The Basics

These are all the operations that can be accessed from the MATH button.
This is where you will ask the output to be a fraction or take a radical of something with an index other than 2 or 3.
NOTES

Helpful Little Time Savers

- 2^{nd} (-) : recalls the previous answer
- 2^{nd} ENTER: recalls the previous entry
- STO> : store a value as a variable
- EE: use this for scientific notation
- 2^{nd} +: access the memory of your calculator to clear lists and reset your settings.
- 2^{nd} 0: access the catalog of all operations the calculator can do.
- Use the X,T, θ, n button to input the variable x.
- If you get an answer that looks like this: 1.23E-10, then the answer is in scientific notation and should be written like this on your paper:

  $.000\ 000\ 000\ 123 \ \ or \ 1.23 \ x \ 10^{-10}$

Graphing

Notes:

_____

_____

_____

_____

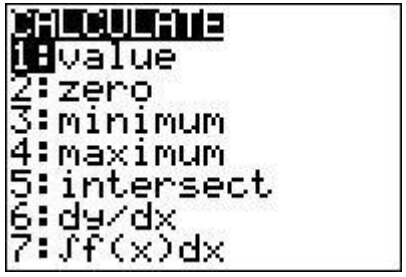
_____

_____

_____

ZBOX is great for creating a "box" around the important part of the graph.

ZSTANDARD returns the window to the standard window.



One of the most amazing inventions of modern man, the Calculate menu.

Value: find a specific y value associated with a specified x.

Zero: finds where the graph equals zero, x-intercepts.

Minimum: finds the smallest value over a chosen interval.

Maximum: find the largest value over a chosen interval.

Intersect: find where two graphs intersect.

dy/dx: finds the value of the tangent at a given x-value.

$\int \boldsymbol{f(x)dx}$**:** finds the value of a definite integral.

Table

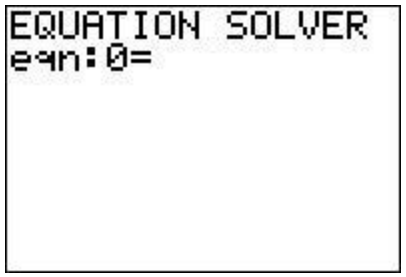
- Don’t underestimate the value of the table that is associated with your graph.
- It can help you find limits.
- It can help you find a specific term in a sequence.

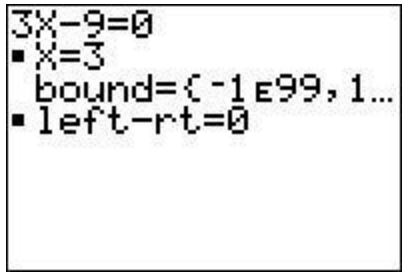
Choose where you want the table to start with TblStart.
Set the change of increments with ΔTbl

Notes

Helpful Solving Tools

- Solver…
- This is found by pressing the MATH button and arrowing up once.
- This is great for solving equations you don't have the algebra skills to solve. It must be set equal to zero.
- Enter in the equation and press ENTER.
- Cursor needs to be on the X= and press ALPHA ENTER

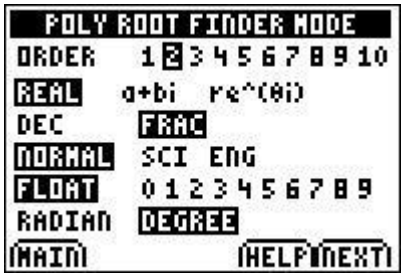




PolySmlt 2: One of the most amazing APPS ever.

- This will solve two types of problems.
- Higher order polynomials
- Simultaneous Linear Equations.
- Press APPS and then use ALPHA 8 to get to the P's quickly. Choose PolySmlt.

- Poly Root Finder solves polynomials. Use this instead of Solver… because of the possibility of more than one answer.



Notes:

_____

_____

_____

PolySmlt 2 s’more

- Simultaneous Equations can be solved using choice 2 in the menu.
- Make sure that your equations have the variables in the same order.
- This only works for linear equations, nothing with an exponent greater than 1.

Notes:

_____

_____

_____

_____

_____

_____

_____

Finance

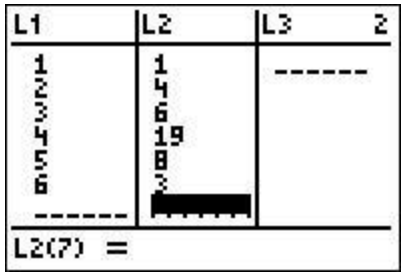
- This is found in APPS.
- It will calculate missing information involved in a compound interest or depreciation problem.
  - Use TVM Solver

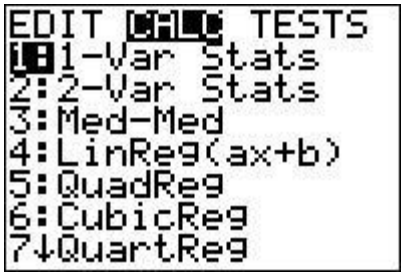
After you have entered in the known information then position the cursor over what you are trying to solve for and press ALPHA ENTER.

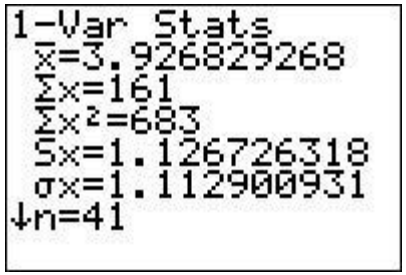
Notes:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Statistics







The STAT button is an excellent way to generate statistical information about a set of data.

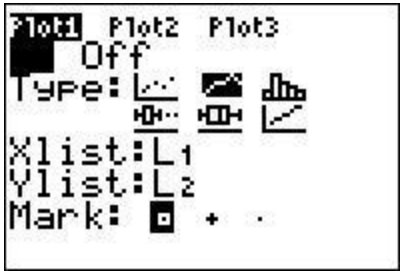
You first need to enter data into the lists using the EDIT menu. L_1 is for the actual data values. L_2 is utilized if the data is grouped. It contains the frequency of each data value.
**If I don't group the data, then L_2 is unnecessary.

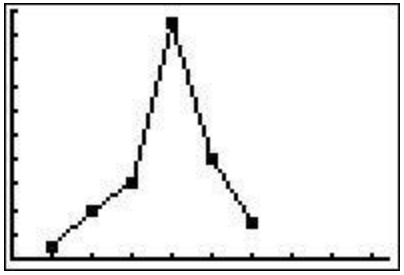
When you finish entering in your data remember to return to the Home Screen. You can accidentally do the math in your lists otherwise. Notice that I chose 1-VAR Stats and then listed L_1 and L_2. I had to do this because the data is grouped and I need to let the GDC know to work with both lists.

Notes

_____
_____
_____
_____
_____
_____
_____
_____

Statistical Plots





Press 2nd Y= and you will get into the Statistical Plots. You have to it on in order for it to show on the graph.

Remember to turn it off when you want to return to the normal graph mode.

How to turn it off: 1. go back to 2nd Y= and select off
2. go to Y= and arrow up to highlighted Plot and press enter. This should remove the highlight it and turn it off.

Notes:

_____

_____

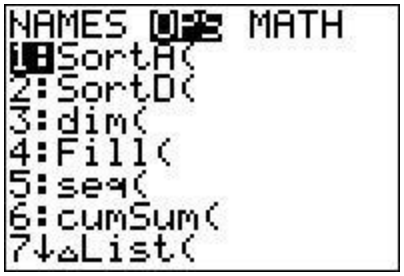
_____

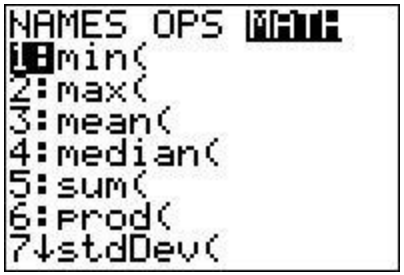
_____

_____

_____

_____





Lists: 2nd STAT

- This is a handy menu to know about. Once you have data entered into a list you can do many operations with it.

Notes:

_____

_____

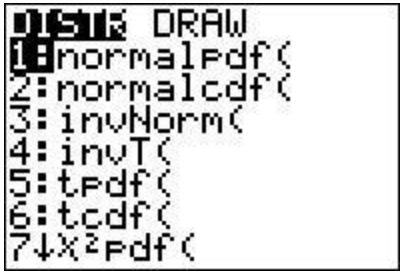
_____

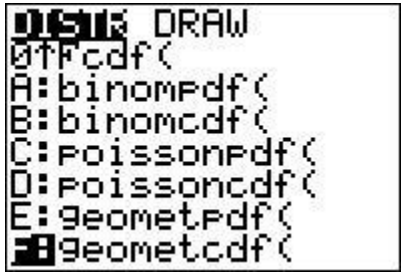
_____

_____

Distribution: 2nd VARS

- This will find binomial pdf and cdf or normal pdf and cdf or even Poisson pdf and cdf.





Notes: