

# Self Assessment Analyzing Investigations

Name \_\_\_\_\_

Period \_\_\_\_\_ NBpg# \_\_\_\_\_

1. Read the description of this investigation and then answer the questions below.

A study was done to determine how the number of paper clips picked up was related to the number of dry cell batteries connected to the electromagnet. The magnet, connected to 1, 2, 3, 4, or 5 D cell batteries, is placed on the top of a pile of 100 paper clips and lifted.

a. Identify the constants in the above investigation.

\_\_\_\_\_  
\_\_\_\_\_

b. Identify the independent variable. \_\_\_\_\_

c. Identify the dependent variable. \_\_\_\_\_

d. State the hypothesis being tested. \_\_\_\_\_

\_\_\_\_\_

2. Identify each of the statements below that is stated as a hypothesis.

- a. Baking powder is used in biscuits.
- b. The brighter the color of an orange, the juicier the fruit.
- c. Brass contains copper and zinc.
- d. The more antifreeze, the lower the freezing temperature.

3. Classify these statements as hypotheses (H) or non-hypotheses (N):

- | H                        | N                        |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | a. The more cabbage in the stew, the stronger the flavor. |
| <input type="checkbox"/> | <input type="checkbox"/> | b. Most apples are red.                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | c. The faster the river flows, the greater the erosion.   |
| <input type="checkbox"/> | <input type="checkbox"/> | d. Dental floss is waxed.                                 |

4. Suppose you wished to test the hypothesis stated below. Check which of the factors listed should be kept the same in the experiment?

**Hypothesis:** *The warmer the water, the faster an aspirin will dissolve.*

- a. amount of water
- b. brand of aspirin
- c. temperature of water
- d. size of the tablet

5. List four constants for an experiment if you were to test this hypothesis:

**Hypothesis:** *The thicker the coating of peanut butter, the slower a sandwich will be eaten.*

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