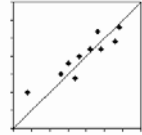




Name _____

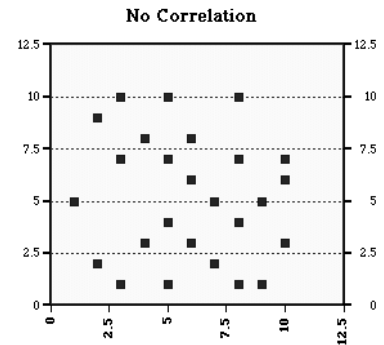
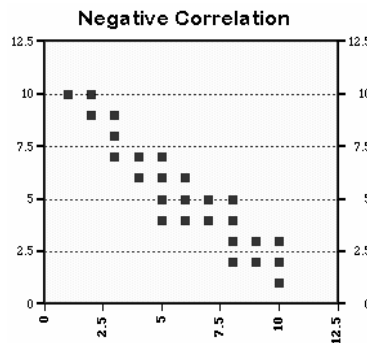
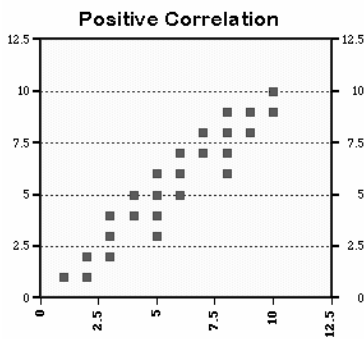


Scatter Plots

Scatter plots show how much one thing is affected by another. This relationship is called a correlation.

When data points are plotted on a scatter plot, the closer the data points come to making a straight line the higher the correlation between the two variables, or the stronger the relationship.

If the data points make a straight or almost straight line going from the lower left to the upper right on the graph, then the variables are said to have a **positive correlation**. If the line goes from the upper left to the lower right on the graph, then the variables have a **negative correlation**. No particular pattern shows **no correlation**.



Correlation does not mean cause and effect.

To make a quality scatter plot:

1. Put the independent (manipulated) variable on the X-axis. The X-axis is the horizontal axis on the bottom of the graph.
2. Put the dependent (responding) variable on the Y-axis. The Y-axis is the vertical axis on the side of the graph.
3. Do not connect the data points with a line.

One way to remember which data goes on which axis is **DRY MIX**

DRY	MIX
D – Dependent	M – Manipulated
R – Responding	I – Independent
Y – Y-axis	X – X - axis

4. Select an appropriate interval and scale for your graph. The scale is the numbers used on the axes of the graph. The scale usually begins at zero.
5. Select an appropriate interval for your graph. The interval is the amount of space between one number and the next or one type of data and the next on the graph.



Changing the scale or the interval changes the way a graph looks, and can change how the graph is interpreted. Make sure your interval and scale are appropriate for the data.



6. Label both of the axes with descriptive labels. Include units of measurement if appropriate.
7. Give the graph a title that describes the data.

One way to remember everything needed for a quality graph is **TAILS**.

TAILS
T – Title
A – Axis
I – Interval
L – Labels
S – Scale

Does the data show a correlation? What kind?