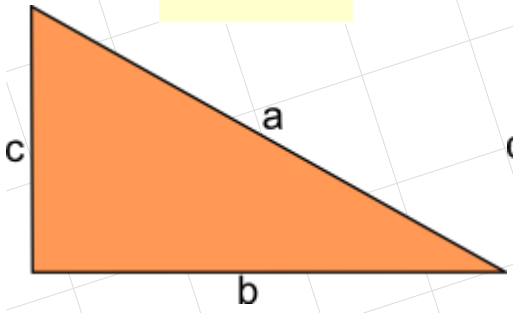
FIGURAS GEOMÉTRICAS

1. Figuras Planas

1.1. Teorema de Pitágoras

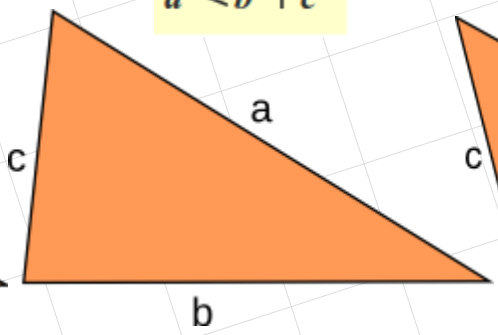
Triángulo rectángulo

$a^2=b^2+c^2$



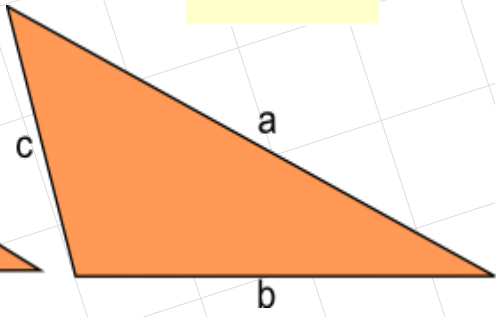
Triángulo acutángulo

$a^2<b^2+c^2$



Triángulo obtusángulo

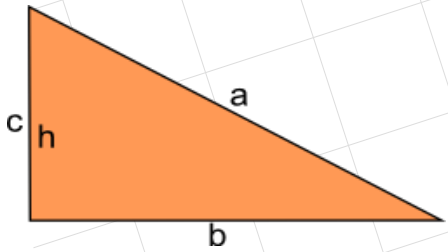
$a^2>b^2+c^2$

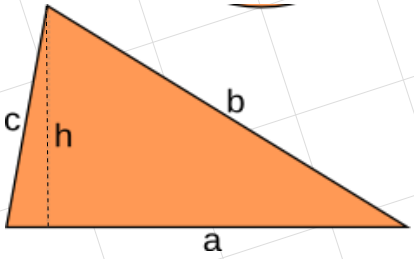


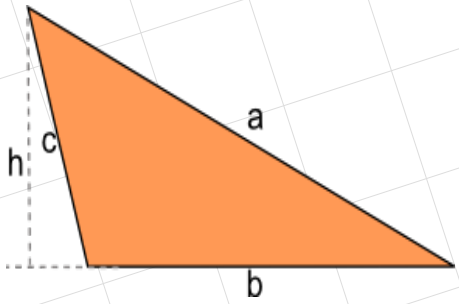
1.2. Áreas

1.2.1. Triángulo

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

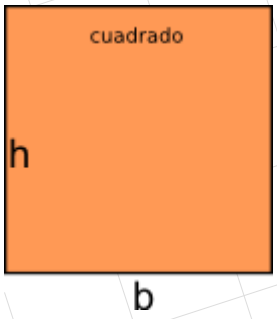


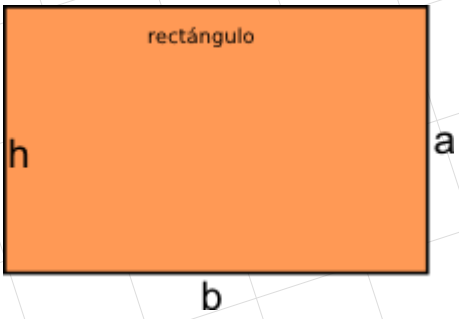


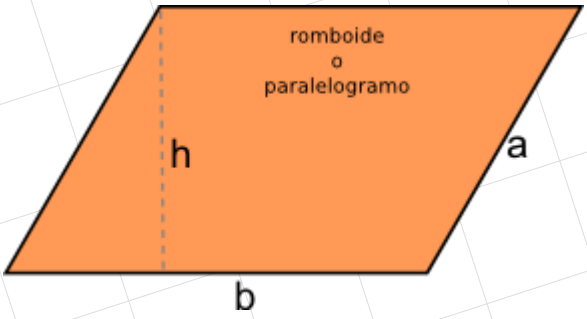


1.2.2. Cuadrilátero de lados paralelos

$A=b\cdot h=base\cdot altura$

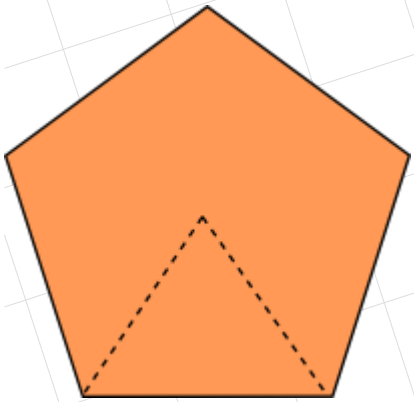


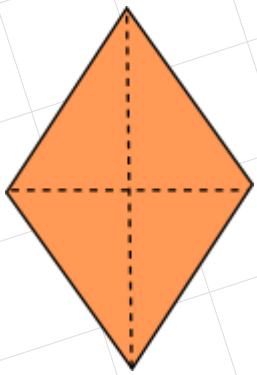


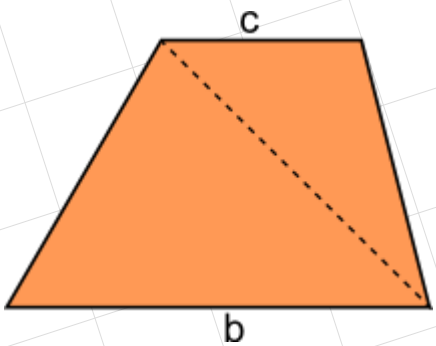


1.2.3. Otros polígonos

Se divide la figura en triángulos

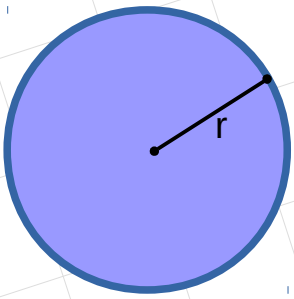


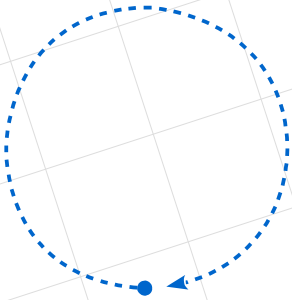


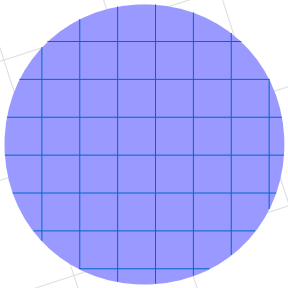


2. Circunferencia y círculo

2.1. Área y Perímetro





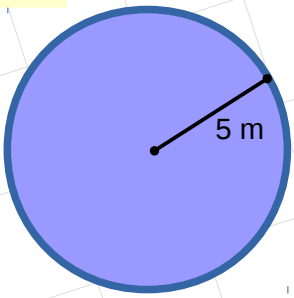


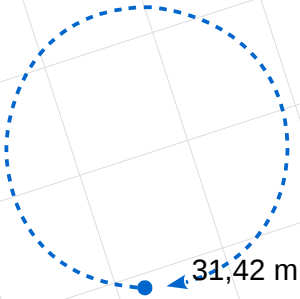
$\pi = 3{,}1416$

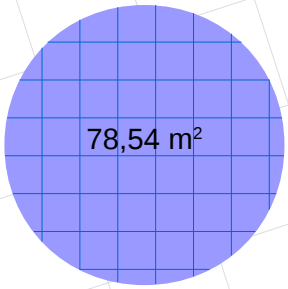
Perímetro: $P = 2 \cdot \pi \cdot r$

Área: $A = \pi \cdot r^2$

Ejemplo







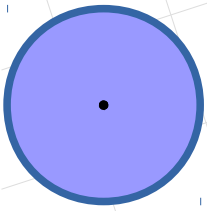
$\pi = 3{,}1416$

Perímetro: $P = 2 \cdot \pi \cdot 5$

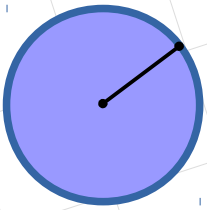
Área: $A = \pi \cdot r^2$

2.2. Elementos

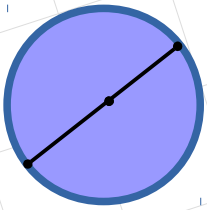
Centro



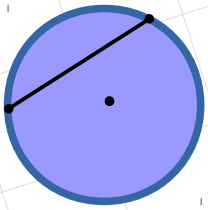
Radio



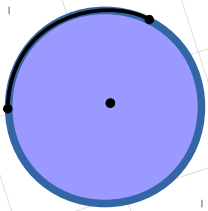
Diámetro



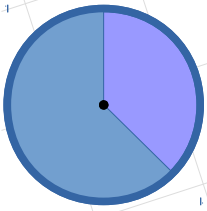
Cuerda



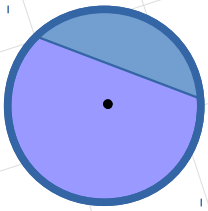
Arco



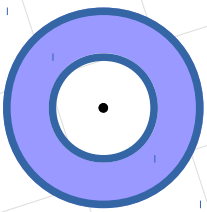
Sector



Segmento

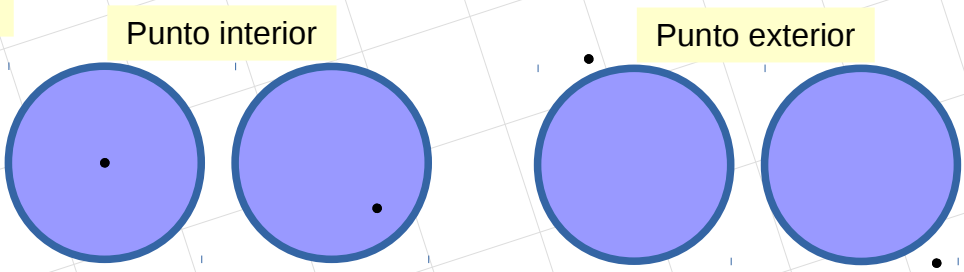


Corona

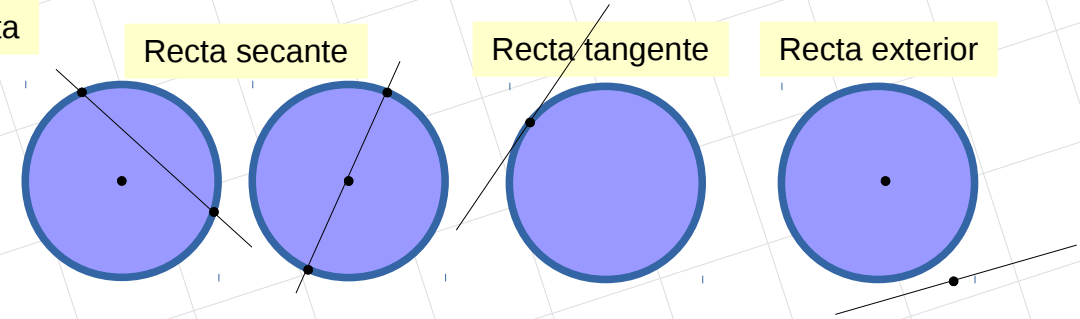


2.3. Posiciones respecto a:

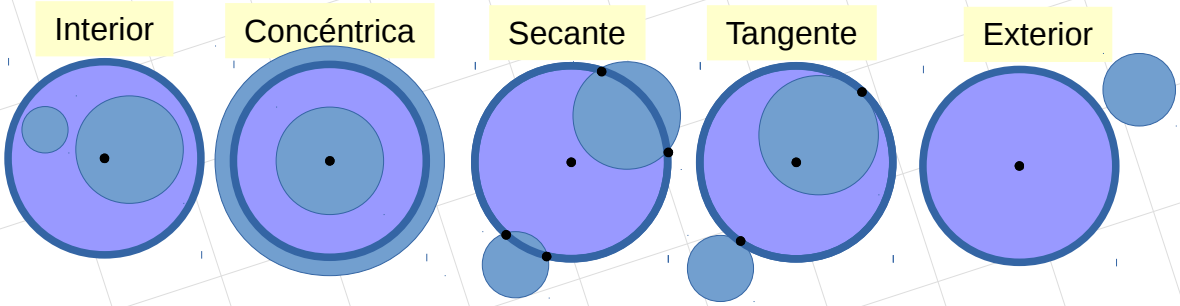
2.3.1. Un punto



2.3.2. Una recta



2.3.3. Otra circunferencia

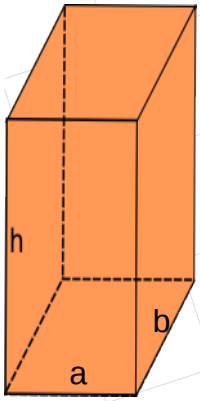


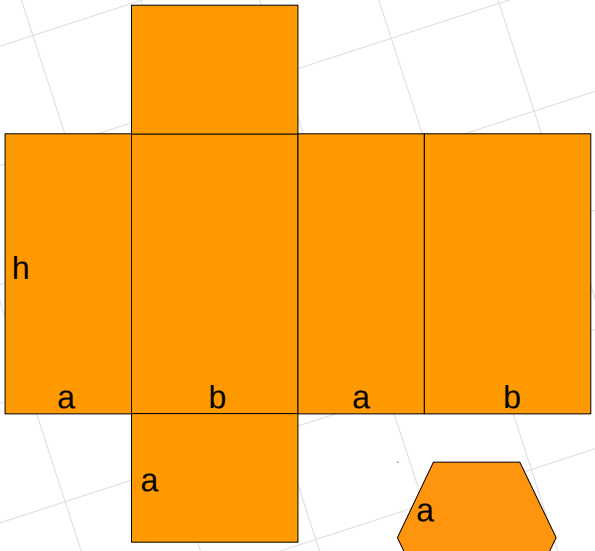
3. Cuerpos Geométricos

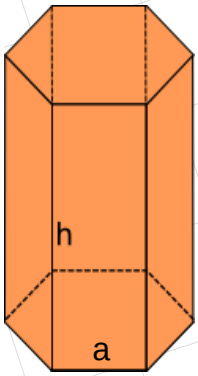
3.1. Áreas Laterales

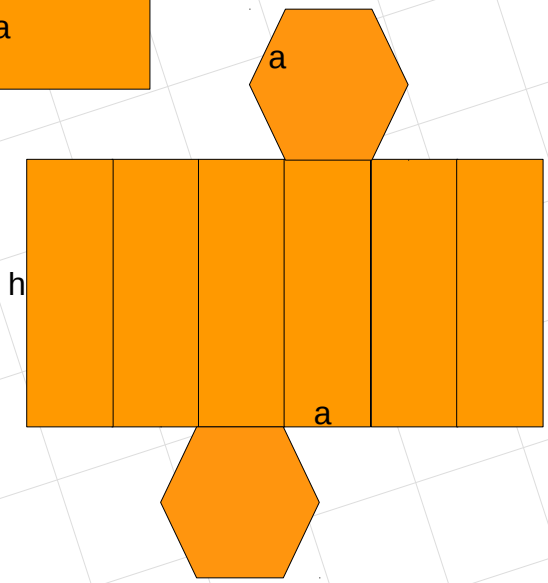
3.1.1. Prisma recto

Área = Suma de todas las caras: varios rectángulos y dos bases



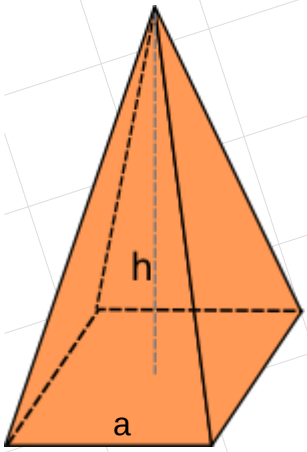


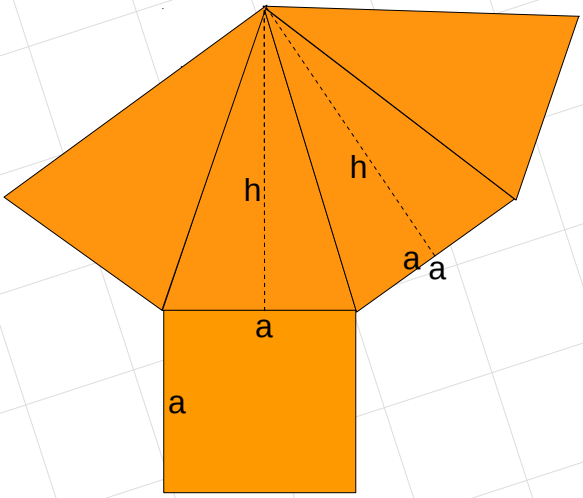




3.1.2. Pirámide recta

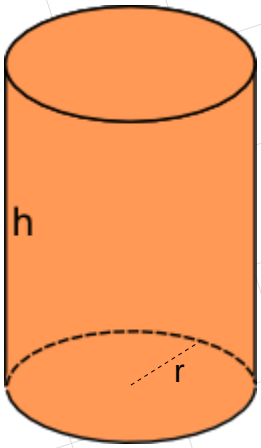
Área = Suma de todas las caras: varios triángulos y una base

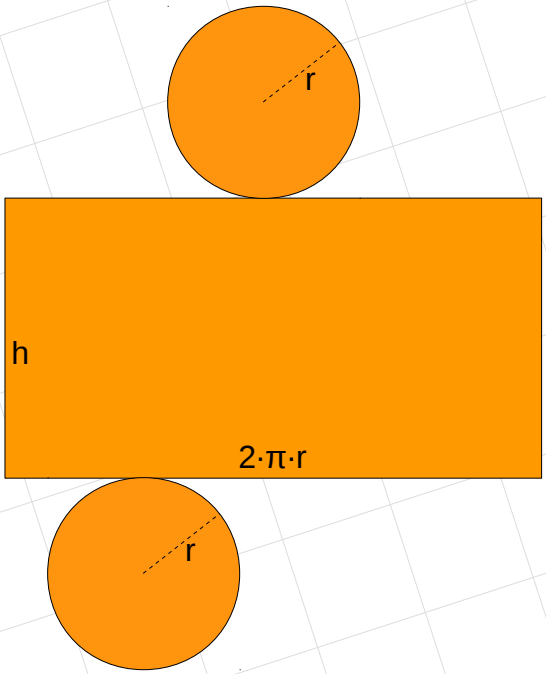




3.1.3. Cilindro recto

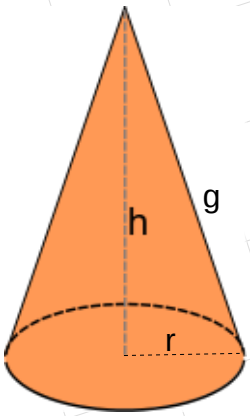
Área = Dos círculos y un rectángulo: $\mathbf{2\cdot\pi\cdot r^2 + 2\cdot\pi\cdot r\cdot h}$

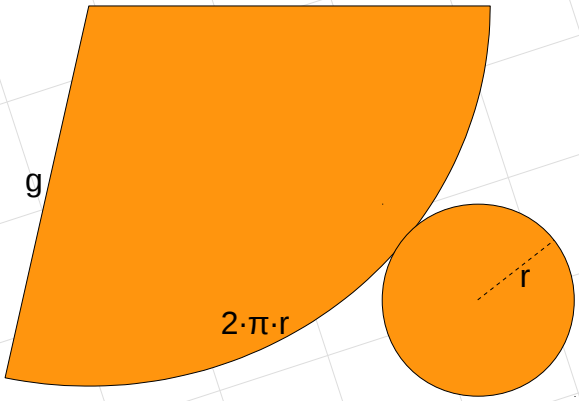




3.1.4. Cono recto

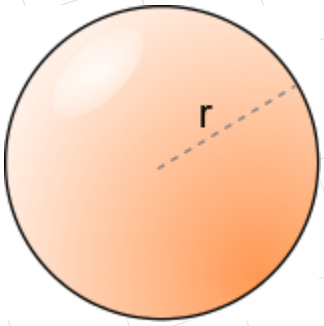
Área = Un círculo y un sector circular: $\mathbf{\pi\cdot r^2 + \pi\cdot r\cdot g}$





3.1.5. Esfera

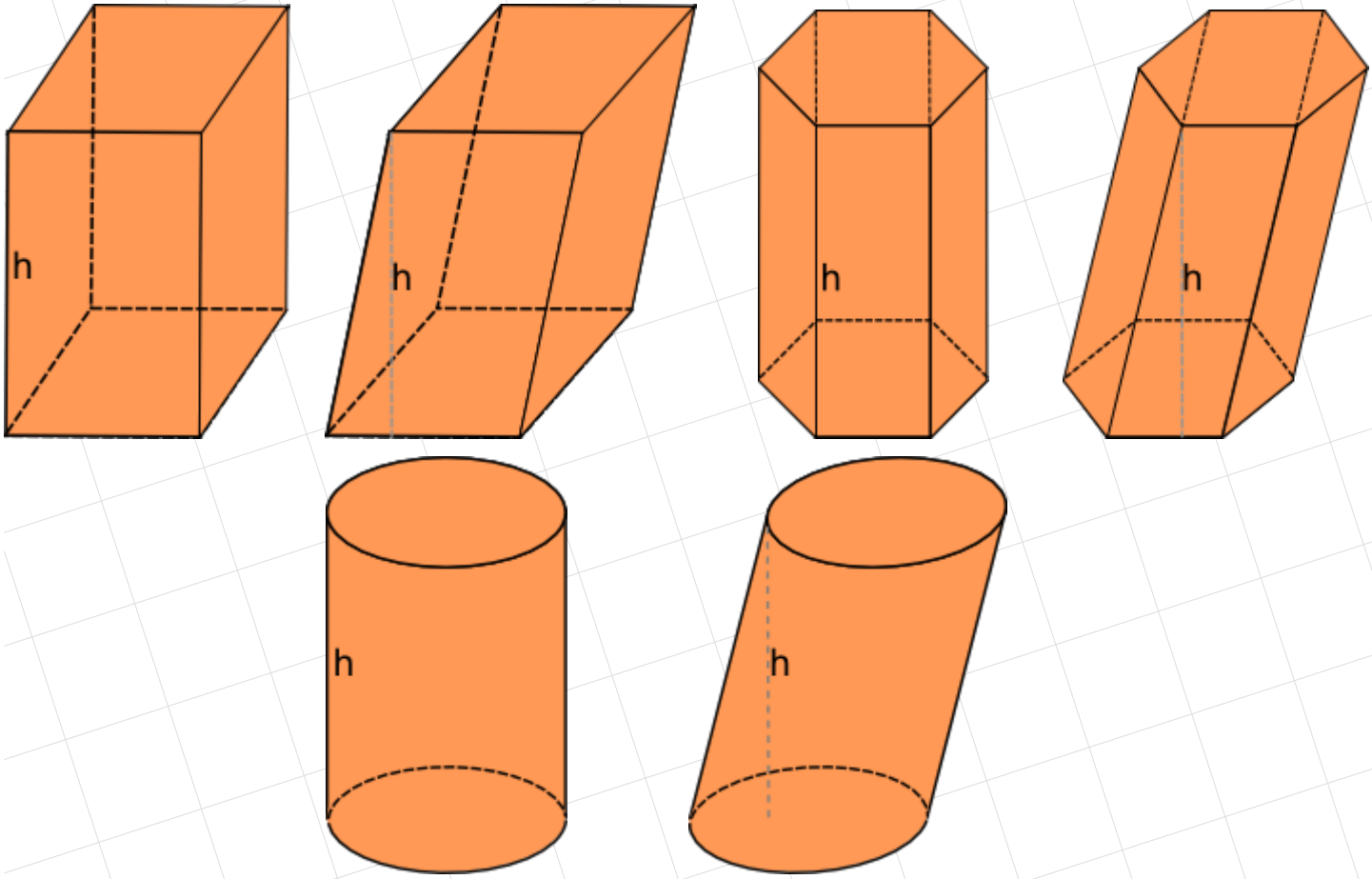
Área = $\mathbf{4\cdot\pi\cdot r^2}$



3.2. Volumen

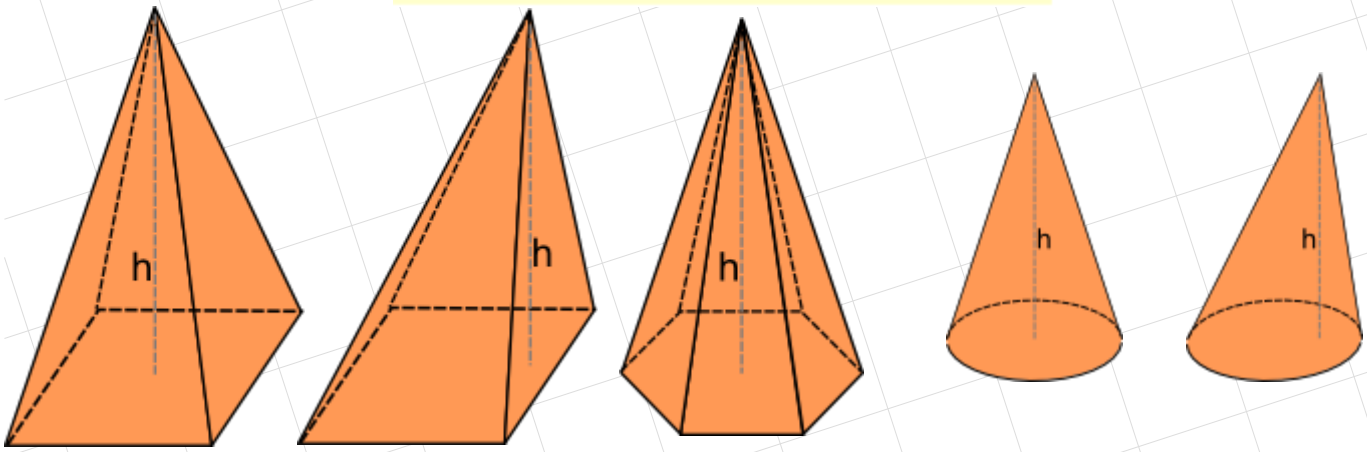
3.2.1. Prisma o Cilindro

$$V = A_{base} \cdot h = (\text{Área de la base}) \cdot \text{altura}$$



3.2.2. Pirámide o Cono

$$V = \frac{A_{base} \cdot h}{3} = \frac{(\text{Área de la base}) \cdot \text{altura}}{3}$$



3.2.3. Esfera

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