Test Bank

Chapter 1: Psychological Research: The Whys and Hows of the Scientific Method

Multiple Choice

1. The empiricism canon of the scientific method states that new knowledge is gained from _____.
a. authority figures
b. observations
c. intuition
d. logic
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Empiricism
Difficulty Level: Easy

2. The parsimony canon of the scientific method states that _____.
a. the simplest explanation of a phenomenon is most likely to be correct
b. observation is the best way of gaining new knowledge
c. phenomena have observable causes
d. explanations of phenomena should be able to be falsified if they are incorrect
Ans: A
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Parsimony
Difficulty Level: Easy

3. The determinism canon of the scientific method states that _____.
a. the simplest explanation of a phenomenon is most likely to be correct
b. observation is the best way of gaining new knowledge
c. phenomena have observable causes
d. explanations of phenomena should be able to be falsified if they are incorrect
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Determinism
Difficulty Level: Easy

4. The testability canon of the scientific method states that _____.
a. the simplest explanation of a phenomenon is most likely to be correct
b. observation is the best way of gaining new knowledge
c. phenomena have observable causes
d. explanations of phenomena should be able to be falsified if they are incorrect
Ans: D
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Testability
Difficulty Level: Easy

5. External validity is typically more important for _____ research than for _____ research.
a. scientific; non-scientific
b. non-scientific; scientific
c. basic; applied
d. applied; basic
Ans: D
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Basic and Applied Research
Difficulty Level: Easy

6. External validity is _____.
a. a type of research conducted in psychology
b. the degree to which a study's results can be generalized to individuals and situations outside of the study
c. the degree to which a study provides a good test of a causal prediction
d. the degree to which the study accurately predicts results
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Basic and Applied Research
Difficulty Level: Easy

7. The scientific method involves gaining new knowledge through _____.
a. deduction
B intuition
c. authority
d. observation
Ans: D
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation

REF: Cognitive Domain: Knowledge
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Easy

8. Deciding that it must be raining because the weather person said it would rain today is an example of the _____ method of knowing?
a. intuition
b. authority
c. observation
d. deduction
Ans: B
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Medium

9. Deciding it must be raining because you look out the window and see rain falling is an example of the _____ method of knowing?
a. intuition
b. authority
c. observation
d. deduction
Ans: C
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Medium

10. Deciding it must be raining because you felt it would rain today is an example of the _____ method of knowing?
a. intuition
b. authority
c. observation
d. deduction
Ans: A
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Medium

11. Deciding it must be raining because you hear thunder is an example of the _____ method of knowing?
a. intuition

b. authority
c. observation
d. deduction
Ans: D
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Medium

12. A psychologist investigating the research question “Which neurotransmitters affect depressive behaviors?” is most likely conducting _____ research.
a. basic
b. applied
c. external
d. internal
Ans: A
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

13. A psychologist investigating the research question “Which type of therapy most effectively reduces depressive behaviors?” is most likely conducting _____ research.
a. basic
b. applied
c. external
d. internal
Ans: B
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

14. _____ research investigates fundamental aspects of behavior, whereas _____ research investigates solutions for real-world problems.
a. Internal; external
b. External; internal
c. Basic; applied
d. Applied; basic
Ans: C
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge

Answer Location: Basic and Applied Research
Difficulty Level: Easy

15. A study that investigates behavior as it naturally occurs in individuals would have a high degree of _____.
a. basic research
b. applied research
c. external validity
d. internal validity
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

16. One reason that Freud's theories of personality have not been more influential in the field of psychology is that _____.
a. the theories do not specify causes for behavior
b. the theories are not the simplest explanations for behavior
c. the theories are too unusual
d. the theories are difficult to falsify
Ans: D
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Testability
Difficulty Level: Easy

17. The method of gaining knowledge that is most likely to yield accurate information is _____.
a. intuition
b. authority
c. observation
d. deduction
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Easy

18. Relying on the works of Plato and Aristotle for knowledge about the world is an example of _____ method of knowing.
a. intuition
b. authority

c. observation
d. deduction
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Easy

19. Seeking only evidence that supports our beliefs and ignoring evidence that contradicts those beliefs is _____.
a. belief bias
b. confirmation bias
c. evidence bias
d. contradictory bias
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Testability
Difficulty Level: Easy

20. _____ was an influential scientist who used observations to understand the world.
a. Galileo
b. Freud
c. Richards
d. Matson
Ans: A
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Empiricism
Difficulty Level: Easy

21. The _____ canon helps scientists test their ideas more easily, because it is easier to develop a study that might falsify a simple explanation than to develop a study that might falsify a more complex explanation.
a. determinism
b. parsimony
c. testability
d. empiricism
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Parsimony

Difficulty Level: Easy

22. Early neuroscientists (e.g., Santiago Ramón y Cajal, Meyers, 2007) conducted _____ research studies to understand how neurons function.
a. complex
b. basic
c. confirmation
d. applied
Ans: B
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge
Answer Location: Basic and Applied Research
Difficulty Level: Easy

23. When we ask people to complete a survey we are using _____ to learn about behavior.
a. determinism
b. parsimony
c. testability
d. empiricism
Ans: D
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Application
Answer Location: Empiricism
Difficulty Level: Hard

24. The _____ provide(s) a general “how to” guide for psychologists designing research studies, because they help us conduct good tests of our explanations of the causes of behaviors and further our understanding of why certain behaviors occur.
a. canons of science
b. canons of phenomena
c. guide to science
d. guide to knowledge
Ans: A
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge
Answer Location: Testability
Difficulty Level: Easy

25. Knowledge gained in _____ studies can also help basic researchers refine their theories about how behavior works.
a. complex
b. basic

c. confirmation
d. applied
Ans: D
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

26. When one encounters reports of research in the media, asking questions to ascertain credibility would not include _____.
a. Who were the research subjects?
b. Was an appropriate sample tested?
c. Was an appropriate method used to investigate the question?
d. What is the gender of the researcher(s)?
Ans: D
KEY: Learning Objective: 1.1: Understand that knowledge of research in psychology has value beyond careers in research
REF: Cognitive Domain: Knowledge
Answer Location: Why Should I Care About Research if I Don't Want to Do Research in My Career?
Difficulty Level: Easy

27. A psychologist investigating the research question "How much information can we store in short-term memory?" is most likely conducting _____ research.
a. basic
b. applied
c. external
d. internal
Ans: A
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

28. A psychologist investigating the research question "What type of work environment increases productivity of employees?" is most likely conducting _____ research.
a. basic
b. applied
c. external
d. internal
Ans: B
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension

Answer Location: Basic and Applied Research
Difficulty Level: Medium

29. Applications of _____ research may not be obvious when it is initially conducted.
a. basic
b. applied
c. external
d. internal
Ans: A
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge
Answer Location: Basic and Applied Research
Difficulty Level: Easy

30. “I want to know if my phone is on. I decide that it is because my phone is always on.” is an example of _____.
a. intuition
b. authority
c. observation
d. deduction
Ans: D
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Medium

31. “I want to know which direction I am facing. The Sun is setting to my right, and I know the Sun sets in the west, so I know that west is the direction where the Sun is setting.” is an example of _____.
a. intuition
b. authority
c. observation
d. deduction
Ans: D
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Medium

32. “I want to know what my pancreas does. I know that my pancreas produces hormones important for digestion because that is what my high school biology teacher told me.” is an example of _____.
a. intuition

b. authority
c. observation
d. deduction
Ans: B
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Medium

33. “I want to know how much sleep on average Americans get per night. I determine this by conducting a survey of Americans to learn that most Americans get an average of 6 to 8 hours of sleep per night” is an example of _____.
a. intuition
b. authority
c. observation
d. deduction
Ans: C
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Medium

34. _____ is not a method of empiricism used to learn about behavior.
a. Observing people in their normal environment
b. Asking people to complete a survey
c. Relying on common sense
d. Asking people to come into a lab and complete a task on a computer
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Empiricism
Difficulty Level: Medium

35. A reporter who is writing an article on an important issue may only interview experts that support their views on the issue. This is an example of _____.
a. belief bias
b. confirmation bias
c. evidence bias
d. contradictory bias
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension

Answer Location: Testability
Difficulty Level: Medium

36. _____ factors can cause us to observe a particular behavior when we observe it only once and affects our result conclusions.
a. Confirmatory
b. Confounding
c. Chance
d. Conflicting
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Empiricism
Difficulty Level: Medium

37. Human factors professionals use research to help understand the best way to _____.
a. replicate work procedures
b. define safety policy
c. design products and interfaces
d. understand employee morale
Ans: C
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Why Should I Care About Research if I Don't Want to Do Research in My Career?
Difficulty Level: Medium

38. Relying on common sense as a means of knowing about the world is referred to as the _____ method of knowing.
a. intuition
b. authority
c. deduction
d. observation
Ans: A
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Medium

39. Watson is collecting data to study "Does sleeplessness cause anxiety?". This is an example of the _____ facet of the scientific method.
a. empiricism

b. determinism
c. parsimony
d. testability
Ans: B
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: How Psychologists Use The Scientific Method
Difficulty Level: Medium

True/False

1. Observation is really what sets scientific fields apart from other fields of study.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Using Science to Understand and Explain Behavior
Difficulty Level: Easy

2. As you encounter descriptions of psychological research, you may find that not all research fits neatly into basic or applied categories.
Ans: T
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

3. Some behaviors, such as mental processes, can be directly observed.
Ans: F
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Using Science to Understand and Explain Behavior
Difficulty Level: Easy

4. Research is the foundation of the field of psychology.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Using Science to Understand and Explain Behavior
Difficulty Level: Easy

5. The applications of basic research may not be obvious when it is initially conducted.
Ans: T

KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

6. There are six primary facets or *canons* (i.e., rules or principles that guide a field of study) that define the scientific method.
Ans: F
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Easy

7. Relying on an authority to learn about behavior gives researchers a more accurate understanding of the causes of behaviors than other methods of gaining knowledge.
Ans: F
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Why Psychologists Conduct Research
Difficulty Level: Easy

8. The only goal of psychological research is to be able to explain behavior by understanding the causes of different types of behavior.
Ans: F
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Determinism
Difficulty Level: Medium

9. It takes many studies conducted in many different contexts that produce results consistent with an explanation of behavior to support it.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Testability
Difficulty Level: Easy

10. The goal of applied research is to understand the most fundamental processes of behavior and how they operate.
Ans: F

KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

11. One lab observation is enough to be sure about the knowledge we are gaining.
Ans: F
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Empiricism
Difficulty Level: Easy

12. It takes only a few studies with results inconsistent with an explanation of behavior to falsify it.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Testability
Difficulty Level: Medium

13. Making choices leads people to think more analytically study by Savani, Stephens, and Markus (2017) is an example of basic research.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Basic and Applied Research
Difficulty Level: Medium

14. Assuming a link between two things means one caused the other is a common pitfall in behavioral research.
Ans: T
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Common Pitfalls and How to Avoid Them
Difficulty Level: Medium

Essay

1. What are the four canons of the scientific method? Explain how each canon is used in scientific research.
Ans: Answers vary
Empiricism--observations are made to learn about behavior.

Determinism--observable phenomena are assumed to have observable causes--thus, determinism is used in psychological research to test causal explanations about behavior.
Parsimony--simpler explanations are tested before more complex explanations are pursued because simpler explanations are easier to test.
Testability--studies are designed in such a way to allow explanations to be falsified in order to avoid the positive test bias.
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Knowledge
Answer Location: How Psychologists Use the Scientific Method
Difficulty Level: Easy

2. Explain why the scientific method is not used to determine if an afterlife exists after death.
Ans: Answers vary
The existence of an afterlife is difficult to test in such a way that it can be falsified, because its nature is defined as something that is unobservable to living individuals.
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Application
Answer Location: Testability
Difficulty Level: Hard

3. What is the difference between basic and applied research? In what ways do these types of research interact in the field of psychology?
Ans: Answers vary
Basic research examines fundamental elements of behavior--applied research is conducted to solve a real-world problem--basic research allows theories of behavior to be developed that allow applied researchers to use the theories to develop solutions to problems that they can test. The results from applied research then give feedback to basic researchers to determine if the theories can be applied to real-world behaviors.
KEY: Learning Objective: 1.3: Evaluate research in terms of the basic–applied distinction
REF: Cognitive Domain: Analysis
Answer Location: Basic and Applied Research
Difficulty Level: Medium

4. How do the goals of basic and applied research differ? Provide an example of a research question for each type of research.
Ans: Answers vary
Basic research examines fundamental elements of behavior--applied research is conducted to solve a real-world problem--examples will vary.
KEY: Learning Objective: 1.1: Understand that knowledge of research in psychology has value beyond careers in research
REF: Cognitive Domain: Analysis

Answer Location: Basic and Applied Research
Difficulty Level: Medium

5. What is external validity?
Ans: Answers vary
External validity is the degree to which results of a study can be generalized to individuals and behaviors outside of the study.
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Knowledge
Answer Location: Basic and Applied Research
Difficulty Level: Easy

6. How is falsifiability used in psychological science? Define and explain.
Ans: Answers vary
Falsification of explanations of behavior advances psychological science much more than supporting explanations (Platt, 1964). Whenever researchers can show that an accepted explanation is not supported, it changes the direction of investigation in an area of research and moves psychological science forward in gaining new knowledge about behavior. Making predictions about the results they will find in their studies helps researchers contribute to the testability of their observations. With clear predictions made before a study is conducted, researchers can design good tests of their ideas about behavior and help them avoid falling prey to the confirmation bias in believing the results are consistent with their ideas regardless of how they turn out.
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Testability
Difficulty Level: Medium

7. For behaviors, such as mental processes, that cannot be directly observed (e.g., thoughts or memories) how do psychologists use empiricism for inferring information about these behaviors?
Ans: Answers vary
Psychologists have developed techniques for inferring information about mental processes through observation of specific behaviors that are affected by the mental processes. Psychologists then attempt to understand mental processes through observation of these behaviors and the investigation of the factors that influence those behaviors. That is what this book (and the course you are taking) is all about--understanding the methods psychologists use to observe, measure, and study behavior and mental processes.
KEY: Learning Objective: 1.2: Understand what it means to learn about behavior through observation
REF: Cognitive Domain: Comprehension
Answer Location: Using Science to Understand and Explain Behavior
Difficulty Level: Medium