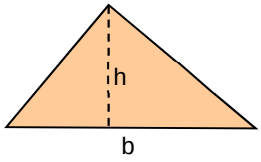
ÁREAS y VOLÚMENES 2º y 3º ESO

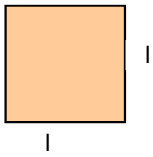
ÁREAS

Triángulo:



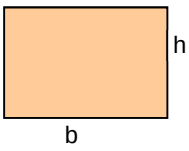
$$A = \frac{b \cdot h}{2}$$

Cuadrado:



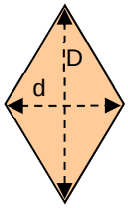
$$A = l^2$$

Rectángulo:



$$A = b \cdot h$$

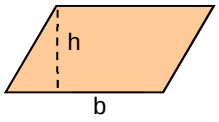
Rombo:



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

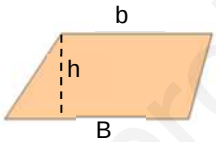
(semiproducto de las diagonales)

Paralelogramo: (Romboide[1])



$$A = b \cdot h$$

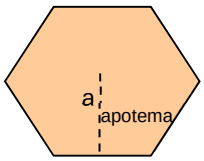
Trapecio:



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

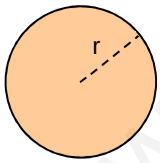
(semisuma de las bases por altura)

Polígonos regulares:



$$A = \frac{p \cdot a}{2}$$ (semiproducto de perímetro y apotema)

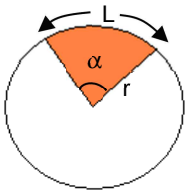
Circunferencia:



Área = πr^2

Longitud = $2 \pi r$

Sector circular:

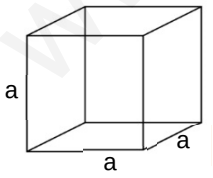


área : $A = \frac{\pi r^2 \alpha}{360}$

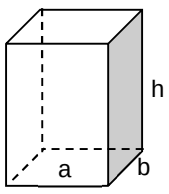
longitud del arco : $L = \frac{2 \pi r \alpha}{360}$

VOLÚMENES

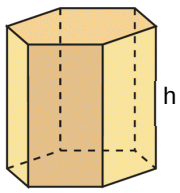
Prismas:



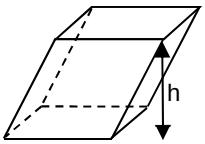
CUBO (Hexaedro regular) $V=a^3$



PRISMA CUADRANGULAR RECTO (ORTOEDRO) $V=a\,b\,h$

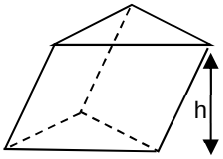


PRISMA HEXAGONAL RECTO



PRISMA CUADRANGULAR OBLICUO

PARALELEPÍPEDO



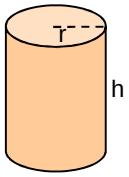
PRISMA TRIANGULAR OBLICUO

$$V = A_{base} \cdot h$$

$$A = A_{lateral} + 2 \cdot A_{base}$$

VOLÚMENES

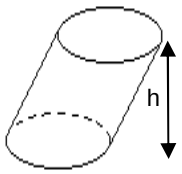
Cilindros:



CILINDRO (CIRCULAR) RECTO

$$V = A_{base} \cdot h = \pi r^2 h$$

$$A = A_{lateral} + 2 \cdot A_{base} = 2\pi rh + 2\pi r^2$$



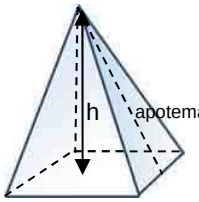
CILINDRO OBLICUO

$$V = A_{base} \cdot h$$

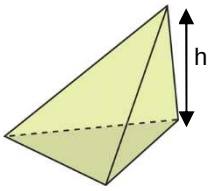
(La base puede ser un círculo o una elipse)

$$A = A_{lateral} + 2 \cdot A_{base}$$

Pirámides:



PIRÁMIDE CUADRANGULAR RECTA

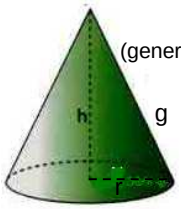


PIRÁMIDE TRIANGULAR OBLICUA (TETRAEDRO)

$$V = \frac{1}{3} A_{base} \cdot h$$

$$A = A_{lateral} + A_{base}$$

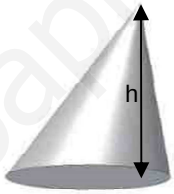
Conos:



CONO (CIRCULAR) RECTO

$$V = \frac{1}{3} A_{base} \cdot h = \frac{1}{3} \pi r^2 h$$

$$A = A_{lateral} + A_{base} = \pi rg + \pi r^2$$



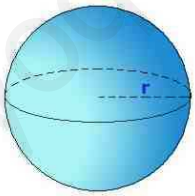
CONO OBLICUO

$$V = \frac{1}{3} A_{base} \cdot h$$

(La base puede ser un círculo o una elipse)

$$A = A_{lateral} + A_{base}$$

Esfera:



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

$$A = 4\pi r^2$$