

Mavzu:

Paraboloidlar. Konus.

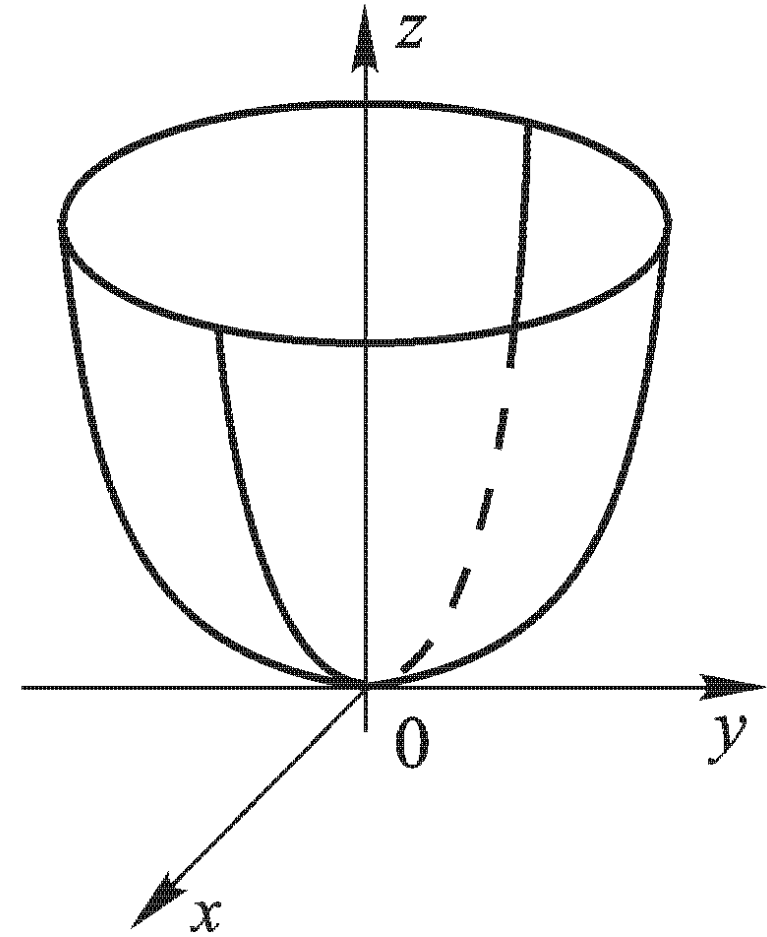
Silindrik va aylanma sirtlar

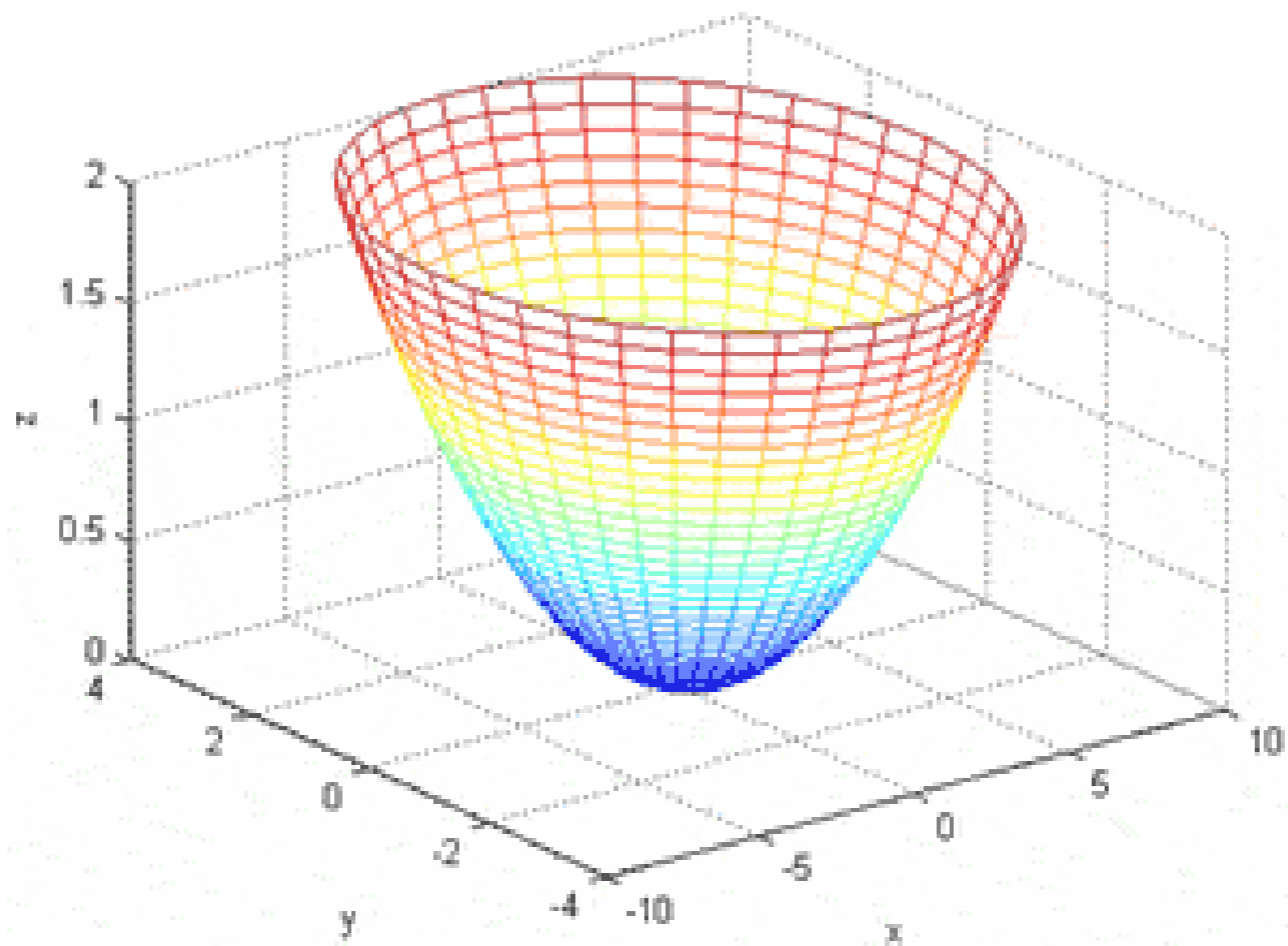
Reja:

1. Paraboloidlar. Konus.
2. Silindrik sirtlar.
3. Aylanma sirtlar.

Elliptik paraboloid

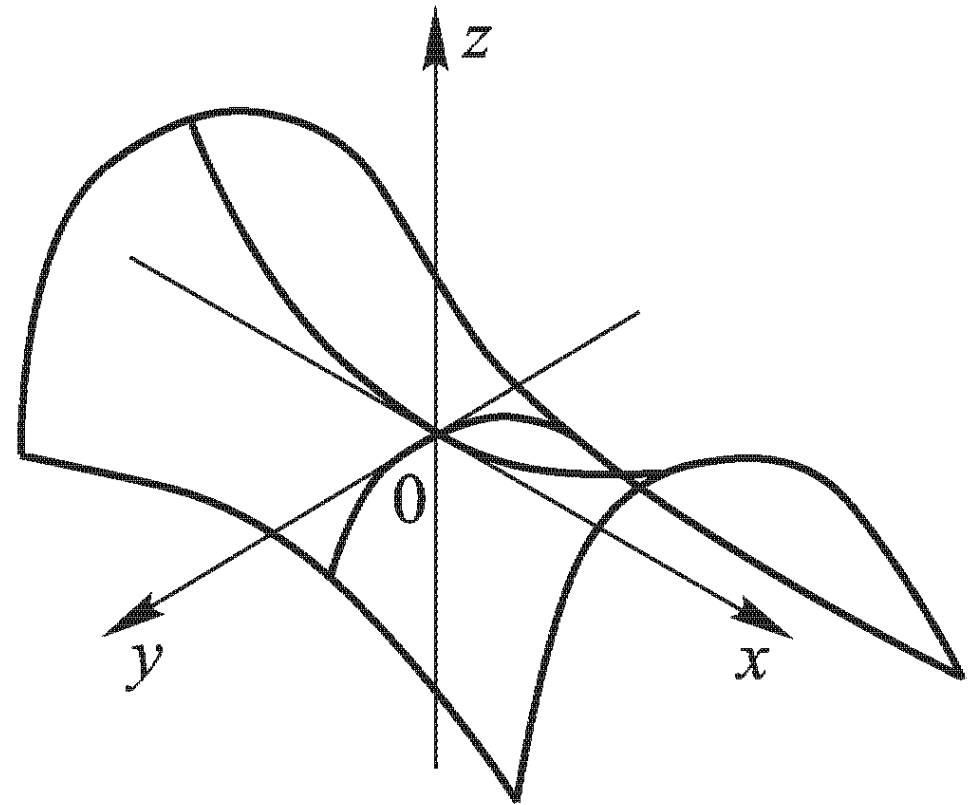
$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 2z$$



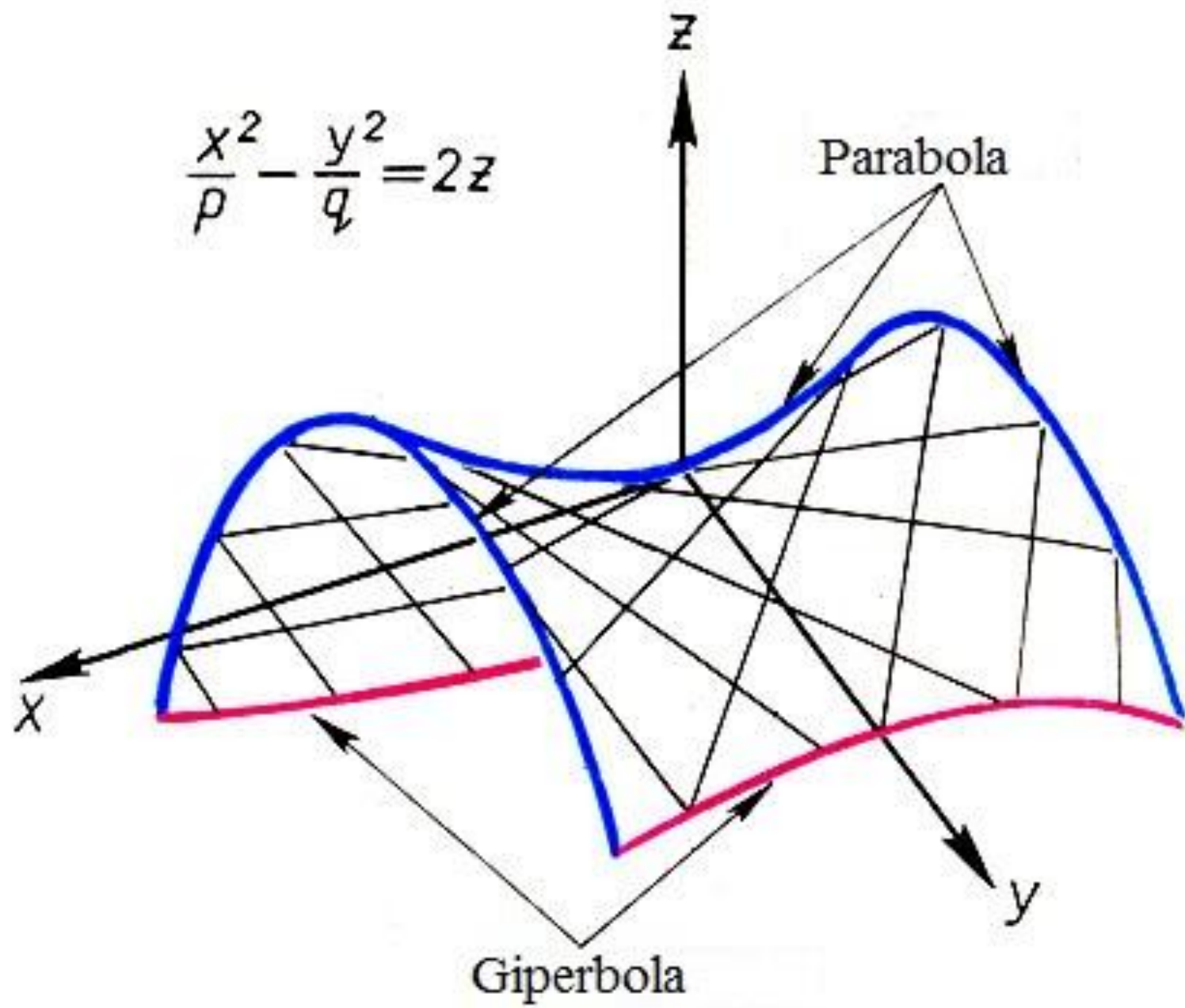


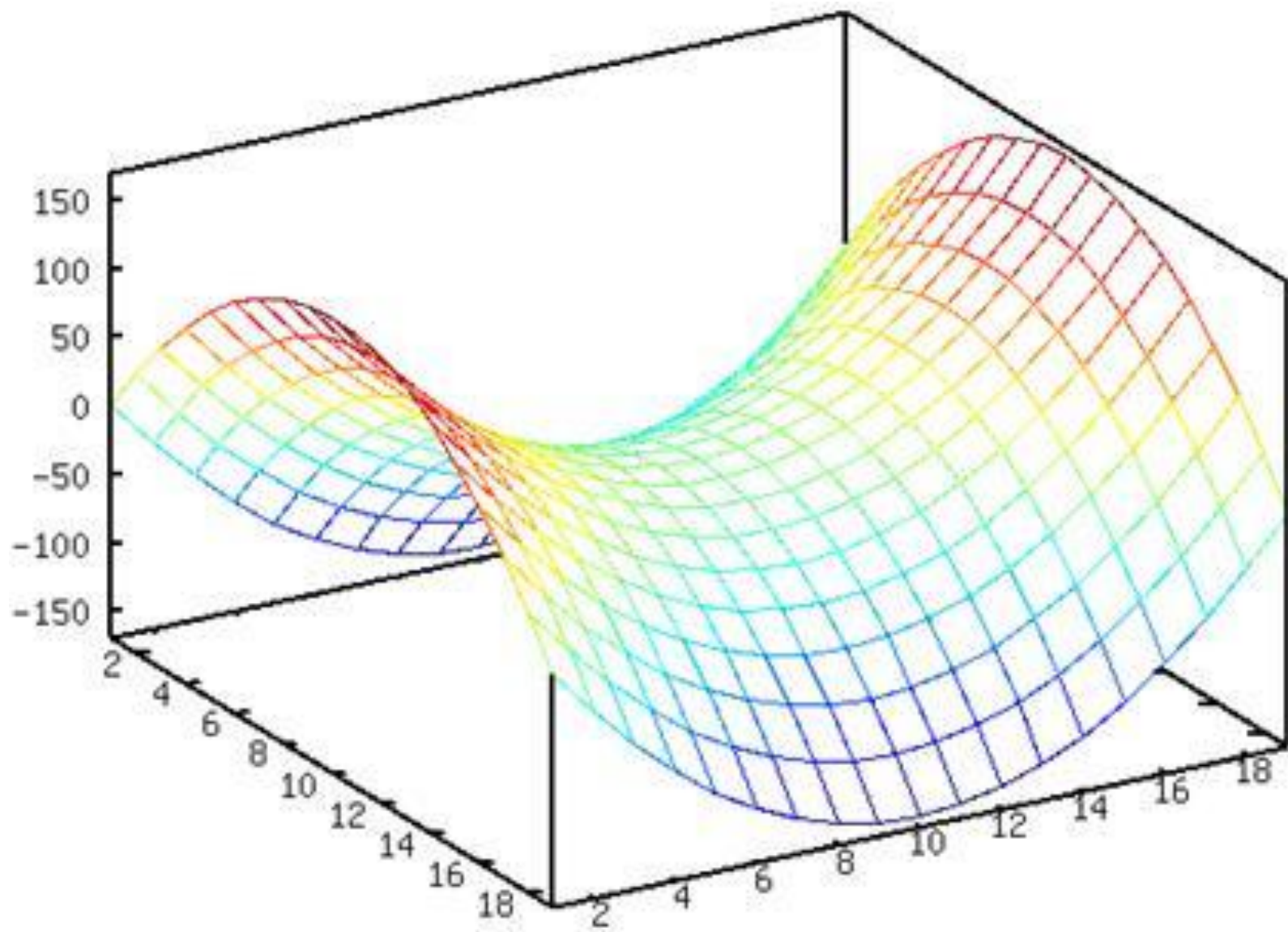
Giperbolik paraboloid

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



$$\frac{x^2}{p} - \frac{y^2}{q} = 2z$$



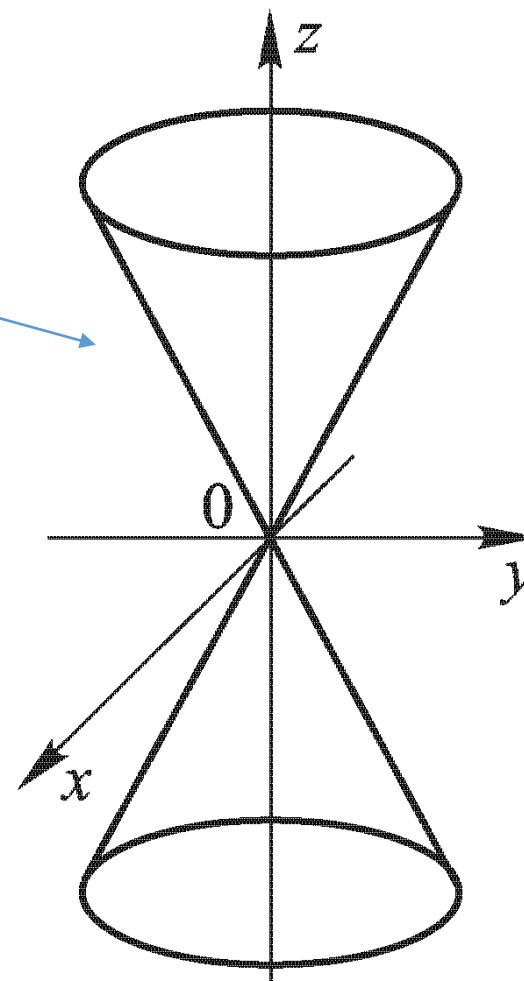


Ikkinchi tartibli konus

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

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

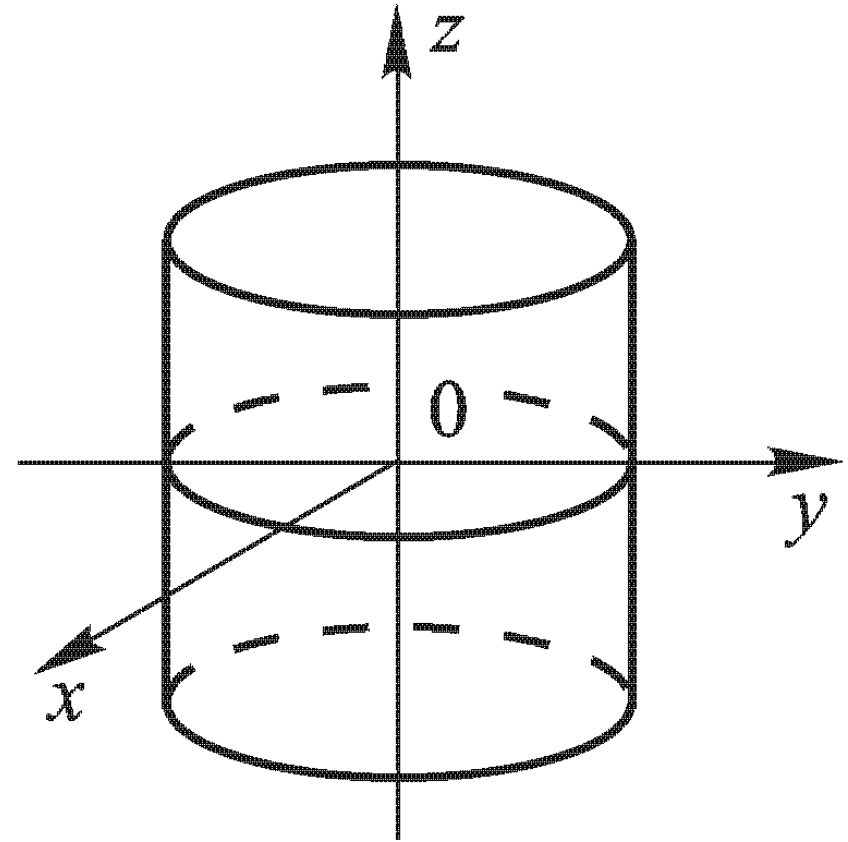
$$-\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 0$$

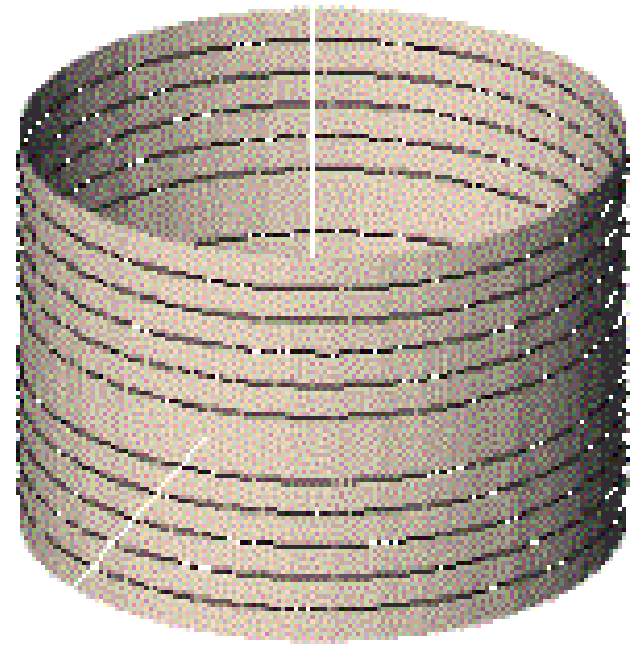


Silindrik sirtlar

Elliptik silindr

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

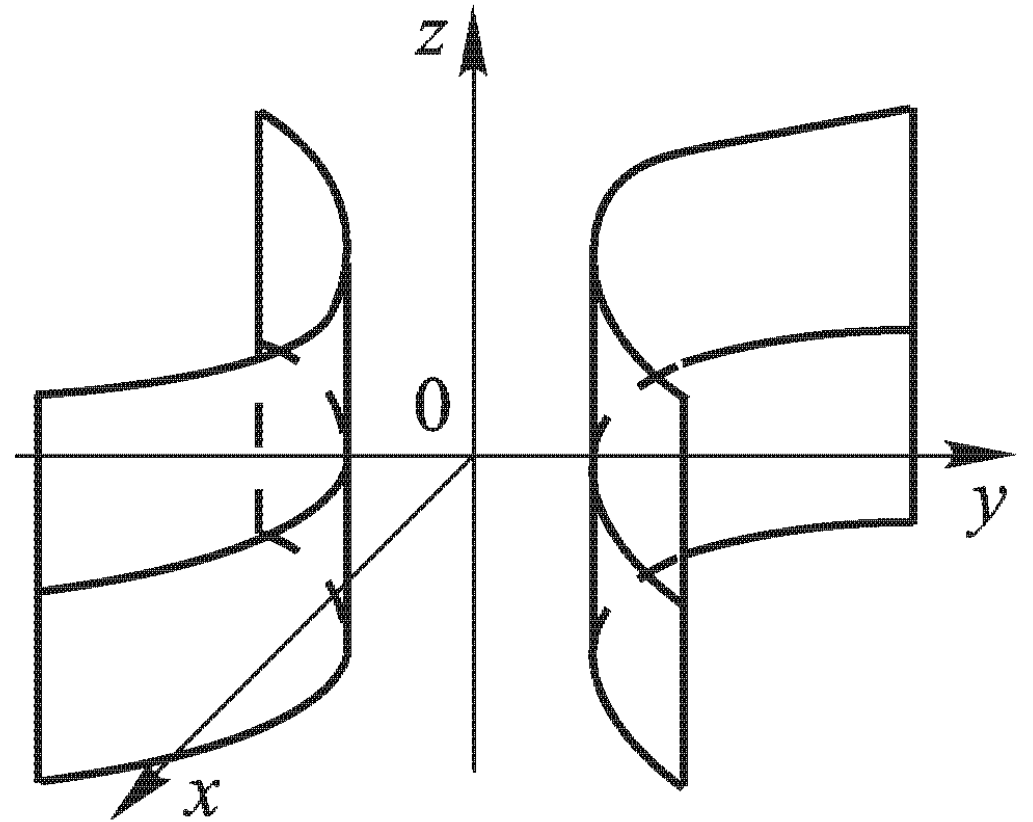


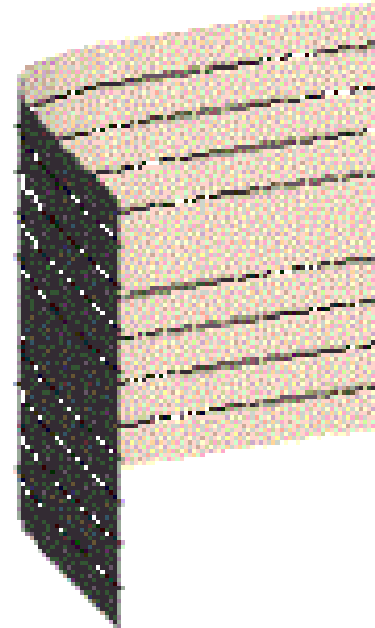
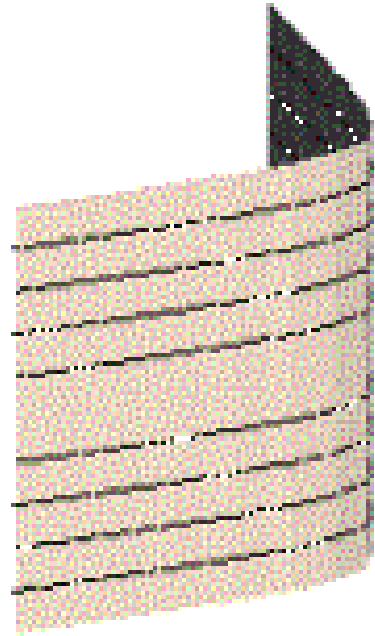


Silindrik sirtlar

Giperbolik silindr

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

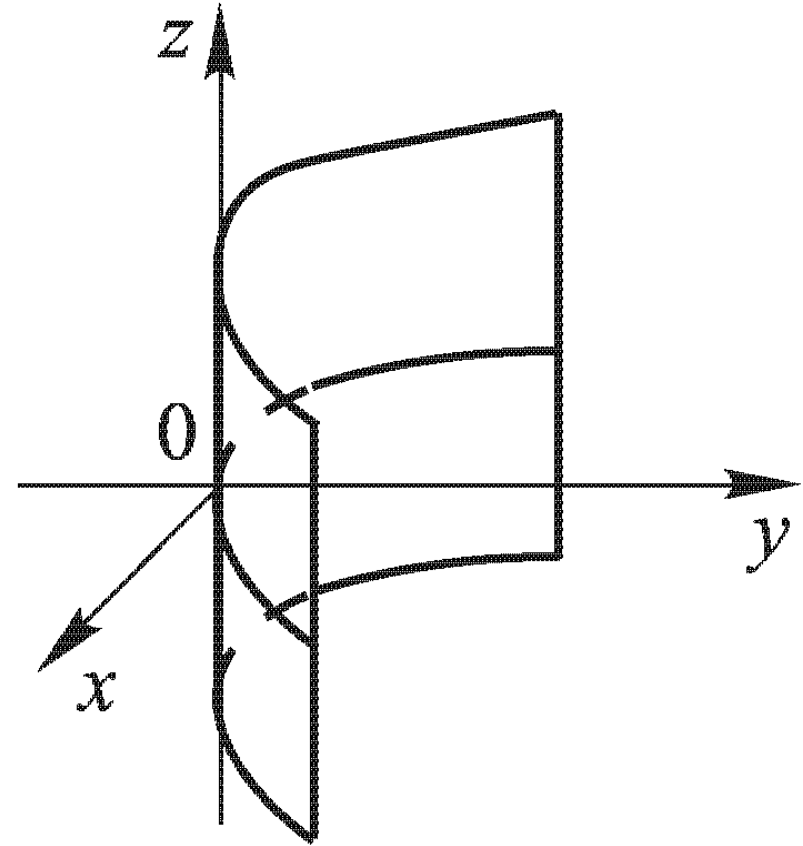




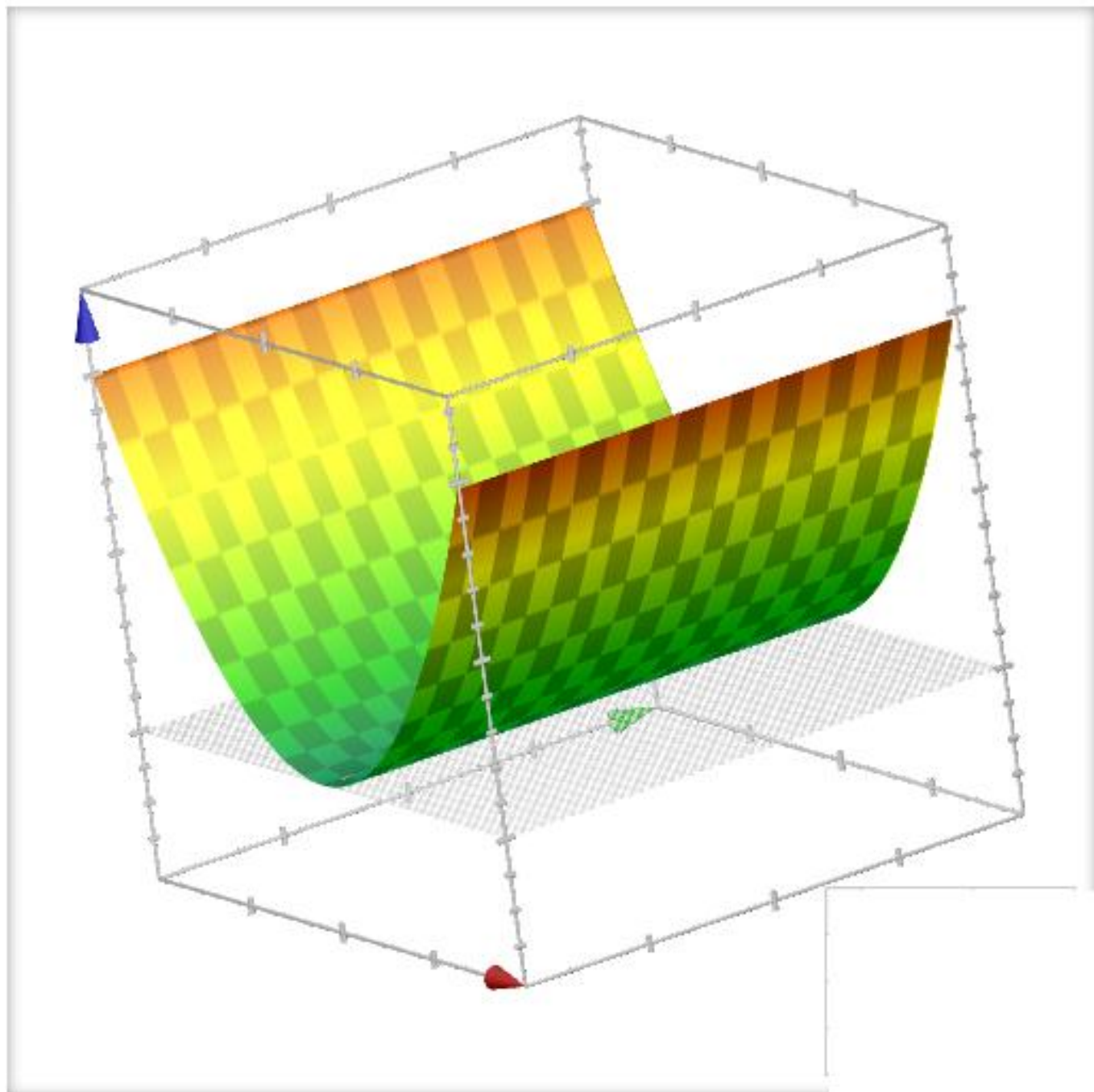
Silindrik sirtlar

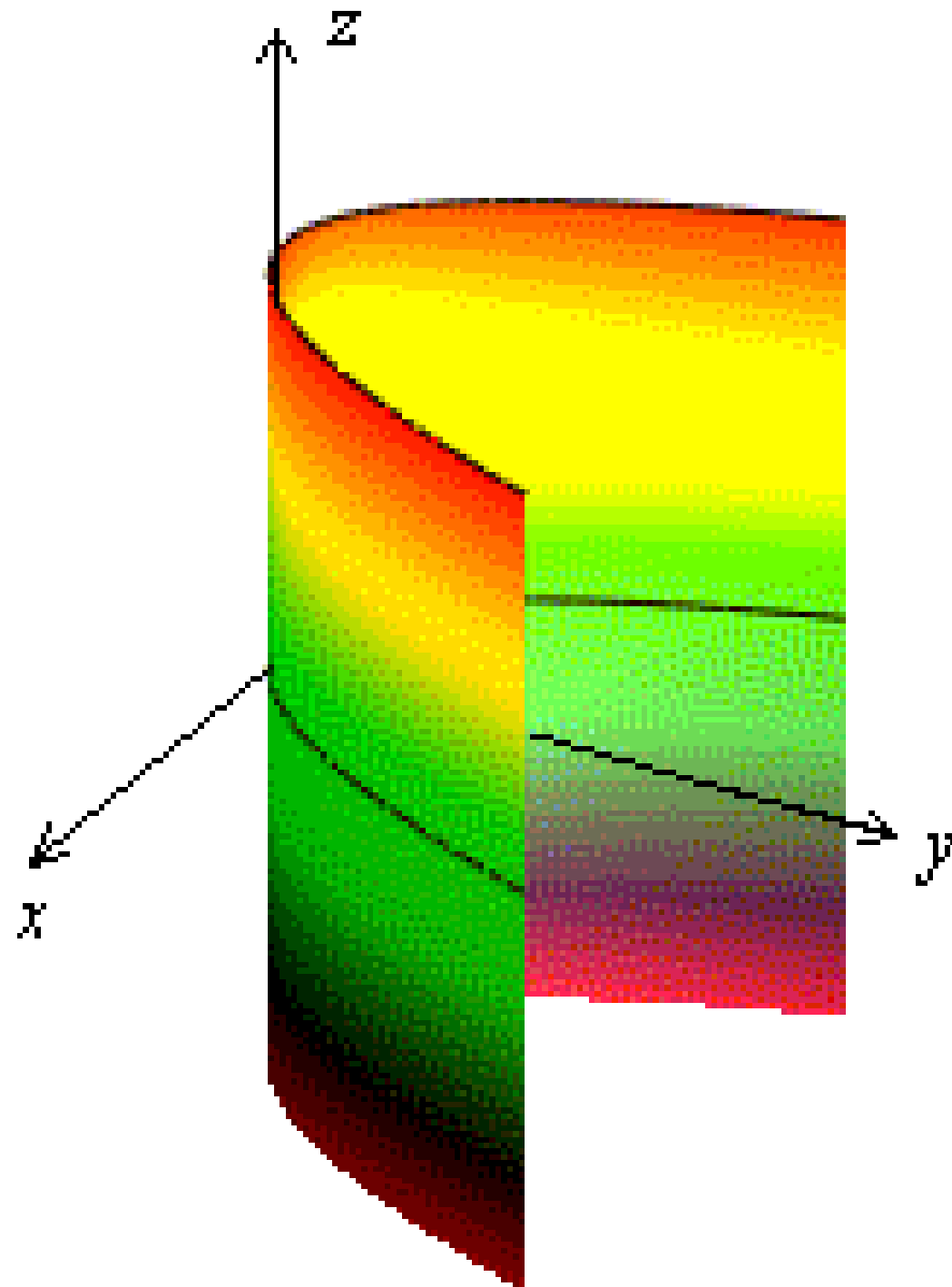
Parabolik silindr

$$x^2 = 2py$$









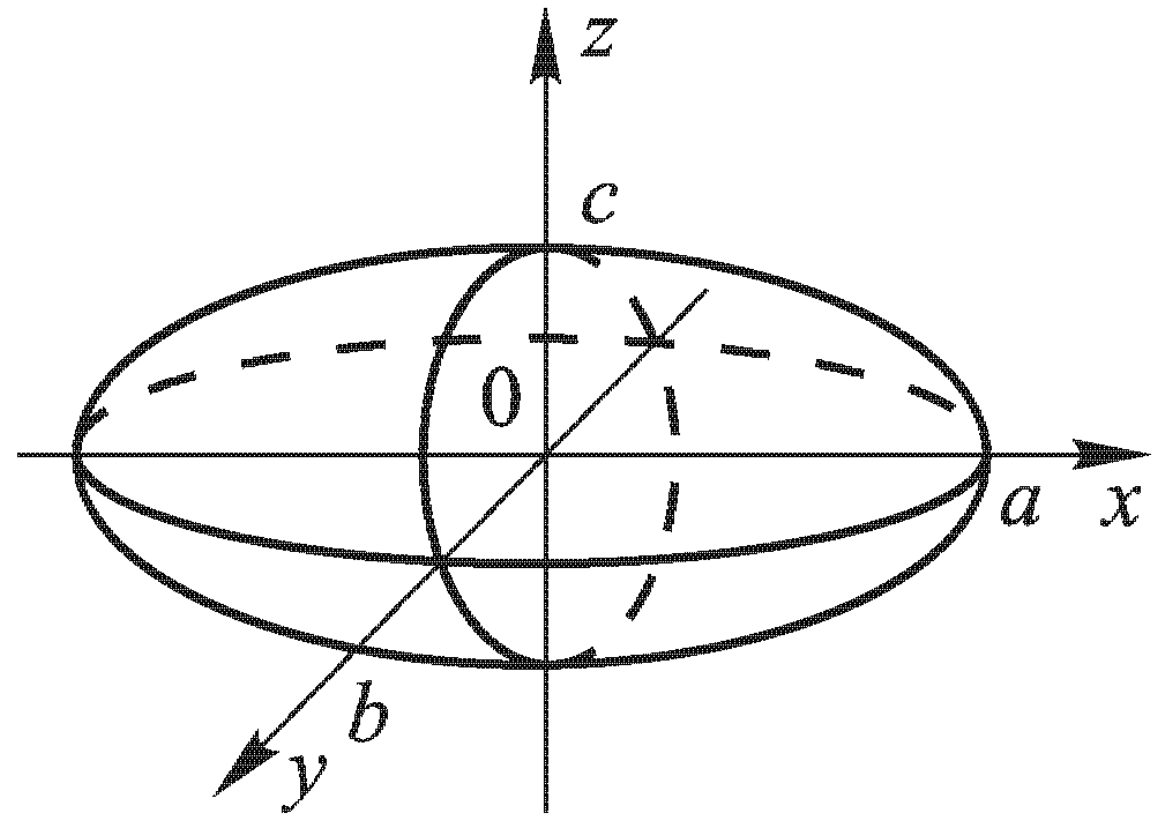
Aylanma sirtlar

Aylanma ellipsoidlar

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

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

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

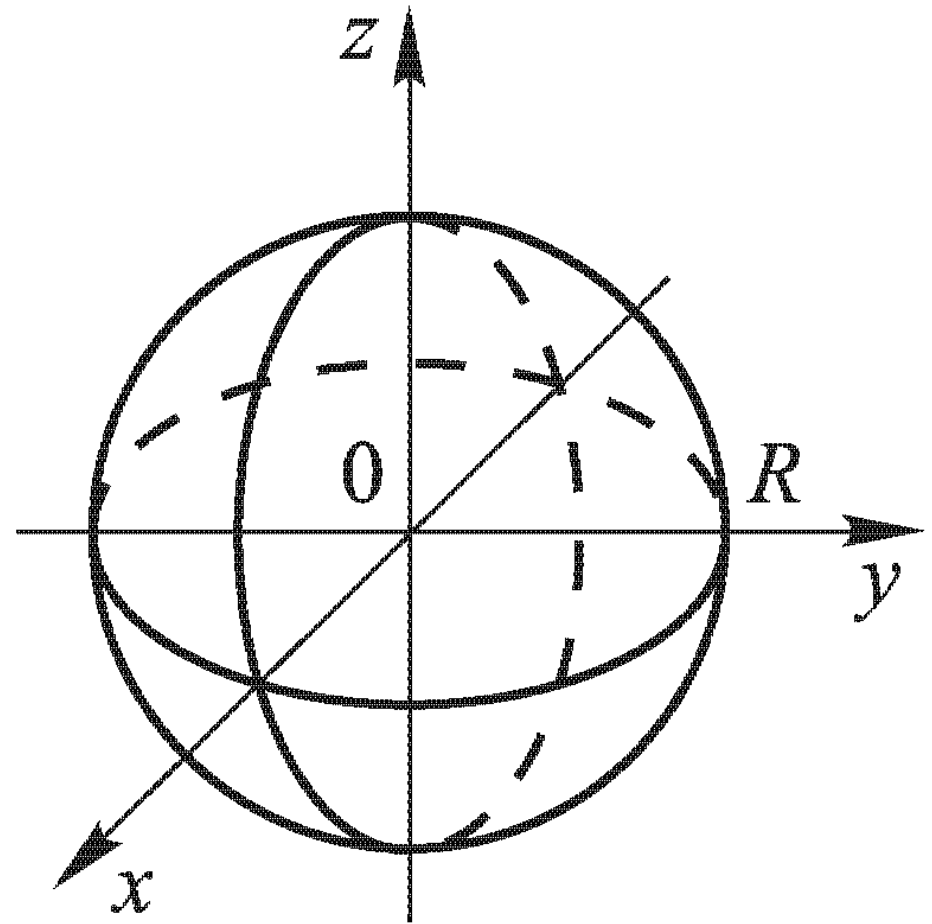


Sfera aylanma ellipsoiddir, chunki sferani aylanma ellipsoid ko'inishida yozish mumkin

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

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

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

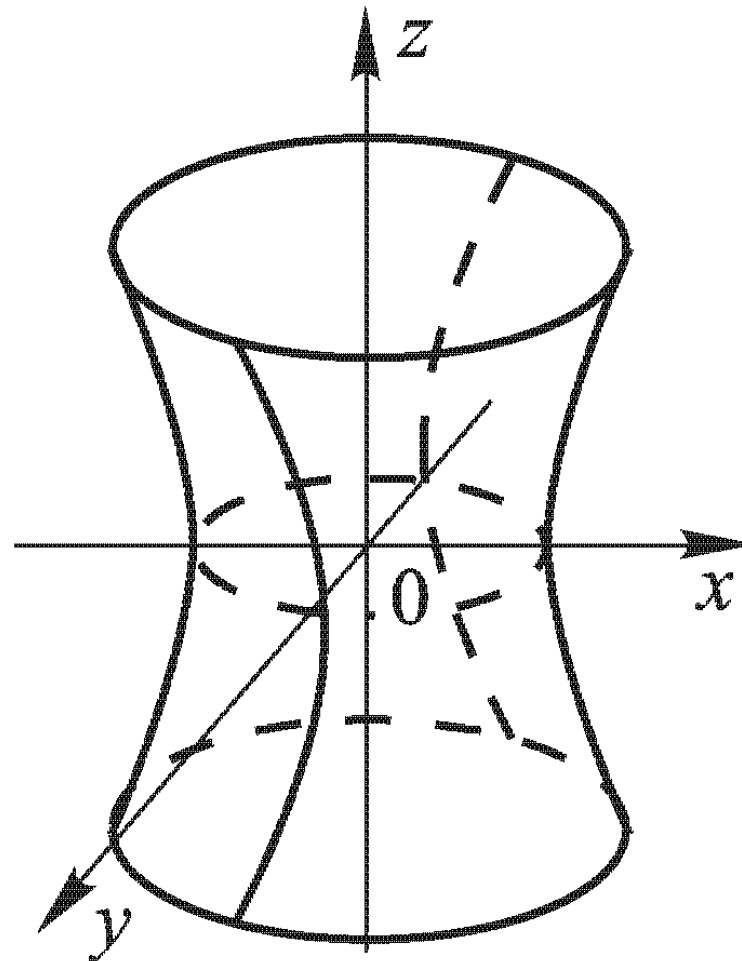


Bir pallali aylanma giperboloid

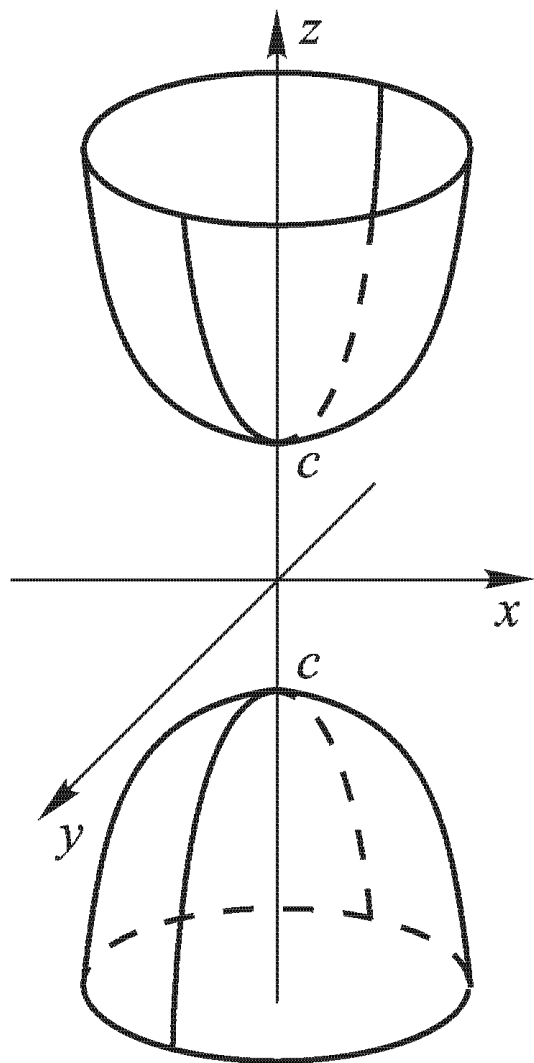
$$\frac{x^2 + y^2}{a^2} - \frac{z^2}{c^2} = 1$$

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

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



Ikki pallali aylanma giperboloid

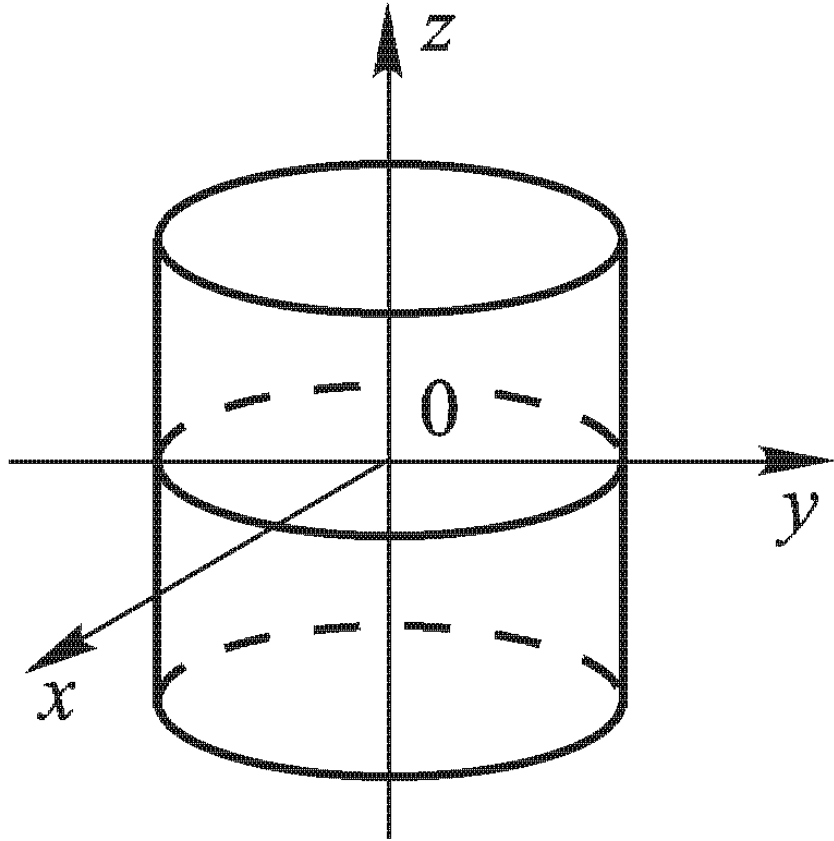


$$\frac{x^2 + y^2}{a^2} - \frac{z^2}{c^2} = -1$$

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

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

Aylanma elliptik paraboloid



$$x^2 + y^2 = 2pz$$

$$x^2 + z^2 = 2py$$

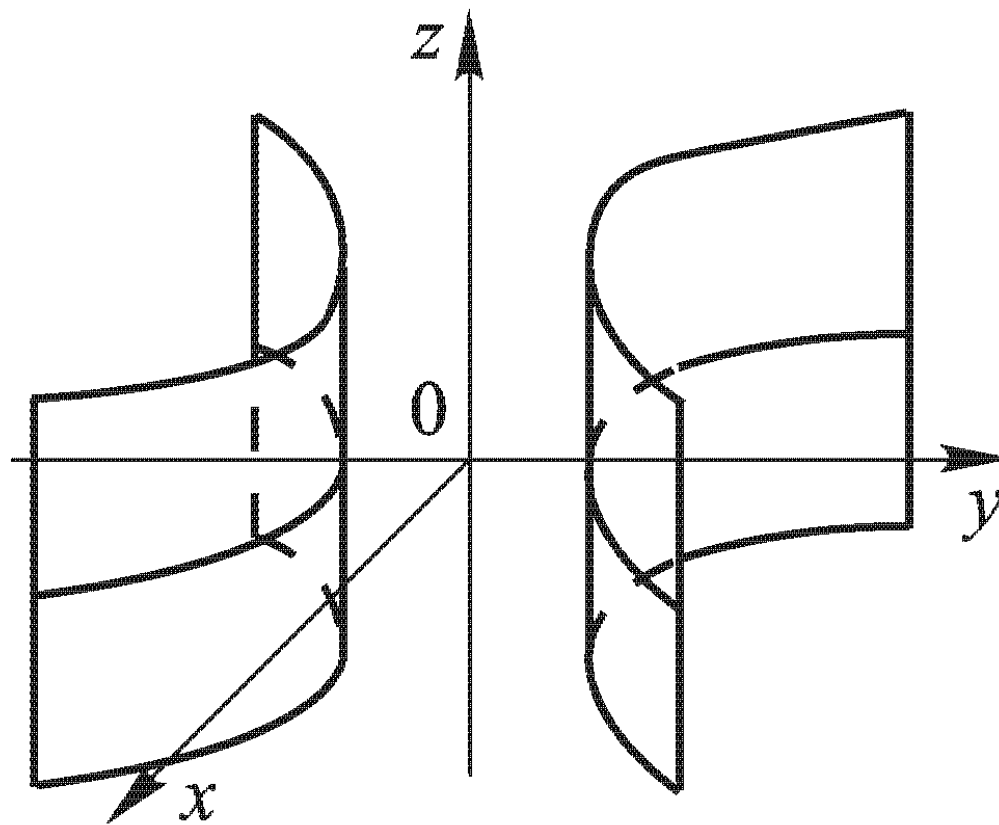
$$y^2 + z^2 = 2px$$

Aylanma giperbolik paraboloid

$$x^2 - y^2 = 2pz$$

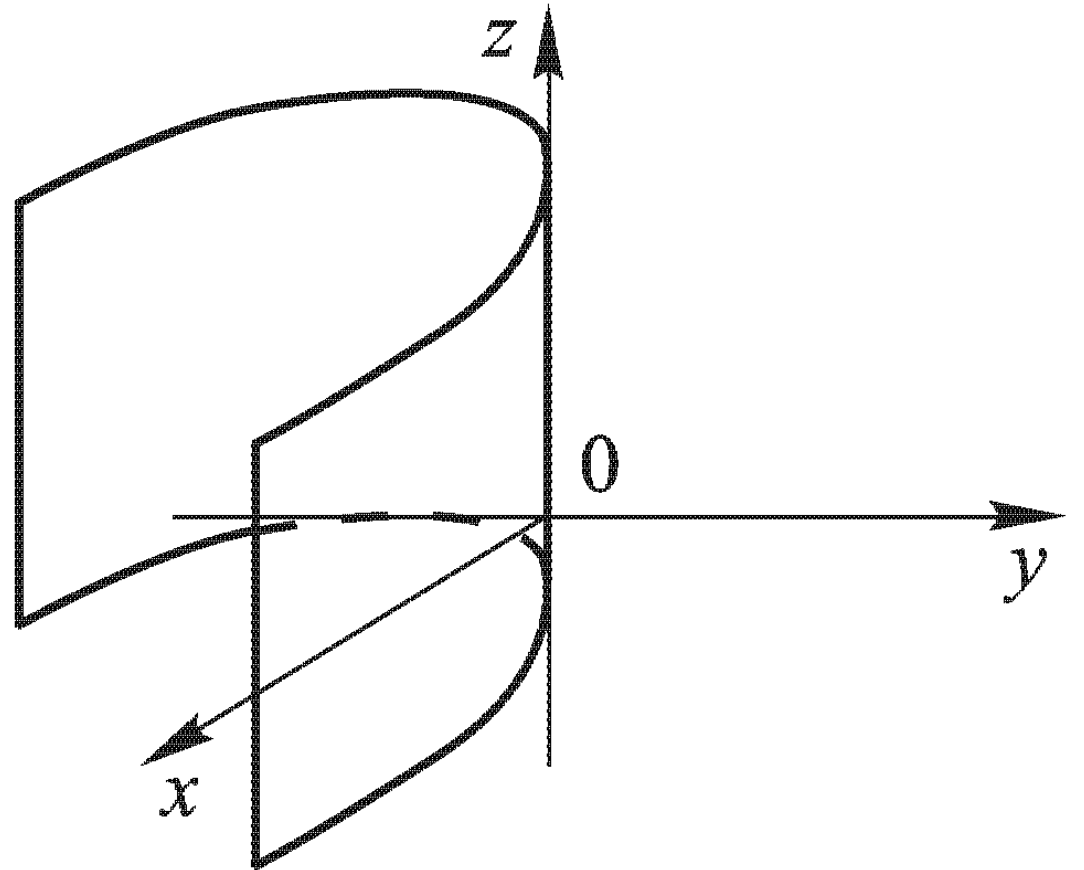
$$x^2 - z^2 = 2py$$

$$y^2 - z^2 = 2px$$



Misollar

$$y^2 = 4x$$



Misollar

$$y^2 + z^2 = 4$$

