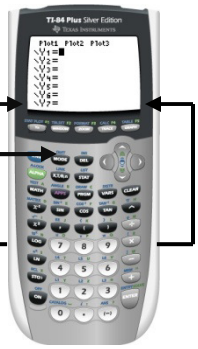
Graphing with a TI-83 or TI-84

How To:

1. Press the 'y =' key.
2. Type in the equation you would like to graph.
3. Remember to use the $'X,T,\theta,n'$ key for 'x'.
4. Press the 'graph' key.



Getting to Know Your Window:

Xmin: The smallest x-value displayed (how far left the graph will show)
Xmax: The largest x-value displayed (how far right the graph will show)
Xscl: How often to show a tick mark on the x-axis
Ymin: The smallest y-value displayed (how far down the graph will show)
Ymax: The largest y-value displayed (how far up the graph will show)
Yscl: How often to show a tick mark on the y-axis

The numbers entered on this window screen tell the calculator exactly which part of the graph to show on the screen.

WARNING – Trig Functions: Always check your 'MODE' when graphing trigonometric functions so that you know if you are graphing them in radians or in degrees.

WARNING – Fractions: Consider putting parenthesis around the top and bottom of fractions.

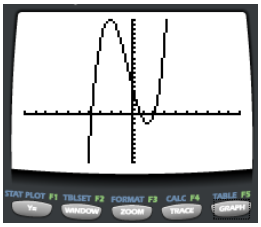
HELP – Return to Normal: Press the 'ZOOM' button & choose 'ZStandard' to see the basic window.

Example: Graph $x^3 + x^2 - 9x + 6$

* Note: Ymin=20 in this picture. You may have a slightly different #.

Solution:

1. Press 'y =' key
2. Type Equation in Y_1
3. Press 'GRAPH' key
4. Use ZStandard or change window



Time to practice… Graph the following on your calculator (try to find a good window)

1. $y = 6\sin(x+3)e^{(0.1x)}$
2. $y = \frac{ln(x+6)}{x^2+5}$
3. $y = \frac{x^2-x-6}{x^2+7x+10}$

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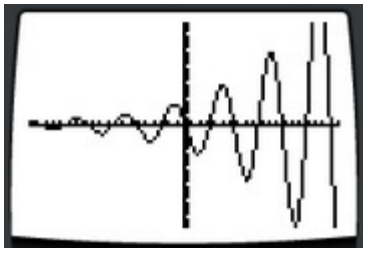
ANSWER KEY

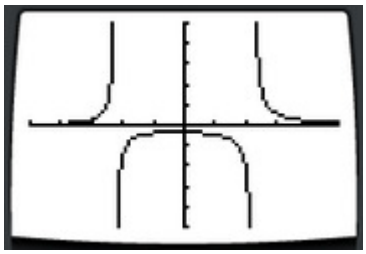
Reminder: The graphs shown below are not the only correct solution. The 'WINDOW' dimensions for each are included. You may have used a slightly different window, which in turn may cause your graph to look slightly different.

1. -



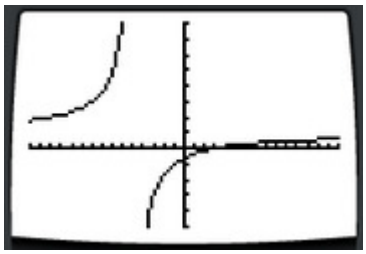
*Note: It is important to note that this graph has a repeating pattern that approaches the x-axis on the left and continues to grow on the right.

2. -



* Note: Be sure to know that this graph approaches the x-axis on the far right AND on the far left. It then is said to have a horizontal asymptote at y = 0.

3. -



* Note: Trick Problem!. The calculator cannot show that there is a hole when x= -2. You should know this & that there is a horizontal asymptote at y = 1