

3.3.1: Bivariate Data and Scatterplots Review

In Chapter 3, we defined bivariate data as data that have two different numeric variables. In an algebra class, these are also known as ordered pairs. We will let X represent the **independent** (or explanatory) variable and Y represent the **dependent** (or response) variable in this definition. Here is an example of five total pairs in which X represents the annual rainfall in inches in a city and Y represents annual sales of sunglasses per 1000 population.

The best way to graph bivariate data is by using a **Scatterplot** in which X , the independent variable is the vertical axis and Y , the dependent variable is the horizontal axis.

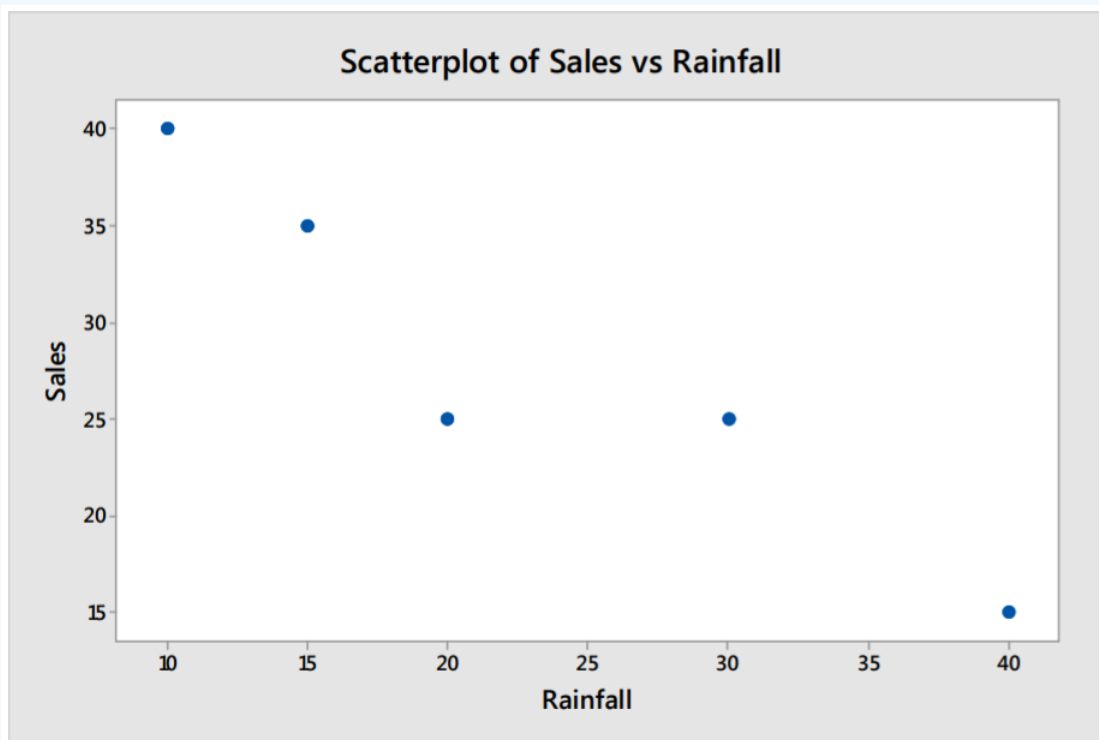
✓ Example: Rainfall and sunglasses sales

Here is an example and scatterplot of five total pairs where X represents the annual rainfall in inches in a city and Y represents annual sales of sunglasses per 1000 population.

X =rainfall	Y =sales
10	40
15	35
20	25
30	25
40	15

Solution

In the scatterplot for this data, it appears that cities with more rainfall have lower sales. It also appears that this relationship is linear, a pattern which can then be exemplified in a statistical model.



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