

# CHAPTER 2

## PSYCHOLOGY AS A SCIENCE

### CHAPTER LEARNING OBJECTIVES

**1. *List two core beliefs of science, and describe the steps in the scientific method.***

- Science is an approach to knowing the world built on the core principles that (1) the universe operates according to certain natural laws, and (2) these laws are discoverable and testable.
- Science is founded upon the scientific method, a process that moves from making controlled, direct observations to generating progressively broader conclusions and tests and attempting to disprove hypotheses.

**2. *Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.***

- Psychology shares with every science the primary goals of describing, explaining, predicting, and controlling the objects of study. The goals of psychology differ from those of other sciences because the search for elements of mental processes and behaviour is complicated by constantly shifting human factors.
- Psychology also shares more similarity with the fields of religion and philosophy than many sciences do because psychological findings are more often associated with values, morality, and personal preference.
- Psychology is different from pseudopsychology. Although the latter also attempts to answer fundamental questions about human nature and behaviour, it has no basis in the scientific method.

**3. *List steps in the research process and key characteristics of descriptive and experimental psychological research methods.***

- Psychological research is rooted in first generating a hypothesis, or prediction, about the relationship between two or more variables based on observations.
- Psychologists conduct research with a sample, a small group meant to represent the larger population of interest. The best means of selecting a sample is random selection, a procedure in which everyone in the population has an equal chance of being selected to be in the sample.
- Descriptive research methods include case studies, naturalistic observations, and surveys.
- Case studies are in-depth observations of a single individual.
- Naturalistic observation involves observing people in settings outside of laboratories where their behaviour occurs naturally.
- Surveys may be conducted in interviews or with questionnaires.
- Only experiments allow researchers to draw conclusions about cause-and-effect relationships.
- All research methods have advantages for particular uses and all are subject to various drawbacks. Researchers must plan carefully to avoid subject bias, researcher bias, and demand characteristics.

**4. Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.**

- Correlations allow us to describe and measure relationships between two or more variables. A *correlation coefficient* tells the direction and size of a correlation.
- Researchers use the mean and standard deviation to describe and summarize their results.
- Researchers use *p values* to determine the statistical significance of results. *Effect size* tells how strong the relationship is between variables.
- Replication of experiments and repeated study of the same predictions using different methods help hypotheses become theories.

**5. Tell what ethical steps psychologists take to protect the rights of human research participants.**

- Today, oversight boards called research ethics boards (REBs) help to protect human rights.
- Psychological researchers must obtain informed consent from human participants, protect them from harm and discomfort, protect their confidentiality, and completely debrief them at the end of their participation.
- The use of animal participants in research has also raised ethical concerns. An oversight council called the Canadian Council on Animal Care (CCAC) works to protect animals' needs and comfort in experiments.

## TRUE-FALSE STATEMENTS

1. Psychology, like other sciences, relies on the scientific method.

Answer: True

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

2. If individuals carefully observe the events in the world around them, they are often able to discover the laws that govern those events.

Answer: True

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

3. Theories are the product of deductive reasoning.

Answer: False

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

4. Religion and mysticism were NOT early influences on the development of psychology as a discipline.

Answer: False

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

5. Kant argued that psychology is not a “real” science.

Answer: False

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

6. Psychology does NOT provide the means to answer all of life's major questions.

Answer: True

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

7. Events, situations, and conditions are all examples of variables.

Answer: True

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

8. Researchers can only generalize their findings if they have studied every individual in the population of interest.

Answer: False

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

9. Descriptive research methods allow psychologists to determine the relationship between variables.

Answer: False

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

10. Researcher bias is NOT an issue when naturalistic observation is used.

Answer: False

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

11. Surveys can provide numerical data that researchers can use to measure the strength of the relationship between variables.

Answer: True

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

12. People in the control group of an experiment are NOT exposed to the independent variable.

Answer: True

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

13. To maintain the validity of the study, researchers must actively avoid exposure to sources of biases that may influence their data collection.

Answer: True

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

14. Without statistics, researchers would not know if their original hypotheses were valid.

Answer: True

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

15. The closer in value a correlation coefficient is to zero, the stronger the relationship.

Answer: False

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

16. Experimental analyses are used to determine causality.

Answer: True

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

17. *T*-tests can be used to compare the performance of two groups.

Answer: True

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

18. A small effect size indicates that a researcher has little room for error in the data.

Answer: False

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

19. Modern psychologists no longer have reasons to be concerned about ethics in research.

Answer: False

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

20. Research participants are fully responsible for protecting themselves from harm or discomfort in a research study.

Answer: False

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

## MULTIPLE CHOICE QUESTIONS

21. Most of Francine's friends who got married are now divorced. Francine never wants to get married because she knows that most marriages end in divorce. This is an example of

- a) empirical reasoning.
- b) deductive reasoning.
- c) inductive reasoning.
- d) logical reasoning.

Answer: b

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

22. Roger Sperry examined which processes occur in each hemisphere. Since that time, researchers have conducted many different experiments that have helped us understand that, in right handed persons, the left hemisphere typically processes language while the right hemisphere processes non-verbal material such as emotions. This is an example of

- a) empirical reasoning.
- b) deductive reasoning.
- c) inductive reasoning.
- d) hypothetico-deductive reasoning.

Answer: c

Difficulty: Hard

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

23. What British philosopher argued against the use of deductive reasoning because he believed it was too susceptible to thinkers' biases?

- a) Skinner
- b) Popper
- c) Kant
- d) Bacon

Answer: d

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.



Section Reference: What Is a Science?

24. Today, when psychologists conduct research, they examine the findings of other researchers first to look at broader topic, then narrow it down to design their own studies based on specific predictions. This is an example of

- a) deductive reasoning.
- b) inductive reasoning.
- c) hypothetico-deductive reasoning.
- d) empirical reasoning.

Answer: c

Difficulty: Hard

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

25. Observations of behaviours or any other events must be objectively testable. Which of the following does NOT meet this criterion?

- a) dollars spent in a department store
- b) number of students in a school
- c) frequency of reported car accidents
- d) number of caring people in the world

Answer: d

Difficulty: Easy

Bloomcode: Evaluation

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

26. A given field of study is defined as a science by virtue of its

- a) methods.
- b) equipment.
- c) subject matter.
- d) findings.

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

27. "Psychology is not a science," Adam argues. Which of the following is the BEST argument opposing this claim?

- a) Psychology is a science because it uses sophisticated technology in its research.
- b) Psychology is a science because some of its early contributors were physiologists.
- c) Psychology is a science because of the methods it uses.
- d) Psychology is a science because it studies the brain and the rest of the nervous system.

Answer: c

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

28. Which of the following adjectives would a scientist use most readily in describing the universe?

- a) mysterious
- b) lawful
- c) simple
- d) chaotic

Answer: b

Difficulty: Easy

Bloomcode: Comprehension

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

29. Your text states that, "By carefully observing what happens . . . we can figure out the laws governing those events. In turn, we can use these laws to make predictions about what might happen, and we can then experiment to see whether those predictions come true." Which of these sequences reflects the order in which the goals of psychology are mentioned in this passage?

- a) explanation – description – prediction
- b) explanation – prediction – description
- c) description – prediction – explanation
- d) description – prediction – control

Answer: c

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

30. Dr. Arceneaux is a meteorologist. Dr. Bianchini is a psychologist. With which of the following statements would they most likely agree?

- a) Like the weather, human behaviour is inherently unpredictable.
- b) The weather is predictable. Human behaviour is not.
- c) While the weather is unpredictable, human behaviour is predictable.
- d) Both the weather and human behaviour are ultimately predictable.

Answer: d

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

31. The Greek philosophers used a type of reasoning known as \_\_\_\_ reasoning.

- a) deductive
- b) hypothetico-deductive
- c) Socratic
- d) inductive

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

32. Why did the Renaissance philosopher Francis Bacon question the validity of deductive reasoning? Which type of reasoning did he suggest as an alternative?

- a) Bacon believed that deductive reasoning was prone to biases. He suggested hypothetico-deductive reasoning as an alternative.
- b) Bacon believed that deductive reasoning was prone to biases. He suggested inductive reasoning as an alternative.
- c) Bacon believed that deductive reasoning often failed to result in general theories. He suggested hypothetico-deductive reasoning as an alternative.
- d) Bacon believed that deductive reasoning often failed to result in general theories. He suggested inductive reasoning as an alternative.

Answer: b

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

33. Cecilia is using the formula  $F = M \cdot A$  to solve a physics problem. Cecilia is using \_\_\_\_ reasoning.

- a) hypothetico-deductive
- b) empirical
- c) inductive
- d) deductive

Answer: d

Difficulty: Medium

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

34. Why might one argue that inductive reasoning is less susceptible to bias than deductive reasoning is?

- a) Inductive reasoning begins with a general theory rather than specific observations.
- b) In inductive reasoning, the observations that would refute the theory are specified in advance.
- c) Inductive reasoning begins with objective observations rather than a theory in the reasoner's mind.
- d) Inductive reasoning is essentially the opposite of the sort of deductive reasoning that philosophers used.

Answer: c

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

35. Recall your text's discussion of the behaviourist perspective in Chapter 1. According to your text, "Skinner argued [that] empirical – observable – information should be gathered first, and then theories . . . could be formulated from that." Skinner is endorsing \_\_\_\_ reasoning, promoted early on by \_\_\_\_.

- a) inductive; Bacon
- b) inductive; Descartes
- c) deductive; Bacon
- d) deductive; Descartes

Answer: a

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

36. Why does contemporary psychology no longer rely solely on inductive reasoning?
- a) Inductive reasoning is too susceptible to the biases of the individual psychologist.
  - b) Inductive reasoning is not based on objective observation.
  - c) There are so many factors influencing human behaviour that pure induction could never identify them all.
  - d) Inductive reasoning never proved a successful way of gaining knowledge.

Answer: c

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

37. Most psychologists today use a type of reasoning termed \_\_\_\_ reasoning.
- a) theoretico-inductive
  - b) theoretico-deductive
  - c) hypothetico-inductive
  - d) hypothetico-deductive

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

38. A statement of the objective relationship between two variables is termed a(n) \_\_\_\_.
- a) axiom
  - b) law
  - c) theory
  - d) hypothesis

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

39. Which statement below is MOST consistent with the hypothetico-deductive approach to reasoning?
- a) Hypotheses are deduced from theories.
  - b) Hypotheses are induced from theories.

- c) Theories are deduced from hypotheses.
- d) Theories are induced from observations.

Answer: a

Difficulty: Hard

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

40. Which of the following alternatives CORRECTLY identifies the order in which the goals of science are pursued using a given type of reasoning?

- a) deductive reasoning: observation – prediction – explanation
- b) hypothetico-deductive reasoning: prediction – observation – explanation
- c) hypothetico-deductive reasoning: observation – prediction – explanation
- d) inductive reasoning: explanation – prediction – observation

Answer: b

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

41. You are at the annual conference of the Association for Psychological Science, listening to researchers present papers on social development in later adulthood. In her presentation, Dr. Dryer notes, "Social disengagement theory predicts that older adults will attend social events less often than will middle-aged adults." The next presenter, Dr. Ebrahimi, reports that in the diaries participants kept as part of his study, older adults reported attending just as many parties, dinners, or other informal gatherings as did middle-aged adults, casting doubt on social disengagement theory. Dr. Dryer's statement reflects the \_\_\_ component of hypothetico-deductive reasoning, whereas Dr. Ebrahimi's illustrates \_\_\_.

- a) inductive; the inductive component also
- b) inductive; the deductive component
- c) deductive; the inductive component
- d) deductive; the deductive component also

Answer: c

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

42. The frustration-aggression hypothesis predicts that aggressive behaviour follows the failure

to attain a goal. The hypothesis is supported when an individual hits and curses at a vending machine that fails to deliver a cold drink after money has been inserted. This scenario illustrates the \_\_\_ reasoning process.

- a) reductive
- b) deductive
- c) inductive
- d) hypothetico-deductive

Answer: d

Difficulty: Easy

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

43. Ms. Juniper, an elementary school teacher, believes that children who play outdoors do better in school. She predicts that those children who play outside for at least half an hour each day will make better grades than those who stay inside all day. Which of the following terms best describes her predictions?

- a) hypothesis
- b) theory
- c) inductive reasoning
- d) deductive reasoning

Answer: a

Difficulty: Hard

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

44. Prior to the nineteenth century, which field contributed most to the rise of psychology?

- a) philosophy
- b) chemistry
- c) biology
- d) physics

Answer: a

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

45. Which approach to psychology advocated focus on observable behaviours only?

- a) hypothetico-deductive
- b) inductive reasoning
- c) pseudopsychology
- d) behaviourism

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

46. Julia, a biology researcher, is trying to isolate a gene that may be responsible for autism. Cynthia, a psychology researcher, is investigating the influence of various social factors on outcomes for children with autism. These examples emphasize the difference between psychology and physical sciences in their goal of

- a) prediction.
- b) description.
- c) explaining.
- d) controlling.

Answer: b

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

47. Jonathon is examining the influence of socioeconomic status, parental supervision, and family history on adolescent substance abuse. The goal in Jonathon's research would be to

- a) to pinpoint a single cause of juvenile delinquency.
- b) isolate how much influence each of these factors has on juvenile delinquency.
- c) examine how these factors might come together in different situations to influence juvenile delinquency.
- d) both b) and c)

Answer: d

Difficulty: Medium

Bloomcode: Application

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

48. Jonathon conducted a research study that examined the influence of family history on juvenile delinquency. Based on the findings of his study, he concludes that adolescents whose



parents have a criminal record are more likely to become juvenile delinquents than those whose parents do not have a criminal record. Jonathon's study

- a) has isolated family history as an important factor in juvenile delinquency.
- b) is flawed because family history cannot be directly observed.
- c) is flawed because it doesn't consider that family history might come together with other factors that may also contribute to juvenile delinquency.
- d) is valid because, similar to a physical science, it describes the contribution of one small factor on juvenile delinquency.

Answer: c

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

49. The field that suggests that genetics should be applied to human breeding to produce desired offspring is called

- a) genetic counselling.
- b) in vitro fertilization.
- c) natural selection.
- d) eugenics.

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

50. Involuntary sterilizations were performed in Alberta between 1927 and 1972 on persons who were deemed unfit to reproduce. This is an example of

- a) genetics.
- b) natural selection.
- c) eugenics.
- d) in vitro fertilization.

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

51. Which of the following is an example of pseudopsychology?

- a) astronomy
- b) astrology
- c) Gestalt
- d) Maharishi

Answer: b

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

52. Which pseudoscience uses Zodiac signs to predict the future and provide advice about relationships?

- a) astrology
- b) astronomy
- c) Gestalt
- d) Maharishi

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

53. In which century did psychology move from a field based on philosophy and religion to one based on science?

- a) the 17th century
- b) the 18th century
- c) the 19th century
- d) the 20th century

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

54. Which discipline is credited with transforming psychology from a philosophical field to a scientific one?

- a) biology
- b) chemistry
- c) physics

d) mathematics

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

55. Which of the following statements best expresses the relationship between psychology and such natural sciences as biology?

- a) Psychology is the same as any other natural science.
- b) Psychology pursues different goals and uses different methods than do such natural sciences as biology.
- c) Psychology is unlikely ever to become a true natural science.
- d) Psychology differs in some ways from the other natural sciences.

Answer: d

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

56. According to your text, which scientific goal seems to pose a particular challenge for psychology?

- a) description
- b) prediction
- c) explanation
- d) control

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

57. "The process of observation is a challenging one for psychology, given its subject matter," offers Frederico. "That's why psychology should investigate only phenomena which are clearly observable," Grady responds. "But psychologists can use observable behaviour to make reliable statements about internal processes that can't be seen," counters Holly. "Not to mention, technology continues to expand the range of psychological processes we can actually observe," Indira notes. Which of these discussants is paired with the psychological perspective they most clearly reflect?

- a) Grady – psychodynamic perspective
- b) Holly – behaviourist perspective
- c) Indira – neuroscience perspective
- d) Grady – cognitive perspective

Answer: c

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

58. Recall the levels of analysis described in Chapter 1 of your text. If you were sympathetic to the notion that psychology should limit itself to clearly observable phenomena, on which level of analysis might you concentrate?

- a) the brain level
- b) the individual level
- c) the group level
- d) the social level

Answer: a

Difficulty: Medium

Bloomcode: Application

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

59. Why do many psychologists find current advances in brain imaging especially exciting, in light of your text's discussion of the goals of psychology at the beginning of Chapter 2?

- a) These advances promise to expand the realm of that which is directly observable.
- b) These advances offer indirect ways to observe the mind.
- c) These advances validate the notion that psychology should limit itself to directly observable phenomena.
- d) These advances indicate that difficulties in observation do not necessary impede progress toward the goal of explanation.

Answer: a

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

60. You are writing a history of psychology, focusing on the major themes and perspectives that have dominated the field over the past 150 years. Which phrase below offers the most fitting

completion to the partial title, The Story of Psychology: \_\_\_\_?

- a) Observing the Unobservable
- b) Predicting the Unpredictable
- c) Explaining the Inexplicable
- d) Controlling the Uncontrollable

Answer: a

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

61. Which of the following alternatives accurately states a key difference between psychology and the other sciences?

- a) Psychology is less concerned with practical applications than are some of the other sciences.
- b) Psychology is more likely to deal with "morally loaded" issues than are the other sciences.
- c) Psychology is more concerned with the goal of control than are the other sciences.
- d) Psychology is less interested in building theories than are the other sciences.

Answer: b

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

62. Why is psychology so often misrepresented and misapplied?

- a) It is highly relevant to people's lives.
- b) It has made little real progress in understanding thought and behaviour.
- c) It focuses on unobservable phenomena.
- d) As a discipline, it has been hijacked by pseudopsychologists.

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

63. How do pseudopsychologists differ from psychologists?

- a) Psychologists are less likely to help people with their problems than are pseudopsychologists.
- b) As compared to pseudopsychologists, psychologists are less likely to make exaggerated claims.

- c) Pseudopsychologists are less likely to promote specific moral values than are psychologists.
- d) Pseudopsychologists address different topics than do psychologists.

Answer: b

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

64. Harvard psychologist Steven Pinker argues that language is instinctual among human beings. Which of the following eminent psychologists of the past would be LEAST willing to entertain Pinker's claim?

- a) Abraham Maslow
- b) Roger Sperry
- c) Ulrich Neisser
- d) B. F. Skinner

Answer: d

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

65. About how many of psychology's "celebrity practitioners" are legitimate?

- a) none
- b) only a minority
- c) about half
- d) a majority

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

66. In what way does astrology exemplify a pseudoscience?

- a) It purports to help people with their lives.
- b) It adopts the terms and topics found in psychology.
- c) It makes grandiose claims regarding the influence of its key variables.
- d) Its methods resemble those typical of personality psychology.

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

67. With which of psychology's shared values are pseudosciences such as astrology MOST inconsistent?

- a) Psychology is empirical.
- b) Psychology is multilevel.
- c) Psychology is theory-driven.
- d) Psychology is contextual.

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

68. A researcher observed the eating patterns of laboratory rats while manipulating the amount of sleep they received during a week-long study. In this example, what type of variable is "sleep"?

- a) observable
- b) dependent
- c) independent
- d) extraneous

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

69. If Corby hypothesizes that sleep deprivation in university students results in lower GPAs, what are the variables in his hypothesis?

- a) amount of sleep deprivation
- b) scores on tests
- c) any factors other than sleep deprivation that affect student grades
- d) sleep deprivation and GPA

Answer: d

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

70. "Opposites attract." "Birds of a feather flock together." These aphorisms most closely resemble

- a) hypotheses.
- b) theories.
- c) variables.
- d) operational definitions.

Answer: a

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

71. A hypothesis is best defined as a(n)

- a) broad, general explanation of the phenomenon of interest.
- b) specific prediction concerning the relationship between variables.
- c) specification of a variable in terms of the procedures that will be used to measure it.
- d) behaviour, event, or other characteristic that can assume different values.

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

72. A behaviour, event, or other characteristic that can take on different values is termed a(n) \_\_\_\_\_.

- a) variable
- b) theory
- c) operational definition
- d) hypothesis

Answer: a

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?



73. Helena proposes that the more impulsive a student is, the less likely he or she will be to change answers on a multiple-choice test. The variable(s) in this statement is/are

- a) impulsivity.
- b) answer-changing.
- c) both impulsivity and answer-changing.
- d) the student, impulsivity, and answer-changing.

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

74. Which of the following statements is the best operational definition of “test score”?

- a) feeling of success following the test
- b) feeling of failure following the test
- c) number of questions answered correctly
- d) number of questions answered confidently

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

75. Dr. Cobalt is a researcher who studies the relationship between drinking and driving by measuring blood alcohol level and the number of driving errors that occur in a driving simulator. In this example, what is blood alcohol level?

- a) an independent variable
- b) a dependent variable
- c) a covariant
- d) operational definition

Answer: d

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

76. Two research assistants are collecting data for a study examining child aggression on the

playground by observing children as they are playing. The first research assistant measures aggression by counting the number of times children hit each other. When the second research assistant goes to the playground, he counts the number of times children push each other. What is the greatest flaw with this study?

- a) the research assistants are biased
- b) the study is not a “true” experiment
- c) the research assistants are working with different operational definitions
- d) all data should be collected by the same person

Answer: c

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

77. Psychologists operationalize the \_\_\_\_ in a \_\_\_\_.

- a) groups; experiment
- b) variables; hypothesis
- c) samples; population
- d) hypotheses; theory

Answer: b

Difficulty: Easy

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

78. When asked to define ‘popularity,’ Brianna offers, “It’s when everyone likes you.” Chrissy suggests, “It’s basically the number of friends you have.” In this example, an operational definition is being offered by

- a) both Chrissy and Brianna.
- b) neither Chrissy nor Brianna.
- c) Brianna.
- d) Chrissy.

Answer: d

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

79. Each of the following is an operational definition of ‘happiness’ EXCEPT

- a) a feeling of joy or contentment.
- b) the number of times an individual smiles in an hour.
- c) an individual's self-rating on a 10-point happiness scale.
- d) a diffuse pattern of brain activation associated in past research with positive emotion.

Answer: a

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

80. Dr. Goliath wishes to study the effect of an intervention program on children in grade 6 who have ADHD. In this study all children in grade 6 would be the \_\_\_\_ whereas children with ADHD in grade 6 would be the \_\_\_\_.

- a) independent variable; dependent variable
- b) sample; population
- c) population; sample
- d) dependent variable; independent variable

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

81. Pollsters are conducting a survey to predict which candidate is going to win the next mayoral election in a large city. They decide to poll 5 of the 40 subdivisions in the city. How accurate is their poll likely to be?

- a) quite accurate as they are polling different areas
- b) not accurate as the pollsters did not use random selection
- c) not accurate as they need to poll everyone in the city
- d) quite accurate as polling 5 subdivisions suggests they used random selection

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

82. A popular women's magazine published a survey in their latest division asking about the division of housework between men and women. Based on the results of the survey, they plan to publish an article in the next edition claiming that women are still responsible for 90% of

household chores. This result demonstrates

- a) researcher bias.
- b) sampling bias.
- c) participant bias.
- d) demand characteristics.

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

83. Which of the following is NOT a descriptive research method?

- a) case study
- b) experiment
- c) naturalistic observation
- d) survey

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

84. Which of the following is a key advantage of the descriptive/correlational research method?

- a) They reflect actual behaviour.
- b) They allow close control over variables.
- c) They explain cause and effect.
- d) There is less of a concern of researcher and participant biases.

Answer: a

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

85. Which of the following is a key disadvantage of the descriptive/correlational research method?

- a) They are impractical in some situations.
- b) They do not reflect actual behaviour.
- c) They do not allow control over variables.
- d) They cannot infer relationships between variables.

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

86. Dr. Freckleton plans to study the relationship between drug abuse and minor illnesses such as colds and flu. Why might he be most likely to use a descriptive research method?

- a) Descriptive studies will allow him to draw conclusions about cause and effect.
- b) There is little concern about participant or researcher biases.
- c) He would have greater control over the variable of drug abuse.
- d) It would be unethical to manipulate the variable of drug abuse.

Answer: d

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

87. When a researcher is unable to control variables in a study, what research method are they likely to choose?

- a) experimental
- b) logical
- c) descriptive
- d) none of the above. Research requires that at least one variable be manipulated.

Answer: c

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

88. Descriptive is to experimental as \_\_\_\_ is to \_\_\_\_.

- a) relationship; cause
- b) cause; relationship
- c) description; statistics
- d) statistics; description

Answer: a

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

89. Karen is a primatologist interested in studying the grooming behaviour of baboon troops. To remain unobtrusive, she sat in a tree to watch the animals and counted the number of instances of grooming behaviour she observed. What research method did Karen use?

- a) naturalistic observation
- b) case study
- c) survey
- d) experiment

Answer: a

Difficulty: Easy

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

90. Which of the following does NOT address the problems associated with the natural observation method?

- a) the use of a single observer
- b) not informing observers of the hypothesis being investigated
- c) having the observer spend a lot of time in the setting they will be observing
- d) using multiple observers

Answer: a

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

91. A study conducted by Landsberger (1958) suggested that when workers knew they were being observed their productivity increased regardless of what changes were made to the workplace. This finding became known as the

- a) the Landsberger effect.
- b) the worker bias effect.
- c) the Hawthorne effect.
- d) the productivity effect.

Answer: a

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

92. Dr. Speckle is conducting a case study on the effectiveness of melatonin in the treatment of depression associated with seasonal affective disorder. Which of the following is a possible concern about Dr. Speckle's research?

- a) participant bias
- b) researcher bias
- c) sampling bias
- d) all of the above

Answer: b

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

93. Martha administered a survey about child abuse to 2000 anonymous new parents and found no reports of a parent exhibiting this type of behaviour. Knowing the number of incidences of child abuse reported each year, Martha suspected that some type of bias attributed to the erroneous results. Which type of bias most likely affected this study?

- a) researcher bias
- b) participant bias
- c) sampling bias
- d) experimental bias

Answer: b

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

94. If researchers were interested in studying individuals' attitudes toward the treatment of persons with mental illness in Canada, which of the following would they be MOST likely to use?

- a) a case study
- b) a survey
- c) naturalistic observation
- d) experiment

Answer: b

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

95. What type of information about variables can a survey provide without the use of statistical analysis of the information collected?

- a) strength
- b) direction
- c) if a relationship exists
- d) no information

Answer: c

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

96. Dr. Nalling conducted a survey asking participants about their hygienic habits. She was very surprised to find that most of her participants had exemplary hygienic habits. Which bias might account for this finding?

- a) researcher bias
- b) sampling bias
- c) participant bias
- d) demand characteristics

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

97. Reese and her roommate were participants in a study researching the affects of playing computer games. Every time Reese would play a computer game, her roommate would leave the house. If the independent variable was "computer game play," which group did Reese's roommate belong to?

- a) control
- b) experimental
- c) double-blind
- d) sample

Answer: a

Difficulty: Medium

Bloomcode: Application



Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

98. Grace conducted an experiment to study the incidence of birth defects in infants born of mothers who drank alcohol during their pregnancies. She had a poster located behind her desk in full view of study participants that stated "Don't Drink" accompanied by a disturbing image of a newborn with multiple birth defects. What type of bias does this poster represent?

- a) researcher
- b) participant
- c) demand characteristic
- d) statistical

Answer: c

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

99. In an experiment, the researcher deliberately manipulates the \_\_\_ variable and measures the \_\_\_ variable.

- a) experimental; control
- b) control; experimental
- c) dependent; independent
- d) independent; dependent

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

100. In experimental research, presumed cause is to potential effect as \_\_\_ is to \_\_\_.

- a) dependent variable; independent variable
- b) independent variable; dependent variable
- c) experimental group; control group
- d) control group; experimental group

Answer: b

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

101. At Folger University, Drs. Chase and Sanborn are conducting an experiment on the effects of caffeine on memory. Participants are randomly assigned to a caffeine or a no-caffeine group and their recall of items on a word list is later assessed. Which pair below correctly identifies a variable in this experiment?

- a) caffeine – dependent variable
- b) caffeine – independent variable
- c) word recall – independent variable
- d) word recall – experimental variable

Answer: b

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

102. At Folger University, Drs. Chase and Sanborn are conducting an experiment on the effects of caffeine on memory. Participants are randomly assigned to a caffeine or a no-caffeine group and their recall of items on a word list is later assessed. Which pair below correctly names and identifies the variables in this experiment?

- a) word recall – control variable; caffeine – experimental variable
- b) word recall – independent variable; caffeine – dependent variable
- c) word recall – dependent variable; caffeine – independent variable
- d) word recall – experimental variable; caffeine – control variable

Answer: c

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

103. Which of the following sequences best reflects the order of the steps in the scientific method as it is described and illustrated in your text?

- a) build theory – operationalize variables – develop hypothesis
- b) develop hypothesis – operationalize variables – build theory
- c) develop hypothesis – build theory – operationalize variables
- d) build theory – develop hypothesis – operationalize variables

Answer: b

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

104. Which of the following statements BEST expresses the relationship between a sample and a population?

- a) A sample includes a population.
- b) A population includes a sample.
- c) A population is similar to a sample.
- d) A sample is completely separate from a population.

Answer: b

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

105. At a DUI checkpoint, some cars are stopped at random; many others are not stopped. Using the terminology of psychological research, the cars that are stopped may be considered a \_\_\_ of all the cars that pass by the checkpoint.

- a) sample
- b) subset
- c) population
- d) segment

Answer: a

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

106. Magazine surveys cannot be considered valid research methods because its readers are the only ones who will respond and they may have a special interest in the hypothesis. This is an example of a

- a) random sample.
- b) sampling error.
- c) sampling bias.
- d) representative sample.

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

107. Amy is conducting a survey of dating attitudes and behaviours among young adults as part of her masters' thesis work. Amy distributes questionnaires to 200 randomly selected students enrolled in an introductory psychology course at her university. The 200 students constitute Amy's \_\_\_\_\_. The people to whom she assumes her results will generalize are termed the \_\_\_\_\_.

- a) control group; population
- b) experimental group; population
- c) population; sample
- d) sample; population

Answer: d

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

108. Tiffany is conducting a survey on personality traits and binge drinking among college students as part of her masters' thesis work. Tiffany distributes questionnaires to students enrolled in her own section of an introductory psychology course, as well as those taught by her thesis advisor. Based on this information, it appears that Tiffany has failed to

- a) randomly select the participants.
- b) operationalize the variables.
- c) randomly assign the participants.
- d) debrief the participants.

Answer: a

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

109. Case studies, naturalistic observation, and surveys are examples of \_\_\_\_ research methods.

- a) observational
- b) descriptive
- c) predictive
- d) experimental

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

110. Description is to explanation as \_\_\_\_ is to \_\_\_\_.

- a) naturalistic observation; survey research
- b) survey research; naturalistic observation
- c) naturalistic observation; experimental research
- d) experimental research; survey research

Answer: c

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

111. In which of the following alternatives is a scientific goal matched with an appropriate research method?

- a) description – experimental research
- b) explanation – survey research
- c) explanation – experimental research
- d) explanation – case study

Answer: c

Difficulty: Easy

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

112. Kayley is trying to decide whether to study the relationship between alcohol consumption using survey research techniques on the one hand, or experimental research methods on the other. Which of the following alternatives most accurately identifies considerations Kayley should keep in mind as she plans her research?

- a) Survey responses are prone to biases, but survey work allows you to identify causes and effects. Experimental research is more artificial, but allows you to control variables.
- b) Both survey research and experimental methodology involve somewhat artificial conditions. However, both survey research and experimental research are fairly easy to conduct.
- c) Both survey research and experimental methodology allow you to identify causes and effects. However, experimental research usually involves artificial laboratory conditions, while survey responses may reflect biases.
- d) Experimental research usually involves artificial laboratory conditions, but it would allow you to identify causes and effects. Survey research does not allow cause-effect-conclusions, and survey responses may reflect biases.

Answer: d

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

113. Dr. Girard is conducting a detailed examination of a patient with dissociative identity disorder. Dr. Girard is undertaking

- a) a survey.
- b) experimental research.
- c) a case study.
- d) naturalistic observation.

Answer: c

Difficulty: Easy

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

114. Which of the following prominent psychologists developed his theories primarily through case study work?

- a) James
- b) Freud
- c) Skinner
- d) Wundt

Answer: b

Difficulty: Easy

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

115. Naturalistic observation entails

- a) the systematic, detailed study of a single individual.
- b) examining existing records, such as census documents.
- c) asking a sample of individuals a set of questions.
- d) examining behaviour in the setting in which it typically occurs.

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

116. DeAndre is recording instances of physical aggression among children in a schoolyard at recess. DeAndre is undertaking

- a) naturalistic observation.
- b) experimental research.
- c) survey research.
- d) a case study.

Answer: a

Difficulty: Easy

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

117. Which of the following alternatives correctly identifies BOTH an advantage AND a disadvantage of naturalistic observation?

- a) Naturalistic observation is highly reflective of actual behaviour, but it is difficult to generalize results gained through the study of a single person.
- b) Naturalistic observation is highly reflective of actual behaviour, but it is prone to biases.
- c) Naturalistic observation allows cause-and-effect conclusions, but it can be highly artificial.
- d) Naturalistic observation allows control over variables, but it is prone to biases.

Answer: b

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

118. Survey is to case study as \_\_\_\_ is to \_\_\_\_.

- a) experimental; descriptive
- b) descriptive; experimental
- c) one participant; many participants
- d) many participants; one participant

Answer: d

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

119. Dr. Pang prepares a set of questions to ask college students about their drinking behaviour and their attitudes toward alcohol. Dr. Pang is undertaking

- a) a survey.
- b) a case study.
- c) naturalistic observation.
- d) experimental research.

Answer: a

Difficulty: Easy

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

120. Dr. Ireland deliberately varied the imageability of items on a list and later measured participants' recall of the items. Dr. Ireland conducted a(n) \_\_\_ study.

- a) naturalistic
- b) correlational
- c) observational
- d) experimental

Answer: d

Difficulty: Easy

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

121. Experimental research requires that the responses of \_\_\_ group(s) be examined.

- a) at least 1
- b) 2
- c) at least 2
- d) 3 or more

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

122. Experimental group is to control group as \_\_\_ is to \_\_\_.



- a) independent variable; no independent variable
- b) dependent variable; no dependent variable
- c) independent variable; dependent variable
- d) dependent variable; independent variable

Answer: a

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

123. In an industrial psychology experiment, one group of participants is exposed to heat stress; another is not. All participants' performance on a manual dexterity task is then examined. Which set below contains equivalent items?

- a) independent variable; experimental group; no stress group
- b) independent variable; experimental group; heat stress group
- c) no independent variable; control group; heat stress group.
- d) no independent variable; experimental group; no stress group

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

124. Why are control groups included in experiments?

- a) to determine whether two variables are related
- b) to ascertain cause-and-effect relationships
- c) to ensure that participant characteristics are essentially the same in each group
- d) to ensure that the results may be generalized to the population

Answer: b

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

125. Random assignment

- a) guarantees the elimination of differences between the control and experimental groups.
- b) may not entirely eliminate differences between the control and experimental groups.
- c) does little to minimize differences between the control and experimental groups.
- d) ensures that a sample represents a population.

Answer: b

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

126. Research studies that in some way unintentionally communicate the results the researcher expects are said to reflect

- a) subject bias.
- b) researcher bias.
- c) the double-blind effect.
- d) demand characteristics.

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

127. A pharmaceutical company wishes to test the efficacy of a new anti-depressant using a double-blind procedure. Which alternative CORRECTLY describes the procedure the company would use?

- a) The research assistants would know which participants were receiving the new drug and which were receiving an inert pill. Each patient would also know which type of pill he or she was taking.
- b) The research assistants would know which participants were receiving the new drug and which were receiving an inert pill. Each patient, though, would not know which type of pill he or she was taking.
- c) The research assistants would not know which participants were receiving the new drug and which were receiving an inert pill. Each patient, though, would know which type of pill he or she was taking.
- d) The research assistants would not know which participants were receiving the new drug and which were receiving an inert pill. Also, each patient would not know which type of pill he or she was taking.

Answer: d

Difficulty: Medium

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

128. Which of the following research methods is CORRECTLY matched with a description?

- a) naturalistic observation – behaviour is investigated in the environment in which it typically occurs
- b) case study – a large sample is asked a set of questions
- c) survey research – at least one variable is deliberately manipulated by the researcher
- d) experimental research – a single individual is examined in detail

Answer: a

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

129. Which of the following research methods is CORRECTLY matched with an advantage?

- a) naturalistic observation – rich source of hypotheses regarding a single individual's behaviour
- b) case study – allows control over variables
- c) survey research – lets researchers measure the strength of the relationship between variables
- d) experimental research – highly reflective of actual human behaviour

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

130. What method do psychologists use to analyze study data?

- a) logic
- b) induction
- c) statistics
- d) deduction

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

131. Which of the following values indicates that there is no relationship between two variables?

- a)  $-1.0$
- b)  $-.10$

- c) 0.00
- d) 1.0

Answer: c

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

132. The category of experimental analyses that assists researchers in making conclusions based on results is known as \_\_\_\_.

- a) correlation statistics
- b) inferential statistics
- c) probability statistics
- d) descriptive statistics

Answer: b

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

133. Which of the following statistical procedures can be used to determine to what degree participants' scores within a group vary?

- a) standard deviation
- b) mean
- c) *t*-test
- d) analysis of variance

Answer: a

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

134. Which value indicates the greatest likelihood that a result occurred by chance alone?

- a) .005
- b) .05
- c) .5

d) .001

Answer: c

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

135. Which term is most nearly synonymous with the term correlation?

- a) relationship
- b) explanation
- c) observation
- d) influence

Answer: a

Difficulty: Easy

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

136. The correlation coefficient ranges from

- a) 1 to 100.
- b) -1.00 to 1.00.
- c) 0 to 1.
- d) -100 to 100.

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

137. "Okay. What does a correlation coefficient tell us?" Zoe asks the members of her psychology study group. "The strength of a relationship between two variables," answers Yvonne. "The direction of the relationship between two variables," puts in Will. Who's right?

- a) Only Yvonne is right.
- b) Only Will is right.
- c) Both Yvonne and Will are right.
- d) Neither Yvonne nor Will is right.

Answer: c

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

138. The direction of the relationship between two variables is given by a correlation coefficient's \_\_\_\_; the strength of the relationship is given by the coefficient's \_\_\_\_.

- a) absolute value; value
- b) sign; absolute value
- c) sign; value
- d) absolute value; sign

Answer: b

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

139. Between which pair of variables is one most likely to find a positive correlation?

- a) alcohol consumption and GPA
- b) GPA and height
- c) GPA and amount of studying
- d) GPA and depression

Answer: c

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

140. Velma found a positive correlation between self-reported alcohol and drug use and sick days taken in a study of white-collar workers. A graph of her results would show

- a) a diagonal line from the top left to the bottom right.
- b) a diagonal line from the bottom left to the top right.
- c) a horizontal line.
- d) a U-shaped curve.

Answer: b

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

141. A researcher finds a correlation of  $-.51$ . Which pair of variables is the researcher most likely investigating?

- a) GPA and alcohol use
- b) IQ and GPA
- c) GPA and height
- d) GPA and amount of studying

Answer: a

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

142. Which of the following correlation coefficients represents the strongest relationship between two variables?

- a)  $-.75$
- b)  $.60$
- c)  $.00$
- d)  $.30$

Answer: a

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

143. A \_\_\_ correlation results when there is no relationship between two variables.

- a) negative
- b) inverse
- c) zero
- d) infinite

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

144. If there is a relationship between the amount of caffeine consumed and heart rate in that the more caffeine that is consumed the faster a person's heart beats, how would you describe the correlation between caffeine and heart rate?

- a) negative correlation
- b) positive correlation
- c) stable correlation
- d) unstable correlation

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

145. As a person ages they demonstrate lower rates of recall for words studied from a list. This suggests that the relationship between age and recall memory is a

- a) positive correlation.
- b) negative correlation.
- c) zero correlation.
- d) stable correlation.

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

146. In a survey project, Dr. Miyake finds a correlation of .60 between attachment security and the likelihood with which participants say they'd engage in various pro-social behaviours at work. Each of the following is consistent with this data EXCEPT

- a) attachment security leads people to behave pro-socially at work.
- b) behaving pro-socially at work can produce a feeling of attachment security.
- c) lower attachment security is associated with less pro-social work behaviour.
- d) there is a perfect relationship between attachment security and pro-social work behaviour.



Answer: d

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

147. Using a sample of young adolescents, Dr. Nguyen finds a correlation of .55 between scores on a measure of neglectful or uninvolved parenting and scores on a measure of delinquent behaviour. Which of the following might Dr. Nguyen legitimately conclude?

- a) Uninvolved parenting causes juvenile delinquency.
- b) Parenting that is more uninvolved is related to a higher degree of delinquent behaviour.
- c) Uninvolved parenting is unrelated to delinquency.
- d) There is a negative relationship between uninvolved parenting and delinquent behaviour.

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

148. In a large correlational study, Grace finds a correlation coefficient of .15 between one pair of variables. She finds a coefficient of  $-.65$  between two other variables. Which alternative below BEST describes these two correlations, respectively?

- a) weak positive relationship; strong negative relationship
- b) very weak positive relationship; strong negative relationship
- c) weak positive relationship; very strong negative relationship
- d) weak positive relationship; modest negative relationship

Answer: a

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

149. "I'm so excited! I got a correlation between scores on my socio-sexual activity measure and scores on the anxious attachment scale, just like I predicted," enthuses Holly. Based on your text's discussion, the absolute value of Holly's coefficient should be

- a) at least .20.

- b) at least .30.
- c) at least .40.
- d) at least .60.

Answer: b

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

150. Correlational analysis is to experimental analysis as \_\_\_ is to \_\_\_.

- a) inferential statistics; descriptive statistics
- b) *t*-test; analysis of variance
- c) relationship; cause-and-effect
- d) cause-and-effect; relationship

Answer: c

Difficulty: Medium

Bloomcode: Analysis

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

151. Statistics which summarize data are termed \_\_\_ statistics. Those that indicate what might be concluded from research results are called \_\_\_ statistics.

- a) experimental; correlational
- b) correlational; experimental
- c) inferential; descriptive
- d) descriptive; inferential

Answer: d

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

152. In a small study, a group of students in an Experimental Psychology course collected scores on two variables – Variables A and B – from five participants as follows: Participant 1: A = 3, B = 10; Participant 2: A = 3, B = 9; Participant 3: A = 8, B = 4; Participant 4: A = 6, B = 6; Participant 5: A = 10, B = 1. “The mean score on Variable A is 6, and the variables are not

correlated,” Ivy notes. “The mean Variable B score is 5, and the variables are negatively correlated,” John states. “No, the mean score on B is 6; but, yes, A and B are negatively correlated,” Kenya remarks. “Wait. The mean score on A is 5,” Lara adds. Which of these students is correct?

- a) Only John is correct.
- b) Kenya and Lara are correct.
- c) John and Lara are correct.
- d) Only Kenya is correct.

Answer: d

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

153. One statistic that tells researchers how much participants' scores vary from one another is the

- a) weighted mean.
- b) standard deviation.
- c) correlation coefficient.
- d) inferential statistic.

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

154. “The average was 75,” explains Dr. Cole, handing back the semester’s first midterm. The lowest score was 32, and there were several in the 40s. But I had some 95s, 96s, and even a 98 – so it’s not like it’s impossible to do well.” Handing back the second midterm, Dr. Cole notes, “The average was 75 again. There were a few in the low 60s, but I got a bunch in the high 80s and into the 90s. It’s looking better!” Which of the following statements is TRUE?

- a) The means were the same on the two tests, but the standard deviation was lower on the first than on the second.
- b) The means were the same on the two tests, but the standard deviation was higher on the first than on the second.
- c) The mean was higher on the second test than on the first, but the standard deviation was lower on the second test.
- d) The means and standard deviations were the same on the two tests.

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

155. In an experiment containing one experimental group and one control group, the performance of the participants in the two groups would be compared using a(n)

- a) *t*-test.
- b) standard deviation.
- c) analysis of variance.
- d) correlation coefficient.

Answer: a

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

156. Dr. Nash is reading Odette's thesis proposal. "Recovering cocaine addicts will view three types of words flashed briefly on the computer screen: cocaine-related words, words related to drugs the participants did not abuse, and neutral words unrelated to drugs," reads one sentence. Later, Dr. Nash encounters this sentence: "Mean reaction times to the three types of words will be analyzed using a *t*-test." Which piece of feedback is Dr. Nash most likely to give to Odette?

- a) "The proposed analysis seems fine."
- b) "I would suggest using analyses of variance, since you have three groups."
- c) "Correlational analyses such as *t*-tests aren't appropriate for experiments."
- d) "I would propose computing correlation coefficients for this type of study."

Answer: b

Difficulty: Hard

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

157. What does a psychologist usually mean when she says a particular experimental result is 'significant'?

- a) The result reflects a large difference between the mean scores of one participant group and the mean scores of another.
- b) The result is important in a practical sense.

- c) The result will allow psychologists to support one theory over alternative theories.
- d) The result is unlikely to have occurred solely as a result of chance.

Answer: d

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

158. Paulette encounters the following sentence in a psychology journal article she is reading: "Participants exposed to brief heat stress made more errors on the visual attention task than did participants not exposed to heat stress,  $p < .05$ ." Paulette can conclude each of the following EXCEPT

- a) the difference between the groups in the number of errors most likely stems from heat stress.
- b) there was a significant difference between the groups in the number of errors.
- c) the number of errors was much larger in the heat stress group than it was in the other group.
- d) there is less than a 5% chance that random coincidence was responsible for the difference between the groups in the number of errors.

Answer: c

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

159. Why do the editors of psychology journals sometimes insist that psychologists include an estimate of effect size along with the probability statistic when they report a significant result?

- a) By itself, a probability statistic indicates only whether the difference in means between the groups in the study is unlikely to reflect chance. The effect size statistic indicates whether the difference is large.
- b) By itself, a probability statistic indicates only that the difference in means between the groups in the study is large. The effect size statistic indicates whether the difference is unlikely to reflect chance.
- c) The effect size statistic replicates the probability statistic, providing additional evidence that the result is significant.
- d) By itself, a probability statistic indicates only that there is a relationship between two variables. The effect size statistic gives some indication of cause and effect.

Answer: a

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

160. Redoing and expanding on a study to see if its results hold up in different conditions with new samples is termed \_\_\_\_.

- a) reproduction
- b) replication
- c) repetition
- d) restoration

Answer: b

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

161. Immediately after the title of a journal article in psychology, a brief overview of the research always appears before the introduction begins. This overview is called a(n) \_\_\_\_.

- a) synopsis
- b) preface
- c) precis
- d) abstract

Answer: d

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

162. Which of the following universities conducted research exposing mentally ill patients to LSD and ECT to test the causes and effects of brainwashing?

- a) University of Toronto
- b) Harvard University
- c) McGill University
- d) Stanford University

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

163. What procedure at the end of an experiment provides participants with information regarding the full purpose and goals of the study?

- a) informed consent
- b) confidentiality review
- c) debriefing
- d) welfare review

Answer: c

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

164. Trent, a doctoral student in psychology, is preparing his dissertation proposal. The research ethics board (REB) at his university will approve his research if

- a) the research promises at least some scientific benefit.
- b) participants will experience no risk or discomfort during the research.
- c) the scientific benefit of the research outweighs the risk to the participants.
- d) participants are fully informed of the study's true purpose before the session begins.

Answer: c

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

165. Dr. O'Connor is telling his participants before he begins the experiment that their participation is completely voluntary and that they can stop taking part at any time. Dr. Quick is providing a detailed explanation to participants who have just completed a study. Which of the following statements is TRUE?

- a) Dr. O'Connor is obtaining informed consent from his participants. Dr. Quick is debriefing her participants.
- b) Dr. O'Connor is debriefing his participants. Dr. Quick is obtaining informed consent from her participants.
- c) Both Dr. O'Connor and Dr. Quick are obtaining informed consent from their participants.
- d) Both Dr. O'Connor and Dr. Quick are debriefing their participants.

Answer: a

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

166. Which of the following sequences best reflects the order of events in a typical experimental session?

- a) informed consent – debriefing – experiment
- b) informed consent – experiment – debriefing
- c) debriefing – informed consent – experiment
- d) debriefing – experiment – informed consent

Answer: b

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

167. Which of the following would NOT be an ethical concern for research ethics boards?

- a) not telling a participant the true purpose of a study
- b) not paying participants for participating in a study
- c) disclosing the names of participants in a study
- d) pressuring participants to participate in a study

Answer: b

Difficulty: Medium

Bloomcode: Evaluation

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

168. Dr. Kudo is planning a research study where he will tell his participants that he is conducting an experiment on math ability in university students. In actuality, he will really be studying how readily students will cheat if given the opportunity. He will give participants a mock math test and leave them alone with a booklet that is labelled "ANSWERS". He will measure cheating behaviour by secretly video taping the participants and later checking to see if they opened the booklet. After the experiment, Dr. Kudo will explain the true purpose of the experiment. Does Dr. Kudo's experiment violate research ethics?

- a) Yes, because Dr. Kudo is using deception.
- b) Yes, because participants cannot give informed consent if they do not know the purpose of the study.
- c) Yes, because the study may cause harm to the participants.
- d) No, it was necessary to deceive the participants to achieve the studies goals and he debriefs them at the end of the study.



Answer: d

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

169. Jennifer is a student researcher who wants to study memory in children with autism. As Jennifer works part time in a school for children with autism she plans to ask the parents of the students if they will allow their children to participate. What ethical guideline is Jennifer violating?

- a) informed consent
- b) participation must be voluntary
- c) deception or incomplete disclosure
- d) protect participants from harm

Answer: b

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

170. About \_\_\_% of psychological research involves animals. Of the animals used, approximately \_\_\_% are primates.

- a) 8; 5
- b) 8; 25
- c) 25; 5
- d) 25; 25

Answer: a

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

171. How is animal research at colleges, universities, and institutes regulated?

- a) It is overseen by the same REBs that regulate research with human participants.
- b) It is overseen by the Canadian Council on Animal Care, a different organization than the REB that regulates research with human participants.
- c) In contrast to research with human participants, the regulation of animal research is left to the common sense of individual scientists.
- d) Application must be made to a provincial board prior to each study involving animal subjects.

Answer: b

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

172. According to your text, approximately \_\_\_% of the public supports animal research, provided that the research serves scientific purposes.

a) 50

b) 65

c) 75

d) 90

Answer: c

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

## MATCHING QUESTION

173. Match the appropriate words in the left column to the definitions in the right column.

<u>Terms</u>		<u>Definitions</u>
A. Demand characteristics	_____	1. Identifying a sample in such a way that everyone in the population of interest has an equal chance of being involved in the study
B. Positive correlation	_____	2. When higher scores on one variable are related to lower scores on another variable
C. Independent variable	_____	3. Allow researchers to demonstrate a relationship between the variables of interest
D. Experimental group	_____	4. When each participant has an equal chance of being in either group in an experiment
E. Random selection	_____	5. When a researcher unintentionally conveys the desired outcome of the study to a participant
F. Sampling bias	_____	6. When higher scores on one variable are related to higher scores on another variable
G. Descriptive methods	_____	7. Reasoning process proceeding from small specific situations to more general truths.
H. Experimental methods	_____	8. Group that has not been or will not be exposed to the treatment
I. Deductive reasoning	_____	9. Condition or event that you expect to change as a result of changing a variable
J. Perfect correlation	_____	10. Condition or event that is thought to be a factor in changing another condition or event
K. Negative correlation	_____	
L. Control group	_____	
M. Dependent variable	_____	
N. Random assignment	_____	
O. Inductive reasoning	_____	

## ANSWERS TO MATCHING QUESTION

1. E
2. K
3. G
4. N
5. A
6. B
7. O
8. L
9. M
10. C

Difficulty: Easy

Bloomcode: Knowledge

## FILL-IN-THE-BLANK

174. The natural law of \_\_\_\_ suggests that when something is set in motion, it has an effect on other things.

Answer: cause and effect

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

175. Ideas that psychologists develop about the laws that govern processes and behaviour are called \_\_\_\_.

Answer: theories

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

176. The field of \_\_\_\_ is often credited with shifting psychology from a philosophy to a science.

Answer: biology

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

177. Forced sterilization and controlled breeding are two consequences of \_\_\_\_.

Answer: eugenics

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

178. In an experimental setting, the variable that is NOT manipulated is called the \_\_\_\_ variable.

Answer: dependent

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

179. A subset of a population is known as a(n) \_\_\_\_.

Answer: sample

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

180. A \_\_\_\_ study focuses on observing a single person.

Answer: case

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

181. The research methodology that asks participants to answer a series of questions is called a(n) \_\_\_\_.

Answer: survey

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

182. In more complex experiments, multiple experimental groups are exposed to varying amounts of the \_\_\_\_ variable.

Answer: independent

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

183. An unintentional factor that conveys what a researcher expects to find is known as a(n) \_\_\_\_.

Answer: demand characteristic

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

184. If a researcher chooses a sample that will all respond in the same way, it can alter the results of the study because the sample is not \_\_\_\_ of the population.

Answer: representative

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

185. Analyzing data through the use of \_\_\_\_ allows researchers to describe and measure relationships between variables.

Answer: statistics

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

186. The value of a perfect positive relationship is \_\_\_\_.

Answer: +1.0

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

187. Researchers are able to conclude more broadly from their results through the use of \_\_\_\_ statistics.

Answer: inferential

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

188. A(n) \_\_\_\_ test can be used to compare the performance of more than two groups.

Answer: analysis of variance

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

189. To assess the strength of the relationship between variables, a(n) \_\_\_\_ can be calculated.

Answer: effect size

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

190. Before a researcher can test his or her hypotheses by collecting data, a(n) \_\_\_\_ must provide ethical oversight.

Answer: institutional review board

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?



191. Protecting the identity and information collected from individual respondents in a research study refers to maintaining \_\_\_\_.

Answer: confidentiality

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

## SHORT ANSWER ESSAY QUESTIONS

192. What logical process starts with broad, basic principles and applies them in specific situations to prove many smaller truths?

Answer: deductive reasoning

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

193. What term refers to personal beliefs or conventional wisdom that a particular thinker accepts as a broad, basic truth?

Answer: bias

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

194. What logical process uses direct observations to generate broad conclusions?

Answer: Inductive reasoning

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

195. What blended model is commonly used by psychologists to employ the best attributes of deductive and inductive reasoning?

Answer: hypothetico-deductive approach

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

196. What four goals does psychology share with other sciences?

Answer: Describe, explain, predict, control.

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

197. Psychology distinguishes itself from other scientific fields by examining what three issues?

Answer: values, morality, and personal preference

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

198. What is the guiding principle of astrology?

Answer: Human personality traits are based on the alignment of the planets on given birth dates, and these traits determine how people make decisions and interact with others.

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

199. What does it mean to operationalize a variable?

Answer: develop a working definition

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

200. Define random selection.

Answer: All members of an identified population have an equal chance of being selected as part of the sample.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

201. At what stage of research are case studies usually conducted?

Answer: during early investigations when psychologists are developing ideas

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

202. Describe a limitation associated with the use of naturalistic observation methodology.

Answer: Research subjects may change their behaviour if they know they are being observed; researcher bias may influence what researchers do and do not record.

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

203. In an experiment, what names are given to the variable that is manipulated and the variable that is measured?

Answer: Independent variables are manipulated and dependent variables are measured.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

204. What term is used to describe the process in which everyone in a sample has an equal chance of being placed in either the control or experimental group?

Answer: random assignment

Difficulty: Easy

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

205. Name two benefits of a study that uses a double-blind procedure.

Answer: Reduces researcher bias; reduces subject bias.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

206. What statistic is used to describe the relationship between two or more variables?

Answer: correlation coefficient

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

207. Interpret the meaning of a strong positive correlation found in a study that measured abusive parenting and childhood aggression.

Answer: High incidences of abusive parenting are related to high incidences of childhood aggression.

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

208. What is the mean of a data set?

Answer: The mean is a calculation of the arithmetic average of the numerical data in the data set.

Difficulty: Medium

Bloomcode: Application

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

209. Define “statistically significant.”

Answer: Performance in two or more groups varies more than could be expected by chance alone.

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

210. Describe what replication means?

Answer: Replication means that the findings of a study were the same or very similar to those of previous studies performed on the same topic.

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

211. What is the ethical goal of psychologists who are conducting research?

Answer: to protect research participants from physical and emotional harm during the study

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

212. Identify three pieces of information that are often included on a research study consent form?

Answer: details regarding purpose of the study, procedures to be used, disclosure of risks and benefits of participation, responsibility of participants

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

## ESSAY QUESTIONS

213. What are the two essential beliefs that science has regarding the world?

Answer: The universe operates according to natural laws and that such laws are discoverable and testable.

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

214. Define the term “hypothesis” and provide an example.

Answer: A hypothesis is a testable statement that can objectively be proven false. Hypotheses are typically in the form of an if/then statement; applicable example must be provided.

Difficulty: Hard

Bloomcode: Application

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

215. Describe the four steps used in the scientific approach to study behaviour.

Answer: making observations, developing a hypothesis, testing the hypothesis, and developing a theory

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List two core beliefs of science, and describe the steps in the scientific method.

Section Reference: What Is a Science?

216. Describe a key difference between the goals of psychology and the physical sciences.

Answer: Although psychologists attempt to isolate the fundamental elements of behaviour, they realize that these factors may be temporary or permanent combinations that vary by individual.

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

217. What is the difference between psychology and pseudopsychology?

Answer: Pseudopsychology argues that psychological principles can provide answers to all of life's major questions; has no basis in the scientific method.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

218. What difficult balance, in regards to using psychology and pseudopsychology, must psychologists maintain?

Answer: They must encourage people to seek guidance for how to live effectively while simultaneously distancing themselves from the non-scientific approaches used by pseudopsychology.

Difficulty: Hard

Bloomcode: Analysis

Learning Objective: Compare and contrast psychology with other natural sciences, such as biology, chemistry, and physics, and with pseudosciences, such as astrology.

Section Reference: Is Psychology a Science?

219. Stanley wanted to determine whether hunger influenced his performance on his history exams. For the first exam, he ate 1 hour before the exam. For the second exam, he ate immediately after the exam. Identify the independent and dependent variables in this study.

Answer: The independent variable is the manipulation of when he ate (before/after the exam). The dependent variable is his performance on the test.

Difficulty: Hard

Bloomcode: Application

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

220. A political scientist wanted to study the prevalence of racism in Canada. Unknowingly, her sample included a disproportionate number of racist individuals. Name a methodological criticism of her research.

Answer: Sampling bias occurred. Individuals in the sample were more likely to confirm her hypothesis which decreases the validity of her findings.

Difficulty: Hard

Bloomcode: Application



Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

221. Explain the Hawthorne Effect. What type of study was conducted to show this effect?

Answer: People who are observed during a study or at their workplace will change or improve their behaviour if they know they are being watched. This was shown in a naturalistic observation study.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

222. Name two disadvantages of using a case study methodology.

Answer: Results may not generalize to larger populations; researcher bias may occur.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

223. Describe three different means by which surveys can be conducted.

Answer: in-person, telephone, electronic (email), written questionnaire dissemination, etc.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

224. In an experiment, how does an experimental group vary from a control group?

Answer: The control group is not exposed to the independent variable; the experimental group is.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

225. Describe the characteristics of a double-blind study.

Answer: Neither the researcher nor the participants know who is assigned to the control and experimental groups.

Difficulty: Medium

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

226. Define and provide an example of a demand characteristic.

Answer: Any unintentional factor that conveys what a researcher expects to find such that participants may change their behaviours, therefore compromising the validity of the results. Provide an applicable example.

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: List steps in the research process and key characteristics of descriptive and experimental psychological research methods.

Section Reference: How Do Psychologists Conduct Research?

227. Describe the difference between a negative and positive correlation.

Answer: Positive correlations indicate that variables change in the same direction (e.g., both get larger or smaller) whereas a negative relationship indicates an inverse relationship (e.g., one increases while another decreases).

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

228. Provide an example of a negative correlation.

Answer: Example should reflect an inverse relationship between two variables.

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

229. Make a distinction between descriptive and inferential statistics.

Answer: Descriptive statistics summarize data and include measures such as the mean and standard deviation. Inferential statistics are used to interpret the meaning of results and determine whether study results support or refute hypotheses.

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

230. What is the purpose of calculating a probability statistic?

Answer: to set a criterion for determining what a significant difference in scores would be

Difficulty: Hard

Bloomcode: Knowledge

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

231. Why is experimental replication necessary?

Answer: Replication ensures that experimental methodology is being used effectively and that findings are consistent across a variety of locations and time periods. Robust findings eventually grow into theories which in turn, may become laws.

Difficulty: Hard

Bloomcode: Comprehension

Learning Objective: Tell what information is conveyed by statistics, including correlation coefficients, means, and standard deviations, and explain how psychologists draw conclusions about cause and effect.

Section Reference: How Do Psychologists Make Sense of Research Results?

232. What special considerations must researchers give to participants such as children or the elderly?

Answer: These populations are protected because they may not be able to give informed consent on their own. Caregivers or parents must give permission for them to participate.

Difficulty: Medium

Bloomcode: Comprehension

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

233. Evaluate the following statement: Animal testing has not benefited our understanding of human behaviour. Is this an accurate statement? Why or why not?

Answer: Much of the knowledge we have regarding the brain and nervous system has and will continue to be derived from animal research.

Difficulty: Hard

Bloomcode: Evaluation

Learning Objective: Tell what ethical steps psychologists take to protect the rights of human research participants.

Section Reference: What Ethical Research Guidelines Do Psychologists Follow?

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