



Minitab®

* New or Improved

Assistant

Measurement systems analysis
Capability analysis
Graphical analysis
Hypothesis tests
Regression
DOE
Control charts

Graphics

Binned scatterplots*, boxplots, charts, correlograms*, dotplots, heatmaps*, histograms, matrix plots, parallel plots*, scatterplots, time series plots, etc.
Contour and rotating 3D plots
Probability and probability distribution plots
Automatically update graphs as data change
Brush graphs to explore points of interest
Export: TIF, JPEG, PNG, BMP, GIF, EMF

Basic Statistics

Descriptive statistics
One-sample Z-test, one- and two-sample t-tests, paired t-test
One and two proportions tests
One- and two-sample Poisson rate tests
One and two variances tests
Correlation and covariance
Normality test
Outlier test
Poisson goodness-of-fit test

Regression

Linear regression

Nonlinear regression

Binary, ordinal and nominal logistic regression

Stability studies

Partial least squares

Orthogonal regression

Poisson regression

Plots: residual, factorial, contour, surface, etc.

Stepwise: p-value, AICc, and BIC selection criterion

Best subsets

Response prediction and optimization

Validation for Regression and Binary Logistic Regression*

Analysis of Variance

ANOVA

General linear models

Mixed models

MANOVA

Multiple comparisons

Response prediction and optimization

Test for equal variances

Plots: residual, factorial, contour, surface, etc.

Analysis of means

Measurement Systems Analysis

Data collection worksheets

Gage R&R Crossed

Gage R&R Nested

Gage R&R Expanded

Gage run chart

Gage linearity and bias

Type 1 Gage Study

Attribute Gage Study

Attribute agreement analysis

Quality Tools

Run chart

Pareto chart

Cause-and-effect diagram

Variables control charts: XBar, R, S, XBar-R, XBar-S, I, MR, I-MR, I-MR-R/S, zone, Z-MR

Attributes control charts: P, NP, C, U, Laney P' and U'

Time-weighted control charts: MA, EWMA, CUSUM

Multivariate control charts: T2, generalized variance, MEWMA

Rare events charts: G and T

Historical/shift-in-process charts

Box-Cox and Johnson transformations

Individual distribution identification

Process capability: normal, non-normal, attribute, batch

Process Capability Sixpack™

Tolerance intervals

Acceptance sampling and OC curves

Multi-Vari chart

Variability chart

Design of Experiments

Definitive screening designs

Plackett-Burman designs

Two-level factorial designs

Split-plot designs

General factorial designs

Response surface designs

Mixture designs

D-optimal and distance-based designs

Taguchi designs

User-specified designs

Analyze binary responses

Analyze variability for factorial designs

Botched runs

Effects plots: normal, half-normal, Pareto

Response prediction and optimization

Plots: residual, main effects, interaction, cube, contour, surface, wireframe

Reliability/Survival

Parametric and nonparametric distribution analysis

Goodness-of-fit measures

Exact failure, right-, left-, and interval-censored data
Accelerated life testing
Regression with life data
Test plans
Threshold parameter distributions
Repairable systems
Multiple failure modes
Probit analysis
Weibayes analysis
Plots: distribution, probability, hazard, survival
Warranty analysis

Power and Sample Size

Sample size for estimation
Sample size for tolerance intervals
One-sample Z, one- and two-sample t
Paired t
One and two proportions
One- and two-sample Poisson rates
One and two variances
Equivalence tests
One-Way ANOVA
Two-level, Plackett-Burman and general full factorial designs
Power curves

Predictive Analytics*

CART® Classification
CART® Regression
Random Forests® Classification*
Random Forests® Regression*
TreeNet® Classification*
TreeNet® Regression*

Multivariate

Principal components analysis
Factor analysis
Discriminant analysis
Cluster analysis
Correspondence analysis
Item analysis and Cronbach's alpha

Time Series and Forecasting

Time series plots
Trend analysis
Decomposition
Moving average
Exponential smoothing
Winters' method
Auto-, partial auto-, and cross correlation functions
ARIMA

Nonparametrics

Sign test
Wilcoxon test
Mann-Whitney test
Kruskal-Wallis test
Mood's median test
Friedman test
Runs test

Equivalence Tests

One- and two-sample, paired
2x2 crossover design

Tables

Chi-square, Fisher's exact, and other tests
Chi-square goodness-of-fit test
Tally and cross tabulation

Simulations and Distributions

Random number generator
Probability density, cumulative distribution, and inverse cumulative distribution functions
Random sampling
Bootstrapping and randomization tests

Macros and Customization

Customizable menus and toolbars
Extensive preferences and user profiles
Powerful scripting capabilities
Python integration
R integration*