

To enter data (one variable)

STAT → EDIT

Clear out L_1 by putting the cursor above the list and hitting clear

Enter data in L_1 , making sure to hit enter after the last number

(If you can't access L_1 , try doing: STAT → EDIT → SetUpEditor)

To compute \bar{x} and s (for quantitative variables)

Enter data in L_1 as above

STAT → CALC → 1-Var Stats → L_1

To get a histogram or box plot (for quantitative variables)

Enter data in L_1 as above

2nd → STAT PLOT (top row, above Y=)

Select one of the plots by hitting enter

Turn the plot on

Choose histogram (top row, far right) or box plot (bottom row, far left)

Make sure Xlist is L_1 and Freq is 1

ZOOM (top row, middle) → ZoomStat (#9)

(Turn the plot off when you are finished or it will cause problems with other graphs.)

To get a scatterplot (for regression)

STAT → EDIT

Clear out L_1 and L_2 by putting the cursor above each list and hitting clear

Enter the x values in L_1 and the y values in L_2

2nd → STAT PLOT (top row, above Y=)

Select one of the plots by hitting enter

Turn the plot on

Choose scatterplot (top row, far left)

Make sure Xlist is L_1 and Ylist is L_2

Choose the kind of mark you like

ZOOM (top row, middle) → ZoomStat (#9)

(Turn the plot off when you are finished or it will cause problems with other graphs.)

To get the equation of the regression line and correlation

Enter the data into L_1 and L_2 as above

STAT → CALC → LinReg(ax + b)

(a is slope and b is y-intercept)

(if correlation isn't given, 2nd → CATALOG (above 0) → D (above x^{-1})

DiagnosticOn → Enter → Enter and repeat STAT....)

To get areas (probabilities or p-values) under the normal curve (bell-shaped curve)

2nd → DISTR (above VARS) → normalcdf (lower, upper, mean, sd)

To get areas (probabilities or p-values) under the t curve

2nd → DISTR (above VARS) → tcdf (lower, upper, degrees of freedom)

To get areas (probabilities or p-values) under the χ^2 curve

2nd → DISTR (above VARS) → χ^2 cdf (lower, upper, degrees of freedom)

To get areas (probabilities or p-values) under the F curve

2nd → DISTR (above VARS) → Fcdf (lower, upper, degrees of freedom)

To compute CI's or perform HT's,

STAT → TESTS

Pick the appropriate CI or HT from list below

Note: I should caution you that the following does not check the necessary conditions for these confidence intervals or tests of hypotheses, (so you need to somehow do so separately):

For Ch 3: one quantitative variable (including paired data (Ch 7), after taking differences)

CI: TInterval

HT: T-Test

For Ch 2: one categorical variable (note: x is numerator of \hat{p} and n is denominator of \hat{p})

CI: 1-PropZInt

HT: 1-PropZTest

For Ch 4: two categorical variables

HT: Put the observed table into matrix A (MATRX → Edit → [A])

χ^2 -Test (the expected table will be automatically put into matrix B)

CI: 2-PropZInt (note x_1 is numerator of \hat{p}_1 and n_1 is denominator of \hat{p}_1 , same for x_2 and n_2 and \hat{p}_2)

For Ch 5: linear regression:

Put x into L_1 and y into L_2 (after first clearing these lists)

HT: LinRegTTest

Make sure Xlist is L_1 and Ylist is L_2

Choose the appropriate H_1 by highlighting $\neq 0$, < 0 , or > 0

Hit calculate

The calculator will also give you the slope (b) and the y-intercept (a) for your sample. The p-value is next to $p=$, and the test statistic is next to $t=$.

In order to check assumptions, you need to use the residuals, which are automatically created (when you do the LinRegTTest or LinReg(ax+b)) in a list called RESID. You can check the normality of RESID in whatever way you typically check normality. The RESID list can be accessed by hitting the LIST key, which is in blue above the STAT key.

However, to check constant variance, you must first create the predicted values. To do this, you have to feed the list that contains the x-coordinates of your points into the equation of the regression line, and save the outcome in another list. To do this, you first need to enter the equation of the regression line into Y_1 (as if you were going to graph the line). If you want to store the predicted values in L_3 , first clear L_3 . Then, on the main screen, type $Y_1(L_1) \rightarrow L_3$, where \rightarrow is the STO key above the ON key. Now you can make a scatter plot where L_3 is on the x-axis and RESID is on the y-axis.

For Ch 7: paired data: See Ch 3: one quantitative variable (after taking differences)

For Ch 6: two independent samples/populations (note: choose pooled = no; also note that the calculator will compute the degrees of freedom differently than you do by hand, so the p-value and CI from the calculator may not match your hand calculations)

CI: 2-SampTInt

HT: 2-SampTTest

For Ch 8: Analysis of Variance (ANOVA)

Put the samples into separate lists (L_1, L_2 , etc.)

HT: ANOVA(L_1, L_2, \dots)