

Tips and Tricks: 2006 Volume 4

In case you missed earlier volumes here's a list of previous tips and tricks.

Volume 1 2006

- Name your calculator
- Friendly decimals: Norm1 v Norm2
- Choose Math or Linear display in Run-Mat
- Cut, Copy and Paste between applications
- Add vectors in RUN-MAT
- Leave a shadow trail when using dynamic graph
- PHYSIUM

Volume 2 2006

- Jump to any exact coordinate whilst tracing in Graph
- Find the equation of the tangent to any function in Graph
- Recursive calculations with matrices in Run
- Substitution in a function in Run

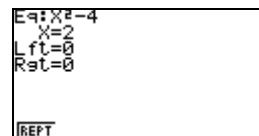
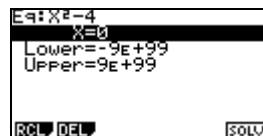
Volume 3 2006

- Graphing tricky functions
- Using the Catalog
- Graphs of logs to any base
- Geometry

Now for some more...

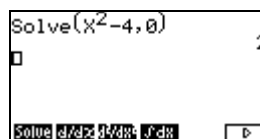
Solving $f(x)=0$ in Solver

This is a lazy tip! When solving $f(x) = 0$, there is no need to include the '=0'. By default, if there is no '=' sign in the equation, the calculator will find roots depending on the initial value set or the variable.



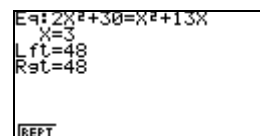
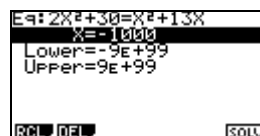
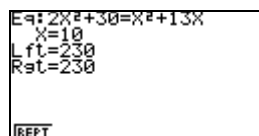
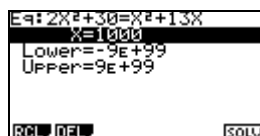
Solve in RUN

The above reflects the use of the Solve() function found in the OPTN CALC Menu in RUN. Solve($f(x), b$) finds a root of $f(x)$ given a first approximation of b .



Solving quadratics in Solver

This is a tip for many students who, when solving for roots, struggle to re-arrange a quadratic equation into standard form (and hence are unable to use the Polynomial solver). Simply enter the equation as is into Solver. Then, mindful that there could be two solutions, solve once with an initial 'guess' of 1000 and then a second time with an initial 'guess' of -1000.

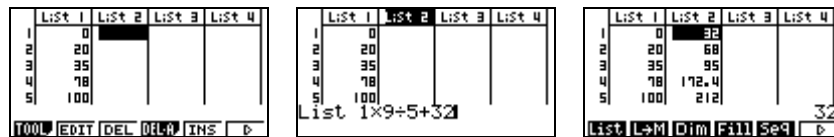


Working with Lists

When in STAT mode, lists can be manipulated 'wholesale'.

For example, suppose List 1 contains temperatures in degrees Celsius and the equivalent Fahrenheit temperatures are required.

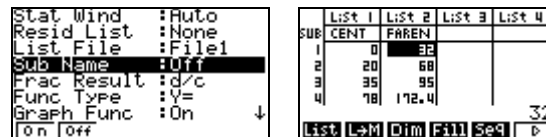
Use the cursor to move into (and so highlight) the List header of the List you want the result in. (This can be the same list or any other). Next use OPTN F1 F1 to obtain 'List', type the List number of the original data and the required operation and tap EXE.



Sub Names

In the above screens, the Sub Name had been turned off.

To turn Sub Names On or Off go into the SetUp (SHIFT + MENU)

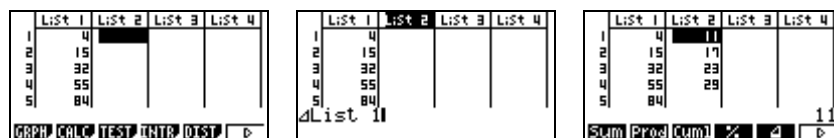


Sub Names allow users to give meaningful names to Lists.

List Differences

Some useful List manipulation functions can be found in the OPTN LIST menu.

Given a sequence of numbers in one list, the differences between consecutive terms can be automatically calculated and stored in another list.



After entering the sequence into List 1, move to the List 2 header. Next tap OPTN F1 F6 F6 F5 followed by the number 1 to obtain the middle screen. Tap EXE to store the differences into List 2.