

## Chapter 1: Introduction to the Science of Psychology

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### LEARNING OBJECTIVES

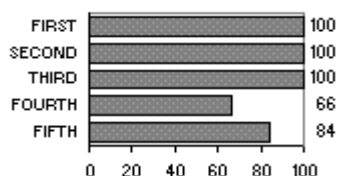
1. Define psychology.
2. Name the various subfields of psychology. Describe the activities and interests of psychologists in each subfield.
3. Explain how the subfields of psychology can overlap. Describe how the field of psychology is linked to other disciplines.
4. Define empiricism.
5. Discuss the history of psychology. Compare the goals, methods, and beliefs associated with structuralism, Gestalt psychology, psychoanalysis, functionalism, and behaviorism.
6. Compare and contrast the basic assumptions of the following approaches to psychology: biological, evolutionary, psychodynamic, behavioral, cognitive, and humanistic. Define eclectic.
7. Explain why psychologists are interested in the influence of culture on behavior and mental processes. Define and give examples of sociocultural variables. Compare and contrast individualist and collectivist cultures.
8. Define critical thinking. Be able to assess claims by using the five-step process presented in the text.
9. Define and give an example of a hypothesis, operational definition, and variable.
1. Discuss the importance of reliability and validity in evaluating the quality of evidence.
2. Describe the evolution of a theory.
3. List the four main goals of scientific research in psychology.
4. Describe the following research methods, and discuss the advantages and disadvantages of each: naturalistic observation, case studies, and surveys.
5. Define correlation. Give an example of a positive correlation and a negative correlation. Explain how correlation coefficients are interpreted. Explain why correlation does not guarantee causation.
6. Define and give an example of an experiment. Explain why experiments can establish cause-and-effect relationships, but other research methods cannot.
7. Define and explain the role of independent and dependent variables, and of experimental and control groups in an experiment.
8. Define confounding variable. Discuss the problems associated with the following confounding variables: random variables, the placebo effect, and experimenter bias.
9. Define random assignment, placebo, and double-blind design. Explain the purpose of each in an experiment.
19. Define sampling, random sample, and biased sample. Discuss the importance of sampling in data collection.
10. Give examples of the questions and issues associated with the field of behavioral genetics. Explain how family, twin, and adoption studies are used to explore the relative roles of genetics and environmental variables in human development.

11. Define data. Summarize the use of descriptive and inferential statistics in evaluating data.
12. Explain the importance of statistically significant research results.
13. Describe the ethical guidelines that psychologists must follow.

### MULTIPLE CHOICE

1. Psychology is best defined as the
  - a. search for treatments of emotional, cognitive, and neurological disorders.
  - b. use of scientific methods to study the elements of human consciousness.
  - c. study of the human experience from birth to old age.
  - d. science of behavior and mental processes.
 ANS: D REF: 3 OBJ: 1 KEY: F
2. In his oral presentation class, Kevin gave a speech on the field of psychology. He opened by saying that psychology is best defined as the scientific study of
  - a. disorders and therapies.
  - b. motivation and emotion.
  - c. behavior and mental processes.
  - d. sensation and perception.
 ANS: C REF: 3 OBJ: 1 KEY: C/A
3. A cognitive psychologist would be most likely to design a study of
  - a. how people influence each other.
  - b. the processes involved in decision making.
  - c. which characteristics make humans unique.
  - d. how we can best analyze psychological data.
 ANS: B REF: 3 OBJ: 2 KEY: F

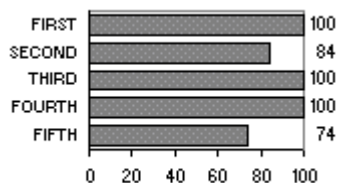
### Responses:



$r_{pb} = .39$  A. 3% B. 91% C. 3% D. 3%

4. Psychologists who focus their research on processes such as decision making, problem solving, and imagination would most likely be considered \_\_\_\_\_ psychologists.
  - a. cognitive
  - b. personality
  - c. social
  - d. industrial-organizational
 ANS: A REF: 3 OBJ: 2 KEY: F

### Responses:



$r_{pb} = .22$  A. 92% B. 5% C. 0% D. 3%

5. After two years of research, Dr. Simon believes that she has discovered a hormone that is directly related to eating disorders. Dr. Simon is most likely a \_\_\_\_\_ psychologist.

a. social  
b. biological  
c. community  
d. cognitive

ANS: B REF: 4 OBJ: 2 KEY: C/A

6. Roy is interested in the details of the relationship between brain structures and behavior. Roy is most likely a \_\_\_\_\_ psychologist.

a. personality  
b. social  
c. biological  
d. counseling

ANS: C REF: 4 OBJ: 2 KEY: C/A

7. Suzi is interested in studying the reasons that some people tend to pursue social activities in their free time, whereas others prefer to engage in solitary activities. Suzi is interested in \_\_\_\_\_ psychology.

a. clinical  
b. developmental  
c. biological  
d. personality

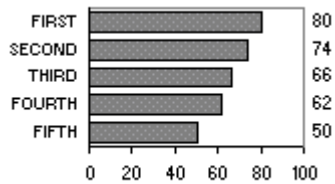
ANS: D REF: 4 OBJ: 2 KEY: C/A

8. Dana is investigating the relationship between optimism and a number of other factors, including achievement and problem-solving skills. Dana is most likely a \_\_\_\_\_ psychologist.

a. social  
b. clinical  
c. personality  
d. quantitative

ANS: C REF: 4 OBJ: 2 KEY: C/A

**Responses:**



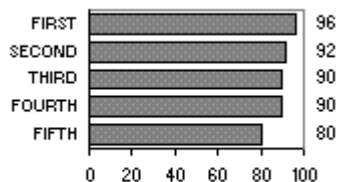
$r_{pb} = .23$  A. 7% B. 8% C. 67% D. 17%

9. Psychologists in which of the following subfields would be most interested in researching changes over time in human behavioral, emotional, and mental processes?

a. Social psychology  
b. Personality psychology  
c. Cognitive psychology  
d. Developmental psychology

ANS: D REF: 4 OBJ: 2 KEY: F

**Responses:**



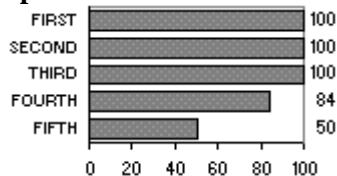
$r_{pb} = .19$  A. 1% B. 3% C. 5% D. 91%

10. Wanda is interested in the various kinds of changes that people go through in old age (sixty-five years or older). Into which area of specialization in psychology does this research fall?

a. Biological  
b. Cognitive  
c. Personality  
d. Developmental

ANS: D REF: 4 OBJ: 2 KEY: C/A

**Responses:**



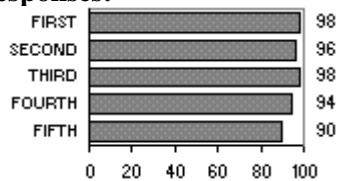
$r_{pb} = .49$  A. 6% B. 3% C. 3% D. 88%

11. Bob is a psychologist who works for the Educational Testing Service. He is involved in constructing and evaluating tests and questionnaires. He also develops mathematical methods to analyze data. Bob is most likely a(n) \_\_\_\_\_ psychologist.

a. biological  
b. developmental  
c. engineering  
d. quantitative

ANS: D REF: 4 OBJ: 2 KEY: C/A

**Responses:**



$r_{pb} = .20$  A. 0% B. 1% C. 2% D. 96%

12. Daria is a forty-year-old woman. When Daria is under stress, she has episodes in which she believes she is a ten-year-old girl named Rita. Daria has no recollection of these episodes. Daria would benefit most from the services of a \_\_\_\_\_ psychologist.

a. community  
b. clinical  
c. personality  
d. developmental

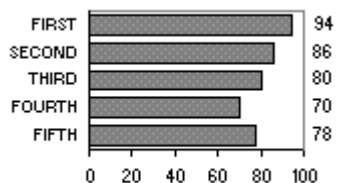
ANS: B REF: 5 OBJ: 2 KEY: C/A

13. Dr. Quent studies the causes and treatment of schizophrenia. Dr. Quent is most likely a(n) \_\_\_\_\_ psychologist.

a. quantitative  
b. experimental  
c. clinical  
d. eclectic

ANS: C REF: 5 OBJ: 2 KEY: C/A

**Responses:**



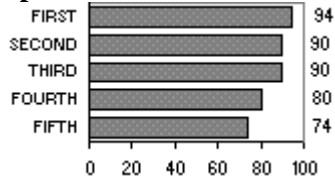
$r_{pb} = .22$  A. 0% B. 11% C. 82% D. 7%

14. Rosita is trying to prevent inner-city teenage boys from joining gangs. She has set up a program in the boys' neighborhood to teach job skills. Rosita is most likely a \_\_\_\_\_ psychologist.

a. clinical  
b. community  
c. counseling  
d. social

ANS: B REF: 5 OBJ: 2 KEY: C/A

**Responses:**



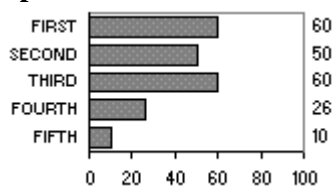
$r_{pb} = .23$  A. 2% B. 87% C. 1% D. 10%

15. Community psychologists are primarily interested in the \_\_\_\_\_ of mental illness.

a. treatment  
b. prevention  
c. observation  
d. analysis

ANS: B REF: 5 OBJ: 2 KEY: F

**Responses:**



$r_{pb} = .3$  A. 33% B. 41% C. 22% D. 4%

16. Loretta's day involves giving IQ tests, diagnosing learning disabilities, and setting up programs to improve academic achievement. Loretta is most likely a \_\_\_\_\_ psychologist.

a. school  
b. health  
c. sports  
d. quantitative

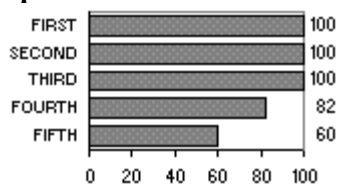
ANS: A REF: 5 OBJ: 2 KEY: C/A

17. Troy is interested in understanding mob behavior and hopes to identify the factors related to the eruption of mob violence. He would most likely be classified as a \_\_\_\_\_ psychologist.

a. social  
b. biological  
c. personality  
d. cognitive

ANS: A REF: 5 OBJ: 2 KEY: C/A

**Responses:**



$r_{pb} = .45$  A. 89% B. 0% C. 4% D. 7%

18. A paper titled "The Effect of Peer Group Pressure on Individual Behavior" would most likely have been written by a(n) \_\_\_\_\_ psychologist.

a. behavioral  
b. social  
c. psychodynamic  
d. evolutionary

ANS: B REF: 5 OBJ: 2 KEY: C/A

19. Dr. Branaman's study investigated the relationship between offices with large windows and workers' productivity. Dr. Branaman is most likely a(n) \_\_\_\_\_ psychologist.

a. educational  
b. counseling  
c. environmental  
d. community

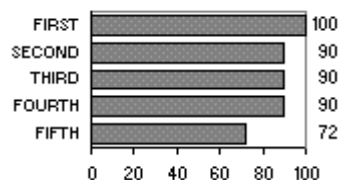
ANS: C

REF: 6

OBJ: 2

KEY: C/A

**Responses:**



$r_{pb} = .11$

A. 2%

B. 0%

C. 89% D. 9%

20. The interiors of cars have been redesigned in recent years so that most of the controls can be operated without the hands of the driver leaving the steering wheel. These changes were most likely suggested by a(n) \_\_\_\_\_ psychologist.

a. personality  
b. engineering  
c. social  
d. developmental

ANS: B

REF: 6

OBJ: 2

KEY: C/A

21. Valeri, a \_\_\_\_\_ psychologist, testified at a recent trial that the defendant fit the profile for the crime committed.

a. social  
b. forensic  
c. experimental  
d. biological

ANS: B

REF: 6

OBJ: 2

KEY: C/A

22. Vicki is working as an educational psychologist. Which of the following exemplifies the kind of work Vicki's job will entail?

a. Determining how interior design affects student productivity  
b. Investigating how personality traits predict behavior  
c. Studying the effectiveness of new learning techniques  
d. Diagnosing students with learning disabilities

ANS: C

REF: 5

OBJ: 2

KEY: C/A

MSC: New

23. The tasks of a(n) \_\_\_\_\_ psychologist include improving supervisors' leadership skills, creating maximum-efficiency work groups, and suggesting other research-based programs designed to increase efficiency.

a. industrial/organizational  
b. clinical  
c. experimental  
d. developmental

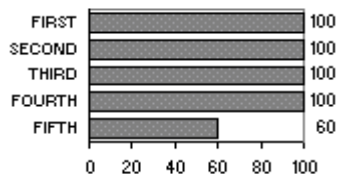
ANS: A

REF: 5

OBJ: 2

KEY: F

**Responses:**



$r_{pb} = .51$

A. 92% B. 8%

C. 0%

D. 0%



30. Pavan decided to try introspection as a way to study mental processes. Which of the approaches to the study of consciousness was he following?

a. Behaviorist  
b. Structuralist  
c. Functionalist  
d. Biological

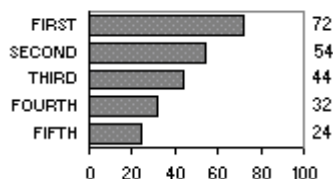
ANS: B

REF: 10

OBJ: 5

KEY: C/A

**Responses:**



$r_{pb} = .33$

A. 27% B. 45% C. 18% D. 10%

31. Wundt's approach to psychology is called "structuralism" because he stressed that

a. childhood experiences structure later development.  
b. conscious experience consists of complicated combinations of elemental sensations.  
c. the structure of overt behavior is the only appropriate subject matter for psychology.  
d. the whole of the structure is different from its elemental parts.

ANS: B

REF: 10

OBJ: 5

KEY: F

32. "The whole is greater than the sum of its parts" is a belief associated with the \_\_\_\_\_ view of psychology.

a. Gestalt  
b. psychodynamic  
c. behavioral  
d. humanistic

ANS: A

REF: 10

OBJ: 5

KEY: F

33. Owen believes that psychologists are wasting their time when they try to identify the basic elements of human consciousness. Owen thinks that psychologists should examine a person's total conscious experience instead. Owen's beliefs are most similar to those of

a. functionalists.  
b. Gestalt psychologists.  
c. structuralists.  
d. cognitive psychologists.

ANS: B

REF: 10

OBJ: 5

KEY: C/A

34. Anna is constantly arguing with her parents and starting fights at school. Anna's guidance counselor explains that she behaves this way in order to satisfy her unconscious aggressive urges. Anna's guidance counselor likely subscribes to the \_\_\_\_\_ approach to psychology.

a. humanistic  
b. behavioral  
c. cognitive  
d. psychodynamic

ANS: D

REF: 11

OBJ: 5

KEY: C/A

35. Your psychologist tells you that all your problems are a result of conflict between your biological urges and the moral restrictions that society places on you. Your psychologist appears to follow the work of

a. Ivan Pavlov.  
b. John B. Watson.  
c. Wilhelm Wundt.  
d. Sigmund Freud.

ANS: D

REF: 11

OBJ: 5

KEY: C/A

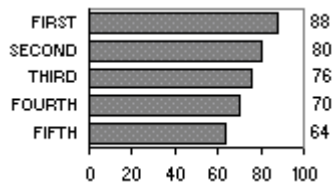


36. Peter and Wanda are having a discussion about consciousness. “What is consciousness? What does consciousness consist of?” asks Peter. Wanda says, “I think it would be more helpful to think about the purpose of consciousness. For example, how does it help us adapt to our environment?” In their discussion, Peter was taking a \_\_\_\_\_ approach, whereas Wanda was taking a \_\_\_\_\_ approach.

a. structuralist; behavioral  
b. behavioral; structuralist  
c. functionalist; structuralist  
d. structuralist; functionalist

ANS: D REF: 10-12 OBJ: 5 KEY: C/A

**Responses:**



$r_{pb} = .20$  A. 16% B. 1% C. 6% D. 77%

37. Which of the following statements most closely follows the functionalist view of consciousness?
- a. Consciousness is the study of behavior and mental processes.  
b. Consciousness helps people adapt to their environments.  
c. Consciousness is an inherently private concept.  
d. Consciousness is made up of our basic sensations and other mental building blocks.

ANS: B REF: 11-12 OBJ: 5 KEY: F

38. The chapter in your textbook on consciousness would be of *least* interest to someone advocating
- a. functionalism.  
b. behaviorism.  
c. cognitive psychology.  
d. structuralism.

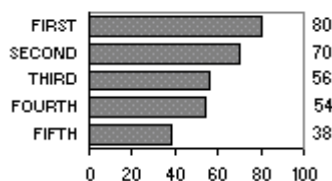
ANS: B REF: 12 OBJ: 5 KEY: F

39. “Anything that cannot be observed and measured directly is not worth studying.” Which psychologists would be most likely to agree with this statement?

a. Sigmund Freud and Erik Erikson  
b. John B. Watson and B. F. Skinner  
c. William James and Wilhelm Wundt  
d. Jean Piaget and Lawrence Kohlberg

ANS: B REF: 12 OBJ: 5 KEY: C/A

**Responses:**



$r_{pb} = .29$  A. 4% B. 61% C. 26% D. 9%

40. Dr. Keller is a psychiatrist who believes that schizophrenia is caused by a chemical imbalance, depression is caused by maladaptive thought patterns, and phobias result from learned experiences. Dr. Keller's approach to psychology is best described as

a. behavioral.  
b. psychodynamic.  
c. eclectic.  
d. cognitive.

ANS: C REF: 14 OBJ: 6 KEY: C/A

41. Steve was constantly fearful and tense. He went to a psychiatrist to receive treatment. Although Steve expected to talk his problems over with the psychiatrist, the doctor only briefly talked to Steve and prescribed a pill to help him relax. The doctor was treating Steve with a \_\_\_\_\_ approach.

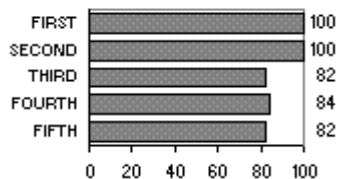
a. biological  
b. psychodynamic  
c. behavioral  
d. cognitive

ANS: A

REF: 14

OBJ: 6

KEY: C/A

**Responses:** $r_{pb} = .23$ 

A. 91% B. 9%

C. 0%

D. 0%

42. Dr. Allera studies how brain activity is related to depressed and anxious behavior in college students. Dr. Allera probably takes the \_\_\_\_\_ approach to psychology.

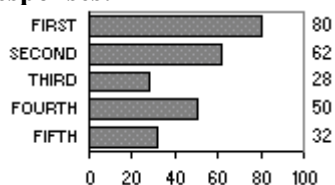
a. behavioral  
b. psychodynamic  
c. cognitive  
d. biological

ANS: D

REF: 14

OBJ: 6

KEY: C/A

**Responses:** $r_{pb} = .34$ 

A. 13% B. 6%

C. 19% D. 62%

43. Researchers have found that infants may have an innate ability to respond to faces. These researchers suggest that an interest in human faces may have developed because it helps newborns focus on their only source of food and care. These researchers are most likely following a(n) \_\_\_\_\_ approach.

a. behavioral  
b. evolutionary  
c. cognitive  
d. biological

ANS: B

REF: 14-15

OBJ: 6

KEY: C/A

44. Professor Smith claims females tolerate infidelity by their spouses more than males do because males have to make sure they are not committing their resources to raising another male's offspring. Professor Smith is probably taking the \_\_\_\_\_ approach to psychology.

a. behavioral  
b. evolutionary  
c. humanistic  
d. psychodynamic

ANS: B

REF: 14-15

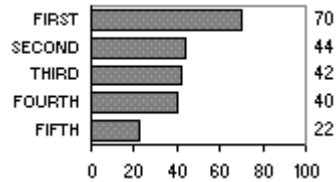
OBJ: 6

KEY: C/A

45. You firmly believe that learning from the environment is a more important influence on behavior than genetic influences. You would be most skeptical of the claims of
- the evolutionary approach.
  - humanistic psychology.
  - cognitive-behavioral research.
  - psychoanalysis.

ANS: A REF: 14-15 OBJ: 6 KEY: C/A

**Responses:**



$r_{pb} = .32$  A. 44% B. 24% C. 18% D. 13%

46. Psychodynamic psychologists emphasize that behavior is often controlled by
- external stimuli.
  - perception.
  - unconscious processes.
  - free will.

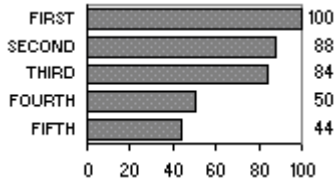
ANS: C REF: 15 OBJ: 6 KEY: F

47. Eleanor is having difficulties with relationships. Her psychotherapist tells her that the goal of her therapy sessions will be to try to uncover unconscious conflicts she has about her relationships. Eleanor's therapist most likely takes the \_\_\_\_\_ approach to psychology.

- psychodynamic
- cognitive
- behavioral
- relational

ANS: A REF: 15 OBJ: 6 KEY: C/A

**Responses:**



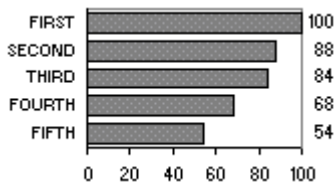
$r_{pb} = .50$  A. 73% B. 11% C. 13% D. 2%

48. Six-year-old Jean hits another child and steals the child's lunch money. A psychologist who takes a psychodynamic approach would suggest that Jean

- learned that hitting someone would result in a reward.
- has an unconscious drive for aggression, causing her to act out.
- asserted herself, an example of bettering herself as a person.
- hit the child for food, an adaptive mechanism to survive.

ANS: B REF: 15 OBJ: 6 KEY: C/A

**Responses:**



$r_{pb} = .40$  A. 15% B. 79% C. 5% D. 1%

49. Janice thinks that the attention her little brother gets when he has tantrums actually encourages him to have more tantrums. Janice's explanation is based on a \_\_\_\_\_ approach.

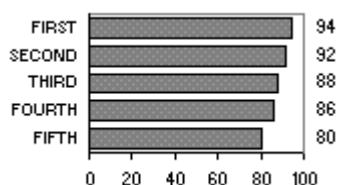
a. psychodynamic  
b. cognitive  
c. humanistic  
d. behavioral

ANS: D

REF: 15

OBJ: 6

KEY: C/A

**Responses:** $r_{pb} = .16$ 

A. 3%

B. 3%

C. 4%

D. 89%

50. Adam, the class bully, cornered Billy and demanded he give up his lunch and new binder. A psychologist who takes a behavioral approach would suggest that Adam

a. learned that yelling or pushing someone would produce desired outcomes.  
b. has uncontrolled id impulses.  
c. has unbalanced brain chemistry.  
d. is expressing a genetically determined dominance trait.

ANS: A

REF: 15

OBJ: 6

KEY: C/A

MSC: New

51. Sharya believes that people are largely motivated to behave in certain ways because of their patterns of thought and judgments. Sharya's views are most consistent with the \_\_\_\_\_ approach to psychology.

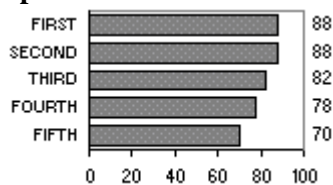
a. psychodynamic  
b. evolutionary  
c. cognitive  
d. behavioral

ANS: C

REF: 16

OBJ: 6

KEY: C/A

**Responses:** $r_{pb} = .19$ 

A. 5%

B. 1%

C. 82% D. 12%

52. A psychologist taking a cognitive approach would most likely explain that psychological disorders are the result of

a. unconscious aggressive instincts turned inward.  
b. past rewards, punishments, and other learning experiences.  
c. unproductive and self-destructive thought patterns.  
d. an imbalance in brain chemistry.

ANS: C

REF: 16

OBJ: 6

KEY: F

53. In a conversation with her mother, Sarah says, "Our next-door neighbor is a real weirdo." Sarah's mom replies, "Although he might seem strange, we shouldn't judge him. His actions would probably make sense to us if we saw the world through his eyes." Sarah's mom seems to agree mostly with the \_\_\_\_\_ approach of psychology.

a. behavioral  
b. psychodynamic  
c. evolutionary  
d. humanistic

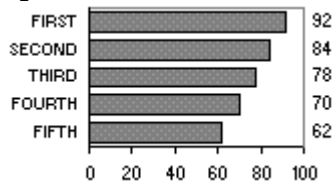
ANS: D REF: 16-17 OBJ: 6 KEY: C/A MSC: New

54. According to the humanistic approach to psychology, a person's behavior is determined by

a. instincts or biological urges.  
b. rewards and punishments.  
c. unique and individual perceptions of the world.  
d. how information is stored, retrieved, and processed by the brain.

ANS: C REF: 16-17 OBJ: 6 KEY: F

**Responses:**



$r_{pb} = .26$  A. 8% B. 14% C. 78% D. 1%

55. For her dissertation, Anupama would like to study the effects of culture on driving behavior. She would like to conduct the study in the United States and in India. However, she is advised to be careful with her study because both countries are comprised of many different subcultures. Else said, both countries are considered to be

a. multicultural.  
b. randomly sampled cultures.  
c. individualist cultures.  
d. collectivist cultures.

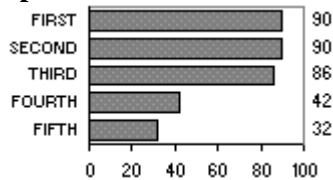
ANS: A REF: 19 OBJ: 7 KEY: C/A

56. Which of the following beliefs would a collectivist society support?

a. Personal effort leads to success.  
b. Restraining oneself to be part of a social unit is good.  
c. Multiple values, such as realizing one's personal potential, meeting personal obligations to others, and identifying with one's cultural heritage, are important.  
d. Self-esteem is a direct function of one's ability to express unique aspects of oneself to others.

ANS: B REF: 18-19 OBJ: 7 KEY: C/A

**Responses:**



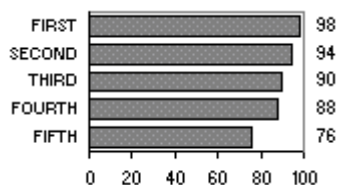
$r_{pb} = .36$  A. 2% B. 69% C. 28% D. 1%

57. An industrial/organizational psychologist doing cross-cultural work finds that in Country Alam, the workers have the highest job satisfaction when they are rewarded for their accomplishments and quality of work. Country Alam probably has a(n) \_\_\_\_\_ culture.

a. individualist  
b. communist  
c. collectivist  
d. democratic

ANS: A REF: 18-19 OBJ: 7 KEY: C/A

**Responses:**



$r_{pb} = .29$  A. 91% B. 1% C. 6% D. 2%

58. The only sports Emily likes are tennis, golf, cycling, and running because in those sports she can show everyone how uniquely talented she is. Emily most likely grew up in what type of culture?

a. Collectivist  
b. Centrist  
c. Individualist  
d. Socialist

ANS: C REF: 18-19 OBJ: 7 KEY: C/A MSC: New

59. Your friend Isha never complains about being lonely but often expresses her worries about being rejected by the group of people she associates with. Her attitudes are typical of someone raised in a(n) \_\_\_\_\_ country.

a. monocultural  
b. collectivist  
c. multicultural  
d. individualist

ANS: B REF: 18-19 OBJ: 7 KEY: C/A

60. Italian-Americans living in New York could be said to represent a \_\_\_\_\_ within a \_\_\_\_\_ society.

a. subculture; collectivist  
b. cross-culture; individualist  
c. subculture; multicultural  
d. cross-culture; sociocultural

ANS: C REF: 19 OBJ: 7 KEY: F

61. Critical thinking is

a. used by most people in most situations.  
b. the process of assessing claims and making judgments on the basis of well-supported evidence.  
c. the default manner in which people come to make decisions about important matters.  
d. unimportant for scientists.

ANS: B REF: 22 OBJ: 8 KEY: F

62. Bradley used to readily accept statements made by politicians and take claims made by advertisers at face value. After a discussion in his communication class, Bradley decides he will now avoid making poor decisions based on such claims by

a. following the process of introspection.  
b. engaging in critical thinking.  
c. no longer utilizing naturalistic observation.  
d. relying less on positive psychology.

ANS: B REF: 22 OBJ: 8 KEY: C/A MSC: New

63. Which of the following questions would be *least* helpful to someone trying to analyze a claim with critical thinking?

- a. What are my gut feelings about the claim's validity?
- b. Is there evidence to support the claim?
- c. Can the available evidence be interpreted another way?
- d. What evidence would help to evaluate the alternatives?

ANS: A

REF: 22-23

OBJ: 8

KEY: F

64. The prediction that “bright colors will make people happier” is called a(n)

- a. hypothesis.
- b. law.
- c. theory.
- d. explanation.

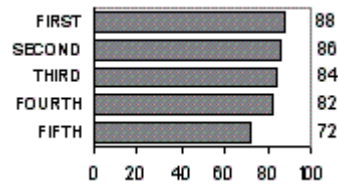
ANS: A

REF: 23

OBJ: 9

KEY: F

**Responses:**



$r_{pb} = .20$

A. 83% B. 1%

C. 15% D. 1%

65. Joe, a psychologist, believes that listening to classical music while studying will increase academic performance. This is an example of a(n)

- a. hypothesis.
- b. theory.
- c. experimental design.
- d. case study.

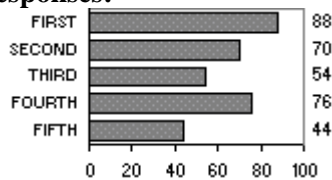
ANS: A

REF: 23

OBJ: 9

KEY: C/A

**Responses:**



$r_{pb} = .28$

A. 67% B. 30% C. 0%

D. .2%

66. An experimenter wants to determine whether taking a specific amount of the drug Prozac relieves depression. Which of the following will be most in need of an operational definition in this study?

- a. Variables
- b. Descriptive Statistics
- c. Inferential statistic
- d. Experimental confound

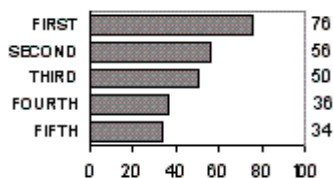
ANS: A

REF: 24

OBJ: 9

KEY: C/A

**Responses:**



$r_{pb} = .29$

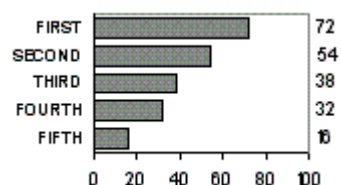
A. 51% B. 31% C. 10% D. 7%

67. Shantae is doing an experiment on how anxious people will feel if they are told that they did not do well on an intelligence test. She asks her participants to rate how nervous, upset, and anxious they feel on a scale from 1 (not at all) to 7 (very). Participants' scores on the scale are a(n)

a. operational definition of anxiety.                      c. confounding variable.  
b. independent variable.                                      d. intervening variable.

ANS: A                      REF: 24                      OBJ: 9                      KEY: C/A

**Responses:**



$r_{pb} = .37$                       A. 43% B. 29% C. 21% D. 7%

68. The term “variables” is best defined as the
- a. consistency of the evidence obtained through research.  
b. specific factors or characteristics that are manipulated or measured in research.  
c. degree to which evidence accurately represents the topic being studied.  
d. specific, testable statements or propositions about the topic being studied.

ANS: B                      REF: 24                      OBJ: 9                      KEY: F

69. Tamera is taking a test that purports to be able to determine her personality based on her responses to simple questions about her favorite colors. Tamera soon realizes that the test is a poor measure of one's personality. In other words, she realizes that the test is

a. lacking in validity.                                      c. lacking in reliability.  
b. randomly assigned.                                      d. randomly sampled.

ANS: A                      REF: 24                      OBJ: 10                      KEY: C/A

70. Tim claims that he has developed a test that can assess a person's intelligence based on the answer to a single question. As you hear about the test, you start to wonder whether Tim's test is truly measuring intelligence. In other words, you have concerns about the \_\_\_\_\_ of the test.

a. reliability    c. validity  
b. statistical significance                                      d. absolute value

ANS: C                      REF: 24                      OBJ: 10                      KEY: C/A

71. Dan performs the same experiment on several different occasions. Each time he performs the experiment, his data suggest different conclusions. The results from Dan's experiment lack

a. reliability.    c. empiricism.  
b. variability.    d. statistical significance.

ANS: A                      REF: 24                      OBJ: 10                      KEY: C/A

72. What is a theory?

a. A factor or characteristic that is manipulated or measured in research.  
b. An elaborate set of hypotheses  
c. A law that has been established through experimentation  
d. An integrated set of principles that can be used to explain and predict phenomena

ANS: D                      REF: 24                      OBJ: 11                      KEY: C/A                      MSC: New



73. Albert has collected and examined his research data and now has a set of general principles that he feels accounts for the acquisition of personality traits. Albert has formed a(n) \_\_\_\_\_ of personality.

a. theory  
b. operational definition  
c. experimental design  
d. opinion

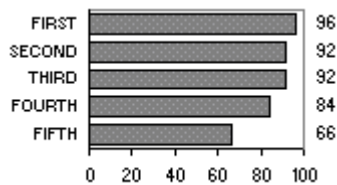
ANS: A REF: 24 OBJ: 11 KEY: C/A

74. Psychology is based on research questions about many phenomena. The first step in assembling information about a phenomenon is usually

a. devising a theory that will predict future phenomena.  
b. describing the phenomenon of interest.  
c. finding the correlation between the variables that constitute the phenomenon.  
d. devising an experiment that will explain the causal relationships involved.

ANS: B REF: 25 OBJ: 12 KEY: F

**Responses:**



$r_{pb} = .35$  A. 4% B. 87% C. 5% D. 4%

75. Jack collected survey data and summarized the results. He then made a hypothesis based on those data. After making the hypothesis he developed a theory. Which of the four main goals of research did Jack skip?

a. Description  
b. Prediction  
c. Control  
d. Explanation

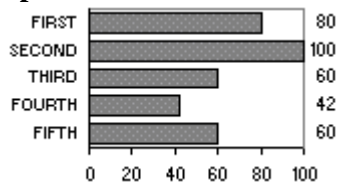
ANS: C REF: 25 OBJ: 12 KEY: C/A

76. A social psychologist is interested in studying the effects of AIDS on dating. She designs an interview and carefully selects several people to participate in the study. Each interview lasts two hours. Which goal of research is she pursuing?

a. Control  
b. Prediction  
c. Explanation  
d. Description

ANS: D REF: 25 OBJ: 12 KEY: C/A

**Responses:**

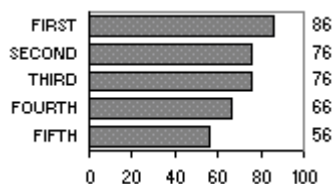


$r_{pb} = .34$  A. 14% B. 3% C. 14% D. 69%

77. A major limitation of naturalistic observation in the study of human behavior is that
- accurate observations usually cannot be made.
  - the observer might influence the behavior being studied.
  - studying people in their natural environment tells nothing about the influence of context on behavior.
  - it always requires two observers and is therefore very expensive.

ANS: B REF: 26 OBJ: 13 KEY: F

**Responses:**

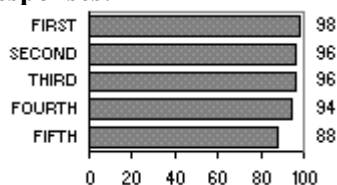


$r_{pb} = .24$  A. 14% B. 72% C. 13% D. 1%

78. What research topic would lend itself best to naturalistic observation?
- Comparing smokers and nonsmokers on judgments of self-esteem
  - Describing play among children in a kindergarten class
  - Describing gender attitudes for all Chicagoans
  - Understanding the life of someone with a rare brain disorder

ANS: B REF: 25-26 OBJ: 13 KEY: C/A

**Responses:**



$r_{pb} = .21$  A. 1% B. 95% C. 2% D. 2%

79. Dissociative identity disorder is a rare mental disorder in which a person exhibits two or more distinct personalities. Psychologists studying this rare disorder would be most likely to use
- case studies.
  - surveys.
  - naturalistic observation.
  - experiments.

ANS: A REF: 26 OBJ: 13 KEY: F

80. Psychologists are most likely to use case studies instead of other research methods when they wish to study
- cause-effect relationships between variables.
  - phenomena that are new, complex, or rare.
  - group behavior and public opinion.
  - people without being intrusive.

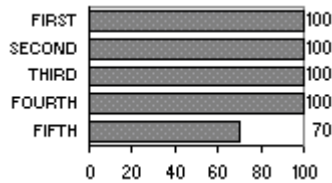
ANS: B REF: 26 OBJ: 13 KEY: F

81. Nina wants to know whether there is a market for a brand-new product, the Arctic Blast, which freezes all types of food within seconds. To find out what percentage of people and what types of people might be interested in such a product, Nina needs to use which research method?

a. A survey  
b. Naturalistic observation  
c. A case study  
d. An experiment

ANS: A REF: 27 OBJ: 13 KEY: C/A

**Responses:**



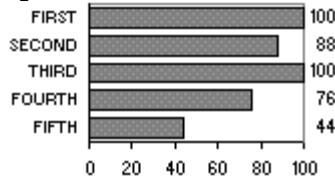
$r_{pb} = .42$  A. 94% B. 0% C. 3% D. 3%

82. Nancy wants to collect data about the shopping habits of two-career families. She has very little money to pursue this study, and her research advisor wants the results as soon as possible. Nancy should collect her data by

a. administering a survey.  
b. doing naturalistic observation.  
c. following one case study.  
d. conducting an experiment.

ANS: A REF: 27 OBJ: 13 KEY: C/A

**Responses:**



$r_{pb} = .45$  A. 82% B. 13% C. 4% D. 0%

83. One limitation of case studies that surveys are able to address is:

a. The lack of experimental groups  
b. The lack of control groups  
c. Confounding variables  
d. Small sampling sizes

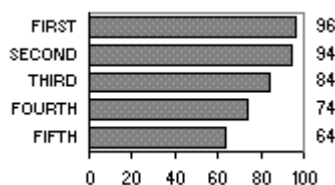
ANS: D REF: 27 OBJ: 13 KEY: F

84. Which correlation coefficient indicates the strongest relationship between two variables?

a. +.68  
b. -.35  
c. -1.00  
d. +.15

ANS: C REF: 29 OBJ: 14 KEY: F

**Responses:**



$r_{pb} = .33$  A. 9% B. 0% C. 84% D. 7%

85. Which of the following correlation coefficients best supports the assertion that the likelihood of a poor grade decreases as class attendance increases?

a. -.90  
b. +.70  
c. -.37  
d. +.23

ANS: A REF: 29 OBJ: 14 KEY: C/A

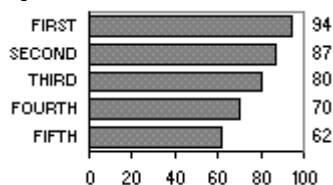
86. Biff has discovered a correlation of  $-0.83$  between the amount of time his fraternity brothers spend working out in the gym and the number of dates they have during the semester. Based on this information, Biff should conclude that
- the more the men work out, the more dates they have.
  - the more the men work out, the fewer dates they have.
  - working out causes an increase in dates.
  - working out causes a decrease in dates.

ANS: B

REF: 29

OBJ: 14

KEY: C/A

**Responses:** $r_{pb} = .30$ 

A. 13% B. 79% C. 4%

D. 5%

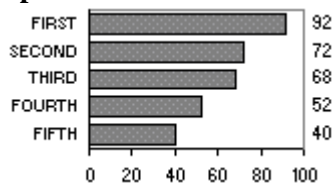
87. Mario tested the relationship between violence and population density. He found a correlation coefficient of  $-0.75$ . What can you conclude?
- Population density and violence are not related.
  - A higher population density causes more violence.
  - A higher population density is associated with more violence.
  - A higher population density is associated with less violence.

ANS: D

REF: 29

OBJ: 14

KEY: C/A

**Responses:** $r_{pb} = .36$ 

A. 8%

B. 1%

C. 25% D. 66%

88. Which of the following research designs is characterized by an effort to keep all variables constant except for the variable being manipulated and the variable being measured?
- Survey
  - Case study
  - Experiment
  - Naturalistic observation

ANS: C

REF: 31

OBJ: 15

KEY: F

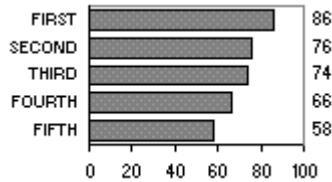
89. A researcher was interested in determining whether or not the test performances of students could be improved by providing them with individual tutoring. The researcher randomly divided fifty first-year college students into two groups. In Group A the instructor lectured to them for three hours per week. Group B received an equal amount of lecturing, but their instructor also met with each student for thirty minutes every week. Each group took the same final exam. The test performance of students in Group B was about the same as that of students in Group A. This study is an example of a(n)
- correlational study.
  - case study.
  - experiment.
  - survey.

ANS: C

REF: 31

OBJ: 15

KEY: C/A

**Responses:** $r_{pb} = .23$  A. 23% B. 4%

C. 73% D. 0%

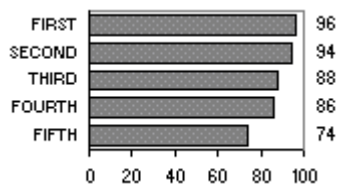
90. The title of a research article is “Hot and Crowded: The Effects of Altering Temperature and Group Size on Exam Performance.” What research method was used in this study?
- Naturalistic observation
  - Survey
  - Experiment
  - Case study

ANS: C

REF: 31

OBJ: 15

KEY: C/A

**Responses:** $r_{pb} = .26$  A. 6%

B. 1%

C. 89% D. 4%

91. Unlike other research methods, experiments allow researchers to establish \_\_\_\_\_ relationships between variables.
- cause-and-effect
  - correlational
  - predictive
  - dependent

ANS: A

REF: 30

OBJ: 15

KEY: F

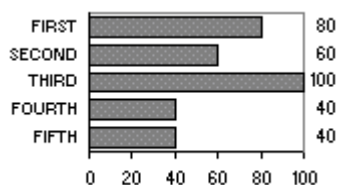
92. Experimenters who want to find the best explanation of a phenomenon among several rival hypotheses should
- describe the correlation among the variables involved.
  - conduct controlled research using experimental methods.
  - conduct research in the real world instead of in a laboratory.
  - continue observing the phenomenon of interest until the best explanation becomes clear.

ANS: B

REF: 30-31

OBJ: 15

KEY: F

**Responses:** $r_{pb} = .42$ 

A. 15%

B. 65%

C. 4%

D. 15%

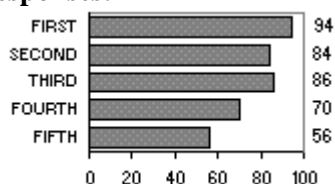
93. Jon believes that exercise is a cause of higher levels of life satisfaction. If Jon plans to study this hypothesis experimentally, his independent variable would be the
- amount of exercise his participants engage in.
  - level of life satisfaction before the exercise.
  - level of life satisfaction after the exercise.
  - physical health of his participants.

ANS: A

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .33$ 

A. 79% B. 11% C. 6%

D. 4%

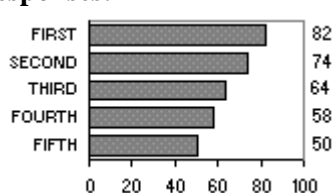
94. Tai is interested in how alcohol consumption affects driving ability. He gives college students two, four, or six beers and then measures how many obstacles the students “hit” when they are in a driving simulator. The dependent variable is
- alcohol consumption.
  - driving ability.
  - the number of drinks.
  - the number of obstacles hit.

ANS: D

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .27$ 

A. 3%

B. 20% C. 10% D. 67%

95. Dr. Summers investigated the influence of snacking on the onset of sleep in preschool children. One group of preschoolers ate a candy bar prior to bedtime, and the other group ate nothing. Time until the onset of sleep was recorded for each child. In this experiment, eating or not eating the snack is the \_\_\_\_\_ variable, and the time until the onset of sleep is the \_\_\_\_\_ variable.

a. independent; dependent

c. experimental; control

b. dependent; independent

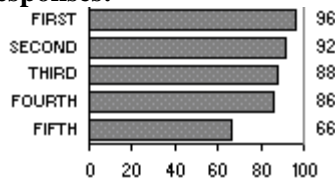
d. control; experimental

ANS: A

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .32$ 

A. 87% B. 8%

C. 2%

D. 4%

96. Rica has children watch either violent or nonviolent cartoons. Afterward, she watches to see which group of children gets into the most fights. In this study, the number of fights that each child engages in is the \_\_\_\_\_ variable.

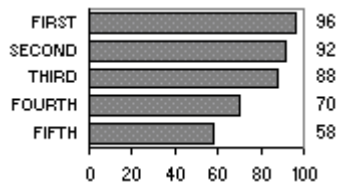
a. independent  
b. dependent  
c. representative  
d. random

ANS: B

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .39$ 

A. 12% B. 82% C. 4%

D. 2%

97. Dr. Jones is studying the effects of fatigue on aggression. He hypothesizes that the more fatigue a person is experiencing, the more aggressively the person will behave. Dr. Jones's control group should be composed of \_\_\_\_\_ participants.

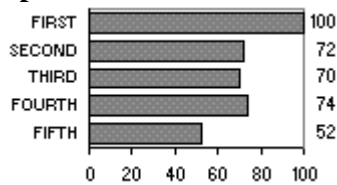
a. non-fatigued  
b. fatigued  
c. aggressive  
d. nonaggressive

ANS: A

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .29$ 

A. 75% B. 15% C. 3%

D. 8%

98. Dr. Adcock is a community psychologist studying whether a special program instituted for an at-risk group of junior high school students decreases behavior problems. At-risk students are randomly assigned to either Group A, the special program, or Group B, a study hall meeting at the same time. In this experiment, Group A is the \_\_\_\_\_, whereas Group B is the \_\_\_\_\_.

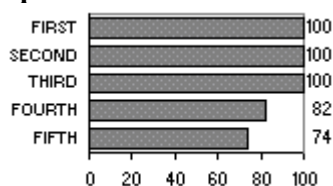
a. independent variable; dependent variable  
b. experimental group; control group  
c. control group; experimental group  
d. dependent variable; independent variable

ANS: B

REF: 31

OBJ: 16

KEY: C/A

**Responses:** $r_{pb} = .35$ 

A. 3%

B. 92% C. 3%

D. 3%

99. A(n) \_\_\_\_\_ variable can be any factor, other than the variable being manipulated by the experimenter, in the experimental situation that might affect the dependent variable.

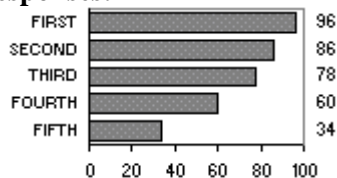
a. interval  
b. correlational  
c. independent  
d. confounding

ANS: D

REF: 33

OBJ: 17

KEY: F

**Responses:** $r_{pb} = .48$ 

A. 1%

B. 6%

C. 22% D. 71%

100. In studying the effects of amount of alcohol consumed on test taking, a participant's alcohol tolerance would be

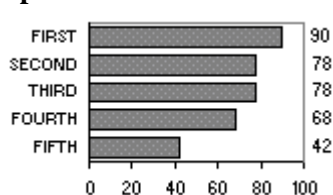
a. the independent variable.  
b. the dependent variable.  
c. a confounding variable.  
d. the experimental group.

ANS: C

REF: 33

OBJ: 17

KEY: C/A

**Responses:** $r_{pb} = .36$ 

A. 14% B. 14% C. 72% D. 0%

101. A participant in an experiment is told that a particular pill should improve her performance on a cognitive task. The participant is then given the pill, and she performs better than usual on the task. In actuality, the pill did not contain any ingredients that would affect her performance on the task. The participant's improved performance was most likely due to

a. the double-blind design.  
b. random variables.  
c. the placebo effect.  
d. confirmation bias.

ANS: C

REF: 31, 33

OBJ: 17

KEY: C/A

102. Dr. Ayala conducts an experiment in which she gives half her participants a yellow pill containing a drug that keeps them awake during psychology lectures. She gives the other half of her participants an identical-looking yellow pill that does not contain the drug. This experimental design controls for

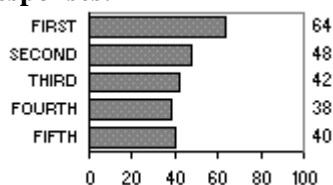
a. experimenter bias.  
b. random variables.  
c. a placebo effect.  
d. confirmation bias.

ANS: C

REF: 31, 33

OBJ: 17

KEY: C/A

**Responses:** $r_{pb} = .15$ 

A. 18% B. 11% C. 47% D. 23%

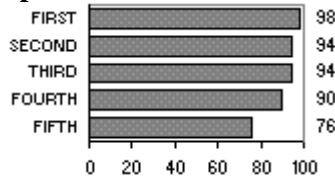


103. Laura conducted a study to determine whether her new “puppet” therapy works better than the traditional “talking” therapy. After randomly assigning her own patients to either the “puppet” or the “talking” group, Laura herself administered the therapy. This study is most obviously flawed due to

a. random variables. c. the placebo effect.  
b. experimenter bias. d. participant expectations.

ANS: B REF: 33 OBJ: 17 KEY: C/A

**Responses:**



$r_{pb} = .27$  A. 4% B. 92% C. 2% D. 3%

104. Pedro is conducting an experiment for his senior thesis. He wants to be sure that his results have a minimal chance of being influenced by uncontrolled variables. Which of the following can Pedro use to evenly spread out the effects of such factors across his experimental group and control group?

a. Experimenter expectancies c. Random variables  
b. Random assignment d. Double-blind design

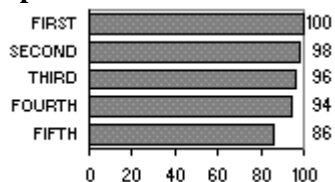
ANS: B REF: 34 OBJ: 18 KEY: C/A MSC: New

105. To avoid bias and confounding variables in a controlled experiment, participants should be assigned to either the experimental or control group

a. on the basis of careful thought. c. on the basis of individual tests.  
b. randomly. d. according to age variables.

ANS: B REF: 34 OBJ: 18 KEY: F

**Responses:**



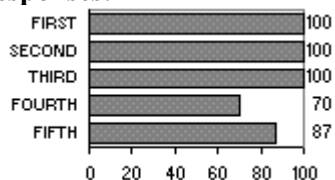
$r_{pb} = .24$  A. 2% B. 96% C. 1% D. 1%

106. In Dr. Turgrove's experiment he includes a control group that receives a placebo. This type of research design is meant to control which confounding variable?

a. Participants' expectations c. Sampling bias  
b. Experimenter bias d. Independent variable

ANS: A REF: 31, 33 OBJ: 18 KEY: C/A

**Responses:**



$r_{pb} = .15$  A. 92% B. 3% C. 3% D. 3%

107. Padma is doing an experiment concerning the effectiveness of a unique type of exercise as a treatment for pain. She has a placebo group in her experiment; the placebo group will
- do no exercises.
  - do a different kind of exercise.
  - do less of the experimental exercise.
  - not be aware that they are in the experiment.

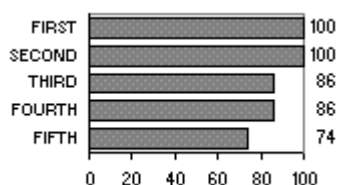
ANS: B REF: 31, 33 OBJ: 18 KEY: C/A

108. Which of the following is the most effective way to eliminate experimenter bias?

- Use placebos
- Hire ethical research assistants
- Use random variables
- Use a double-blind design

ANS: D REF: 33 OBJ: 18 KEY: F

**Responses:**



$r_{pb} = .36$  A. 0% B. 5% C. 5% D. 90%

109. A psychologist is conducting an experiment to test the effectiveness of a new antidepressant drug. He instructs his research assistant to give the drug to half of the participants and to give a placebo to the other half. Neither the research assistant nor the participants know who is getting the drug and who is getting the placebo. This study uses

- random assignment.
- naturalistic observation.
- a double-blind design.
- random sampling.

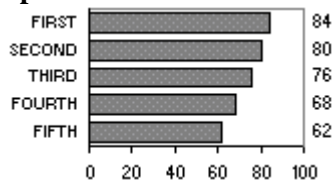
ANS: C REF: 33 OBJ: 18 KEY: C/A

110. Mark wants to do research using a survey about attitudes toward smoking. Mark wants his sample of respondents to be as representative as possible of the adult Illinois population. Mark should

- randomly pick names from the latest Illinois census.
- take every thousandth name from phone books all over the state.
- survey all passersby in downtown areas of communities all over the state.
- put ads on TV stations around the state asking for volunteers.

ANS: A REF: 34 OBJ: 19 KEY: C/A

**Responses:**

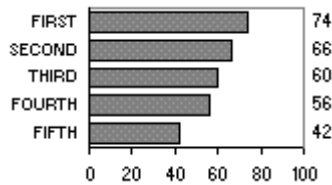


$r_{pb} = .20$  A. 75% B. 17% C. 5% D. 3%

111. Marney is studying the relationship between the rate of teen pregnancies in U.S. high school students and the availability of contraceptives. She selects a sample composed of equal numbers of first-year, sophomore, junior, and senior women from a local high school. Marney's sample is
- random.
  - biased.
  - representative.
  - generalizable.

ANS: B REF: 34

OBJ: 19 KEY: C/A

**Responses:**

$r_{pb} = .20$  A. 8% B. 58% C. 32% D. 3%

112. A researcher at Oak Tree University has students in the psychology participant pool fill out a survey about life satisfaction. This psychology participant pool represents a \_\_\_\_\_ sample of the adult population in the United States.

- random
- biased
- representative
- placebo

ANS: B REF: 34

OBJ: 19

KEY: C/A

MSC: New

113. Behavioral genetics is

- the biology of inheritance.
- similar to the evolutionary approach.
- the study of how genes affect behavior.
- also known as neuropsychology.

ANS: C REF: 36

OBJ: 20

KEY: F

114. Brent suffers from schizophrenia. If schizophrenia is passed along genetically, who is at the greatest risk of developing this disorder?

- Billy, his identical twin
- Betty, his sister
- Barry, his father
- Bonnie, his mother

ANS: A REF: 36-37

OBJ: 20

KEY: C/A

115. If Dr. Tarantino wants to know the degree to which heredity and environment affect differences among individuals, he would likely consider any of the following research approaches *except* for a(n) \_\_\_\_\_ study.

- family
- twin
- adoption
- experimental

ANS: D REF: 36

OBJ: 20

KEY: C/A

116. Dr. Ayhee's research is focused on exploring how environmental effects, such as stress and disease, can alter the functions of genes in the human body, even though the DNA itself remains unchanged. This field of study is known as

- forensic psychology.
- inferential studies.
- environmental psychology.
- epigenetics.

ANS: D REF: 37

OBJ: 20

KEY: C/A

117. Twenty volunteers are shown a movie about a party. After viewing, participants are asked to rate their reactions to the movie using a scale that went from 1 to 10. In this example, the data would be the

- participants.
- movie watched.
- party.
- participants' ratings.

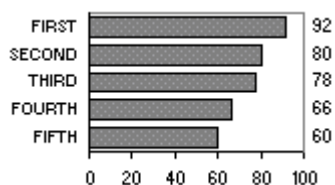
ANS: D REF: 38

OBJ: 21

KEY: C/A

118. A researcher wants to know what conclusions she can reasonably draw from the data that she collected in her experiment. The researcher should use \_\_\_\_\_ statistics in order to understand what her data mean.
- inferential
  - quantitative
  - variable
  - descriptive
- ANS: A REF: 39 OBJ: 21 KEY: C/A
119. Psychologists use \_\_\_\_\_ statistics to get a sense of what numbers are in a given data set; they use \_\_\_\_\_ statistics to understand what those numbers mean.
- inferential; quantitative
  - quantitative; variable
  - descriptive; inferential
  - variable; descriptive
- ANS: C REF: 38-39 OBJ: 21 KEY: F
120. Todd hypothesizes that the students in School A are more intelligent than the students in School B. To test his hypothesis, Todd samples students from each school and administers an intelligence test to the two groups. He finds that there is a statistically significant difference in the scores of the two groups, which means that the
- students in one school are definitely more intelligent than those in the other.
  - difference between the groups is due to chance.
  - students in the two schools are of equal intelligence.
  - difference between the groups is probably not due to chance.
- ANS: D REF: 39 OBJ: 22 KEY: C/A
121. What does it mean to say that the results of a study are not statistically significant? The results
- could reasonably be expected to have occurred by chance.
  - are extremely unlikely to have occurred by chance.
  - are not scientifically valuable.
  - are extremely unlikely to have occurred by chance and are not scientifically valuable.
- ANS: A REF: 39 OBJ: 22 KEY: F

**Responses:**



$r_{pb} = .26$

A. 77% B. 8%

C. 8%

D. 8%

122. When is it allowable for subjects to be exposed to risk or discomfort during research?
- Only when risk and discomfort are temporary
  - Only when minimal risk and discomfort are outweighed by the benefit to the knowledge base and to human welfare
  - When nonhuman subjects are used
  - It is never allowable.

ANS: B

REF: 39

OBJ: 23

KEY: F

123. An experimenter is studying the facial expression of the emotion of terror. He plans to point a loaded gun at participants as they enter the room and photograph them at the same instant. Such an experiment would be ethically
- acceptable if the experimenter explained the experiment afterward.
  - acceptable if the experimenter explained the experiment afterward and if the participants were paid.
  - acceptable if the participants were paid.
  - unacceptable because the risks and discomfort to the participants outweigh the potential benefits of the knowledge gained.
- ANS: D                      REF: 39                      OBJ: 23                      KEY: C/A
124. A psychologist proposed an experiment in which he would tell participants that their performances on an intelligence test were extremely low (regardless of actual performance) and then measure their self-esteem. What might an American Psychological Association ethics committee say about such a proposal?
- Deception is allowable only if it is revealed immediately afterward and if the emotional distress that it causes is short-lived.
  - Deception is allowable only if participants give informed consent prior to the experiment.
  - Deception is never allowable.
  - Deception such as this would cause emotional discomfort, so it should not be done.
- ANS: A                      REF: 39-40                      OBJ: 23                      KEY: C/A
125. Which of the following statements about the use of animal subjects in psychological research is *false*?
- Animals are used as subjects in almost 50 percent of all psychological research.
  - Studies of animals can yield information relevant to humans that would be impossible to collect from humans.
  - Animals used in psychological research are not routinely subjected to extreme pain, starvation, or other inhumane conditions.
  - There are strict guidelines that set standards for the care and treatment of animal subjects.
- ANS: A                      REF: 40                      OBJ: 23                      KEY: F

## ESSAY

1. Bluto, the neighborhood bully, is constantly teasing all the other children on his block. Explain Bluto's behavior using the psychodynamic, behavioral, cognitive, and biological approaches to psychology.
- ANS: Psychodynamic: Bluto harbors strong aggressive instincts in his unconscious mind, and these instincts are driving his behavior toward the other children in the neighborhood.  
Behavioral: Bluto may have learned to be aggressive by watching others behave aggressively. Alternatively, Bluto may have learned to be aggressive through his own experiences with being punished or by being rewarded for aggressive acts in the past.  
Cognitive: Bluto views the world as a hostile place, and his decision-making processes have led him to the conclusion that aggression is the best way to combat such hostility.  
Biological: Bluto's aggressive behavior may be caused by abnormal brain structures, an imbalance in brain chemistry, or overactive hormones.

2. Choose two subfields that illustrate the diversity that exists within the field of psychology. Explain the ways in which these two subfields are unified, despite their apparent diversity.

ANS: The biological and clinical subfields illustrate the diversity that exists within the field of psychology. Biological psychologists study how our biological makeup influences our mental processes and behavior, whereas clinical psychologists study the causes and treatments of mental disorders.

Biological and clinical psychologists are unified in that they share an interest in studying human behavior and mental processes. Given this common interest, psychologists in each subfield will often investigate similar issues or even conduct research across subfields. For instance, both biological and clinical psychologists would be interested in determining whether schizophrenia is caused by a chemical imbalance.

Psychologists from the two subfields are also unified in their commitment to empiricism, meaning that they systematically gather and analyze data in order to gain understanding of psychological phenomena.

3. Use the following information to address the five points listed below. Large agricultural companies have begun treating vegetables with radiation to improve their size and quality and to increase the length of time they can be stored. Marcie has a theory that eating irradiated vegetables could cause memory loss. Her friend disagrees, reasoning that if irradiated vegetables were dangerous, the Food and Drug Administration would require warning labels.
- Restate Marcie's theory as a testable hypothesis and include all the relevant variables.
  - Identify the independent and dependent variables.
  - State how to measure and manipulate the independent and dependent variables.
  - Decide who the participants will be.
  - Design and describe an experimental procedure to test your hypothesis.

ANS: A correct answer should include the following points.

- Sample hypothesis: The consumption of irradiated vegetables for one month will decrease one's learning and memory ability.
- The independent variable is consumption of irradiated vegetables. The dependent variable is learning and memory ability.
- Memory could be assessed by counting the number of words recalled from a short list. Consumption of irradiated vegetables could be measured by counting the number of ounces of treated vegetables eaten daily.
- Participants must be volunteers who are randomly chosen from the population at large and not just from students attending a particular university.
- Participants will be given a recall test before they begin eating irradiated vegetables and after they have eaten irradiated vegetables for one month. A control group of volunteers who are not eating irradiated vegetables might be included. The participants must be randomly distributed between the control and the experimental groups.

4. A recent newspaper article reported that a college student's academic major determines his or her reported happiness. To evaluate this claim, you decide to use the critical thinking approach. Explain the five questions of critical thinking and provide a brief explanation or example of each as it pertains to the claim above.

ANS: A correct answer should include the following five questions. Possible examples and explanations are included.

- What am I being asked to believe or accept? Academic major affects a student's experience of happiness.
- Is there evidence available to support this claim? Evidence may come from a research study, such as a student survey.

- c. Can the evidence be interpreted in another way? Other factors may influence reports of happiness, such as social adjustment to college, academic support services, financial circumstances, family situation, experiences of depression and anxiety, etc.
  - d. What evidence would help evaluate the alternatives? It would be helpful to know the definition of happiness used in the study, specific findings from similar research studies, and if the study results are replicable.
  - e. What conclusions are most reasonable? Understanding the relative influence of academic major on happiness will depend on the evidence available and the findings of other research studies.
- MSC: New

5. A researcher wants to study the use of profanity in public by adults. Describe how a study would be designed using the following research methods: survey, experiment, and naturalistic observation. Explain the features, benefits, and limitations of each method.

ANS: A survey consists of a standard set of questions asked of participants. It is important to have a representative sample (or convenience sample) of the population. Benefits include getting a large number of responses. Limitations include possible issues with wording of questions and willingness to report embarrassing personal information.

An experiment includes manipulation of an independent variable and measurement of its effect on a dependent variable. The benefit is that a cause-and-effect relationship between the IV and DV can be established. The limitations include the presence of confounding variables, including experimenter bias, participant's expectations, and random variables.

Naturalistic observation describes the observation of human behavior in the environment in which it typically occurs. This approach is beneficial because it provides descriptive data on the behavior that is not contaminated (in theory) by outside influences. Naturalistic observation is limited by observer bias, people acting differently if they know they are being observed, and inability to draw conclusions from observations.

MSC: New

## SHORT ANSWER

1. Define random sampling and random assignment, demonstrating how they differ.

ANS: Random sampling refers to a process by which every member in a population has an equal chance of being selected to participate in a study. Without random sampling, the sample of participants is biased, or not representative of the population.

Random assignment is the procedure used in experiments to select participants for experimental and control groups so as to minimize group differences caused by random or chance variables.

This is generally achieved by a coin flip or computer program.

MSC: New

2. Define case studies, including their strengths and weaknesses as a method of psychological study.

ANS: A case study involves the intensive examination of the behavior and mental processes associated with a specific person or situation. Such studies provide detailed descriptive analyses, which are beneficial for new, complex, or rare phenomena. Case studies may not represent people in general and may only include evidence considered important by the researcher.

MSC: New

3. Describe what it means for a research finding to be statistically significant.

ANS: Statistical significance refers to a correlation, or a difference between two groups, that is larger than would be expected by chance.

MSC: New

4. Contrast the work conducted by educational psychologists and school psychologists. Give examples.

ANS: Educational psychologists conduct and apply research on teaching and learning. An example includes researching the use of the jigsaw technique in classrooms to promote learning and generate mutual respect among classmates. School psychologists specialize in assessing and alleviating children's academic problems. Examples include diagnosing learning disabilities or crisis intervention following an act of violence at school.

MSC: New

5. Explain the relationship between a control group and a placebo.

ANS: A placebo is often used in experiments as part of a special control group. The participant may expect benefits from the placebo, even though it contains nothing known to be helpful. Researchers compare the results of the control group receiving a placebo to the experimental group (that receives the actual treatment) as well as a group that receives no treatment.

MSC: New