

Basics: Returning to the home screen

1. To go to a different menu screen, press the button for the desired menu.
2. To get back to the home screen, from which you perform calculations, press QUIT (2nd + MODE).

Basics: Inserting a character

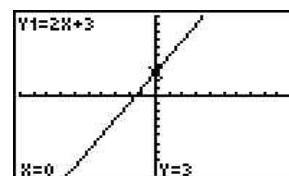
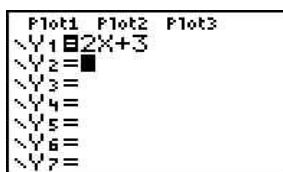
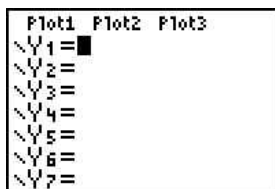
1. To insert a number or letter, set the cursor on the character to the **right** and then press **INS** (2nd key + DEL).
2. You may enter as many characters as you wish without re-entering the INS

Basics: Clearing an entry or error

1. If you have entered the wrong number or letter, set the cursor on the error and press the correct key
2. If you need to delete a number or letter, set the cursor on the error and press the **DEL** key.
3. To erase the entire line, press **CLEAR** once.
4. To clear the whole screen, press **CLEAR** twice.

Basics: Graphing a simple equation

1. Press **y=** button
2. Type in the equation.
The button with **x, T, 0, n** on it is the best way to enter a variable.
3. Press **GRAPH**

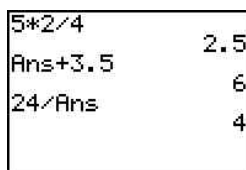


Basics: Making the screen lighter or darker

1. To make the screen darker, press **2nd + UP arrow**
2. To make the screen lighter, press **2nd + DOWN arrow**.

Basics: Using a previous answer

1. To use the last answer as the first number of the next calculation, just enter the operation sign that goes after it. The calculator will show **ANS** in the first spot.
2. To use the previous answer in the next calculation, but **NOT** in the first position, press **ANS (2nd + (-))** [in the lower right]

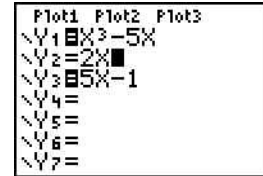


Basics: Turning it OFF

1. The TI-83 turns itself off if you forget.
2. To turn off the calculator, press **2nd + ON**

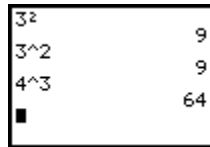
Beginning Skills: Turning graphs on/off

1. To turn a graph OFF, use the Left arrow key to put the cursor over the equal sign.
2. Press ENTER. In this screen, y1 and y3 will graph, but y2 is turned off.
3. Moving the cursor over to the far left allows different graph styles from dotted to pathway motions, to inequality shading.



Raising a Number to a Power

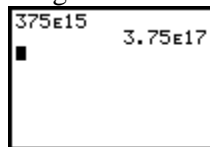
To square a number, use the **x²** key. For example, 3² can be calculated by entering 3 **x²** **ENTER**. Another way to calculate 3² is to use the **^** key. Enter 3 **^** 2 **ENTER**. In general, the **^** key can be used to raise a number to any specific power. To calculate 4³ enter 4 **^** 3 **ENTER**.



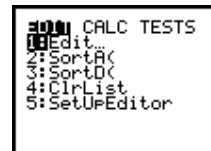
The **NEGATIVE SIGN** should not be confused with the subtraction sign. When subtracting two numbers use the **-** key and when negating a number use the **(-)** key.

Scientific Notation

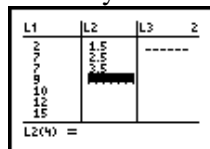
Numbers can be entered in scientific notation by pressing **2nd** **EE** to access EE. For example, the number 375 x 10¹⁵ is entered by pressing 375 **2nd** **EE** 15.



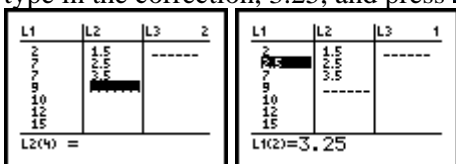
List Editor



Data for statistical calculations is entered in lists on the TI-83. Press **STAT** Press **1** or **ENTER** to view the contents of any of the six lists.



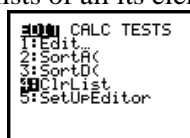
Use the [cursor keys](#) to view the contents of lists L4, L5, and L6 or additional entries in a list. Any entry can be changed. For example, to change the 2.5 entry in L1 to 3.25, highlight the 2.5, type in the correction, 3.25, and press **ENTER**.



The entry is changed and the cursor highlights the next entry. Any entry can be deleted. Highlight the entry and press **DEL**. All list elements below the deleted one move up one place. An entry can be inserted. Highlight the entry below which an entry is to be inserted. Press **2nd** **DEL**. The value is inserted above the highlighted element and will have an initial value of 0. All list elements below the inserted one will be moved down one.

Clear Lists Option

The clear list option clears one or more lists of all its elements. Press **STAT**.



followed by **4** to begin the process. Next, specify which of the six lists, L1 through L6, should be cleared. To clear only the first list, press **2nd** **1** **ENTER**.

Note: More than one list can be cleared at a time. For example, to clear lists L1, L3, and L5 press **2nd** **1** **,** **2nd** **3** **,** **2nd** **5** **ENTER**. All three lists are now cleared.




More from the Statistics Edit Menu

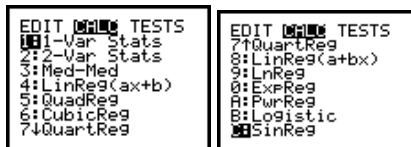
Press **2** to select sort A which sorts lists in ascending order.

Press **3** to select sort D which sorts lists in descending order.

Press **5** to select setUPEditor which can be used to rename lists.

Statistics Calculation Menu

Press **STAT**  to view the statistics calculation options.



Press the number associated with an option or use the [cursor keys](#) to select an option & press **ENTER**.

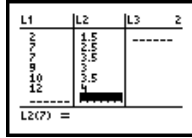
Press **1** to select one-variable statistics.

Press **4** to select [linear regression](#) which finds the best-fit linear equation of the form $y = ax + b$

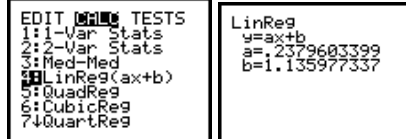
Press **5** to select [quadratic regression](#) which finds the best-fit equation of the form $y = ax^2 + bx + c$

Linear Regression

The linear regression option uses the equation of a linear equation of the form $y = ax + b$ that best fits a set of data. First, [enter the data](#). Press **STAT** **ENTER**.

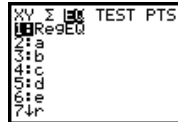


Press **STAT** and use to select CALC. Press **4**. This yields an equation of the form $y=ax + b$



The TI-83 stores the regression equation. The equation can be graphed and is transferred to **Y =**

without typing the equation as follows. Press **Y =** **VAR5** **5** and use to select EQ.



Press **1**. The equation is now entered in **Y =**. Press **GRAPH**. The data points can also be viewed. Access STAT PLOTS by pressing **2nd** **Y =**. To turn the plots on press **5**.



Statistics Plot Menu

Press **2nd** **Y =**.



Press the number associated with an option or use the [cursor keys](#) to select an option and press **ENTER**.

Press **1** to select plot 1 which shows current settings for stored information. The same applies for plots 2 and 3.

Press **4** to select plots off which turns the plots off. **5** turns the plots on.

The setup for Plot 1, Plot 2, or Plot 3 can be altered. For example, press **1**.



On means the data will be plotted by pressing **GRAPH**.

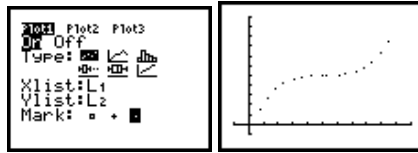
Off means the plot is defined and saved for use later.

XLlist determines the list from which the x values are defined.

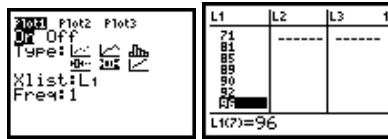
YLlist determines the list from which the y values are defined.

Mark determines the appearance of each point, a box, cross, or dot.

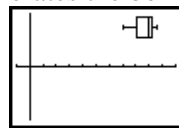
For example, the following set up generates a **scatter plot** with cross marks using the data from lists L1 and L2.



Selecting **box plot** uses data from only the XList. The "whiskers" on the plot will extend from the minimum data point in the set (minX) to the first quartile (Q1) and from the third quartile (Q3) to the maximum point (maxX). The quartile Q1 is the median of the data to the left of the median (Med). The quartile Q3 is the median of the data to the right of Med. The box is defined by Q1, Med, and Q3. For example,

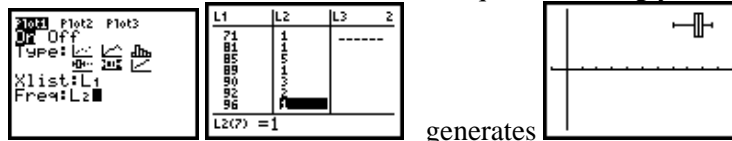


generates the box plot



(xMin=-10, xMax=110)

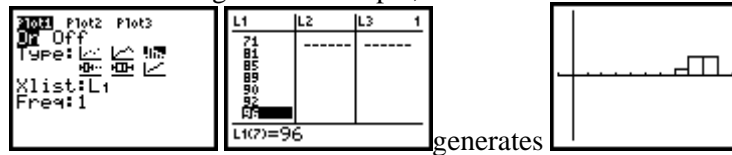
The frequency (Freq) of the data above is 1. If any given data occurs in the set more than once, this information can be stored in a second list and the Freq set accordingly. For example,



generates

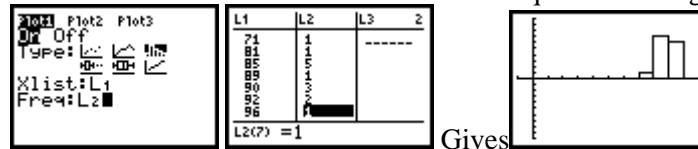
More Stat Plots

Selecting **histogram** uses data from only the XList. A vertical bar is displayed to represent the data elements. The placement of the bars is determined by the Xmin and Xscl setting in **WINDOW**. Beginning at the Xmin value, a new bar is possible every Xscl units. The wider the bar, the broader the range of data elements that each bar represents. If a data value occurs on the edge of a bar, it is counted in the bar to the right. For example,



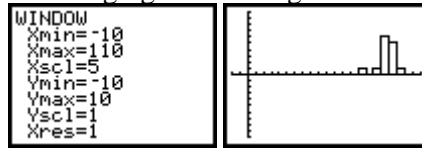
(xScl=10)

The frequency (Freq) of the data above is set to 1. If any given data occurs in the set more than once, this information can be stored in a second list and the Freq set accordingly. For example,



Gives

The following shows the effect of changing Xscl setting.



Table

Press **2nd** **GRAPH** to view the table.

X	Y1	Y2
0	2.3333	8.025
1	0.7576	8.0127
2	0.1237	7.0004
3	0.3333	5.9881
4	0.7576	4.9758
5	2.1339	3.9635
6	3.204	2.9512

X=0

The first column lists x values, while the second and third columns list corresponding y values defined by equations Y1 and Y2 entered in **Y =**. The first x value displayed and the increments between the x values can be changed by accessing the [table setup](#).

Set Table Values

Press **2nd** **WINDOW** to view the table set up.

TABLE SETUP
TblStart=0
ΔTbl=1
Indpnt: Auto Ask
Depend: Auto Ask

TblStart determines the first x value displayed in the [table](#).
Δx establishes the increment between successive x values.

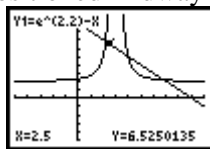
Press **2nd** **GRAPH** to view the table defined above.

X	Y1	Y2
0	2.3333	8.025
1	0.7576	8.0127
2	0.1237	7.0004
3	0.3333	5.9881
4	0.7576	4.9758
5	2.1339	3.9635
6	3.204	2.9512

X=0

Trace Option

Press **TRACE** and a blinking cursor is displayed on the first graph entered in **Y =**. The cursor is positioned midway between Xmin and Xmax defined in **WINDOW**



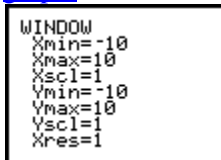
The coordinates of the blinking cursor's location appear at the bottom of the

screen. Press **←** or **→** to move the cursor along the graph from one plotted point to the next.

Press **▲** or **▼** moves the tracing cursor to the next function typed in **Y =**, as indicated by the equation in the upper left corner of the screen. The cursor moves to the new function at the same x value.

Set Window Dimensions

Press **WINDOW** to see the window used to [graph](#) a function.



Xmin establishes the smallest x value, the left end of the x axis.

Xmax establishes the largest x value, the right end of the x axis.
This value must be larger than the value entered for Xmin.

Xscl defines the spacing between tic marks along the x axis.
To turn off the marks, set Xscl to 0.

Ymin establishes the smallest y value, the bottom of the y axis.

Ymax establishes the largest y value, the top of the y axis.
This value must be larger than the value entered for Ymin.

Yscl defines the spacing between tic marks along the y axis.
To turn off the marks, set Yscl to 0.

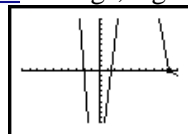
Xres defines the distance, in pixels, between consecutive evaluated values of x. The default is 1.

Zoom Statistics Option

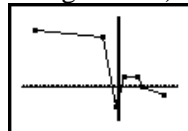
The zoom statistics option displays a graph that includes all statistical data points that are active.
Press **ZOOM**.



For example, depending upon the [stat plot](#) settings, a graph such as



does not show all the data points. Press **9**. (The zoom stat option can also be obtained by using the **▼** to select option 9 and pressing **ENTER**.)



The window settings are adjusted and all entered data is visible.