The Mesh Command in Matlab
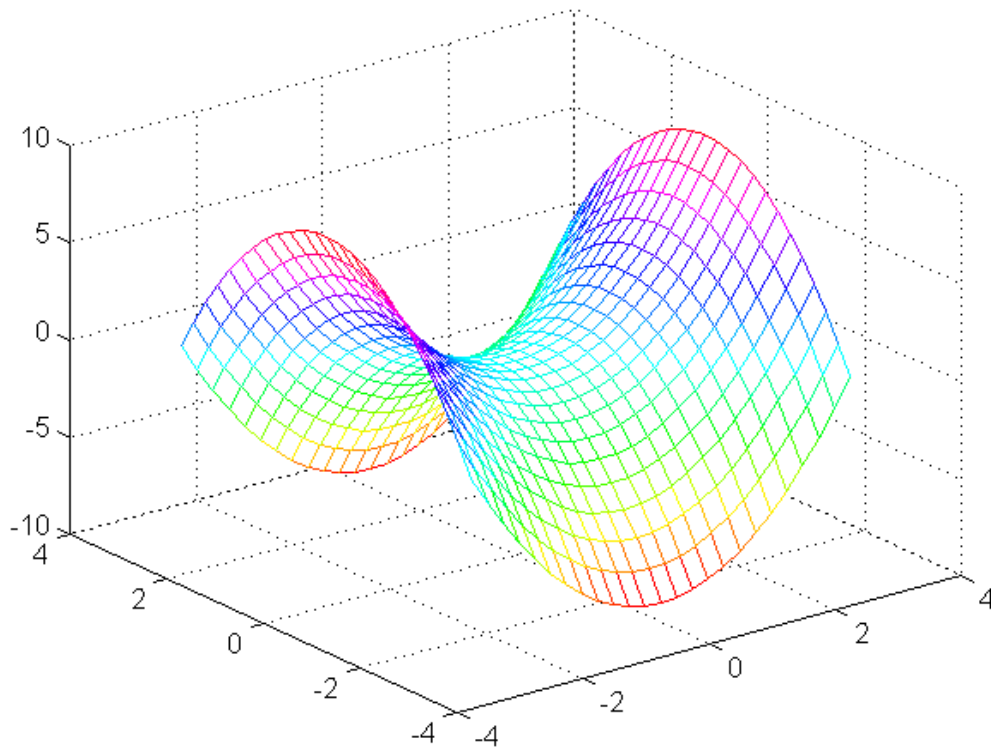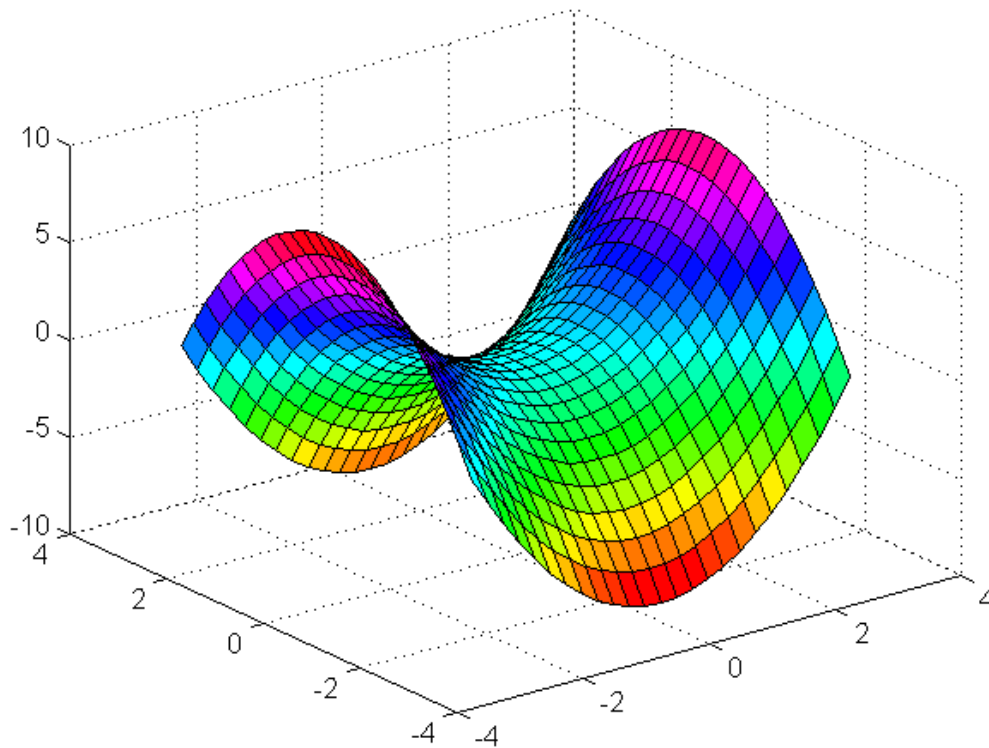
»colormap(hsv);
» s = -3:0.25:3;
» t = s;
» [x,y] = meshgrid(s,t);
» z = x.^2 - y.^2;
» mesh(x,y,z);

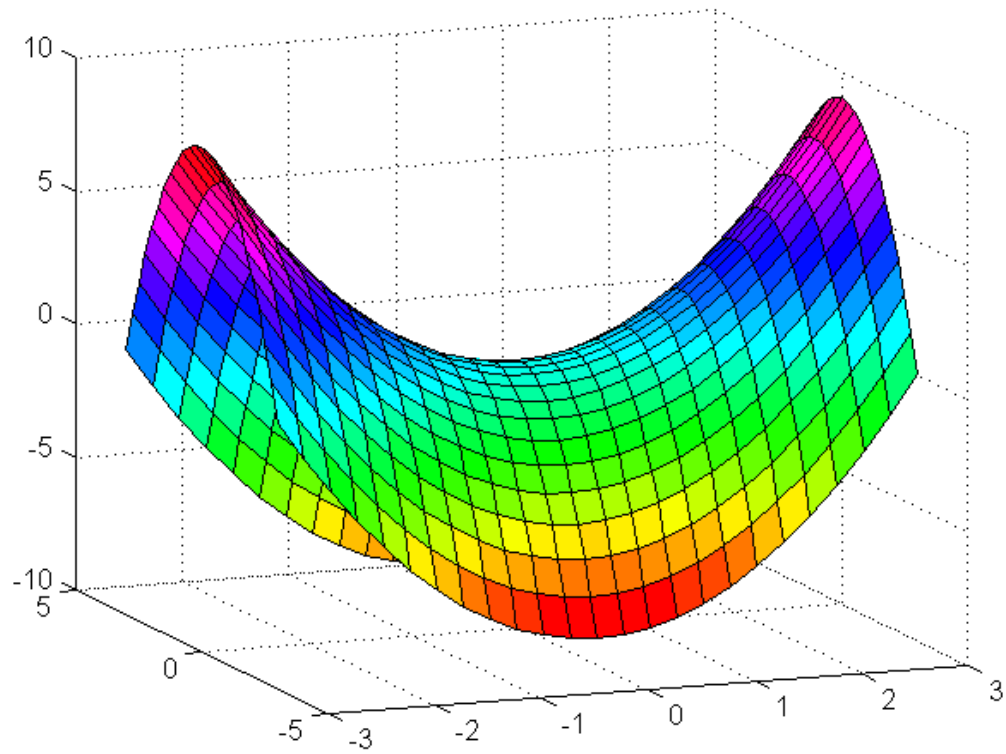Mesh and Surf are the basic commands for 3-dimensional graphing.

The Surf Command in Matlab

»colormap(hsv);
» s = -3:0.25:3;
» t = s;
» [x,y] = meshgrid(s,t);
» z = x.^2 - y.^2;
» surf(x,y,z);

The surf command is similar to the mesh command, but the plates
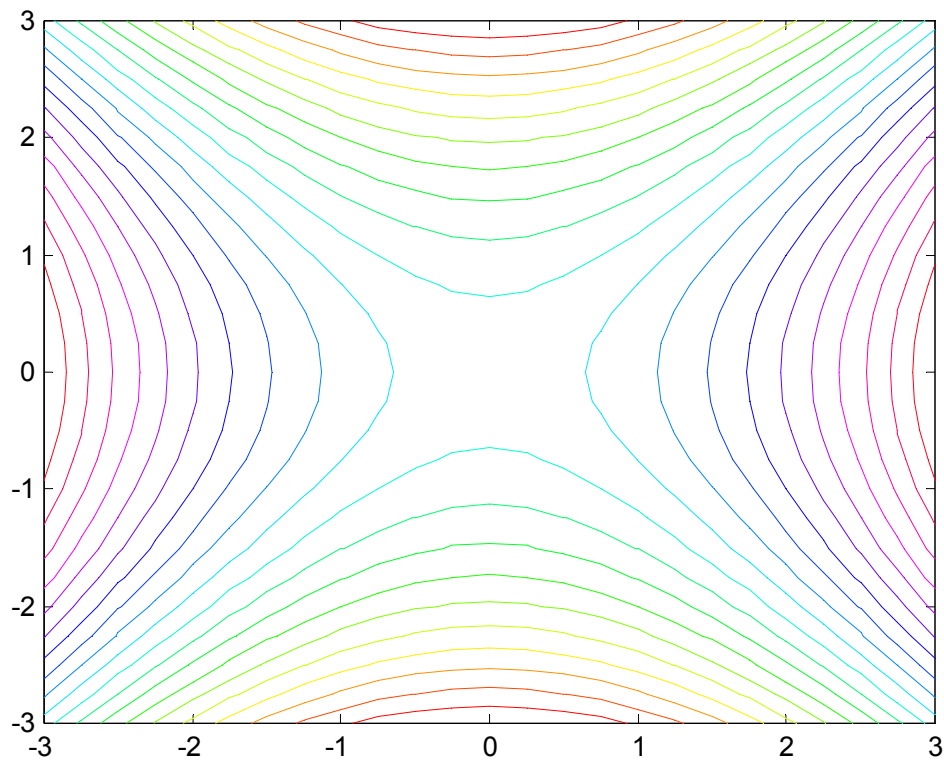formed by the lines are colored.

Use the Rotate3D command in the Tools menu to rotate the figure in any desired way.
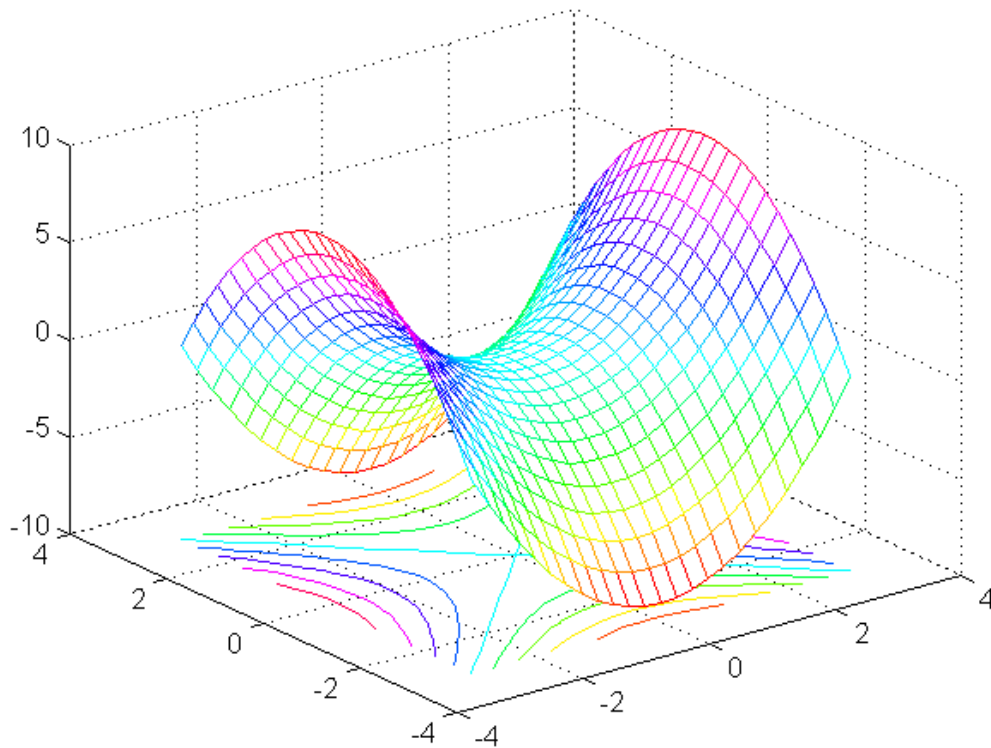
The Contour Command in Matlab

»colormap(hsv);
» s = -3:0.25:3;
» t = s;
» [x,y] = meshgrid(s,t);
» z = x.^2 - y.^2;
» contour(x,y,z,20);

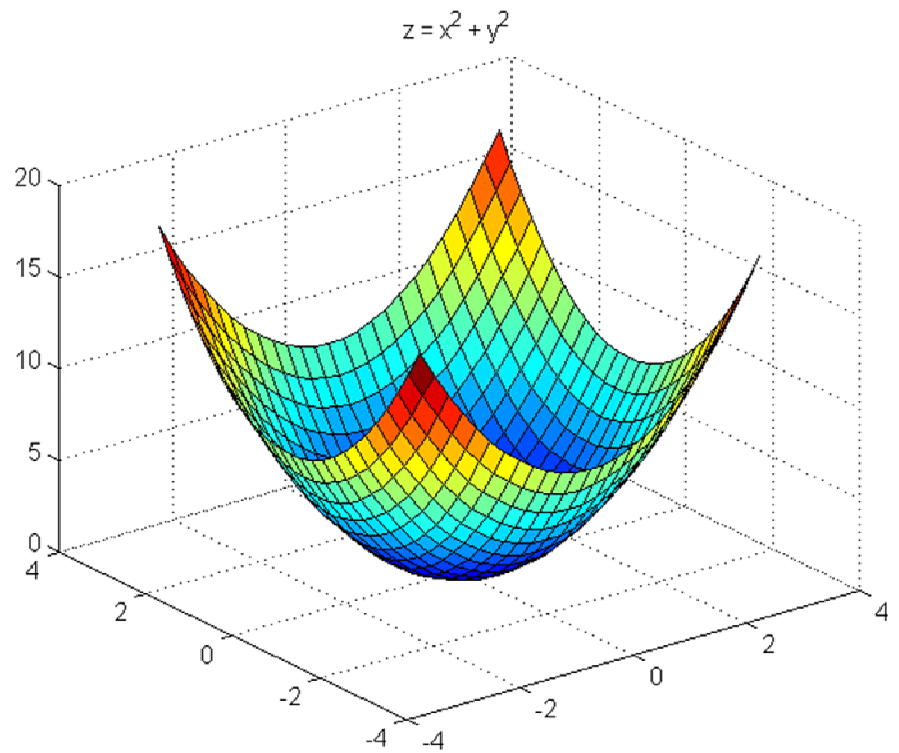The 20 in the command results in 20 contour lines, scaled over the figure.

The Meshc Command in Matlab

»colormap(hsv);
» s = -3:0.25:3;
» t = s;
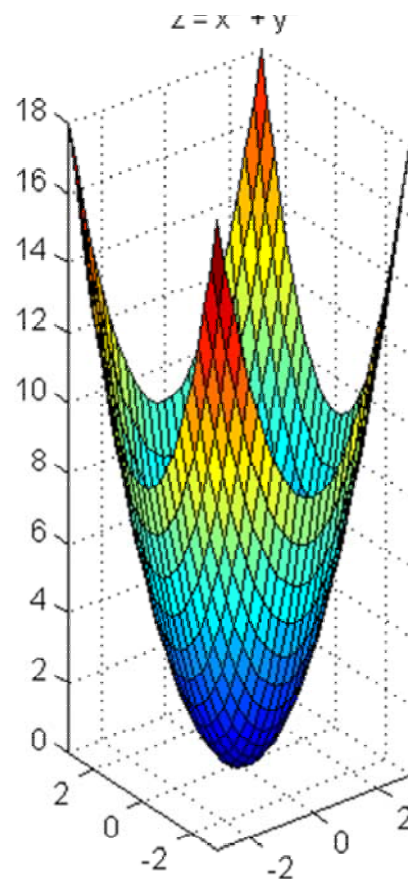» [x,y] = meshgrid(s,t);
» z = x.^2 - y.^2;
» meshc(x,y,z);

Meshc draws the contour curves under the mesh graph.

$$z = x^2 + y^2$$

EDU» s = -3:.25:3;
EDU» [x,y] = meshgri
EDU» z = x.^2 + y.^2
EDU» surf(x,y,z);

$$z = x^2 + y^2$$

EDU» axis equal;

**The Axis Equal command (after the graph has been made) may give a more
realistic picture of the graph.**