

1. According to the text, when students think of “scientists,” they rarely think of
 - A) chemistry and physics.
 - B) white lab coats and test tubes.
 - C) research activities.
 - D) the formulation of theory.

2. The ultimate goal of scientific inquiry is to produce knowledge in the form of
 - A) factual data.
 - B) theory.
 - C) technological advances.
 - D) new discoveries.

3. Data are verifiable to the extent that they are
 - A) systematically collected.
 - B) numerical in form.
 - C) judged to be true by the researcher.
 - D) observable.

4. What is the objective of logic or logical analysis?
 - A) to describe human thought processes
 - B) to facilitate creativity and imagination
 - C) to empirically validate scientific theory
 - D) to evaluate reasoning

5. What is the primary difference between deductive and inductive logic?
 - A) the quality of the evidence supporting a conclusion
 - B) the certainty that a conclusion is true, based on the evidence
 - C) whether a conclusion can be drawn, based on the evidence
 - D) the closeness of the association between evidence and conclusion

6. In valid deductive reasoning, if the evidence is true, the conclusion
 - A) may be true or false.
 - B) may be strong or weak.
 - C) must be true.
 - D) depends on the variety of supporting evidence.

7. Someone studying homelessness finds that the first four homeless people he examines are mentally ill. He therefore concludes that all homeless people are mentally ill. What type(s) of reasoning is this?
- A) deductive reasoning
 - B) inductive reasoning
 - C) neither deductive nor inductive reasoning
 - D) both deductive and inductive reasoning
8. (Box 2.2) Consider the following argument: If people are depressed, then they will lose their appetite. Alexis has lost her appetite. Therefore, Alexis is depressed. This is
- A) a valid deductive argument.
 - B) an invalid deductive argument.
 - C) a weak inductive argument.
 - D) a strong inductive argument.
9. (Box 2.2) The reasoning from scientific theory to testable hypotheses should be _____; the reasoning from data to empirical patterns should be _____.
- A) deductively valid; deductively valid
 - B) inductively sound; deductively valid
 - C) deductively valid; inductively sound
 - D) inductively sound; inductively sound
10. Which of the following sequences best describes the deductive logic of inquiry?
- A) theory → data → hypothesis
 - B) data → theory → hypothesis
 - C) data → empirical pattern → theory
 - D) theory → hypothesis → data
 - E) empirical pattern → hypothesis → theory
11. Scientists apply the deductive logic of inquiry when they
- A) show how a hypothesis follows from a theory.
 - B) infer empirical patterns from data.
 - C) formulate a theory to account for empirical patterns.
 - D) infer the validity of a theory from a set of data.

12. Based on the “mental alienation” theory of suicide, Durkheim argued that groups with higher rates of insanity will have higher rates of suicide. Women have higher rates of insanity than men. Therefore, women have higher rates of suicide than men. What type(s) of reasoning is this?
- A) deductive reasoning
 - B) inductive reasoning
 - C) neither deductive nor inductive reasoning
 - D) both deductive and inductive reasoning
13. According to Durkheim's theory of suicide, the more socially integrated a group, the lower its suicide rate. Catholics are more socially integrated than Protestants. Therefore, the suicide rate is lower among Catholics than among Protestants. What type(s) of reasoning is this?
- A) deductive reasoning
 - B) inductive reasoning
 - C) neither deductive nor inductive reasoning
 - D) both deductive and inductive reasoning
14. Durkheim found that predominantly Catholic nations had lower suicide rates than predominantly Protestant nations, and that married people had lower suicide rates than single people. Noting that both Catholics and married people are more socially integrated than their counterparts, he theorized that the more socially integrated a group, the lower its suicide rate. What type(s) of reasoning is this?
- A) deductive reasoning
 - B) inductive reasoning
 - C) neither deductive nor inductive reasoning
 - D) both deductive and inductive reasoning
15. In terms of the cyclical relationship between theory and data that is presented in the text, empirical pattern is to hypothesis as _____ is to _____.
- A) deduction is to induction.
 - B) induction is to deduction.
 - C) theory is to induction.
 - D) deduction is to data.
16. Compared to a researcher using the deductive logic of inquiry, a researcher using the inductive logic of inquiry is less likely to
- A) make use of field research.
 - B) make use of in-depth interviews.
 - C) formulate a hypothesis at the beginning of the research.
 - D) identify empirical patterns based on the analysis of data.

17. Based on Allport's theory of interracial contact, Dixon and Rosenbaum hypothesized that contact reduces racial prejudice when
- A) whites interact with blacks who are close in age.
 - B) whites interact with blacks of the same gender.
 - C) whites interact with blacks of the opposite gender.
 - D) whites personally know blacks from school.
18. Based on Allport's theory of interracial contact, Dixon and Rosenbaum hypothesized that contact reduces racial prejudice under certain conditions. Then they tested their hypotheses with data from the General Social Survey. Thus, their research followed the
- A) deductive logic of inquiry.
 - B) inductive logic of inquiry.
 - C) neither the deductive nor the inductive logic of inquiry.
19. Contrary to their hypothesis, Dixon and Rosenbaum found that the social setting in which whites interacted with blacks
- A) had no effect on their racial stereotypes.
 - B) had no effect on anti-black stereotyping when whites had black relatives.
 - C) increased anti-black stereotyping when whites knew blacks from school.
 - D) reduced anti-black stereotyping when whites knew blacks in the workplace.
20. Lareau interviewed parents of third-grade children and observed families. Based on these data, she inferred several recurring class differences, from which she developed a theory of child rearing. Thus, her research followed the
- A) deductive logic of inquiry.
 - B) inductive logic of inquiry.
 - C) neither the deductive nor the inductive logic of inquiry.
21. In her study of child rearing, Lareau found that working-class parents were more apt than middle-class parents to
- A) allow their children to play on their own.
 - B) reason and negotiate with their children.
 - C) support their children's participation in organized and supervised activities.
 - D) adopt the child-rearing strategy of concerted cultivation.

22. When Durkheim tested psychological theories of suicide with data from official records, he used the _____ logic of inquiry; when he developed his own theory of suicide from the same data, he used the _____ logic of inquiry.
- A) deductive; deductive
 - B) deductive; inductive
 - C) inductive; deductive
 - D) inductive; inductive
23. In his study *Suicide*, Durkheim
- A) developed a comprehensive theory of suicide that included climatic, psychological, and social causes.
 - B) attempted to explain individual differences in types of suicide.
 - C) examined variation in suicide rates among different nations and groups.
 - D) did not produce a single finding that has stood the test of time.
24. Why is Durkheim's study *Suicide* a model of social scientific inquiry, even today?
- A) It provided the first extensive quantitative analysis of suicide.
 - B) It presented the first truly scientific theory of suicide.
 - C) Virtually all of its predictions have been confirmed repeatedly by other investigators.
 - D) It showed how scientists use data to test theory and develop theories from data.
25. Durkheim's study *Suicide* illustrates the limitations of scientific inquiry insofar as
- A) subsequent research has disconfirmed all of his findings.
 - B) his theory of suicide has been shown to be inconsistent with his data.
 - C) its narrow focus on social causes appears to have been an attempt to legitimize the field of sociology.
 - D) his theory does not apply to suicide in the 21st century.
26. Which statement most accurately describes scientific knowledge or theory?
- A) It is the best understanding that we have been able to produce thus far.
 - B) When perfected, it is a statement of what is ultimately real.
 - C) A theory is accepted as "scientific" when objective tests confirm its predictions.
 - D) Theory in a scientific discipline is essentially an inventory of the currently most accurate predictions.

27. Which of the following statements is true of scientific theory?
- A) Scientific theories can be proven logically.
 - B) There can be one and only one true theory of any social phenomenon.
 - C) Theories are less abstract than hypotheses.
 - D) Theories can be expressed as a logically interconnected set of propositions.
28. Science is best defined as a step-by-step method of data collection.
- A) True
 - B) False
29. The scientific process always begins with theory and ends with data.
- A) True
 - B) False
30. Scientific inquiry always starts with data, from which theories are developed.
- A) True
 - B) False
31. The principal goal of science is the development of theory.
- A) True
 - B) False
32. The principal goal of science is the solution of technical and social problems.
- A) True
 - B) False
33. Empirical evidence is observable to the researcher and others.
- A) True
 - B) False
34. Like many other intellectual endeavors, scientific inquiry relies on tradition, revelation, and intuition as sources of evidence.
- A) True
 - B) False

35. Science is based on verifiable data..
A) True
B) False
36. Being “systematic” in collecting and analyzing data minimizes the influence of scientists' values and biases.
A) True
B) False
37. Science involves both deductive and inductive reasoning.
A) True
B) False
38. In inductive reasoning, conclusions may go beyond the evidence at hand.
A) True
B) False
39. Inferring that a person is rude based on three interactions with that person is an example of inductive reasoning.
A) True
B) False
40. The deductive logic of inquiry represents a bottom-up process, moving from data to empirical patterns to theory.
A) True
B) False
41. In formulating a hypothesis from a theory, a researcher uses deductive logic.
A) True
B) False
42. A limitation of the inductive logic of inquiry is that several theories may account for the same empirical patterns.
A) True
B) False

43. The Hawthorne effect showed that research participants may change their behavior when they know they are being studied.
A) True
B) False

44. Discoveries based on intuition or serendipity have no place in science.
A) True
B) False

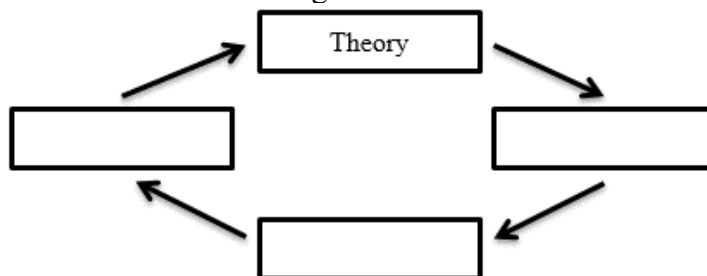
45. Scientific knowledge is tentative and uncertain.
A) True
B) False

46. Through systematic observation, science eliminates the impact of the historical context on theory and research.
A) True
B) False

47. The GSS misclassification of data on social isolation shows how the social sciences are less scientific than the natural sciences.
A) True
B) False

48. Describe how Durkheim used both the deductive and inductive logics of inquiry in his study of suicide. Be sure to give specific details of the study as these relate to the key components of each logic.

49. Below is an outline of a flowchart illustrating the scientific process. Fill-in the boxes and then indicate whether each arrow in the diagram represents the application of deductive or inductive logic.



50. Because of the human element in science, some scholars believe that it is impossible to detect and eliminate sources of bias in scientific inquiry. Present a rebuttal to this criticism. Be sure to point out how many biases and errors are identifiable and correctable because the nature of scientific inquiry enables its own critique.

Answer Key

1. D
2. B
3. D
4. D
5. B
6. C
7. B
8. B
9. C
10. D
11. A
12. A
13. A
14. B
15. B
16. C
17. D
18. A
19. B
20. B
21. A
22. B
23. C
24. D
25. C
26. A
27. D
28. B
29. B
30. B
31. A
32. B
33. A
34. B
35. A
36. A
37. A
38. A
39. A
40. B
41. A
42. A
43. A
44. B

- 45. A
- 46. B
- 47. B
- 48.
- 49.
- 50.