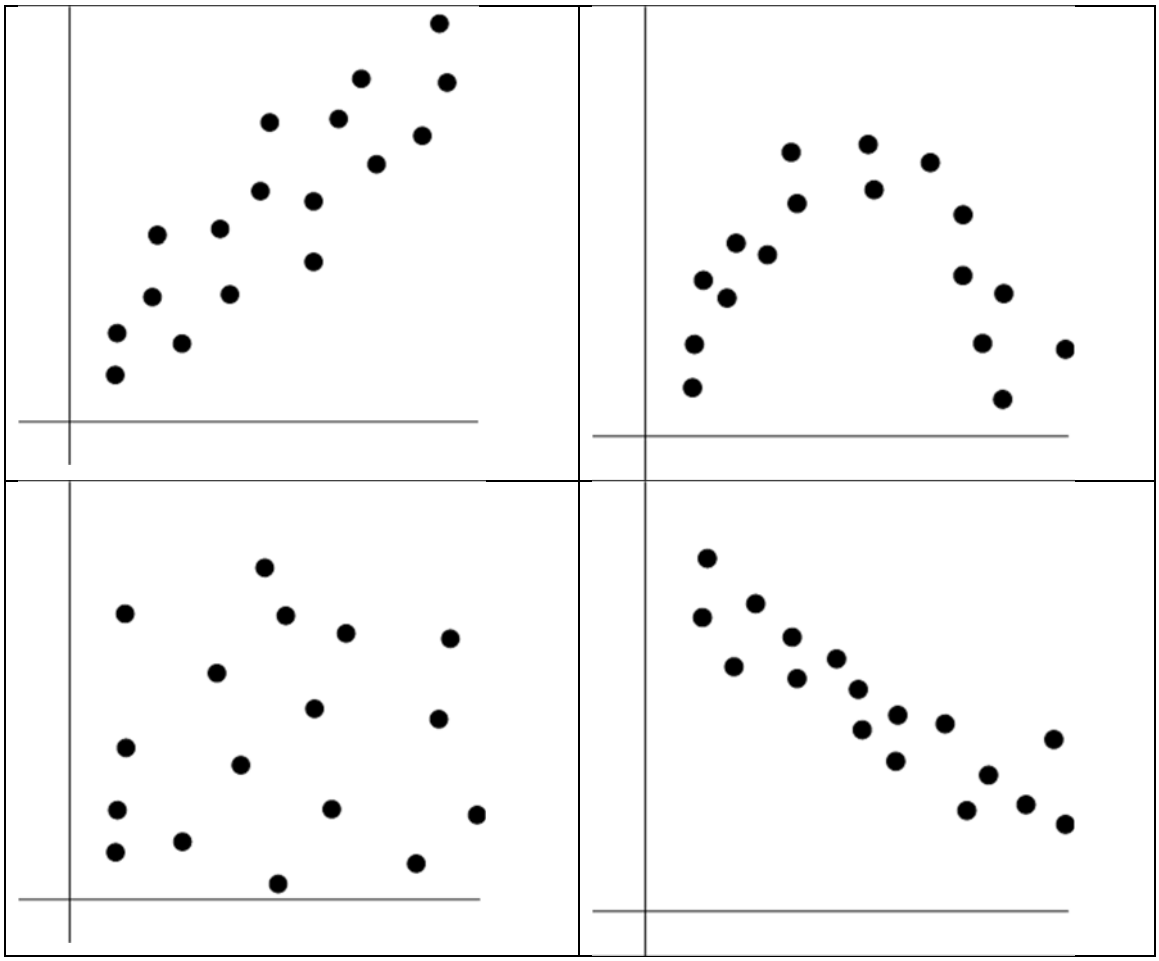
Regression and correlation NAME:

Regression is the art of finding a line or curve that fits the pattern of points on a scatter plot.

Two of the scatter plots below have a linear pattern, one has a curved pattern, and one has no discernible pattern. For each of the graphs below, draw in a straight line (with a straight edge) or a curve that you think best fits the pattern of points or indicate it has no pattern.



The correlation coefficient r tells us how well the points form a straight line. The sign (positive or negative) also tells us if the pattern of points slopes up or down (looking from left to right on graph). Remember r can be any number between -1 and 1.

Let's look at some more scatter plots, all with linear or no patterns. Assign to each graph the most likely value of r out of the possibilities: -1, -0.9, -0.7, 0, 0.7, 0.9, and 1. There is an extra value of r given.