

Inquiry Homework, A

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Scientific Nutrition and Health Inc., a fictitious company, conducted an experiment to determine how creatine supplements affect muscle growth in body builders. One hundred body builders were divided into four equal groups. All groups were given the same diet and the same strict work-out schedule. Group 1 was given a placebo sugar pill for four weeks . Group 2 was give 5 grams of creatine twice a day for four weeks. Group3 was given 5 grams of creatine twice a day for four weeks. Group 4 was given 5 grams of creatine four times a day for the first two weeks and the 5 grams of two times a week for the second two weeks

Which group was used as the control ?

- a. Group 1
 - b. Group 2
 - c. Group 3
 - d. Group 4
2. Janet is interested in the growth rated of three different varieties of bean plants. She has ten plants of each of the three varieties, and she records the heights of each plant each day for a period of one month. How should Janet best present her data?
 - a. on a data table with the days of the month along the top and the heights of each plant listed below.
 - b. on a line graph showing average plant height for each variety each day for the month
 - c. in a paragraph that describes her methods and findings
 - d. on a pie chart that shows the percentage of plants that had significant growth
 3. A judgement based on data gathered in an experiment is
 - a. a skill.
 - b. a conclusion.
 - c. a hypothesis.
 - d. an observation.
 4. A forecast of possible or future events is a/an
 - a. analysis.
 - b. prediction.
 - c. hypothesis.
 - d. observation.
 5. The ability to draw from previous knowledge and experience to make an explanation is
 - a. a problem
 - b. inductive reasoning
 - c. a reasonable explanation
 - d. processing
 6. An explanaion that explains a scientific result or predicts the result of an experiment is a/ an
 - a. hypothesis
 - b. puzzle
 - c. answer
 - d. reason
 7. How many significant figures are in the measurement 4.410 m?
 - a. one
 - b. two
 - c. three
 - d. four
 8. The following information about the results of an experiment on goldfish is included in a research paper.

Goldfish in the 2'x5' tank were given the same amount of food as the goldfish in the 8'x10' tank. Also, equal numbers of goldfish were present in each tank. Results indicate that goldfish raised in the 8'x10' tank grew on average 1 inch longer than the goldfish in the 2'x5' tank.

Which of the following sentences is most likely to be in the conclusion of these results?

- a. Goldfish growth was not affected any the size of their habitat.
 - b. Goldfish have a tendency to grow larger in a larger habitat
 - c. Diet is a deciding factor in goldfish growth.
 - d. The number of goldfish living together in one area has a substantial effect on the growth of each goldfish.
9. Keisha observes goldfish in an outdoor pond. The goldfish seem to be more active when the weather is warm than when it is cold. She asks herself how do temperature changes affect goldfish? If she were to do an experiment, which of the following would be the best hypothesis.
- a. Do goldfish like warm water or cold water?
 - b. Goldfish are more active in warm water than in cold water.
 - c. Goldfish live in warm and cold water.
 - d. Temperature changes will kill goldfish.
10. Four groups of rats are tested in a lab. Group 1 is given a special hormone for muscle growth. Group 2 is given a special multivitamin diet. Group 3 receives both the hormone treatment and the multivitamin diet. Group 4 does not receive any extra treatment or special diet. Which of the following groups is **the control** for this experiment?
- a. group 4
 - b. group 2
 - c. group 3
 - d. group 1
11. Something occurring in nature experienced through our senses to obtain information is
- a. asking questions
 - b. inductive reasoning
 - c. defining a problem
 - d. a natural phenomenon
12. A statement that can be tested experimentally is a
- a. variable.
 - b. model.
 - c. generalization.
 - d. hypothesis.
13. The most appropriate SI unit for measuring the length of an automobile is the
- a. millimeter.
 - b. kilometer.
 - c. meter.
 - d. liter.
14. The number of meters equal to 0.5 km is
- a. 0.0005.
 - b. 0.005.
 - c. 500.
 - d. 5000.
15. If repeated measurements agree closely but differ widely from the accepted value, these measurements are
- a. neither precise nor accurate.
 - b. accurate, but not precise.
 - c. both precise and accurate.
 - d. precise, but not accurate.