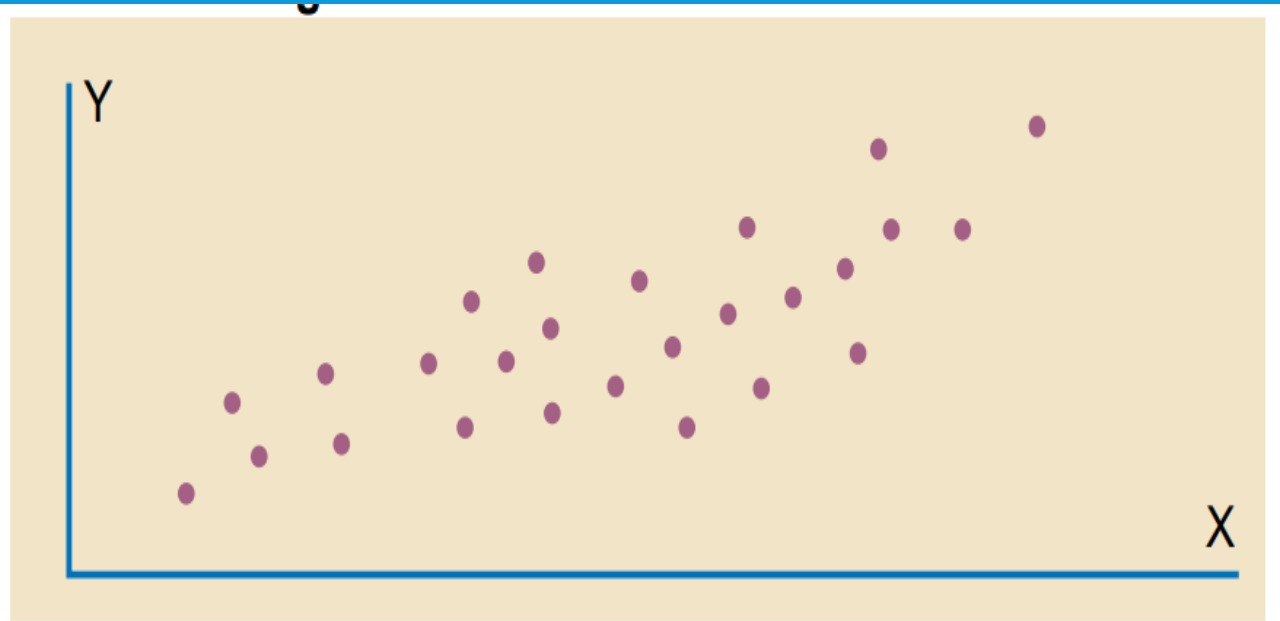
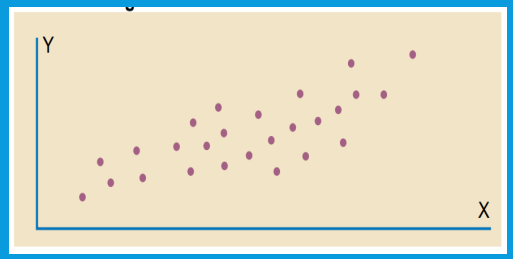
SCATTER PLOT



A QUALITY TOOL FOR DATA VISUALIZATION

WHAT IS SCATTER PLOT?

- ✓A graphical representation that displays the relationship between two quantitative variables.
- ✓Each point on the graph represents an observation, allowing for visual analysis of trends, correlations, and clusters.
- ✓Scatter diagrams are particularly useful in identifying patterns and assessing the strength of relationships between variables, helping teams make data-driven decisions for quality improvement.



A LITTLE BIT OF HISTORY

- ✓The scatter diagram, a key tool in data analysis, emerged in the 19th century. It was first used by John Frederick W. Herschel in 1833 to study double stars.
- ✓In 1886, Francis Galton popularized its use in correlation studies, laying the groundwork for its application in quality management.
- ✓Subsequently, Karl Pearson further refined the concept by formalizing statistical methods, leading to its widespread adoption in various fields, including engineering and social sciences, as a means to visualize and analyze data relationships.

HOW TO CREATE A SCATTER PLOT?

1. Collect Data

   Gather quantitative data for the two variables you wish to analyze.

2. Set up Axis

   Designate one variable for the x-axis and the other for the y-axis.

HOW TO CREATE A SCATTER PLOT?

3. Plot Data Points

   Mark each observation on the graph according to its values.

4. Analyze Trends

   Look for patterns, correlations, or outliers to inform quality improvement decisions.

EXAMPLE #1

Choose two related variables to plot. Let's say you want to examine the relationship between hours studied and test scores. Here's some sample data:

Hours Studied	Test Score
1	50
2	60
3	65
4	70
5	80
6	90

EXAMPLE #2: PRODUCTION SPEED VS DEFECT RATE

Let's assume you have the following data for production speed (units/hour) and defect rate (defects per 100 units).

Production Speed	Defect Rate
50	5
60	4
70	3
80	6
90	7
100	8

THANK YOU!!!