DOWNLOADING AND USING DPGRAPH

I. DOWNLOADING DPGRAPH FROM THE WEB

1. Go to www.dpgraph.com.

2. Click on "List of Site Licensees" then "C" for Cuesta and follow directions for the download and installation of DPGraph. (Cuesta has a site license for use of this program.)

II. USING DPGRAPH

It's easiest to edit an existing graph file rather than to create a new graph file from scratch.

To create a graph of a single equation, you can use the simplest file under cones. Click "CONES" then click the last file, i.e., "cone, x^2+y^2=z^2.dpg". Be sure to use the asterisks for multiplying and the carrot ^ symbol for exponents when typing in your equation. The "HELP" file will give you a list of all of the available "canned" functions. Once you've typed in the equation, click "EXECUTE". If the screen is blank, check the error message at the bottom of the screen. If it says "syntax error" then you probably typed in your equation incorrectly. Go back to "EDIT" and look for the error.

To rotate your graph, use the arrow keys.

To increase or decrease the size of the display, use the "Page Up" and "Page Down" keys, respectively.

To get a contour diagram, click "EDIT" then

a. find the graph3d.perspective line and change it to "graph3d.perspective := false"
b. find the graph3d.view line and change it to "graph3d.view := top
(This is faster and more accurate than trying to rotate the box.)
c. If your contour diagram has too many contours, then decrease the resolution. Find the graph3d.resolution line and change it to "graph3d.resolution := 13 (for instance) instead of 21. This also makes the scale for the x and y variables into 1/2 (provided you're using a standard box of [-3,3] by [-3,3] for x and y).

To get cross sections, click "EDIT" then

a. Increase the resolution (the higher the resolution, the less chunky the cross sections will be). See part c above for changing resolution. Click "EXECUTE".
b. Click "SCROLLBAR" then select X slice, Yslice or Z slice.

Fun Stuff:
Play with parameters. Put parameters a, b, c and/or d into your equation then click on "SCROLLBAR". Select the parameter, click okay then, back to the graph, move the scrollbar one click at a time to see what effect that parameter has on the graph (shifting, stretching, etc).

Animate your graph. Incorporate time as a variable. Use sin(time) for cyclical animation.

Browse other files. "Hundreds of Pretty Pictures" and "Optimal Geometry" both have very interesting graphs as does the DPGraph website's "Gallery". See what people with WAY too much free time have been doing!