Progressive QUALITY Training and Consulting LLC
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Working to Help You Win!

Basic Statistics Workshop Details

Description

Introduces basic concepts associated with statistics. Specific topics covered include: Population and sample from a population, Mean, Median, Mode, Standard Deviation, Quartiles, Quantiles, Normal Distribution, Box Plots, Course will use MINITAB statistical software. **Duration - 8 hours**.

Goal

Understand basic statistical terms, their relevance to the data they represent; normal distribution; basic graphical analysis tools and analytical techniques.

Outline / Topics

Histograms and Expected Values

- Histogram Examples
- Normal Distribution
- Central Tendency and Spread

Introduction to Statistical Analysis

- Causal Factors
- Statistical Tools

Population and Sample

- All Values versus Representative Sample
- Arithmetic for Mean
- Arithmetic for Standard Deviation

Summary

- Histograms and Distributions
- Populations and Samples
- Statistical Terms
- Data Analysis

Statistical Terms in Data Analysis

- Mean
- Standard Deviation
- Process Performance
- Normal Distribution Percentages
- Performance Related to Statistical Terms
- Collecting Performance Data
- Types of Data
- Common Statistical Terms
- Understanding Performance

Results

Upon successful completion of the training, participants will have demonstrated the ability to:

1. Calculate basic statistics for a data set including mean, standard deviation, median, minimum, maximum, range, mode, first and third quartiles.
2. Construct Histograms for a data set including how to construct and interpret a Pareto chart.
3. Identify sampling techniques for collecting a representative sample from a population.
4. Compare mean and variance of a data set to desired performance specifications and understand the impact both of these statistics can have.
5. Use graphical analysis techniques to compare segmented data subsets to better understand the effect causal factors have on overall performance.
6. Conduct Hypothesis Tests (Normality, F test) and interpret the results.