

What everybody should know about the TI-89

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<http://www2.ohlone.edu/people2/joconnell/ti/>

For general information like how the TI-89 compares to other calculators, software downloads, the TI-89 and TI-89 Titanium guidebooks, and information that can be found on the Texas Instruments web site about the TI-89, please check <http://www2.ohlone.edu/people2/joconnell/ti/comparison.html>

ANS(#) – Pressing $\boxed{2\text{nd}}$ [ANS] will give you the last calculated result. By default, the calculator will show ans(1) which is the last entry, you can change it to ans(2) to get the second to last answer, and so on. Also, the TI-89 allows you to scroll up to the home screen from the entry line to highlight either results or computations. Pressing $\boxed{\text{ENTER}}$ will move it to the entry line.

Battery information – The TI-89 uses both 4 AAA alkaline batteries and a lithium battery for back-up. The lithium battery is only used to store information when the AAA batteries are being changed. Batteries should be changed when the BATT indicator shows at the bottom of the screen, also you will start to see the screen dim while the calculator is computing, graphing for example. If you find yourself needing to darken the contrast to 7 just to see the screen, then it is time to change the batteries. When the BATT indicator changes to light colored letters over a black background, change the batteries immediately.

Catalog – A complete list of the TI-89 and TI-89 Titanium functions can be found by pressing $\boxed{\text{CATALOG}}$. Pressing any letter key will take you down to the first command that begins with that letter. For details on what each function does refer to Appendix A in the appropriate guidebook.

Custom Menus – Creating a custom menu is a nice way to put all of the commands that you regularly use at you fingertips. The following is a program to put the main Vector, Matrix, and Counting commands that I use in the custom menu. Each Title will be a different pull down menu (there can be up to 8 pull down menus) and the Items are the commands that will be in each pull down menu. After the program is done, enter mymenu() on the home screen and press $\boxed{\text{ENTER}}$. Now pressing $\boxed{2\text{nd}}$ [CUSTOM] will give you your menu

```
mymenu()  
Prgm  
Custom  
Title "vector"  
Item "crossP("  
Item "dotP("  
Title "matrix"  
Item "det("  
Item "rref("  
Item "eigV1("  
EndCustm  
EndPrgm
```

Darken/Lighten Screen Contrast – To adjust the contrast on the screen press $\boxed{\diamond}$ and $\boxed{-}$ or $\boxed{+}$.

Entry – After a long line of computation you may find that you have made an entry mistake or maybe the next line of computation is very similar to the first. Pressing $\boxed{2\text{nd}}$ [ENTRY] will produce the last line that you entered and you can edit it as necessary.

Exact Mode – You can put the calculator into Exact mode in which all answers will be given as exact values. Press $\boxed{\text{MODE}}$ and scroll down to [Exact/Approx. . . .] and select [exact]. I'm not a big fan of the exact mode. It is sometimes nice to get $\sin(\pi / 4) = \sqrt{2} / 2$ but if you try $\sin(1.2)$ you get $\sin(12/10)$ as a result. If you are in exact mode and press $\boxed{\diamond}$ before $\boxed{\text{ENTER}}$ then the exact mode will be temporarily be turned off so $\sin(1.2)=0.932$. I personally think the exact(command (described below) works better for getting exact values.

exact(– The exact(command can be found in the catalog (or put into a custom menu). Entering any command inside of the exact command will give you an exact value regardless of what mode the calculator is in. For example $\text{exact}(24/32) = 3/4$.

Home – You can always get back to the home screen by pressing $\boxed{\text{HOME}}$.

Storing – To store a result after it has been entered press $\boxed{\text{STO} \triangleright}$ $\boxed{\text{ALPHA}}$ and enter the variable you wish to use. Variables can only be one letter.

(-) vs – – The $\boxed{(-)}$ button found at the bottom of the calculator is a negative sign, the $\boxed{-}$ above the $\boxed{+}$ button is a subtraction sign. While there isn't much difference in your Mathematics course, if you want to do a computation like $-2 - 5$ it must be entered $\boxed{(-)} \boxed{2} \boxed{-} \boxed{5}$

Errors – When the TI-89 gives an error, it lets you know what kind of error it found. This can be very helpful when things are not working right. The list of errors for the TI8-89 can be found in Appendix B of the guidebook and in the catalog listing for the TI-89 Titanium.