Chapter 1: Introduction to Scientific Thinking

Test Bank

# Multiple Choice

1. \_\_\_\_\_\_ is the acquisition of knowledge through observation, evaluation, interpretation, and theoretical explanation.

A. Science

B. Empiricism

C. Authority

D. Statistics

Ans: A

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

2. A researcher uses the scientific method to acquire knowledge through observation, evaluation, interpretation, and theoretical explanation. This researcher is engaged in \_\_\_\_\_\_.

A. Statistics

B. Sampling

C. Science

D. Empiricism

Ans: C

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Science as a Method of Knowing

Difficulty Level: Medium

3. Science is the acquisition of knowledge through all of the following EXCEPT \_\_\_\_\_\_.

A. observation

B. evaluation

C. interpretation

D. anecdotal evidence

Ans: D

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

4. Which of the following is *not* a means of acquiring knowledge through science?

A. acquire knowledge through observation

B. acquire knowledge through tenacity and intuition

C. acquire knowledge through theoretical explanation

D. acquire knowledge through evaluation and interpretation

Ans: B

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Application

Answer Location: Science as a Method of Knowing

Difficulty Level: Hard

5. Science is a broad term that comes from the Latin *scientia*, meaning what?

A. to state (a theory or idea)

B. knowledge

C. to observe

D. interpretation

Ans: B

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Application

Answer Location: Science as a Method of Knowing

Difficulty Level: Hard

6. The \_\_\_\_\_\_ refers to a set of systematic techniques used to acquire, modify, and integrate knowledge concerning observable and measurable phenomena.

A. hypothesis

B. population

C. scientific method

D. operational definition

Ans: C

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: The Scientific Method

Difficulty Level: Easy

7. The scientific method refers to a set of systematic techniques used to acquire, modify, and integrate knowledge concerning \_\_\_\_\_\_.

A. observable and measurable phenomena

B. populations, but not samples

C. statistics, but not parameters

D. any phenomena

Ans: A

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

8. Another name for the scientific method is the \_\_\_\_\_\_.

A. sampling method

B. systematic method

C. research method

D. preferred method

Ans: C

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

9. Science is \_\_\_\_\_\_ way of knowing about the world.

A. one

B. the only

C. the best

D. the worst

Ans: A

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

10. Which of the following is *not* one of the six general steps to apply the scientific method?

A. identify a problem

B. select an authority figure

C. conduct the study

D. develop a research plan

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: The Scientific Method

Difficulty Level: Hard

11. Which of the following lists the general steps for engaging in the scientific method in the correct order?

A. identify a problem, conduct the study, develop a research plan, analyze, and evaluate the data, generate more new ideas, and communicate the results

B. identify a problem, conduct the study, develop a research plan, analyze, and evaluate the data, communicate the results, and generate more new ideas

C. identify a problem, develop a research plan, conduct the study, analyze, and evaluate the data, communicate the results, and generate more new ideas

D. develop a research plan, conduct the study, identify a problem, analyze, and evaluate the data, communicate the results, and generate more new ideas

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Medium

12. The first step in the scientific process is to identify a problem, which entails all of the following EXCEPT \_\_\_\_\_\_.

A. performing a literature review

B. determining an area of interest

C. developing a research hypothesis

D. conducting the study

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 1: Identify a Problem

Difficulty Level: Easy

13. A researcher reads an article that reports a significant result. While reading this article, the researcher identifies a hypothesis to explain the findings reported in that article. Which step of the scientific method is described in this example?

A. analyze and evaluate data

B. conduct the study

C. communicate the results

D. identify a problem

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Step 1: Identify a Problem

Difficulty Level: Hard

14. Based on results reported in published articles, a researcher states that men will be less likely than women to read nutrition labels when making decisions about purchasing foods. What is this statement called?

A. intuition

B. hypothesis

C. research plan

D. literature review

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Identify New Ideas in Your Area of Research

Difficulty Level: Hard

15. A researcher conducts a literature review. After completing this review, she states that texting during class can improve student learning. This statement is referred to as \_\_\_\_\_\_.

A. intuition

B. a hypothesis

C. a research plan

D. a literature review

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Develop a Research Hypothesis

Difficulty Level: Hard

16. A research hypothesis must be \_\_\_\_\_\_ when subjected to the scientific method.

A. intuitive

B. logical

C. testable

D. accurate

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Identify New Ideas in Your Area of Research

Difficulty Level: Easy

17. A(n) \_\_\_\_\_\_ is a testable claim or statement concerning the relationship between variables that can be observed.

A. variable

B. statistic

C. operational definition

D. research hypothesis

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Identify New Ideas in Your Area of Research

Difficulty Level: Easy

18. A(n) \_\_\_\_\_\_ is a description of some observable event in terms of the specific process or manner by which it was observed or measured.

A. variable

B. statistic

C. operational definition

D. research hypothesis

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Define the Variables Being Tested

Difficulty Level: Easy

19. A researcher measures attraction among dating college students. Which of the following is an appropriate operational definition for attraction?

A. The appeal of a persons’ physical appearance.

B. The duration of a conversation (in min) between two people.

C. The closeness or love felt for another person.

D. Anecdotal responses from people.

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Define the Variables Being Tested

Difficulty Level: Hard

20. A researcher measures recall of an entrance exam taken 2 weeks prior. Which of the following is an appropriate operational definition for anxiety?

A. The number of questions answered correctly on a similar test.

B. The ability to bring a thought or experience back to mind or memory.

C. The accuracy of the mind or memory.

D. The number of questions answered correctly on a different test.

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Define the Variables Being Tested

Difficulty Level: Hard

21. Which of the following is an example of a variable?

A. the value of pie

B. the human life span

C. the number of years in one decade

D. the number of meters in 1 mile

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Define the Variables Being Tested

Difficulty Level: Hard

22. The scientific method can be used to study only phenomena that can be \_\_\_\_\_\_.

A. observed and measured

B. studied in a laboratory

C. readily understood

D. made into origami

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: The Scientific Method

Difficulty Level: Easy

23. How can scientists ensure that the variables they investigate can be observed and measured?

A. Scientists state the dictionary definition of an investigated variable.

B. Scientists use their trained intuition before investigating a variable.

C. Scientists state an operational definition of an investigated variable.

D. Scientists do nothing; it is not necessary to observe and measure variables.

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Define the Variables Being Tested

Difficulty Level: Easy

24. A(n) \_\_\_\_\_\_ is a set of *all* individuals, items, or data of interest. This is the group about which scientists will generalize.

A. variable

B. statistic

C. population

D. sample

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Identify Participants or Subjects and Determine How to Sample Them

Difficulty Level: Easy

25. Suppose that a researcher is interested in a group of 10 million people who paid to see a movie playing in theaters. In this example, the 10 million moviegoers would be \_\_\_\_\_\_.

A. a sample of moviegoers who paid to see the movie in a theater

B. a population of moviegoers who paid to see the movie in a theater

C. an independent variable

D. a dependent variable

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Identify Participants or Subjects and Determine How to Sample Them

Difficulty Level: Hard

26. Researchers measure data in a \_\_\_\_\_\_ to learn more about individuals in the larger \_\_\_\_\_\_ of interest.

A. sample; population

B. statistic; inference

C. population; sample

D. inference; statistic

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Identify Participants or Subjects and Determine How to Sample Them

Difficulty Level: Easy

27. Researchers rarely have access to entire populations. How do researchers resolve this limitation?

A. They do not need to resolve this; it is not a limitation at all.

B. They record data from an entire population of people to make inferences concerning characteristics in a sample.

C. They record data from as many persons in a population as possible to draw conclusions concerning only those individuals.

D. They record data from a sample of people in the larger population in order to make inferences concerning characteristics in that larger population.

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Identify Participants or Subjects and Determine How to Sample them

Difficulty Level: Medium

28. A(n) \_\_\_\_\_\_ is a set of *selected* individuals, items, or data taken from a population of interest.

A. statistic

B. criterion

C. population

D. sample

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Identify Participants or Subjects and Determine How to Sample Them

Difficulty Level: Easy

29. A professor teaches a class of 42 students. If only 34 students show up to take the first exam, then how would we characterize this group who took the first exam?

A. This group constitutes the population of all students in the class.

B. This group is likely to be absent for the second exam.

C. This group constitutes a sample of all students in the class.

D. This group is not registered for the class.

Ans: C

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Identify Participants or Subjects and Determine How to Sample Them

Difficulty Level: Medium

30. As part of the scientific process, if we are *conducting the study*, then this means that we are \_\_\_\_\_\_.

A. executing the research plan

B. at the last step in the scientific process

C. trying to decide on a research plan

D. not engaged in the scientific method

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 3: Conduct the Study

Difficulty Level: Easy

31. Using the scientific method, we typically analyze and evaluate data in order to \_\_\_\_\_\_.

A. avoid the need to conduct a study

B. avoid using statistical techniques

C. determine whether or not to measure data

D. determine whether the pattern of data shows support for a research hypothesis

Ans: D

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Analyze and Evaluate the Data as They Relate to the Research Hypothesis

Difficulty Level: Medium

32. \_\_\_\_\_\_ are measurements or observations that are typically numeric.

A. Operations

B. Data

C. Samples

D. Hypotheses

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Analyze and Evaluate the Data as They Relate to the Research Hypothesis

Difficulty Level: Easy

33. Which of the following is one term used to describe a single measurement, value, or observation?

A. datum

B. proportion

C. sample

D. population

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Summarize Data and Report the Research Results

Difficulty Level: Easy

34. A researcher measures the following four exam scores: 90, 95, 80, and 100. An individual grade is called a \_\_\_\_\_\_, whereas all grades are called \_\_\_\_\_\_.

A. sample; population

B. score; data

C. score; average

D. population; sample

Ans: B

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Summarize Data and Report the Research Results

Difficulty Level: Hard

35. Which of the following is one method of communicating research to others?

A. poster

B. e-mail to colleague

C. in a paper assigned by your professor

D. Research should not be communicated to others.

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Method of Communication

Difficulty Level: Medium

36. In psychology and across many other disciplines in the behavioral sciences, which style of communication is most often used?

A. APA

B. SFN

C. APS

D. USMC

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Style of Communication

Difficulty Level: Medium

37. In psychology, we typically use the style of communication identified by the APA. What does APA stand for?

A. American Psychological Association

B. American Psychonomic Affiliation

C. Abridged Psychological Association

D. Affiliated Psychologists of America

Ans: A

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Style of Communication

Difficulty Level: Easy

38. Tenacity is a method of knowing based largely on \_\_\_\_\_\_.

A. educated guesses

B. scientific rigor

C. habit or superstition

D. constant pressure

Ans: C

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Tenacity

Difficulty Level: Easy

39. \_\_\_\_\_\_ is a method of knowing based largely on habit or superstition.

A. Intuition

B. Science

C. Empiricism

D. Tenacity

Ans: D

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Tenacity

Difficulty Level: Medium

40. A coworker tells an employee to close up at exactly midnight because that’s when the store always closes. Which method of knowing is illustrated in this example?

A. intuition

B. tenacity

C. empiricism

D. science

Ans: B

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Application

Answer Location: Tenacity

Difficulty Level: Hard

41. Intuition is a method of knowing based largely on \_\_\_\_\_\_.

A. an individual’s hunch or feeling that something is correct

B. scientific rigor

C. habit or superstition

D. one’s experiences or observations

Ans: A

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Intuition

Difficulty Level: Easy

42. \_\_\_\_\_\_ is a method of knowing based largely on an individual’s hunch or feeling that something is correct.

A. Intuition

B. Science

C. Empiricism

D. Tenacity

Ans: A

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Intuition

Difficulty Level: Medium

43. A fan stays for the last 5 min of a game because he has a hunch that his team is ready to make a comeback. Which method of knowing is illustrated in this example?

A. authority

B. tenacity

C. empiricism

D. intuition

Ans: D

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Application

Answer Location: Tenacity

Difficulty Level: Hard

44. Authority is a method of knowing accepted as fact because \_\_\_\_\_\_.

A. an individual has a hunch or feeling that something is correct

B. scientific rigor was applied to find the answer

C. it was stated by an expert or respected source in a particular subject area

D. one’s experiences or observations confirm the fact

Ans: C

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Authority

Difficulty Level: Easy

45. \_\_\_\_\_\_ is a method of knowing accepted as fact because it was stated by an expert or respected source in a particular subject area.

A. Intuition

B. Authority

C. Empiricism

D. Tenacity

Ans: B

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Authority

Difficulty Level: Medium

46. You believe that if you don’t read your textbook you will fail your research methods class because your professor said so. Which method of knowing is illustrated in this example?

A. intuition

B. authority

C. empiricism

D. rationalism

Ans: B

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Application

Answer Location: Authority

Difficulty Level: Hard

47. Rationalism is a method of knowing \_\_\_\_\_\_.

A. that requires the use of reasoning and logic

B. that applies scientific rigor

C. because it was stated by an expert in a particular subject area

D. based on one’s experiences or observations

Ans: A

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Rationalism

Difficulty Level: Easy

48. \_\_\_\_\_\_ is a method of knowing that requires the use of reasoning and logic.

A. Empiricism

B. Authority

C. Rationalism

D. Tenacity

Ans: C

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Rationalism

Difficulty Level: Medium

49. Your friend states that you work too much because you don’t spend enough time with her. Which method of knowing is illustrated in this example?

A. tenacity

B. authority

C. empiricism

D. rationalism

Ans: D

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Application

Answer Location: Rationalism

Difficulty Level: Hard

50. Empiricism is a method of knowing based on \_\_\_\_\_\_.

A. an individual’s hunch or feeling that something is correct.

B. scientific rigor

C. habit or superstition

D. one’s experiences or observations

Ans: D

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Empiricism

Difficulty Level: Easy

51. \_\_\_\_\_\_ is a method of knowing based on one’s experiences or observations.

A. Authority

B. Empiricism

C. Rationalism

D. Tenacity

Ans: B

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Empiricism

Difficulty Level: Medium

52. An audience member knows that a magic trick is an illusion because he saw how the trick was done. Which method of knowing is illustrated in this example?

A. tenacity

B. authority

C. empiricism

D. rationalism

Ans: C

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Application

Answer Location: Empiricism

Difficulty Level: Hard

53. Which of the following is a method of acquiring knowledge according to the textbook?

A. superstition

B. coincidence

C. empiricism and rationalism

D. expertise

Ans: D

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Methods of Knowing

Difficulty Level: Easy

54. What are the four goals of science?

A. describe, explain, control, and complete

B. establish, control, predict, and describe

C. describe, explain, predict, and control

D. tenacity, authority, rationalism, and prediction

Ans: C

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: The Goals of Science

Difficulty Level: Easy

55. Which one of the four goals of science is specifically met when we define the variables that we will observe and measure?

A. describe

B. explain

C. predict

D. control

Ans: A

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Comprehension

Answer Location: Describe

Difficulty Level: Medium

56. Which one of the four goals of science is specifically met when we can identify the conditions or causes for the behaviors or events we study?

A. describe

B. explain

C. predict

D. control

Ans: B

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Comprehension

Answer Location: Explain

Difficulty Level: Medium

57. Which one of the four goals of science is specifically met when we can identify when a behavior or event will occur again in the future?

A. describe

B. explain

C. predict

D. control

Ans: C

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Comprehension

Answer Location: Predict

Difficulty Level: Medium

58. Which one of the four goals of science is specifically met when we can isolate the conditions necessary to make a behavior occur or not occur?

A. describe

B. explain

C. predict

D. control

Ans: D

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Comprehension

Answer Location: Control

Difficulty Level: Medium

59. Basic research uses the scientific method to answer questions that address \_\_\_\_\_\_.

A. very simple questions

B. theoretical issues about fundamental processes and underlying mechanisms related to the behaviors and events being studied

C. questions concerning practical problems with potential practical solutions

D. questions about individuals who are at a basic level of understanding or competency

Ans: B

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Basic and Applied Research

Difficulty Level: Easy

60. \_\_\_\_\_\_ uses the scientific method to answer questions that address theoretical issues about fundamental processes and underlying mechanisms related to the behaviors and events being studied.

A. Nonempirical research

B. Basic research

C. Applied research

D. Nontheoretical research

Ans: B

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Basic and Applied Research

Difficulty Level: Medium

61. A researcher conducts a study to test a prediction made by a theory of learning with the intention of addressing issues related to that theory. What type of research did this researcher conduct?

A. basic research

B. applied research

C. qualitative research

D. quantitative research

Ans: A

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Application

Answer Location: Basic and Applied Research

Difficulty Level: Hard

62. Applied research uses the scientific method to answer questions \_\_\_\_\_\_.

A. about how to purchase apps

B. about theoretical issues for fundamental processes and underlying mechanisms related to the behaviors and events being studied

C. concerning practical problems with potential practical solutions

D. that are directly related to the predictions made by theories

Ans: C

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Basic and Applied Research

Difficulty Level: Easy

63. \_\_\_\_\_\_ uses the scientific method to answer questions concerning practical problems with potential practical solutions.

A. Nonempirical research

B. Basic research

C. Applied research

D. Impractical research

Ans: C

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Basic and Applied Research

Difficulty Level: Medium

64. A researcher identifies that a certain community has a high rate of obesity. He conducts a study to determine if people would increase their overall activity in that community if a park were built there. What type of research did this researcher conduct?

A. basic research

B. applied research

C. qualitative research

D. quantitative research

Ans: B

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Application

Answer Location: Basic and Applied Research

Difficulty Level: Hard

65. Quantitative research uses the scientific method to \_\_\_\_\_\_.

A. record observations as numeric data

B. make nonnumeric observations, from which conclusions are drawn without the use of statistical analysis

C. conduct studies that can be completed without the use of statistical analysis

D. make guesses about scientific phenomena

Ans: A

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Easy

66. \_\_\_\_\_\_ uses the scientific method to record observations as numeric data.

A. Quantitative research

B. Qualitative research

C. Basic research

D. Applied research

Ans: A

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

67. Qualitative research uses the scientific method to \_\_\_\_\_\_.

A. record observations as numeric data

B. make nonnumeric observations, from which conclusions are drawn without the use of statistical analysis

C. conduct studies that can be completed without the use of statistical analysis

D. make nonnumeric observations and conduct studies without the use of statistical analysis

Ans: D

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Easy

68. \_\_\_\_\_\_ uses the scientific method to make nonnumeric observations, from which conclusions are drawn without the use of statistical analysis.

A. Quantitative research

B. Qualitative research

C. Basic research

D. Applied research

Ans: B

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

69. A researcher measures studying as the number of minutes spent reading books and writing notes per week. What type of research is described in this example?

A. quantitative research

B. qualitative research

C. basic research

D. applied research

Ans: A

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Application

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Hard

70. A researcher measures studying by describing in words where a person generally likes to study and with whom they prefer to study with. What type of research is described in this example?

A. quantitative research

B. qualitative research

C. basic research

D. applied research

Ans: B

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Application

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Hard

71. Pseudoscience is sometimes confused with which of the following other terms often inappropriately used as a synonym?

A. experimental

B. observational

C. nonscientific

D. quantitative

Ans: C

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Knowledge

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Easy

72. What are two criteria to define pseudoscience that delineates it as a narrower concept?

A. IT is scientific, and it is part of a system or set of beliefs that correctly create the impression that the knowledge gained represents the “final say” on its subject matter.

B. IT is scientific, but it has certain drawbacks that make it appear as if it is not scientific when in truth it is a scientific methods of knowing.

C. IT is not scientific, and it uses the scientific methods to establish best practices in terms of new knowledge creation.

D. IT is not scientific, and it is part of a system or set of beliefs that try to deceptively create the impression that the knowledge gained represents the most reliable knowledge on its subject matter.

Ans: D

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Analysis

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Medium

73. Which of the following is a term used to describe a set of procedures that are not scientific and is part of a system or set of beliefs that try to deceptively create the impression that the knowledge gained represents the “final say” or most reliable knowledge on its subject matter?

A. experimental

B. scientific method

C. pseudoscience

D. methodological

Ans: C

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Knowledge

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Easy

74. Pseudoscience is \_\_\_\_\_\_.

A. not scientific

B. reliable

C. descriptive

D. valid

Ans: A

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Knowledge

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Easy

75. Which of the following scenarios is an example of pseudoscience?

A. A psychologist performs a study and unknowingly analyzes the data incorrectly, then reports erroneous conclusions that are incorrect because of his or her mistake.

B. A psychologist makes a series of impromptu observations, then constructs an explanation for the observations made as if his or her conclusions were scientific.

C. A psychologist reports that he or she has a personal belief and faith in God and believes that such faith is important.

D. A psychologist performs a study and analyzes the data incorrectly, then reports erroneous conclusions that are incorrect because of his or her poor analysis.

Ans: B

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Application

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Hard

# True/False

1. The word *science* comes from the Latin *scientia*, meaning to measure.

Ans: F

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

2. A scientific observation can be direct or indirect.

Ans: T

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

3. Science makes use of the scientific method to acquire knowledge.

Ans: T

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

4. The first step in the research process begins when data are analyzed statistically.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Medium

5. The scientific process to test a research idea is typically completed within only a few days.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Medium

6. A research hypothesis is a specific, testable claim or prediction about what you expect to observe given a set of circumstances.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 1: Identify a Problem

Difficulty Level: Easy

7. An operational definition is a description of some observable event in terms of how it would be described in a dictionary.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Easy

8. Defining athleticism as the time in seconds it takes to complete an obstacle course is an example of an operational definition.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Application

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Hard

9. A variable that is tested using the scientific method must be directly or indirectly observable and measurable.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Easy

10. A population can be any group of interest.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Easy

11. A sample is a set of *all* individuals, items, or data of interest about which scientists will generalize.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Easy

12. Researchers should always make considerations for how to treat participants in a research study.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Easy

13. Researchers analyze data to determine whether the pattern of data observed in a study shows support for the research hypothesis.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 4: Analyze and Evaluate the Data

Difficulty Level: Easy

14. Data are typically nonnumeric measurements or observations.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 4: Analyze and Evaluate the Data

Difficulty Level: Easy

15. Data are rarely presented in figures or graphs in a research report.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 5: Communicate the Results

Difficulty Level: Easy

16. Guidelines for communicating results to others are identified by the American Psychological Association.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 5: Communicate the Results

Difficulty Level: Easy

17. While data in a research study are often reported in a manuscript, data in a research study are rarely reported as a poster or oral presentation.

Ans: F

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Step 5: Communicate the Results

Difficulty Level: Medium

18. To generate more new ideas, you can refine or expand an original hypothesis, reformulate a new hypothesis, or start over.

Ans: T

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Step 5: Communicate the Results

Difficulty Level: Easy

19. The use of slogans and beliefs in superstitions are examples of empirical knowledge.

Ans: F

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Tenacity

Difficulty Level: Easy

20. The belief that if you do not read your textbook you will fail your research methods class because your professor said so is an example of tenacity as a way of knowing.

Ans: F

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Tenacity

Difficulty Level: Medium

21. Authority is a method of knowing accepted as fact because it was stated by an expert or respected source.

Ans: T

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Authority

Difficulty Level: Easy

22. An example of intuition is a student who studies for a quiz because she has a hunch that the professor will give a pop quiz in the next class.

Ans: T

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Intuition

Difficulty Level: Medium

23. Gamblers using their instincts to choose how to bet is an example of rationalism as a way of knowing.

Ans: F

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Rationalism

Difficulty Level: Medium

24. Knowledge about nutrition from a Food and Drug Administration nutrition label is an example of empiricism as a way of knowing.

Ans: F

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Empiricism

Difficulty Level: Medium

25. Many factors bias our perception of the behaviors and events we observe.

Ans: T

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Empiricism

Difficulty Level: Easy

26. Tenacity, intuition, authority, rationalism, and empiricism are called the nonscientific methods of knowing.

Ans: T

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Other Methods of Knowing

Difficulty Level: Easy

27. The four goals of science are to describe, explain, predict, and prove.

Ans: F

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: The Goals of Science

Difficulty Level: Easy

28. To describe behaviors and events means to define them in terms of how they are observed and measured.

Ans: T

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: Describe

Difficulty Level: Easy

29. To explain a behavior means to demonstrate what causes the behavior to occur.

Ans: T

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: Explain

Difficulty Level: Easy

30. Predicting behavior and controlling behavior are both the same goal in science.

Ans: F

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Comprehension

Answer Location: Predict

Difficulty Level: Medium

31. Controlling the conditions necessary to make a behavior occur and not occur is sufficient to meet the goal of control in science.

Ans: T

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: Control

Difficulty Level: Easy

32. Applied research is used to address theoretical questions regarding the mechanisms and processes of behavior.

Ans: F

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Basic and Applied Research

Difficulty Level: Easy

33. Applied research is used to address questions that can lead to immediate solutions to practical problems.

Ans: T

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Basic and Applied Research

Difficulty Level: Easy

34. A study that analyzes the mean difference in time spent to complete a cognitive task between groups is an example of quantitative research.

Ans: T

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Easy

35. Qualitative research uses the scientific method to make nonnumeric observations, from which conclusions are drawn without the use of statistical analysis.

Ans: T

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Knowledge

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Easy

36. Quantitative and qualitative research cannot be effectively used to study the same behaviors.

Ans: F

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Analysis

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

37. Quantitative, but not qualitative research, is regarded as being scientific.

Ans: F

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

38. Generally speaking, pseudoscience is “nonscience posing as science.”

Ans: T

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Knowledge

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Easy

39. All nonscience is pseudoscience.

Ans: F

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Comprehension

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Medium

40. Even if the “bad” science is intentional or fraudulent, “bad” science is rarely called pseudoscience.

Ans: T

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Analysis

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Medium

# Essay

1. What term expresses a set of systematic techniques used to acquire, modify, and integrate knowledge concerning observable and measurable phenomena?

Ans: Scientific method.

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: The Scientific Method

Difficulty Level: Medium

2. Science is the acquisition of knowledge through \_\_\_\_\_\_.

Ans: observation, evaluation, interpretation, and theoretical explanation

KEY: Learning Objective: 1.1: Define science and the scientific method.

REF: Cognitive Domain: Knowledge

Answer Location: Science as a Method of Knowing

Difficulty Level: Easy

3. In which step of the scientific process is it important to identify participants or subjects and determine how to sample them?

Ans: In Step 2, which is to develop a research plan.

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Analysis

Answer Location: Develop a Research Plan

Difficulty Level: Medium

4. The scientific process is linear. Restate this sentence so that is it correctly stated, and explain why this is NOT true.

Ans: The scientific process is cyclic, not linear, meaning that even when a study answers a question, this usually leads to more questions and more testing. Thus, completing the six steps of the scientific process typically leads back to Step 1, and we begin again.

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Medium

5. A researcher selects 10 students from his class of 18 students to participate in a class exercise. Identify the population and sample identified in this example.

Ans: The population is the entire class of 18 students; the sample is the 10 students selected to participate in the class exercise.

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Medium

6. A researcher defines learning as the time it takes to complete a rudimentary task. What type of definition did the researcher state?

Ans: An operational definition.

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Step 2: Develop a Research Plan

Difficulty Level: Medium

7. Name three typical ways that researchers share the results of their research.

Ans: Researchers typically share the results of their research orally (in a talk), written (in a manuscript), or presented as a poster (at a conference or other professional setting).

KEY: Learning Objective: 1.2: Describe six steps for engaging in the scientific method.

REF: Cognitive Domain: Comprehension

Answer Location: Step 5: Communicate the Results

Difficulty Level: Medium

8. The adage “seeing is believing” reflects what type of nonscientific way of knowing?

Ans: Empiricism.

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Empiricism

Difficulty Level: Easy

9. What type of nonscientific way of knowing is sometimes used synonymously with instincts?

Ans: Intuition.

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Comprehension

Answer Location: Intuition

Difficulty Level: Medium

10. Authority is a method of knowing accepted as fact because \_\_\_\_\_\_.

Ans: it was stated by an expert or respected source in a particular subject area

KEY: Learning Objective: 1.3: Describe five nonscientific methods of acquiring knowledge.

REF: Cognitive Domain: Knowledge

Answer Location: Authority

Difficulty Level: Easy

11. What goal of science is met by answering the following question: What is the behavior or event?

Ans: Describe.

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: Describe

Difficulty Level: Easy

12. What goal of science is met by answering the following question: What are the causes of the behavior or event?

Ans: Explain.

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: Explain

Difficulty Level: Easy

13. The four goals of science serve to direct scientists toward \_\_\_\_\_\_.

Ans: a comprehensive knowledge of the behaviors and events they observe

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: The Goals of Science

Difficulty Level: Easy

14. State the four goals of science.

Ans: Describe, explain, predict, and control.

KEY: Learning Objective: 1.4: Identify the four goals of science.

REF: Cognitive Domain: Knowledge

Answer Location: The Goals of Science

Difficulty Level: Easy

15. Which type of research (basic or applied) is used to answer fundamental questions that address theoretical issues? What type of questions does the other type of research answer?

Ans: Basic research is used to answer fundamental questions that address theoretical issues. Applied research answer questions concerning practical problems with potential practical solutions.

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Basic and Applied Research

Difficulty Level: Medium

16. Implementing different instructional strategies, character development, parental involvement, and classroom management in an educational setting are examples for what type of research (basic or applied)?

Ans: Applied research.

KEY: Learning Objective: 1.5: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Comprehension

Answer Location: Basic and Applied Research

Difficulty Level: Medium

17. Which type of research (quantitative or qualitative) is most often applied in science? Why?

Ans: Quantitative research, because the data are numeric allowing for a more objective analysis of the observations made in a study.

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research.

REF: Cognitive Domain: Analysis

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

18. What is the type of research that is entirely descriptive or does not include the measurement of numeric data?

Ans: Qualitative research.

KEY: Learning Objective: 1.6: Distinguish between basic and applied research, and between quantitative and qualitative research..

REF: Cognitive Domain: Analysis

Answer Location: Qualitative and Quantitative Research

Difficulty Level: Medium

19. Identify the two key criteria to define pseudoscience that delineates it as a narrower concept?

Ans: Pseudoscience (1) is not scientific and (2) is part of a system or set of beliefs that try to deceptively create the impression that the knowledge gained represents the “final say” or most reliable knowledge on its subject matter.

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Analysis

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Medium

20. State a key feature of pseudoscience that Gardner (1957) referred to as “nonscience posing as science.”

Ans: A key feature of pseudoscience is intent to deceive.

KEY: Learning Objective: 1.7: Delineate science from pseudoscience.

REF: Cognitive Domain: Comprehension

Answer Location: Distinguishing Science From Pseudoscience

Difficulty Level: Medium