Obrtne površi

Ako površ rotira oko z ose, jednačina površi je

$$z = f(x^2 + y^2)$$

Ako površ rotira oko y ose, jednačina površi je

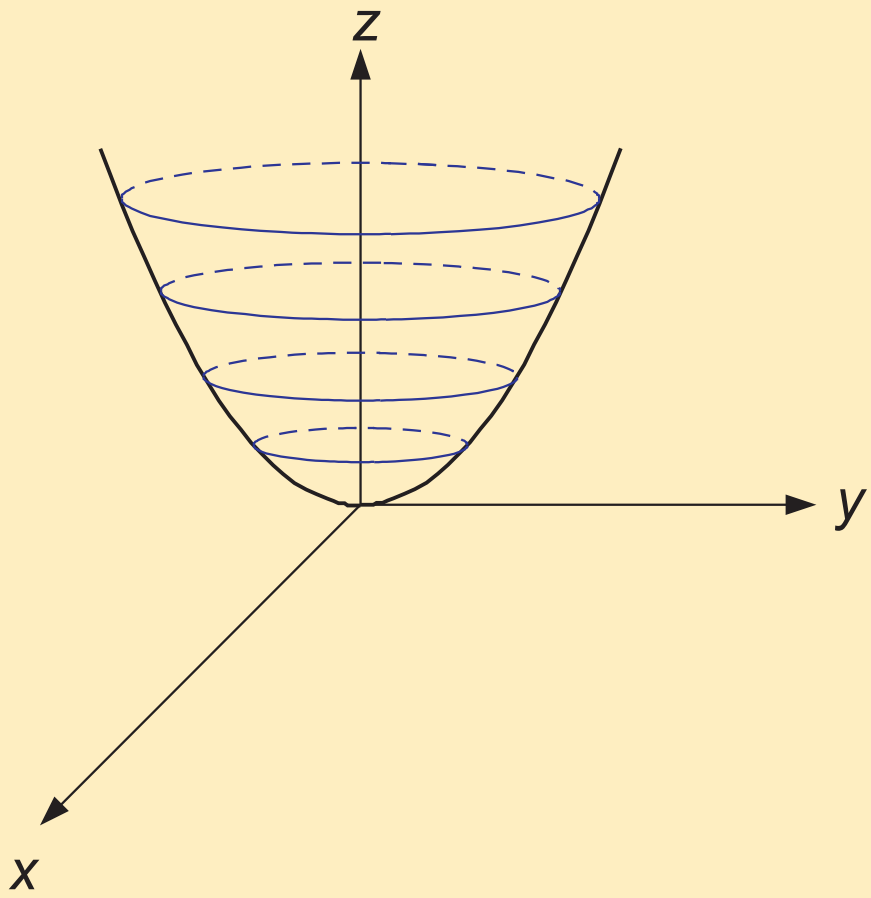
$$y = f(x^2 + z^2)$$

Ako površ rotira oko x ose, jednačina površi je

$$x = f(y^2 + z^2)$$

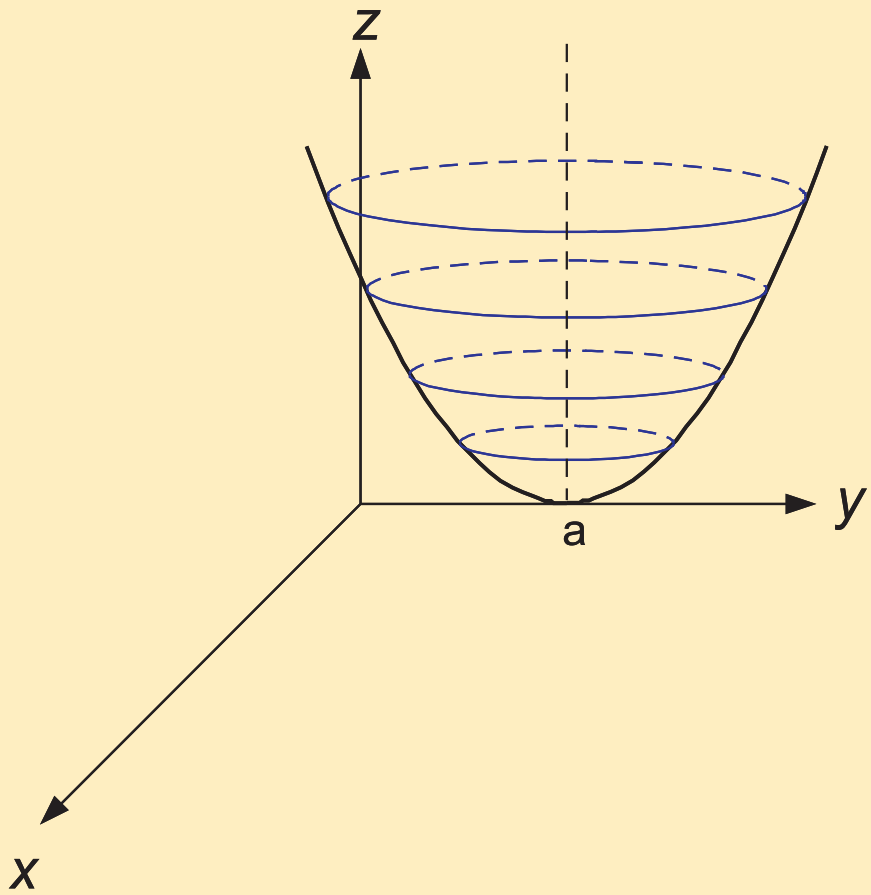
Obrtne površi - obrtni paraboloid

$z = x^2 + y^2$



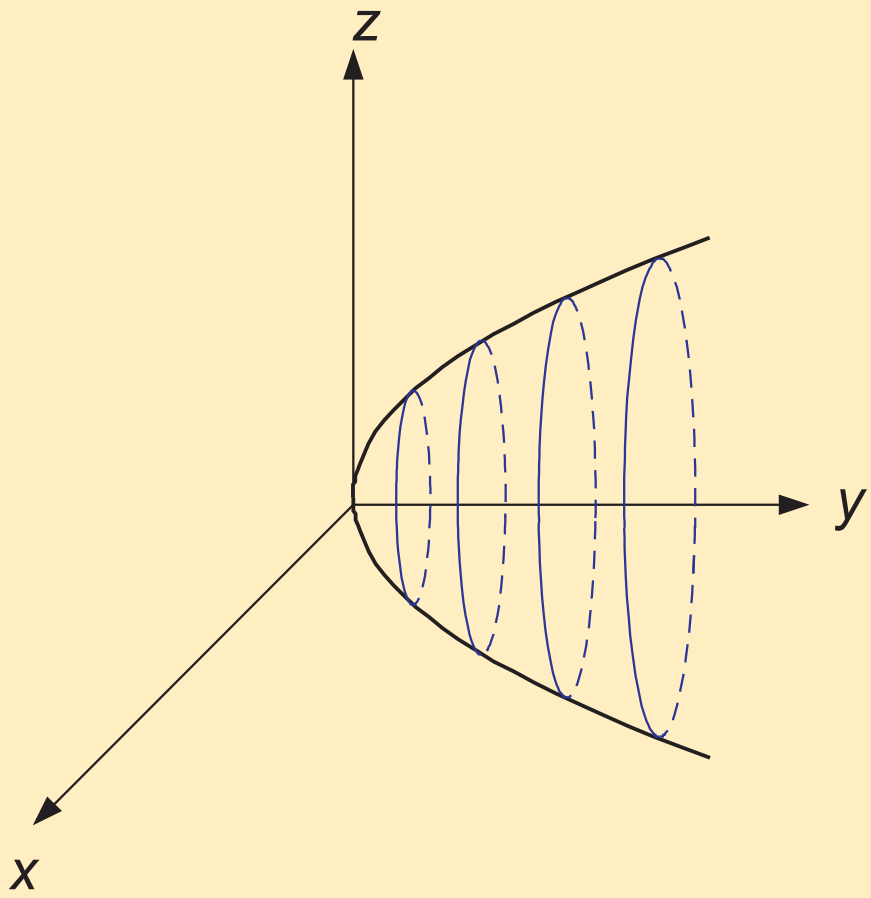
Obrtne površi - obrtni paraboloid

$z = x^2 + (y - a)^2,\ a > 0$



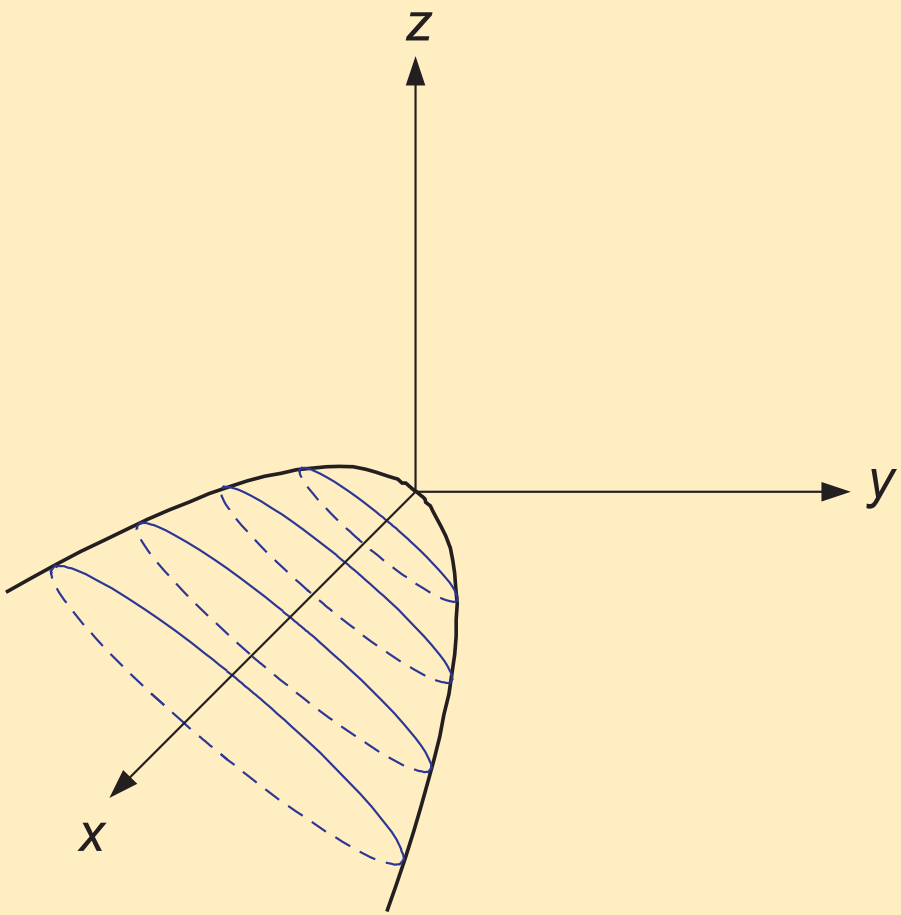
Obrtne površi - obrtni paraboloid

$y = x^2 + z^2$



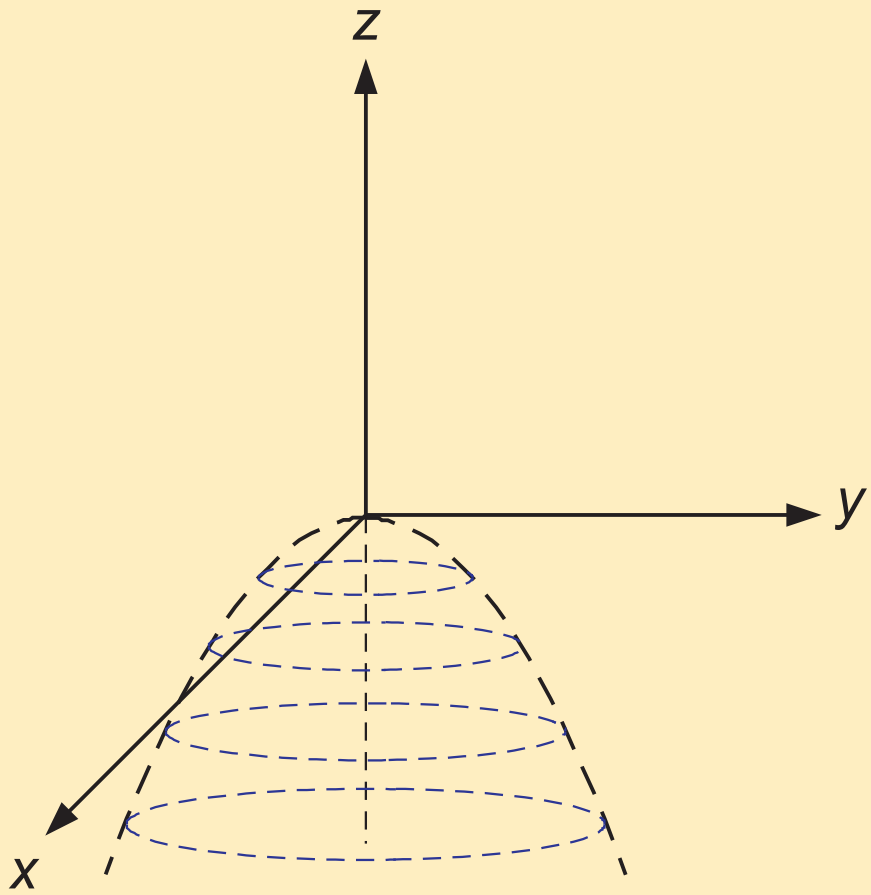
Obrtne površi - obrtni paraboloid

$x = y^2 + z^2$



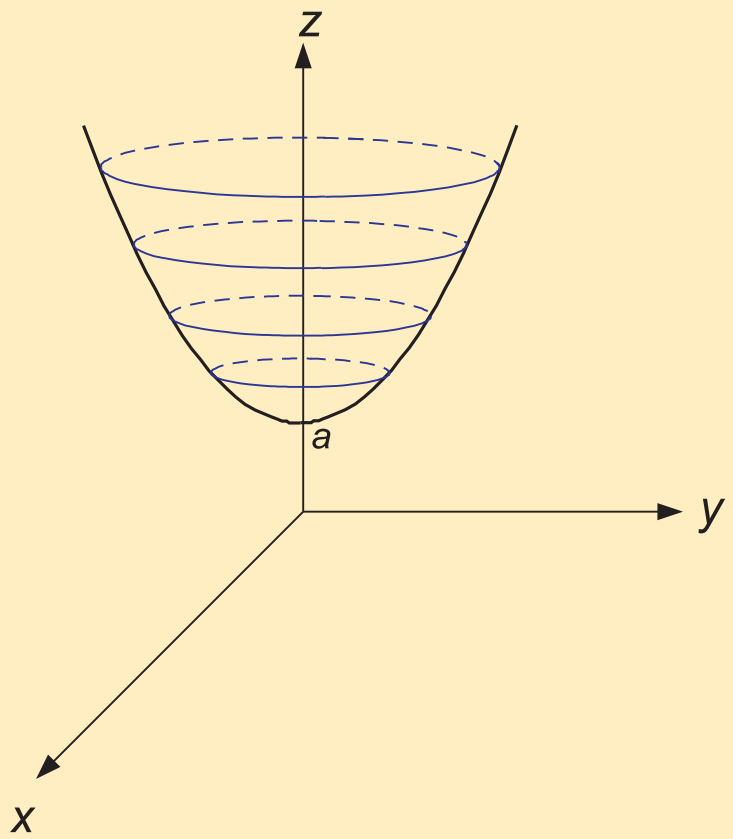
Obrtne površi - obrtni paraboloid

$z = -(x^2 + y^2)$



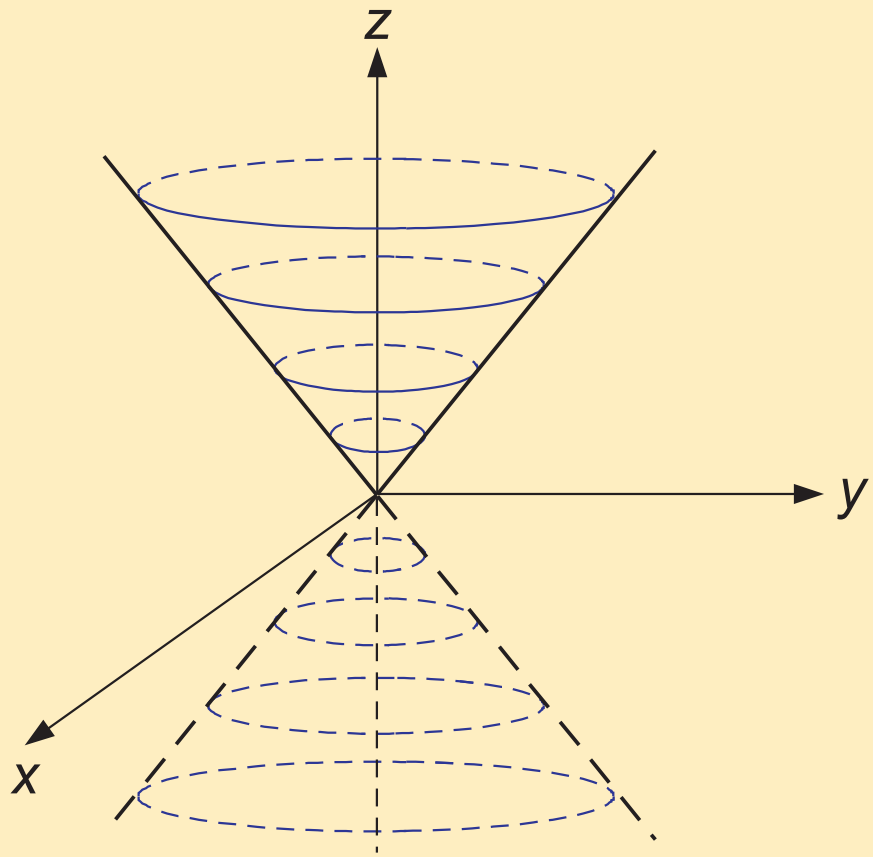
Obrtne površi - obrtni paraboloid

$z = x^2 + y^2 + a,\ a > 0$



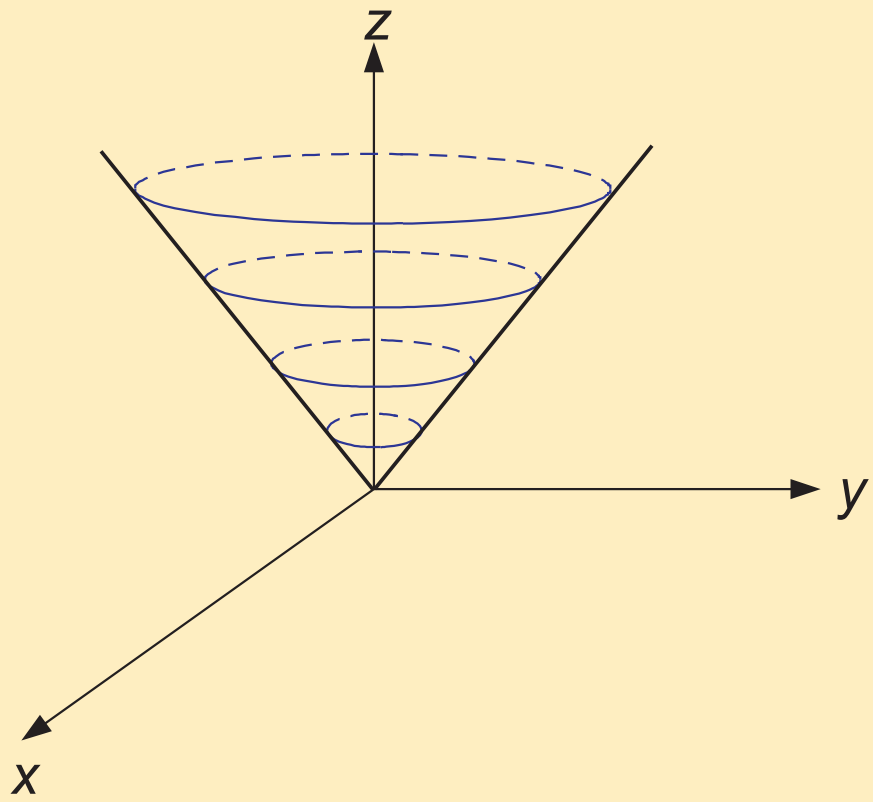
Obrtne površi - centralni konus

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



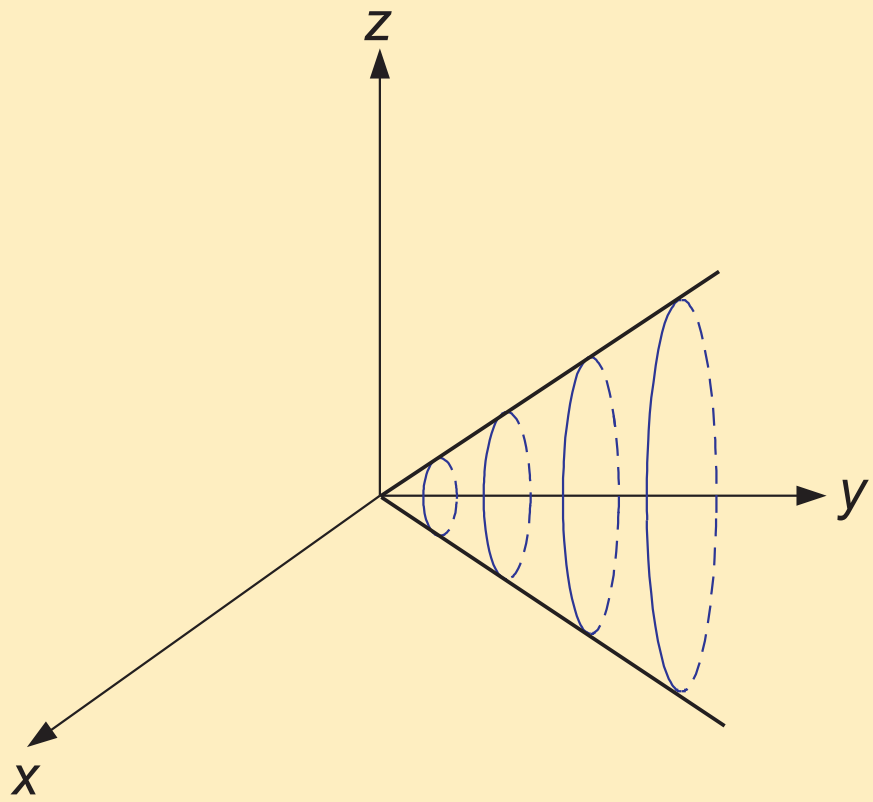
Obrtne površi - centralni konus

$z = \sqrt{x^2 + y^2}$



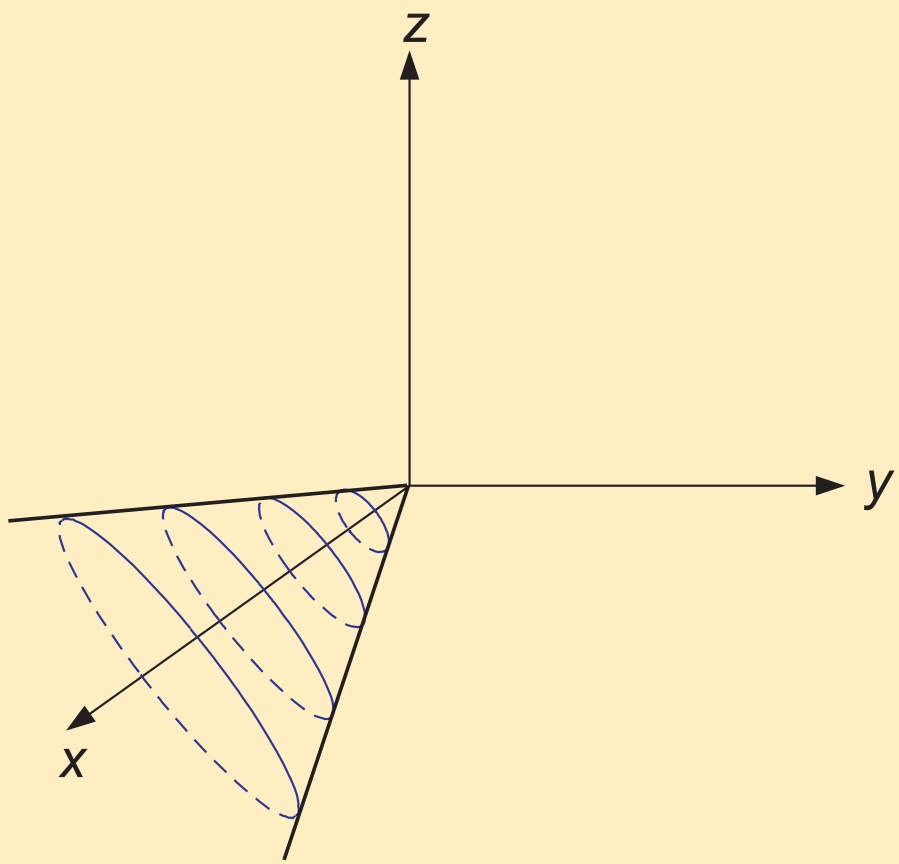
Obrtne površi - centralni konus

$y = \sqrt{x^2 + z^2}$



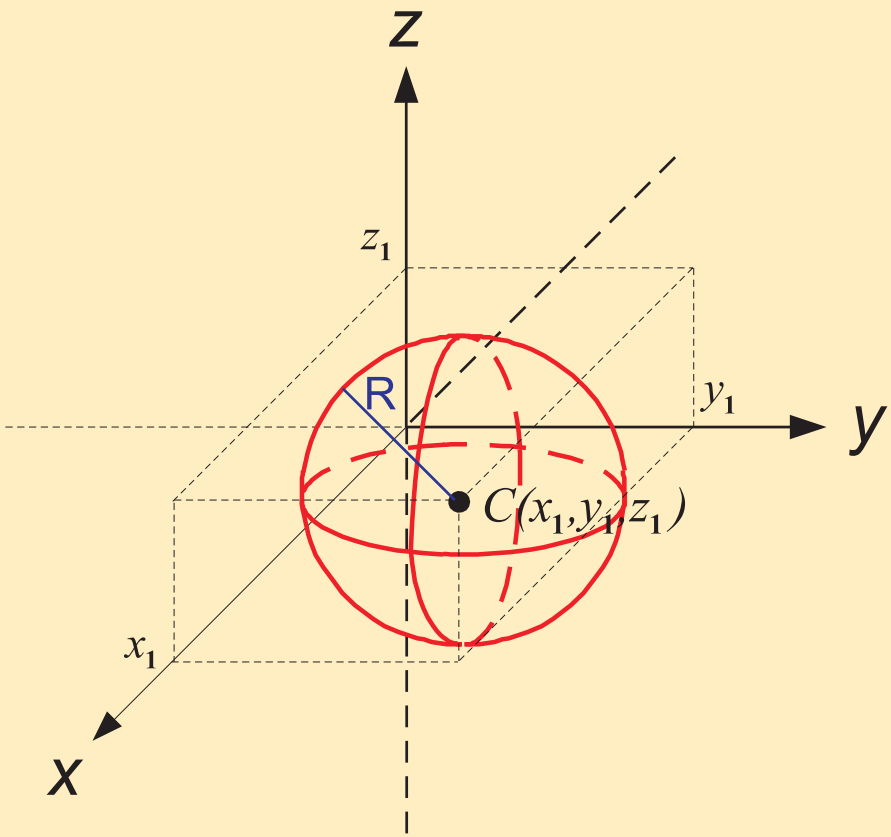
Obrtne površi - centralni konus

$x = \sqrt{y^2 + z^2}$



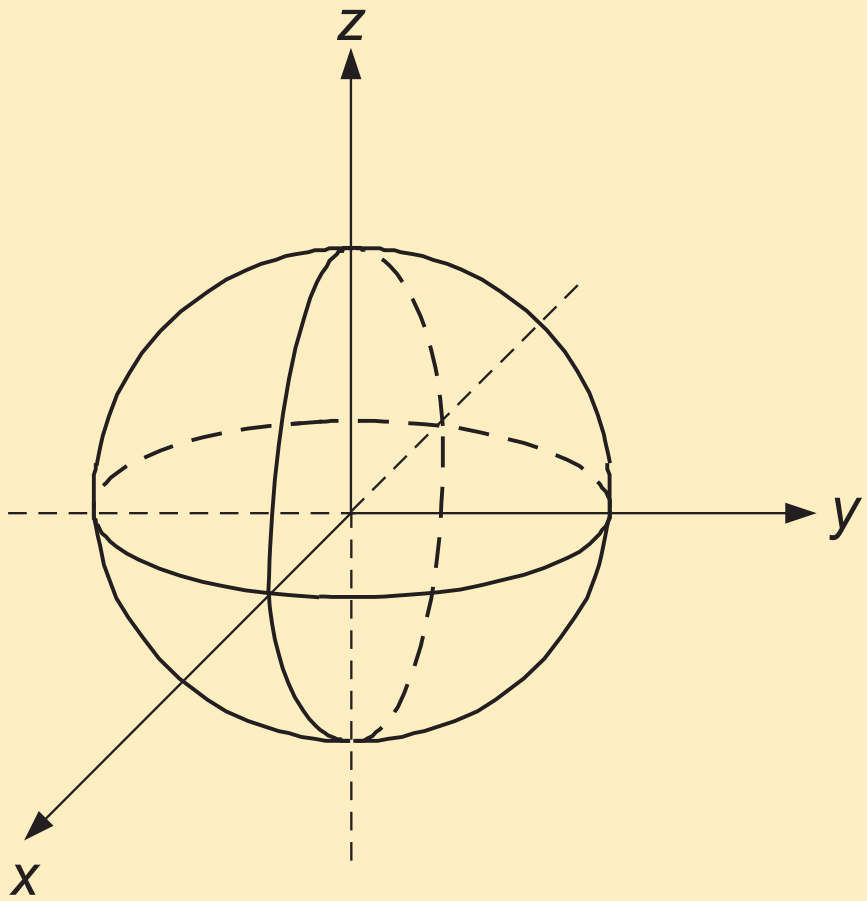
Obrtne površi - sfera sa centrom u $C(x_1, y_1, z_1)$ pol. R

$$(x - x_1)^2 + (y - y_1)^2 + (z - z_1)^2 = R^2$$



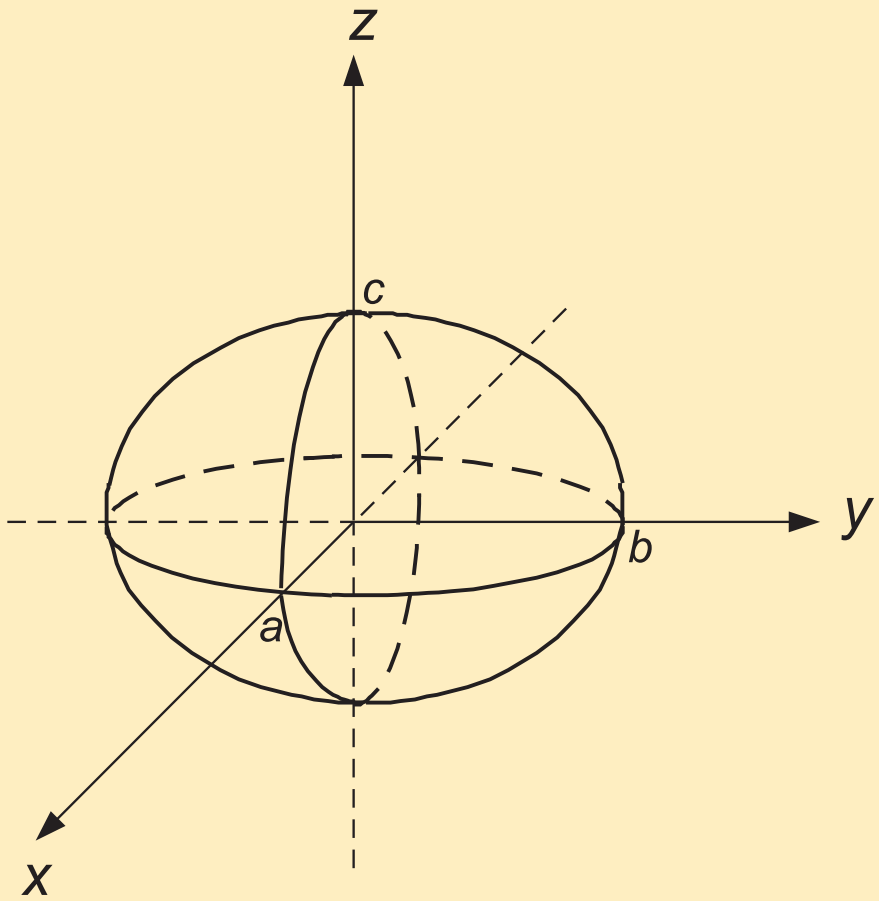
Obrtne površi - centralna sfera poluprečnika R

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



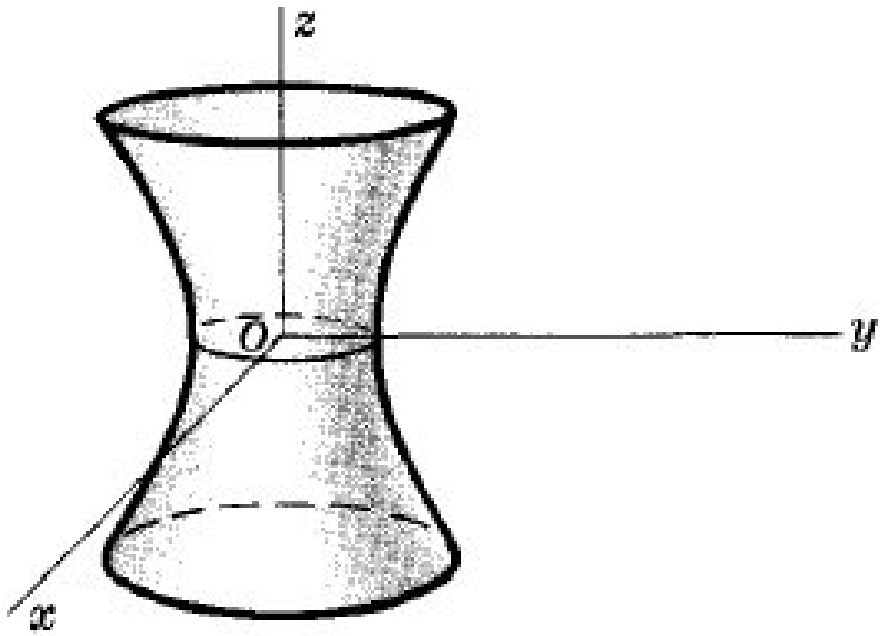
Obrtne površi - centralni elipsoid

$x^2/a^2 + y^2/b^2 + z^2/c^2 = 1$



Obrtne površi - hiperboloid

$x^2/a^2 + y^2/b^2 - z^2/c^2 = 1$



Cilindrične površi

Ako je površ paralelna sa z osom, jednačina površi je

$$f(x, y) = 0$$

Ako je površ paralelna sa y osom, jednačina površi je

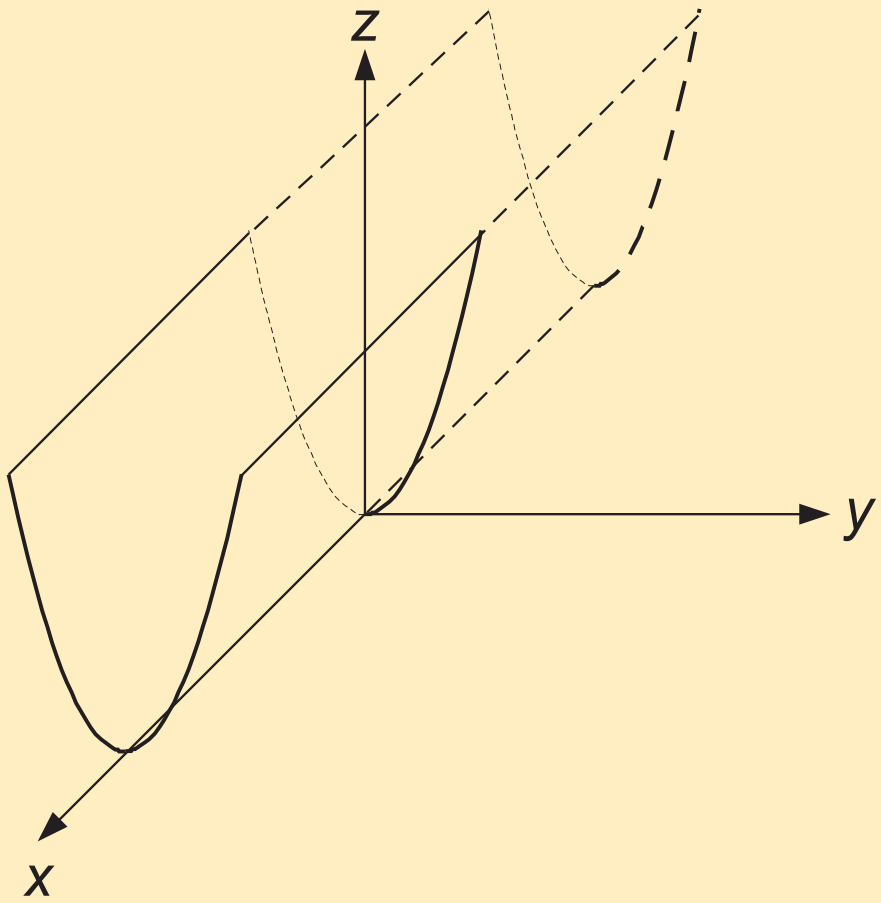
$$f(x, z) = 0$$

Ako je površ paralelna sa x osom, jednačina površi je

$$f(y, z) = 0$$

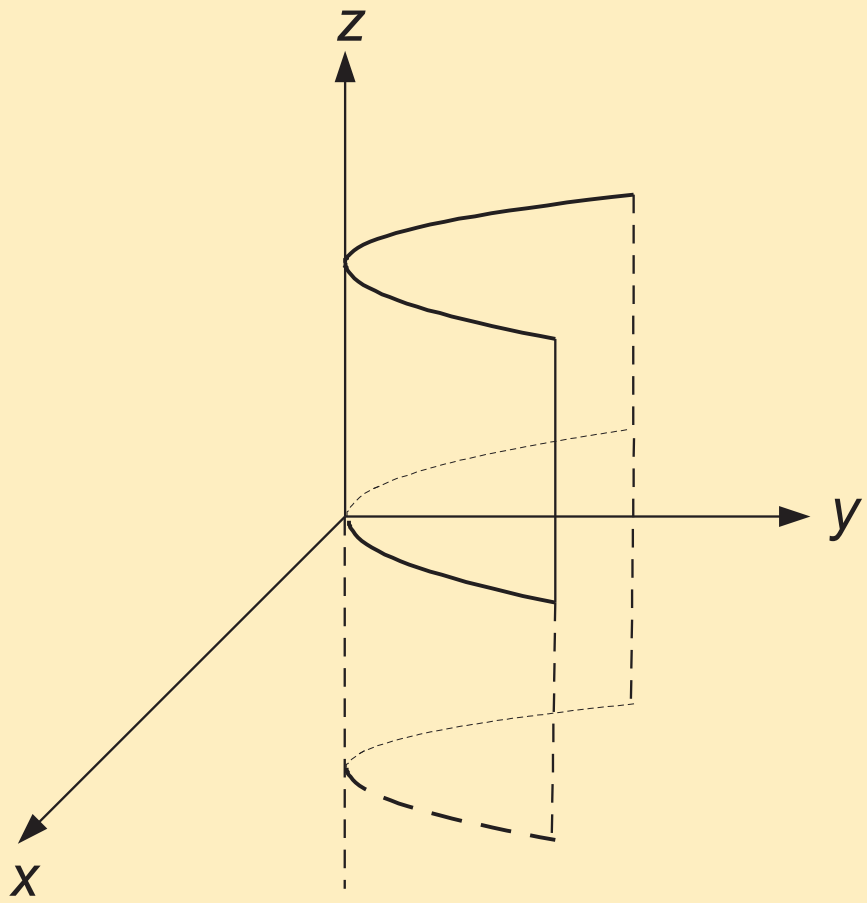
Cilindrične površi

$z = y^2$



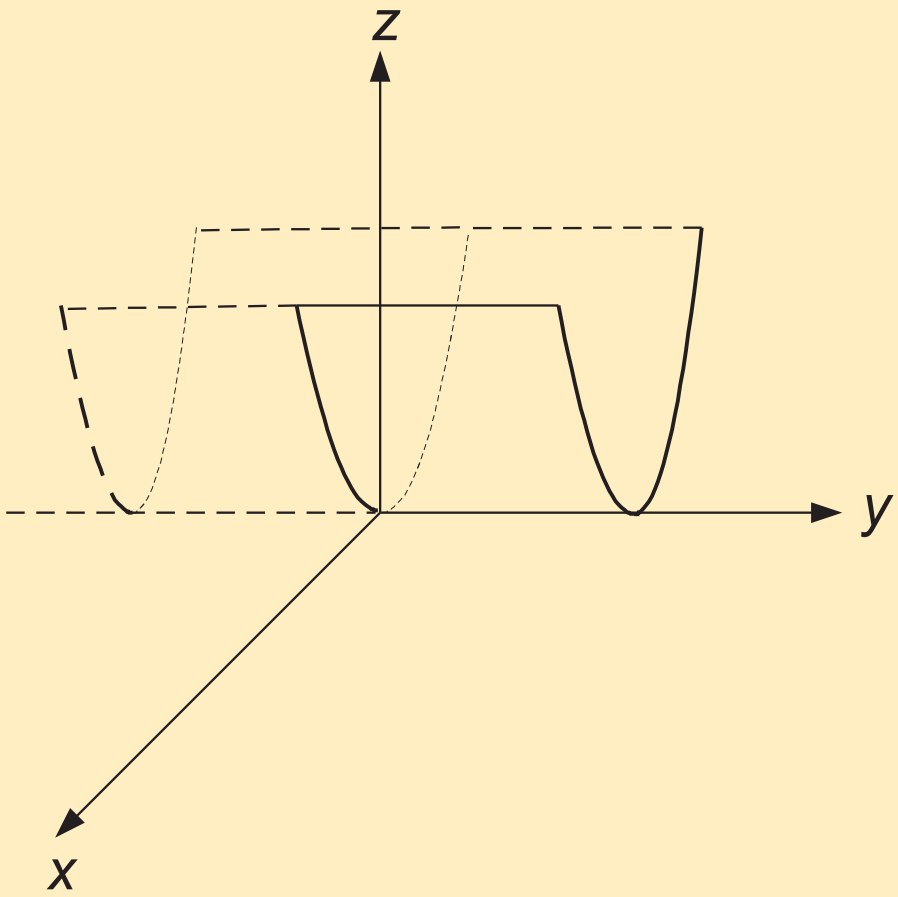
Cilindrične površi

$y = x^2$



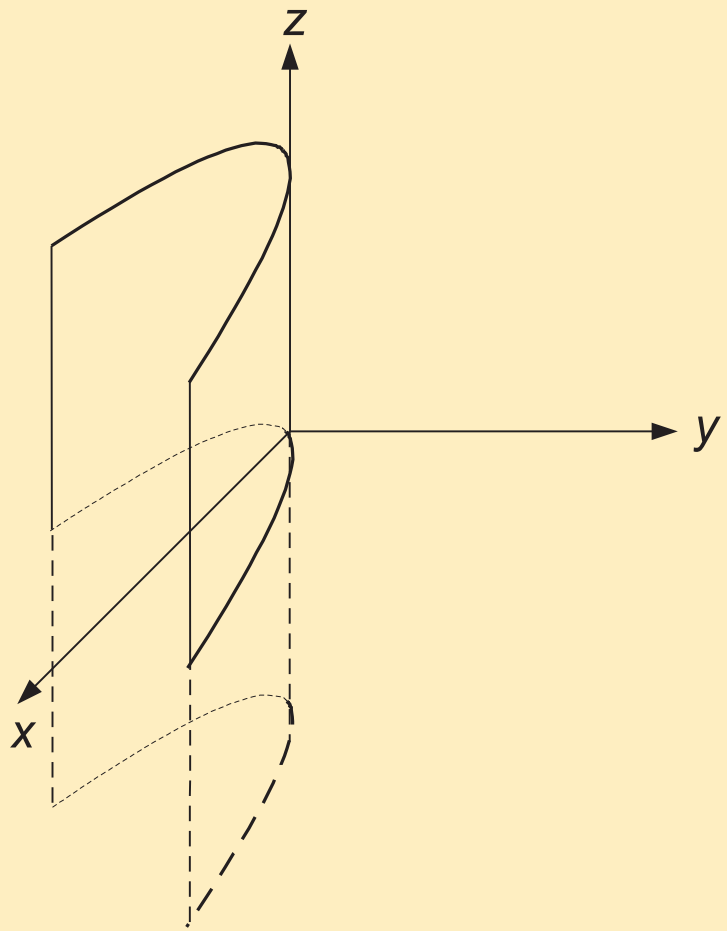
Cilindrične površi

$z = x^2$



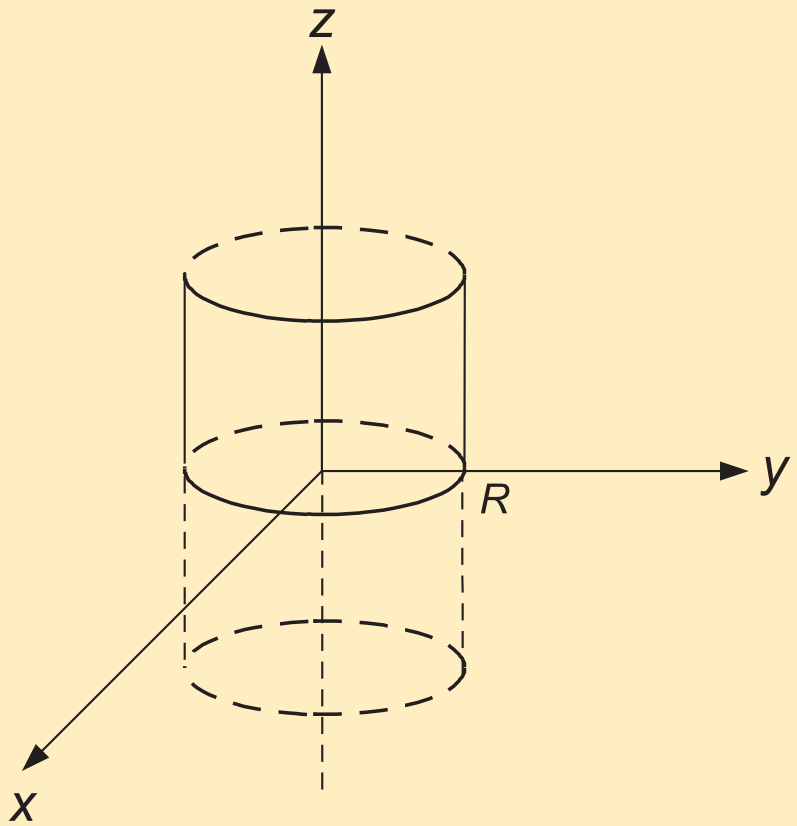
Cilindrične površi

$x = y^2$



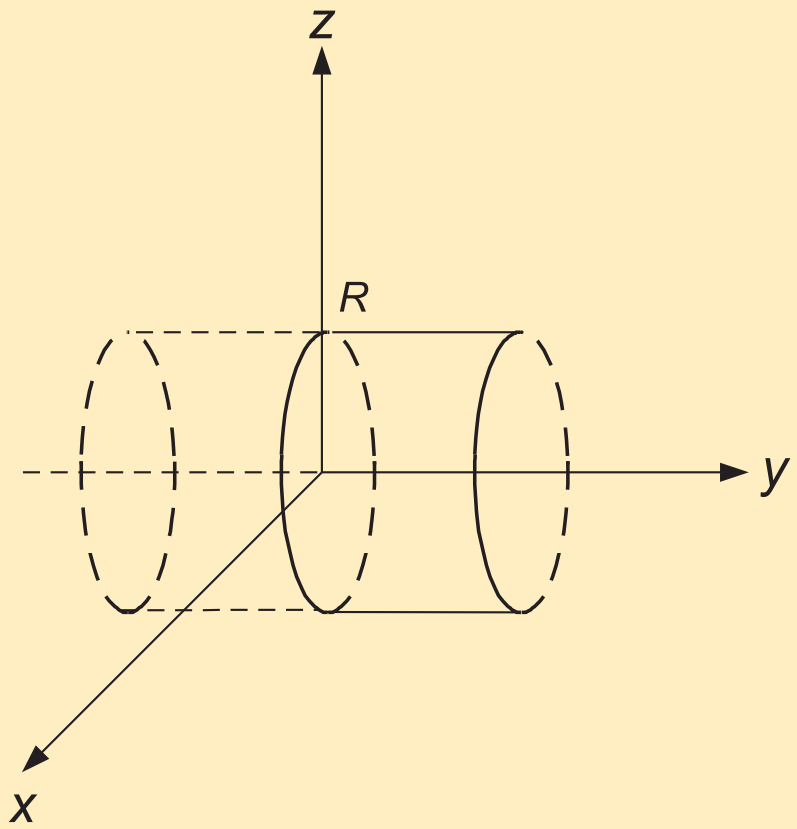
Cilindrične površi

$x^2 + y^2 = R^2$



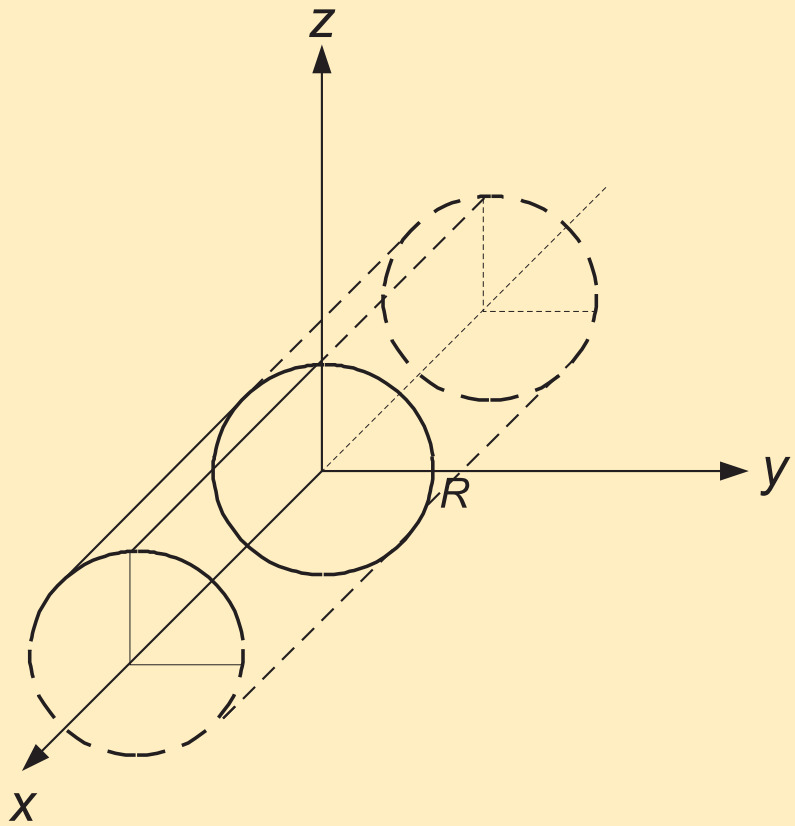
Cilindrične površi

$x^2 + z^2 = R^2$



Cilindrične površi

$y^2 + z^2 = R^2$



Ravni

Skalarni oblik jednačina ravni je

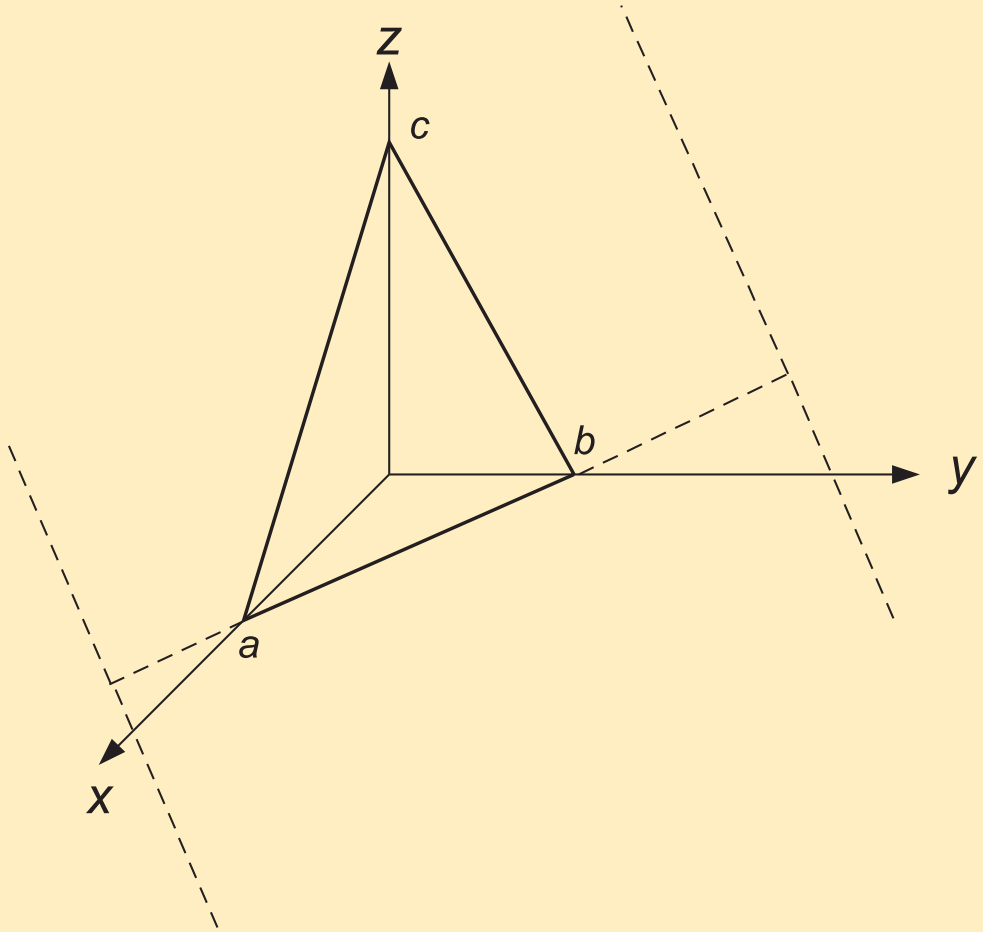
$$Ax + By + Cz + D = 0\,,\ A, B, C, D \in \mathbb{R}.$$

Segmentni oblik jednačina ravni je

$$\frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 1\,,\ \ a,\ b \text{ i } c \text{ odsečci na } x,\ y \text{ i } z \text{ osi, redom.}$$

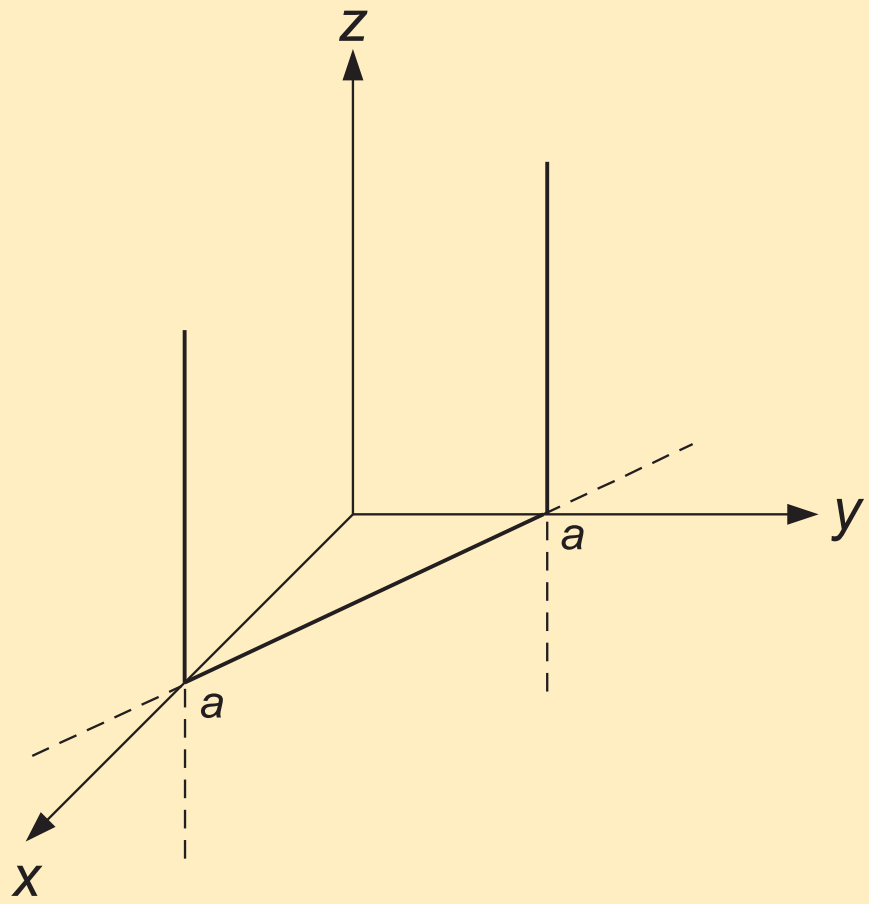
Ravan - segmentni oblik jednačine

$x/a + y/b + z/c = 1$



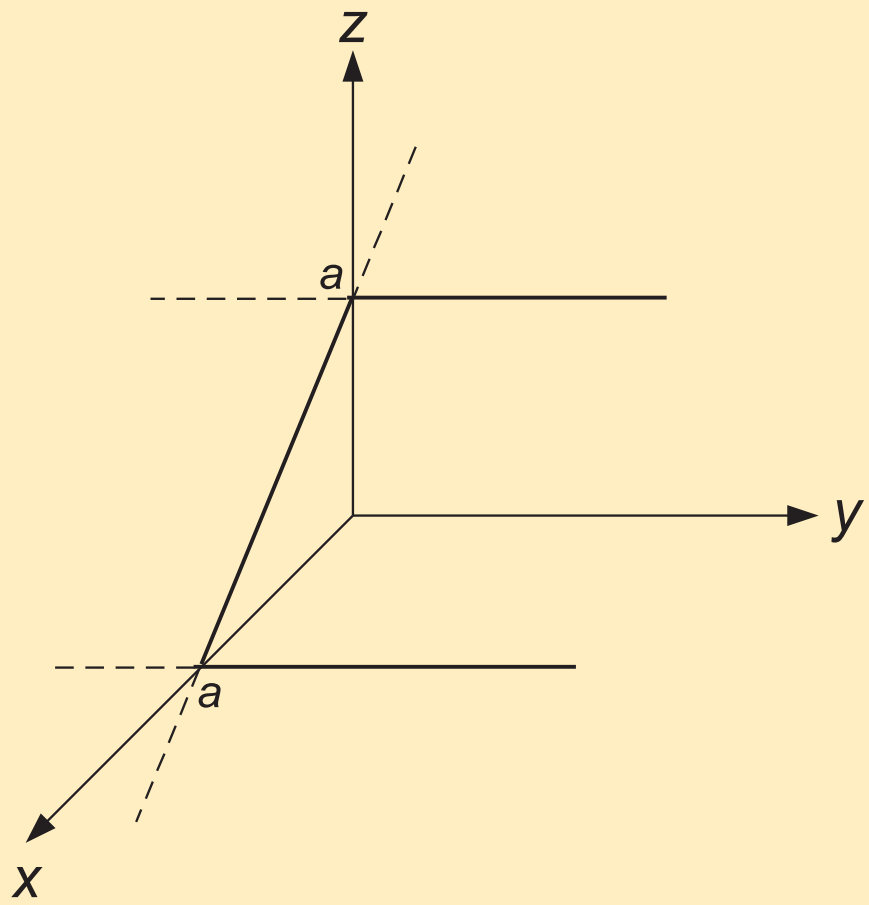
Ravan

$x + y = a$



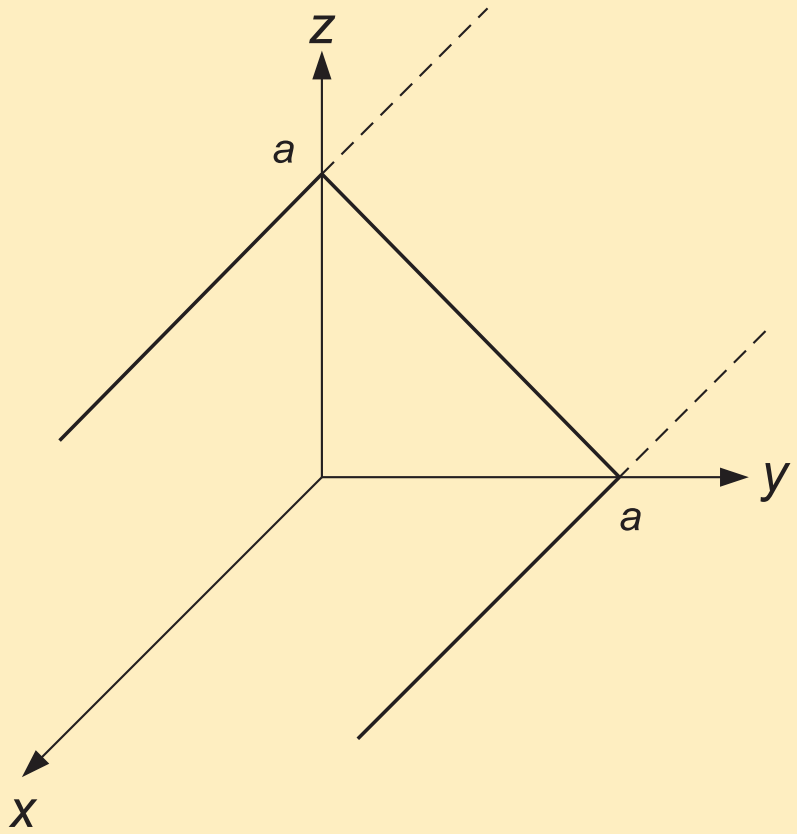
Ravan

$x + z = a$



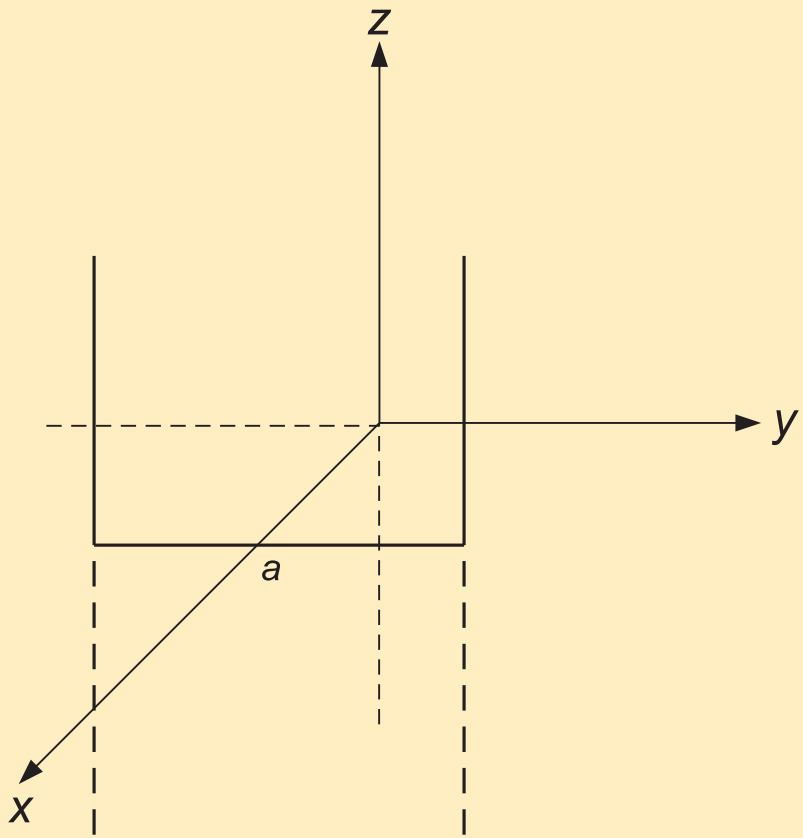
Ravan

$y + z = a$



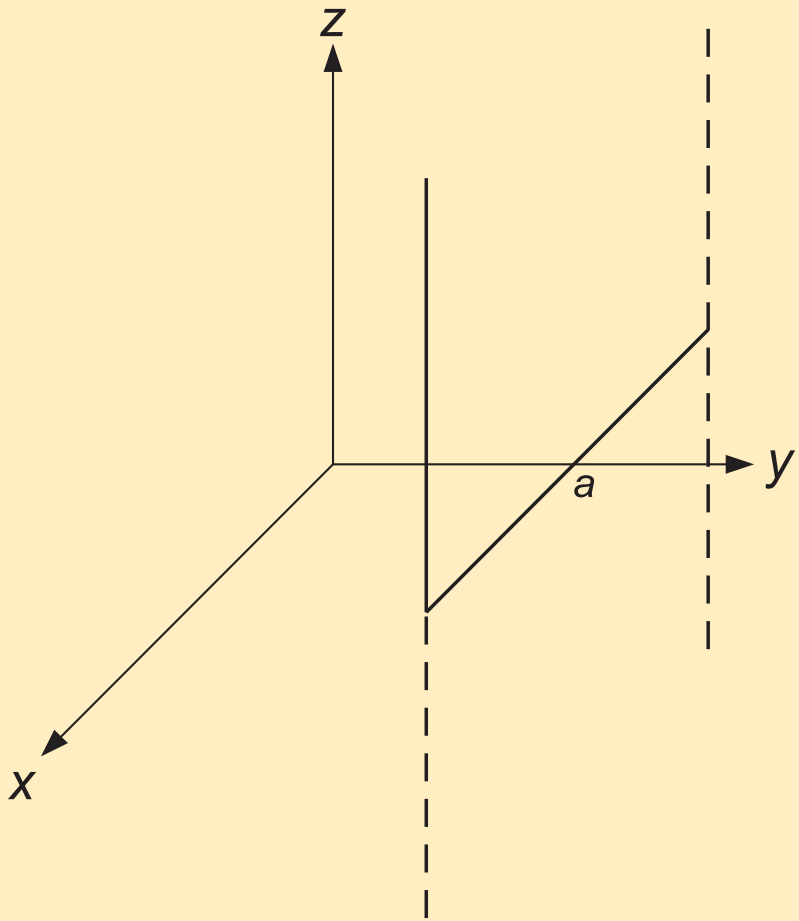
Ravan

$x = a$



Ravan

$y = a$



Ravan

$z = a$