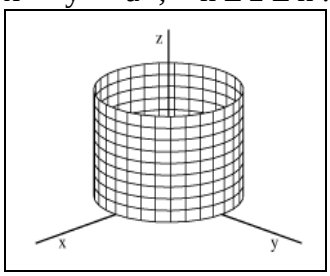
Standard Surfaces

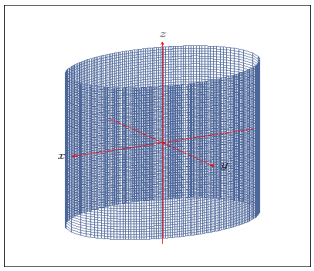
1.CIRCULAR CYLINDER:

$x^2 + y^2 = a^2$, $-h \le z \le h$:



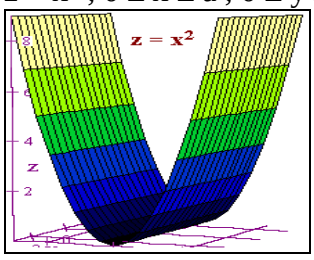
2.ELLIPTIC CYLINDER

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \ , -h \le z \le h$$



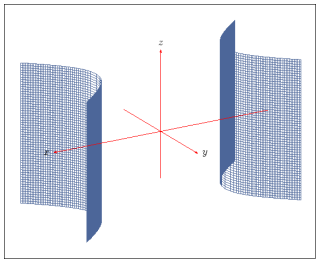
3.PARABOLIC CYLINDER:

$z = x^2$, $0 \le x \le a$, $0 \le y \le h$

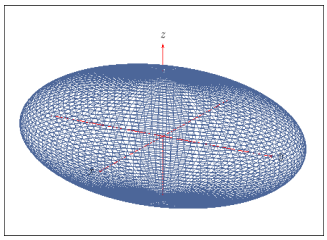


4.HYPERBOLIC CYLINDER:

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \ , -h \le z \le h$$



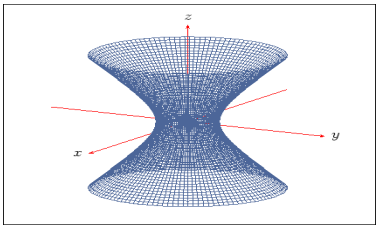
5. Ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$



6. Sphere $x^2 + y^2 + z^2 = a^2$

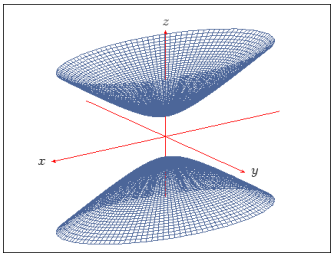
7. Hyperboloid of one sheet

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$$



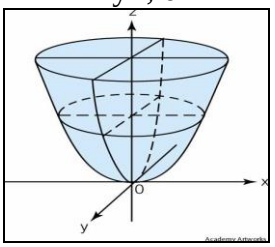
8. Hyperboloid of two sheet

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$$



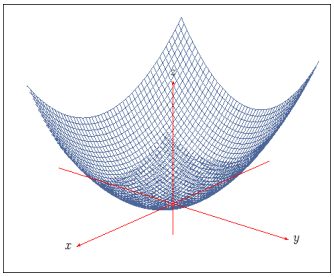
9. Circular Paraboloid

$z = x^2 + y^2$, $0 \le z \le h$



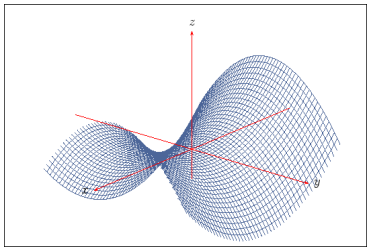
10.ELLIPTIC PARABOLOID:

$$\frac{z}{c} = \frac{x^2}{a^2} + \frac{y^2}{b^2}, 0 \le z \le h$$



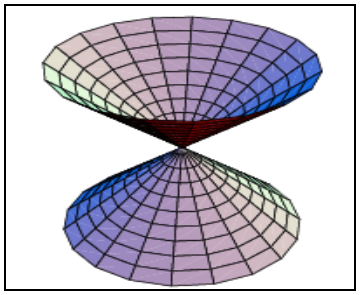
11.HYPERBOLIC PARABOLOID:

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = \frac{z}{c}$$



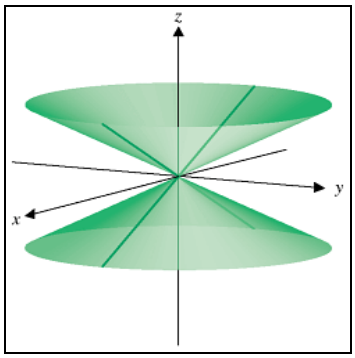
12 .CIRCULAR CONE :

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



13. ELLIPTIC CONE :

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = \frac{z^2}{c^2}$$



14. Helicoid

$$\frac{y}{x} = \tan\left(\frac{z}{c}\right)$$