Minitab 18 Feature List

* New or Improved

Assistant

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

Graphics

- Scatterplots, matrix plots, boxplots, dotplots, histograms, charts, 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 and nonlinear regression
- Binary, ordinal and nominal logistic regression *
- Stability studies
- Partial least squares
- Orthogonal regression *
- Poisson regression

- Plots: residual, factorial, contour, surface, etc.
- Stepwise and best subsets
- Response prediction and optimization

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: T^2, 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

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 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

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

Macros and Customization

- Customizable menus and toolbars
- Extensive preferences and user profiles
- Powerful scripting capabilities