

Math 241

Notes for Chapter 1

Calculator Instructions for 1.5 (plotting data and finding formulas)

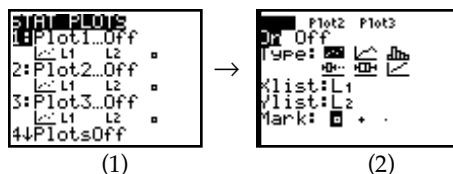
1. Preparing the STAT editor:

First steps: If you are plotting points for the first time or you haven't used the Statistics editor for a while, start here.

Turning ON the STAT PLOT:

Go to the STAT PLOT menu by pressing **2nd** **Y=** and then press **ENTER** with the cursor on 1:Plot 1 (1)

Turn on the STAT PLOT by pressing **ENTER** with the cursor on ON and highlight the Type and Mark as shown (2)

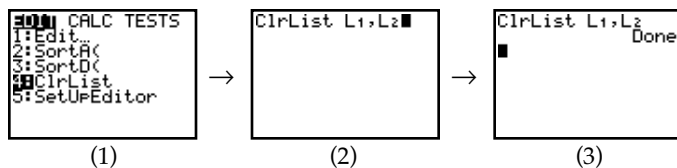


Clearing the STAT editor:

To clear the statistics editor press the **STAT** button and then **4** (ClrList) (1)

Now type in **2nd** **1** to get L_1 , then type a comma **,** and follow it with **2nd** **2** to get L_2 , (etc.) (2)

then press **Enter** (3)



2. Recognizing data type

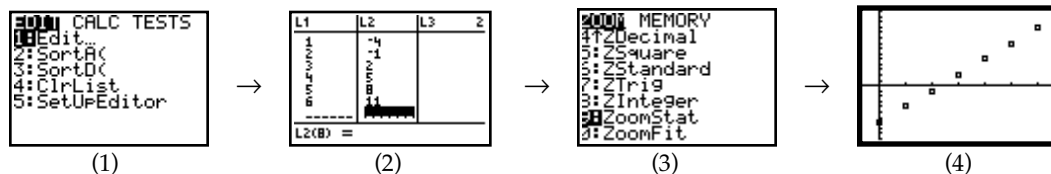
Example: Enter the table below in the statistics editor:

x	0	1	2	3	4	5	6
y	-7	-4	-1	2	5	8	11

To put data into the statistics editor: Press the **STAT** button and then **ENTER** with the cursor on EDIT (1)

Begin entering data by putting x values in L_1 and y values in L_2 (2)

Go to the **ZOOM** menu and press **9** (Zoom Stat) and the graph will follow. (3) & (4)



Now that we recognize this as a linear function, we should find the equation of the function.

3. Generating Best Fit Line (Linear example, # 2 continued):

Press the **STAT** button (1)

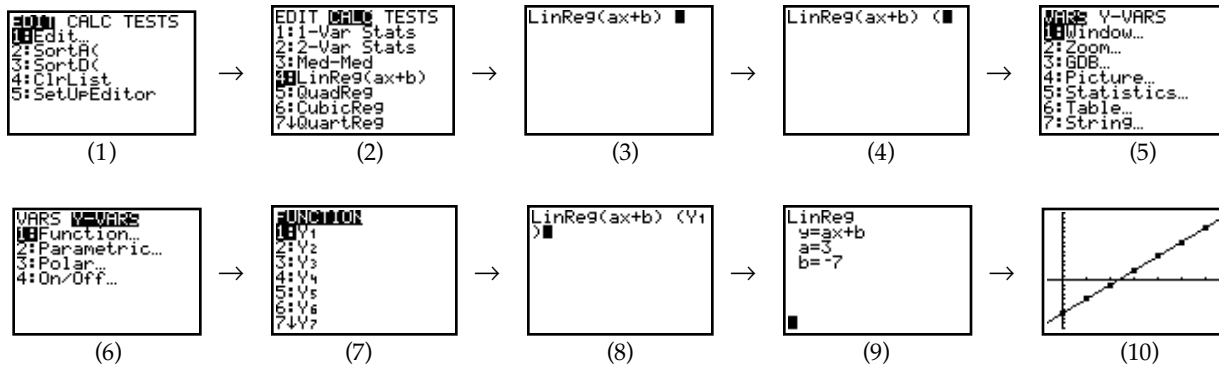
Use the **Right Arrow** to move over to CALC, then **Down Arrow** to 4:LinReg(ax + b) and press **ENTER** (2) & (3)



Over:

In order to store the results in the $y=$ editor, do the following:

- Type a ((1)
- Then press the **VARs** button (5)
- Right Arrow** over to Y-VARS and press **ENTER** (6)
- With the cursor on **Y1** press **ENTER** again (7)
- Type a) (8)
- Press **ENTER** (9)
- To see that your equation matches the data, press the **GRAPH** button (10)



*The equation is stored in the $Y=$ editor. Press $Y=$ in order to see the function.

4. Recognizing data type and finding the formula (Quadratic example):

Example: Enter the table below in the statistics editor (repeat steps 1 – 4 from #2)

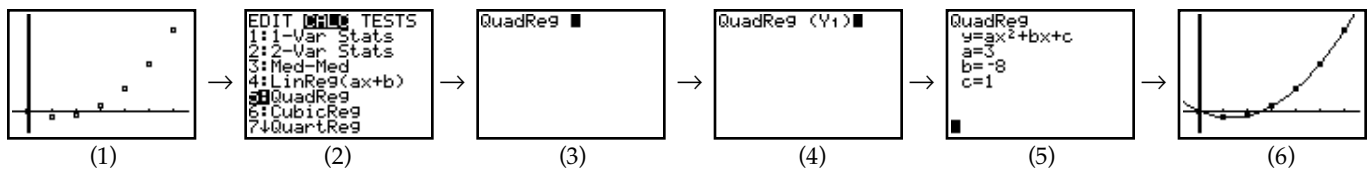
x	0	1	2	3	4	5	6
y	1	-4	-3	4	17	36	61

You should see that the data are not linear. In this case we will assume that they must be quadratic (the simplest curve). (1)

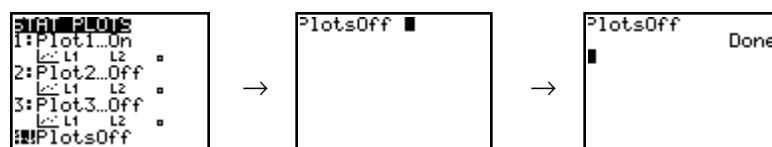
Press **STAT** then **Right Arrow** over to CALC, then **Down Arrow** to 5:QuadReg and press **ENTER** (2) & (3)

In order to store the results in the $y=$ editor, repeat steps 4 – 9 above (4) & (5)

To see that your equation matches the data, press the **GRAPH** button (6)



5. **Turning Plots Off:** If you don't want to keep graphing the stats lists (or if you don't have anything in your stats editor), go to the STAT PLOT menu (**2nd** $Y=$) and press **4** (PlotsOff) and then **ENTER** .



* If you get the following error when you are trying to graph something, follow the instructions above in #5.

