

Regression on the TI-89

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Keys are written between brackets [].

Function key selections are written in *italics*.

1. Enter the data points.

– Data sets are entered as a Data Variable.

– Press [APPS] 6 : *Data/Matrix Editor* 3 : *New*. Your screen should look like this:



– Press the down arrow to scroll to the *Variable* : box and enter a new name for your data variable. I will use the name *stat* in this example. Then press [ENTER] twice. Your screen should now look like this.

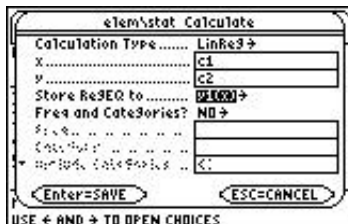


– Fill in the *c1* column with the *x* data and the *c2* column with the corresponding *y* data. Use this data list $\{(1, 1), (2, 3), (3, 2), (4, 6), (5, 5)\}$. Your screen should now look like this:

F1 Tools	F2 Plot Setup	F3 Cell Header	F4 Calc	F5 Util	F6 Stat
DATA					
	c1	c2	c3		
2	2	3			
3	3	2			
4	4	6			
5	5	5			
r5c2=5					
ELEM		RAD AUTO		FUNC	

2. Perform the regression calculation.

- Press [F5-CALC] to do a calculation based on the data.
- For a linear regression press the right arrow once to reveal the menu of regression choices and then scroll down to 5 : *LinReg*. Press [ENTER].
- Now select the x and y variables by putting $c1$ in the x space and $c2$ in the y space.
- Now select *Store RegEQ to* → $y1(x)$.
- When the screen looks like this:



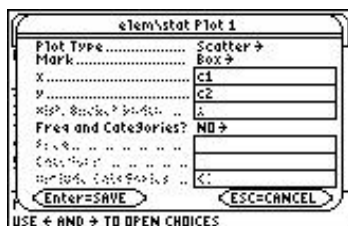
Press [ENTER] and the regression results will appear like this:



- We don't need to copy down the equation because we stored it in $y1(x)$ for easy access.

3. Plot the data (this step may be skipped if desired).

- Press [ENTER] then [F2-Plot Setup] to set up the plot parameters.
- Press [F1-Define] to display the stat plot screen:



- Select Plot Type...*Scatter*, Mark...*Box*, $x...c1$, $y...c2$ to edit your next screen to look like this one.
- Then press [ENTER] to store the selections and press [HOME] to exit the window.

– To finish the graph press [Green Diamond] and [$y =$] to go to the equation editor. Make sure that you are in Function Mode. You should see your regression equation stored in $y1(x)$. [CLEAR] any other unwanted equations.

– Now press [F2-*Zoom*] and select 9 : *ZoomData*. You will see the data points graphed with the regression line. Your data will be automatically centered and graphed like this:

