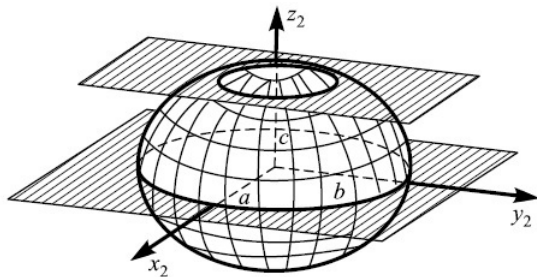


# CUÁDRICAS

Eugenio Hernández

ÁLGEBRA LINEAL Y GEOMETRÍA  
Curso 2013-2014

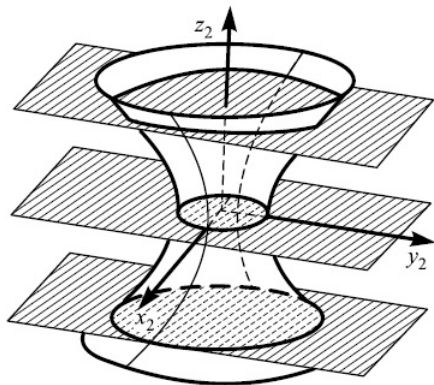
# Elipsoide.



$$\frac{x_2^2}{a^2} + \frac{y_2^2}{b^2} + \frac{z_2^2}{c^2} = 1$$

Figura 13.1 Elipsoide.

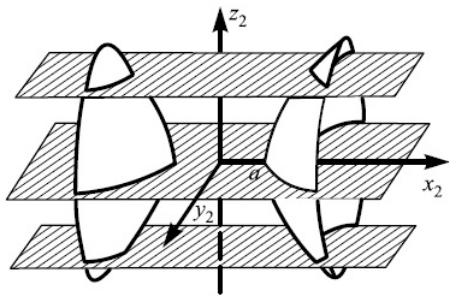
# Hiperboloide de una hoja.



$$\frac{x_2^2}{a^2} + \frac{y_2^2}{b^2} - \frac{z_2^2}{c^2} = 1$$

Figura 13.2 Hiperboloide de una hoja.

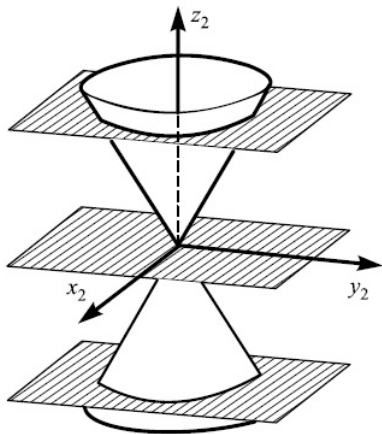
# Hiperboloide de dos hojas.



$$\frac{x_2^2}{a^2} - \frac{y_2^2}{b^2} - \frac{z_2^2}{c^2} = 1$$

Figura 13.3 Hiperboloide de dos hojas.

# Cono elíptico.



$$\frac{x_2^2}{a^2} + \frac{y_2^2}{b^2} = z_2^2$$

Figura 13.4 Cono.

$$x^2 + y^2 + z^2 - 4xz - 4y + 2 = 0.$$

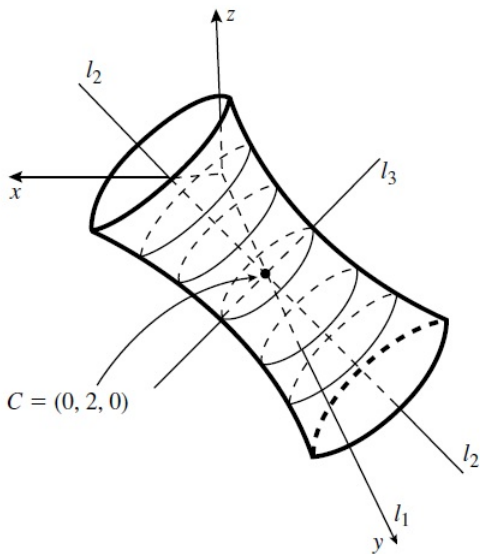


Figura 13.12

$$y^2 + 4xz + 1 = 0.$$

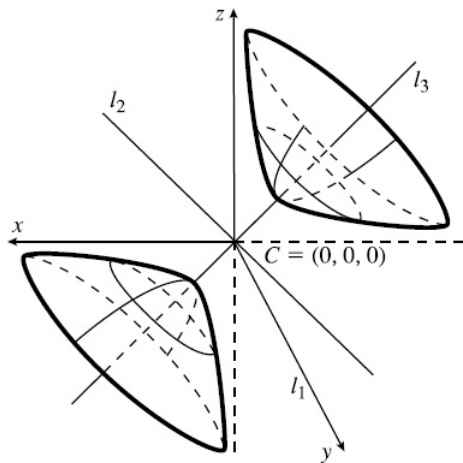
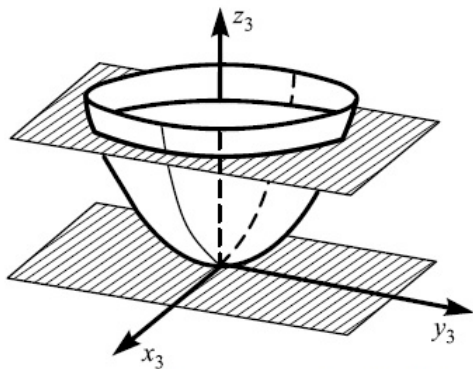


Figura 13.13

# Paraboloide elíptico.



$$\frac{x_3^2}{a^2} + \frac{y_3^2}{b^2} = z_3$$

Figura 13.5 Paraboloide elíptico.



# Paraboloide hiperbólico.

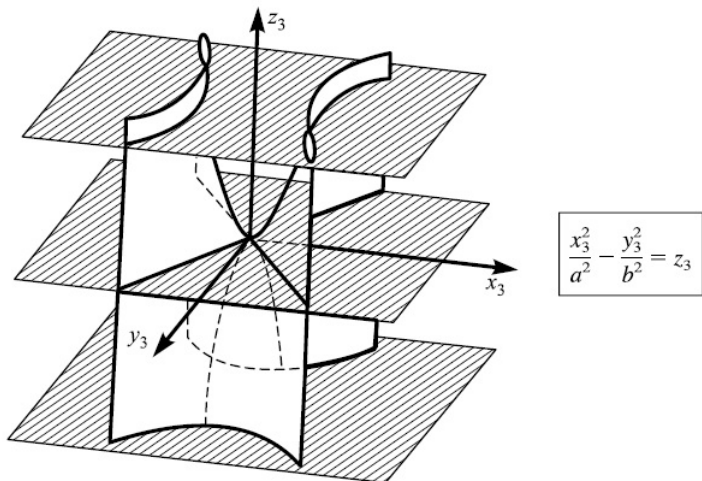


Figura 13.6 Paraboloide hiperbólico.

# Vértice y plano tangente de paraboloides.

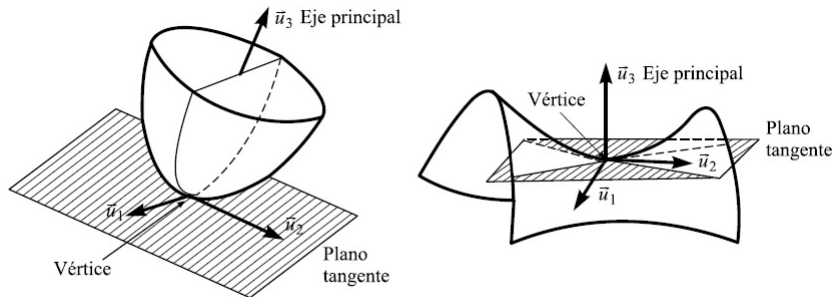


Figura 13.14

# Superficies cilíndricas.

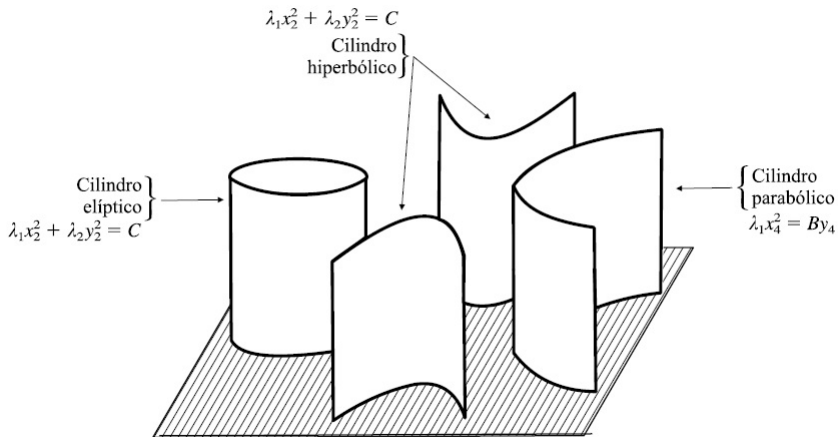


Figura 13.7

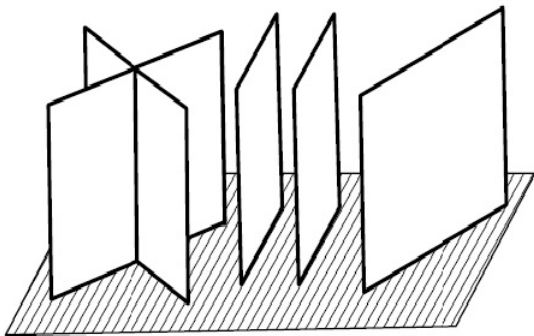
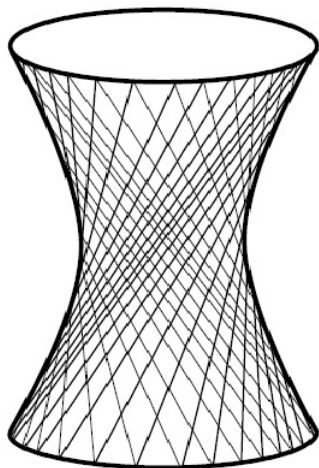


Figura 13.8

# Superficie reglada.



El hiperboloide de una hoja como superficie reglada

**Figura 13.22**