

Variable Practice for Lab Exam

For each item below, specify the independent and dependent variables, as well as constants.

1. A study was done to find if different tire treads affect the braking distance of a car.

I: Type of treads D: Braking distance C: car

2. The time it takes to run a mile depends on the person's running speed.

I: running speed D: time C: person

3. The height of bean plants depends on the amount of water they receive.

I: amt of water D: height of plant C: location

4. The higher the temperature of the air in the oven, the faster a cake will bake.

I: Temp of oven D: time to bake C: oven

5. Lemon trees receiving the most water produced the most lemons.

I: amt of water D: # of lemons C: environment

6. An investigation found that more bushels of potatoes were produced when the soil was fertilized more.

I: amt of fertilization D: # of potatoes C: environment

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 mass of plane
Dependent variable distance
Control plane
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 way of computation
Dependent variable time to complete problems
Control problems
Constant _____

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

Independent variable ages
Dependent variable time to complete
Constant _____

control: puzzle