Did You Know Your TI-84 Plus Could Do This?

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T^3 Webinar
https://education.ti.com/en/us/professional-development/webinars/upcoming#ondemand/technology/all
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Reminders from the Webinar!

Graph-Table mode setting – the power of analytic, numeric and graph!

1) Setting Graph-Table mode

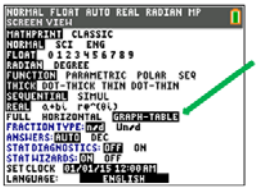
2) [2nd] Format: Set GridLine, colors, and even Background Image (5 Image Vars are pre-loaded).

3) Zoom: ZoomDec was used. Each Zoom is an automatic setting for Window.

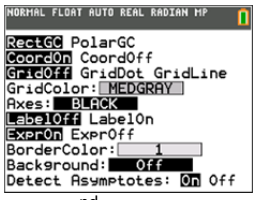
4) Trace in Graph – same as Full screen graph.

5) Smart Trace – While tracing, enter a value to jump to that point!

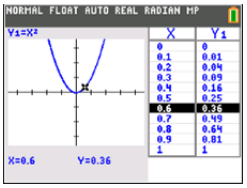
6) Trace in Table – [2nd] [table] changes focus to the right hand of the screen. Use up and down arrows to trace the Table values on the Graph!



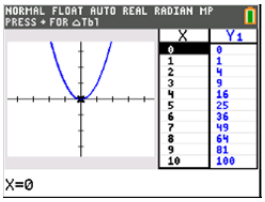
[mode]



[2nd] Format



[graph] gives graph focus



[2nd][table] gives table tracing

Reminders from the Webinar!

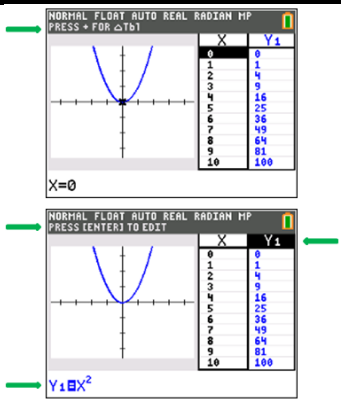
Graph-Table continued:

7) Edit deltaTable in view – look at Context Help!

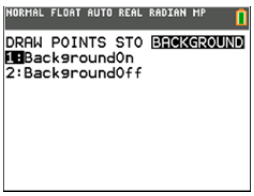
8) Edit function from Table in view – look at Context Help!

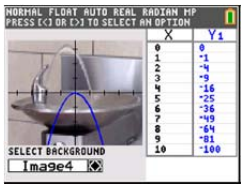
9) (Not shown in Webinar)
   - BackgroundOn from Graph screen
   - From [graph],press [2nd] [draw] BACKGROUND menu to find interactive graphing BackgroundOn!
   - Use arrows to find your Image Var and press [enter] to select as the background image! Drinking fountain is a pre-loaded Image Var.

Also See:
- QuickPlot&FitEq Activity posted with the Webinar materials. "At the Drinking Fountain" student and teacher notes.
- "Building a Garden Fence" in 84 Central
  https://education.ti.com/en/84activitycentral/us/detail?id=52C3DDA4B45547EF86EAA58B58201E62&t=B850B03EE2054CE4A4B55CCD8CEA51E6



Edit deltaTbl and the function – look at the Context Help line for reminders!





Reminders from the Webinar!

Interactive Draw – selected features

This rich menu extends the drawing on the graph screen. These feature draw over the graphs and are cleared using the ClrDraw command.

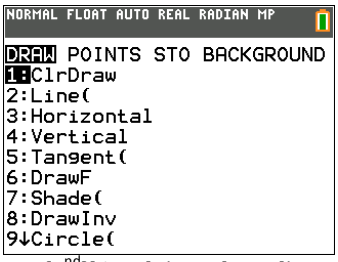
Try these features…and more! (Change color in STYLE.)

- Horizontal and Vertical lines
- Tangent(*(Result given on graph border.)*

Steps:

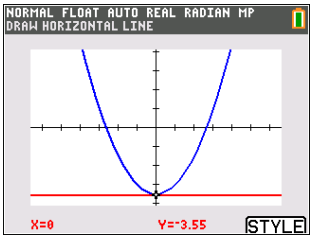
- Press [graph] to be on the graph screen.
  - *For Tangent(, have a function loaded in [Y=].*
- Press [2nd][draw] to access the interactive feature.
  - *If not on graph, the TI-Basic programming commands will paste.*
- Press STYLE to change color and line style.
- Use arrows and [enter] to "set" the draw feature.
- Use ClrDraw to "erase" these draw features.

Draw Menu Features

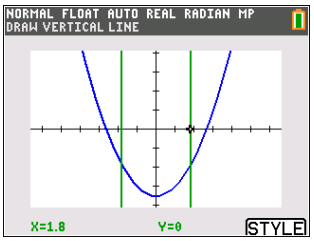


[2nd][draw] (over [prgm])

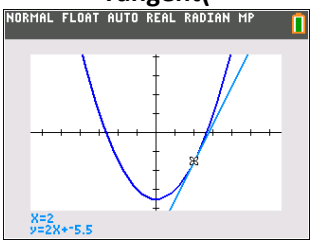
Horizontal



Vertical



Tangent(



Reminders from the Webinar!

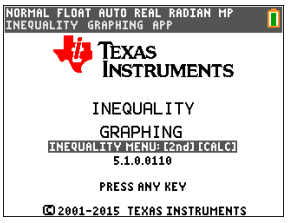
Inequality Graphing App

Inequality Graphing CE App for the TI-84 Plus CE is pre-loaded and contains the same features as on the TI-8x Family with ease of use features.

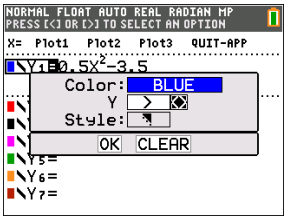
Where to find familiar features. (Read the second context help line up in the status bar for help or information.)

- [Y=]
  - Use left arrow to move cursor over the color/line style area, press [enter] and use the dialog box which now includes relation settings.
  - X= editor – highlight X= (top line) and [enter]
  - QUIT-APP – highlight this to quit the App.

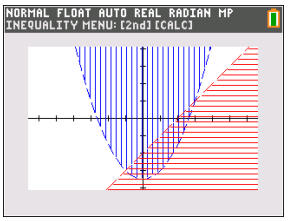
- [graph]
  - Find all Inequality Graphing features as on TI-8x Family, now located in [2nd] [calc] INEQUALITY menu.



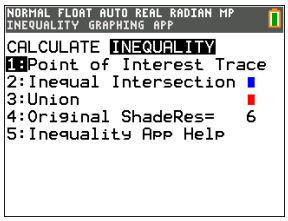
Splash screen with reminder of [2nd][CALC] INEQUALITY menu



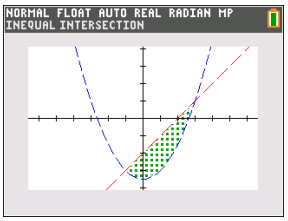
[Y=] [<] [enter] to set color/line/relation



Read second line in status bar for reminders & help.



Inequality features in [2nd][CALC][>] INEQUALITY menu



Example of menu item 2:Inequal Intersection

Reminders from the Webinar!

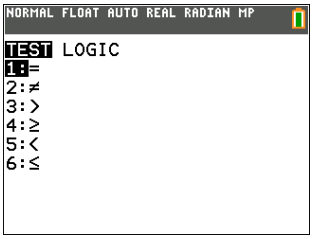
Using Boolean Logic with the TI-84 Family

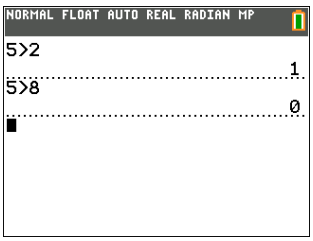
1) Teachers can introduce Boolean Logic by asking students to type the statements “5 > 2” and “5 > 8” on their calculator and analyze the result.

   True Statement – Result is “1”
   False Statement – Result is “0”

   Note: The test relations are found in the TEST menu ([2nd][test]).

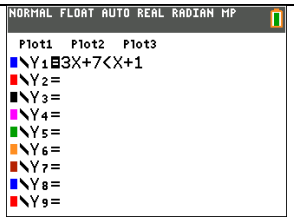
   Example: To enter 5>2, press



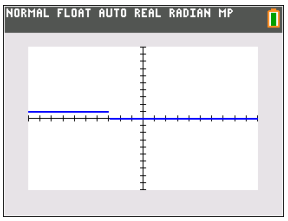


2) Simulate the solution to a one-variable inequality on a number line

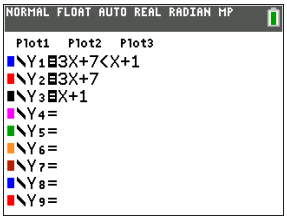
   Press [Y=] and enter the one-variable inequality as the expression for Y1.
   When the expression is true, the output will be “1”, but when the expression is false, the output will be “0”, so the result appears to be a graph of a number line.
   For example, see screens for solving 3x + 7 < x + 1.

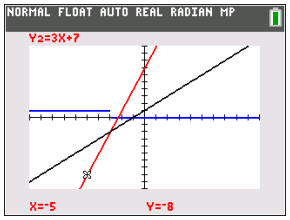


Y1 graphs 0 or 1 depending on the test result.



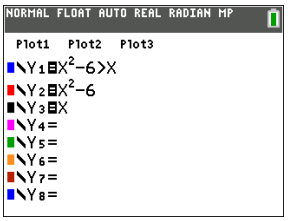
3) Students can then graph y = 3x + 7 and y = x + 1 on the same screen and discuss the relationships between the graphs.

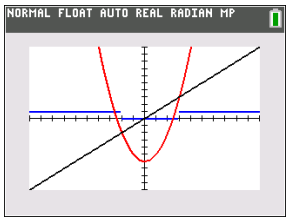




Reminders from the Webinar!

4) Similarly, solving quadratic inequalities can be introduced using the Boolean feature as well. How does the graph of x2 – 6 > x relate to the graphs of y = x2 - 6 and y = x?



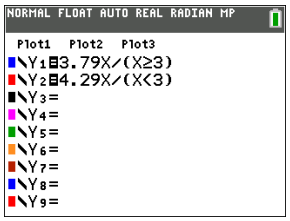


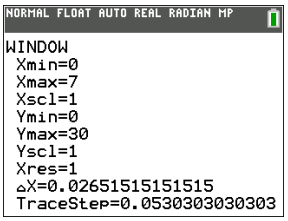
Using Boolean Logic to Graph Piecewise Functions

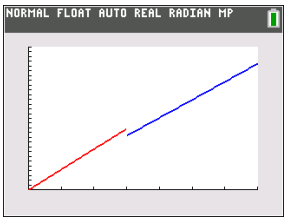
1) Consider the following problem, "This week, I could buy ground chuck at one store for $4.29 per pound or go to another store that had ground chuck for $3.79 per pound sold in packages of 3 pounds or more." This function can be modeled by typing the 2 expressions in the calculator as shown.

   When x ≥ 3, Y1 is true, so the calculator will divide the expression 3.79x by 1 and graph that function.

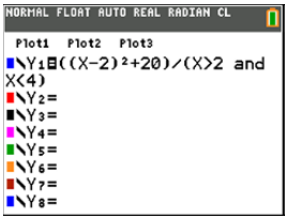
   But when x < 3, Y1 is not true and the calculator will attempt to divide the expression 3.79x by 0, but since division by 0 is impossible, the calculator won't graph anything.

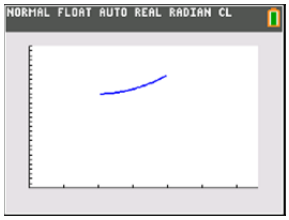


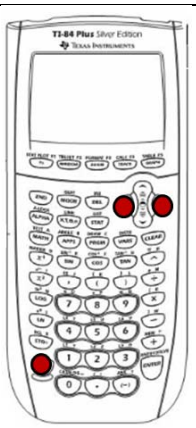




2) Using LOGIC:
   The and/or commands ([2nd] [math] LOGIC menu) can be used to graph other pieces of functions like y = (x-2)2 + 20 for 2 < x < 4.





Reminders from the Webinar!	
Using the TI-84 Plus Family for Testing Using the TI-84+ Family for Testing If students have their own calculators, teachers might want to disable some features of the calculators for testing situations. Instead of resetting the calculators, (which wipes out all the memory), calculators with operating systems 2.40 or higher can be put in "Press-to-Test Mode", which will disable the program menu, the APPS menu, and picture and image files and can also limit access to other features as desired.	
1) Begin with the graphing calculator powered OFF. 2) Holding down both the LEFT and RIGHT arrow keys, press ON. (Note that you are pressing all three keys simultaneously. If this doesn't work the first time, try again.) 3) Release all 3 keys and the calculator will start with the RESET OPTIONS screen. 4) Select the options you want for the calculator. The radian/degree option can be changed, as can the diagnostics on/off option, however the other choices (log base shortcut and summation feature) cannot be changed once the calculator is in Press-to-Test mode. 5) Once your selections have been completed, press the ZOOM button located just below the word "OK" on the screen. 6) The RESET COMPLETE screen will appear confirming your choices. The degree/radian option is still available. Press any key to continue. 7) If you try to access programs or apps, a disable message will appear as shown on the screens.	  
8) In order to get the calculator out of Press-to-Test Mode, physically link it (using a connection cable) with any other calculator and send anything from one calculator to the other. (I suggest students send the variable "x" since it changes often anyway.) For more detailed instructions about using the "Press-to-Test Mode", follow this link: https://education.ti.com/sites/US/downloads/pdf/press_to_test_ti84p.pdf	