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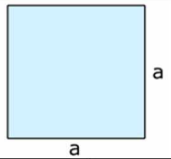
MATEMÁTICAS ESO (4 de 6)

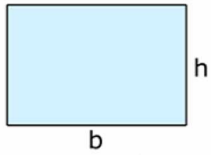
FIGURAS PLANAS

Cuadrado



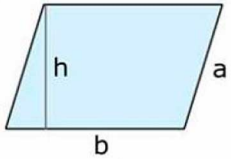
$P=4a$	$A=a^2$

Rectángulo



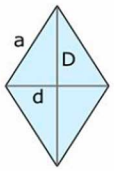
$P=2(b+h)$	$A=b\cdot h$

Paralelogramo



$P=2(a+b)$	$A=b\cdot h$

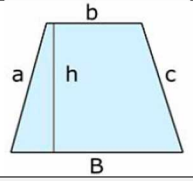
Rombo



$$P=4\cdot a=4\cdot\sqrt{\left(\frac{d}{2}\right)^2+\left(\frac{D}{2}\right)^2}$$

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

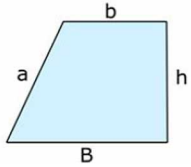
Trapecio



$$P=a+B+c+b$$

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

Trapecio Recto

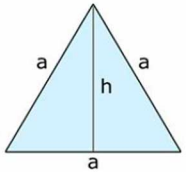


$$P=a+B+h+b$$

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

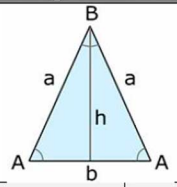
$$A=\frac{B+b}{2}\cdot h$$

Triángulo Equilátero



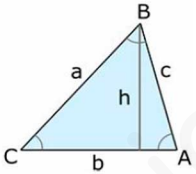
$P=3\cdot a$	$A=\frac{a\cdot h}{2}$

Triángulo Isósceles



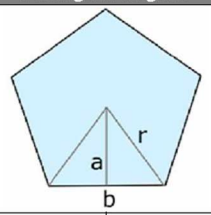
$P=2\cdot a+b$	$A=\frac{b\cdot h}{2}$

Triángulo Escaleno



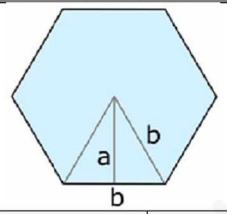
$P=a+b+c$	$A=\frac{b\cdot h}{2}$

Pentágono Regular



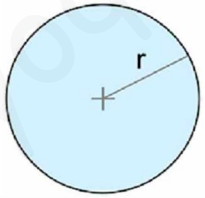
$P=5\cdot b$	$A=\frac{P\cdot a}{2}$

Hexágono Regular



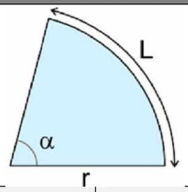
$P=6\cdot b$	$A=\frac{P\cdot a}{2}$

Círculo



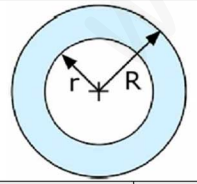
$P=2\cdot\pi\cdot r$	$A=\pi\cdot r^2$

Sector Circular



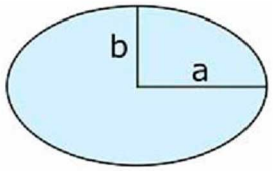
$L=\pi\cdot r\cdot\frac{\alpha}{180}$	$A=\pi\cdot r^2\cdot\frac{\alpha}{360}$

Corona Circular



$P=2\pi(R+r)$	$A=\pi(R^2-r^2)$

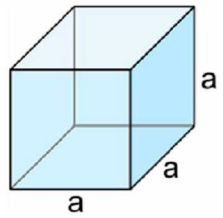
Elipse



$P=\pi(a+b)$	$A=\pi\cdot a\cdot b$

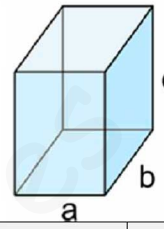
FIGURAS EN EL ESPACIO

Cubo



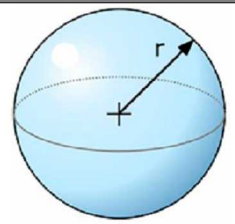
$A_{Lat}=6a^2$	$V=a^3$

Ortoedro



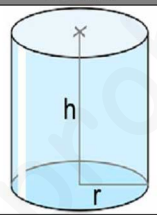
$A_{Lat}=2(a\cdot b+b\cdot c+a\cdot c)$	$V=a\cdot b\cdot c$

Circunferencia



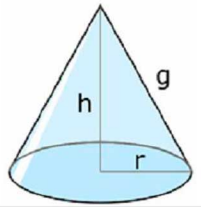
$A_{Lat}=4\cdot\pi\cdot r^2$	$V=\frac{4}{3}\cdot\pi\cdot r^3$

Cilindro



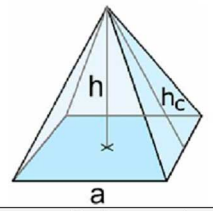
$A_{Lat}=2\cdot\pi\cdot r\cdot h$	
$A_{Total}=2\cdot\pi\cdot r\cdot(r+h)$	
$V=\pi\cdot r^2\cdot h$	

Cono



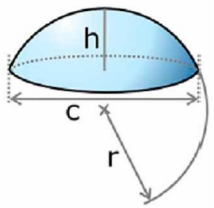
$A_{Lat}=\pi\cdot r\cdot g$ $\quad g=\sqrt{h^2+r^2}$	
$A_{Total}=\pi\cdot r\cdot(r+g)$	
$V=\frac{1}{3}\pi\cdot r^2\cdot h$	

Pirámide



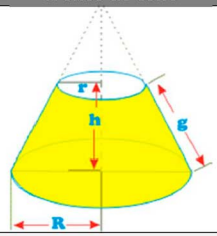
$A_{Lat}=\frac{Perímetro_{Base}\cdot h_c}{2}$	
$A_{Total}=A_{lat}+A_{Base}$	
$V=\frac{1}{3}\cdot A_{base}\cdot h$	

Casquete



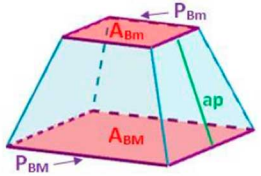
$A_{Lat}=2\cdot\pi\cdot r\cdot h=\frac{\pi}{4}(c^2+4h^2)$	
$A_{Base}=\frac{\pi\cdot c^2}{4}$ $\quad r=\frac{h}{2}+\frac{c^2}{8h}$	
$V=\pi\cdot h^2\left(r-\frac{h}{3}\right)=\frac{\pi}{6}\cdot h\left(\frac{3c^2}{4}+h^2\right)$	

Tronco de cono



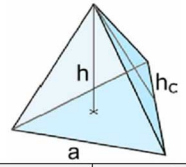
$A_{Lat}=\pi(R+r)\cdot g$	
$A_{Total}=\pi\left[(R+r)\cdot g+R^2+r^2\right]$	
$V=\frac{\pi\cdot h(R^2+r^2+R\cdot r)}{3}$	

Tronco de pirámide



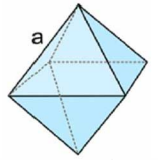
$A_{Lat}=\frac{(P_{BM}+P_{Bm})\cdot g}{2}$	
$A_{Lat}=\frac{(P_{BM}+P_{Bm})\cdot ap}{2}+A_{BM}+A_{Bm}$	
$V=\frac{h\left(A_{BM}+A_{Bm}+\sqrt{A_{BM}\cdot A_{Bm}}\right)}{3}$	

Tetraedro



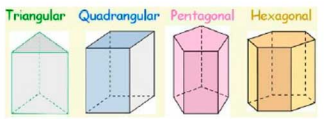
$A=\sqrt{3}\cdot a^2$	$V=\frac{\sqrt{2}}{12}\cdot a^3$

Octaedro



$A=2\cdot\sqrt{3}\cdot a^2$	$V=\frac{\sqrt{2}}{3}\cdot a^3$

Prismas Rectos



$A=2A_{base}+n\cdot A_{lat}$	$V=A_{base}\cdot h$