

MA16010 TI-30Xa Calculator Tips

Calculator Memory

Your calculator has 3 memories (**M1**, **M2**, and **M3**), each one can store one number.

- To store the displayed number in a memory, press the **STO** key, then either **1**, **2**, or **3**.
- To recall the value that is being stored in a memory, use the recall button **RCL**, then **1**, **2**, or **3** (you do not need to use the **=** key).
- Turning your calculator off and on does not erase the contents of the memories (except in some solar models). To clear the value being stored in a memory, press **0** **STO** followed by **1**, **2**, or **3**. When a value is being stored in memory 2, you will see **M2** in the upper left hand corner of the screen, if this memory is cleared, the **M2** will disappear.

Examples:

- ★ To store 4π in **M1**, use:
 4 **×** **π** **=** **STO** **1**; you will now have 12.56637061 stored in **M1**.
- ★ Then, to compute $(2.5^2 - 1)\sqrt{4\pi}$, you can use:
 2.5 **x²** **-** 1 **=** **×** **RCL** **1** **√x** **=** 18.61076543
- ★ To clear out the value being stored in **M1**, use 0 **STO** **1**.

Decimals, fractions, and mixed numbers

- To enter a fraction or a mixed number into the calculator, use the **a^{b/c}** key.
- To toggle between a mixed number and an improper fraction, use **2nd** **a^{b/c}** ^{d/c}.
- To toggle between a decimal and a fraction (or mixed number), use **2nd** **F[↔]D** **←**.
The calculator cannot convert every decimal to a fraction, and this only works if the denominator is less than 1000.

You do not need to use the **=** key after any of those operations.

Examples:

- ★ To compute $\frac{1}{5} + 2\frac{1}{3}$, you can use: 1 **a^{b/c}** 5 **+** 2 **a^{b/c}** 1 **a^{b/c}** 3 **=**
- ★ To convert the result $2\frac{8}{15}$ to an improper fraction, use **2nd** **a^{b/c}** ^{d/c}.
- ★ To convert the result $\frac{38}{15}$ to decimal, use **2nd** **F[↔]D** **←**. Using **2nd** **F[↔]D** **←** again will convert it back to a fraction.

Logarithms

- To find a natural logarithm (base e), use the **LN** key. No need to press **=**.
Likewise, for common logarithms (base 10), use **LOG**.
The calculator will display an error if you try an illegal operation, like $\ln(-2)$, or $\log 0$.
* To compute $\log 89 - \ln 7$ use: **89** **LOG** **-** **7** **LN** **=** 0.003479858

Exponentials, Powers and Roots

- To compute the exponential e^x , use **2nd** **LN**. You do not need to use **=**.
Likewise, to find powers of 10, use **2nd** **LOG**.
* To raise any base to a power, use the **y^x** key.
The calculator will display an error if you try an illegal operation, like $(-2)^{1/3}$, or 0^{-2} .
* To find any root of a number, use **2nd** **y^x**. You must enter the radicand first.

Note that some powers and roots have a dedicated key:

$$x^2: \mathbf{x^2}, \quad x^3: \mathbf{2nd} \mathbf{1}, \quad \sqrt{x}: \mathbf{\sqrt{x}}, \quad \sqrt[3]{x}: \mathbf{2nd} \mathbf{0}, \quad x^{-1}: \mathbf{1/x}$$

Examples:

- * To compute $e^7 - 10^{3.04}$ use: **7** **2nd** **LN** **-** **3.04** **2nd** **LOG** **=** 0.154962285
- * 2^8 is entered using: **2** **y^x** **8** **=** 256
- * $(-3)^5$ is entered as: **3** **+/-** **y^x** **5** **=** -243 or **(** **-** **3** **)** **y^x** **5** **=**
- * $\sqrt[4]{5}$ is computed using: **5** **2nd** **y^x** **4** **=** 1.495348781
or with powers: **5** **y^x** **(** **1** **÷** **4** **)** **=**, or even as: **5** **y^x** **4** **1/x** **=**

Other Hints

- You should only approximate when the directions in LonCapa say to do so. If the problem does not ask you to approximate, then you should enter the exact answer.
- When computing trigonometric function, most of the time you want your calculator set to radians. Press **DRG** until **RAD** appears on the screen. If you turn your calculator off and on, it will reset to **DEG**.
- The factorial function is on top of the **3**: **3**. To find $6!=720$, use: **6** **2nd** **3**.
- The **←** key allows you to delete the last number digit by digit, without having to reenter all of it again. For example, finding $249543540 \div 15577$ we made a mistake entering the second number: **249543540** **÷** **11577** **←** **←** **←** **←** **5577** **=** 16020.