

Practice in Identifying Variables

Ch. 1: What is psychology?

Name _____

Date _____

1. A psychology teacher allowed his third period class to eat snacks while taking an exam. His fourth period class was not allowed to eat snacks while taking the same exam. He compared the test averages from both classes. Prior to this, both classes averaged comparable exam scores.

- a. What could the hypothesis be?

Identify the following:

- b. *control group*
c. *experimental group*
d. *independent variable*
e. *dependent variable*

2. Four groups of rats were being trained to learn an escape-avoidance response. Groups 1, 2, and 4 were given 10, 15, and 20 volts of shock respectively. Group 3 was given no shock. All other conditions were the same for each group. The time it took for each rat to learn the escape-avoidance response was recorded.

- a. What could the hypothesis be?

Identify the following:

- f. *control group*
g. *experimental group*
h. *independent variable*
i. *dependent variable*

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3. The leading producer of paper products wants to increase their sales of paper cups. They set up a test program in local supermarkets. Identical 8 ounce paper cups were packaged in two ways—half of the stock was packaged in the present plain boxes, while the other half of the stock was packaged in bright, cheery, pastel-colored boxes. Sales volumes for each type of package were recorded over a period of six months.

a. What could the hypothesis be?

Identify the following:

j. *control group*

k. *experimental group*

l. *independent variable*

m. *dependent variable*

4. A group of scientists are testing the hypothesis that people learn more when they study in a quiet versus a noisy place.

a. What is the *independent variable*?

b. What is the *dependent variable*?

c. Suggest an *operational definition* for the dependent variable.

5. Imagine you are testing the hypothesis that watching professional wrestling diminishes interpersonal skills.

a. What is the *independent variable*?

b. What is the *dependent variable*?

c. Propose an *operational definition* for the dependent variable.

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Confounding Variables: Identify the one serious confounding factor that threatens the following experiment's validity. Then suggest how the confounded factor could be controlled.

A drug company developed a new medication to control the symptoms of depression. The company hired a hospital psychiatrist to test the effectiveness of the drug. He identified a group of depressed patients and randomly assigned them to a drug or placebo group. Nurse Henderson was told to administer the drug, while Nurse Smith was told to administer the placebo. Each made daily observations of their patients during treatment. A month later, the observations were compared. In general, patients in the drug group had behaved more "normally" than patients in the placebo group. The drug company publicized the effectiveness of the product and received a million orders for the new drug in the next few weeks.

Name a *confounding variable*:

What is one method to "unconfound" the experiment?

Biff Bifferson wanted to test a new sing-along method to teach math to fourth graders (e.g., "Multiplying Is Fun" to the tune of Happy Birthday). He used the sing-along method in his first period class. His sixth period students continued solving math problems with the old method. At the end of the term, Mr. Bifferson found that the first period class scored significantly lower than the sixth period class on a mathematics achievement test. He concluded that his sing-along method was a total failure.

Name a *confounding variable*:

What is one method to "unconfound" the experiment?