

Name: _____

Date: _____ Period: _____

For each experiment below, specify the independent variable, dependent variable, control group and any constants.

1. A student wanted to test how the mass of a paper airplane affected the distance it would fly. Paper clips were added before each test flight. As each paper clip was added, the plane was tested to determine how far it would fly.

Independent variable _____

Dependent variable _____

Control _____

Constant _____

2. Two groups of students were tested to compare their speed working math problems. Each group was given the same problems. One group used calculators and the other group computed without calculators.

Independent variable _____

Dependent variable _____

Control _____

Constant _____

3. Students of different ages were given the same puzzle to assemble. The puzzle assembly time was measured.

Independent variable _____

Dependent variable _____

Constant _____

There can be several controlled variables. If an experiment is to be useful, only one variable at a time can be manipulated intentionally. All other variables must be controlled throughout all parts of the experiment. If more than one variable is altered (changed), the results of an experiment cannot be interpreted with any validity.

4. An experiment was performed to determine how the amount of coffee grounds could affect the taste of coffee. The same kind of coffee, the same percolator, the same amount and type of water, the same perking time, and the same electrical sources were used.

Independent variable _____

Dependent variable _____

Constants (3) _____