

TRUCKEE MEADOWS COMMUNITY COLLEGE

TUTORING AND LEARNING CENTER

THE ANYBODY-CAN-DO-IT

TI-83 Calculator User Guide

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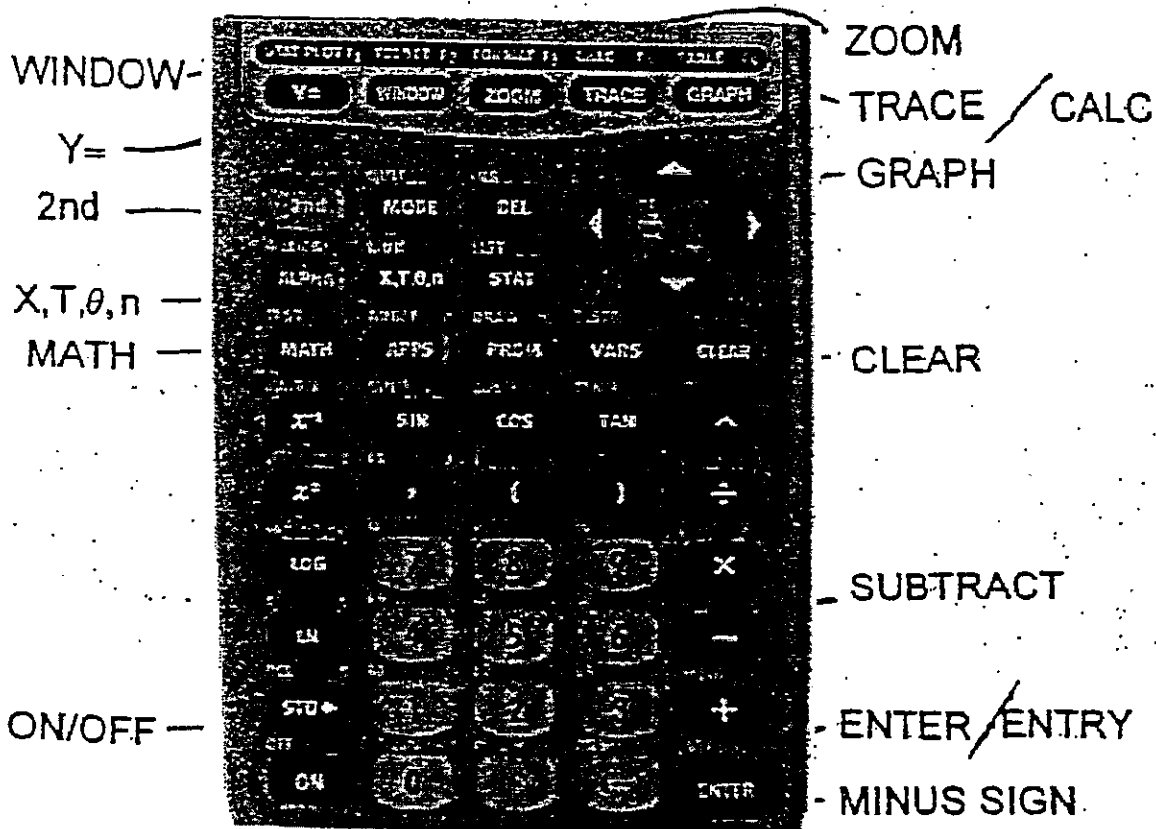
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The Anybody-Can-Do-It TI-83 Calculator User Guide

The following guide was created with the first time calculator user in mind. Included are the necessary steps to begin using your TI-83 calculator for calculation, graphing equations, exploring graphs, solving equations using graphs, and evaluating expressions.

If you have more questions on how to use your graphing calculator, find out when the Tutoring and Learning Center (TLC) is offering Graphing Calculator Workshops by call the TLC at (775) 674-7517.





On/Off

The **ON** button is at the left-hand corner at the bottom of your calculator. Notice that the OFF button is above it in yellow. To access any button that is in yellow, you must first press the yellow 2nd button at the left-hand top of your calculator, and then press the desired yellow button.

CALCULATING

Enter the expression you wish to calculate in the order which is written, then press the ENTER button at the bottom right-hand corner of the calculator. The *input* (ENTRY) appears on the left hand side of the *home screen*. The *output* (ANSWER) appears on the right hand side of the screen.

Helpful Keys to know:

- ENTER – this is like your equal sign. Once you enter a calculation, you hit **ENTER** for the ANSWER
- ANS (or 2nd **(-)**) This button will retrieve the last ANSWER that was calculated and use it as an ENTRY.
- An ENTRY is the last input you made. ENTRY can be used by hitting 2nd **ENTER**.
- QUIT is found by hitting 2nd **MODE** and this will always take you back to the home screen
- The **(-)** is different from the subtraction sign on the right column of the pad. The (-) is a negative sign, used in front of negative numbers, and the subtraction sign is used as an operating sign only, not as a negative sign.

CORRECTING MISTAKES

- You can erase an entire expression using the **CLEAR** button in the top right-hand corner.
- Or, you can move the cursor, so that it is on the error and replace the entry by typing over it. To move the cursor, use the arrow keys on the top right-hand corner of the key pad. You can only edit an ENTRY if you have not press **ENTER**. Once you press enter, you must hit 2nd ENTRY to retain the previous entry.
- To delete an error, move the cursor to the error and press the **DEL** button in the top row of the key pad. Delete will delete the space of the error also. So enter something else you must use the Insert (INS) key.
- To change an error, not just replace, use the INS button. Be sure to press the 2nd button first to use the INS button. This will allow you to insert and element at the cursor.
- Once you hit **ENTER**, the only way to edit a line, it to use the ENTRY button. ENTRY is the yellow button on the ENTER key.

**EXAMPLE**

Type in the expression: $3+5(9-4)$.

We are going to edit the expression by changing the number 9 to the number 10.

1. move the cursor so it is blinking on the 9.
2. type the number 1
3. use the INS button to type a 0 after the 1
4. hit enter
5. you should get 33

Now, we are going to change the number 10 back to the number 9

1. use the ENTRY button so we can re-edit the line
2. move the cursor to the 1 on the number 10
3. type the number 9
4. delete the 0
5. hit enter
6. you should get 28

EXPONENTS

- You can use the \wedge button in the top right column for calculate powers.
 - 2^3 , would be entered as $2\wedge 3$.

Special powers like “squared” and “cubed” have special buttons. The square button x^2 is in the left column. To find 4^2 , input 4, then press the x^2 button. Did you get 16?

- To find 4^3 , you can type $4\wedge 3$, or you can input 4, then press MATH (left column) and choose the 3rd entry in the menu, and press ENTER. Did you get 64?
- Try 5^3 and $2\cdot 3^2$. Did you get 125 and 16?

CONVERTING DECIMALS → FRACTIONS

- You can convert a decimal answer into a fraction, or you can reduce a fraction into lowest terms.
- This command is located in MATH button, 1st entry.

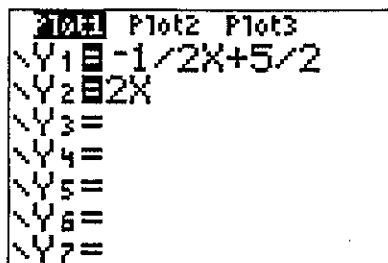
Example:

- Reduce $75/135$ into lowest terms. Press $75/135$ and ENTER. Press MATH, ENTER, and ENTER again. Did you get $5/9$?
- Write the number .1376 as a fraction in lowest terms. Enter .1376, press MATH, ENTER, ENTER. Did you get $86/625$?

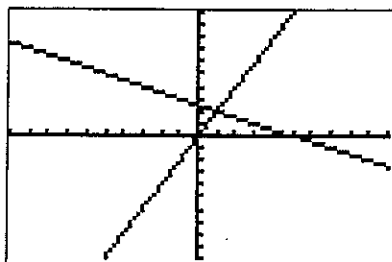
GRAPHING

Suppose you need to solve this system of equations $\begin{cases} x+2y=5 \\ 2x-y=0 \end{cases}$

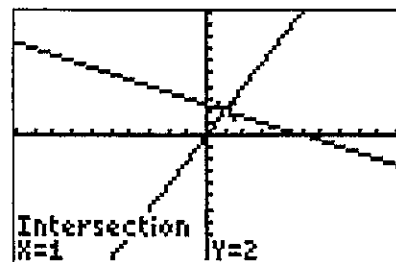
- First, rewrite the equations in *slope-intercept form* $\begin{cases} y = -\frac{1}{2}x + \frac{5}{2} \\ y = 2x \end{cases}$
- Press the $\boxed{Y=}$ button and enter $-\frac{1}{2}x + \frac{5}{2}$ for Y1 and enter $2x$ for Y2.
- To input "x" use the X, T, θ, n button in the second row.



- Press GRAPH



- To solve the system, we need to find the point of intersection of the two lines. Press 2nd TRACE to access the CALC command.
- Scroll down to entry 5:intersect using the arrow key. Press ENTER.
- The cursor will blink on one of the two lines. Press ENTER twice. Then move the cursor near the point of intersection and press ENTER. The x-y coordinates of the point of intersection will appear as the bottom of the screen



ZOOM FEATURES

What to do if you cannot see the lines in the screen.

- Press ZOOM and scroll down to 6:ZStandard and press ENTER. This is a window, where there are 10 tick marks in all directions.
- You decide which view you like best! Sometimes you may have to switch from one view to another to get the best picture of the graph.

WINDOW FEATURES

Notice how the window changes. You can manually set the WINDOW to capture the graph. ZStandard is the same as a 10 x 10 window.

