Using Mode Settings

Mode settings control how numbers and graphs are displayed. Settings are retained when you turn off the calculator.

- Press [MODE] to access the mode setting screen.
- Press [▼] or [▲] to move the cursor to the line, press [▶] and [◀] to move the cursor to the settings you want, and press [ENTER].

Some mode settings are shown in the following table with the default settings highlighted:

Setting	*Result*
Normal Sci Eng	Numeric notation.
Float 0123456789	Number of decimal places.
Radian Degree	Unit of angle measure.
Func Par Pol Seq	Type of graphing.
Connected Dot	Graph points connect or display as dots.
Sequential Simul	Graphs draw in sequence or simultaneously.
Real a+b*i* re^θ*i*	Real, rectangular complex, or polar complex.
Full Horiz G-T	Full, Horizontal, and Graph-Table split screen modes.
MathPrint™ Classic	Display input/output in textbook type display or in one line.
n/d Un/d	Display as a simple fraction/mixed number.

Note: When using instructions this document, most screens are displayed using the default mode setting.

FCC Caution

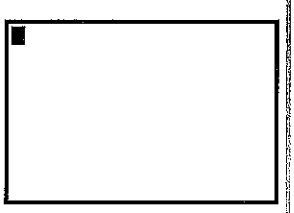
This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada Declaration

This Class B digital apparatus meets all requirements of the Canadian Interference- Causing Equipment Regulations.
CAN ICES-3(B)/NMB-3(B)

Using the Home Screen

The Home Screen is the primary screen of the TI-84 Plus. You can enter instructions and evaluate expressions from this screen (where the answers are also displayed). Return to the Home Screen from any other screen, by pressing [2nd] [QUIT].

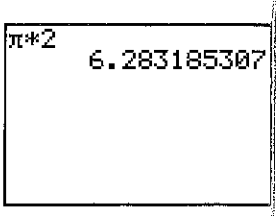


Entering an Expression

An expression on your TI-84 Plus consists of numbers, operators, variables, and functions. You can type an expression using the keypad and then evaluate it to a single answer.

1. Press [2nd] [π] [×] **2**.
2. Press [ENTER] to see the answer.

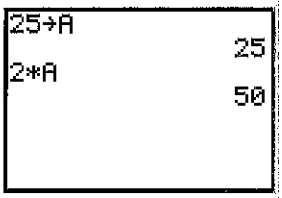
Note: You can change any expression on your screen by using the backspace [◀] key, the delete [DEL] key, or the insert [2nd] [INS] keys.



Storing a Value

Your graphing calculator allows you to store numerical values. You can recall them from memory using variable names.

1. Press **25** [STO▶] [ALPHA] **[A]**.
2. Press [ENTER].
3. Press **2** [×] [ALPHA] **[A]**.
4. Press [ENTER].



TI-84 Plus Quick Start

The TI-84 Plus is an easy-to-use graphing calculator that provides function graphing and data plotting as well as function and data analysis.

Note: In this document, TI-84 Plus refers to TI-84 Plus Edition graphing calculator.

Turning Power On and Off

To turn on the TI-84 Plus, press [ON].
To turn off the TI-84 Plus, press [2nd] [OFF].

- All settings and memory contents are retained by Constant Memory™ function.

Using the [2nd] Key

The second function of each key is printed above the key in the same color as the [2nd] key. Some secondary keys enter a symbol or a function (such as [√‾], [SIN⁻¹]). Others display menus and editors.

- Press [2nd] [ANGLE] to view the **ANGLE** menu.

Using the [ALPHA] Key

Many keys also have a third function. These functions are printed above the keys in the same color as the [ALPHA] key. The third functions enter alpha characters, special symbols, and access **SOLVE**:

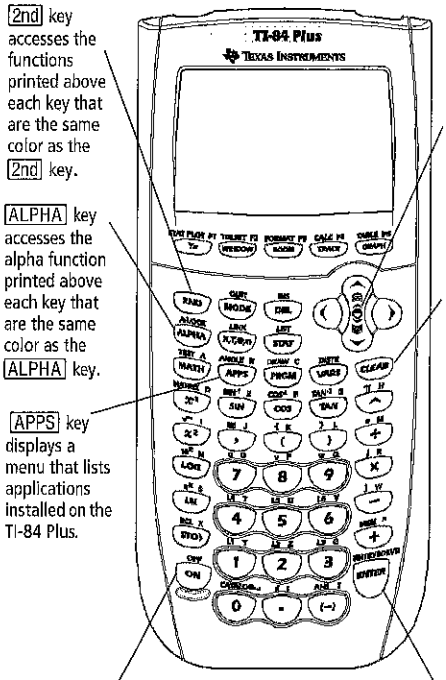
- Press [ALPHA] **4** to enter **T**.
- Press [2nd] [A-LOCK] to lock the alpha key in the on position and enter several alpha characters.
- Press [ALPHA] [SOLVE] to solve equations entered in the **Solver...** command. Solver is found in the [MATH] menu.

Adjusting the Display

To change your display contrast:

- Press [2nd] [▲] or [▼] repeatedly to darken or lighten the screen to various contrast levels.

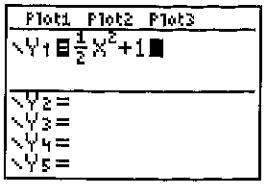
TI-84 Plus Keys



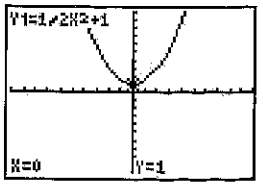
Graphing a Function

Use the [Y=] editor to enter a function and display the graph.

1. Press [Y=]. If Y1 is not empty, press [CLEAR].
2. Press **1** [ALPHA] [F1] [ENTER] **2** [▶] [X,T,Θ,n] [x^2] [+]**1**.



3. Press [GRAPH].
4. Press [TRACE] and use the arrow key to trace along the curve.
5. Press [2nd] [QUIT] to leave the screen.

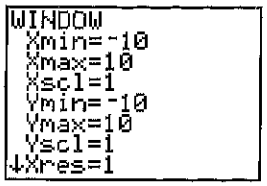


Note: Default window settings are -10<x<10 and -10<y<10.

Setting the Graphing Window

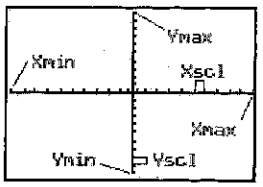
To obtain the best view of the graph, you may need to change the boundaries of the window.

1. Open the editor by pressing [WINDOW].
2. Move the cursor to highlight the value you want to change.
3. Type a value or an expression. Press [CLEAR] to clear the old value.



4. Press [2nd] [QUIT] to leave the screen.

Note: *Xmin*, *Xmax*, *Ymin*, *Ymax*, *Yscl*, and *Yscl* represent the X and Y maximums and minimums and the X and Y scales.



Using Zoom

The TI-84 Plus has pre-defined window settings that let you quickly adjust the graph window to a predetermined level of magnification and scale. To display this menu, press the [ZOOM] key:

1: ZBox	Lets you draw a box (using the cursor pad) to define the viewing window.
2: Zoom In	After you position the cursor and press [ENTER], magnifies the graph around the cursor.
3: Zoom Out	After you position the cursor and press [ENTER], displays more of the graph.
4: ZDecimal	Sets the change in X and Y to increments of 0.1 when you use [TRACE].
5: ZSquare	Adjusts the viewing window so that X and Y dimensions are equal.
6: ZStandard	Sets the standard (default) window variables.
7: ZTrig	Sets the built-in trigonometry window variables.
8: ZInteger	After you position the cursor and press [ENTER], sets the change in X and Y to whole number increments.
9: ZoomStat	Sets the values for currently defined statistical lists.
0: ZoomFit	Fits **Ymin** and **Ymax** between **Xmin** and **Xmax**.
A: ZQuadrant1	Only displays Quadrant 1.
B:-G: ZFrac	Sets the graphing window to support tracing in fractional elements.

Using Menus

You can access many functions and instructions on the Home Screen by selecting from a menu. To select an item:

- Press the number/letter shown to the left of the menu.

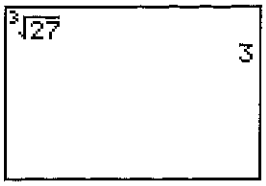
- or-

- Use the cursor arrows keys ▼ or ▲ to highlight a menu item and press [ENTER].

Some menus close automatically. You can also press [2nd] [QUIT] to exit.

The following example shows how to select from a [MATH] menu:

1. Press [MATH].
2. Press **4** *or* ▼▼▼ [ENTER].
3. Press **2 7** [ENTER].



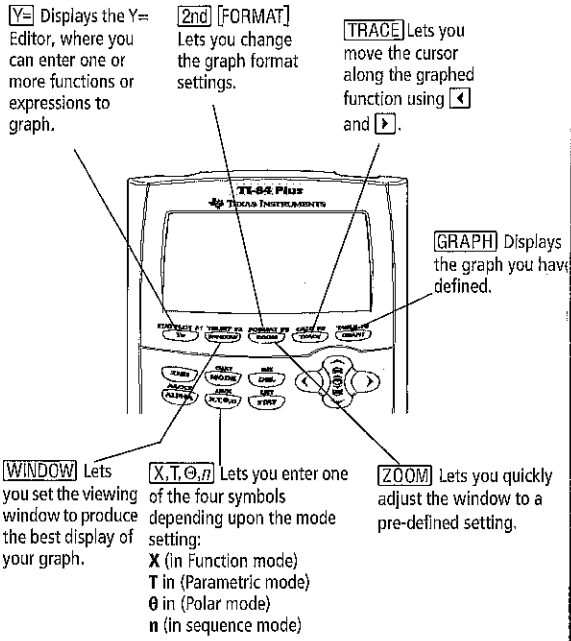
Using the CATALOG

CATALOG is an alphabetic list of all functions and instructions. Some of these items are also available on keys and menus. To insert an item:

1. Position the cursor where you want to insert the item.
2. Press [2nd] [CATALOG].
3. Press ▼ or ▲ to move the ▶ indicator to the function or instruction.
4. Press [ENTER]. Your selection is pasted on the Home Screen.

Note: Use the Catalog Help App for syntax help. Run this application from the [APPS] menu.

Graphing Keys

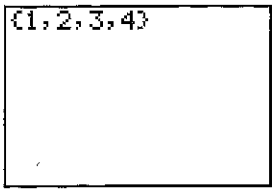


Entering Data into Lists

You can enter data into lists using braces and STO▸, or the statistical list editor.

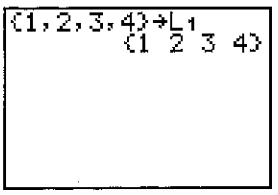
Creating L1 using the STO▸ key

1. Press 2nd [{] **1** , **2** , **3** , **4** 2nd [}].



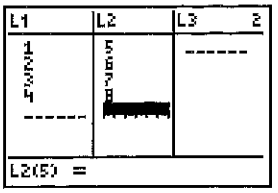
2. Press STO▸ 2nd [L1] ENTER to store data.

Note: To enter a fraction, enter the numerator, ALPHA [F1] ENTER, and then the denominator.

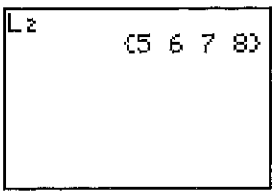


Creating L2 using the statistical list editor

1. Press STAT ENTER ▸.
2. Press **5** ENTER **6** ENTER **7** ENTER **8** ENTER.



3. Press 2nd [QUIT] 2nd [L2] ENTER.

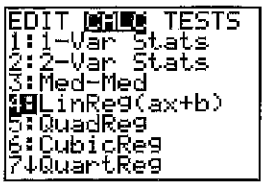


Statistics and Regression

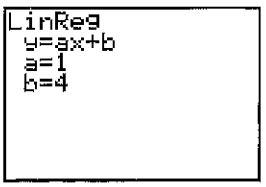
Calculating a linear regression

To calculate the linear regression for stored list data:

1. Press STAT ▸ ▾ ▾ ▾.



2. Press ENTER.

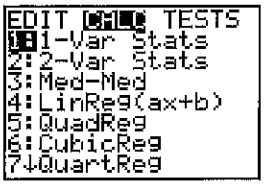


Calculating statistical variables

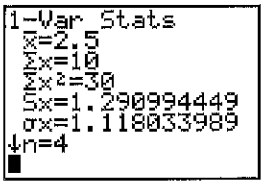
You can calculate one-variable or two-variable statistics for data that you have entered into lists.

The following example shows a one-variable statistic:

1. Press STAT ▸ ENTER.



2. Press 2nd [L1] ENTER.



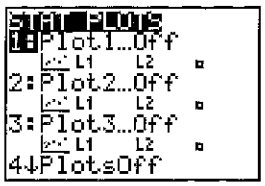
Plotting Data

When statistical data is stored in lists, you can display the data you have collected in a scatter plot, xyLine, histogram, box plot, or normal probability plot.

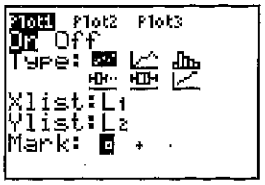
Selecting the lists you want to plot

1. To turn plots off, press [2nd] [STAT PLOT] **4** [ENTER].

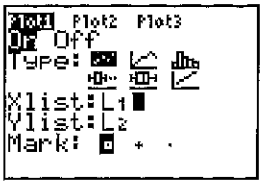
   (Turns plots off if any plots are on.)



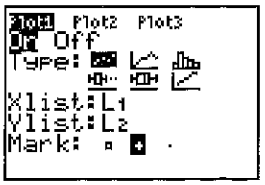
2. To turn **Plot1** on, press [2nd] [STAT PLOT] [ENTER] [ENTER].



3. To enter L1 as the X list, press [▼] [▼] [2nd] [L1] [ENTER].
4. To enter L2 as the Y list, press [▼] [2nd] [L2] [▼] [ENTER].



5. To select + as the plotting mark, press [▼] [▶] [ENTER].



Displaying plot and trace

Press [ZOOM] **9** [TRACE] to display a scatter plot.

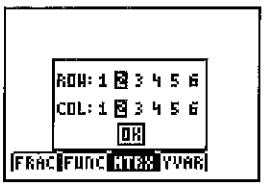
Using the Matrix Editor

Use the matrix editor to enter and edit values for equations.

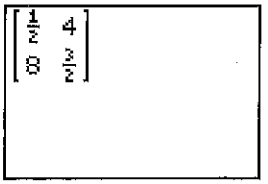
Creating a matrix

$$\begin{pmatrix} \frac{1}{2} & 4 \\ 8 & \frac{3}{2} \end{pmatrix} + \begin{pmatrix} \frac{7}{2} & 6 \\ 3 & \frac{7}{2} \end{pmatrix}$$

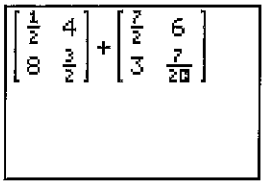
1. Press [ALPHA] [F3] [▼] [▼] [ENTER].



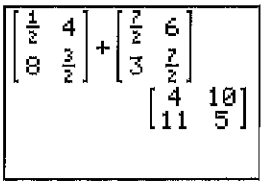
2. Press **1** [ALPHA] [F1] [ENTER] **2** [▶] [▶] **4** [▶] **8** [▶] **3** [ALPHA] [F1] [ENTER] **2** [▶] [▶].



3. Press [+] [ALPHA] [F3] [▼] [▼] [ENTER].
4. Press **7** [ALPHA] [F1] [ENTER] **2** [▶] [▶] **6** [▶] **3** [▶] **7** [ALPHA] [F1] [ENTER] **2**.



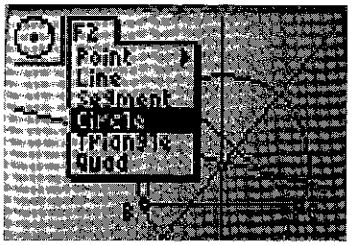
5. Press [ENTER].



Quick Reference

TI-84 Plus

Key	Action
[ENTER]	Executes an instruction and/or an expression.
[CLEAR]	Clears the current line. (If the cursor is on a blank line, clears everything on the Home Screen.)
[2nd]	Changes the cursor to ↑; the next keystroke performs a 2nd operation. To cancel [2nd], press [2nd] again.
[◄] or [►]	Moves the cursor around within an expression.
[2nd] and [►] or [◄]	Moves the cursor to the beginning or end of an expression.
[▼] [▲]	Moves the cursor from line to line.
[DEL]	Deletes the character under the cursor.
[2nd] [INS]	Inserts additional characters at the cursor. Press the keys again to end the insertion.
[ALPHA] [A-LOCK]	Changes the cursor to A; sets the alpha-lock; subsequent keystrokes paste alpha characters. To cancel [ALPHA], press [ALPHA] again or press an arrow key.
[ALPHA]	Changes the cursor to A; the next keystroke pastes an alpha character. To cancel [ALPHA], press [ALPHA] again or press an arrow key.
[ALPHA] [▼]	Pages down to the next screen (on menus).
[ALPHA] [▲]	Pages up to the next screen (on menus).
[ALPHA] [F1] [F5]	Displays the shortcut menus, **FRAC**, **FUNC**, **MTRX**, and **YVARS**.
[2nd] [ENTRY]	Places your last entry on the current entry line on the Home Screen.
[2nd] [ANS]	Places **Ans** (a reference to your last answer) on the current entry line on the Home Screen, allowing you to use the answer in the next calculation.
[X,T,Θ,n]	Pastes an **X** in **Func** mode, a **T** in **Par** mode, a θ in **Pol** mode, or an *n* in **Seq** mode with one keystroke.



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Texas Instruments

Grouping and Ungrouping files

Grouping files

1. Press [2nd] [MEM] **8 1** to select **Create New** on the **GROUP UNGROUP** screen.
2. Type a group name and press [ENTER].
3. Navigate to the files you want to group and select each file by moving the cursor to the file and pressing [ENTER].
4. Press [▶] **1** to select **Done**.

Ungrouping files

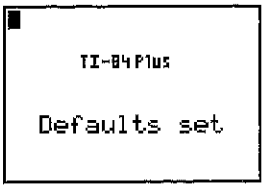
1. Press [2nd] [MEM] **8** [▶] to select **UNGROUP**.
2. Move the cursor to the group name that you want to ungroup and press [ENTER].
3. Press **3** to select **Overwrite All**.

Resetting Defaults

If your calculator gives you unexpected results or your settings have changed, you can reset defaults on your TI-84 Plus.

1. Press [2nd] [MEM].
2. Press **7**.
3. Press **2**.

4. Press **2**.



Installing Applications

With free TI Connect™ CE software and a TI Connectivity Mini USB cable (included with your TI-84 Plus), you can link your graphing calculator to a personal computer and download free applications.

For more information, visit:

- **education.ti.com/apps** to download TI Connect™ CE software, applications, and OS updates.
- **education.ti.com/guides** to download documentation.

Running applications

Once you have downloaded an application, press the [APPS] key to run the applications on your TI-84 Plus graphing calculator.

Transferring the OS from Calculator to Calculator

You can transfer the operating system from one calculator to another using a Mini USB unit-to-unit cable. (not included, available as an accessory).

Connect the two calculators by firmly inserting the USB ends into the calculators. The USB is located on the top edge of the calculator.

Transfer the OS as follows:

On the receiving unit

Press [2nd] [LINK] [▶] [ENTER].

On the sending unit

Press [2nd] [LINK] [▲] [▲] [ENTER].