

Dependent Variables

The dependent variable is the variable which is dependent on an independent variable (which is usually time). The dependent variable is plotted on the y-axis of a graph, whereas the independent variable (time) is plotted on the x-axis.

e.g. A baby's weight is measured over a 2-week period. It is determined that the baby gains 4 ounces per day.

If this information were to be plotted on a graph, time (in days) would be shown on the x-axis. The y-axis would show how the weight changes as a function of time. Time is independent. It goes on at a constant rate, independent of anything else. Weight is dependent on time. As time goes on, weight changes.

Independent variable: Time

Dependent variable: Weight of Baby

You try:

1. A zoologist observes the growth of a monkey population and notes that their number doubles each year. Determine the dependent variable for this functional situation.

Answer: # Monkeys

2. A crew lays 60 feet of railroad track per day. Determine the dependent variable for this functional situation.

Answer: Length of Railroad

3. A child grows 0.5 mm per week during a 4-week period. Determine the dependent variable for this functional situation.

Answer: Height (or length) of child

4. A man is balding. Each day, 46 of his hair follicles die. Determine the dependent variable for this functional situation.

Answer: # Hair follicles (either lost or left)

5. A geneticist observes a fruit fly colony and notes that the number of fruit flies increases by 50% each week. Determine the dependent variable for this functional situation.

Answer: # fruit flies