Colégio Santa Marta
Prof. Josy Rocha - Matemática

Relação de Euler

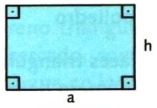
$V + F - A = 2$ ou $V + F = A + 2$

$V \rightarrow$ vértices

$F \rightarrow$ faces

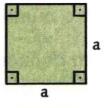
$A \rightarrow$ arestas

- retângulo



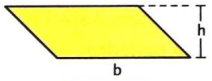
$A = a \cdot h$

- quadrado



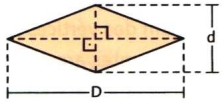
$A = a^2$

- paralelogramo



$A = b \cdot h$

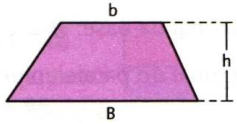
- losango



$A = \frac{D \cdot d}{2}$

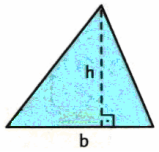
- trapézio

$A = \frac{(B+b) \cdot h}{2}$



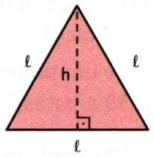
- triângulo

$A = \frac{b \cdot h}{2}$



- triângulo equilátero

$A = \frac{\ell^2 \sqrt{3}}{4}$



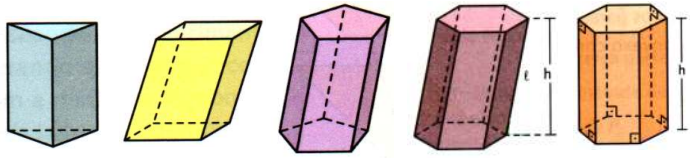
- Prisma qualquer

Área total: $A_t = A_\ell + 2 \cdot A_b$

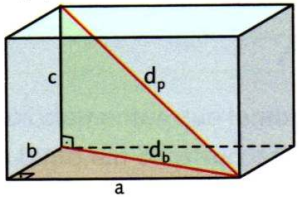
Volume: $V = A_b \cdot h$

A_ℓ: área lateral

A_b: área da base



- Paralelepípedo reto retângulo



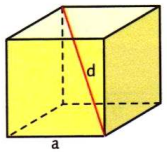
Diagonal da base: $d_b = \sqrt{a^2 + b^2}$

Diagonal do paralelepípedo:

$d_p = \sqrt{a^2 + b^2 + c^2}$

Volume: $V = a \cdot b \cdot c$

- Cubo



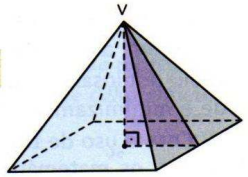
Diagonal do cubo: $d = a\sqrt{3}$

Volume: $V = a^3$

Pirâmide regular

Área total: $A_t = A_\ell + A_b$

Volume: $V = \frac{A_b \cdot h}{3}$



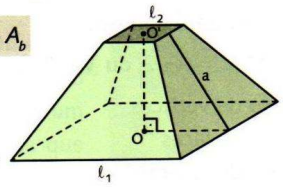
Tronco de pirâmide regular

Área total: $A_t = A_\ell + A_B + A_b$

$V = \frac{h_1}{3}\left(B + \sqrt{B.b} + b\right)$

b: área da base menor

B: área da base maior

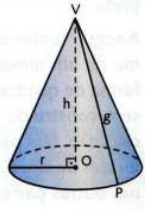


Cilindro circular reto

- Área da base: $A_b = \pi r^2$
- Área lateral: $A_\ell = 2\pi r \cdot h$
- Área total: $A_t = A_\ell + 2 \cdot A_b$ ou $A = 2\pi r(h + r)$
- Volume: $V = \pi r^2 \cdot h$

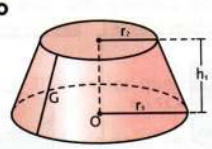
Cone circular reto

- Área da base: $A_b = \pi r^2$
- Área lateral: $A_\ell = \pi r g$
- Área total: $A_t = A_\ell + A_b$ ou $A_t = \pi r(g + r)$
- Volume: $V = \frac{\pi r^2 \cdot h}{3}$



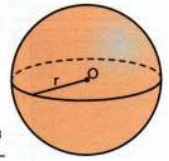
Tronco de um cone reto

- Área da base menor: $A_b = \pi r_2^{\,2}$
- Área da base maior: $A_B = \pi r_1^2$
- Área lateral: $A_\ell = \pi G(r_2 + r_1)$
- Área total: $A_t = A_\ell + A_B + A_b$
- Volume: $V = \frac{\pi h_1}{3}\left(r_1^2 + r_2 r_1 + r_2^{\,2}\right)$



Esfera

- Volume: $V = \frac{4\pi r^3}{3}$
- Área da superfície: $A = 4\pi r^2$



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