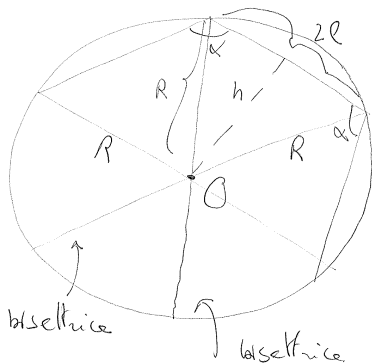


Poligoni, Poliedri e Politopi regolari

Camillo De Lellis

Universität Zürich - Institut für Mathematik.

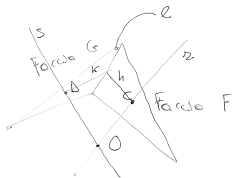
Figura 1



$$R = \sqrt{h^2 + l^2}$$

O = centro del cerchio inscritto
e circoscritto

Fig. 2



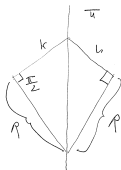
C e D : centri

$$r \perp k$$

$$h \perp r$$

$h \perp r$ appartengono al piano $u \perp r$

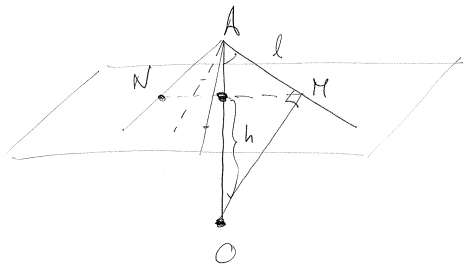
$$s \perp k \quad \text{-----} \quad u \perp r$$



$$h = k$$

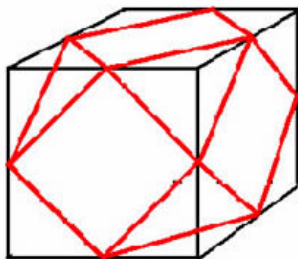
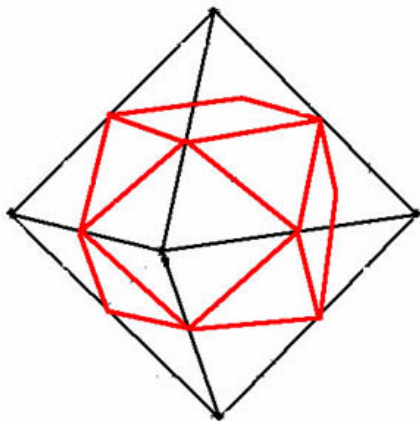
→ O è equidistante dalle due linee

Fig 3

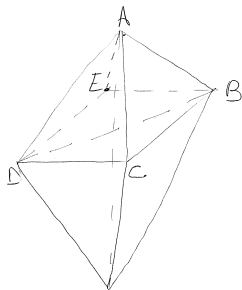
 $2l =$ lato del poliedro regolare

 $OA =$ raggio della sfera circoscritta

 $OM =$ _____ mediana della

h è determinato: i punti nodi degli spigoli sono complanari.



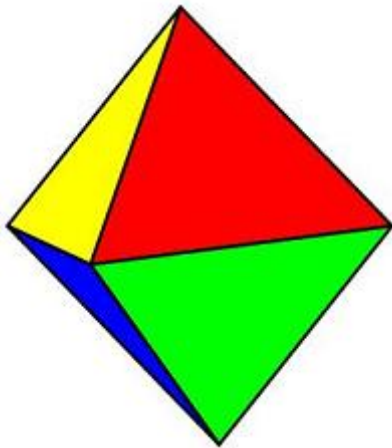
L' ottaedro

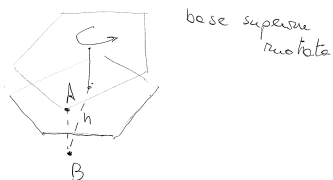
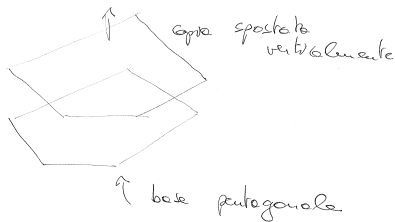


$$\overline{AB} = \overline{DA} = \overline{BC}$$

$$\overline{DB} = \sqrt{2} \overline{BC} = \sqrt{2} \overline{DA}$$

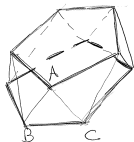
ADB è "medio quadrato" !



L'icosaedro Parte I

il vertice A della base superiore "cade" sull'altrezza h della base inferiore

L'icosaedro 2



L'antiprisma a base pentagonale
 i vertici della base sono collegati in
 "alternanza".

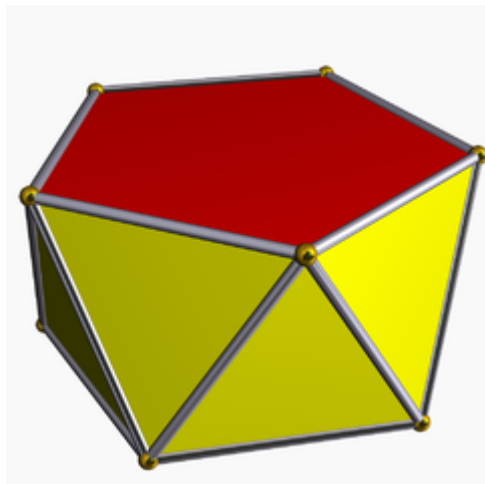
$$\text{Lato di base} = \overline{BC} = l$$

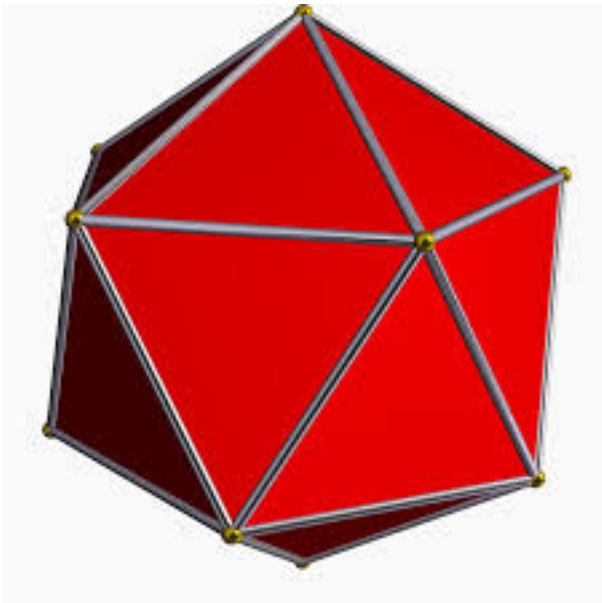
$$\text{Lato "laterale"} = \overline{AC} = d$$

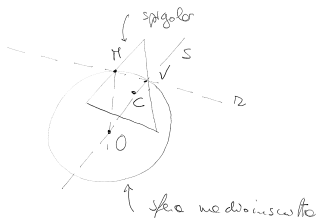
h = altezza dell'antiprisma

$$h \rightarrow 0 \quad l > d$$

$$h \rightarrow +\infty \quad d \uparrow +\infty$$







$r \perp$ spigolo

$r \parallel$ sfera

M = punto medio

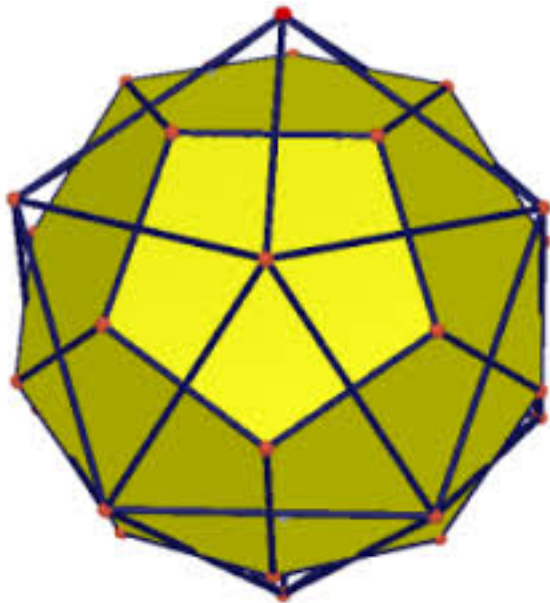
C = centro della sfera

S = retta per O e C

S e r sono ortogonali allo spigolo

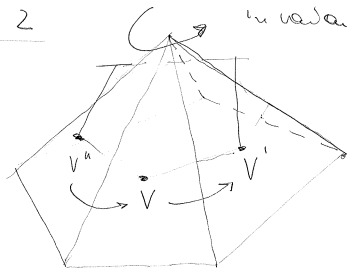
\Rightarrow complanari

\Rightarrow si intersecano in V



Analisi 2

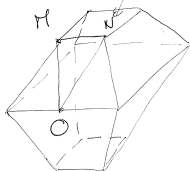
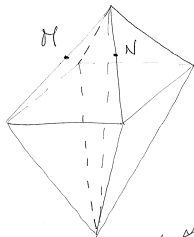
Fig. 8



in rotazione per
rotazione

V, V', V'' Complanari

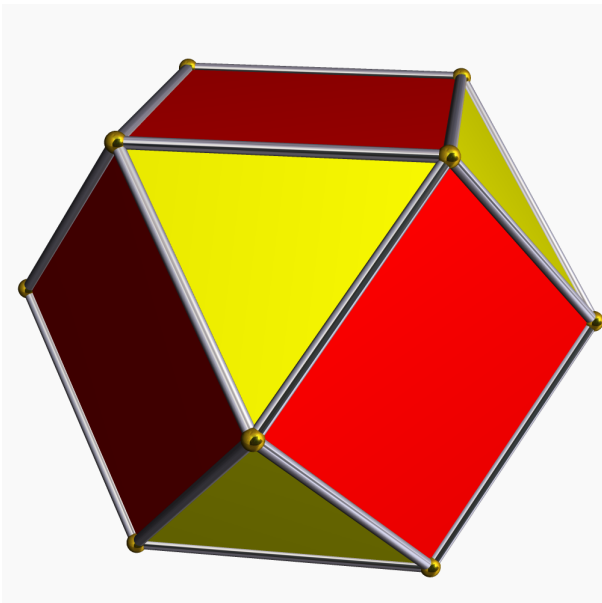
Se un piano parallelo alla
figura al vertice!

Il cuboide

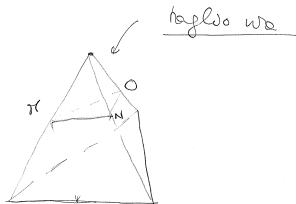
"tagliare con due
vertici"

figura

del vertice

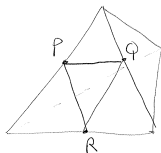


Tetraedo troncato



taglio wa

ΔPNO è un triangolo equilatero



PQR anche!

