Name: _____

Independent and Dependent Variables

The **independent variable** is not impacted by any other variable. Its value is set at the beginning of a problem. It is represented as **x** and plotted on the x-axis.

The **dependent variable** is impacted by—or depends on—the independent variable. Its value can only be determined after the value of the independent variable has been set. It is represented as **y** and plotted on the y-axis.

Independent and dependent variables can be identified in many forms.
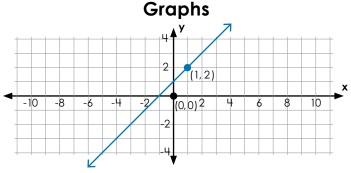
Equations

Tables

# of food bags	price

Note: sometimes other letters are used in place of x and y, but the general equation structure will remain the same.

Note: vertical tables are formatted with the x value in the left column; horizontal tables are formatted with the x value in the top row.

Graphs

On graphs, x-axis values are the independent variable; y-axis values are the dependent variable.

Note: *identify the relationship between the paired values to identify the matching equation (in this case, y = x + 1).*

Words

> **Gael's cat is two years younger than Holly's dog. How old is the cat?**

The age of Gael's cat is expressed in relation to the age of Holly's dog: $c = d - 2$. The dog's age is the independent variable; the cat's age is the dependent variable.

Note: *always pay attention to which value a word problem expresses in terms of another.*