Science Process Skills Test

Name: _____ **Date:** _____

1. Which statement is an **observation**?

   A. The plant has flowers.

   B. The plant is very pretty.

   C. The plant will grow berries.

   D. The plant might be poisonous.

2. A fertilizer company claims that their fertilizer causes rose bushes to produce more flowers. To support this claim, they set up an investigation. They added the recommended amount of fertilizer to 100 rose bushes in a greenhouse, and then they counted the number of flowers that developed on each plant. The number of flowers on each rose bush ranged from 28 to 36. The mean number of flowers on each plant was 33.

   A gardener was skeptical of the company's claim. Which statement provides the *best* reason to be skeptical?

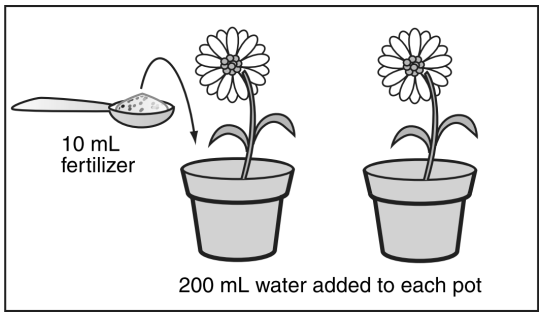
   A. The sample size was too small to be valid.

   B. The investigation tested only one variable.

   C. The research was conducted without a control.

   D. The investigation was conducted only on rose plants.

3. A student will measure and record the growth of two flowering plants every other day for 10 days.



   According to the diagram, which question is being tested?

   A. Do flowering plants grow better when watered with salt water?

   B. How much fertilizer do flowering plants need?

   C. Does fertilizer added to the soil lead to taller flowering plants?

   D. How tall do flowering plants grow?

4. Students hypothesized that their normal pulse rates would double after doing 50 sit-ups. After completing three trials, four students averaged their individual pulse rates and recorded their results below.

Student	Average Pulse After 3 Trials
1	120 beats/min.
2	98 beats/min.
3	135 beats/min.
4	110 beats/min.

Based on the data above, a conclusion cannot be made because

A. the exercise was not strenuous enough to affect the pulse rates.

B. control data of normal pulse rates for each individual are missing.

C. the variability in pulse rates among the students is too great.

D. not enough trials were conducted to be able to draw a conclusion.

5. In most stable freshwater environments, populations of *Daphnia* are almost entirely female and reproduce asexually. However, males are observed in low oxygen environments or when food is scarce. Based on these observations, a researcher suggests that male *Daphnia* develop in response to unfavorable environmental conditions. This is an example of a

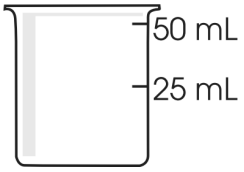
A. result.
B. theory.
C. procedure.
D. hypothesis.

6. A student studying rock densities needs to measure the volume of a small rock sample to the nearest milliliter (mL). The student knows that the rock sample has a volume of at least 5 mL.

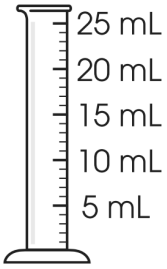
Which tool should the student use to get the most accurate measure of the volume of water displaced by the rock?

A.

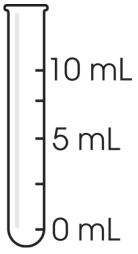
B.



C.



D.



7. Which of these is an SI unit of measure for the mass of an object?

A. meter
B. ounce
C. milliliter
D. kilogram