TI-83/84 Graphing Calculator

I.   Graphing
        Press Y= to get to the equation screen. Type the desired function(s) in any location (Y_1 is the most common). Press **GRAPH**. This will graph most functions. Occasionally, it will be necessary to resize the graphing window to show the function. This can be done manually or automatically.

        Manually. Press **WINDOW**. Type the smallest x-value for your window in **Xmin**. Enter the largest x-value for your window in **Xmax**. **Xscl** is used to indicate how often you want a tic mark along the x-axis. **Ymin** is the smallest y-value for your window. **Ymax** is the largest y-value for your window. **Yscl** is used to indicate how often you want a tic mark along the y-axis.

        Automatically. Press **ZOOM**. The following explains each ZOOM feature.

1: ZBOX	Allows the user to set a window of any desired size that is smaller than the current window. After pressing **ZBOX**, use the directional arrows to move the cursor to a corner of your new widow. Press **ENTER** to anchor that corner. Use directional arrows to expand the rectangle to the other corner of a diagonal. Press **ENTER** again. The rectangle will be resized to fill the entire screen.
2: Zoom In	This causes the widow to zoom in by a fixed factor in both the x and y directions. The default factor is 4. Each time you press **ENTER** while in this mode, the screen will zoom in by the current factor. After pressing **Zoom In**, use directional arrows to move the cursor to the center of the desired screen. Press **ENTER**. The screen will zoom in by the specified factor. You may move the cursor and press **ENTER** as many times as you want to zoom in as close as your want. It is possible to change the default value.
3: Zoom Out	This causes the window to zoom out by a fixed factor in both the x and y directions. The default factor is 4. Each time you press **ENTER** while in this mode, the screen will zoom out by the current factor. After pressing **Zoom In**, use directional arrows to move the cursor to the center of the desired screen. Press **ENTER**. The screen will zoom out by the specified factor. You may move the cursor and press **ENTER** as many times as you want to zoom out as far as your want. It is possible to change the default value.
4: ZDecimal	This resizes the window so that each horizontal pixel represents a change of 0.1 in the x-coordinate. This gives a convenient window when using the **TRACE** button. The domain is from -4.7 to 4.7. The range is from -3.1 to 3.1.
5: ZSquare	This resizes the window so that each pixel represents the same number in both the x- and y- directions. The domain defaults to -15 to 15. The range goes from -10 to 10. This window is useful in seeing the true aspect ratio of the graph.

6: ZStandard	Defaults the domain from -10 to 10 and the range from -10 to 10. This window is usually large enough to show a representative portion of the graph. However, the graph will be distorted because the x and y units are not equal.
7: ZTrig	In **Radian** mode the domain is -2π to 2π. In **Degree** mode the domain is -360° to 360°. In both cases the range is -4 to 4.
8: ZIntegrer	This mode is similar to **ZDecimal** except that each pixel represents one unit along the horizontal and vertical axes. The default domain is -47 to 47 and -31 to 31 for the range. This window is useful when looking at a large scale view of the graph.
9: ZoomStat	Automatically sizes the window to show all data points in an active plot as shown in **STATPLOT**.
0: ZoomFit	Automatically adjusts the range so the function enters the window at a corner on the left side. If the function is odd, the range is adjusted so the function leaves the window at the other corner of the diagonal. If the function is even, the range is adjusted to cover the extreme y-value in the other direction of the entry point.

A common error message when graphing is **ERR: DIM MISMATCH**. This usually occurs when the **StatPlot** window is on and the referenced lists do not contain the same number of elements. To correct this error, press **2nd Y= [STAT PLOT]**. Press **4: PlotsOff**. This transfers the command to the home screen. Press **ENTER** and the command will be executed. The command should be used whenever you wish to graph an equation without plotting any data points.