

Magical Calculator Help Paper!

(It will fix ALL your problems!!)

Clear Lists:

This is for after you are done with a problem and want to enter different data.

STAT 4:ClrList

Enter

L1, L2, L3, L4 (or as many as you need)

Enter Points in a List:

This is telling your calculator a table you want it to graph.

STAT EDIT Enter

L1 is x values

L2 is y values

Checksum (only if you have a checksum):

This is to make sure that you entered your data correctly into your lists.

STAT CALC 1-Var Stats

(this is where you put the list you want to calculate stats on such as L1 or L2)

Enter

Plot Points:

Turn your table into a graph. This creates a scatterplot.

2nd y=

Turn the scatterplot icon ON

x-list: L1

y-list: L2

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Change the Window:

So you can see your points in your graph. This changes the scale and gives you a better graph.

WINDOW

X-min: something lower than your lowest x-value

X-max: something higher than your highest x-value

Similar for y

GRAPH

Least Squares Regression Line:

Creating the best line of best fit on your graph.

STAT CALC 4:LinReg(ax+b)

Enter

L1, L2, VARS "Y-Vars" "1:Function" "1:Y1"

Enter

This told your calculator to use x-values from L1 and y-values from L2 and then to put the equation into y= under Y1.

Find the Residuals:

These are the vertical distance from the Least Squares Regression Line to the actual points. It is a measure of how good the line is.

YOU MUST HAVE YOUR LEAST SQUARES REGRESSION LINE PLOTTED. (see above)

2nd STAT RESID

Enter

STO – L3

Enter

This told your calculator to put the residuals into list 3.

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Create a Residual Plot:

This plot will let you know how good a linear model is. If the points are all scattered, then a line is a good fit. If there is a curve to the points, then a quadratic or exponential graph might be better.

YOU MUST HAVE YOUR RESIDUALS IN L3. (see previous page)

2nd Y=

In the plot you already have on, just change the y-list to L3

Change your WINDOW using earlier instructions. Leave the x-min and x-max the same but change the y-min to -5 and the y-max to 5 (this usually works for most residual plots).

Graph

Sum of the Squares of the Residuals:

This is all of the residuals squared and added together.

YOU MUST HAVE YOUR RESIDUALS IN L3 FROM “HOW TO FIND THE RESIDUALS.”

L3 (x^2) STO – L4

Enter

STAT CALC “1-Var Stats” L4

Enter

2nd Number is the Sum of the Squares of the Residuals