Moore SCC 8e

Chapter 5 Practice Quiz

1. In the following situation, which is the response variable and which is the explanatory variable: the amount of sunlight and height of a plant.

a. Response variable: amount of sunlight; explanatory variable: height of plant

b. Response variable: height of plant; explanatory variable: amount of sunlight

c. Response variable: the type of plant; explanatory variable: the amount of shade

d. Response variable: the amount of shade; explanatory variable: the type of plant.

2. Does drinking orange juice alleviate back pain? 50 volunteers were asked to drink 3 glasses of orange juice every morning for two weeks. As a result, most volunteers said that pain was lessened enough for them to ask their doctors to reduce their medication.

What is the explanatory variable?

a. Drinking orange juice

b. Amount of back pain

c. The fifty volunteers

d. The medication

3. Does drinking orange juice alleviate back pain? 50 volunteers were asked to drink 3 glasses of orange juice every morning for two weeks. As a result, most volunteers said that pain was lessened enough for them to ask their doctors to reduce their medication.

What is the response variable?

a. Drinking orange juice

b. Amount of back pain

c. The fifty volunteers

d. The medication

4. Does drinking orange juice alleviate back pain? 50 volunteers were asked to drink 3 glasses of orange juice every morning for two weeks. As a result, most volunteers said that pain was lessened enough for them to ask their doctors to reduce their medication.

What is the lurking variable?

a. Drinking orange juice

b. Amount of back pain

c. The fifty volunteers

d. The medication

5. An experiment is being done to test whether a new drug will reduce eye puffiness. Two groups of 50 are randomly chosen: one group is given the new drug treatment; the second is given a simple cream with no active ingredients. The group who was given the new drug treatment reported that 45% had reduced eye puffiness. In the second group with the simple cream, 20% had reduced puffiness. This second group is an example of:

a. A control

b. Randomization

c. Confounding

d. Treatments

6. Randomly assigning individuals into treatment groups to control the effects of lurking variables is known as:

a. Simple Random Samples

b. Randomized Comparative Experiments

c. Statistical Significance

d. Compare matched groupings

7. Randomization is important in experimental design because it:

a. Reduces bias

b. Creates groups that are similar in all variables

c. Mitigates the effects of lurking variables

d. All of the choices are correct.

8. Differences between the effects of treatments that are so large that they would rarely happen by chance are called:

a. Explanatory variables

b. Compare matched groupings

c. Statistically significant

d. Placebo effect

9. The primary problem with observational studies is:

a. We cannot directly observe the results.

b. We cannot determine associations between variables.

c. We cannot determine cause and effect relationships between variables.

d. None. Observational studies are flawless.

10. The best method for testing causation would be:

a. Sample Surveys

b. Observational Studies

c. Experimentation

d. Census