

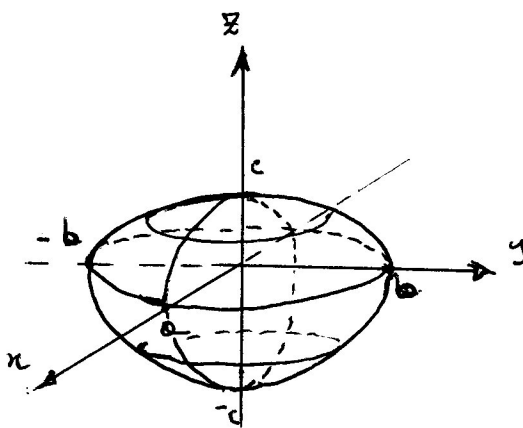
# Equazioni canoniche delle quadriche non degeneri in $\mathbb{R}^3$

①

Ellissoide

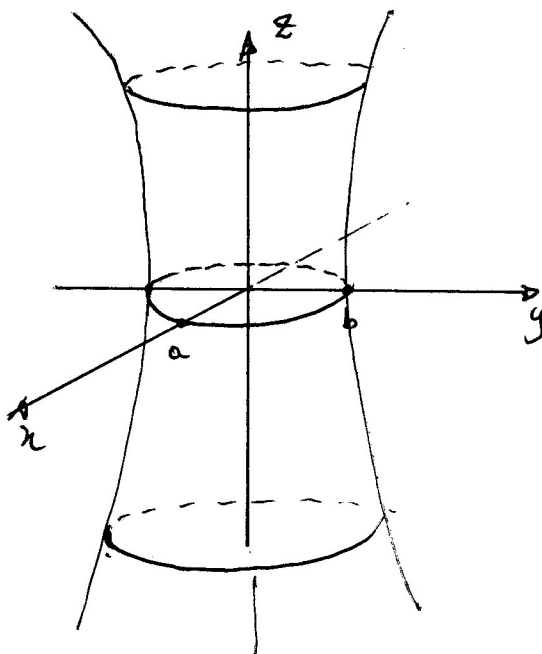
$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$$

(Se  $a=b=c$  allora: sfera)



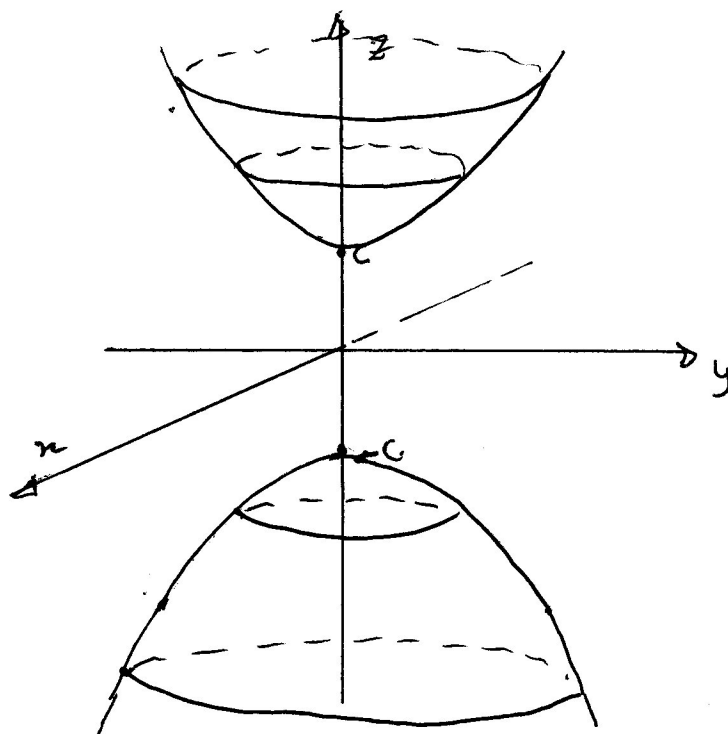
Iperboloide a una falda

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



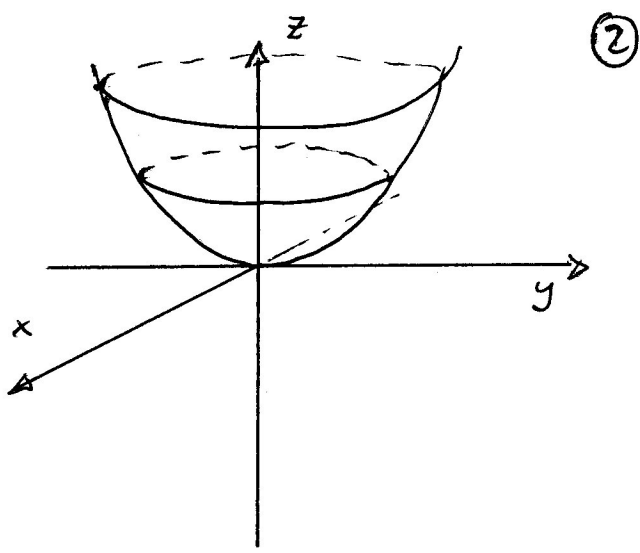
Iperboloide a due falde

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



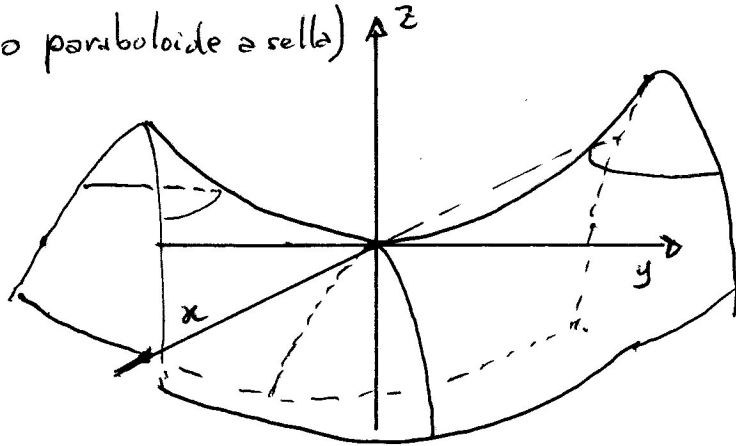
Paraboloido ellittico

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



Paraboloido iperbolico (o paraboloido a sella)

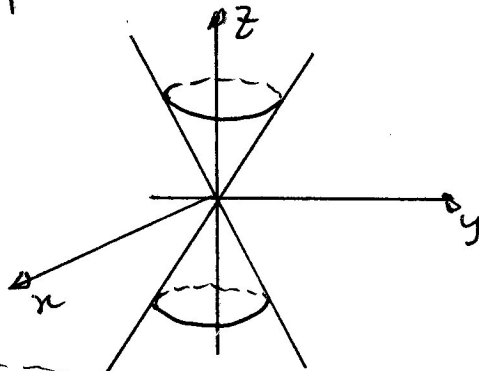
$$2z = \frac{x^2}{a^2} - \frac{y^2}{b^2}$$



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ALTRE QUADRICHE DEGENERI

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



$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = R^2 \quad \text{cilindro}$$

