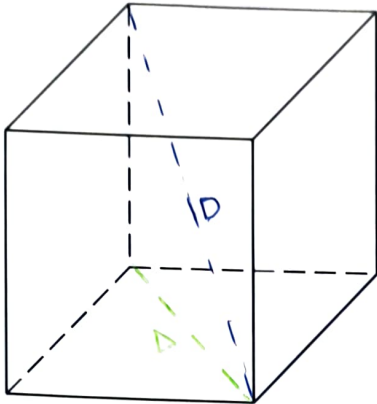


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# FORMULE CUBO



## FORMULE QUADRATO

D= DIAGONALE

$$A = l^2$$

$$l = \sqrt{A}$$

$$D = l \times \sqrt{2} \quad l = \frac{D}{\sqrt{2}}$$

$$P = l \times 4 \rightarrow l = \frac{P}{4}$$

## FORMULE CUBO

Ab= AREA DI BASE

Al= AREA LATERALE

At= AREA TOTALE

D= DIAGONALE

$$Ab = l^2$$

$$Al = 4 \times l^2$$

$$At = 6 \times l^2$$

$$l = \sqrt{\frac{Al}{4}}$$

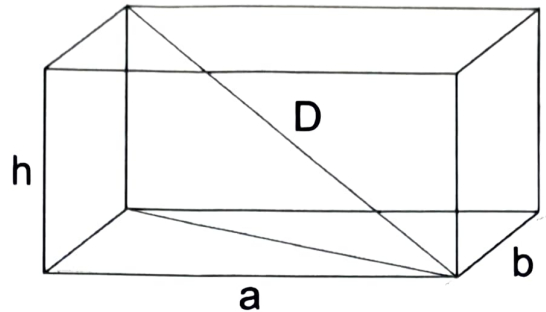
$$l = \sqrt{\frac{At}{6}}$$

$$D = l \times \sqrt{3}$$

$$l = \frac{D}{\sqrt{3}}$$

$$V = l^3 \rightarrow l = \sqrt[3]{V}$$

# PARALLELEPIPEDO



## FORMULE RETTANGOLO

a = BASE, b = ALTEZZA,  
 $P_b$  = PERIMETRO,  
 Ab = AREA DI BASE

$$P_b = (a + b) \cdot 2 \quad a = (P : 2) - b$$

$$b = (P : 2) - a$$

$$Ab = a \cdot b \quad a = \frac{Ab}{b}$$

$$b = \frac{Ab}{a}$$

## FORMULE PARALLELEPIPEDO

H = ALTEZZA DEL PRISMA,  
 AL = AREA LATERALE, D = DIAGONALE  
 AT = AREA TOTALE, V = VOLUME

$$AL = P' \cdot H \quad P_b = \frac{AL}{H} \quad H = \frac{AL}{P_b}$$

$$AT = AL + (Ab \cdot 2) \quad AL = AT - (Ab \cdot 2)$$

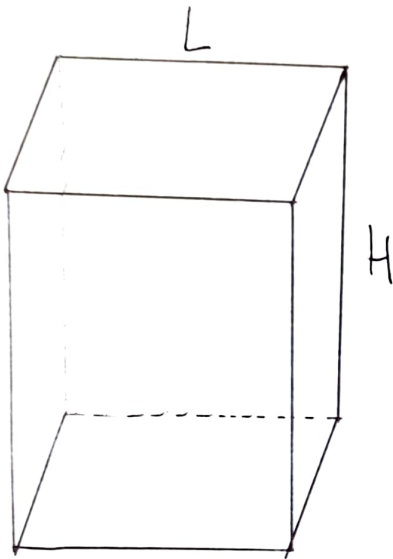
$$Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

$$D = \sqrt{a^2 + b^2 + H^2} \quad a = \sqrt{D^2 - b^2 - H^2}$$

$$b = \sqrt{D^2 - a^2 - H^2} \quad H = \sqrt{D^2 - b^2 - a^2}$$

# PARALLELEPIPEDO A BASE QUADRATA



## FORMULE QUADRATO

L = LATO, P = PERIMETRO, Ab = AREA DI BASE,  
D = DIAGONALE

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = L^2 \quad L = \sqrt{Ab}$$

$$D = L\sqrt{2} \quad L = \frac{D}{\sqrt{2}}$$

## FORMULE PARALLELEPIPEDO

H = ALTEZZA DEL PRISMA,  
AL = AREA LATERALE, D = DIAGONALE  
AT = AREA TOTALE, V = VOLUME

$$\begin{aligned} \text{S} \\ AL = P \cdot H \quad P = \frac{AL}{H} \quad H = \frac{AL}{P} \end{aligned}$$

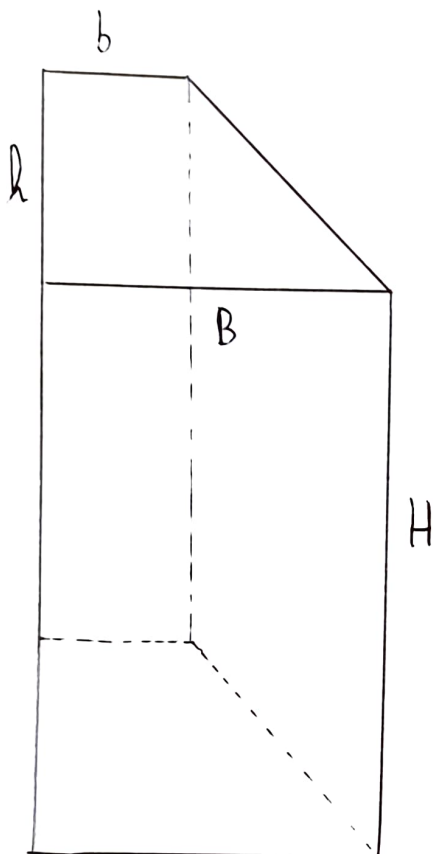
$$\begin{aligned} \text{SL} \\ AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2} \end{aligned}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

$$D = \sqrt{2L^2 + H^2} \quad L = \frac{\sqrt{D^2 - H^2}}{2} \quad H = \sqrt{D^2 - 2L^2}$$

---

# PRISMA CON BASE UN TRAPEZIO RETTANGOLO



## FORMULE TRAPEZIO RETTANGOLO

L = LATO OBLIQUO, b = BASE MINORE,  
 B = BASE MAGGIORE, P = PERIMETRO,  
 Ab = AREA DI BASE,  
 h = ALTEZZA DEL TRPEZIO

$$P = B + b + L + h$$

$$Ab = \frac{(B + b) \cdot h}{2} \quad b = \frac{Ab \cdot 2}{h} - B$$

$$B = \frac{Ab \cdot 2}{h} - b \quad h = \frac{Ab \cdot 2}{B + b}$$

$$L = \sqrt{h^2 + (B - b)^2} \quad B - b = \sqrt{L^2 - h^2}$$

$$h = \sqrt{L^2 - (B - b)^2}$$

## FORMULE PRISMA

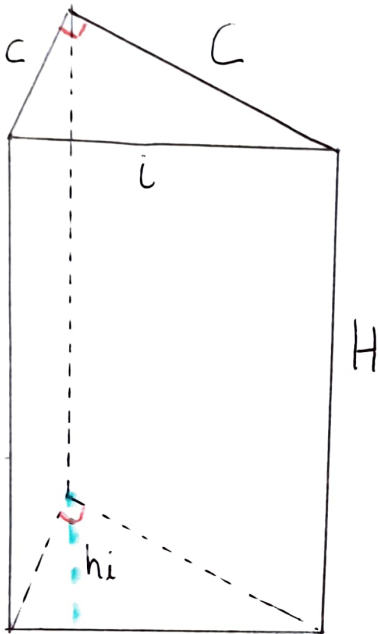
H = ALTEZZA DEL PRISMA,  
 AL = AREA LATERALE,  
 AT = AREA TOTALE, V = VOLUME

$$AL = P \cdot H \quad \textcircled{P} = \frac{AL}{H} \quad H = \frac{AL}{P}$$

$$AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

# PRISMA CON BASE UN TRIANGOLO RETTANGOLO



## FORMULE TRIANGOLO RETTANGOLO

$C$  = CATETO MAGGIORE,  
 $c$  = CATETO MINORE,  $i$  = IPOTENUSA,  
 $p$  = PERIMETRO,  $Ab$  = AREA DI BASE,  
 $h$  = ALTEZZA DEL TRIANGOLO

$$P = i + c + C$$

$$Ab = \frac{C \cdot c}{2} \quad C = \frac{Ab \cdot 2}{c} \quad c = \frac{Ab \cdot 2}{C}$$

$$hi = \frac{a \cdot b}{i}$$

$$Ab = \frac{i \cdot h}{2} \quad i = \frac{Ab \cdot 2}{h} \quad h = \frac{Ab \cdot 2}{i}$$

$$hi = \frac{C \cdot c}{i}$$

$$i = \sqrt{C^2 + c^2} \quad C = \sqrt{i^2 - c^2} \quad c = \sqrt{i^2 - C^2}$$

## FORMULE PRISMA

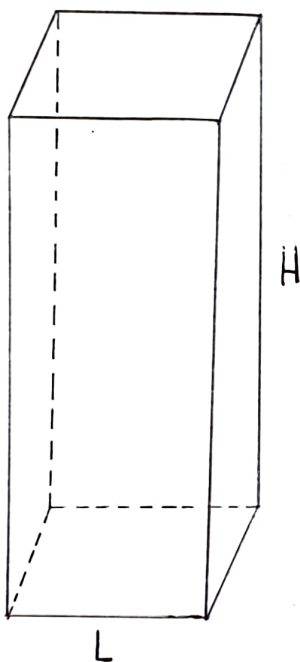
$H$  = ALTEZZA DEL PRISMA,  
 $AL$  = AREA LATERALE,  
 $AT$  = AREA TOTALE,  $V$  = VOLUME

$$AL = P \cdot H \quad P = \frac{AL}{H} \quad H = \frac{AL}{P}$$

$$AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

# PRISMA A BASE QUADRATA



## FORMULE QUADRATO

L = LATO, P = PERIMETRO, Ab = AREA DI BASE,  
D = DIAGONALE

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = L^2 \quad L = \sqrt{Ab}$$

$$D = L\sqrt{2} \quad L = \frac{D}{\sqrt{2}}$$

## FORMULE PRISMA

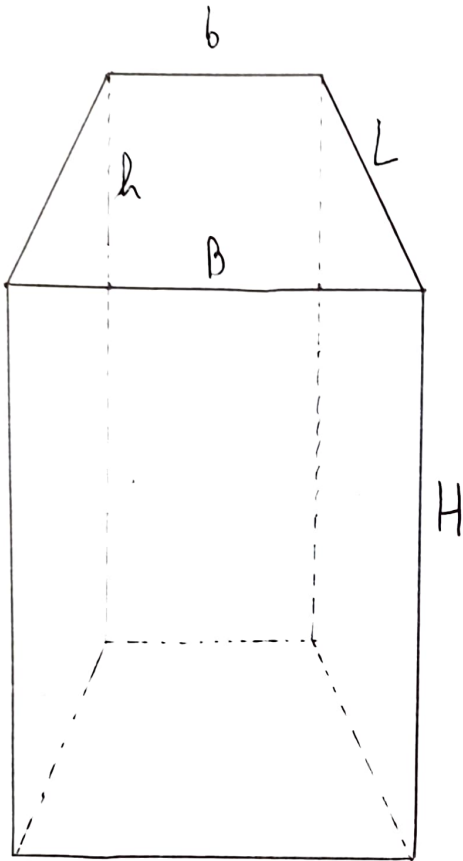
H = ALTEZZA DEL PRISMA,  
AL = AREA LATERALE,  
AT = AREA TOTALE, V = VOLUME

$$AL = P \cdot H \quad P = \frac{AL}{H} \quad H = \frac{AL}{P}$$

$$AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

# PRISMA CON BASE UN TRAPEZIO ISOSCELE



## FORMULE TRAPEZIO ISOSCELE

L = LATO OBLIQUO, b = BASE MINORE,  
 B = BASE MAGGIORE, P = PERIMETRO,  
 Ab = AREA DI BASE,  
 h = ALTEZZA DEL TRPEZIO

$$P = B + b + 2L \quad b = P - 2L - B \quad L = \frac{P - b - B}{2}$$

$$Ab = \frac{(B + b) \cdot h}{2} \quad b = \frac{Ab \cdot 2}{h} - B$$

$$B = \frac{Ab \cdot 2}{h} - b \quad h = \frac{Ab \cdot 2}{B + b}$$

$$L = \sqrt{h^2 + \left(\frac{B-b}{2}\right)^2} \quad \frac{B-b}{2} = \sqrt{L^2 - h^2} \quad h = \sqrt{L^2 - \left(\frac{B-b}{2}\right)^2}$$

## FORMULE PRISMA

H = ALTEZZA DEL PRISMA,  
 AL = AREA LATERALE,  
 AT = AREA TOTALE, V = VOLUME

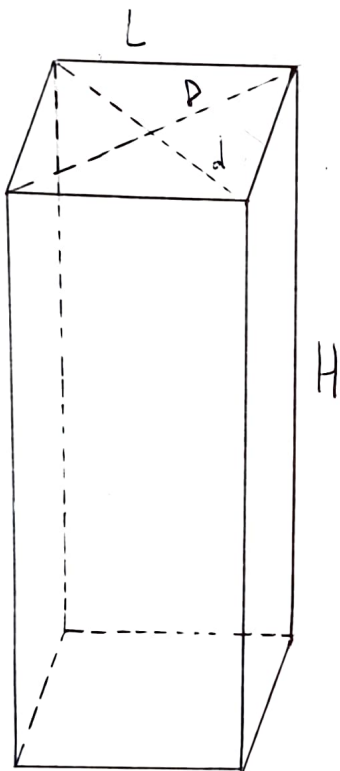
$$AL = P \cdot H \quad P = \frac{AL}{H} \quad H = \frac{AL}{P}$$

$$AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$



# PRISMA A BASE ROMBOIDALE



## FORMULE ROMBO

L = LATO, D = DIAGONALE MAGGIORE,  
d = DIAGONALE MINORE,  
P = PERIMETRO, Ab = AREA DI BASE,  
h = ALTEZZA DEL ROMBO

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = \frac{D \cdot d}{2} \quad D = \frac{Ab \cdot 2}{d} \quad d = \frac{Ab \cdot 2}{D}$$

$$Ab = L \cdot h \quad L = \frac{Ab}{h} \quad h = \frac{Ab}{L}$$

$$L = \sqrt{\left(\frac{D}{2}\right)^2 + \left(\frac{d}{2}\right)^2} \quad \frac{d}{2} = \sqrt{L^2 - \left(\frac{D}{2}\right)^2} \quad \frac{D}{2} = \sqrt{L^2 - \left(\frac{d}{2}\right)^2}$$

## FORMULE PRISMA

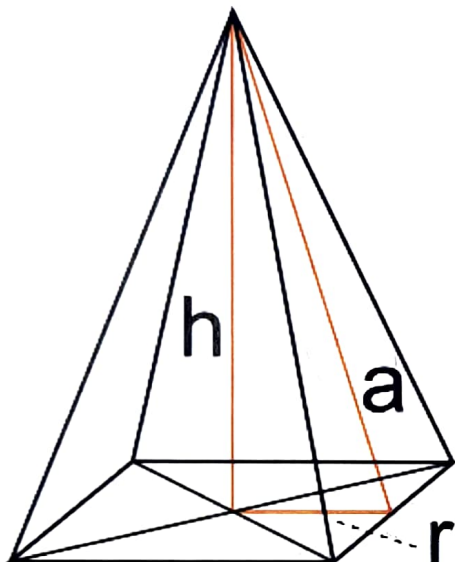
H = ALTEZZA DEL PRISMA,  
AL = AREA LATERALE,  
AT = AREA TOTALE, V = VOLUME

$$AL = P \cdot H \quad P = \frac{AL}{H} \quad H = \frac{AL}{P}$$

$$AT = AL + Ab \cdot 2 \quad AL = AT - Ab \cdot 2 \quad Ab = \frac{AT - AL}{2}$$

$$V = Ab \cdot H \quad Ab = \frac{V}{H} \quad H = \frac{V}{Ab}$$

# PIRAMIDE A BASE QUADRATA



## FORMULE QUADRATO

L = LATO, P = PERIMETRO,  
Ab = AREA DI BASE, D = DIAGONALE  
R = RAGGIO

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = L^2 \quad L = \sqrt{Ab}$$

$$D = L\sqrt{2} \quad L = \frac{D}{\sqrt{2}}$$

$$L = R \cdot 2 \quad R = L : 2$$

## FORMULE PIRAMIDE

h = ALTEZZA DEL PRISMA,  
a = APOTEMA, R = RAGGIO  
AL = AREA LATERALE,  
AT = AREA TOTALE, V = VOLUME

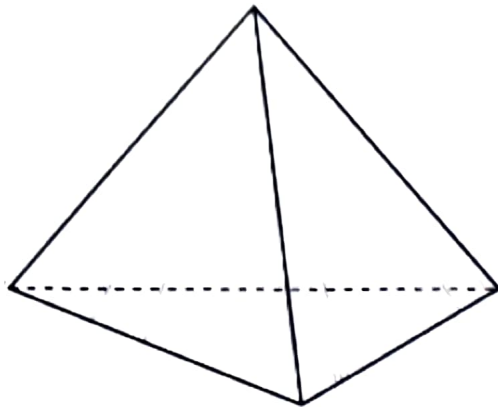
$$AL = \frac{P \cdot a}{2} \quad P = \frac{AL \cdot 2}{a} \quad a = \frac{AL \cdot 2}{P}$$

$$AT = AL + Ab \quad AL = AT - Ab \quad Ab = AT - AL$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{V \cdot 3}{h} \quad h = \frac{V \cdot 3}{Ab}$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# PIRAMIDE CON BASE UN TRIANGOLO RETTANGOLO



## FORMULE TRIANGOLO RETTANGOLO

C = CATETO MAGGIORE,  
 c = CATETO MINORE, i = IPOTENUSA,  
 p = PERIMETRO, Ab = AREA DI BASE,  
 h = ALTEZZA DEL TRIANGOLO

$$P = i + c + C$$

$$Ab = \frac{C \cdot c}{2} \quad C = \frac{Ab \cdot 2}{c} \quad c = \frac{Ab \cdot 2}{C}$$

$$Ab = \frac{i \cdot h}{2} \quad i = \frac{Ab \cdot 2}{h} \quad h = \frac{Ab \cdot 2}{i}$$

$$i = \sqrt{C^2 + c^2} \quad C = \sqrt{i^2 - c^2} \quad c = \sqrt{i^2 - C^2}$$

$$R = \frac{2 \cdot Ab}{P} \quad Ab = \frac{P \cdot R}{2} \quad P = \frac{2 \cdot Ab}{R}$$

## FORMULE PIRAMIDE

h = ALTEZZA DEL PRISMA,  
 a = APOTEMA, R = RAGGIO  
 AL = AREA LATERALE,  
 AT = AREA TOTALE, V = VOLUME

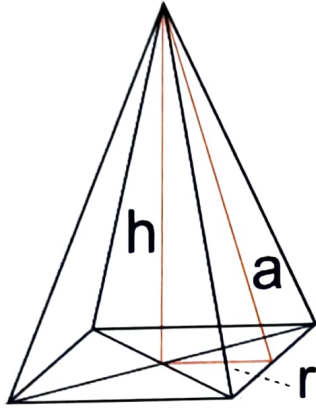
$$AL = \frac{P \cdot a}{2} \quad P = \frac{AL \cdot 2}{a} \quad a = \frac{AL \cdot 2}{P}$$

$$AT = AL + Ab \quad AL = AT - Ab \quad Ab = AT - AL$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{V \cdot 3}{h} \quad h = \frac{V \cdot 3}{Ab}$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# PIRAMIDE A BASE ROMBOIDALE



## FORMULE ROMBO

L = LATO, D = DIAGONALE MAGGIORE,  
d = DIAGONALE MINORE,  
P = PERIMETRO, Ab = AREA DI BASE,  
H = ALTEZZA DEL ROMBO

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = \frac{D \cdot d}{2} \quad D = \frac{Ab \cdot 2}{d} \quad d = \frac{Ab \cdot 2}{D}$$

$$Ab = L \cdot H \quad L = \frac{Ab}{H} \quad h = \frac{Ab}{L}$$

$$L = \sqrt{\left(\frac{D}{2}\right)^2 + \left(\frac{d}{2}\right)^2} \quad \frac{d}{2} = \sqrt{L^2 - \left(\frac{D}{2}\right)^2} \quad \frac{D}{2} = \sqrt{L^2 - \left(\frac{d}{2}\right)^2}$$

$$R = \frac{2 \cdot Ab}{P} \quad Ab = \frac{P \cdot R}{2} \quad P = \frac{2 \cdot Ab}{R}$$

## FORMULE PIRAMIDE

h = ALTEZZA DEL PRISMA,  
a = APOTEMA, R = RAGGIO  
AL = AREA LATERALE,  
AT = AREA TOTALE, V = VOLUME

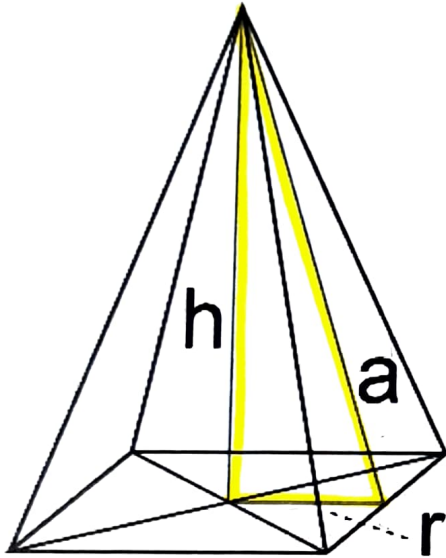
$$AL = \frac{P \cdot a}{2} \quad P = \frac{AL \cdot 2}{a} \quad a = \frac{AL \cdot 2}{P}$$

$$AT = AL + Ab \quad AL = AT - Ab \quad Ab = AT - AL$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{V \cdot 3}{h} \quad h = \frac{V \cdot 3}{Ab}$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# PIRAMIDE A BASE QUADRATA



## FORMULE QUADRATO

L = LATO, P = PERIMETRO,  
Ab = AREA DI BASE, D = DIAGONALE  
R = RAGGIO

$$P = L \cdot 4 \quad L = P : 4$$

$$Ab = L^2 \quad L = \sqrt{Ab}$$

$$D = L\sqrt{2} \quad L = \frac{D}{\sqrt{2}}$$

$$L = R \cdot 2 \quad \boxed{R = L : 2}$$

## FORMULE PIRAMIDE

h = ALTEZZA DEL PRISMA,  
a = APOTEMA, R = RAGGIO  
AL = AREA LATERALE,  
AT = AREA TOTALE, V = VOLUME

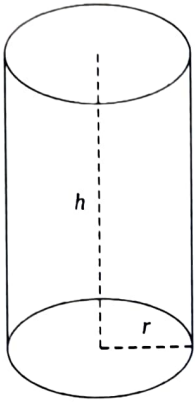
$$AL = \frac{P \cdot a}{2} \quad P = \frac{AL \cdot 2}{a} \quad a = \frac{AL \cdot 2}{P}$$

$$AT = AL + Ab \quad AL = AT - Ab \quad Ab = AT - AL$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{V \cdot 3}{h} \quad h = \frac{V \cdot 3}{Ab}$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# FORMULE CILINDRO



AL = AREA LATERALE / AT = AREA TOTALE

Ab = AREA DI BASE / V = VOLUME / d = DIAMETRO

r = RAGGIO / C = CIRCONFERENZA / h = ALTEZZA

$$AL = 2 \cdot \pi \cdot r \cdot h \quad r = \frac{AL}{(2 \cdot \pi \cdot h)} \quad h = \frac{AL}{(2 \cdot \pi \cdot r)}$$

$$AT = AL + (2 \cdot Ab) \quad AL = AT - (2 \cdot Ab) \quad Ab = \frac{(AT - AL)}{2}$$

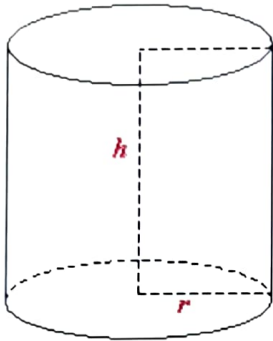
$$V = Ab \cdot h \quad Ab = \frac{V}{h} \quad h = \frac{V}{Ab}$$

$$C = 2 \cdot \pi \cdot r \quad r = \frac{C}{(2 \cdot \pi)}$$

$$Ab = \pi \cdot r^2 \quad r = \sqrt{\frac{Ab}{\pi}}$$

$$d = 2 \cdot r \quad r = d : 2$$

# FORMULE CILINDRO EQUILATERO



AL = AREA LATERALE / AT = AREA TOTALE

Ab = AREA DI BASE / d = DIAMETRO / V = VOLUME

r = RAGGIO / C = CIRCONFERENZA / h = ALTEZZA

$$h = d \quad h = r \cdot 2 \quad r = h : 2$$

$$AL = 2 \cdot \pi \cdot r \cdot h \quad r = \sqrt{\frac{AL}{4 \cdot \pi}} \quad h = \sqrt{\frac{AL}{4 \cdot \pi}}$$

$$AT = AL + (2 \cdot Ab) \quad AL = AT - (2 \cdot Ab) \quad Ab = \frac{(AT - AL)}{2}$$

$$V = Ab \cdot h \quad Ab = \frac{V}{h} \quad h = \frac{V}{Ab}$$

$$C = 2 \cdot \pi \cdot r \quad r = \frac{C}{(2 \cdot \pi)}$$

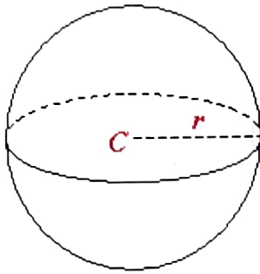
$$Ab = \pi \cdot r^2 \quad r = \sqrt{\frac{Ab}{\pi}}$$

$$d = r \cdot 2 \quad r = d : 2$$

$$1 \ell = 1 \text{ dm}^3$$

$$78,5 \ell = 78,5 \text{ dm}^3$$

# FORMULE SFERA



AT = AREA TOTALE / Ab = AREA DI BASE

d = DIAMETRO / V = VOLUME

r = RAGGIO / C = CIRCONFERENZA

$$AT = 4\pi r^2 \quad r = \sqrt{\frac{AT}{(4\pi)}}$$

$$V = \frac{4\pi r^3}{3} \quad r = \sqrt[3]{\frac{3V}{(4\pi)}}$$

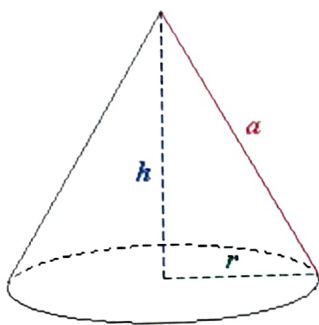
$$C = 2 \cdot \pi \cdot r \quad r = \frac{C}{(2 \cdot \pi)}$$

$$d = r \cdot 2 \quad r = d : 2$$

$$Ab = \pi r^2 \quad r = \sqrt{\frac{Ab}{\pi}}$$



# FORMULE CONO



AL = AREA LATERALE / AT = AREA TOTALE / a = APOTEMA

Ab = AREA DI BASE / V = VOLUME / d = DIAMETRO

r = RAGGIO / C = CIRCONFERENZA / h = ALTEZZA

$$\frac{SL}{AL} = \pi \cdot r \cdot a \quad r = \frac{AL}{(\pi \cdot a)} \quad a = \frac{AL}{(\pi \cdot r)}$$

$$AT = AL + Ab \quad AL = AT - Ab \quad Ab = AT - AL$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{3 \cdot V}{h} \quad h = \frac{3 \cdot V}{Ab}$$

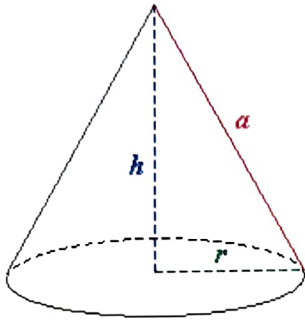
$$C = 2 \cdot \pi \cdot r \quad r = \frac{C}{(2 \cdot \pi)}$$

$$Ab = \pi \cdot r^2 \quad r = \sqrt{\frac{Ab}{\pi}}$$

$$d = 2 \cdot r \quad r = d : 2$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# FORMULE CONO EQUILATERO



AL = AREA LATERALE / AT = AREA TOTALE / a = APOTEMA

Ab = AREA DI BASE / V = VOLUME / d = DIAMETRO

r = RAGGIO / C = CIRCONFERENZA / h = ALTEZZA

$$a = 2 \cdot r \quad r = a : 2$$

$$AL = 2 \cdot \pi \cdot r^2 \quad r = \sqrt{\frac{AL}{(\pi \cdot 2)}}$$

$$AT = 3 \cdot \pi \cdot r^2 \quad r = \sqrt{\frac{AL}{(\pi \cdot 3)}}$$

$$V = \frac{Ab \cdot h}{3} \quad Ab = \frac{3 \cdot V}{h} \quad h = \frac{3 \cdot V}{Ab}$$

$$C = 2 \cdot \pi \cdot r \quad r = \frac{C}{(2 \cdot \pi)}$$

$$Ab = \pi \cdot r^2 \quad r = \sqrt{\frac{Ab}{\pi}}$$

$$d = 2 \cdot r \quad r = d : 2$$

$$a = \sqrt{h^2 + R^2} \quad h = \sqrt{a^2 - R^2} \quad R = \sqrt{a^2 - h^2}$$

# PESO SPECIFICO

Il **peso specifico** di una sostanza è il **rapporto** tra il suo **peso** e il suo **volume**. Ogni materiale ha il suo peso specifico.

PESO SPECIFICO $P_s$	PESO $P$	VOLUME $V$
$P_s = \frac{P}{V}$	$P = p_s \times V$	$V = \frac{P}{P_s}$

 stai attento alle **unità di misura** del peso e del volume !

Se il peso è espresso in :

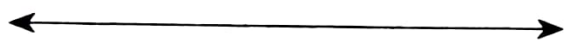
il volume si esprime in :

g



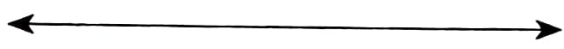
cm<sup>3</sup>

kg



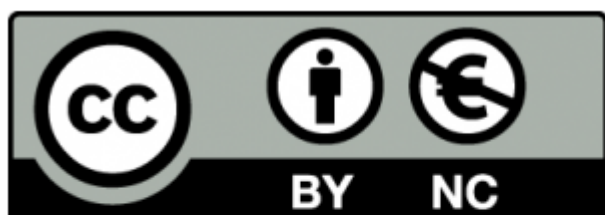
dm<sup>3</sup>

t



m<sup>3</sup>

e viceversa



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