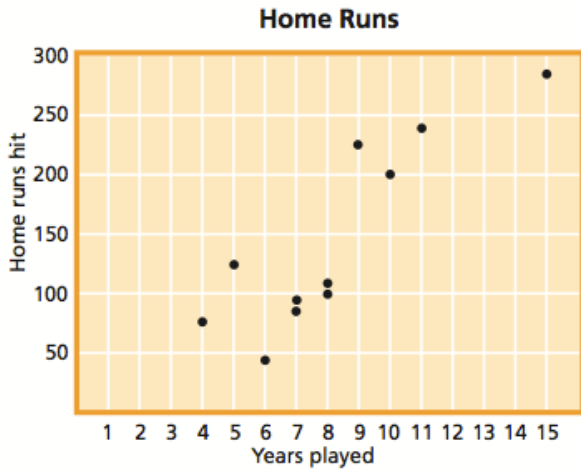


## Scatter Plots, Lines of Best Fit

A **scatter plot**, displays two sets of related data on the same set of axes. Points represent the data, but they are not connected to each other. There may be more than one point for any value on either axis.



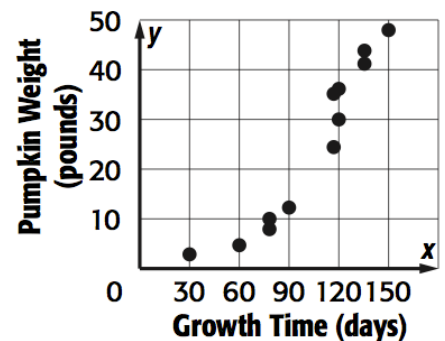
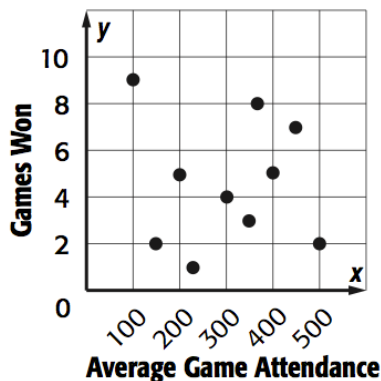
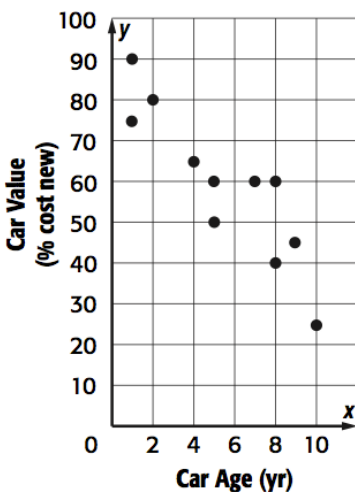
How many players are represented on this scatter plot?

Can you draw any general conclusions about a relationship between the number of years played and the number of home runs hit?

On some scatter plots, a **line of best fit**, or **trend line**, can be drawn near most of the points. A line of best fit that slopes up and to the right indicates a positive correlation among the data. A **positive correlation** means that as the horizontal axis values increase, the vertical axis values tend to increase.

A line of best fit that slopes down and to the right indicates a negative correlation. A **negative correlation** means that as the horizontal axis values increase, the vertical axis values tend to decrease.

Does the home run data above have a correlation? Is it positive or negative? Can you draw a line of best fit through the data?



Data on students' test scores and the number of hours per day they watch TV is shown in the table below.

Before you make your scatter plot, predict whether you will see a positive, negative, or no correlation in the data.

Test Scores	73	81	74	97	58	71	50	84	91	64	76	82	62	84	77	63
Hours spent watching TV	3.5	1.5	2.5	1	4	2	1	2	1.5	0	4	2.5	3.5	1	2	4.5