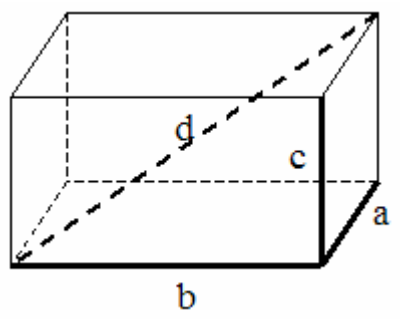
di Gianni Sammito

Parallelepipedo rettangono



$$A_l = 2p_b \cdot c \qquad c = \frac{A_l}{2p_b} \qquad 2p_b = \frac{A_l}{c}$$

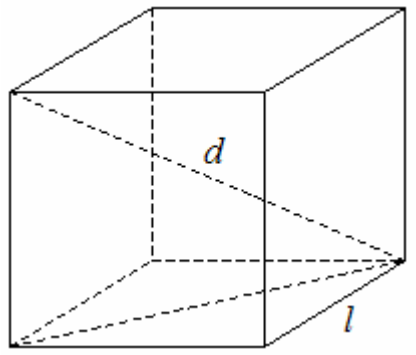
$$A_b = a \cdot b \qquad A_t = 2A_b + A_l \qquad A_l = A_t - 2A_b$$

$$A_b = \frac{A_t - A_l}{2} \qquad V = A_b \cdot c = a \cdot b \cdot c \qquad c = \frac{V}{A_b}$$

$$A_b = \frac{V}{c} \qquad d = \sqrt{a^2 + b^2 + c^2}$$

Dove A_l è l'area latelare, $2p_b$ è il perimetro di base, A_b è l'area di base, A_t è l'area totale, e V è il volume.

Cubo



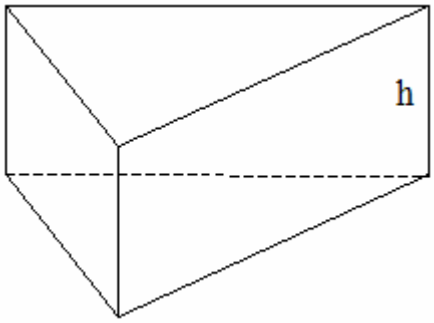
$$A_l = 4l^2 \qquad l = \sqrt{\frac{A_l}{4}}$$

$$A_t = 6l^2 \qquad l = \sqrt{\frac{A_t}{6}}$$

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

$$d = l\sqrt{3} \qquad l = \frac{d}{\sqrt{3}}$$

Prisma retto

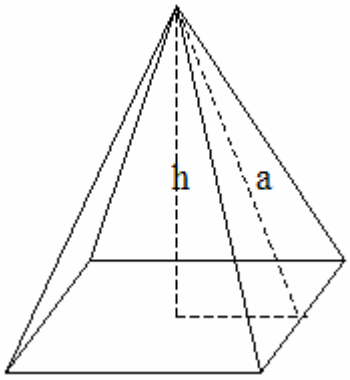


$A_l = 2p_b \cdot h$ $\quad 2p_b = \frac{A_l}{h}$ $\quad h = \frac{A_l}{2p_b}$

$A_t = A_l + 2A_b$ $\quad A_l = A_t - 2A_b$ $\quad A_b = \frac{A_t - A_l}{2}$

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

Piramide retta

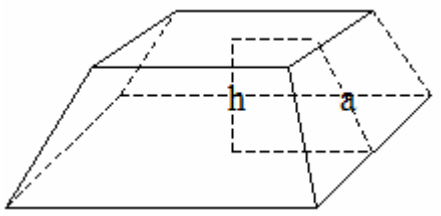


$A_l = \frac{2p \cdot a}{2}$ $\quad 2p = \frac{2A_l}{a}$ $\quad a = \frac{2A_l}{2p}$

$A_t = A_b + A_l$ $\quad A_b = A_t - A_l$ $\quad A_l = A_t - A_b$

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

Tronco di piramide

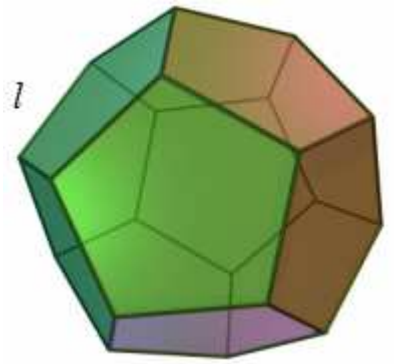


$$A_l = \frac{(2p+2p')\cdot a}{2} \qquad a = \frac{2A_l}{2p+2p'} \qquad 2p = \frac{2A_l}{a} - 2p'$$

$$A_t = A_l + A_b + A_b'$$

A_b e A_b' sono le aree delle due basi, invece $2p$ e $2p'$ sono i perimetri delle due basi.

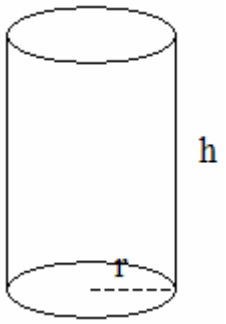
Poliedro regolare



$$A = l^2 \cdot \phi \qquad V = l^3 \sigma$$

tabella dei numeri fissi					
poligoni regolari			poliedri regolari		
	N numero fisso apotema	f numero fisso area		φ numero fisso area	σ numero fisso volume
triangolo	0,289	0,433	tetraedro	1,73	0,118
quadrato	0,5	1	esaedro	6	1
pentagono	0,688	1,72	ottaedro	3,464	0,471
esagono	0,866	2,598	dodecaedro	20,64	7,663
ettagono	1,038	3,634	icosaedro	8,66	2,182
ottagono	1,207	4,828			
ennagono	1,374	6,182			
decagono	1,539	7,694			

Cilindro



$A_b = \pi r^2$ $A_l = C \cdot h = 2\pi r h$ $C = \frac{A_l}{h}$

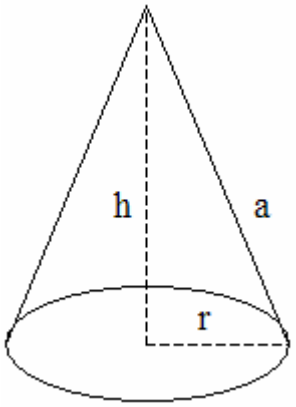
$h = \frac{A_l}{2\pi r}$ $r = \frac{A_l}{2\pi h}$ $A_t = A_l + 2A_b = 2\pi r h + 2\pi r^2 = 2\pi r(h + r)$

$V = A_b \cdot h = \pi r^2 h$ $r = \sqrt{\frac{V}{\pi h}}$ $h = \frac{V}{\pi r^2}$

$A_b = \frac{V}{h}$

$C = 2\pi r$ indica il perimetro di base.

Cono

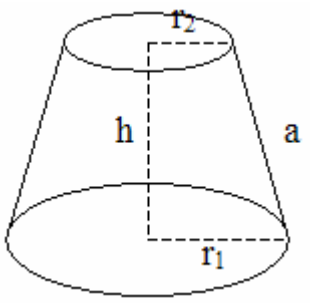


$A_l = \frac{C \cdot a}{2} = \pi r a$ $r = \frac{A_l}{\pi a}$ $a = \frac{A_l}{\pi r}$

$A_b = \pi r^2$ $A_t = A_b + A_l = \pi r^2 + \pi r a$

$h = \frac{3 \cdot v}{\pi r^2}$ $r = \sqrt{\frac{3 \cdot V}{3 \cdot h}}$

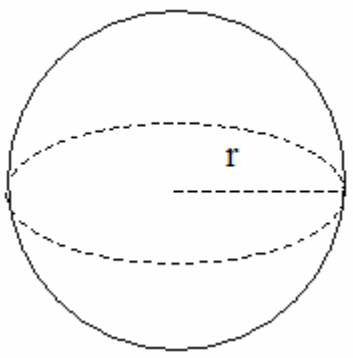
Tronco di cono



$A_l = \pi \cdot a \cdot (r_1 + r_2)$ $A_b = \pi r_1^2 + \pi r_2^2$ $A_t = A_l + A_b$

A_{b1} e A_{b2} sono le aree delle due basi.

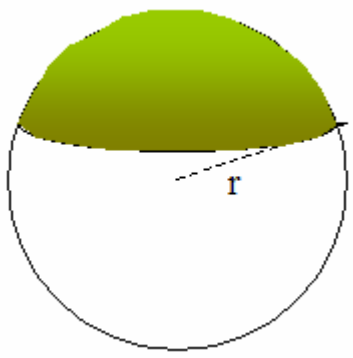
Sfera



$A = 4\pi r^2$ $r = \sqrt{\frac{A}{4\pi}}$

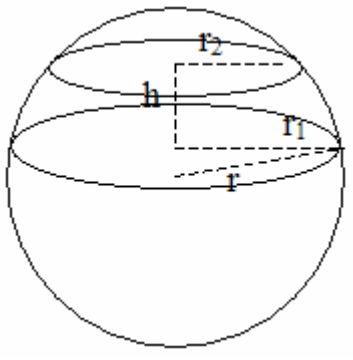
$V = \frac{4}{3}\pi r^3$ $r = \sqrt[3]{\frac{3V}{4\pi}}$

Calotta sferica e segmento sferico ad una base



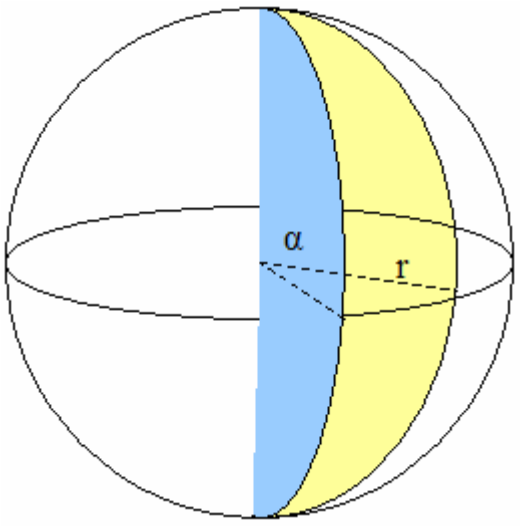
$A = 2\pi r h$ $V = \frac{1}{3}\pi h^2 (3r - h)$

Zona sferica e segmento sferico a due basi



$$A = 2\pi r h$$

Fuso sferico e spicchio sferico



$$A = \frac{\pi r^2}{90^\circ}\alpha \qquad V = \frac{\pi r^3}{270^\circ}\alpha$$