

Index of TI-83, 84 Programs

Type of Statistics Problem	TI-83, 84 Program	Reference
Histogram Plot <i>Given a set of data, make a vertical bar chart showing the frequencies of occurrences of equal intervals of the data.</i>	Statistics Plots 2 nd -Stat Plot (3 rd Icon Type)	Chapter 2 Page 12
Box Plot <i>Given a set of data, plot the minimum, first quartile, median, third quartile, maximum, and outliers</i>	Statistics Plots 2 nd -Stat Plot (4 th and 5 th Icon types.	Chapter 2 Page 29
Mean, Median, Quartiles, Standard Deviation, Variance, IQR <i>Find the specific values for a sample data set</i>	Stat-Edit (Enter Data) PRGM-SAMPSTAT (Enter List #)	Text Ch 2 Page 26
Percentiles <i>Given a set of numbers, find a given percentile</i>	PGRM-PRCNTILE	Chapter 2 Page 24
Normal Distribution <i>Given lower bound (L) and upper bound (U) of interval, find the area above the interval</i>	PGRM - NORMDIST 1 (L, U, μ , σ)	Chapter 6 Page 6
Normal Distribution <i>Given the area from the left above interval $(-\infty, b)$, find the value of b.</i>	PGRM -NORMDIST 2 (Area as decimal, μ , σ)	Chapter 6 Page 12
Standard Error <i>Find the standard error to use to construct a confidence interval or hypothesis test</i>	PGRM - STDERROR	Text Ch 7 Page 5
Critical Values <i>Find the critical value for a level of confidence to construct a confidence interval for a proportion or mean</i>	PGRM -CRITVAL	Text Ch 8 Add-in Prog.
Confidence Interval- Mean, σ Known <i>Find the confidence interval for a population mean when the population standard deviation is known (Normal Distribution)</i>	Z-Interval Stat-Tests-7	Text Ch 8 Page 5
Sample Size <i>Given a desired confidence level and margin of error, find the required sample size</i>	PGRM - SAMPLSIZ	Chapter 8 Page 9

Type of Statistics Problem	TI-83 Program	Reference
Hypothesis Test – One Mean, σ Known <i>Given one sample mean, find the p-value when the standard deviation of the population is known. $H_0: \mu=A$ (Normal Distribution)</i>	Z -Test Stat-Tests-1	Chapter 8 Page 18
T-Distribution <i>Given lower and upper bounds of an interval, find the area above interval</i>	PGRM - TDIST	Chapter 9 Page 9
Confidence Interval– Mean, σ Unknown <i>Find the confidence interval for a population mean when the population standard deviation is unknown, but is estimated by the sample standard deviation (T-Distribution, df)</i>	T-Interval Stat-Tests-8	Chapter 9 Page 6
Hypothesis Test – One Mean, σ Unknown <i>Given one sample mean, find the p-value when the population standard deviation is unknown, but is estimated by the sample standard deviation. $H_0: \mu=A$ (T-Distribution, df)</i>	T -Test Stat-Tests-2	Chapter 9 Page 10
Confidence Interval – One Proportion <i>Find a confidence interval for a population proportion (Normal Distribution)</i>	1-PropZInt Stat-Tests-A	Chapter 9 Page 18
Hypothesis Test – One Proportion <i>Given one sample proportion, find the p-value that population proportion is different from a hypothesized value. . $H_0: p=A$ (Normal Distribution)</i>	1-PropZTest Stat-Tests-5	Chapter 9 Page 26
Dependent Paired Samples – Confidence Interval <i>Given two sets of data with related numbers for each subject, i.e. before treatment and after, find the confidence interval for the population mean of the pair-wise differences. (T-distribution, df)</i>	L3 =2 nd L1 - 2 nd L2 T-Interval for L3	Chapter 9 Page 6

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Dependent Paired Samples - Hypothesis Test <i>Find the p-value that population mean of the pair-wise difference is not equal to a hypothesized value, usually 0. $H_0: \mu_d=0$ (T-distribution, df)</i>	L3 =2 nd L1 - 2 nd L2 T-Test for L3	Chapter 9 Page 10
Two Independent Sample Means-Confidence Interval <i>Find the confidence Interval for the difference of two population means (T-distribution, df)</i>	2-SampTInt Stat-Tests-0	Chapter 10 Page 14
Two Independent Sample Means-Hypothesis Test <i>Given two sample means, find the p-value that the population means are not equal. $H_0: \mu_1=\mu_2$ (T-distribution, df)</i>	2-SampTTest Stat-Tests-4	Chapter 10 Page 16
Confidence Interval - Two Proportions <i>Find confidence interval for the difference of two population proportions (Normal Distribution)</i>	2-PropZInt Stat-Tests-B	Chapter 10 Page 25
Hypothesis Test - Two Proportions <i>Given two sample proportions, find the p-value that population proportions are not equal. $H_0: p_1=p_2$ (Normal Dist.)</i>	2-PropZTest Stat-Tests-6	Chapter 10 Page 28
Chi-Square Distribution <i>Given the Chi-square Statistic and df, find the p-value</i>	PRGM - CHI2DIST (LB = χ^2 STAT, UB = E99, df)	Chapter 11 Page 4
Chi-Square Goodness of Fit Test <i>Given a set of counts related to a categorical variable, check the "goodness of fit" to a particular model. H_0: The Observed data fits the model. (Chi-Square Distribuion)</i>	PRGM-GOODFIT (Data in L1, L2)	Chapter 11 Page 6
Chi-Square Homogeneity Test <i>Given multiple distributions of categorical variables, check to see if they are the same are homogeneous. H_0: The distributions have the same proportions. (Chi-Square Distribution)</i>	χ^2 Test Stat-Tests-Alpha C (Data in Matrix A)	Text Ch 11 Page 14

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<p>Chi-Square Independence Test <i>Given a two-way table for two categorical variables, check to see if they are independent. H_0: The variables are independent. (Chi-Square Distribution)</i></p>	<p>χ^2 Test Stat-Tests-Alpha C (Data in Matrix A)</p>	<p>Text Ch11 Page 14</p>
<p>F Distribution <i>Given the F Statistic, the df for the numerator, and the df for the denominator, find the p-value.</i></p>	<p>PRGM – FDIST (LB = F STAT, UB =2ND E99, df Numerator, df Denominator)</p>	<p>Chapter 12 Page 3</p>
<p>Two Sample Comparison of Variance <i>Given the variance of two samples, test the hypothesis that they are not the same. $H_0: \sigma_1^2 = \sigma_2^2$ (F-Distribution)</i></p>	<p>STAT – TESTS- E:2SampFTest</p>	<p>Chapter 12 Page 4</p>
<p>Analysis of Variance <i>Given three or more means, find the p-value for the alternate hypothesis. H_0: The population means are all the same. (F-Distribution)</i></p>	<p>PRGM-ANOV2 Data in List Editor or Stats in Matrix A</p>	<p>Chapter 12 Page 12, 14</p>
<p>Scatter Plot <i>Given 2 sets of data, plot corresponding values as points on an x-y coordinate plane</i></p>	<p>Statistics Plots 2nd-Stat Plot (1st Icon Type)</p>	<p>Chapter 2 Page 3</p>
<p>Correlation <i>Given two sets of data, find the correlation coefficient, r.</i></p>	<p>PRGM-CORRELTN (Data in L1, L2)</p>	<p>Text Ch 3 Page 6</p>
<p>Linear Regression and Correlation <i>Given two sets of data, find the equation of the line that best models the relationship.</i></p>	<p>PRGM-REGBASIC (Data in L1, L2)</p>	<p>Ch 3 Page 13</p>
<p>Inferences for Regression <i>Given two sets of data, find the equation of line of best fit, and find p-values for slope and intercept, and confidence intervals for slope, intercept, and predicted values</i></p>	<p>PRGM-REGINFER (Data in L1, L2)</p>	<p>Chapter 13 Page 10</p>