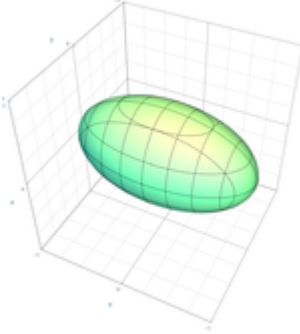
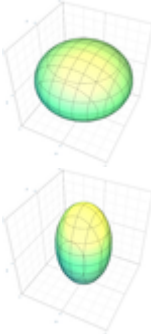
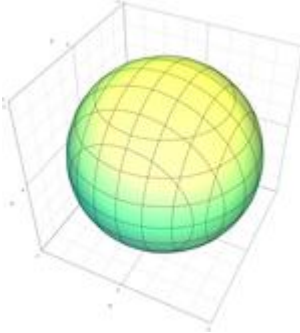
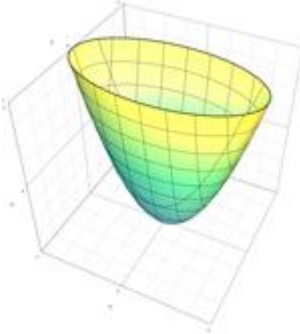
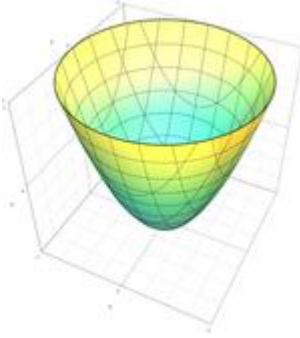
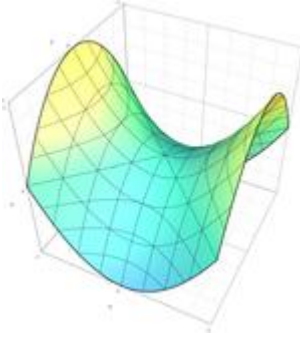
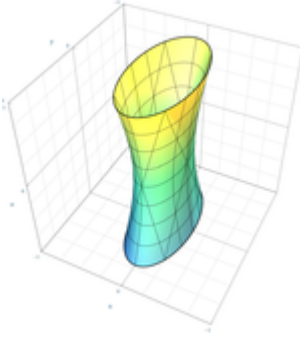
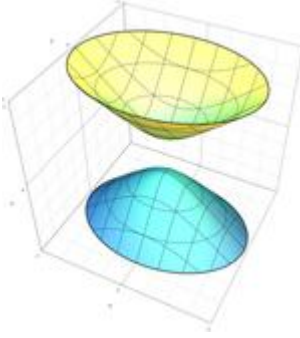
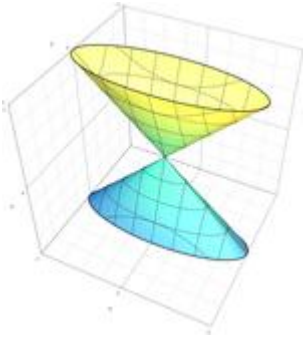
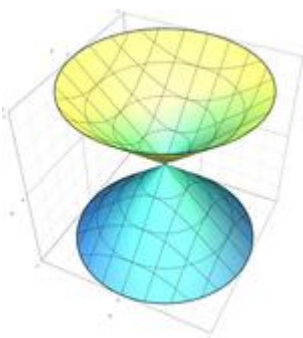
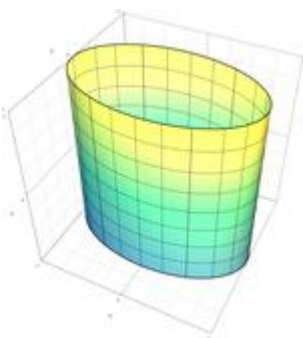
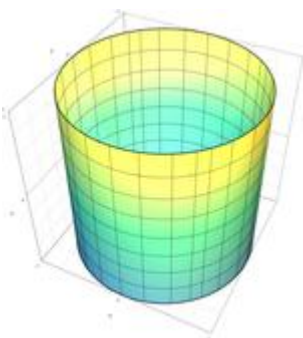


## Non-degenerate real quadric surfaces

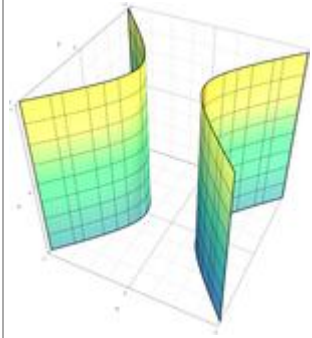
<p><u>Ellipsoid</u></p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$	
<p><u>Spheroid</u> (special case of ellipsoid)</p>	$\frac{x^2}{a^2} + \frac{y^2}{a^2} + \frac{z^2}{b^2} = 1$	
<p><u>Sphere</u> (special case of spheroid)</p>	$\frac{x^2}{a^2} + \frac{y^2}{a^2} + \frac{z^2}{a^2} = 1$	
<p><u>Elliptic paraboloid</u></p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} - z = 0$	

<p>Circular <u>paraboloid</u> (special case of elliptic paraboloid)</p>	$\frac{x^2}{a^2} + \frac{y^2}{a^2} - z = 0$	
<p>Hyperbolic <u>paraboloid</u></p>	$\frac{x^2}{a^2} - \frac{y^2}{b^2} - z = 0$	
<p>Elliptic <u>hyperboloid</u> of one sheet</p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$	
<p>Elliptic <u>hyperboloid</u> of two sheets</p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = -1$	
<p><b>Degenerate quadric surfaces</b></p>		

<p>Elliptic <u>cone</u></p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 0$	
<p>Circular <u>cone</u> (special case of cone)</p>	$\frac{x^2}{a^2} + \frac{y^2}{a^2} - \frac{z^2}{b^2} = 0$	
<p>Elliptic <u>cylinder</u></p>	$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	
<p>Circular <u>cylinder</u> (special case of elliptic cylinder)</p>	$\frac{x^2}{a^2} + \frac{y^2}{a^2} = 1$	

Hyperbolic cylinder

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



Parabolic cylinder

$$x^2 + 2ay = 0$$

