The Top Ten+ Overlooked Features for the TI-84 Plus Family

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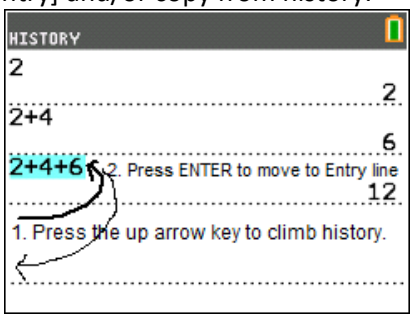
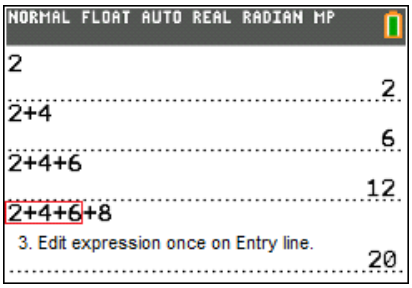
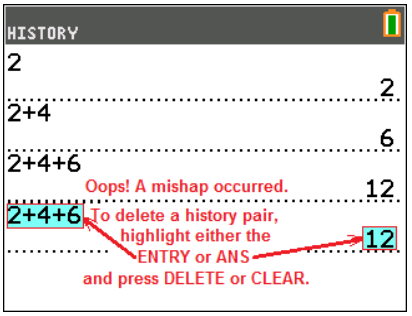
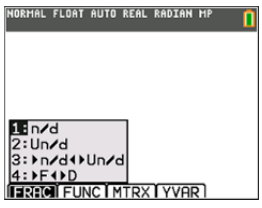
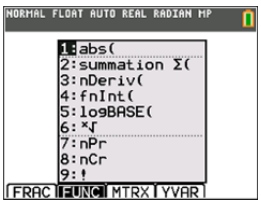
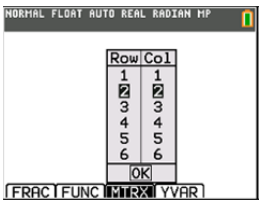
Grand Ballroom Salon 3

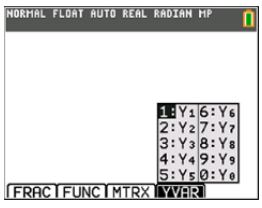
Tips	Example
Useful editing keys: 1) [2nd] [entry] (above the [enter] key). • Pastes previous entry – step back through entries • Overwrites entire line 2) Copy/Paste from History • Freely paste at cursor location in a new line • Note: List and Matrix answers will not paste from history. • See the activity *Patterns with Rectangular Numbers from Multiple Perspectives*	Pattern Generation on the Home Screen Sum Even Whole Numbers Walk through the sum of even numbers using [2nd][entry] and/or copy from history.  
3) Delete a History pair • Arrow to any entry or answer in a history pair. Press [del] or [clear] to delete the history pair.	

MathPrint Templates
Use [alpha] [F1] – [F4] for MathPrint Templates

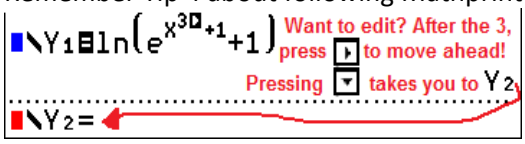
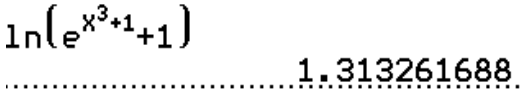
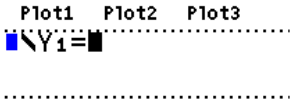
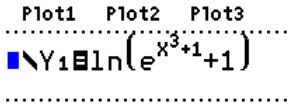
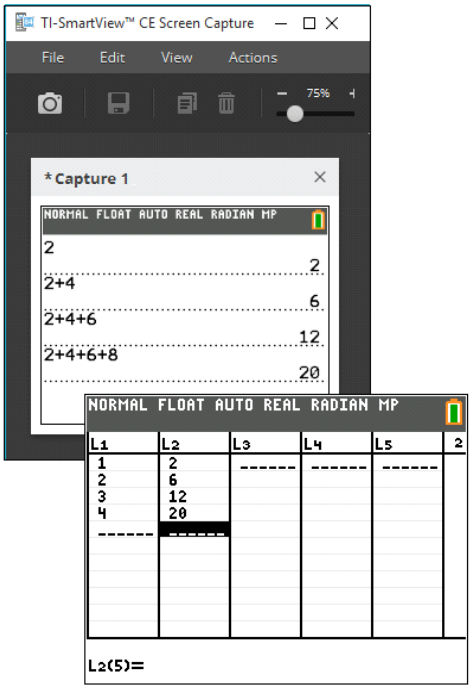
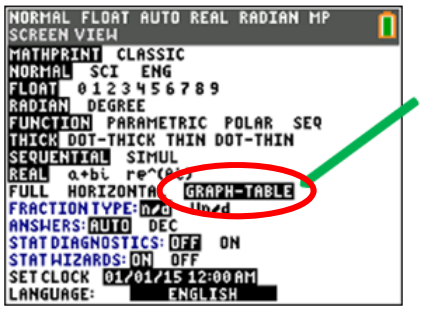


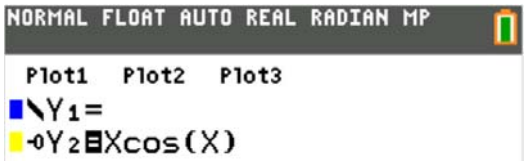
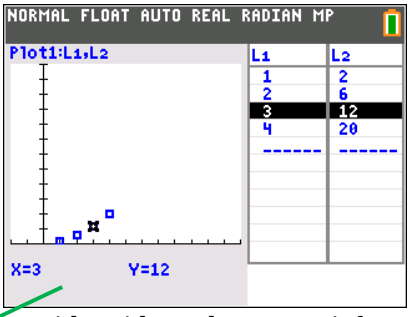
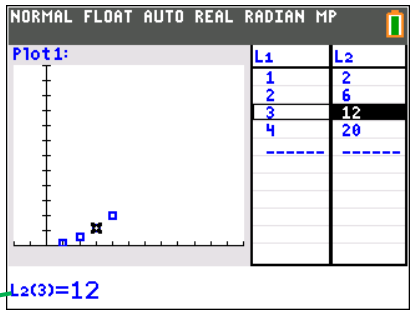
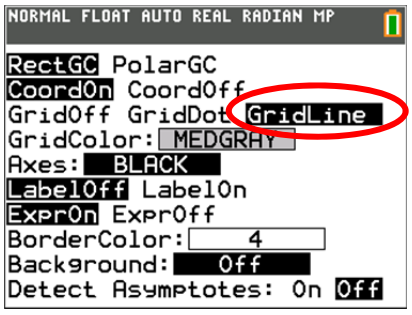


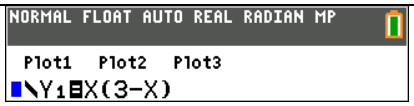
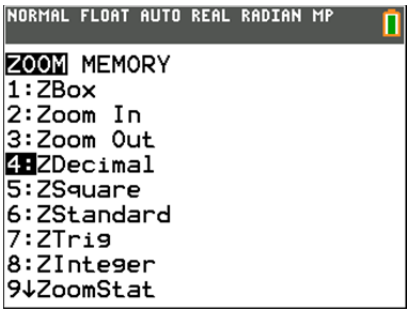
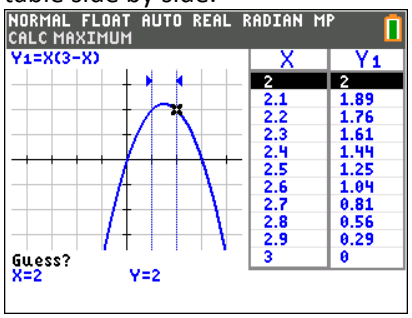
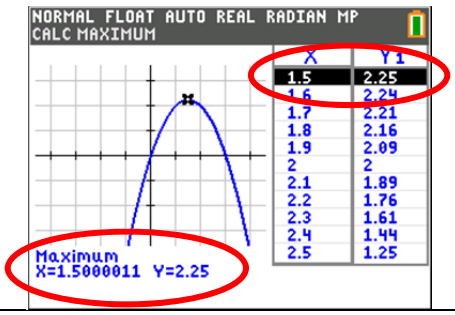
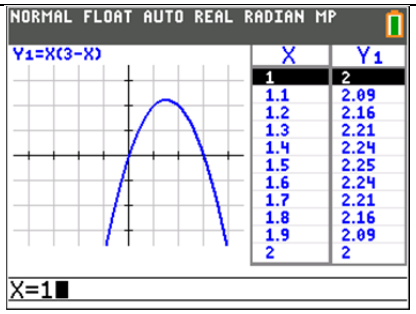


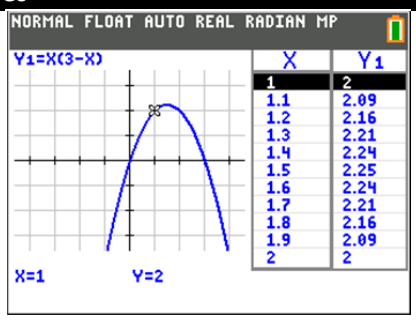
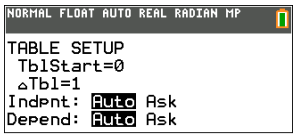
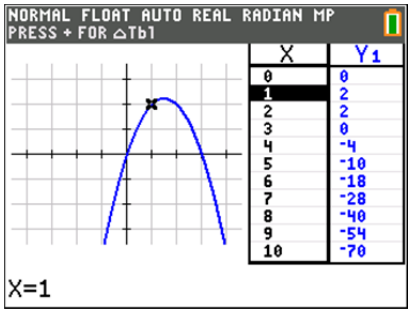
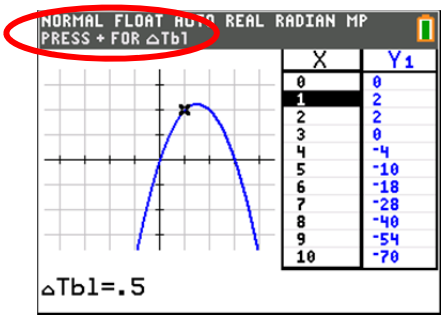
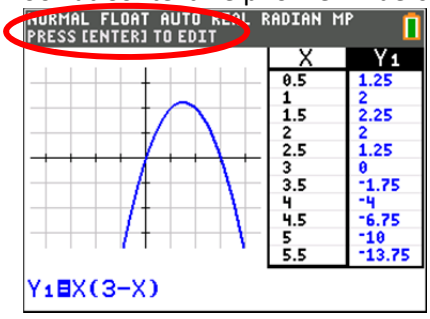


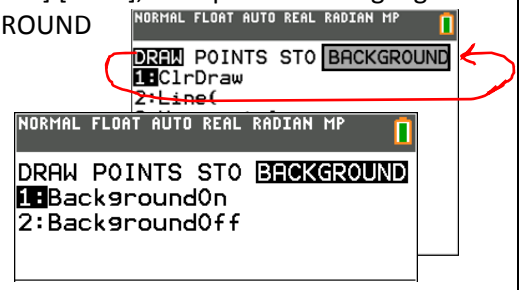
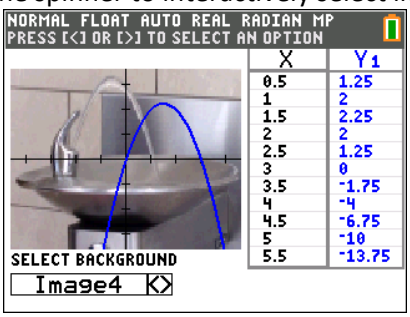
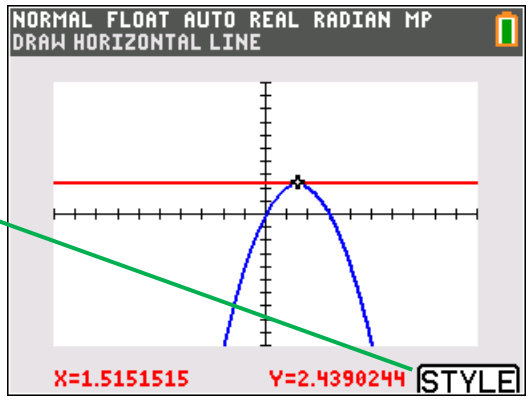
Tips	Examples
4) MathPrint Cursor "GPS" • Arrows appear in a template to steer you. Follow them. • Automatic Alpha cursor appears where relevant.	Alpha cursor – watch for automatic Alpha! $\sum_{\square=\square}^{\square}(\square)$ MathPrint Arrow Cursor – arrow right! $\sum_{J=1}^{10\square}(\square)$ $\sum_{J=1}^{10}(2J\square)$ Additional examples: $0\rightarrow X$ 0 $e^{X^3+1}+1$ 3.718281828 1) To enter $e^{X^3+1}+1$ on the home screen, once you have typed $e^{X\square}$, press ▶. (If you press ▲, you go to history. A press of the ▼ key after $e^{X^{3\square}}$ or $e^{X^3+1\square}$ on the home screen will have no effect.) 2) In Y=, to enter $Y_1=\ln(e^{X^3+1}+1)$, once you have typed $\ln(e^{X^{3\square}}$, press ▶. (If you press ▼, you go to Y2) $Y_1=\ln(e^{X^{3\square}}$ Press ▶ to move ahead! If you press ▼ you go $Y_2=$
5) Jump Cursor Start to End of an Expression Use [2nd] ▶ and [2nd] ◀ to move the cursor to the start or end of an expression. • Overstrike cursor: $\blacksquare^{X^3+1}+1$ o Any existing character is overwritten. • Insert cursor: $\underline{e}^{X^3+1}+1$ o A character is inserted *in front* of the cursor location.	From Tip 4 above: Cursor at the end of the expression on home screen: $e^{X^3+1}+1\blacksquare$ [2nd] ◀ moves "overstrike" cursor to start $e^{X^3+1}+1$ (Cursor is still on *e*) Press [2nd] [ins] to change to "insert" cursor $\underline{e}^{X^3+1}+1$ Press ln to insert the natural logarithm $\ln(e^{X^3+1}+1$ Press [2nd] ▶ to jump to the end; press) $\ln(e^{X^3+1}+1)\blacksquare$ Press [enter] to evaluate!

Tips	Examples
6) Paste a home screen expression to Y=. After the evaluation of an expression on the home screen, the input expression is stored in [2nd] [entry] (above the [enter] key). [2nd] [entry] is a way to have a "copy" and "paste" feature. <u>Reminder note</u>: Remember Tip 4 about following Mathprint GPS. 	Once the following has been entered on the home screen (from Tip 5 above)  then press [y=] and put the cursor on the Y-Var to "paste."  Press [2nd] [entry] to paste to the function Y-Var. 
7) Screen capture on TI-SmartView™ CE • Screen capture facilitates multiple perspectives (in addition to TI-Smartview View[3]) Note: Also use "Drag and Drop" of a screen from the emulator, Large Screen or View[3] to your own document as you teach!	
8) Graph-Table Mode • Press [2nd] [table] to edit the data while with side by side "live" graphing. **Graph-Table mode setting – the power of analytic, numeric and graph!**	

Tips	Examples
9) Manage the Y= editor • [clear] [clear] – clear expression and reset the color and line style to default for one function • Highlight Plot1 through Plot3 to turn on or off. • Function # on or off? From the Home Screen ([2nd][quit]): o [catalog] [F] ([alpha] is on in catalog) ▪ FnOff # ▪ FnOn # Note: On the TI-84CE or TI-84C, if you see **QUIT-APP** along the Plot1 Plot2 Plot3 line in Y=, either Inequality Graphing or Transformation Graphing App is running. Select **QUIT-APP** to turn off either of these Apps.	  [clear][clear]
10) Plot Trace and Table Trace in G-T • Press [trace] or [graph] to get to the Left Pane o When you press [trace] followed by the ▶ and ◀ key, you will trace the plot as the corresponding ordered pair is highlighted in the *table*. o The left pane has same functionality as Full screen graphing. If more than one plot or function is on, use the ▼ and ▲ keys to move between plots or graphs. o When active, notice the right pane is gray and the lower border on the left pane is shaded. • Press [2nd] [table] to get to the Right Pane o When you press [2nd] [table] followed by the ▼ and ▲ keys, the corresponding point is highlighted on the *plot.* o Use the ▶ and ◀ keys to move left or right in the table. o When active, notice the right pane has a dark black border and the full value of the list element is on the lower entry line.	 [graph] and [trace] give graph focus  [2nd] [table] gives table tracing
11) [2nd] [format]: • Set GridLine • Set colors, and even Background Image (five Image Vars are pre-loaded) • You can turn Detect Asymptotes Off for faster graphing.	 [2nd] [format]

Tips	Examples
12) Manage the List Editor with SetUpEditor • `SetUpEditor` returns list editor to L1, L2, L3, L4, L5, L6 • `SetUpEditor L1,L3,L2` would place only these three lists in the list editor (and in this order). You can also use named lists selected from [2nd] [list].	
13) Preset Zoom windows **ZDecimal** sets a fixed window for "friendly" tracing. • The ZDecimal window is centered at the origin. For each press of ▶ and ◀ there is a change in x of 0.1 when tracing a graph. o Helpful for graphing a function which has a hole-in-the-graph at an integer value. • Values of Xmin and Xmax will depend on the pixel resolution for each calculator model in the TI-84 Plus Family.	 
14) Smart Trace – While tracing, enter a value to jump to that point! • Similarly for Intersection, Minimum, and Maximum. • In G-T view, the *approximation* from the Maximum routine can be compared to the *analytical value* used by the formula in the table side by side.  	 Press [trace], then type a value

Tips	Examples
15) Function Trace and Table Trace in G-T • Press [trace] for Function Trace o Use the ▶ and ◀ keys to move across the graph and up or down the table. o If multiple graphs are displayed, use the ▼ and ▲ keys to move between graphs. o increment in table is determined from viewing window, i.e. for ZDEC it is 0.1. • Press [2nd] [table] for table tracing o Use the ▼ and ▲ keys to move up or down the table o Use the ▶ and ◀ keys to move left or right in the table. o increment in table is determined from ΔTbl defined in [2nd] [tblset].	 [graph] and [trace] gives graph focus Scroll the table using the ▶ and ◀ keys   [2nd] [table] gives table tracing. Scroll the table using the ▼ and ▲ keys.
16) Edit ΔTbl to view - look at Context Help! 17) Edit function from Table in view - look at Context Help!	 Edit ΔTbl by pressing [+] Look at Context Help for reminders!  Edit the function by highlighting Y1.

Tips	Examples
18) BackgroundOn from Graph screen • From [graph], press [2nd] [draw] BACKGROUND menu to find interactive graphing BackgroundOn! (The [draw] key is above the [prgm] key) • Use arrows to find your Image Var and press [enter] to select as the background image! 19) QuickPlot&FitEq on the TI84C and TI84CE • See the QuickPlot&FitEq Activity *At the Drinking Fountain* student and teacher notes.	Press [graph] to first start from Graph Screen. Press [2nd] [draw], then press ◄ to highlight BACKGROUND  Press [1] or [enter] to turn Background On. Use the spinner to interactively select image. 
20) Interactive Draw menu From the graph screen, press [2nd] [draw] (The [draw] key is above the [prgm] key). • Select, for example, Horizontal. Use [F5] menu STYLE to select the color. Use the arrow keys to move the line to a location. Press [enter] to set the line. Use arrow keys to move create other horizontal lines if needed. Note: Commands from the Draw menu can be used from a program or the home screen but you will need to fill in the syntax. • Highlight the command and press [+] to use Catalog Help for syntax on most commands. • Find the COLORS menu in [vars].	

Related Resources

- See users.ipfw.edu/lamaster/technology/ for digital copies of handouts provided in this session.
- See education.ti.com/en/us/pd/online-learning to watch upcoming and on-demand Webinars. You can also download associated documents. Additional tips not shown in this session appear in each!
  - *The Top Ten Overlooked TI-84 Plus Features* - Margo Mankus & John LaMaster
  - *The Best of TI-SmartView CE* - Margo Mankus
  - *TI-84 Tips & Tricks for Working with Graphs* - Karen Campe & Ruth Casey
  - *TI-84 Tips & Tricks for Working with Expressions & Equations* - John LaMaster & Stuart Moskowitz