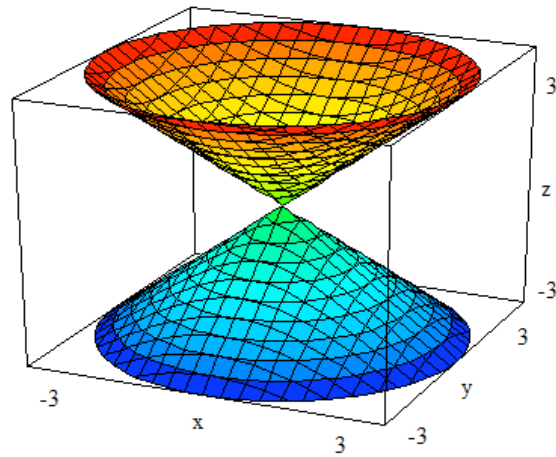


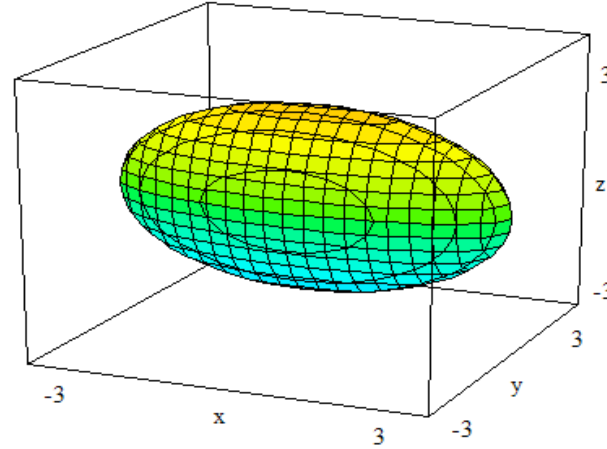
**Cone**

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



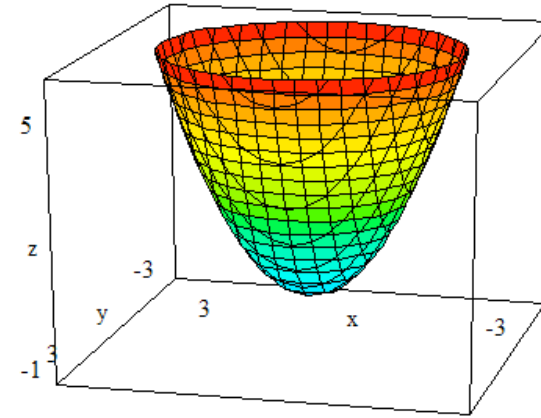
**Ellipsoid**

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



**Elliptic Paraboloid**

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

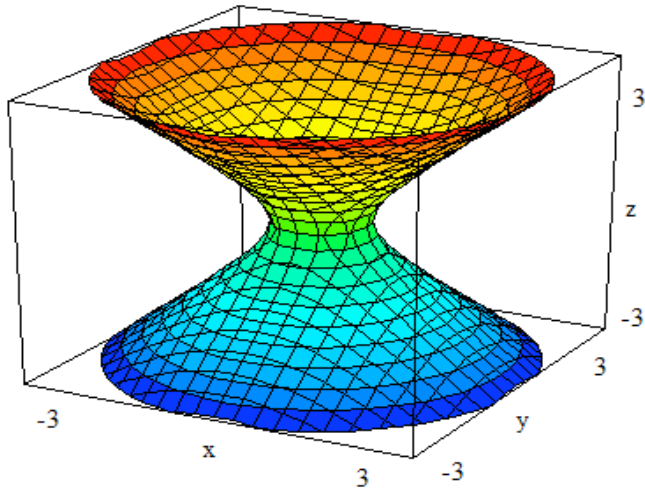


**General Formulas:**

1. Elliptic cone:  $z^2/c^2 = x^2/a^2 + y^2/b^2$
2. Ellipsoid:  $x^2/a^2 + y^2/b^2 + z^2/c^2 = 1$
3. Elliptic paraboloid:  $z/c = x^2/a^2 + y^2/b^2$

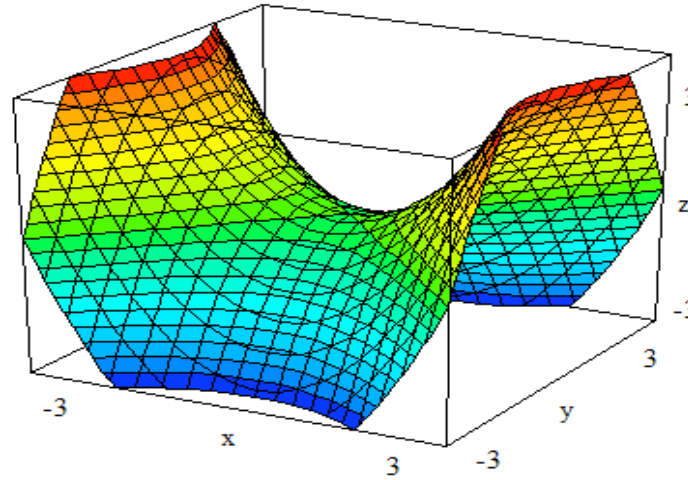
**Hyperboloid of One Sheet**

$$x^2 + y^2 = z^2 + \frac{1}{2}$$



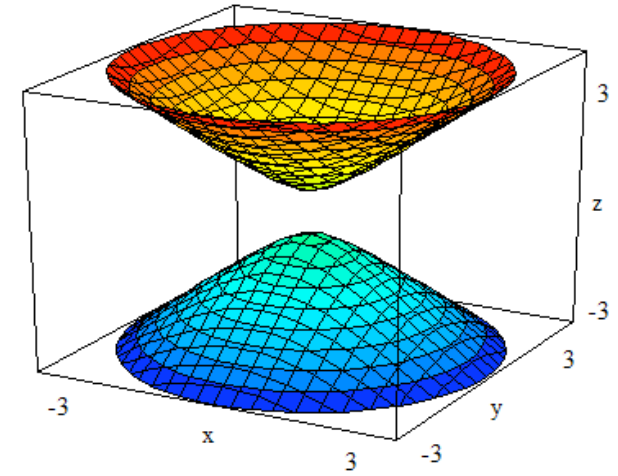
**Hyperbolic Paraboloid**

$$z = x^2 - y^2$$



**Hyperboloid of Two Sheets**

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



General Formulas:

1. Hyperboloid of one sheet:  $x^2/a^2 + y^2/b^2 - z^2/c^2 = 1$
2. Hyperbolic paraboloid:  $z/c = y^2/b^2 - x^2/a^2$
3. Hyperboloid of two sheets:  $z^2/c^2 - x^2/a^2 - y^2/b^2 = 1$