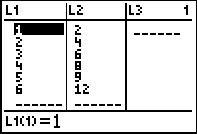
How do I view a residual list on a TI-83 family, TI-84 Plus family, or TI-Nspire in TI-84 Plus mode?   
  
When the TI-83 family, TI-84 Plus family, or TI-Nspire in TI-84 Plus mode calculates a regression, there will be a difference between the values of f(x) as calculated and the value as determined by the "best fitting" line. This difference is called a residual.

When regressions are calculated, these residuals are automatically stored within a list called RESID. To view the RESID list, place it into a list in the List editor.

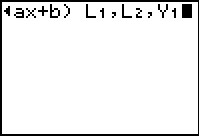
For example, calculate a linear regression for the following values:

L1: {1, 2, 3, 4, 5, 6} L2: {2, 4, 6, 8, 9, 12}

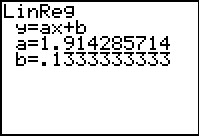
• Press [STAT] [1].  
• Press [↑] until cursor is on top line, highlighting L1.  
• Press [CLEAR] [ENTER].  
• Press [↓] [1] [↓] [2] [↓] [3] [↓] [4] [↓] [5] [↓] [6] [↓].  
• Press [→] [↑] [↑] [↑] [↑] [↑] [↑] [↑].  
• Press [CLEAR] [ENTER].  
• Press [↓] [2] [↓] [4] [↓] [6] [↓] [8] [↓] [9] [↓] [12] [↓].



• Press [2ND] [QUIT]  
• Press [STAT] [→].  
• Choose [4:LinReg (ax+b)].  
• Press [2nd] [L1] [,] [2nd] [L2] [,] [VARS] [→] [1] [1] [ENTER].

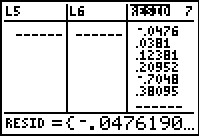


• The linear regression will now be calculated and stored to Y1.



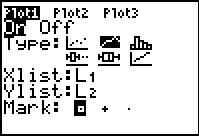
To view the RESID list:

• Press [STAT] [1].  
• Press [→] until you get to L6.  
• Press [↑] [→].  
• Press [2nd] [LIST] to open the List Editor   
• Press [↓] until you reach the listname RESID then press [ENTER].



To graph the linear regression along with the statistical data:

• Press [2nd] [STAT PLOT] [1].  
• Use the settings listed in the image below. To change the menu settings use the arrow keys to navigate the options and press the [Enter] key to select an option.



• Press [ZOOM] [9].

**(1) To display residuals (RESID):**

2nd – LIST – Select RESID from the list – ENTER

After LRESID appears on the screen enter STO – 2nd – L3 – ENTER whereby the residuals will appear in L3. To view the residuals enter STAT – 1 (EDIT) – ENTER. Residuals are displayed in the L3 column.

**(2) To get sum of squared errors (SSE):**

2nd – LIST – MATH – 5 -ENTER

After “sum(“ appears on the screen enter ( - 2nd - LIST - Select RESID - ENTER - X2 - ) - ENTER **.** Sum of residuals squared will appear on the screen.

\*We find the line of best fit by getting the smallest sum of the squares of the errors. In your calculator, this is as easy as getting the square of the residuals.