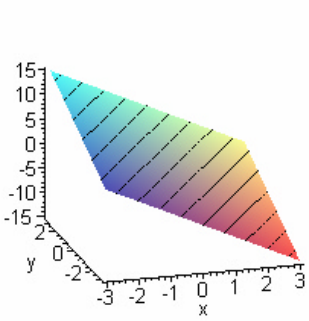
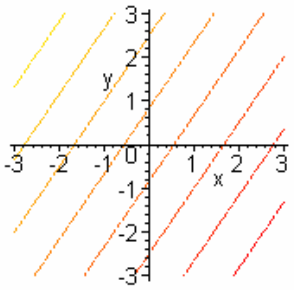
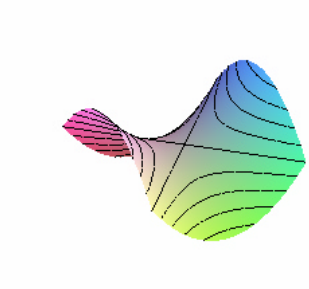
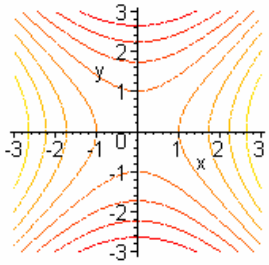
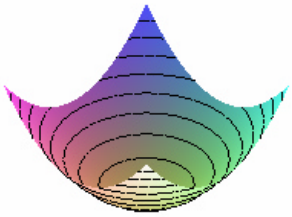
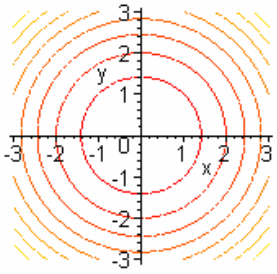
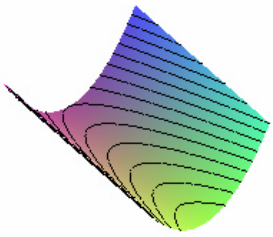
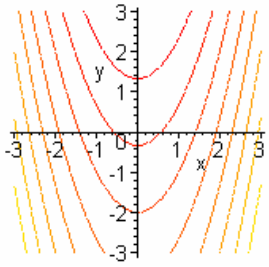
Special Surfaces and Their Level Curves

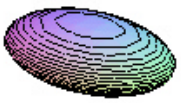
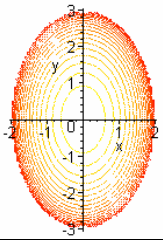
Plane		
	$z = -3x + 2y$	$-3x + 2y = c$

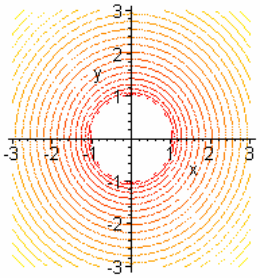
Hyperbolic Parabaloid, Or Saddle		
	$z = x^2 - y^2$	$x^2 - y^2 = c$

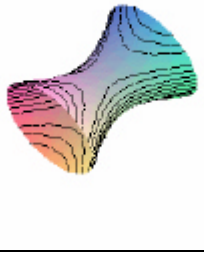
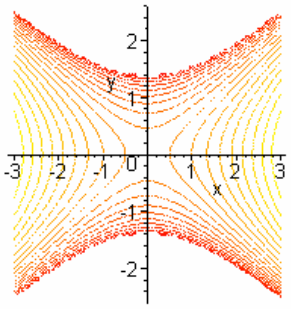
Circular Parabaloid		
	$z = x^2 + y^2$	$x^2 + y^2 = c$

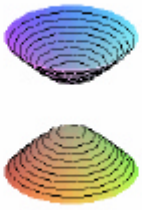
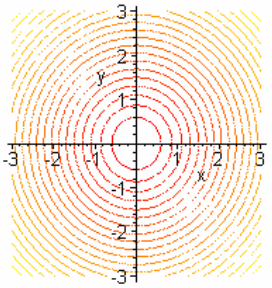
Parabolic Cylinder		
	$z = -x^2 + y$	$-x^2 + y = c$

Special Surfaces and Their Level Curves

Ellipsoid		
	$\frac{x^2}{4}+\frac{y^2}{9}+z^2=1$	$\frac{x^2}{4}+\frac{y^2}{9}=1-c^2$

Hyperboloid of One Sheet		
	$x^2+y^2-z^2=1$	$x^2+y^2=1+c^2$

Hyperboloid of One Sheet		
	$\frac{x^2}{4}-\frac{y^2}{2}+z^2=1$	$\frac{x^2}{4}-\frac{y^2}{2}=1-c^2$

Hyperboloid of Two Sheets		
	$-x^2-y^2+z^2=1$	$x^2+y^2=c^2-1$