Calculator Functions for the AP Stats Exam

One Variable Data

Function	When to use it	Input Command
1-Var Stats (STAT, CALC)	To find mean, standard deviation, and 5 number summary for a data set.	Enter data in L_1 and frequency in L_2 if needed 1-Var Stats L_1 or 1-Var Stats L_1,L_2

Two Variable Data

Function	When to use it	Input Command
LinReg (a + bx) (STAT, CALC) DiagnosticOn	To find the equation for a least squares regression line. To find r and r^2.	Enter values in L_1 (explanatory) Enter values in L_2 (response) LinReg (a + bx) L_1,L_2

Probability Calculations

Function	When to use it	Input Command
binompdf (2^{nd}, VARS, DISTR)	To find the probability of getting <u>exactly</u> X successes in a binomial setting.	binompdf(n, p, X) n: number of trials p: probability of success X: number of successes
binomcdf (2^{nd}, VARS, DISTR)	To find the probability of getting <u>at most</u> X successes in a binomial setting.	binomcdf(n, p, X) n: number of trials p: probability of success X: number of successes
normalcdf (2^{nd}, VARS, DISTR)	To find area for an interval in a normal distribution.	normalcdf(lower, upper, mean, SD)
invNorm (2^{nd}, VARS, DISTR)	To find a boundary value in a normal distribution.	invNorm(area left, mean, SD)
tcdf (2^{nd}, VARS, DISTR)	To find area for an interval in a *t* distribution.	tcdf(lower, upper, df)
invT (2^{nd}, VARS, DISTR)	To find a boundary value in a *t* distribution.	invT(area left, df)
χ^2cdf (2^{nd}, VARS, DISTR)	To find area for an interval in a χ^2 distribution.	χ^2cdf(lower, upper, df)

Confidence Intervals

Function	When to use it	Input Command
1-PropZInt (STAT, TESTS, A:)	To calculate a confidence interval to estimate a single proportion.	1-PropZInt x: number of successes n: sample size C-Level: confidence level
2-PropZInt (STAT, TESTS, B:)	To calculate a confidence interval to estimate a difference of proportions.	2-PropZInt x1: number of successes in sample 1 n1: sample size of sample 1 x2: number of successes in sample 2 n2: sample size of sample 2 C-Level: confidence level
TInterval (STAT, TESTS, 8:)	To calculate a confidence interval to estimate a single mean. Standard deviation of the population is unknown.	TInterval Inpt: Stats $\bar{x}$: sample mean S_x: sample standard deviation n: sample size C-Level: confidence level
2-SampTInt (STAT, TESTS, 0:)	To calculate a confidence interval to estimate a difference of means. Standard deviation of the populations unknown.	2-SampTInt Inpt: Stats $\bar{x}$1: sample mean of sample 1 Sx1: standard deviation of sample 1 n1: sample size of sample 1 $\bar{x}$2: sample mean of sample 2 Sx2: standard deviation of sample 2 n2: sample size of sample 2 C-Level: confidence level Pooled: No
LinRegTInt (STAT, TESTS, G:) *only newer calculators have this command*	To calculate a confidence interval to estimate a slope.	LinRegTInt Enter values in L_1 (explanatory) Enter values in L_2 (response) Xlist: L_1 Ylist: L_2 Freq: 1 C-Level: confidence level

Significance Tests

Function	When to use it	Input Command
1-PropZTest (STAT, TESTS, 5:)	To test a claim made about a single proportion.	1-PropZTest p_0: null value x: number of successes n: sample size Prop: $\neq p_0$ $< p_0$ $> p_o$ (alternative)
2-PropZTest (STAT, TESTS, 6:)	To test a claim made about a difference of proportions.	2-PropZTest x1: number of successes sample 1 n1: sample size of sample 1 x2: number of successes sample 2 n2: sample size of sample 2 p1: ≠p2 <p2 >p2 (alternative)
T-Test (STAT, TESTS, 2:)	To test a claim made about a single mean Standard deviation of the population is unknown.	T-Test Inpt: Stats μ_0: null value $\bar{x}$: sample mean S_x: sample standard deviation n: sample size μ: $\neq \mu_0$ $< \mu_0$ $> \mu_0$ (alternative)
2-SampTTest (STAT, TESTS, 4:)	To test a claim made about a difference of means Standard deviation of the populations unknown.	2-SampTTest Inpt: Stats $\bar{x}$1: sample mean of sample 1 Sx1: standard deviation sample 1 n1: sample size of sample 1 $\bar{x}$2: sample mean of sample 2 Sx2: standard deviation sample 2 n2: sample size of sample 2 μ1: ≠μ2 <μ2 >μ2 (alternative) Pooled: No

Significance Tests – continued

Function	When to use it	Input Command
χ^2GOF–Test (STAT, TESTS, D:) *only newer calculators have this command*	To test a claim about the distribution of a categorical variable. • Chi square goodness-of-fit test	χ^2GOF–Test Enter observed counts in L_1 Enter expected counts in L_2 Observed: L_1 Expected: L_2 df: degrees of freedom
χ^2–Test (STAT, TESTS, C:)	To test a claim about the distribution of a categorical variable. • Chi square test of homogeneity • Chi square test of independence	χ^2–Test Enter observed counts in matrix A Observed: [A] Expected: [B] Expected counts appear in matrix B
LinRegTTest (STAT, TESTS, E:)	To test a claim made about the slope of a population regression line.	LinRegTTest Enter values in L_1 (explanatory) Enter values in L_2 (response) Xlist: L_1 Ylist: L_2 Freq: 1 β: ≠0 <0 >0 (alternative)