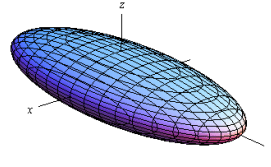
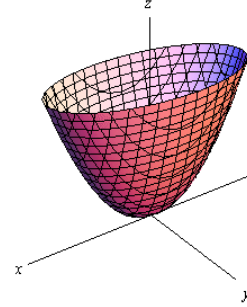


Quadric Surfaces

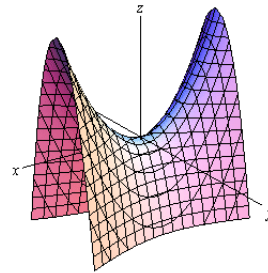
(I) ELLIPSOID : $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$



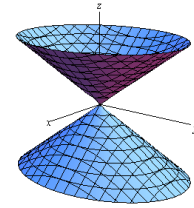
(II) ELLIPTICAL PARABOLOID : $\frac{z}{c} = \frac{x^2}{a^2} + \frac{y^2}{b^2}$



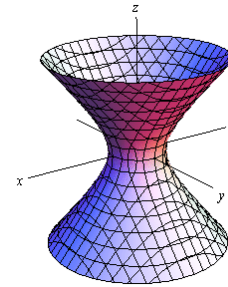
(III) HYPERBOLIC PARABOLOID : $\frac{z}{c} = \frac{x^2}{a^2} - \frac{y^2}{b^2}$



(IV) (Double) ELLIPTICAL CONE : $\frac{z^2}{c^2} = \frac{x^2}{a^2} + \frac{y^2}{b^2}$



(V) HYPERBOLOID OF 1 SHEET : $\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$



(VI) HYPERBOLOID OF 2 SHEETS : $-\frac{x^2}{a^2} - \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ or $\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = -1$

