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| 1. ​When you “know” that you do not want to eat fried worms, even when everyone around you says that they taste great, your decision is based on the method of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​faith | |  | c. | ​tenacity | |  | d. | ​authority |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 2. ​A student who believes that his or her performance on tests is influenced by wearing a lucky hat is using the method of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​faith | |  | c. | ​tenacity | |  | d. | ​authority |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 3. ​A person who buys a lottery ticket because s/he just feels lucky is using the method of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​faith | |  | c. | ​tenacity | |  | d. | ​intuition |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 4. ​Which method of acquiring knowledge is being used when people accept information as true because it has been believed for a very long time or is supported by superstition?   |  |  |  | | --- | --- | --- | |  | a. | ​intuition | |  | b. | ​rationalism | |  | c. | ​tenacity | |  | d. | ​authority |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 5. ​What is a potential problem with the method of authority?   |  |  |  | | --- | --- | --- | |  | a. | ​A person may claim to be an expert when he or she really is not. | |  | b. | ​An “expert” answer may be only a personal, subjective opinion. | |  | c. | ​An expert may be giving answers outside his or her area of expertise. | |  | d. | ​The other three choices are all potential problems. |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 6. ​Magazine advertisements that use celebrities to sell makeup employ which method of acquiring knowledge?   |  |  |  | | --- | --- | --- | |  | a. | ​tenacity | |  | b. | ​authority | |  | c. | ​empiricism | |  | d. | ​rationalism |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 7. ​Finding the address and phone number of a restaurant by Googling the name of the restaurant is an example of using the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empirical method | |  | b. | ​rational method | |  | c. | ​method of authority | |  | d. | ​scientific method |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 8. ​Which method of acquiring knowledge is being used by students who are learning from teachers and textbooks?   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​rationalism | |  | c. | ​method of authority | |  | d. | ​scientific method |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 9. ​The mode of inquiry that is called the method of faith is a variant of which other method of inquiry?   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​rationalism | |  | c. | ​the method of authority | |  | d. | ​the scientific method |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 10. ​When your doctor asks you whether you have been sleeping well at night, the doctor is gathering information by using the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​method of authority | |  | b. | ​rational method | |  | c. | ​empirical method | |  | d. | ​method of intuition |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 11. ​A patient who demands a second opinion before agreeing to surgery is double checking information obtained by the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​method of authority | |  | b. | ​rational method | |  | c. | ​empirical method | |  | d. | ​method of intuition |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 12. ​Last year Tomas and his friend Jamie were both too short to ride the rollercoaster. Jamie went to the park this year and was tall enough to ride. Because Tomas is taller than Jamie, he thinks that he will be able to ride the rollercoaster as well. Tomas is using the \_\_\_\_ to answer his question.   |  |  |  | | --- | --- | --- | |  | a. | ​method of empiricism | |  | b. | ​rational method | |  | c. | ​method of authority | |  | d. | ​scientific method |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 13. ​An explanation is rational if it is based on \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​widely held beliefs | |  | b. | ​logical deductions | |  | c. | ​evidence of the senses | |  | d. | ​respect for the source of the explanation |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 14. ​Which potential problem can occur the rational method is used?   |  |  |  | | --- | --- | --- | |  | a. | ​People are not necessarily very good at logical reasoning. | |  | b. | ​While useful for minor issues, this method is inadequate for important matters. | |  | c. | ​There is no mechanism for testing the accuracy of the claims. | |  | d. | ​This method typically requires preconceived assumptions. |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 15. ​Which method of acquiring knowledge is being used by a person who says “I’ll believe it when I see it?”   |  |  |  | | --- | --- | --- | |  | a. | ​method of empiricism | |  | b. | ​rational method | |  | c. | ​method of authority | |  | d. | ​scientific method |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 16. ​A restaurant chef tries replacing rice with pasta in one of her recipes to see what will happen. Which method of acquiring knowledge is she using?   |  |  |  | | --- | --- | --- | |  | a. | ​method of empiricism | |  | b. | ​rational method | |  | c. | ​method of authority | |  | d. | ​scientific method |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 17. ​Visual illusions, such as the vertical/horizontal illusion, provide a demonstration of one problem with the \_\_\_\_ method of knowing or acquiring knowledge.   |  |  |  | | --- | --- | --- | |  | a. | ​rational | |  | b. | ​authority | |  | c. | ​empirical | |  | d. | ​scientific |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 18. ​When your doctor uses a stethoscope to listen to your heart, the doctor is gathering information by using the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​method of authority | |  | b. | ​rational method | |  | c. | ​empirical method | |  | d. | ​method of intuition |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 19. ​An explanation is empirical if it is based on \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​widely held beliefs | |  | b. | ​logical deductions | |  | c. | ​evidence of the senses | |  | d. | ​respect for the source |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 20. ​A limitation of using the method of empiricism is that \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​people are generally not very good at reasoning | |  | b. | ​while perception is typically accurate, sensation is not | |  | c. | ​the process can be time consuming and often risky | |  | d. | ​there is no mechanism for validating conclusions |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficult | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 21. ​In a chemistry class, a group of students try mixing two chemicals together to see what will happen. These students are using the \_\_\_\_ method to gather information.   |  |  |  | | --- | --- | --- | |  | a. | ​empirical | |  | b. | ​rational | |  | c. | ​intuitive | |  | d. | ​scientific |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 22. ​When people make an observation, then form a hypothesis that explains the observation, and then make more observations to test the credibility of the hypothesis, they are using the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empirical method | |  | b. | ​rational method | |  | c. | ​scientific method | |  | d. | ​method of authority |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 23. ​Which of the following is the best description of the scientific method?   |  |  |  | | --- | --- | --- | |  | a. | ​a circular process that leads to a final answer | |  | b. | ​a linear process that moves directly to a final answer | |  | c. | ​a circular process that leads to a tentative answer | |  | d. | ​a linear process that leads to a tentative answer |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 24. What kind of reasoning uses a general statement to make conclusions about specific examples?   |  |  |  | | --- | --- | --- | |  | a. | ​inductive | |  | b. | ​deductive | |  | c. | ​scientific | |  | d. | ​predictive |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 25. What kind of reasoning uses a few specific observations to produce a statement about a larger possible set of observations?   |  |  |  | | --- | --- | --- | |  | a. | ​inductive | |  | b. | ​deductive | |  | c. | ​scientific | |  | d. | ​predictive |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 26. Using observations of a small number of humans to make a statement about human behavior in general is an example of \_\_\_\_ reasoning.   |  |  |  | | --- | --- | --- | |  | a. | ​inductive | |  | b. | ​deductive | |  | c. | ​practical | |  | d. | ​predictive |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 27. Based on observations of his own children, Jean Piaget formed a theory about the cognitive development of all children. This is an example of \_\_\_\_ reasoning.   |  |  |  | | --- | --- | --- | |  | a. | ​inductive | |  | b. | ​deductive | |  | c. | ​practical | |  | d. | ​predictive |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Difficult | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 28. ​A hypothesis is a \_\_\_\_ statement and a prediction is a \_\_\_\_ statement.   |  |  |  | | --- | --- | --- | |  | a. | ​specific; general | |  | b. | ​specific; specific | |  | c. | ​general; specific | |  | d. | ​general; general |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.07 - Explain the distinction between a hypothesis and a prediction. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 29. ​The third step of the scientific method uses a general hypothesis to develop a testable predication. This step involves the use of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​induction | |  | b. | ​deduction | |  | c. | ​analysis | |  | d. | ​synthesis |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.07 - Explain the distinction between a hypothesis and a prediction. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 30. In the scientific method, a prediction is evaluated by \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ​making systematic, planned observations | |  | b. | ​determining the hypothesis of best fit | |  | c. | ​logically evaluating the implications | |  | d. | ​using it to explain established phenomena |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.07 - Explain the distinction between a hypothesis and a prediction. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 31. ​What is meant by the saying, “science is empirical?”   |  |  |  | | --- | --- | --- | |  | a. | ​Scientific answers are based on direct observation. | |  | b. | ​Scientific answers are based on deductive reasoning. | |  | c. | ​Scientific answers are based on inductive reasoning. | |  | d. | ​Scientific answers are made available for evaluation by others. |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.08 - Explain what it means to say that the scientific method is empirical, public, and objective. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 32. ​The phrase “science is objective” means that scientific answers are \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​based on direct observation | |  | b. | ​based on logical reasoning | |  | c. | ​not influenced by researcher bias | |  | d. | ​made available for evaluation by others |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.08 - Explain what it means to say that the scientific method is empirical, public, and objective. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 33. ​Publically repeating a study by copying the methods exactly is referred to as \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​empiricism | |  | b. | ​replication | |  | c. | ​control | |  | d. | ​tenacity |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.08 - Explain what it means to say that the scientific method is empirical, public, and objective. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 34. ​Tiffany is researching methods used to treat autism spectrum disorders and begins by searching on the Internet. Which statement should make her suspicious that she is on a site rooted in pseudoscience?   |  |  |  | | --- | --- | --- | |  | a. | ​The entire website is plastered with testimonials from family members that describe seemingly miraculous cures. | |  | b. | ​The site contains links to research published in peer-reviewed journals that evaluate the treatment method. | |  | c. | ​The treatment methods described on the site are clearly defined, as are the expected outcomes. | |  | d. | ​The site provides clear explanations of how the treatment methods are tied to existing theories of the causes of autism. |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 35. ​A distinction between science and pseudoscience is that \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​science focuses on the theoretical, not the practical | |  | b. | ​science is based on hypotheses that are testable and refutable | |  | c. | ​science examines a topic that has never been investigated | |  | d. | ​science aims to make definite conclusions about a topic |  |  |  | | --- | --- | | *ANSWER:* | b | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 36. ​Lowell is very concerned about his grandmother, who has recently been diagnosed with dementia. He wants to learn more about it, and checks out the jacket quotes on some currently popular books. Which quote should reassure him that the book is based in science rather than pseudoscience?   |  |  |  | | --- | --- | --- | |  | a. | ​“This book saved my wife from a lonely death in a nursing home!” | |  | b. | ​“Big Pharma does not want you to know about curing dementia!” | |  | c. | ​“From laboratory research to clinical trials: evaluating the treatment of dementia.” | |  | d. | ​“Find out what REALLY causes dementia and why health agencies do not care.” |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 37. ​Pseudoscience is based on \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​testable hypotheses | |  | b. | ​objective evidence | |  | c. | ​subjective evidence | |  | d. | ​refutable hypotheses |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 38. ​A good research hypothesis should be \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​attention grabbing | |  | b. | ​unique in the literature | |  | c. | ​testable and refutable | |  | d. | ​consistent with prevailing theories |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Difficult | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 39. ​A researcher conducts a study in which 50 rats are assigned to different treatments and tested. In the study, the rats are called research \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​associates | |  | b. | ​cohorts | |  | c. | ​participants | |  | d. | ​subjects |  |  |  | | --- | --- | | *ANSWER:* | d | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 40. ​A researcher conducts a study in which 50 college students are assigned to different treatments and tested. In the study, the students are called \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​associates | |  | b. | ​cohorts | |  | c. | ​participants | |  | d. | ​subjects |  |  |  | | --- | --- | | *ANSWER:* | c | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 41. ​The first step in the research process is \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​identifying an idea and searching the literature to form the research question | |  | b. | ​forming a testable, refutable hypothesis based on current theories | |  | c. | ​deciding which individuals should participate and how they should be recruited | |  | d. | ​selecting a research and analytic strategy based on what is typically used |  |  |  | | --- | --- | | *ANSWER:* | a | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.11 - Identify and describe the steps in the research process. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 42. ​The method of tenacity is a nonscientific way of knowing.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 43. ​A football player who knows that his performance will be better if he wears his lucky shirt is using the method of faith.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.01 - Describe tenacity and intuition as methods of knowing or acquiring knowledge. Identify an example and explain the limitations of each method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 44. ​Finding information in a textbook is an example of using the rational method of inquiry.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 45. ​Dallas is using the rational method when, upon seeing that birds eating certain berries do not die, concludes that the berries are not poisonous.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 46. ​Clinton is using the empirical method when he decides to eat a handful of berries to see if they are poisonous.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 47. ​To find out whether it really is cold enough to make your tongue stick to a metal flagpole, you press your tongue against a metal flagpole. This is an example of using the empirical method.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 48. ​Visual illusions demonstrate one problem with the method of empiricism.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.04 - Describe and identify an example of the empirical method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 49. ​You have dinner reservations at 7:30 at a restaurant that is 30 minutes away and it is already 7:20, leading you to conclude that you are going to be late. This is an example of using the empirical method.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 50. ​Based on a few students whom you know, you decide that art majors wear funky clothes and that physics majors tend to be nerds. This is an example of inductive reasoning.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 51. ​Part of the scientific method involves using a hypothesis to make predictions.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 52. ​Using a hypothesis to predict how people will behave demonstrates the use of induction.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 53. ​In the scientific method, the process of forming a hypothesis means that you are trying to find a possible explanation for the phenomenon that you have observed.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.07 - Explain the distinction between a hypothesis and a prediction. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 54. ​If the scientific method is being used to evaluate a hypothesis predicting a specific relationship between two variables, then it is essential that both variables can be measured.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 55. ​An important element of the scientific method is that research results should be made public.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.08 - Explain what it means to say that the scientific method is empirical, public, and objective. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 56. ​Pseudoscience is based on objective, empirical evidence.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 57. ​In the scientific method, the actual research study is not done until after the researcher has formed a hypothesis and made a specific prediction.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 58. ​One critical component of the scientific method is that all answers or explanations must be demonstrated empirically.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Easy | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.08 - Explain what it means to say that the scientific method is empirical, public, and objective. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 59. ​A good hypothesis should make a statement about the existence of a relationship, a difference, or a treatment effect.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 60. ​Humans who participate in a research study are properly called research subjects.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.4 The Research Process | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.10 - Describe the difference between qualitative and quantitative research and recognize examples of each. | | *KEYWORDS:* | Bloom’s: Understand | |

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| 61. ​One difference between a scientific answer and answers gained by other methods is that the scientific answer is more likely to be an absolute or final answer.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *DIFFICULTY:* | Moderate | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 62. ​Describe a problem that can arise when you are trying to obtain information using only the method of authority. How is this problem avoided in the scientific method?   |  |  | | --- | --- | | *ANSWER:* | ​Potential problems with the method of authority are (1) that the expert may not really be an expert or may be providing information outside his or her area of expertise, and (2) that the method does not include any mechanism to verify the information. These problems are corrected in the scientific method because the results are always verified by an empirical demonstration. | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge, 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.02 - Describe and identify an example of the method of authority and explain its limitations. GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 63. ​Describe a problem that can arise when you are trying to obtain information using only the rational method. How is this problem avoided in the scientific method?   |  |  | | --- | --- | | *ANSWER:* | ​Potential problems with the rational method include the fact (1) that you may have inaccurate or incomplete premise statements and (2) that there may be flaws in your use of logic. These problems are corrected in the scientific method because the logical prediction that is derived from the research hypothesis is always verified by an empirical demonstration. | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.2 Methods of Knowing and Acquiring Knowledge 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.03 - Describe and identify an example of the rational method of acquiring knowledge and explain its limitations. GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 64. ​Describe how the rational method and the method of empiricism are both utilized as parts of the scientific method.   |  |  | | --- | --- | | *ANSWER:* | The rational method is used to develop a hypothesis based on observations (inductive reasoning) and when the hypothesis is used to make predictions (deductive reasoning) that will be tested. The method of empiricism is used when scientists make systematic, planned observations to evaluate the predictions from their hypothesis.​ | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 65. ​Distinguish between induction and deduction and describe how each is used in the scientific method.   |  |  | | --- | --- | | *ANSWER:* | ​Induction involves using a few specific observations as the basis for forming a general statement about all possible observations. In the scientific method, researchers use inductive reasoning to form a general hypothesis that is based on a small number of initial observations. Deduction involves using a general statement to make predictions about specific examples. In the scientific method, researchers use a general hypothesis to predict what should occur when the make systematic, planned observations in a research study; that is, when specific individuals are observed in a specific situation. | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. GRAV.METH.16.01.06 - Define induction and deduction and explain the role of each in the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 66. ​Identify the basic steps in the scientific method and describe how the scientific method is used to answer questions such as, “Why are some marriages successful and others are not?”   |  |  | | --- | --- | | *ANSWER:* | ​After observing that some marriages are successful and some are not (step 1) you would develop a hypothesis to try to explain the phenomenon (step 2). For example, it is possible that good communication within a marriage leads to success whereas poor communication leads to failure. Based on this hypothesis, you would make a specific research prediction (step 3). For example, if you selected 50 married couples and asked each couple to rate their level of communication and the overall quality of their marriage, you should find a strong relationship between the two variables. Next, you would empirically evaluate the hypothesis by actually selecting 50 couples and observing the two variables (step 4). Based on the outcome of the observations in step 4, you could either reject the hypothesis (if it is not communication it could be some other factor) or you could refine the original hypothesis, for example try to determine what factors lead to good (or bad) communication within a marriage (step 5). | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Apply | |

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| 67. ​Explain what it means to say that the scientific method or the research process can be viewed as a never ending circle or a spiral of steps rather than a linear process that leads to an end.   |  |  | | --- | --- | | *ANSWER:* | ​Research always produces tentative answers. It is always understood that new information may appear tomorrow that changes the way we think about behavior today. The results from one research study usually generate new questions for future research, or the results may be challenged or tested by additional research. Thus, the “end” on one research study is usually the beginning for other studies and the cycle continues. | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.05 - Identify and describe the steps of the scientific method. | | *KEYWORDS:* | Bloom’s: Analyze | |

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| 68. ​Distinguish between science and pseudoscience.   |  |  | | --- | --- | | *ANSWER:* | ​Science is based on evidence gathered from systematic and objective observations. Pseudoscience tends to rely on subjective evidence, anecdotal reports, and a few hand-picked examples of success. Science examines hypotheses and theories that can be tested and refuted. As a result, scientific theories are open to change or revision when new results contradict old ideas. Pseudoscience typically does not acknowledge or accept negative results, and does not change or evolve. | | *DIFFICULTY:* | Medium | | *REFERENCES:* | 1.3 The Scientific Method | | *LEARNING OBJECTIVES:* | GRAV.METH.16.01.09 - Explain the distinction between science and pseudoscience. | | *KEYWORDS:* | Bloom’s: Analyze | |