

"HOW-TO" WITH YOUR TI-84 CE GRAPHING CALCULATOR

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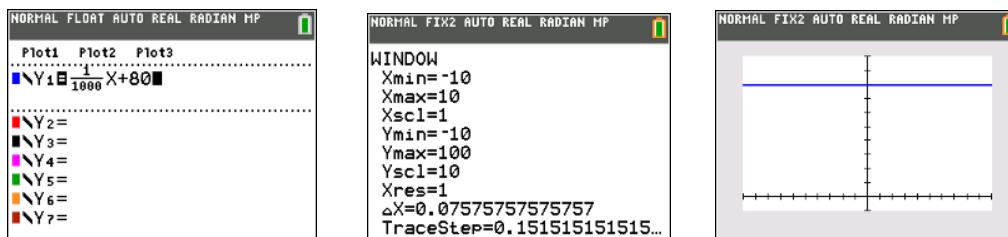
Graphing Features

Polar Graphs in Elem Geometry

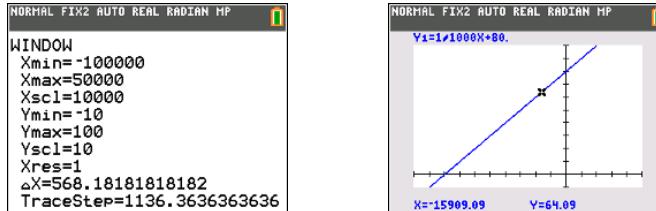
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- 1 Sketch a complete Graph of $y = \frac{1}{1000}x + 80$ (one that displays both axis intercepts)

Using a grapher successfully requires an understanding of the mathematics. Displaying a complete graph of this function requires an understanding of the behavior of linear functions and their equations. No graph appears in the default window, but does appear when Ymax is increased. However, if only Ymax is changed, then it appears as a horizontal line. Use algebra, logic, and/or guess n check to find the x-intercept.



note Xscl=1 and Yscl=10



- 2 Using the equation in #1 (above), use trace to capture 2 random points and calculate slope without having to retype the coordinates.

The most recent TRACE coordinates are automatically saved by the TI-84; it's easy to transfer values needed in computations from the GRAPH screen to the HOME screen.

While in Trace mode, highlight a desired point, then press 2^{nd} [QUIT] to return to the home screen. Store the X and Y coordinates as A and B. Return to the GRAPH screen and move the Trace cursor to a second point and store these coordinates as C and D. Calculate the slope of the line through these two points by typing $\frac{D-B}{C-A}$, then pressing [ENTER]

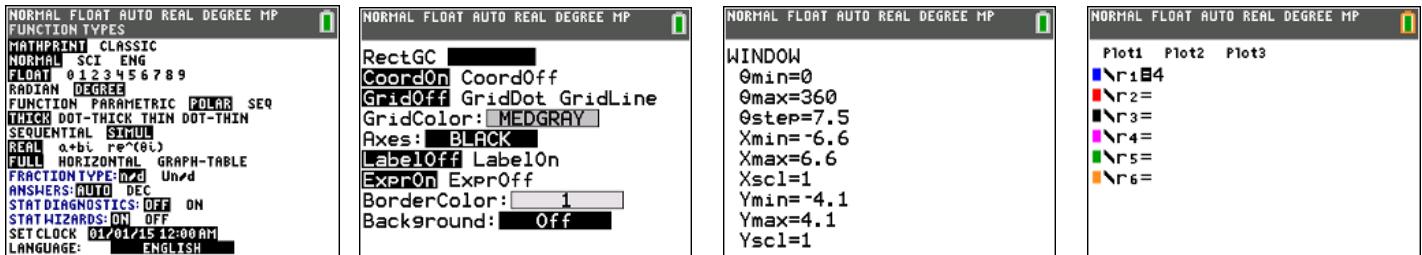


3 Find the zeros of $y = (x - 3)^2$.

(The calculator has limitations. You must be smarter than your calculator!!)



4 In Polar MODE, turn circles into polygons by manipulating θ -step (in the WINDOW menu). Select Polar Graphing and Degrees in the MODE menu. Select Polar coordinates in the FORMAT menu. Graph in the Zoom Standard Window. Then choose Zoom Decimal.



Explore!! Can you make a hexagon? A star? Other polygons and star polygons?

