

How to Understand and Create Scatterplots to Reveal Data Relationships

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A scatterplot is a graphical representation of data points plotted on a Cartesian coordinate system, with the independent variable on the x-axis and the dependent variable on the y-axis. The purpose of a scatterplot is to visually display the relationship between two variables and identify any patterns or trends that may exist. This type of graph is commonly used in statistical analysis to help identify correlations between variables, assess the strength of the relationship, and make predictions based on the data. Scatterplots are valuable tools for understanding and interpreting data and are widely used in various fields such as economics, science, and social sciences. They provide a clear and concise way to present complex data and are essential in making informed decisions and drawing meaningful conclusions.

Scatterplots

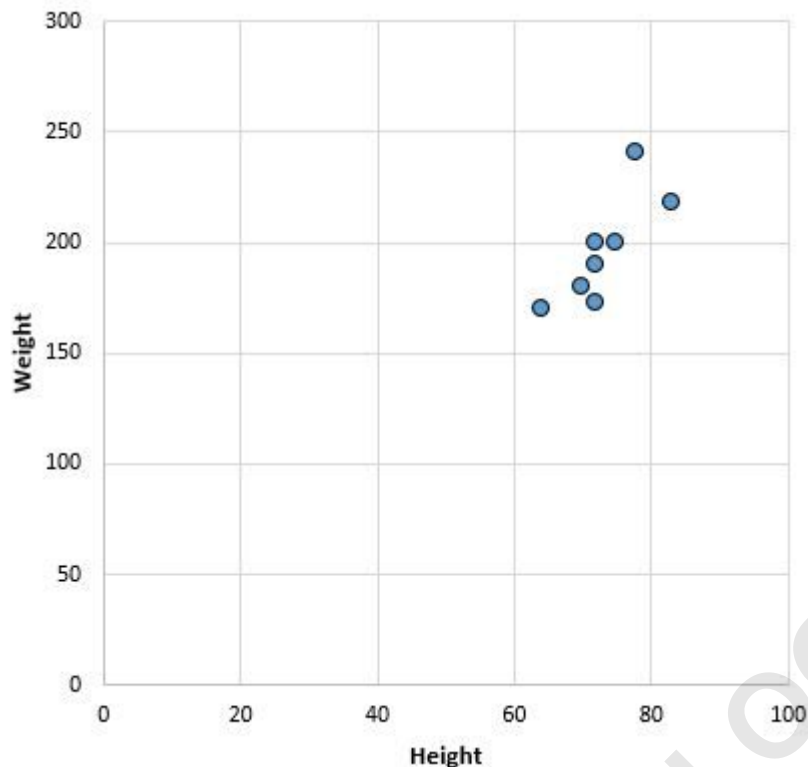
Scatterplots are used to display the relationship between two variables.

Suppose we have the following dataset that shows the weight and height of players on a basketball team:

Height (inches)	Weight (pounds)
70	180
72	190
75	200
78	240
83	218
72	200
72	172
64	170

The two variables in this dataset are height and weight.

To make a scatterplot, we place the height along the x-axis and the weight along the y-axis. Each player is then represented as a dot on the scatterplot:



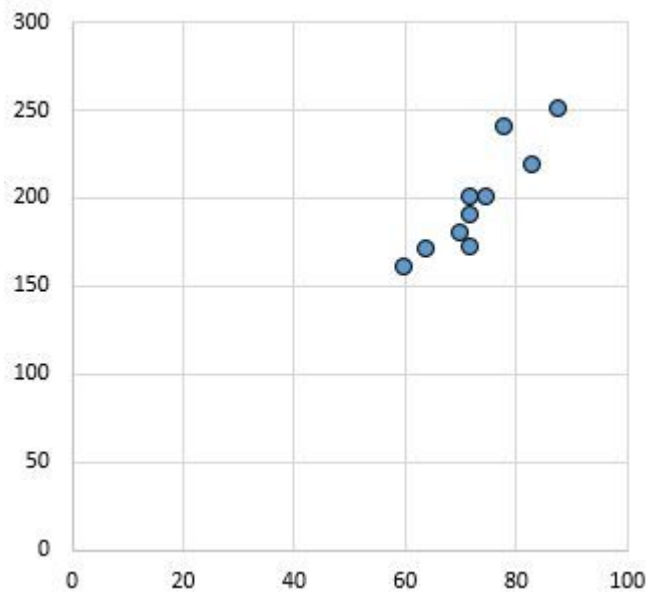
Scatterplots help us see relationships between two variables. In this case, we see that height and weight have a positive relationship. As height increases, weight tends to increase as well.

Interpreting Scatterplots

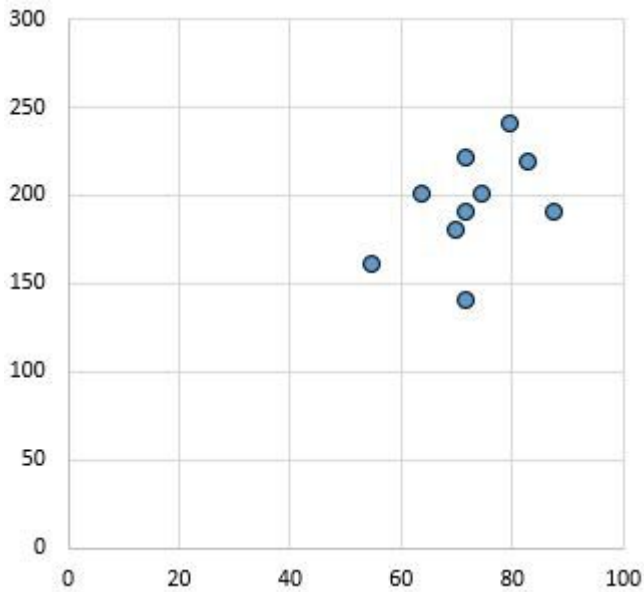
Scatterplots help us see the relationship (positive, negative, none) between two variables as well as the strength of that relationship (weak, strong).

Strong, positive relationship: As the variable on the x-axis increases, the variable on the y-axis increases as well. The dots are packed together tightly, which

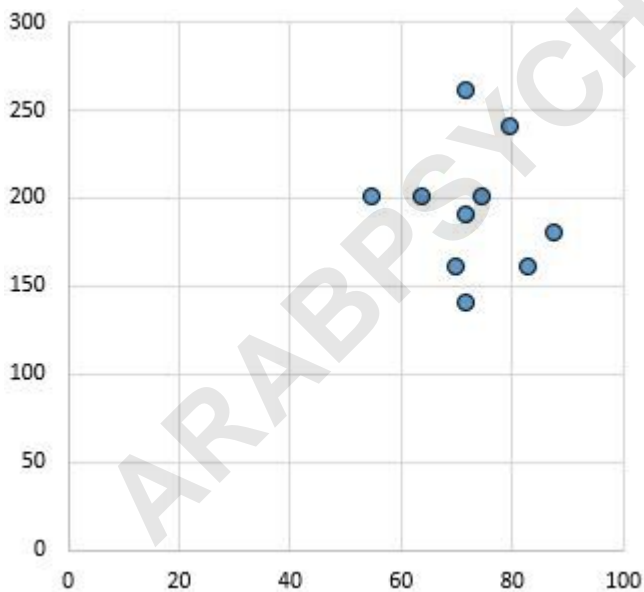
indicates a strong relationship.



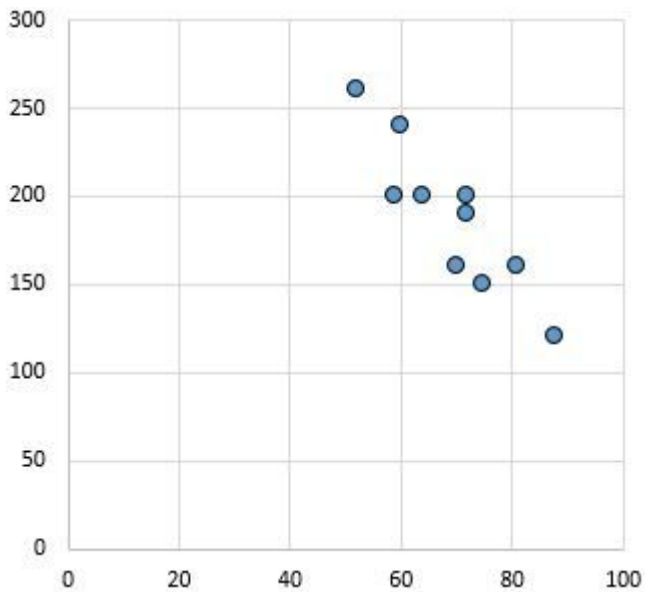
Weak, positive relationship: As the variable on the x-axis increases, the variable on the y-axis increases as well. The dots are fairly spread out, which indicates a weak relationship.



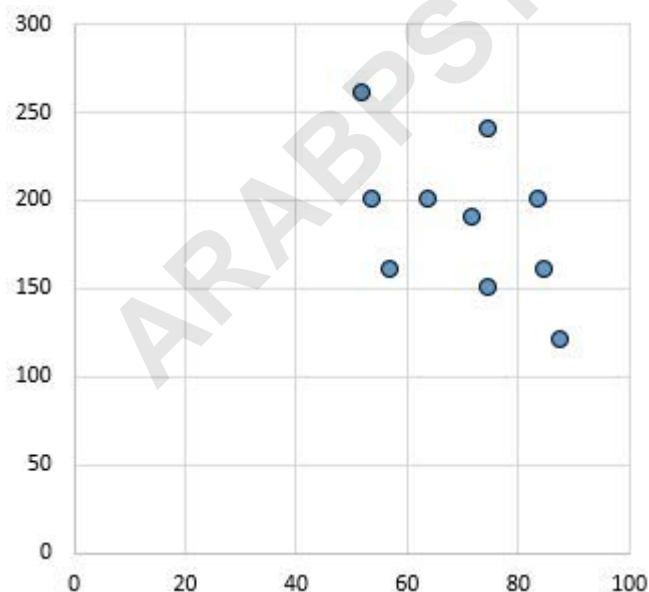
No relationship: There is no clear relationship (positive or negative) between the variables.



Strong, negative relationship: As the variable on the x-axis increases, the variable on the y-axis decreases. The dots are packed tightly together, which indicates a strong relationship.



Weak, negative relationship: As the variable on the x-axis increases, the variable on the y-axis decreases. The dots are fairly spread out, which indicates a weak relationship.



Scatterplot Generator

Use the free to generate a scatterplot for a dataset simply by entering data values.

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