lead us to make snap decisions that may or may not be consistent with the evidence.

2.1-9. The _____ heuristic is one that involves judging the probability of an event by its superficial similarity to a prototype.
   a. availability
   b. representativeness
   c. confirmation
   d. hindsight

Difficulty: 1
Question ID: 2.1-9
Page Ref: 45
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: b. representativeness

2.1-10. When judging people, we often focus on how closely they fit with our stereotypes of particular groups. This tendency is called the
   a. availability heuristic.
   b. hindsight bias.
   c. overconfidence phenomenon.
   d. representativeness heuristic.

Difficulty: 2
Question ID: 2.1-10
Page Ref: 45
Topic: Heuristics: How We Can Be Fooled
Skill: Conceptual
Objective: 2.2
Answer: d. representativeness heuristic.
Rationale: The representativeness heuristic is our tendency to judge the probability of an event based on its superficial similarity to our prototype.
% correct 80 a = 5 b = 5 c = 10 d = 80 *r* = .21

2.1-11. One reason that we are susceptible to the representativeness heuristic is that we
   a. are fooled by information that comes to our mind most easily.
   b. fail to consider how probable an outcome is within the general population.
   c. mistake confidence for certainty.
   d. overestimate our cognitive abilities and processes.

Difficulty: 3
Question ID: 2.1-11
Page Ref: 45
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: b. fail to consider how probable an outcome is within the general population.

2.1-12. Johnny assumes that because Lola enjoys reading and spends considerable time in the library, she probably isn't going to the football game on Saturday. Why might Johnny be wrong?
   a. He has fallen prey to the hindsight bias.
   b. He is relying on the availability heuristic.
   c. He considered only the base rate in making his assumption.
   d. He is relying too heavily on the representativeness heuristic.

Difficulty: 2
Question ID: 2.1-12
Page Ref: 45
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: d. He is relying too heavily on the representativeness heuristic.
Rationale: If we use the representativeness heuristic, we might assume that "a studier" wouldn't want to attend sporting events. But we could be wrong.

2.1-13. A base rate refers to
a. how close a characteristic or behavior is to the mode.
b. how valuable a heuristic is.
c. how common a characteristic or behavior is.
d. how close a characteristic or behavior is to the mean.
Difficulty: 1
Question ID: 2.1-13
Page Ref: 45
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: c. how common a characteristic or behavior is.

2.1-14. A key idea that emerged from Kahneman and Tversky's research is that people often behave
a. irrationally.
b. logically and reasonably.
c. rationally.
d. in an unbiased fashion.
Difficulty: 2
Question ID: 2.1-14
Page Ref: 45–46
Topic: Heuristics: How We Can Be Fooled
Skill: Conceptual
Objective: 2.2
Answer: a. irrationally.
Rationale: Several examples from Kahneman and Tversky's research illustrate irrational thinking.

2.1-15. The _____ heuristic involves estimating the likelihood of an occurrence based on the ease with which it comes to our minds.
a. availability
b. hindsight
c. base rate
d. representativeness
Difficulty: 1
Question ID: 2.1-15
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: a. availability

2.1-16. If you polled some friends about the number of murders in New York City and other friends about the number of murders in the state of New York, you'd likely find that the average number of murders estimated for New York City is more than for the entire state. This impossible finding is best explained by the
   a. availability heuristic.
   b. confirmation bias.
   c. hindsight bias.
   d. tendency toward overconfidence.

Difficulty: 2
Question ID: 2.1-16
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: a. availability heuristic.
Rationale: Most people can more easily recall murders in NYC than elsewhere in New York state.
% correct 28 a = 28 b = 7 c = 24 d = 40 *r* = .35

2.1-17. If a person makes a judgment based on how easy it is for an instance to come to mind, he or she is using the
   a. availability heuristic.
   b. belief perseverance effect.
   c. hindsight bias.
   d. representativeness heuristic.

Difficulty: 1
Question ID: 2.1-17
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Factual
Objective: 2.2
Answer: a. availability heuristic.
% correct 70 a = 70 b = 0 c = 15 d = 10 *r* = .21

2.1-18. Amanda asks a group of research participants to estimate whether more people die each year from homicide or from diabetes. She finds that higher numbers choose homicide, because they are more vivid examples, though over twice as many die from complications related to diabetes. This is one example of the dangers of _____ in our judgments and decision making.
   a. the availability heuristic
   b. confirmation bias
   c. hindsight bias
   d. the representativeness heuristic

Difficulty: 3
Question ID: 2.1-18
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: a. the availability heuristic
Rationale: The availability heuristic often leads us to make inaccurate judgments, because readily available in memory does not necessarily mean more common.

2.1-19. Marty is convinced that there are more ice cream cones sold in August than December, yet statistics tell us something different. Which heuristic may explain Marty's error?
   a. Representativeness
   b. Availability
   c. Sharpening
   d. Leveling

Difficulty: 2
Question ID: 2.1-19
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: b. Availability
Rationale: It's easier to think of ice cream cones being sold in August than in December, but that doesn't necessarily mean it's true.

2.1-20. Ted, who watches a lot of sporting events on television, assumed that nearly all commercials on the air focused on the sale of beer. He was surprised to hear that his girlfriend, who watches primarily soap operas, had rarely seen a beer commercial. Ted's erroneous assumption that nearly all commercials focused on the sale of alcohol is an example of which concept?
   a. Representativeness heuristic
   b. Illusory correlation
   c. Availability heuristic
   d. Negative correlation

Difficulty: 2
Question ID: 2.1-20
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: c. Availability heuristic
Rationale: Because Ted had many beer commercials available in his memory, he overestimated the overall number of commercials that are for beer.

2.1-21. The _____ bias is our natural tendency to seek out evidence that supports our hypotheses and to downplay or distort evidence that doesn't.
   a. cognitive
   b. confirmation
   c. hindsight
   d. researcher

Difficulty: 1
Question ID: 2.1-21
Page Ref: 46
Topic: Cognitive Biases
Skill: Factual
Objective: 2.2
Answer: b. confirmation

2.1-22. _____ biases are systematic errors in thinking.
a. Confirmation
b. Hindsight
c. Cognitive
d. Functional
Difficulty: 1
Question ID: 2.1-22
Page Ref: 46
Topic: Cognitive Biases
Skill: Factual
Objective: 2.2
Answer: c. Cognitive

2.1-23. The _____ bias is the tendency to overestimate how well we could have successfully forecasted known outcomes.
a. hindsight
b. confirmation
c. cognitive
d. availability
Difficulty: 1
Question ID: 2.1-23
Page Ref: 46
Topic: Cognitive Biases
Skill: Factual
Objective: 2.2
Answer: a. hindsight

2.1-24. When Louisa and Burt were married, their friends were unsure of whether the marriage would last or end in divorce. However, after the two divorced, many of their friends commented to each other about how certain they had been that things would not work out from the beginning. This is an example of
a. the availability heuristic.
b. confirmation bias.
c. hindsight bias.
d. the representativeness heuristic.
Difficulty: 2
Question ID: 2.1-24
Page Ref: 46
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: c. hindsight bias.
Rationale: Hindsight bias is our tendency to think we could have predicted an outcome, now that we know what actually happened.

2.1-25. Jerome was uncertain of the correctness of his answers to many of the questions on his General Psychology exam. After seeing his score, an A, he subsequently told his friends about how he knew he aced the exam as soon as he had taken it. This demonstrates the influence of _____ on our judgments.

a. the availability heuristic
b. belief perseverance
c. confirmation bias
d. hindsight bias

Difficulty: 2
Question ID: 2.1-25
Page Ref: 46
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: d. hindsight bias
Rationale: Hindsight bias is our tendency to think we could have predicted an outcome, now that we know what actually happened.
% correct 60 a = 30 b = 10 c = 0 d = 60 *r* = .23

2.1-26. "Joe knew that the Patriots were going to lose the Super Bowl. Despite their perfect record, and all the experts expecting them to win, they never really had a chance." Joe's overconfidence after the fact is an example of what concept?

a. Critical thinking
b. Confirmation bias
c. Hindsight bias
d. Heuristics

Difficulty: 1
Question ID: 2.1-26
Page Ref: 46–47
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: c. Hindsight bias
Rationale: Hindsight bias occurs when we think we could have predicted an outcome, once the outcome is known.

2.1-27. People's tendency to be more certain about the correctness of their beliefs than they should be based on their actual level of accuracy is what psychologists call

a. the availability heuristic.
b. the confirmation bias.
c. overconfidence.
d. the representativeness heuristic.

Difficulty: 1
Question ID: 2.1-27
Page Ref: 47
Topic: Cognitive Biases
Skill: Factual
Objective: 2.2
Answer: c.overconfidence.

2.1-28. Each year, psychics make predictions about events they believe will occur, though few of these events ever do. Psychics are quite certain of their claims despite their frequent, later inaccuracy. This finding would be consistent with the psychological phenomenon known as
   a. the availability heuristic.
   b. confirmation bias.
   c. hindsight bias.
   d. overconfidence.

Difficulty: 2
Question ID: 2.1-28
Page Ref: 47
Topic: Cognitive Biases
Skill: Applied/Conceptual
Objective: 2.2
Answer: d. overconfidence.
Rationale: Overconfidence is our tendency to overestimate our ability to make correct predictions.

2.1-29. When a researcher tests a hypothesis, he or she is often hoping to gather information that is consistent with a particular theory. When, more specifically, is a researcher able to say that he or she has "proven" a theory?
   a. Any time a hypothesis is confirmed
   b. Any time a hypothesis confirms one theory and simultaneously disconfirms at least one other theory
   c. Any time a hypothesis confirms one theory and simultaneously disconfirms all other theories
   d. None of these; a researcher is never able to say that he or she has "proven" a theory.

Difficulty: 3
Question ID: 2.1-29
Page Ref: 47
Topic: The Scientific Method: A Toolbox of Skills
Skill: Factual
Objective: 2.3
Answer: d. None of these; a researcher is never able to say that he or she has "proven" a theory.
% correct 60 a = 10 b = 5 c = 25 d = 60 *r* = .29

2.1-30. Watching behavior in real-world settings is known as
   a. case study.
   b. correlation design.
   c. naturalistic observation.
   d. existence proof.

Difficulty: 1
Question ID: 2.1-30
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Factual
Objective: 2.3
Answer: c. naturalistic observation.

2.1-31. Dr. Watson wanted to know which gender was better at sharing at the sixth-grade level, so he went to the local middle school to observe lunch periods. This is a form of
   a. case study.
   b. naturalistic observation.
   c. experimental design.
   d. confirmation bias.

Difficulty: 2
Question ID: 2.1-31
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.3
Answer: b. naturalistic observation.
Rationale: Naturalistic observation entails watching behavior in a real-world settings.

2.1-32. A group of student researchers divides up the different times of day and night and the buildings on their campus in order to determine when people will hold a door open for another person. These researchers are most likely using which research method design when conducting their study?
   a. Case study
   b. Correlational
   c. Experimental
   d. Naturalistic observation

Difficulty: 1
Question ID: 2.1-32
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.3
Answer: d. Naturalistic observation
Rationale: Naturalistic observation involves studying subjects in real-world settings, without interfering.
% correct 85 a = 0 b = 10 c = 5 d = 85 *r* = .31

2.1-33. A student researcher wishes to maximize the external validity of her research design. What research method should you recommend to her?
   a. Case study
   b. Correlational
   c. Experimental
   d. Observational

Difficulty: 3
Question ID: 2.1-33
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Conceptual
Objective: 2.3
Answer: d. Observational
Rationale: Naturalistic observation is high in external validity because the study occurs in the real world, rather than in a laboratory.

2.1-34. A researcher is interested in determining how frequently bullying behavior occurs in real-life settings. This researcher would best be advised to use the
   a. case study design.
   b. correlational design.
   c. experimental design.
   d. naturalistic observation design.

Difficulty: 2
Question ID: 2.1-34
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Conceptual
Objective: 2.3
Answer: d. naturalistic observation design.
Rationale: Naturalistic observation occurs in the real world, rather than in a laboratory.
% correct 80 a = 10 b = 10 c = 0 d = 80 *r* = .21

2.1-35. Dr. Jones wants to make sure that the findings from his most recent observational study on facial expressions can be generalized to real-world settings. Dr. Jones is concerned about what concept?
   a. External validity
   b. Internal validity
   c. Overconfidence
   d. Placebo effects

Difficulty: 2
Question ID: 2.1-35
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.3
Answer: a. External validity
Rationale: External validity is the extent to which our findings apply to the real world (not just the laboratory).

2.1-36. Professor Williams wants to know if "real" college students exhibit the same kinds of behaviors in class that subjects who were paid to act like college students do. She decides to have someone come in once a week to her classes to record the types of nonverbal behaviors that students engage in while listening to her lectures. This would be an example of which kind of study?
   a. Real-world observation
   b. Naturalistic observation
   c. Classroom observation
   d. Social observation

Difficulty: 2
Question ID: 2.1-36
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "In The Wild"
Skill: Applied
Objective: 2.3
Answer: b. Naturalistic observation
Rationale: Naturalistic observation involves watching and recording participants' behavior, often without their knowledge.

2.1-37. Although Professor Smith went to great lengths to conduct a study using naturalistic observation and has confidence in his findings, he should be most concerned with which limitation of this research technique?

a. The generalizibility of results
b. Whether the correlations will be significant
c. An inability to draw cause-and-effect conclusions
d. External validity

Difficulty: 3
Question ID: 2.1-37
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.4
Answer: c. An inability to draw cause-and-effect conclusions
Rationale: The main disadvantage of naturalistic observation is that we can't determine cause and effect.

2.1-38. This research design involves an extremely deep and detailed information gathering from a single individual over a long period of time.

a. Case study design
b. Correlational design
c. Experimental design
d. Naturalistic observation design

Difficulty: 1
Question ID: 2.1-38
Page Ref: 48
Topic: Case Study Designs: Getting to Know You
Skill: Factual
Objective: 2.3
Answer: a. Case study design
% correct 95 a = 95 b = 5 c = 0 d = 0 *r* = .21

2.1-39. A research design that examines one person or a small number of people in depth, often over an extended time period is called

a. naturalistic observation.
b. an experiment.
c. a survey.
d. a case study.

Difficulty: 1
Question ID: 2.1-39
Page Ref: 48
Topic: Case Study Designs: Getting to Know You
Skill: Factual
Objective: 2.3
Answer: d. a case study.

2.1-40. The study of a rare or unusual phenomenon is most easily done through the use of the _____ design.
   a. case study
   b. correlational
   c. experimental
   d. observational

Difficulty: 1
Question ID: 2.1-40
Page Ref: 48–49
Topic: Case Study Designs: Getting to Know You
Skill: Factual
Objective: 2.3
Answer: a. case study

2.1-41. It would be LEAST advisable to attempt to apply the results gathered from a(n) _____ design to a larger population of interest.
   a. case study
   b. correlational
   c. experimental
   d. observational

Difficulty: 3
Question ID: 2.1-41
Page Ref: 48–49
Topic: Case Study Designs: Getting to Know You
Skill: Conceptual
Objective: 2.4
Answer: a. case study
Rationale: Case studies are difficult to generalize; even if you know a lot about one case, you may know nothing about the population at large.

2.1-42. Sarah, a graduate student in psychology, just heard about a five-year-old child who has already learned calculus. She is thinking about doing an in-depth study of the child for her dissertation. Sarah is considering which research method?
   a. Naturalistic observation
   b. Experiment
   c. Independent study
   d. Case study

Difficulty: 1
Question ID: 2.1-42
Page Ref: 48–49
Topic: Case Study Designs: Getting to Know You
Skill: Applied
Objective: 2.3
Answer: d. Case study
Rationale: Case studies involve in-depth analyses of one or a few participants.

2.1-43. A major criticism of Freud's theory was that most of the information he gathered came from individual case histories of his patients. Why might this have caused Freud's views to be biased?
   a. Most of Freud's patients had mental problems and were not a representative sample of the population.
   b. Dealing with mentally disturbed patients all day altered Freud's perception of reality.
   c. All of his theories are correct and the criticism is unjustified.
   d. Freud's emphasis on sexual and aggressive drives caused people to reject his theories outright.

Difficulty: 3
Question ID: 2.1-43
Page Ref: 48–49
Topic: Case Study Designs: Getting to Know You
Skill: Applied
Objective: 2.4
Answer: a. Most of Freud's patients had mental problems and were not a representative sample of the population.
Rationale: The main limitation of the case study approach is that the cases may not be representative of the population at large.

2.1-44. A research design that examines the extent to which two variables are associated is called
   a. a case study.
   b. a correlational design.
   c. naturalistic observation.
   d. an experiment.

Difficulty: 1
Question ID: 2.1-44
Page Ref: 49
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: b. a correlational design.

2.1-45. Two variables are said to have a correlation when scores on one variable
   a. are unrelated to the scores on the second variable.
   b. are related to scores on the second variable.
   c. cause the scores on the second variable.
   d. are different from the scores on the second variable.

Difficulty: 2
Question ID: 2.1-45
Page Ref: 49
Topic: Correlational Designs
Skill: Conceptual
Objective: 2.3
Answer: b. are related to scores on the second variable.
Rationale: If two things are correlated, they relate to each other, statistically.

2.1-46. You are interested in examining the relationship between the number of class days missed and one's subsequent semester grade point average. The most appropriate research design to study this question would be a(n)
   a. case study.
   b. correlational design.
   c. experiment.
   d. naturalistic observation design.

Difficulty: 2
Question ID: 2.1-46
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: b. correlational design.
Rationale: Correlational designs allow us to determine the extent to which two variables are related.
% correct 80 a = 0 b = 80 c = 10 d = 10 *r* = .55

2.1-47. Hopefully the amount of time a student spends studying would show a(n) _____ correlation with the student's grades.
   a. negative
   b. spurious
   c. positive
   d. illusory

Difficulty: 2
Question ID: 2.1-47
Page Ref: 49
Topic: Correlational Designs
Skill: Conceptual
Objective: 2.3
Answer: c. positive
Rationale: A positive correlation means that as the value of one variable goes up, so does the other; in this instance, one would hope that the more one studies, the higher the grade.

2.1-48. There is a negative correlation between wearing one's seat belt and the severity of injuries received during an accident. Which statement correctly illustrates this correlation?
   a. The more often you wear your seat belt, the more serious the injury you are likely to receive in an accident.
   b. The more often you wear your seat belt, the less likely you are to suffer serious injuries in an accident.
   c. Wearing your seatbelt prevents you from being injured in an accident.
   d. Failing to wear your seat belt increases the likelihood that you will sustain serious injuries in an accident.

Difficulty: 2
Question ID: 2.1-48
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: b. The more often you wear your seat belt, the less likely you are to suffer serious injuries in an accident.
Rationale: A negative correlation means that as one variable goes up, the other is goes down. And remember, correlation is not causation.

2.1-49. There tends to be a negative correlation between the amount of television watched and students' grades. Based on this information alone, which conclusion is legitimate?
   a. Students who watch a lot of television do not like school.
   b. Watching television causes students' grades to drop.
   c. Watching more television may lead to a drop in grades.
   d. Watching more television may improve students' grades.

Difficulty: 2
Question ID: 2.1-49
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: c. Watching more television may lead to a drop in grades.
Rationale: When two variables are negatively correlated, as the value of one goes up, the value of the other goes down.

2.1-50. If there is no discernible relationship between scores on students' homework assignments and their exam scores in an introductory biology class, we would say that a(n) _____ correlation exists.
   a. inverse
   b. negative
   c. positive
   d. zero

Difficulty: 2
Question ID: 2.1-50
Page Ref: 49
Topic: Correlational Designs
Skill: Conceptual
Objective: 2.3
Answer: d. zero
Rationale: When there is no relationship between two variables, the correlation coefficient will be at or near zero.
% correct 85 a = 0 b = 5 c = 10 d = 85 $r = .37$

2.1-51. As the average daily temperature *decreases,* the number of persons who are observed wearing sweaters in the workplace *increases*. This is an example of a _____ correlation.
   a. causal
   b. negative
   c. positive
   d. zero

Difficulty: 2
Question ID: 2.1-51
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: b. negative
Rationale: Negative correlations mean that as the value of one variable goes up, the value of the other variable goes down.
% correct 65 a = 0 b = 65 c = 35 d = 0 $r = .66$

2.1-52. A correlational value will always range between
   a. 0 and 1.
   b. -10 and +10.
   c. 0 percent and 100 percent.
   d. -1.0 and +1.0.

Difficulty: 1
Question ID: 2.1-52
Page Ref: 49
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: d. -1.0 and +1.0.

2.1-53. Which of these is NOT a correlational measure?
   a. Positive
   b. Parallel
   c. Zero
   d. Negative

Difficulty: 1
Question ID: 2.1-53
Page Ref: 49
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: b. Parallel

2.1-54. Which is NOT a correlational research method?
   a. Case study
   b. Survey
   c. Experiment
   d. Naturalistic observation

Difficulty: 2
Question ID: 2.1-54
Page Ref: 49–50
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: c. Experiment

2.1-55. Which of the following correlations represents the WEAKEST degree of relation between two variables?
   a. Daily calcium intake and bone mass density, $r = +.11$
   b. Degree of exposure to lead and IQ scores in children, $r = -.12$
   c. Hours of exposure to media violence and aggressive behavior, $r = +.31$
   d. Number of cigarettes smoked per day and incidence of lung cancer, $r = +.39$

Difficulty: 2
Question ID: 2.1-55
Page Ref: 49–50
Topic: Correlational Designs
Skill: Applied/Conceptual
Objective: 2.3
Answer: a. Daily calcium intake and bone mass density, $r = +.11$
Rationale: Correlations closer to zero (whether positive or negative) are weaker.

2.1-56. Which of the following correlation coefficients represents the strongest degree of relation between two variables?

a. +.19
b. -.25
c. +.43
d. -.47

Difficulty: 2
Question ID: 2.1-56
Page Ref: 49–50
Topic: Correlational Designs
Skill: Conceptual
Objective: 2.3
Answer: d. -.47
Rationale: Correlations closer to 1.0 (whether positive or negative) are stronger.
% correct 50 a = 20 b = 10 c = 20 d = 50 *r* = .60

2.1-57. If we discover that there is a perfect positive correlation *r* = +1.0 between the percent of brain damage a person suffered and the number of errors he makes on a test of memory, what conclusion can we draw?

a. An increase in the percentage of brain damage causes one to make more errors on tests of memory.
b. People suffering from brain damage shouldn't be given tests of memory.
c. An increase in the percentage of brain damage is not a predictive factor in tests of memory.
d. Increases in the percentage of brain damage are strongly associated with increases in the number of errors made on tests of memory.

Difficulty: 2
Question ID: 2.1-57
Page Ref: 49–50
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: d. Increases in the percentage of brain damage are strongly associated with increases in the number of errors made on tests of memory.
Rationale: When a correlation is stronger (closer to 1.0), we are better able to say that the two variables are related, and to predict one if we know the value of the other.

2.1-58. Mr. Jones, a sixth grade science teacher, has tried to predict his students' end-of-the-year grades by looking at their end-of-the-year grades from the previous year. Unfortunately, there does not seem to be any systematic relationship between these two variables. The correlation between these two variables is probably

a. near zero.
b. positive.
c. negative.
d. near 1.0.

Difficulty: 1
Question ID: 2.1-58
Page Ref: 49–50
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: a. near zero.
Rationale: When there is no relationship between two variables, the correlation coefficient will be at or near zero.

2.1-59. Authorities have noted that there is an increased number of teen pregnancies among high schools that offer day care to their students. We can draw which of the following conclusions?
   a. The presence of day care is causing students to become sexually active.
   b. High schools that provide day care are also offering sexual education.
   c. There is a negative correlation between teen pregnancies and day care in the high schools.
   d. There is a positive correlation between teen pregnancies and day care in the high schools.

Difficulty: 2
Question ID: 2.1-59
Page Ref: 49–50
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: d. There is a positive correlation between teen pregnancies and day care in the high schools.
Rationale: Two variables are positively correlated if, as one increases, the other increases.

2.1-60. Which correlation coefficient is most likely to describe the relationship between brushing one's teeth and the number of cavities one gets?
   a. $r = -.62$
   b. $r = .83$
   c. $r = -.08$
   d. $r = .45$

Difficulty: 2
Question ID: 2.1-60
Page Ref: 49–50
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: a. $r = -.62$
Rationale: One would expect that as brushing increases, cavities tend to decrease. Thus, a negative correlation would best describe the relationship. Further, one would expect the relationship to be fairly strong and thus closer to 1.0 than to 0 in absolute value.

2.1-61. Dr. Schott's scatter plot reveals no real patterns or clusters. In fact, the data seems to fall randomly on the graph. This pattern of results is most likely from which type of correlation?
   a. Positive
   b. Zero
   c. Negative
   d. None of the above

Difficulty: 2
Question ID: 2.1-61
Page Ref: 50–51
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: b. Zero
Rationale: When the correlation coefficient is near zero, the points on a scatterplot will be all over the graph, with no discernable pattern.

2.1-62. Dr. Stanhope is trying to determine which type of correlation is represented on his scatterplot, in which nearly all of his data are clustered along a diagonal line running from higher numbers on the left down to lower numbers on the right. Which type of correlation is represented by this pattern?

a. Positive
b. Zero
c. Negative
d. We need more information to draw a conclusion

Difficulty: 2
Question ID: 2.1-62
Page Ref: 50–51
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: c. Negative
Rationale: On a scatterplot, a negative correlation will appear as data points clustered around a line going from upper left to lower right.

2.1-63. A graph that can be used to represent the pattern of relationship between scores from two variables is called a

a. bar graph.
b. frequency polygon.
c. histogram.
d. Scatterplot.

Difficulty: 1
Question ID: 2.1-63
Page Ref: 50–51
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: d. scatterplot.

2.1-64. The perception of a statistical association between two variables where none exists is known as

a. confirmation bias.
b. illusory correlation.
c. existence proof.
d. type I error.

Difficulty: 1
Question ID: 2.1-64
Page Ref: 51
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: b. illusory correlation

2.1-65. The notion of illusory correlation describes how we pay too much attention to situations that support our beliefs about the world (e.g., the superstitious belief that full moons are associated with increases in deviant behavior). Illusory correlation is similar to which decision-making error or bias?
   a. The availability heuristic
   b. Confirmation bias
   c. Hindsight bias
   d. The representativeness heuristic

Difficulty: 3
Question ID: 2.1-65
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied/Conceptual
Objective: 2.3
Answer: b. Confirmation bias
Rationale: Confirmation bias is our tendency to search for information that confirms our preexisting notions, while ignoring or dismissing contradictory evidence. This tendency makes us susceptible to illusory correlation—perceiving associations where none exist.

2.1-66. For many years, newspapers often mentioned the race of criminal suspects who were NOT white in the articles detailing their crimes. This often led people who were not obviously biased or prejudiced to conclude that there was a relationship between race and criminal behavior. This is one example of
   a. the confirmation bias.
   b. the hindsight bias.
   c. illusory correlation.
   d. the representativeness heuristic.

Difficulty: 3
Question ID: 2.1-66
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: c. illusory correlation.
Rationale: Illusory correlation occurs when we perceive a relationship between two variables where none actually exists.

2.1-67. When asked if there are more ice cream cones sold in November or July, Mary answers July immediately. She is surprised to find out that there is little to no difference between the two months in terms of ice cream cone sales. Mary's error is most clearly an example of
   a. imaginary correlation.
   b. common sense.
   c. Superstitions.
   d. illusory correlation.

Difficulty: 2
Question ID: 2.1-67
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: d. illusory correlation.
Rationale: Illusory correlation occurs when we perceive a relationship between two variables where none actually exists.

2.1-68. Six-year-old Scotty comes running in the door and yells triumphantly to his mother, "Today is my lucky day; I found a four-leaf clover!" Many superstitions, like this one, likely began as which of the following?

a. Imaginary correlation
b. Anecdotal stories
c. Coincidence
d. Illusory correlation

Difficulty: 2
Question ID: 2.1-68
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: d. Illusory correlation
Rationale: Illusory correlation refers to our tendency to perceive a relationship between two events that are not actually related.

2.1-69. Correlational research designs are NOT appropriate for purposes of

a. determining causation.
b. providing description.
c. offering predictions.
d. any of the above.

Difficulty: 2
Question ID: 2.1-69
Page Ref: 52
Topic: Correlational Designs
Skill: Factual
Objective: 2.4
Answer: a. determining causation.
% correct 40 a = 40 b = 10 c = 10 d = 40 *r* = .23

2.1-70. The only research design that allows one to make cause-and-effect inferences is

a. the case study.
b. the correlational design.
c. the experiment.
d. naturalistic observation.

Difficulty: 2
Question ID: 2.1-70
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. the experiment.
% correct 62 a = 25 b = 0 c = 62 d = 13 *r* = .36

2.1-71. A research design characterized by random assignment of participants to conditions and manipulation of an independent variable is called a(n)
   a. case study.
   b. naturalistic observation.
   c. experiment.
   d. survey.

Difficulty: 1
Question ID: 2.1-71
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. experiment.

2.1-72. Conclusions over cause-and-effect relationships are only possible when the _____ method is used.
   a. correlational
   b. experimental
   c. case study
   d. empirical

Difficulty: 2
Question ID: 2.1-72
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: b. experimental

2.1-73. In an experiment, the _____ group receives the manipulation.
   a. control
   b. independent
   c. experimental
   d. dependent

Difficulty: 2
Question ID: 2.1-73
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. experimental

2.1-74. A key aspect of an experiment that is missing in other research designs is
a. description of the phenomena of interest.
b. possible explanation for why a relationship exists.
c. prediction of the effects of differences in one variable on another variable.
d. random assignment to conditions/groups.

Difficulty: 2
Question ID: 2.1-74
Page Ref: 53
Topic: Experimental Designs
Skill: Conceptual
Objective: 2.3
Answer: d. random assignment to conditions/groups.
Rationale: Random assignment is one of two components necessary for a study to be an experiment.
% correct 85 a = 10 b = 0 c = 5 d = 85 *r* = .24

2.1-75. A researcher wants to see whether she can make the typical administrative assistant job more motivating at Acme, Inc. To experimentally investigate this possibility, she randomly assigns administrative assistants to one of the following conditions: doing the job as it has always been done, having a computer performance monitoring device installed, receiving feedback about one's performance on a weekly basis, or being given a say in how one's workload is structured and completed. Which of the preceding conditions would be assigned to the control group?
a. Doing the job as it has always been done
b. Having a computer performance monitoring device installed
c. Receiving feedback about one's performance on a weekly basis
d. Being given a say in how one's workload is structured and completed

Difficulty: 2
Question ID: 2.1-75
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: a. Doing the job as it has always been done
Rationale: A control group is one that does not receive the manipulation of interest.

2.1-76. In an experiment, the group that receives the manipulation is called the
a. control group.
b. dependent group.
c. experimental group.
d. independent group.

Difficulty: 1
Question ID: 2.1-76
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. experimental group.

2.1-77. In an experiment, the _____ group receives no manipulation.
a. control
b. dependent
c. independent
d. experimental
Difficulty: 1
Question ID: 2.1-77
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: a. control

2.1-78. Professor Golder is studying hyperactivity in preschool age children. She is concerned that differences in child rearing, diet, and so forth may affect her results. To minimize these potential confounding variables, she should be sure to do which of the following?
a. Use random assignment when forming her groups.
b. Include an independent variable.
c. Include a dependent variable.
d. Assign boys to the experimental group and girls to the control group.
Difficulty: 2
Question ID: 2.1-78
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: a. Use random assignment when forming her groups.
Rationale: Random assignment "cancels out" the effects of any preexisting differences between groups, allowing study of the variable of interest.

2.1-79. Ryan, a professional bass fisherman, is trying to determine which lure is most effective on Wakeby Lake: the plastic worm he normally uses or the new minnow-style lure he bought yesterday. Based on this scenario, what would constitute the control?
a. The new minnow lure
b. The plastic worm
c. Neither the minnow lure nor the plastic worm
d. There is no control.
Difficulty: 1
Question ID: 2.1-79
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: b. The plastic worm
Rationale: A control receives no manipulation in an experiment. In this case, normal use of the plastic worm suggests lack of manipulation.

2.1-80. Several years ago the NBA (National Basketball Association) introduced a new style of basketball to the players. After several months, many players complained that they did not like the "feel" of the new ball. Based on this scenario, what constitutes the control?

a. There is no control condition.
b. The new ball that was introduced
c. The original ball the players were used to
d. Both the new and old balls are part of the control condition.

Difficulty: 1
Question ID: 2.1-80
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: c. The original ball the players were used to
Rationale: A control receives no manipulation in an experiment. In this case, the original ball suggests lack of manipulation.

2.1-81. The _____ variable is what the experimenter "manipulates" or varies.

a. control
b. dependent
c. operational
d. independent

Difficulty: 1
Question ID: 2.1-81
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: d. independent

2.1-82. The variable that an experimenter assesses or measures is called the

a. causal variable.
b. confounding variable.
c. dependent variable.
d. independent variable.

Difficulty: 2
Question ID: 2.1-82
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. dependent variable.
% correct 60 a = 0 b = 60 c = 5 d = 35 $r = .38$

2.1-83. Professor Todd decides to test her hypothesis that eating chocolate prior to exams increases students' test scores. She randomly assigns students to two groups at the beginning of the semester. One group receives a bar of chocolate before each test, while the other group receives another type of candy. She compares their scores at the end of the year, and finds that the students who ate the chocolate scored an average of ten points higher on their exams. What is a fair conclusion that can be drawn from this experiment?

a. Eating chocolate causes students' test scores to increase.
b. Eating chocolate has no relationship to students' test scores.
c. Eating chocolate may increase students' test scores.
d. Eating chocolate makes students happy.

Difficulty: 3
Question ID: 2.1-83
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: a. Eating chocolate causes students' test scores to increase.
Rationale: An experiment with random assignment to groups allows us to determine cause and effect.

2.1-84. An administrator believes that the placement of motivational posters on the walls in classrooms of academic buildings will lead to increased GPAs at his school. To test his theory, he randomly assigns certain classrooms within the College of Liberal Arts and Sciences to have the posters while others do not. None of the remaining four academic colleges have any posters placed in their classrooms. What is the independent variable in this study?

a. Academic college
b. Classroom wall hangings
c. Gender of the student
d. Grade point average

Difficulty: 3
Question ID: 2.1-84
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied/Conceptual
Objective: 2.3
Answer: b. Classroom wall hangings
Rationale: The independent variable is the one that is manipulated; in this case, the intervention is posters/no posters.
% correct 86 a = 10 b = 72 c = 8 d = 10 *r* = .35

2.1-85. A medical doctor believes that the administration of aromatherapy will reduce the anxiety of first-time mothers-to-be during labor and will increase their reported satisfaction with their care at his hospital. He randomly assigns mothers to give birth in a room either with or without aromatherapy. What is the independent variable in this example?

a. Anxiety level during labor
b. Number of previous birthing experiences
c. Room environment
d. Satisfaction with hospital care

Difficulty: 3
Question ID: 2.1-85
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied/Conceptual
Objective: 2.3
Answer: c. Room environment
Rationale: The independent variable is the one that is manipulated; in this case, the intervention is presence/absence of aromatherapy.

2.1-86. Coach Ezell wants her players to relax before playing important conference games. At the halfway point in the season, instead of the dance music she normally had playing in the locker room, she switches to classical music before the games. What is the dependent variable in this scenario?

a. The new classical music
b. The players' anxiety level
c. The coach
d. The original dance music

Difficulty: 2
Question ID: 2.1-86
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: b. The players' anxiety level
Rationale: The dependent variable is the one that is measured (also known as the outcome of the study).

2.1-87. Professor Todd decides to test her hypothesis that eating chocolate prior to exams increases students' test scores. She randomly assigns students to two groups at the beginning of the semester. One group receives a bar of chocolate before each test, while the other group receives another type of candy. She compares their scores at the end of the year, and finds that the students who ate the chocolate scored an average of ten points higher on their exams. What is the dependent variable in this experiment?

a. Students' test scores
b. Chocolate bars
c. The students themselves
d. The professor

Difficulty: 2
Question ID: 2.1-87
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: a. Students' test scores
Rationale: The dependent variable is the outcome of the study (it is dependent on the level of the independent variable).

2.1-88. The most important characteristic for a psychological measure to have is
a. objectivity.
b. readability.
c. reliability.
d. validity.
Difficulty: 2
Question ID: 2.1-88
Page Ref: 54
Topic: Experimental Designs
Skill: Conceptual
Objective: 2.3
Answer: d. validity.
Rationale: Validity is necessary but not sufficient for a psychological measure to be useful.

2.1-89. _____ is consistency of measurement.
a. Random assignment
b. Validity
c. Reliability
d. Confounding variable
Difficulty: 1
Question ID: 2.1-89
Page Ref: 54
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. Reliability

2.1-90. _____ is the extent to which a measure assesses what it claims to measure.
a. Operationalization
b. Reliability
c. Validity
d. Control group
Difficulty: 1
Question ID: 2.1-90
Page Ref: 54
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: c. Validity

2.1-91. _____ is the specification of how a variable is being measured for the purposes of a particular study.
a. Reliability
b. Validity
c. Randomization
d. Operationalization
Difficulty: 1
Question ID: 2.1-91
Page Ref: 54
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: d. Operationalization

2.1-92. Dr. Nick Riviera measures his students' knowledge on the topic of memory by giving them three different quizzes over the course of 3 weeks (1 per week). He is hoping to show that student scores are largely the same from week to week. He is trying to establish the _____ of his quiz.

a. objectivity
b. reliability
c. subjectivity
d. validity

Difficulty: 2
Question ID: 2.1-92
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: b. reliability
Rationale: Reliability is the consistency of a measure. One way to assess it is to administer the instrument repeatedly.
% correct 40 a = 10 b = 40 c = 15 d = 35 *r* = .21

2.1-93. Dr. Sparks is concerned because he gave Julie a new intelligence test that he personally designed and her scores do not seem very consistent. Which aspect of psychological testing is Dr. Sparks concerned with?

a. Validity
b. Self-report measures
c. Reliability
d. Falsibility

Difficulty: 1
Question ID: 2.1-93
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. Reliability
Rationale: Reliability is the extent to which test scores are consistent.

2.1-94. Jasmine took several different self-administered intelligence tests online yesterday and obtained scores of 124, 128, and 125. She felt great, because the score she received from the psychologist last month at school was only a 95. What characteristic might the online tests be lacking?

a. Reliability
b. Validity
c. Both reliability and validity
d. Neither. The tests appear to have both reliability and validity.

Difficulty: 3
Question ID: 2.1-94
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: b. Validity
Rationale: The tests might lack validity because they don't match a psychologist-administered test (which presumably has been validated). It does seem to be reliable, because the scores are consistent with each other.

2.1-95. When assessing patients' personalities using an "ink blot" test that she created, Dr. Hardcastle is gaining confidence in the test's reliability. Which of the following is likely to be happening?
   a. Her patients are enjoying being tested every day.
   b. The test is generating approximately the same results each time.
   c. The test is measuring what it is supposed to be measuring.
   d. The test is likely to be uninformative.

Difficulty: 1
Question ID: 2.1-95
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: b. The test is generating approximately the same results each time.
Rationale: We have evidence of reliability when test scores are consistent, or similar, each time the test is administered to the same person.

2.1-96. Brittany, a softball player who plays catcher for the local college, has thrown out base stealers at a 42, 39, and 41 percent rate over her three years. Her performance could be considered which of the following?
   a. Valid
   b. Invalid
   c. Reliable
   d. Not reliable

Difficulty: 1
Question ID: 2.1-96
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. Reliable
Rationale: Reliability refers to the extent to which performance is consistent.

2.1-97. Sarula recently completed a compatibility "quiz" from one of her favorite magazines, and although she and her boyfriend have been dating for nearly two years, the "quiz" results suggested they are not compatible. Luckily, Riley, one of Sarula's friends, is a student of psychology and suggested that the "quiz" may not be valid. What is her friend suggesting?
   a. The "quiz" only gives you the answers you want.
   b. The "quiz" is going to give you similar results every time.
   c. The "quiz" is not very scientific.
   d. The "quiz" may not actually measure compatibility.

Difficulty: 3
Question ID: 2.1-97
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: d. The "quiz" may not actually measure compatibility.
Rationale: If a measure is not valid, that means that it does not measure what it claims to measure or predict what it claims to predict.

2.1-98. One difficulty in conducting medical research is that participants often assume that any treatment will be effective in alleviating their symptoms. Therefore, a researcher has to design an experiment that measures the influence of
   a. random selection.
   b. medical confounds.
   c. the Rosenthal effect.
   d. the placebo effect.

Difficulty: 2
Question ID: 2.1-98
Page Ref: 55
Topic: Experimental Designs
Skill: Conceptual
Objective: 2.4
Answer: d. the placebo effect.
Rationale: The placebo effect occurs when a participant's expectations cause him or her to experience certain effects.
% correct 80 a = 0 b = 9 c = 11 d = 80 *r* = .25

2.1-99. People report feeling better after taking medication even though it hasn't had time to be effective. They are suffering from
   a. the experimenter bias effect.
   b. low reliability.
   c. the Placebo effect.
   d. confirmation bias.

Difficulty: 2
Question ID: 2.1-99
Page Ref: 55
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. the placebo effect.
Rationale: The placebo effect refers to improvement resulting from the mere expectation of improvement.

2.1-100. A difference between experimental and control groups other than the independent variable is a _____ variable.
   a. confounding
   b. dependent
   c. false
   d. placebo

Difficulty: 1
Question ID: 2.1-100
Page Ref: 55
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: a. confounding

2.1-101. Dr. Johansen randomly assigned subjects to three different groups during her last experiment. She then proceeded to give all the subjects in the experiment a new study technique designed to enhance their learning for the upcoming test. What critical error did she make during her experiment?

a. She failed to identify the independent variable.
b. She failed to identify the dependent variable.
c. She failed to include an experimental group.
d. She failed to include a control group.

Difficulty: 3
Question ID: 2.1-101
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: d. She failed to include a control group.
Rationale: In an experiment, we need to ensure that there is a group that receives the "active" treatment and a group that receives a "placebo" treatment (in this case, a study technique that has already been tested).

2.1-102. Dr. Wilkins randomly assigns subjects to one of three groups. He is interested in the effects of caffeine on anxiety levels. He gives subjects in the first group an extra two cups of coffee a day for six months. The second group receives an extra two cups of decaffeinated coffee a day for the same time period, while the control group is not given either regular or decaffeinated coffee. By providing one group with decaffeinated coffee, Dr. Wilkins is trying to account for which potential element of the experiment?

a. A control condition
b. The Rosenthal effect
c. The placebo effect
d. The artificial condition

Difficulty: 2
Question ID: 2.1-102
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. The placebo effect
Rationale: The placebo effect occurs when an inert treatment "works." In this case, it would occur if the decaf coffee increased anxiety (it should have no effect on anxiety).

2.1-103. Lisa, a college student, had a great time at the party last night. She danced, sang karaoke, and even played the "rock band" video game—all behaviors that she had never exhibited in public before. She had been drinking the "punch" all night long, which she was told contained high levels of alcohol. Lisa was quite surprised to find out the next morning that the punch did NOT contain any alcohol. What concept may explain Lisa's behavior?

a. The Rosenthal effect
b. Illusory correlations
c. The nocebo effect
d. The placebo effect

Difficulty: 2
Question ID: 2.1-103
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: d. The placebo effect
Rationale: The placebo effect occurs when an inert treatment "works." In this case, it would occur if the nonalcoholic punch produced more gregarious behavior.

2.1-104. _____ is a phenomenon in which researchers' hypotheses lead them to unintentionally bias the outcome of a study.

a. Durability bias
b. Experimenter bias effect
c. Availability heuristic
d. Confounding variable

Difficulty: 1
Question ID: 2.1-104
Page Ref: 56
Topic: Experimental Designs
Skill: Factual
Objective: 2.4
Answer: b. Experimenter bias effect

2.1-105. An experiment is said to be _____ when neither researchers nor participants are aware of who's in the experimental or control group.

a. blind
b. unfalsifiable
c. a placebo
d. double-blind

Difficulty: 2
Question ID: 2.1-105
Page Ref: 56
Topic: Experimental Designs
Skill: Factual
Objective: 2.4
Answer: d. double-blind

2.1-106. How does conducting a double-blind study attempt to remedy the experimenter bias effect?
a. The experimenter does not know, but the participant does know, what condition the participant is assigned to.
b. The experimenter and the participant both know what condition the participant is assigned to.
c. The experimenter knows, but the participant does not know, what condition the participant is assigned to.
d. Neither the experimenter nor the participant knows what condition the participant is assigned to.

Difficulty: 2
Question ID: 2.1-106
Page Ref: 56–57
Topic: Experimental Designs
Skill: Factual
Objective: 2.4
Answer: d. Neither the experimenter nor the participant knows what condition the participant is assigned to.
% correct 90 a = 0 b = 5 c = 5 d = 90 *r* = .22

2.1-107. Why are experimenter bias effects so troublesome in an experimental design?
a. They allow researchers to confirm hypotheses even when those hypotheses are incorrect.
b. They interfere with a researcher's ability to say that the only possible cause of the observed differences was the manipulation of the independent variable.
c. Both a. and b. are correct.
d. Neither a. nor b. is correct.

Difficulty: 2
Question ID: 2.1-107
Page Ref: 56–57
Topic: Experimental Designs
Skill: Conceptual
Objective: 2.4
Answer: c. Both a. and b. are correct.
Rationale: Experimenter bias effects can lead to erroneous conclusions and muddy interpretation of results.

2.1-108. Which of the following best illustrates the experimenter bias effect?
a. Dr. Swanson observes that the subjects in the experimental group received a different drug than those in the control group.
b. After learning a new reading technique, Lola is able to read better.
c. Every time infant Alex smiles at a picture, Dr. Moss infers that the infant likes the picture.
d. When Alice's cat sees Alice coming, she begins to purr.

Difficulty: 2
Question ID: 2.1-108
Page Ref: 56–57
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. Every time infant Alex smiles at a picture, Dr. Moss infers that the infant likes the picture.
Rationale: The experimenter bias effect occurs when the researcher's hypotheses lead him or her to misinterpret subjects' behavior.

2.1-109. Marissa just finished completing her new employee questionnaire form for a job in sales. Despite being a rather shy, introverted person, Marissa checked all the areas that referred to her as a talkative and outgoing individual. She believes those extroverted characteristics are exactly what her new employer is looking for. Which concept is being illustrated?

a. Participant bias
b. The primacy effect
c. Demand characteristics
d. The Rosenthal effect

Difficulty: 2
Question ID: 2.1-109
Page Ref: 57
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: c. Demand characteristics
Rationale: Demand characteristics are cues that participants pick up that allow them to guess about the researcher's hypothesis. In this case, Marissa could guess that the employer was looking for extraverted candidates.

2.1-110. Eila is participating in a psychological experiment for one of the graduate students at her university. She is pretty confident that she knows the true intent of the study and is trying to answer the questions accordingly. A common pitfall in experiments, Eila is falling prey to

a. intentionality.
b. the Rosenthal effect.
c. observer bias.
d. demand characteristics.

Difficulty: 2
Question ID: 2.1-110
Page Ref: 57
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: d. demand characteristics.
Rationale: Demand characteristics are cues that participants pick up that allow them to guess about the researcher's hypothesis.

2.1-111. The most important factor to ensure that one's results apply to other people in other settings is to use

a. very large sample sizes.
b. very small sample sizes.
c. random assignment.
d. random selection.

Difficulty: 2
Question ID: 2.1-111
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Factual
Objective: 2.3
Answer: d. random selection.

2.1-112. The large difference in the percentages of women who admitted to extramarital affairs in the *Hite Report* versus a Harris organization pool was most likely due to
   a. demand characteristics.
   b. how the questions were worded in each study.
   c. the method of sampling used in each study.
   d. the use of covert versus participant observation.

Difficulty: 3
Question ID: 2.1-112
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Factual
Objective: 2.3
Answer: c. the method of sampling used in each study.

2.1-113. Sue asked three of her friends after class if they thought the test they just finished taking was as easy as she thought it was. They all agreed that it was. She was surprised to find out the next day that although she and her friends had indeed done well, a majority of the class had failed. Why shouldn't Sue have been surprised?
   a. Most of the students did not study for the test.
   b. She did not use random selection when asking people about the test.
   c. Students should have been randomly assigned to take the tests on different days.
   d. Her friends shouldn't have expressed their views regarding the test.

Difficulty: 2
Question ID: 2.1-113
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Applied
Objective: 2.4
Answer: b. She did not use random selection when asking people about the test.
Rationale: Without random selection, we can't be sure whether the group we've selected is representative of the larger group.

2.1-114. Dr. Potter, an English professor, is curious about his students' attitudes toward one of his favorite books. What research method is he most likely to use to gather this information?
   a. Case study
   b. Survey
   c. Experiment
   d. Naturalistic observation

Difficulty: 1
Question ID: 2.1-114
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Applied
Objective: 2.4
Answer: b. Survey
Rationale: The survey method is most appropriate when we are interested in people's attitudes or opinions.

2.1-115. The major advantage of self-report measures, like surveys, is that they
a. are easy to administer.
b. are extremely reliable and valid.
c. help establish causality.
d. are unaffected by the wording or phrasing of the questions.

Difficulty: 1
Question ID: 2.1-115
Page Ref: 58–59
Topic: Asking People About Themselves and Others
Skill: Factual
Objective: 2.3
Answer: a. are easy to administer.
% correct 75 a = 75 b = 10 c = 5 d = 10 *r* = .22

2.1-116. Alex, a freshman in college, wants to know how many of her dormmates have tried marijuana, so she decides to survey everyone on her floor. Despite rumors to the contrary, the results suggest that fewer than ten percent of her classmates have tried the drug. What is the most likely explanation for her findings?
a. People often distort their answers or fail to tell the complete truth when surveyed.
b. Her dormmates did not understand the question.
c. Alex did not calculate the findings correctly.
d. Surveys are not an acceptable means to gather new information.

Difficulty: 2
Question ID: 2.1-116
Page Ref: 59
Topic: Asking People About Themselves and Others
Skill: Applied
Objective: 2.4
Answer: a. People often distort their answers or fail to tell the complete truth when surveyed.
Rationale: One downside of using self-report measures and surveys is that people often distort answers, either for lack of personal insight or because they want to appear more in a more positive light.

2.1-117. A key disadvantage to self-report measures is that
a. demand characteristics can bias participant answers.
b. observing behavior leads to changes in behavior.
c. respondents are not always honest in their answers.
d. such measures are less effective than experiments in accurately predicting peoples' behavior.

Difficulty: 2
Question ID: 2.1-117
Page Ref: 59
Topic: Asking People About Themselves and Others
Skill: Conceptual
Objective: 2.4
Answer: c. respondents are not always honest in their answers.
Rationale: Two main disadvantages to the survey method are lack of insight and lack of honesty.
% correct 75 a = 75 b = 5 c = 20 d = 0 *r* = .22

2.1-118. According to your authors, laboratory research generalizes
   a. poorly from college undergraduates to other groups of people in other settings.
   b. poorly from experimental designs in the laboratory but well from correlational or naturalistic observation designs.
   c. well from laboratory settings to the real world, but only when undergraduates are not used as participants.
   d. well from laboratory settings to the real world and well from undergraduates to the general population.

Difficulty: 2
Question ID: 2.1-118
Page Ref: 59–60
Topic: Asking People About Themselves and Others
Skill: Factual
Objective: 2.4
Answer: d. well from laboratory settings to the real world and well from undergraduates to the general population.

2.1-119. Which of these is NOT part of the APA ethical principles for human research?
   a. Informed consent
   b. Deception and debriefing
   c. Monetary compensation
   d. Protection from harm and discomfort

Difficulty: 2
Question ID: 2.1-119
Page Ref: 61
Topic: Ethical Guidelines for Human Research
Skill: Factual
Objective: 2.5
Answer: c. Monetary compensation

2.1-120. Which ethical requirement of research was not present in the Tuskegee experiment, where nearly 400 African American men were exposed to syphilis and denied treatment for its symptoms?
   a. Anonymity
   b. Confidentiality
   c. Informed consent
   d. All of the above

Difficulty: 2
Question ID: 2.1-120
Page Ref: 61–62
Topic: Ethical Guidelines for Human Research
Skill: Factual
Objective: 2.5
Answer: c. Informed consent
% correct 65 a = 0 b = 0 c = 65 d = 35 *r* = .21

2.1-121. Students of psychology are often frustrated because there are very few, if any, clear-cut answers to many of their questions. What is the primary limiting factor in obtaining first-hand knowledge of questions such as the long-term effects of child abuse or the effects of smoking marijuana on a pregnancy?

a. Most people in the general public are not concerned with these issues.
b. It is difficult to find people who are victims of abuse or mothers who smoke marijuana during pregnancy.
c. Ethical guidelines in research prevent psychologists from carrying out many of these studies.
d. Institutional review boards encourage participation in studies that may be harmful to subjects either mentally or physically.

Difficulty: 2
Question ID: 2.1-121
Page Ref: 61–62
Topic: Ethical Guidelines for Human Research
Skill: Applied
Objective: 2.5
Answer: c. Ethical guidelines in research prevent psychologists from carrying out many of these studies.
Rationale: Due to ethical considerations, we cannot randomly assign children to abusive or nonabusive homes, for example. Thus, it is impossible to say whether A causes B, in many cases.

2.1-122. What is the purpose of an institutional review board?

a. To help protect the rights and dignity of the research participants
b. To hinder the research process by placing unnecessary hurdles in the way of researchers
c. To help protect the university from lawsuits from unhappy research participants
d. To encourage the use of deception in medical and psychological research with humans

Difficulty: 2
Question ID: 2.1-122
Page Ref: 62
Topic: Ethical Guidelines for Human Research
Skill: Conceptual
Objective: 2.5
Answer: a. To help protect the rights and dignity of the research participants
Rationale: IRBs work to protect research participants against abuses.

2.1-123. Dr. Williams believes that by administering brief electric shocks to his students, he can improve their attention to his lectures. He blames daydreaming and inattention by his students for their poor performance in his class. His colleagues are not convinced that the potential benefits to the students will outweigh the physical pain they may endure. Ultimately, what will Dr. Williams have to obtain from his students before proceeding?

a. Medical records
b. A debriefing of the results of the study
c. Information about the students' parents
d. Informed consent

Difficulty: 2
Question ID: 2.1-123
Page Ref: 62
Topic: Ethical Guidelines for Human Research
Skill: Applied
Objective: 2.5
Answer: d. Informed consent
Rationale: Informed consent is a process that helps research participants know what they are getting into, and is necessary for conducting an ethically sound study.

2.1-124. Professor Wagner is explaining to his subjects the purpose behind the experiment they just participated in, along with a general description of the results. He is engaging in what aspect of a research study?
a. Debriefing
b. Informed consent
c. Ethical considerations
d. Follow-up discussions
Difficulty: 2
Question ID: 2.1-124
Page Ref: 62
Topic: Ethical Guidelines for Human Research
Skill: Applied
Objective: 2.5
Answer: a. Debriefing
Rationale: Debriefing is a process that allows the researcher to fully disclose the nature of the study and provide more information. It occurs once an individual's participation is complete.

2.1-125. What is the authors' main conclusion regarding the use of animal research in psychology?
a. Animal research provides important insights but also comes with costs in terms of death and suffering of these subjects.
b. All animal research must be ended as soon as is possible.
c. It is more desirable to harm animals than to harm humans in the research process.
d. Results from animal research cannot inform us of how the same phenomena occur with humans.
Difficulty: 2
Question ID: 2.1-125
Page Ref: 62–63
Topic: Ethical Issues in Animal Research
Skill: Conceptual
Objective: 2.6
Answer: a. Animal research provides important insights but also comes with costs in terms of death and suffering of these subjects.
Rationale: The authors discuss a number of pros and cons related to animal research in psychology.

2.1-126. Dr. Nolen wants to know the effects of removing portions of one's hippocampus on long-term memory, in the hopes of one day finding a cure for patients with Alzheimer's disease. The subjects for his study are most likely to be
a. humans.
b. nonhuman animals.
c. robots.
d. insects.
Difficulty: 2
Question ID: 2.1-126
Page Ref: 62–63
Topic: Ethical Issues in Animal Research
Skill: Applied
Objective: 2.6
Answer: b. nonhuman animals.
Rationale: Some research cannot ethically be conducted on humans, so nonhuman animals (most often mice or rats) are used instead.

2.1-127. Numerical characterizations that describe data are known as
a. central tendencies.
b. inferential statistics.
c. dispersion.
d. descriptive statistics.
Difficulty: 1
Question ID: 2.1-127
Page Ref: 64
Topic: Statistics: The Currency of Psychological Research
Skill: Factual
Objective: 2.7
Answer: d. descriptive statistics.

2.1-128. Mathematical methods that allow us to determine whether we can generalize findings from our sample to the full population are called
a. central tendencies.
b. inferential statistics.
c. dispersion.
d. descriptive statistics.
Difficulty: 1
Question ID: 2.1-128
Page Ref: 64
Topic: Statistics: The Currency of Psychological Research
Skill: Factual
Objective: 2.7
Answer: b. inferential statistics.

2.1-129. The application of mathematics to describe and analyze data is known as
a. dispersion.
b. data reduction.
c. statistics.
d. calculus.
Difficulty: 1
Question ID: 2.1-129
Page Ref: 64
Topic: Descriptive Statistics: What's What?
Skill: Factual
Objective: 2.7
Answer: c. statistics.

2.1-130. The measure of where scores in a data set tend to cluster is called
a. dispersion.
b. central tendency.
c. descriptive statistics.
d. variance.
Difficulty: 2
Question ID: 2.1-130
Page Ref: 64
Topic: Descriptive Statistics: What's What?
Skill: Factual
Objective: 2.7
Answer: b. central tendency.

2.1-131. All of these are a measure of central tendency EXCEPT
a. mode.
b. mean.
c. dispersion.
d. median.
Difficulty: 1
Question ID: 2.1-131
Page Ref: 64
Topic: Descriptive Statistics: What's What?
Skill: Factual
Objective: 2.7
Answer: c. dispersion.

2.1-132. A university president asks her psychology department chair if the university has more male or more female undergraduate psychology majors. What measure of central tendency is she asking about?
a. Mean
b. Median
c. Mode
d. Range
Difficulty: 1
Question ID: 2.1-132
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.7
Answer: c. Mode
Rationale: The mode is the most common score in a data set.

2.1-133. A British literature instructor examines the number of class periods his students have missed by mid-terms and has the following data: 1, 0, 10, 0, 2, 1, 0, 0, 5, 2, 3, 0, 0, 0, 1, 1, 2, 3, 1. What is the median for this data set?
a. 0
b. 1
c. 1.68
d. 2.5
Difficulty: 2
Question ID: 2.1-133
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Applied
Objective: 2.7
Answer: b. 1
Rationale: To calculate the median, line up the numbers from smallest to largest, and find the middle score.

2.1-134. In which situation would presenting the mean as one's measure of central tendency be LEAST accurate?
   a. When the distribution is normally distributed
   b. When the distribution is negatively skewed
   c. When the distribution is positively skewed
   d. Whenever either B or C is true

Difficulty: 3
Question ID: 2.1-134
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.8
Answer: d. Whenever either B or C is true
Rationale: Of the measures of central tendency, the mean is most affected by extreme scores.

2.1-135. Which descriptive statistic is LEAST likely to be influenced by the presence of skewness?
   a. Mean
   b. Median
   c. Range
   d. Standard deviation

Difficulty: 3
Question ID: 2.1-135
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Applied/Conceptual
Objective: 2.8
Answer: b. Median
Rationale: The median and mode give a more accurate description of the data when skewness is present.

2.1-136. Dr. Mizel just told his class that the average score on his last test was a 68. Only two students scored above 90, and nearly everyone else scored between 75 and 55. The two highest scores in this data set may be considered what?
   a. Modes
   b. Medians
   c. Outliers
   d. Means

Difficulty: 1
Question ID: 2.1-136
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Applied
Objective: 2.8
Answer: c. Outliers
Rationale: Outliers are data points that lie way outside the other scores.

2.1-137. If I wanted to determine, on average, how far apart any one score is from another, I should use a measure of
   a. central tendency.
   b. correlation.
   c. dispersion.
   d. statistical significance.

Difficulty: 2
Question ID: 2.1-137
Page Ref: 65–66
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.8
Answer: c. dispersion.
Rationale: Measures of dispersion tell us how close together or spread out the scores are. Range and standard deviation are both measures of dispersion.

2.1-138. This simplest measure of dispersion is the
   a. mean.
   b. mode.
   c. range.
   d. standard deviation.

Difficulty: 1
Question ID: 2.1-138
Page Ref: 65–66
Topic: Descriptive Statistics: What's What?
Skill: Factual
Objective: 2.8
Answer: c. range.

2.1-139. A researcher wishes to generalize his findings beyond the people at the organization he is studying in Florida. He wants to attempt to show that the findings apply to all people who work in a similar type of organization throughout the United States. He should use _____ to analyze his data.
   a. correlational statistics
   b. descriptive statistics
   c. inferential statistics
   d. logical statistics

Difficulty: 2
Question ID: 2.1-139
Page Ref: 66
Topic: Inferential Statistics: Testing Hypotheses
Skill: Factual
Objective: 2.8
Answer: c. inferential statistics
% correct 65 a = 25 b = 10 c = 65 d = 0 $r = .67$

2.1-140. Statistical significance implies that the results are
a. important.
b. extremely meaningful.
c. valid.
d. not likely due to chance.
Difficulty: 3
Question ID: 2.1-140
Page Ref: 66
Topic: Inferential Statistics: Testing Hypotheses
Skill: Conceptual
Objective: 2.8
Answer: d. not likely due to chance.
Rationale: Statistical significance means that our results are probably "real" and not due to chance.

2.1-141. After carefully observing thousands of students, Dr. O'Brien revealed to his colleagues that students with brown eyes are statistically more likely to write with pens instead of pencils. Although his colleagues did not question his statistics, they did suggest that a finding such as this lacked
a. authenticity.
b. validity.
c. statistical measures.
d. practical significance.
Difficulty: 2
Question ID: 2.1-141
Page Ref: 66–67
Topic: Inferential Statistics: Testing Hypotheses
Skill: Applied
Objective: 2.9
Answer: d. practical significance.
Rationale: Practical significance refers to whether a statistical difference "makes a difference" in the real world.

2.1-142. A therapist wishes to show that his new therapy is a *marked improvement* over the current best available therapy. To do so he examines the number of participants who improved with each. A total of 125 participants received his treatment (and 100 of them improved). A total of 80 participants received the alternative treatment (and 64 of them improved). What should the therapist conclude?
a. His treatment is superior to the alternative because 100 is greater than 64.
b. His treatment is no better than the alternative because the percentages are the same.
c. His treatment is inferior because the percentages are the same.
d. His treatment is superior because it included 125 people as opposed to 80.
Difficulty: 3
Question ID: 2.1-142
Page Ref: 67, 69
Topic: How People Lie with Statistics
Skill: Applied
Objective: 2.9
Answer: b. His treatment is no better than the alternative because the percentages are the same.
Rationale: Take care against jumping to conclusions in research. Even though it might look like the new treatment is better, we need to examine the percentages of people who showed improvement. When we do, we see that there is no difference.

2.1-143. The peer review process is designed to
a. block alternative therapies from being made available to the general public.
b. identify flaws in a research study's methods, findings, and conclusions.
c. keep in check the egos of researchers.
d. place obstacles in front of people whose theories differ from mainstream science.
Difficulty: 2
Question ID: 2.1-143
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Factual
Objective: 2.10
Answer: b. identify flaws in a research study's methods, findings, and conclusions.

2.1-144. A mechanism by which experts in a field carefully screen the work of their colleagues is known as
a. experimental validity.
b. experimenter bias effect.
c. peer review.
d. peer assessment.
Difficulty: 1
Question ID: 2.1-144
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Factual
Objective: 2.10
Answer: c. peer review.

2.1-145. The purpose of a peer reviewer is to act as
a critical thinker.
b. a hurdle.
c. an obstacle.
d. a scientific gatekeeper.
Difficulty: 3
Question ID: 2.1-145
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Conceptual
Objective: 2.10
Answer: a. a critical thinker.
Rationale: A peer reviewer is a critical thinker in that he or she tries to identify flaws in the research that may lead to a misinterpretation of findings.

2.1-146. The general public is often misled by discussions of research in the media because most reporters are
a. not fair and balanced in their reporting of the facts.
b. actively working to bias the public against scientific research.
c. not trained in understanding research or how to accurately communicate about it.
d. lazy and attempting to do as little as possible in their jobs.
Difficulty: 1
Question ID: 2.1-146
Page Ref: 71
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Factual
Objective: 2.11
Answer: c. not trained in understanding research or how to accurately communicate about it.

2.1-147. A major limitation in reading about the results of psychological research in the newspaper is that reporters
   a. provide too much detailed information about the research study that the general public cannot comprehend.
   b. are so well trained to discuss research that they cannot easily communicate about it with the average lay person.
   c. create controversy where none exists by treating scientific evidence and dissenters' biased opinions as equally compelling.
   d. do not know how to identify experts to interview for many of their stories and end up unintentionally misleading the public.

Difficulty: 2
Question ID: 2.1-147
Page Ref: 71–72
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Factual
Objective: 2.11
Answer: c. create controversy where none exists by treating scientific evidence and dissenters' biased opinions as equally compelling.

2.1-148. Professor Bowden is in the middle of her lecture on marital satisfaction when a student in the back interrupts her and says, "Dr. Phil doesn't agree with that theory!" Soon other students chime in to add fuel to the discussion. Professor Bowden just smiles and asks the original student to produce the research that Dr. Phil carried out to justify his statements. What lesson is Professor Bowden trying to teach?
   a. Information from the media is always inaccurate.
   b. One should never question a well-established theory.
   c. Always check the source of your information before you believe it.
   d. Secondary sources are just as reliable as primary sources.

Difficulty: 3
Question ID: 2.1-148
Page Ref: 71–73
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Applied
Objective: 2.11
Answer: c. Always check the source of your information before you believe it.
Rationale: The authors discuss how we should be skeptical of psychology-related claims in the media, and look for scientific evidence.

2.1-149. A key behavior to engage in when reading about the results of a study on the Internet, in a newspaper, or in a news magazine is
   a. to consider the source of the information.
   b. to determine how well it fits with what others have told you in the past.
   c. to rely on your common sense or "gut" intuition.
   d. none of the above

Difficulty: 1
Question ID: 2.1-149
Page Ref: 72
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Factual
Objective: 2.11
Answer: a. to consider the source of the information.
% correct 90 a = 90 b = 0 c = 10 d = 0 *r* = .21

Fill-in-the-Blank

2.2-1. To view humans as cognitive processors who are lazy, looking to make judgments quickly, and without much effort is to view them as _____.

Difficulty: 2
Question ID: 2.2-1
Page Ref: 44
Topic: Heuristics: How We Can Be Fooled
Skill: Conceptual
Objective: 2.2
Answer: cognitive misers

2.2-2. The more easily an image of a horrific event—like a major airline crash or a school shooting—comes to mind, the more often we assume it occurs. In reality, however, each of these is a relatively rare, infrequent event. We have fallen victim to the _____.

Difficulty: 3
Question ID: 2.2-2
Page Ref: 46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: availability heuristic

2.2-3. John initially believed that staying up all night had led to him failing his psychology final. After seeing his "A," he told his roommate that passing the final had been the only thing on his mind. John is clearly displaying the _____ bias.

Difficulty: 2
Question ID: 2.2-3
Page Ref: 46
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: hindsight

2.2-4. When asked to evaluate whether or not we are good drivers, we are more likely to rate ourselves as above average in our abilities. This tendency is known as _____.

Difficulty: 1
Question ID: 2.2-4
Page Ref: 47
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: overconfidence

2.2-5. If a researcher investigated the topic of aggression by simply recording instances of aggression on a school playground, in a place of business, in a nightclub, and in many other everyday settings, he or she would be using the research design of _____.

Difficulty: 1
Question ID: 2.2-5
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied/Conceptual
Objective: 2.3
Answer: naturalistic observation

2.2-6. Dr. Simmons wants to know if 4th grade boys are more aggressive than 4th grade girls. He sends his class out to record aggression levels at a local playground. This approach is known as _____.

Difficulty: 2
Question ID: 2.2-6
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.2
Answer: naturalistic observation

2.2-7. The degree of statistical association between two variables is the focus of _____ designs.

Difficulty: 1
Question ID: 2.2-7
Page Ref: 49
Topic: Correlational Designs
Skill: Factual
Objective: 2.3
Answer: correlational

2.2-8. According to the authors, many examples of superstitious behavior are the result of _____.

Difficulty: 3
Question ID: 2.2-8
Page Ref: 51
Topic: Correlational Designs
Skill: Factual
Objective: 2.4
Answer: illusory correlation

2.2-9. For a long time, researchers were convinced that watching television was negatively correlated with student grades, but it turns out that the true correlation was between time spent not studying and grades. Perceiving an association where none exists is an example of a(n) _____ correlation.

Difficulty: 3
Question ID: 2.2-9
Page Ref: 51
Topic: Correlational Designs
Skill: Applied
Objective: 2.4
Answer: illusory

2.2-10. The major advantage of a correlational design over naturalistic observation or a case study design is that a correlational design allows us to _____.

Difficulty: 2
Question ID: 2.2-10
Page Ref: 52
Topic: Correlational Designs
Skill: Conceputual
Objective: 2.3
Answer: make predictions (or make predictions about future events or describe and make predictions about behavior)

2.2-11. Even if you obtained a perfect positive correlation of $r = 1.0$ between smoking and lung cancer, you could still NOT say that smoking _____ cancer.

Difficulty: 2
Question ID: 2.2-11
Page Ref: 52
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: causes

2.2-12. Because it is virtually impossible to control for all possible factors that might influence the outcome of an experiment, researchers use _____ to try to even out potential differences among their groups.

Difficulty: 2
Question ID: 2.2-12
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: random assignment

2.2-13. Causal inferences are only possible with a(n) _____ design.

Difficulty: 2
Question ID: 2.2-13
Page Ref: 53
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: experimental

2.2-14. Dr. Torruella is trying to determine if students perform better on tests that are given on Fridays as opposed to Mondays. He randomly assigns two classes to take their tests on one of the two days. In this experiment, performance on the tests represents the _____ variable.

Difficulty: 2
Question ID: 2.2-14
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: dependent

2.2-15. Shakira was disturbed by the fact that she received a different score each time she took the same self-administered intelligence test. It is clear that this particular test lacks _____.

Difficulty: 2
Question ID: 2.2-15
Page Ref: 54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: reliability

2.2-16. Dr. Barrios is examining the relationship between student scores on a practice test in his senior-level class with their actual performance, with different questions, on his first exam. If there is consistency or stability in these scores, Dr. Barrios would be able to say that _____ exists.

Difficulty: 2
Question ID: 2.2-16
Page Ref: 54
Topic: Experimental Designs
Skill: Factual
Objective: 2.3
Answer: reliability

2.2-17. The ability to state that differences in the conditions of the independent variable led to the observed differences in the dependent variable is lessened when a(n) _____ variable is present in one's research design.

Difficulty: 3
Question ID: 2.2-17
Page Ref: 55
Topic: Experimental Designs
Skill: Factual
Objective: 2.4
Answer: confounding

2.2-18. One important limitation of the experimental design is that when research participants know what condition they have been assigned to, this knowledge, rather than the independent variable, may be the cause of the differences observed in the dependent variable. This is known as the _____ effect.

Difficulty: 1
Question ID: 2.2-18
Page Ref: 55–56
Topic: Experimental Designs
Skill: Conceptual
Objective: 2.4
Answer: placebo

2.2-19. As part of an ongoing study on the effects of caffeine on anxiety, Maria is asked to consume two cups of decaffeinated coffee a day. The researcher is attempting to determine the strength of the _____.

Difficulty: 3
Question ID: 2.2-19
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: placebo effect

2.2-20. Although physiologically speaking it should take approximately 30 minutes for an aspirin to relieve a headache, most people claim to feel better only minutes after taking the pill. This observation can best be explained by the _____ effect.

Difficulty: 2
Question ID: 2.2-20
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: placebo

2.2-21. When neither the experimenter nor the participant has any knowledge of the experimental condition to which the participant has been assigned, we say that this is a(n) _____ study.

Difficulty: 2
Question ID: 2.2-21
Page Ref: 56
Topic: Experimental Designs
Skill: Factual
Objective: 2.4
Answer: double-blind

2.2-22. _____ is the most important part of ensuring the generalizability of one's results to the general population.

Difficulty: 3
Question ID: 2.2-22
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Factual
Objective: 2.3
Answer: Random selection

2.2-23. In most experimental and correlational studies, the researcher is required to obtain the participant's _____.

Difficulty: 1
Question ID: 2.2-23
Page Ref: 62
Topic: Ethical Guidelines for Human Research
Skill: Factual
Objective: 2.5
Answer: informed consent

2.2-24. Because review boards are concerned with potential mental or physical anguish during some experimental studies, subjects are required to give _____ before they are allowed to participate.

Difficulty: 2
Question ID: 2.2-24
Page Ref: 62
Topic: Ethical Guidelines for Human Research
Skill: Applied
Objective: 2.5
Answer: informed consent

2.2-25. Dr. Friesz asks his research assistant to gather information on how his data are clustering together on the variable, average daily temperature for December. He is asking for a measure of _____.

Difficulty: 2
Question ID: 2.2-25
Page Ref: 64
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.7
Answer: central tendency

2.2-26. If a statistician asks you, his assistant, to calculate the middle score from a data set, he is asking you to determine the value of the _____.

Difficulty: 1
Question ID: 2.2-26
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Factual
Objective: 2.7
Answer: median

2.2-27. Mario is currently collecting data for his science fair project. He is concerned about potential _____, or scores that fall well beyond the normal cluster of scores.

Difficulty: 3
Question ID: 2.2-27
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Applied
Objective: 2.8
Answer: outliers

2.2-28. The store manager of an ice cream chain is trying to determine the average ice cream sales for the year. He is struggling because there is a large disparity between sales in the summer months and those of the winter months. With data of this nature most experts would recommend using the _____, a measure of central tendency.

Difficulty: 3
Question ID: 2.2-28
Page Ref: 65
Topic: Descriptive Statistics: What's What?
Skill: Applied
Objective: 2.8
Answer: median

2.2-29. In descriptive statistics, the measure of dispersion least likely to be deceptive is the _____.

Difficulty: 2
Question ID: 2.2-29
Page Ref: 65–66
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.8
Answer: standard deviation

2.2-30. The goal of inferential statistics is to _____ our results to other similar samples.

Difficulty: 3
Question ID: 2.2-30
Page Ref: 66
Topic: Inferential Statistics: Testing Hypotheses
Skill: Conceptual
Objective: 2.8
Answer: apply or generalize

2.2-31. Before Dr. Smith submits his new grant proposal to the committee, he asks several of his colleagues to read, revise, and make suggestions about his research design. He is engaging in one form of _____.

Difficulty: 2
Question ID: 2.2-31
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Applied
Objective: 2.10
Answer: peer review

2.2-32. Professor Johnson wants to determine if eating chocolate prior to taking a test has a positive impact on his students' test performance. He asks for volunteers from his classes to test his hypothesis. At the end of the term, the professor concludes that the students who ate the chocolate before the exams did better. Unfortunately for the professor, because he did not use _____ prior to his study, it is not considered a true experiment.

Difficulty: 3
Question ID: 2.2-32
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Applied
Objective: 2.10
Answer: random assignment

2.2-33. Dr. Lee wants to try out her new therapy on a group of patients suffering from bipolar disorder. She decides to use her new therapy on all her patients and record their improvement. A major flaw in her research design is the omission of a(n) _____ group.

Difficulty: 3
Question ID: 2.2-33
Page Ref: 70
Topic: Becoming a Peer Reviewer of Psychological Research
Skill: Applied
Objective: 2.10
Answer: control

2.2-34. A study conducted on factors that contribute to hyperactivity once reported that there was no connection between sugar intake and hyperactivity. Reporters from all over jumped on the story and ran with it. It turns out that the initial study failed to include sugar as one of their variables. This tendency for the media and others to exaggerate a central aspect of a study, while minimizing other potentially important information is known as _____.

Difficulty: 3
Question ID: 2.2-34
Page Ref: 72
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Applied
Objective: 2.11
Answer: sharpening

Essay

2.3-1. Describe both why many people were "fooled" by proponents of facilitated communication and how science was used to discover the truth.

Difficulty: 3
Question ID: 2.3-1
Page Ref: 42–43
Topic: Introduction
Skill: Applied
Objective: 2.1
Answer: Discuss an individual's willingness to accept or believe in "miracle" cures or breakthroughs, especially for people with specific needs (e.g., an autistic child) and/or the idea of confirmation bias. Discuss the need for and ultimate construction of a controlled scientific study to rule out rival hypotheses or "alternate" interpretations and findings.

2.3-2. Heuristics both facilitate and complicate our understanding and processing of the world. Provide one example each of the two prominent heuristics discussed in your textbook.

Difficulty: 3
Question ID: 2.3-2
Page Ref: 44–46
Topic: Heuristics: How We Can Be Fooled
Skill: Applied
Objective: 2.2
Answer: Provide an example of the representativeness heuristic that shows how we judge the probablity of an event by its superficial similarity to a prototype (e.g., You believe that Jack is more likely an athlete than a musician because he wears sweatpants to class every day). Provide an example of the availability heuristic that shows how we estimate the likelihood of an event based on how readily it comes to mind (e.g., You believe that it is more dangerous to fly than ride in a car).

2.3-3. Cognitive biases can interfere with our ability to correctly process information and can even lead us to exaggerate or ignore evidence that may go against what we believe. Provide one example each of hindsight bias and overconfidence.

Difficulty: 3
Question ID: 2.3-3
Page Ref: 46–47
Topic: Cognitive Biases
Skill: Applied
Objective: 2.2
Answer: Provide an example of hindsight bias that demonstrates our tendency to overestimate how well we could have successfully forecasted known outcomes (e.g., After complaining about how poorly he performed on his midterm, Joe tells his roommate after receiving an "A" that he knew he had aced it all along). Provide an example of overconfidence demonstrating our tendency to overestimate our predictive abilities (e.g., John is confident that there are more red cars on the road than blue ones, and is shocked to find out he was wrong).

2.3-4. Why is it necessary for psychologists to have so many different research designs to study human behavior? Provide examples to demonstrate your understanding.

Difficulty: 1
Question ID: 2.3-4
Page Ref: 47–60
Topic: The Scientific Method: A Toolbox of Skills
Skill: Factual
Objective: 2.3, 2.4
Answer: Answers will vary but should contain the following points for full credit.

- The scientific method allows us to test hypotheses, which in turn either strengthens the broader theory or forces scientists to revise or reject that theory. It also provides safeguards against bias.
- The goals of research designs differ (some focus on description, others on prediction, and others on establishing causation). Identify which designs achieve which goals (naturalistic observation, case study, correlational design, experiment, and self-report) to earn full credit.
- Each research design has its own limitations. Provide examples of these as well.

2.3-5. Naturalistic observation provides both benefits and limitations to psychologists studying both human and animal behavior. Provide an example of the major benefit and major limitation associated with naturalistic observation.

Difficulty: 3
Question ID: 2.3-5
Page Ref: 48
Topic: Naturalistic Observation: Studying Humans "in the Wild"
Skill: Applied
Objective: 2.3, 2.4
Answer: Provide at least one example demonstrating the advantage of external validity, or the confidence associated with conducting a study in the "real world" and our ability to generalize our findings to the outside world. Provide at least one example of difficulties in achieving internal validity, or the inability to draw cause-and-effect inferences.

2.3-6. Sigmund Freud has long been criticized for developing many of his theories based on information collected primarily from his patients' case histories or case studies. Why are the criticisms justified?

Difficulty: 3
Question ID: 2.3-6
Page Ref: 48–49
Topic: Case Study Designs: Getting to Know You
Skill: Applied
Objective: 2.4
Answer: Indicate that while case studies can yield valuable hypotheses and provide existence proofs, they cannot be relied upon to draw conclusions because they are not based on systematic research that rules out rival hypotheses.

2.3-7. Correlational studies allow researchers to examine relationships between two variables of interest. Provide one example each of a positive, zero, and negative correlation.

Difficulty: 3
Question ID: 2.3-7
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: Provide an example of a positive correlation, where both variables increase or decrease together. Provide an example of a zero correlation, where neither variable is systematically related to the other. Provide an example of a negative correlation, where one variable increases while the other variable decreases.

2.3-8. People in general have a difficult time with the concept of negative correlation. As a result, many researchers will only present data in terms of positive correlations. Provide an example of a negative correlation and then provide an example of how the same data can be presented in terms of a positive correlation.

Difficulty: 3
Question ID: 2.3-8
Page Ref: 49
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: Provide an example of a negative correlation (e.g., percentage of brain damage AND the number of correct responses made on a test of memory). Provide an example of a positive correlation using the same data (e.g., percentage of brain damage AND the number of errors made on a test of memory).

2.3-9. Explain the relationship between illusory correlations and the formation of some superstitions.

Difficulty: 3
Question ID: 2.3-9
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied
Objective: 2.4
Answer: Provide a definition and example of what constitutes an illusory correlation. Many perceived connections are in fact illusory correlations and, because they sometimes affect one's luck either positively or negatively, these connections have become the basis for many superstitions.

2.3-10. Discuss how the concept of the illusory correlation would explain a friend's complaint that his fraternity/her sorority (or other student group) is always being displayed in a negative light by the campus newspaper, while other groups are not similarly treated.

Difficulty: 3
Question ID: 2.3-10
Page Ref: 51–52
Topic: Correlational Designs
Skill: Applied
Objective: 2.4
Answer: Student should define or describe what the illusory correlation is in his/her answer (either directly or demonstrate an understanding indirectly).

2.3-11. Dr. Causation is collecting data on the relationship between the number of contraceptives given out at the school clinic and the number of pregnancies that occur throughout the school year. After reviewing his data, he reports a correlation of $r = -.59$ between the two variables. Dr. Causation concludes that an increase in contraceptive availability is decreasing the number of pregnancies at the University. Explain whether this conclusion is justified.

Difficulty: 3
Question ID: 2.3-11
Page Ref: 52
Topic: Correlational Designs
Skill: Applied
Objective: 2.3
Answer: While the student can indicate that the correlation indeed shows a relationship between the increase in contraceptive availability and the decrease in pregnancies, they must state that the conclusion is not valid. One cannot draw cause-and-effect conclusions from correlational data.

2.3-12. We know that one cannot draw cause-and-effect conclusions from correlational data; only data collected via the experimental method allows us to draw such conclusions. Many students believe that they can only study with some background noise present, either music playing or maybe the television on. Create an experiment that would allow researchers to either prove or disprove this idea.

Difficulty: 3
Question ID: 2.3-12
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: Student should describe the use of random assignment to groups or conditions, and must include for full credit: a clearly defined independent variable; a clearly defined dependent variable; who and what would constitute the experimental group; who and what would constitute the control group.

2.3-13. Random assignment to groups in experiments is a powerful technique psychologists use in an attempt to minimize potential confounding variables, as well as other factors that might influence the outcome of their studies. Explain how random assignment is used to achieve this goal.

Difficulty: 3
Question ID: 2.3-13
Page Ref: 53
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: Explain the difficulty involved in controlling for all potential outside influences on any given study. Then discuss how by randomly assigning subjects to groups, the researchers hope to balance out these potential outside influences by creating what should be relatively even groups at the beginning of the experiment.

2.3-14. Dr. Fitness has just completed an experiment involving three different exercise routines and their possible impact on the percentage of body fat in his subjects. One routine contains high-intensity cardiovascular training, one routine involves primarily strength training, and the third involves a combination of both cardio and strength training. After identifying the independent and dependent variables, discuss why Dr. Fitness chose FOUR different groups for his experiment, and briefly describe what each group is likely to be exposed to.

Difficulty: 3
Question ID: 2.3-14
Page Ref: 53–54
Topic: Experimental Designs
Skill: Applied
Objective: 2.3
Answer: Correctly identify the independent (type of exercise routine) and dependent (percentage of body fat) variables. Discuss the need for three different experimental groups—each one exposed to a different exercise routine—plus an additional control group that will not be exposed to any of the three routines.

2.3-15. There are some pitfalls associated with the experimental design; in other words, even the experimental method is not infallible. Provide an example of the placebo effect and describe its potential influence on the outcome of some experimental studies.

Difficulty: 3
Question ID: 2.3-15
Page Ref: 55–56
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: Provide an example of the placebo effect (e.g., Although Joe was given a "sugar" pill, he claims that his headache is gone).
Discuss the power of positive or negative beliefs about a treatment or condition that can sometimes create artificial results.

2.3-16. One problem that arises when studying infants is experimenters "reading" more into an infant's activity or response than may actually be present. For instance, it is a common practice to assign infant preference for an object based on how long the infant stares at the object. As a result, researchers have concluded that infants prefer more complex objects to less complex objects like plain circles and squares. Describe the trap these experimenters might be falling into and provide an alternative reason that these infants stare longer at more complex objects.

Difficulty: 3
Question ID: 2.3-16
Page Ref: 56–57
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: Provide a definition and example of the experimenter bias effect.
Discuss the fact that more complex objects require a longer fixation time to process than do less complex objects, which may or may not reflect a true preference for that object.

2.3-17. To minimize experimenter bias effects, it is always recommended that whenever possible experimenters use the double-blind technique. Briefly describe a study that would benefit from use of the double-blind technique.

Difficulty: 3
Question ID: 2.3-17
Page Ref: 56–57
Topic: Experimental Designs
Skill: Applied
Objective: 2.4
Answer: Provide a definition and example of the double-blind technique. Discuss a study where the outcome of the study could be adversely influenced if the experimenter or the subjects knew who had actually received the independent variable.

2.3-18. Discuss the main difference between asking a group of your friends what they think of the new principal versus a survey given to a group of students using random selection.

Difficulty: 3
Question ID: 2.3-18
Page Ref: 58
Topic: Asking People About Themselves and Others
Skill: Applied
Objective: 2.4
Answer: Provide a definition of random selection. Then explain that the group of friends are likely to give similar answers due to other shared personality characteristics, whereas random selection (where every person in the population has an equal chance of being selected) is likely to be less biased and more diversified in the responses.

2.3-19. Even after lengthy discussions of how observational studies provide us with more accurate information and data, many students still insist that the best way to get information from someone is to ask them directly or give them a questionnaire. Give two examples of the disadvantages associated with these self-report measures over the observational method.

Difficulty: 3
Question ID: 2.3-19
Page Ref: 58–59
Topic: Asking People About Themselves and Others
Skill: Applied
Objective: 2.4
Answer: Provide an example of an individual's tendency to exaggerate the truth under certain circumstances to make themselves appear more positive than they are. Next provide an example of an individual's tendency to be less than honest or engage in response sets.

2.3-20. Describe the roles of institutional review boards and statements of informed consent within the human research process.

Difficulty: 2
Question ID: 2.3-20
Page Ref: 61–62
Topic: Ethical Guidelines for Human Research
Skill: Factual
Objective: 2.5
Answer: Answers will vary but should contain the following for full credit.

- Institutional review boards (IRBs) exist to ensure that participants are treated with respect and dignity in the research process. The members are drawn from different departments and must give their approval, and their concerns and requests for changes addressed, before research with human participants may begin.
- Informed consent ensures that participants understand what is being asked of them and what will be involved in their experience. Participants must be given enough information to make a decision to voluntarily participate in the research. If they are misled during the research, the missing information must be explained during a debriefing.

2.3-21. Based on your understanding of the need for animals to be used in some psychological research, provide an example of a question or an area where animal research might be beneficial and an explanation as to why it would be necessary to use animals as opposed to humans.

Difficulty: 3
Question ID: 2.3-21
Page Ref: 62–63
Topic: Ethical Issues in Animal Research
Skill: Applied
Objective: 2.5
Answer: Provide an example of a study that would be invasive or dangerous to a human (e.g., Randomly abusing children to identify the long term effects of such abuse).
Discuss the ethical and practical considerations of conducting research on human beings.
Discuss the potential gains toward our understanding of humans versus the potential harm to animals.

2.3-22. Explain why no single measure of central tendency and measure of dispersion exists that a researcher can use every single time.

Difficulty: 1
Question ID: 2.3-22
Page Ref: 64–66
Topic: Descriptive Statistics: What's What?
Skill: Conceptual
Objective: 2.8
Answer: Answers will vary but should contain the following information for full credit.

- Sometimes one measure is more appropriate than another. For example, the mean is distorted by the presence of outliers in a skewed distribution, so a researcher would be advised to report the median instead.
- It depends what information a researcher wants to highlight. For example, if a researcher wants to identify what was the most frequently endorsed option for a question, he or she would choose the mode. If he or she wants to report about how the scores were represented over all the possible answers, he or she would report the mean.
- Some people may wish to know the typical difference between scores and thus choose standard deviation, while others would look at the amount of difference from the most extreme scores and choose the range.
- A researcher cannot just report central tendency or just dispersion because it tells only part of the whole, either where scores are located (central tendency) or how much difference between scores is present (dispersion).

2.3-23. Provide an example of the difference between statistical significance and practical significance.

Difficulty: 3
Question ID: 2.3-23
Page Ref: 66–67
Topic: Inferential Statistics: Testing Hypotheses
Skill: Applied
Objective: 2.9
Answer: Provide an example that illustrates what is meant by statistical versus practical significance.
Discuss the fact that statistical significance is largely impacted by the number of subjects in a given study and can be misleading.
Discuss the idea that although a finding might be statistically significant, it does not necessarily add any real value or knowledge to our understanding of an area.

2.3-24. Illustrate why being an informed consumer about research, research designs, and statistics will be helpful in identifying incorrect statements about research in the media and on the Internet.

Difficulty: 2
Question ID: 2.3-24
Page Ref: 71–73
Topic: Most Reporters Aren't Scientists: Evaluating Psychology in the Media
Skill: Conceptual
Objective: 2.11
Answer: Answers will vary but should contain *at least four* of the following, and include the first idea, for full credit.

- Student should mention that understanding research designs will aid in identifying when statements of cause and effect are appropriate and when they are not. (Need to give supportive evidence for this and all statements to see that they truly demonstrate an understanding of each idea.)
- One will recognize misleading or inaccurate statistical statements.
- One will recognize when headlines are inaccurate summaries of the research results.
- One will recognize when reporters or writers have used sharpening or leveling.
- One will consider the source and whether the story coverage is balanced or whether it muddies the discussion.

Critical Thinking Short Answer

2.4-1. Describe how the use of research designs protects us from the heuristics and cognitive biases discussed in the textbook.

Difficulty: 2
Question ID: 2.4-1
Page Ref: 43–47
Topic: The Beauty and Necessity of Good Research Design
Skill: Conceptual
Objective: 2.2
Answer: Answers will vary but should contain the following information for full credit.

- Student should mention that research requires that we make our predictions beforehand so that the hindsight bias does not lead us to exaggerate our abilities to correctly understand a complex world.
- The research studies use techniques that focus on recording or gathering information so that our intuitions are not allowed to bias the results (avoiding illusory correlations as well as availability and representativeness heuristics).
- Designs themselves have limitations so that further research is needed to establish the reliability and validity of our findings

2.4-2. Use your knowledge of the case study and naturalistic observation to show why they are better devices for identifying important topics for further study rather than being designs that allow for theory building and testing.

Difficulty: 3
Question ID: 2.4-2
Page Ref: 48–49
Topic: The Scientific Method: A Toolbox of Skills
Skill: Applied
Objective: 2.4
Answer: Answers will vary but should contain the following for full credit. Both are examples of descriptive research designs (identifying and organizing information about general patterns of behaviors) rather than examples of either predictive (i.e., correlational design) or causal (i.e., experimental design) designs.

- Both lack important elements of more complex designs that allow theory testing (lack of controls, inability in most cases to separate elements to allow greater understanding of what is necessary and what is not for a behavior to occur, studying a few people that may not be representative of larger population).
- Direct interaction by researcher with people may strongly influence the data they provide to us (which is often minimized by other methods).

2.4-3. Discuss why researchers need to be familiar with both descriptive and inferential statistics.

Difficulty: 3
Question ID: 2.4-3
Page Ref: 64–67
Topic: Statistics: The Currency of Psychological Research
Skill: Conceptual
Objective: 2.9
Answer: Answers will vary but should contain the following ideas for full credit.

- Student needs to mention that each gives a different kind of information because each has differing goals (organization and summarization for descriptive and generalization for inferential).
- Techniques in each can be misused in different ways to make effects appear that really are not accurate or appropriate.
- Often both are used in conjunction by the researcher rather than being two types that are chosen between (e.g., using the means of the groups to help see the statistically significant group differences).