

## [1.17] Quick tips

This section summarizes things that perplex some new users. If you read this one page, you'll be able to use your calculator much more effectively.

1. To run a program, type in the program name followed by "()", then press [ENTER]. For example: game() [ENTER]. If the program is not in the current folder, type the folder name with a backslash before the name, for example: main\game() [ENTER].
2. Make sure the GraphLink cable is plugged in firmly to the calculator connector. Push hard. The TI-89 has this problem more than the TI-92 Plus.
3. Use new batteries when upgrading the AMS with the GraphLink, or the upgrade may fail, and then you will have to install the AMS from a computer.
4. The latest version of the GraphLink software from TI may fix linking problems. Get it here: <http://education.ti.com/product/accessory/link/download/download.html>. Also make sure you have chosen the correct cable type (black or gray) and the right serial port.
5. If you want exact fraction results (like 1/3), press [MODE] and set Exact/Approx to Exact or AUTO. For approximate fractions (like 0.3333), set Exact/Approx to APPROXIMATE. Or, include a decimal point with one of the numbers: 1./3. Or, press [DIAMOND] [ENTER] instead of [ENTER].
6. There are no cube root or nth-root keys or functions. To find the cube root of  $x$ , use  $x^{(1/3)}$ . To find the  $n$ th root, use  $x^{(1/n)}$ .
7. There is no key for 'log', the base-10 logarithm. To find  $\log(x)$ , type in [L] [O] [G] [ ( ) [x] ( ) ] [ENTER]. Or select *log*( from the [MATH] menu.
8. To find the base- $b$  logarithm of  $x$ , use  $\log_b(x) = \log(x)/\log(b) = \ln(x)/\ln(b)$ .
9. To plot a vertical line in the Y= function editor at  $x=a$ , use  $y1(x)=\text{when}(x<a,-9E999,9E999)$
10. There are no built-in functions for secant, cosecant and cotangent. You can define these functions yourself.
11. There is no built-in interpolation function. Define your own interpolation function with *Define intrp(xa,xb,ya,yb,x)=ya+(x-xa)/(xb-xa)\*(yb-ya)*.  $x_a$  and  $x_b$  are the  $x$ -values,  $y_a$  and  $y_b$  are the  $y$ -values, and  $x$  is the value at which to interpolate for  $y$ .
12. Temperature conversions are not in the UNITS menu. Instead, use `tmpCnv()` (to convert temperatures) and `ΔtmpCnv()` (to convert temperature ranges or differences).
13. The STAT VARS screen (ShowStat command) shows sample standard deviation, not population deviations. Display the population standard deviation by entering  $\sigma_x$  or  $\sigma_y$ . To enter the  $\sigma$  character, use [DIAMOND] [ ( ) [alpha] [S] on the TI-89, or [2ND] [G] [S] on the TI-92 Plus.
14. To find double and triple integrals, nest integral functions, for example,  $\int (\int (f(x, y), y), x)$ .
15. On the TI-89, the 'space' character is [alpha] [ (-) ].
16. There is no built-in quadratic equation solver. Use `zeros(a*x^2+b*x+c,x)`
17. Previous results stored in variables can cause wrong results. Press [F6] (for the Clean Up menu), then use Clear a-z or NewProb to delete old variables.
18. The small manual that comes with the calculator does not cover all features. For the full manual, go to <http://education.ti.com/global/guides.html>. You can also buy a printed manual from TI.
19. ticalc.org has games.
20. Most TI-89 programs will run on the TI-92 Plus and vice versa. Exceptions are ASM programs, programs which use specific key codes, and programs which use the larger TI-92+ display.