

Name: \_\_\_\_\_ P: \_\_\_\_\_ Assignment Code: \_\_\_\_\_

### Independent and Dependent Variables (IV and DV)

**Part I:** A well designed experiment has both controlled parameters which are kept constant and typically two variable parameters. The scientist chooses to change one variable in order to find out what effect it will cause on the outcome of the experiment. The variable that the scientist chooses to **manipulate** is called the **Independent variable**. As the experiment progresses, the scientist observes and measures the **dependent variable** to see how it **responds** to the experimental conditions.

Practice identifying the independent variable and dependent variable that you would use to test the following advertising claims. Note - these claims may not be true!

1. "Air Jordan" sneakers will help a person jump higher than Reebok sneakers.

independent variable: \_\_\_\_\_

dependent variable: \_\_\_\_\_

2. Wearing Old Spice scented products will get you more dates than not wearing them.

independent variable: \_\_\_\_\_

dependent variable: \_\_\_\_\_

3. Electric shock heals people from cancer.

independent variable: \_\_\_\_\_

dependent variable: \_\_\_\_\_

**Part II:** In data tables, the **Independent variable** is typically shown in the left hand column and the **dependent variable** is shown in the right hand column. Look at each data table and identify the IV and the DV.

4.

Month	Number of Bunnies
April	6
May	12
June	30
July	56
August	78

independent variable: \_\_\_\_\_

dependent variable: \_\_\_\_\_

5.

Time (sec)	Concentration (mg/ml)
0	200
10	190
20	170
30	150
40	142

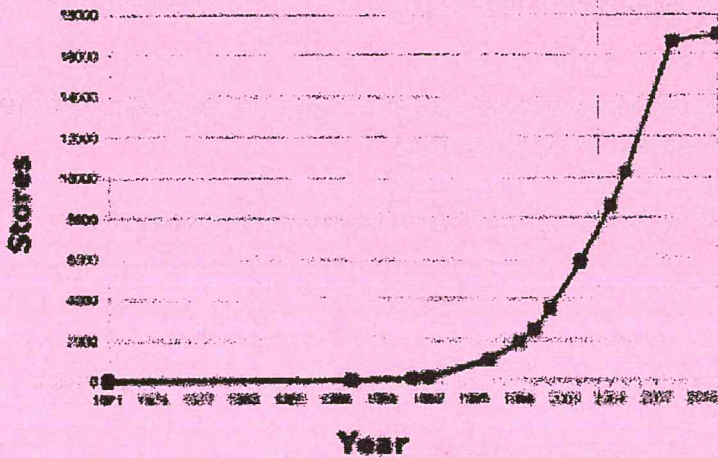
independent variable: \_\_\_\_\_

dependent variable: \_\_\_\_\_



**Part II:** In graphs, data for the **independent variable** is represented by the **X-axis**, or horizontal axis. Data for the **dependent variable** is displayed on the **Y-axis**, or vertical axis.

**Starbucks Locations**



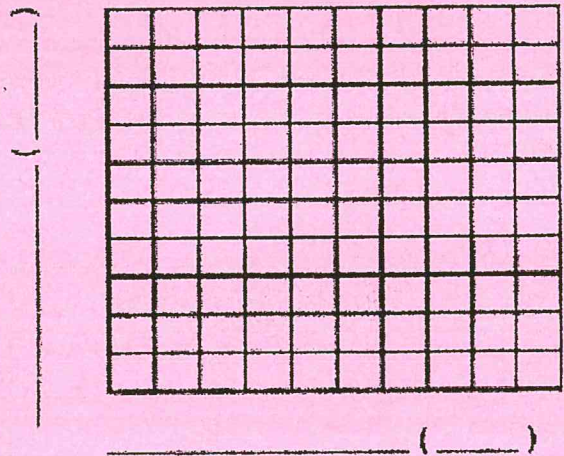
6. Identify the independent and dependent variables from the graph.

IV = \_\_\_\_\_

DV = \_\_\_\_\_

7. Use the data table below to label the X-axis and Y-axis of the graph. Be sure to label the units!

Mass (g)	Volume (mL)
5	
7.5	
10	
12.5	
15	



**Congratulations on finishing this worksheet! Please open your Holt Physical Science textbook to page 51 for an important review of these concepts.**