










JMP® 14 Student Edition Quick Guide

Instructions presume an open data table, default preference settings, and appropriately typed, user-specified variables of interest.





Graphing

What	How
Frequency Distribution	Analyze > Distribution (For categorical variables frequencies are displayed, otherwise quantiles and summary statistics are)
Bar Chart	Graph > Graph Builder > drag continuous variable to Y and categorical to X > click bar icon
Pie Chart	Graph > Graph Builder > drag continuous variable to Y and categorical to X > click pie icon
Histogram	Analyze > Distribution Or: Graph > Graph Builder > drag variable to Y or to X > click histogram icon
Stem and Leaf Plot	Analyze > Distribution; select lower  Stem and Leaf
Scatter Plot 2-D	Graph > Graph Builder > drag continuous variable to Y and another one to X Or: Analyze > Fit Y by X (Bivariate)
Scatter Plot 3-D	Graph > Scatterplot 3-D
Scatter Plot Matrix	Graph > Scatterplot Matrix Or: Analyze > Multivariate
Trellis Plot	Graph > Graph Builder > drag one column to Y and one to X; drag nominal or ordinal column to Wrap
Line Chart	Graph > Graph Builder > drag continuous variable to Y and another one to X > click line icon
Box Plot – One Level	Graph > Graph Builder > continuous column to Y > click box plot icon Or: Analyze > Distribution
Box Plot – Two or More Levels	Graph > Graph Builder > drag a continuous column to Y and categorical to X > click box plot icon Or: Analyze > Fit Y by X (choose continuous Y and categorical X); select  Display Options > Box Plot
Geospatial Mapping	Graph > Graph Builder > drag a column containing city, county, state, or country to the Map Shape zone (bottom left) Or: Use latitude and longitude as X and Y, right-click center and pick Graph > Background Map to choose map




Basic Statistics

What	How	
Descriptive Statistics	Analyze > Distribution; (basic stats are shown by default; to see more select lower  Display Options > Customize Summary Statistics) Or: Analyze > Tabulate Or: Tables > Summary Or: Cols > Columns Viewer; select columns then click Show Summary	
z- or t- test with confidence intervals	1-Sample: 2-Sample: Paired t:	Analyze > Distribution; select lower  Test Mean Analyze > Fit Y by X (cont. Y and 2-level cat. X); select  t Test or Means/ANOVA/Pooled t Analyze > Fit Y by X
Testing Proportions (<i>make 0/1 indicator Nominal or Ordinal</i>)	1 Proportion: 2 Proportions:	Analyze > Distribution; select lower  Test Probabilities Analyze > Fit Y by X
Contingency Table – Chi-Square Test	Analyze > Fit Y by X (both X and Y must be categorical, and labels must be in columns)	
Covariance	Analyze > Multivariate; select  Covariance matrix	
Correlation	Analyze > Multivariate Or: Analyze > Fit Y by X > Density Ellipse	
Test for Normality/Goodness-of-Fit	Analyze > Distribution; select  continuous Fit > Normal; select  by Fitted Normal > Goodness of Fit	
Sample Size and Power Calculations	DOE > Sample Size and Power	







Probability and Random Variables

What	How	
Probability Variables	On data table: 1. Select  in Columns > New Column; 2. Right click on new column > Formula; 3. Select Probability from Functions window; 4. Select desired probability function. <i>Note: For more information on the expected parameters, see Help under Probability Functions.</i>	
Random Variables	On data table: 1. Select  Columns > New Column; 2. Right click on new column > New Column Formula > Random; 3. Select desired Random function.	On data table: 1. Select  in Columns > New Column; 2. Right click on new column > Formula; select Random from Functions Window; 3. Select desired Random function. <i>Note: For more information on the expected parameters, see help under Random Functions.</i>
Distribution Fitting	Analyze > Distribution; select lower  continuous Fit or Discrete Fit, then select desired distribution(s).	





Analysis of Variance

What	How
One-Way	Analyze > Fit Y by X; select  Means/Anova (Continuous Y by Categorical X)
Two or More Factors	Analyze > Fit Model (Continuous Y by Categorical X)
Randomized Blocks	Analyze > Fit Y by X (Continuous Y by Categorical X); include a categorical column in Block role
Multiple Comparison Methods	Analyze > Fit Y by X (Continuous Y by Categorical X); select  Compare Means
Test of Equal/Unequal Variance	Analyze > Fit Y by X (Continuous Y by Categorical X); select  Unequal Variances




Regression and Modeling

What	How
Scatter Plot	Analyze > Fit Y by X (Bivariate) Or: Graph > Graph Builder > drag continuous column to Y and another to X
Ordinary Least Squares	One Predictor: Analyze > Fit Y by X (continuous Y by continuous X); select  Fit Line Or, click Line Icon from Scatterplot in Graph Builder (see above). One or more Predictors: Analyze > Fit Model
Logistic Regression	One Predictor: Analyze > Fit Y by X (categorical Y by continuous X) One or more Predictors: Analyze > Fit Model
Multiple Regression	Analyze > Fit Model
Stepwise Regression	Analyze > Fit Model > Personality – select Stepwise
Residual Analysis	Analyze > Fit Model; Run Model; select  Row Diagnostics Or: Analyze > Fit Y by X; select  and choose a fit; select  from fit report and “Save Residuals” or “Plot residuals”
Interaction Plots	Analyze > Fit Model with interaction effects; Run Model; select  Factor Profiling > Interaction Plots
Durbin-Watson Test	Analyze > Fit Model; Run; select  Row Diagnostics > Durbin-Watson Test
Decision Trees	Analyze > Partition



Nonparametric Techniques

What	How
Wilcoxon Rank Sum Test	Analyze > Fit Y by X (Continuous Y by Categorical X); select  Nonparametric > Wilcoxon Test
Fishers Sign Test (for 2x2 tables only)	Analyze > Fit Y by X (Categorical Y by Categorical X)
Wilcoxon Signed Rank Sum Test	Analyze > Distribution on continuous X; select  Test Mean > check Wilcoxon Signed Rank Box
Kruskal-Wallis Test	Analyze > Fit Y by X (continuous by categorical); select  Nonparametric > Wilcoxon Test
Spearman's ρ	Analyze > Multivariate; select  Nonparametric Correlations > Spearman's ρ

Time Series

What	How
Time Series Plot	Analyze > Modeling > Time Series
Moving Averages	Analyze > Modeling > Time Series; select  Smoothing Models > Simple Moving Average
Exponential Smoothing	Analyze > Modeling > Time Series; select  Smoothing Models > Simple or Double Exponential Smoothing
Holt-Winters (Additive) Method	Analyze > Modeling > Time Series; select  Smoothing Models > Winters Method

Quality Control

What	How
Control Charts	Run Chart: Graph > Control Chart > Run Chart X-bar R or S: Graph > Control Chart > XBar Individual Measurements (IR): Graph > Control Chart > IR P, NP, C or U Chart: Graph > Control Chart > P, NP, C or U CUSUM: Graph > Control Chart > CUSUM
Pareto	Graph > Pareto
Variability Chart (Multi-Vari Chart)	Analyze > Variability Chart
Capability	One variable: Analyze > Distribution, select lower  Capability Analysis With additional graphs on same output: Graph > Control Chart > IR or X-Bar Chart; select  Capability

Design of Experiments

What	How
Factorial Design	DOE > Full Factorial Design Or: DOE > Screening Design
Screening Design	DOE > Screening Design
Response Surface Design	DOE > Response Surface Design

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