TI-83, 83+, 84 instructions for distributions and tests

Distributions
Access DISTR (for "Distributions").

TI's URL for TI assistance and instructions: http://www.ti.com
Then, enter your calculator model into the "search" box.

Binomial Distribution

- binompdf(n,p,x) P(X = x)
- binomcdf(n,p,x) P(X ≤ x)
- To see a list of all probabilities for x: 0, 1, . . . , n, leave off the "x" parameter.

Poisson Distribution

- poissonpdf(λ,x) P(X = x)
- poissoncdf(λ,x) P(X ≤ x)

Continuous Distributions (general)

- $-\infty$ use –1EE99 for left bound
- $+\infty$ use 1EE99 for right bound

Normal Distribution

- normalpdf(x,μ,σ) yields probability density function value – only useful to plot the normal curve, in which case "x" is the variable
- normalcdf(left bound, right bound, μ,σ) P(left bound < X < right bound)
- normalcdf(left bound, right bound) P(left bound < Z < right bound) – standard normal
- invNorm(p, μ,σ) yields the critical value, k: P(X < k) = p
- invNorm(p) yields the critical value, k: P(Z < k) = p for the standard normal

Student-t Distribution

- tpdf(x,df) yields probability density function value – only useful to plot the student-t curve, in which case "x" is the variable
- tcdf(left bound, right bound, df) P(left bound < t < right bound)

Chi-square Distribution

- X^2pdf(x,df) yields probability density function value – only useful to plot the chi^2 curve, in which case "x" is the variable
- X^2cdf(left bound, right bound, df) P(left bound < X^2 < right bound)

F Distribution

- Fpdf(x,dfnum,dfdenom) yields probability density function value – only useful to plot the F curve, in which case "x" is the variable
- Fcdf(left bound, right bound,dfnum,dfdenom) P(left bound < F < right bound)

Tests and Confidence Intervals
Access STAT and TESTS.

For the Confidence Intervals and Hypothesis Tests, you may enter the data into the appropriate lists and press DATA to have the calculator find the sample means and standard deviations. Or, you may enter the sample means and sample standard deviations directly by pressing STAT once in the appropriate tests.

Confidence Intervals

- ZInterval Confidence interval for mean when σ is known
- TInterval Confidence interval for mean when σ is unknown; s estimates σ.
- Z-PropZInt Confidence interval for proportion

NOTE: The confidence levels should be given as percents (ex. enter "95" for a 95% confidence level).

Hypothesis Tests

- Z–Test Hypothesis test for single mean when σ is known
- T–Test Hypothesis test for single mean when σ is unknown; s estimates σ.
- 2–SampZTest Hypothesis test for 2 independent means when both σ's are known
- 2–SampTTest Hypothesis test for 2 independent means when both σ's are unknown
- 1–PropZTest Hypothesis test for single proportion.
- 2–PropZTest Hypothesis test for 2 proportions.
- X^2–Test Hypothesis test for independence.

NOTE: Input the null hypothesis value in the row below "Inpt." For a test of a single mean, "μØ" represents the null hypothesis. For a test of a single proportion, "pØ" represents the null hypothesis.
Enter the alternate hypothesis on the bottom row.