

Index of TI-83, 84 Programs

| Type of Statistics Problem | TI-83, 84 Program | Reference |
|--|---|---------------------------|
| Calculator Setup <i>Clears lists, matrixes, turns plots and functions off, sets decimals to 4</i> | PRGM - ACLEAR | Chapter 2 Page 12 |
| 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 13 |
| 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, <i>Find the specific values for a sample data set</i> | Stat-Edit (Enter Data) PRGM- SAMPSAT (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 |

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| 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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| <p>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></p> | <p>L3 =2nd L1 - 2nd L2 T-Test for L3</p> | <p>Chapter 9 Page 10</p> |
| <p>Two Independent Sample Means-Confidence Interval <i>Find the confidence Interval for the difference of two population means (T-distribution, df)</i></p> | <p>2-SampTInt Stat-Tests-0</p> | <p>Chapter 10 Page 14</p> |
| <p>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></p> | <p>2-SampTTest Stat-Tests-4</p> | <p>Chapter 10 Page 16</p> |
| <p>Confidence Interval - Two Proportions <i>Find confidence interval for the difference of two population proportions (Normal Distribution)</i></p> | <p>2-PropZInt Stat-Tests-B</p> | <p>Chapter 10 Page 25</p> |
| <p>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></p> | <p>2-PropZTest Stat-Tests-6</p> | <p>Chapter 10 Page 28</p> |
| <p>Chi-Square Distribution <i>Given the Chi-square Statistic and df, find the p-value</i></p> | <p>PRGM - CHI2DIST (LB = χ^2 STAT, UB = E99, df)</p> | <p>Chapter 11 Page 4</p> |
| <p>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></p> | <p>PRGM-GOODFIT (Data in L1, L2)</p> | <p>Chapter 11 Page 6</p> |
| <p>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></p> | <p>χ^2 Test Stat-Tests-Alpha C (Data in Matrix A)</p> | <p>Text Ch 11 Page 14</p> |

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| 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> | χ^2 Test Stat-Tests-Alpha C (Data in Matrix A) | Text Ch11 Page 14 |
| F Distribution <i>Given the F Statistic, the df for the numerator, and the df for the denominator, find the p-value.</i> | PRGM – FDIST (LB = F STAT, UB =2 ND E99, <i>df</i> Numerator, <i>df</i> Denominator) | Chapter 12 Page 3 |
| 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> | STAT – TESTS- E:2SampFTest | Chapter 12 Page 4 |
| 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> | PRGM-ANOV2 Data in List Editor or Stats in Matrix A | Chapter 12 Page 12, 14 |
| Scatter Plot <i>Given 2 sets of data, plot corresponding values as points on an x-y coordinate plane</i> | Statistics Plots 2 nd -Stat Plot (1 st Icon Type) | Chapter 2 Page 3 |
| Correlation <i>Given two sets of data, find the correlation coefficient, r.</i> | PRGM-CORRELTN (Data in L1, L2) | Text Ch 3 Page 6 |
| Linear Regression and Correlation <i>Given two sets of data, find the equation of the line that best models the relationship.</i> | PRGM-REGBASIC (Data in L1, L2) | Ch 3 Page 13 |
| Estimate Your Final Grade <i>Enter your grades for classwork, homework, tests, and estimated final exam grade.</i> | PRGM-XGRADE | |