jmp | Statistical Discovery.™ From SAS.

JMP® 12 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 *Or:* Graph > Chart
Pie Chart	Graph > Graph Builder > drag continuous variable to Y and categorical to X > click pie icon *Or:* Graph > Chart > Options > Pie Chart
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) *Or:* Graph > Overlay Plot
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 *Or:* Graph > Overlay Plot; select ▼ y options > Connect Thru Missing
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: Analyze > Distribution; select lower ▼ Test Mean 2-Sample: Analyze > Fit Y by X (cont. Y and 2-level cat. X); select ▼ t Test or Means/ANOVA/Pooled t Paired t: Analyze > Matched Pairs
Testing Proportions *(make 0/1 indicator Nominal or Ordinal)*	1 Proportion: Analyze > Distribution; select lower ▼ Test Probabilities 2 Proportions: 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 ▼ Columns > New Column; 2. Right click on new column > Formula; 3. Select Probability from Functions window; 4. Select desired probability function. *Note: For more information on the expected parameters, see Help under Probability Functions.*
Random Variables	On data table: 1. Select ▼ Columns > New Column; 2. Right click on new column > Column Info; 3. Click on drop-down box next to Initialize Data > Random. *or* On data table: 1. Select ▼ Columns > New Column; 2. Right click on new column > Formula; select Random from Functions Window; 3. Select desired Random function. *Note: For more information on the expected parameters, see help under Random Functions.*
Distribution Fitting	Analyze > Distribution; select lower ▼ continuous Fit, then select desired distribution(s).

Analysis of Variance

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

Regression

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 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 continuous 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; select ▼ Nonparametric > Wilcoxon Test
Fishers Sign Test (for 2x2 tables only)	Analyze > Fit 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 p	Analyze > Multivariate; select ▼ Nonparametric Correlations > Spearman's p

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
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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For complete information and tutorials, please refer to the JMP Help available under “Help > Books” and “Help > Tutorials.”

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