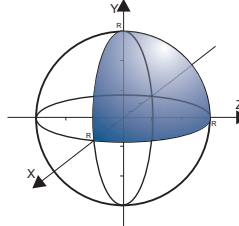
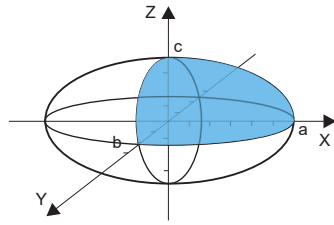
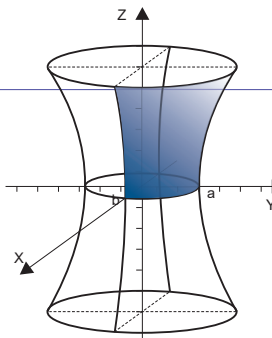
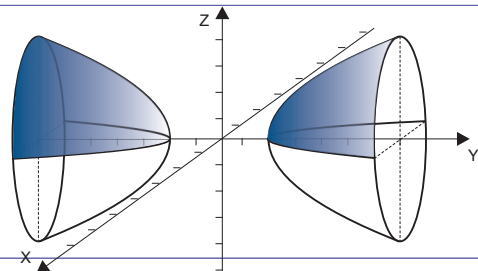
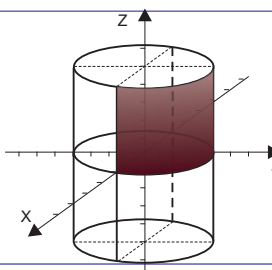
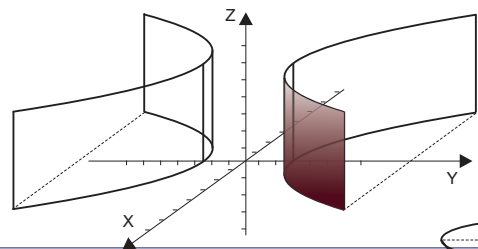
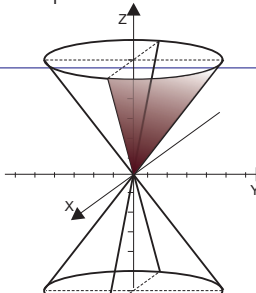


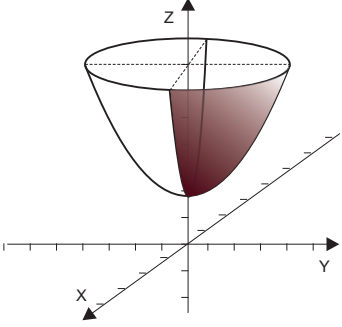
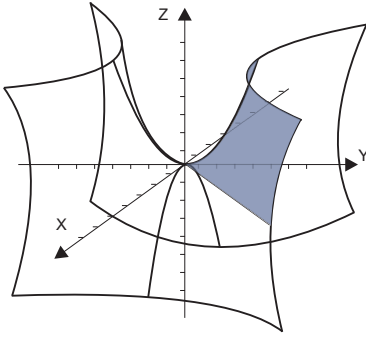
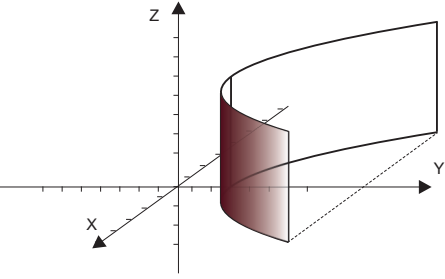
SUPERFICIES

CUÁDRICAS: Son superficies cuyas ecuaciones son de segundo grado

a) Cuádricas con centro:

<p>Superficie Esférica</p> $x^2 + y^2 + z^2 = R^2$ $(x - h)^2 + (y - k)^2 + (z - l)^2 = 1$	
<p>Elipsoide</p> $M x^2 + N y^2 + P z^2 = S$ $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} + \frac{(z - l)^2}{c^2} = 1$	
<p>Hiperboloide de una Hoja</p> $M x^2 + N y^2 - P z^2 = S$ $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} - \frac{(z - l)^2}{c^2} = 1$	
<p>Hiperboloide de dos Hojas</p> $M x^2 - N y^2 - P z^2 = S$ $\frac{(x - h)^2}{a^2} - \frac{(y - k)^2}{b^2} - \frac{(z - l)^2}{c^2} = 1$	
<p>Sup. Cilíndrica Elíptica Recta</p> $M x^2 + N y^2 = P$ $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$	
<p>Sup. Cilíndrica Hiperbólica Recta</p> $M x^2 - N y^2 = P$ $\frac{(x - h)^2}{a^2} - \frac{(y - k)^2}{b^2} = 1$	
<p>Sup. Cónica Recta</p> $M x^2 + N y^2 - P z^2 = 0$ $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} - \frac{(z - l)^2}{c^2} = 0$	 <p style="text-align: center;">Ing. Adelma Grágeda</p>

B) Cuádricas sin centro:

<p>Paraboloide Elíptico</p> $M x^2 + N y^2 = C z$ $\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = z$	
<p>Paraboloide Hiperbólico</p> $M x^2 - N y^2 = C z$ $\frac{(x - h)^2}{a^2} - \frac{(y - k)^2}{b^2} = z$	
<p>Sup. Cilíndrica Parabólica Recta</p> $M x^2 = S y$ $(x - h)^2 = 4p (y - k)$	

Ing. Adelma Grágeda