Statistical Discovery.™ From SAS.

JMP® 11 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	Graph > Graph Builder > Drag Variable to Y or to X > Click Histogram Icon *Or:* Analyze > Distribution
Stem and Leaf Plot	Analyze > Distribution; select ▼ Stem and Leaf
Scatterplot 2D	Graph > Graph Builder > Drag Continuous Variable to Y and another one to X *Or:* Analyze > Fit Y by X (Bivariate) *Or:* Graph > Overlay Plot
Scatterplot 3D	Graph > Scatterplot 3D
Scatterplot Matrix	Graph > Scatterplot Matrix *Or:* Analyze > Multivariate Methods > Multivariate
Trellis Plot	Graph > Graph Builder > Drag Column to Y and one to X; Drag Nominal or Ordinal Column to Wrap
Line Chart	Graph > Graph Builder > Drag Cont. 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 > 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 to the “Map Shape” section a column containing City, County, State, or Country 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 ▼ Display Options) *or* Tables > Summary *or* Analyze > Tabulate
z- or t-Test with Confidence Intervals	1-Sample: Analyze > Distribution; select ▼ 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 ▼ 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)
Covariance	Analyze > Multivariate Methods > Multivariate; select ▼ Covariance matrix
Correlation	Analyze > Multivariate Methods > 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
JMP PRO Bootstrapping	Right-click on a report in an analysis report window and select Bootstrap.

Probability and Random Variables

What	How
Probability Variables	On data table: 1. Select ▼ Columns > New Column; 2. RMC 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. RMC 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. RMC 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 Function.*
Distribution Fitting	Analyze > Distribution; select ▼ 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 ▼ Means/Anova; select ▼ Compare Means
Test for Equal/Unequal Variances	Analyze > Fit Y by X; select ▼ Means/Anova; select ▼ Unequal Variances

Regression

What	How
Scatterplot	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

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 continuous Y by categorical X; 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 Method	Analyze > Modeling > Time Series; select ▼ Smoothing Models > Winters Method

Design of Experiments (DOE)

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

Other designs are also available under the DOE menu.

Advanced Modeling and Multivariate Methods

What	How
Logistic & Multiple Regression	Analyze > Fit Model
Clustering	Analyze > Multivariate Methods > Cluster
Neural Networks	Analyze > Modeling > Neural
Decision Trees	Analyze > Modeling > Partition
Factor Analysis	Analyze > Consumer Research > Factor Analysis
Principal Component Analysis	Analyze > Multivariate Methods > Principal Component
Partial Least Squares	Analyze > Multivariate Methods > Partial Least Squares Or JMP PRO Analyze > Fit Model > Personality – Select "Partial Least Squares"
JMP PRO Model Comparison	Analyze > Modeling > Model Comparison
JMP PRO Generalized Regression	Analyze > Fit Model > Personality – Select "Generalized Regression"
JMP PRO Mixed Models	Analyze > Fit Model > Personality – Select: "Mixed Model"

Quality Control

What	How	
Control Charts	Run Chart:	*Analyze > Quality and Process > Control Chart > Run Chart
	X-Bar R or S:	*Analyze > Quality and Process > Control Chart > Control Chart > X-Bar
	Individual Measurements (IR):	*Analyze > Quality and Process > Control Chart > Control Chart > IR
	P, NP, C or U Chart:	*Analyze > Quality and Process > Control Chart > Control Chart > P, NP, C or U
	UWMA Chart:	Analyze > Quality and Process > Control Chart > Control Chart > UWMA
	EWMA Chart:	Analyze > Quality and Process > Control Chart > Control Chart > EWMA
	CUSUM:	Analyze > Quality and Process > Control Chart > Control Chart > CUSUM
	G Chart:	Analyze > Quality and Process > Control Chart Builder, select Rare Event
	T Chart:	Analyze > Quality and Process > Control Chart Builder, select Rare Event, change sigma limits to Weibull
	**Can also be created with the Control Chart Builder: Analyze > Quality and Process > Control Chart Builder*	
Pareto	Analyze > Quality and Process > Pareto	
Ishikawa ("Fishbone") Diagram	Analyze > Quality and Process > Diagram	
Variability Chart (Multi-Vari Chart)	Analyze > Quality and Process > Variability/Attribute Gauge Chart	
Capability	Analyze > Quality and Process > Capability With additional graphs on same output: Analyze > Quality and Process > Control Chart > IR or X-Bar Chart; check Capability Box > OK	
Measurement Systems Analysis	Analyze > Quality and Process > Measurement Systems Analysis *Or:* Analyze > Quality and Process > Variability / Attribute Gauge Chart	

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For complete information and tutorials, please refer to the JMP Help available under "Help > Books" and "Help > Tutorials".
For one-page guides, videos and additional tutorials, see the Learning Library at **jmp.com/learn**.

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