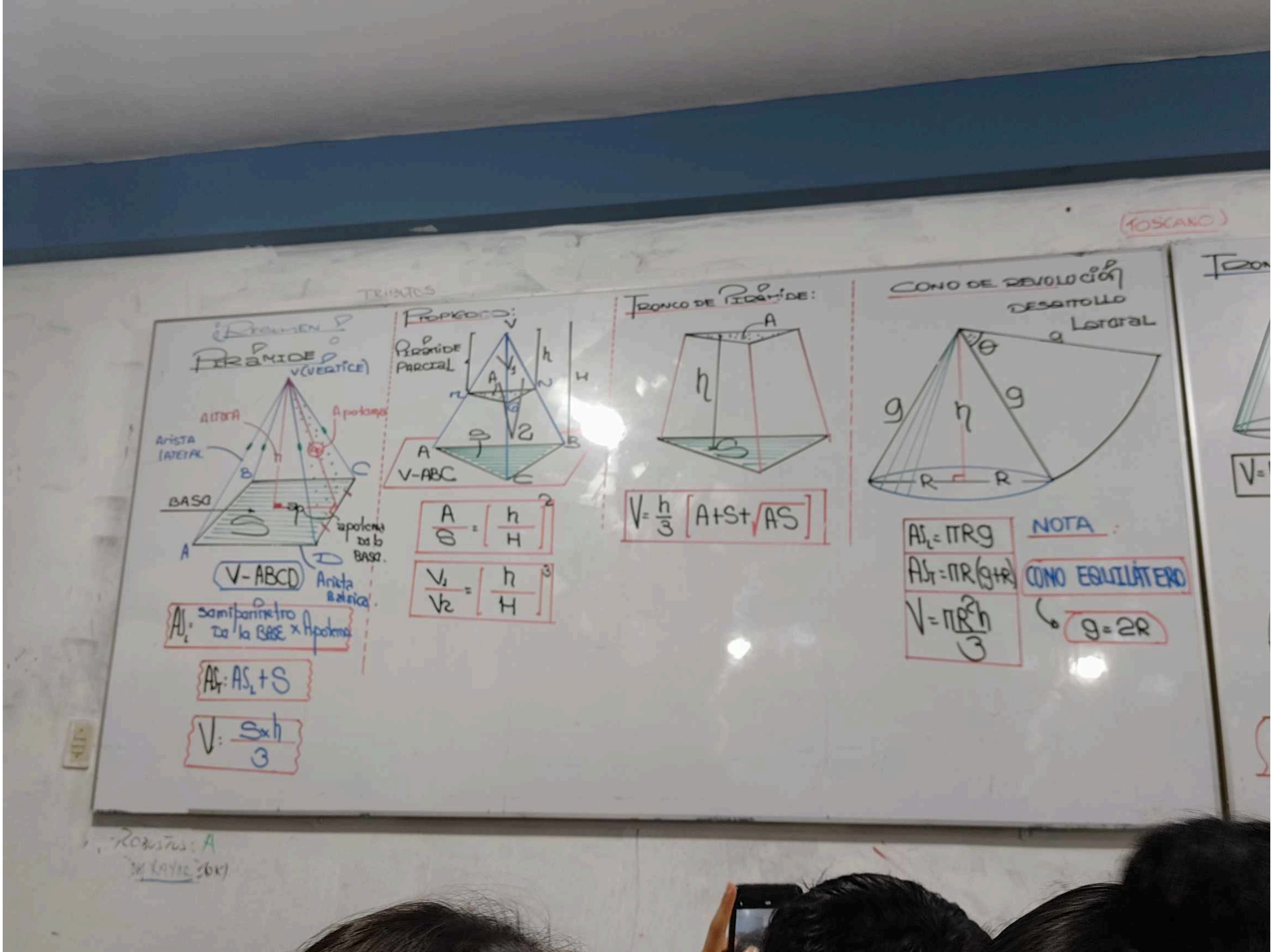
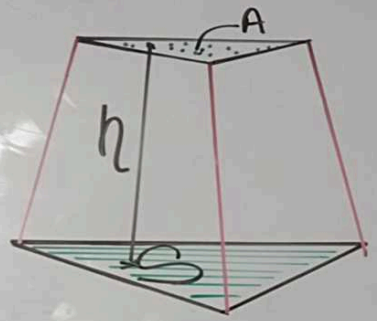


TOSCANO
TRIBUTOS
¡Resumen!
Pirámide
V(vértice)
Altura
Apotema
Arista lateral
Base
S
apotema de la base.
Arista básica
A B C D
V-ABCD
AS_L: semiperímetro de la base x Apotema
AS_T: AS_L + S
V: S×h/3
Propiedad:
Pirámide parcial
h
H
V1
V2
V-ABC
A/S = [h/H]^2
V1/V2 = [h/H]^3
Tronco de pirámide:
A
h
S
V = h/3 [A+S+√AS]
Cono de revolución
Desarrollo lateral
g
θ
h
R
AS_L = πRg
AS_T = πR(g+R)
V = πR²h/3
NOTA:
Cono equilátero
g = 2R
Robustos: A

(TOSCANO)

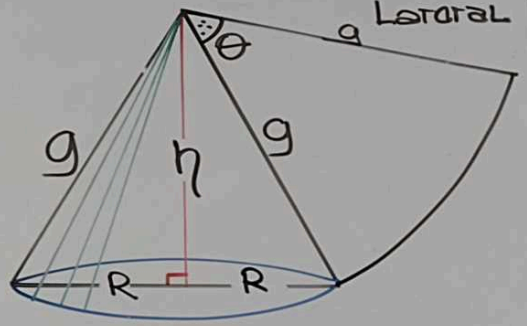
TRONCO DE PIRÁMIDE:



$$V = \frac{h}{3}\left[A + S + \sqrt{AS}\right]$$

CONO DE REVOLUCIÓN

DESARROLLO LATERAL



$$A_{S_L} = \pi R g$$

$$A_{S_T} = \pi R (g + R)$$

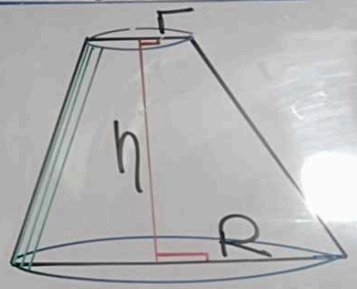
$$V = \frac{\pi R^2 h}{3}$$

NOTA:

CONO EQUILÁTERO

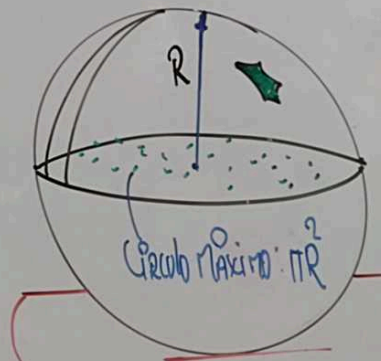
$g = 2R$

TRONCO DE CONO



$$V = \frac{\pi h}{3}\left[R^2 + r^2 + Rr\right]$$

ESFERA

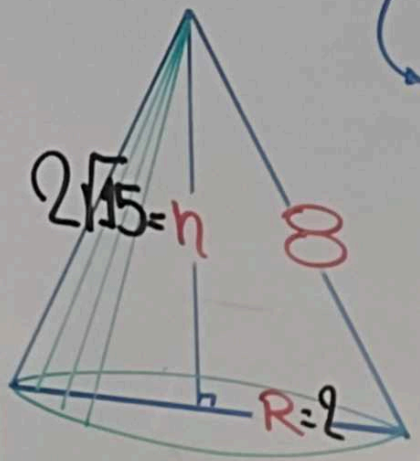


$$A_S = 4\pi R^2$$

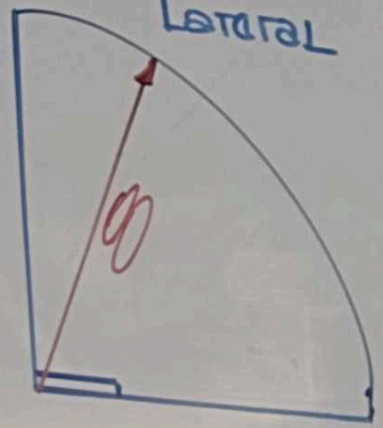
$$V = \frac{4\pi R^3}{3}$$

MITAD

20



DESARROLLO LATERAL



$A_{SL\,CONO} = A_{DESARR}$

$\pi R 8 = \frac{\pi (8)^2 \theta}{360}$

$\pi R 8 = \frac{\pi (8)^2 8}{4}$

$R = 2$

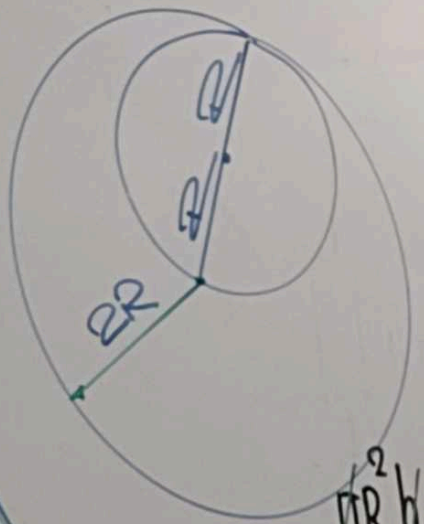
$V: \frac{\pi (2)^2 \cdot 2\sqrt{15}}{3} = \frac{8}{3}\pi\sqrt{15}$ L

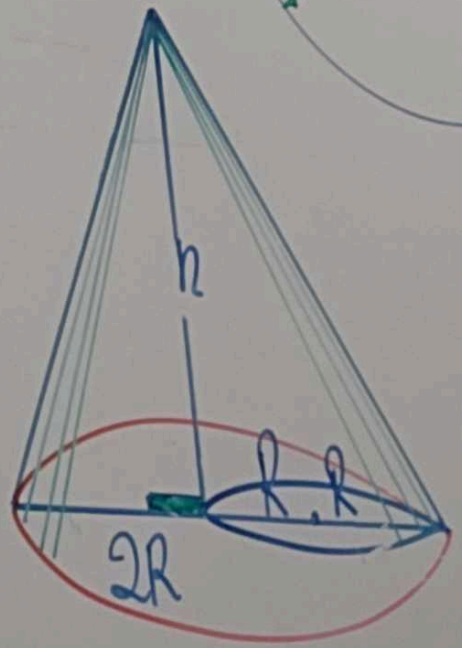
R^2

R^3

3

19



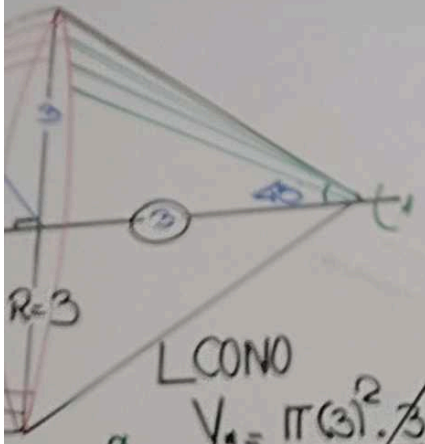


$\frac{\frac{\pi R^2 h}{3}}{\frac{\pi (2R)^2 h}{3}} = \frac{R^2}{4R^2}$

$\frac{1}{4}$

②

TRIÂNGULOS



$\frac{4}{3}\pi\frac{(3)^3}{2}$

$V_2 = 18\pi$

L CONO

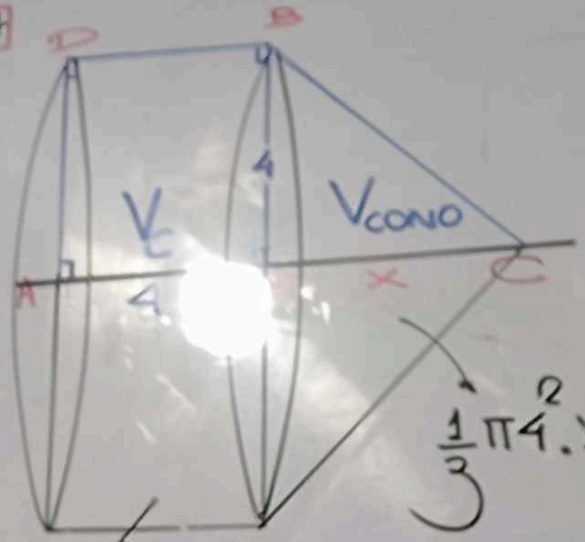
$V_1 = \frac{\pi(3)^2 \cdot 3}{3} \cdot (9\pi)$

$V_T = V_1 + V_2$

$V_T = 9\pi + 18\pi$

27π

17



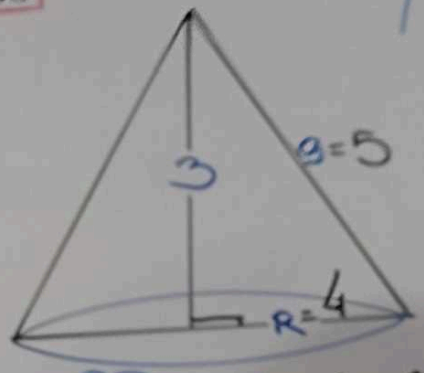
$\frac{1}{3}\pi 4^2 . x$

$\pi 4^2 . 4$

$\pi 4^2 . 4 = \frac{1}{3}\pi 4^2 x$

$12 = x$

30



$g+R=9$

$g-R=1$

$2g=10$

$g=5$

$g^2 = 3^2 + R^2$

$g^2 - R^2 = 9$

$(g+R)(g-R)=9$

$9(g-R)=9$

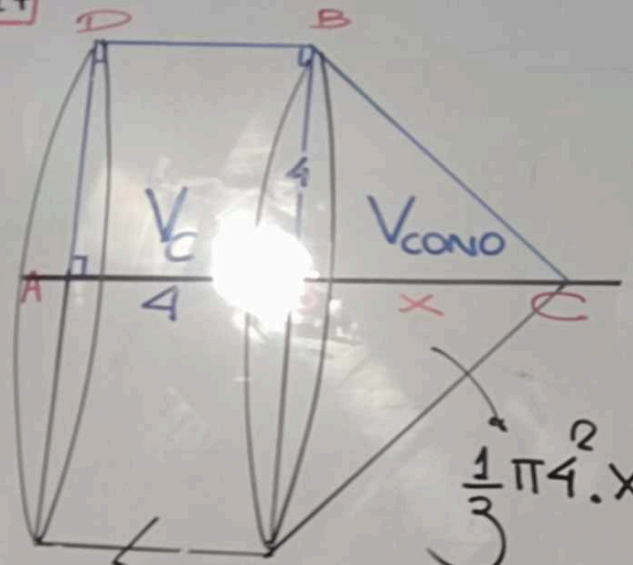
$g-R=1$

$AS_L = \pi \cdot g$

$\pi(4)$

(TOSCANO)

17



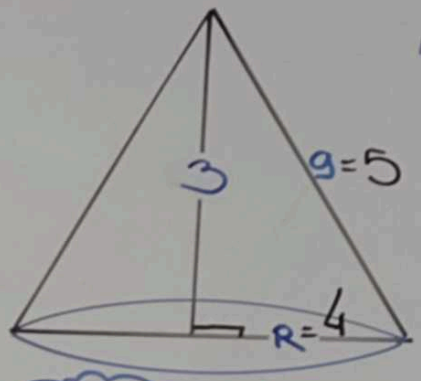
$\frac{1}{3}\pi 4^2 . x$

$\pi 4^2 . 4$

$\pi 4^2 . 4 = \frac{1}{3}\pi 4^2 x$

$12 = x$

30



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$g=5$

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$g^2 - R^2 = 9$

$(g+R)(g-R)=9$

$9(g-R)=9$

$g-R=1$

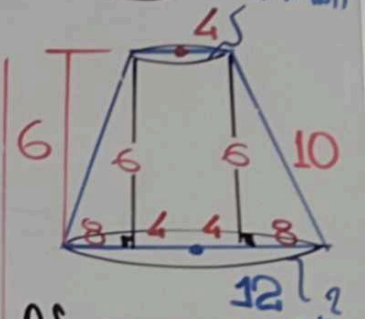
$\left(\frac{2\pi R + 2\pi r}{2}\right) g$

$\pi g(R+r)$

$AS_L = \pi r g$

$\pi(4)5$

20π



$AS_L = \pi g(R+r)$ $\pi 12^2$ 144π

$AS_L = \pi 10(12+4)$

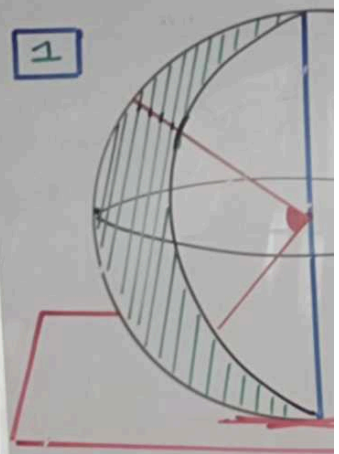
160π

144π

16π

320π

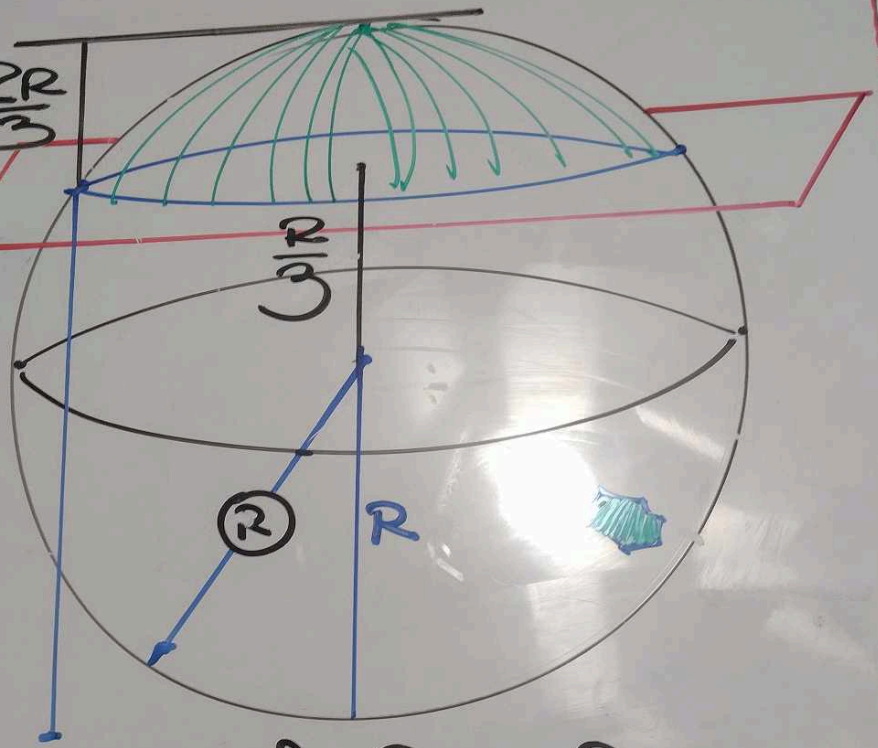
1



2

TRIBUTOS

$h = \frac{2R}{3}$



$\frac{4R}{3}$

$\frac{R}{3}$

$A = 2\pi R \cdot \frac{4R}{3}$

$\frac{8}{3}\pi R^2$

$A = 2\pi R \cdot \frac{2R}{3}$

$\frac{4}{3}\pi R^2$.

$V = \frac{S \cdot h}{3}$

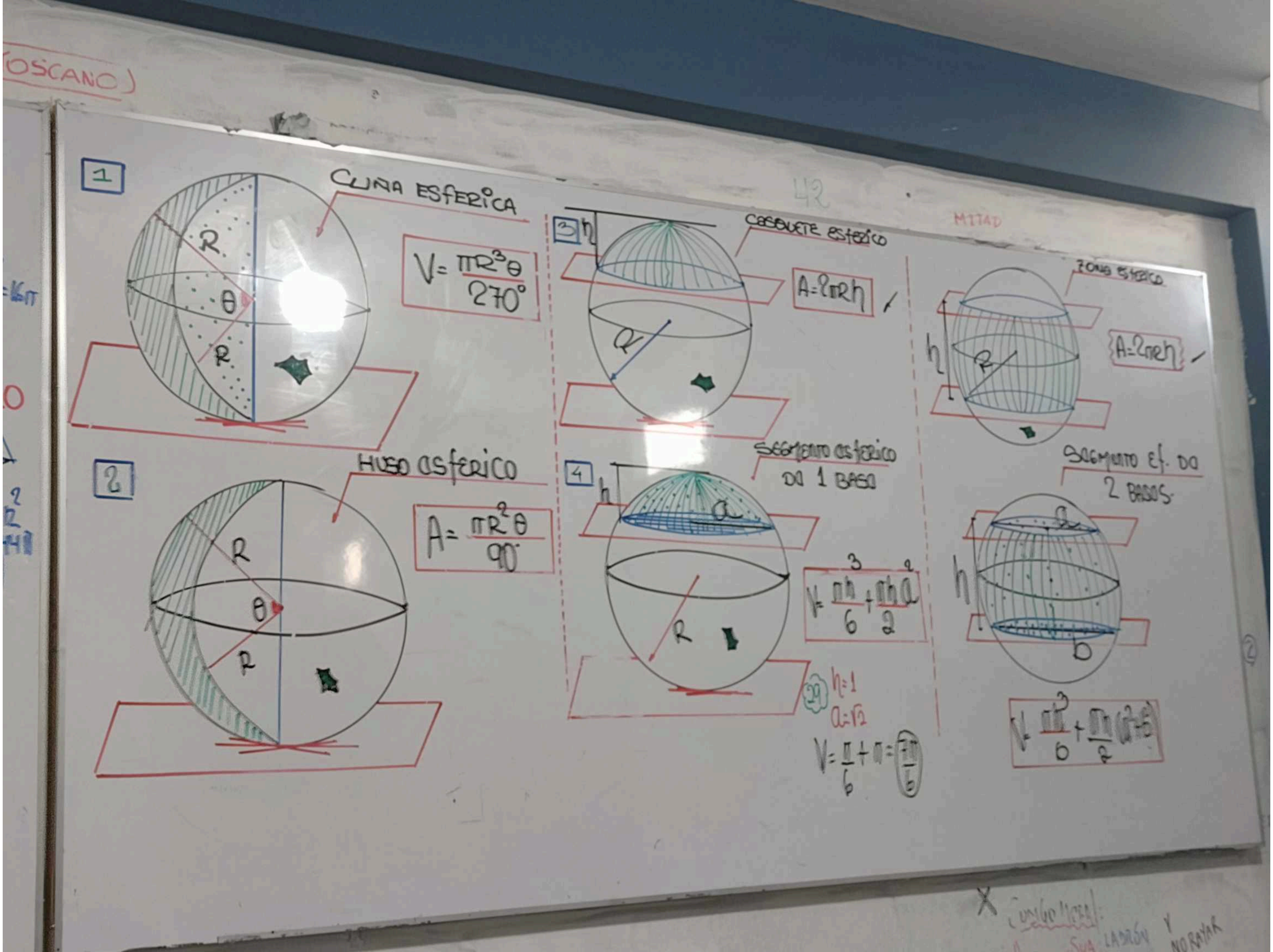
$V = \frac{36 \cdot 3\sqrt{2}}{3}$

$V = 36\sqrt{2}$

G

$S = 36$

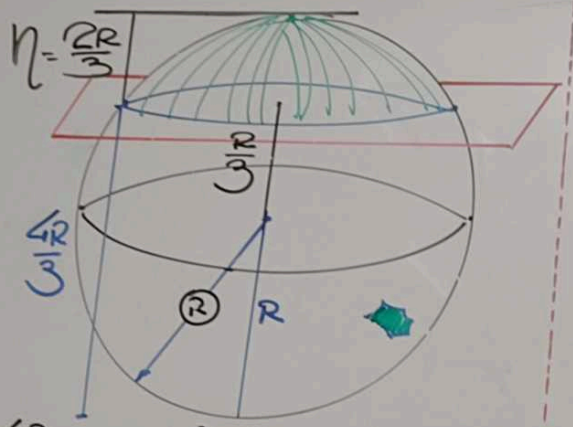
$3\sqrt{2}$



1
CUÑA ESFERICA
$V = \frac{\pi R^3 \theta}{270°}$
2
HUSO ESFERICO
$A = \frac{\pi R^2 \theta}{90°}$
3
CASQUETE ESFERICO
$A = 2\pi R h$
ZONA ESFERICA
$A = 2\pi R h$
4
SEGMENTO ESFERICO DE 1 BASE
$V = \frac{\pi h^3}{6} + \frac{\pi h a^2}{2}$
$h = 1$
$a = \sqrt{2}$
SEGMENTO EF. DE 2 BASES
$V = \frac{\pi h^3}{6} + \frac{\pi h}{2}(a^2 + b^2)$
MITAD

TRIBUTOS

TOSCANO



$A = 2\pi R \cdot \frac{4R}{3}$

$\frac{8}{3}\pi R^2$

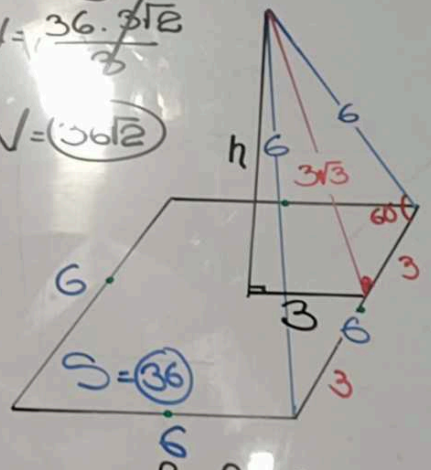
$A = 2\pi R \cdot \frac{2R}{3}$

$\frac{4}{3}\pi R^2$.

$V = \frac{S \cdot h}{3}$

$V = \frac{36 \cdot 3\sqrt{2}}{3}$

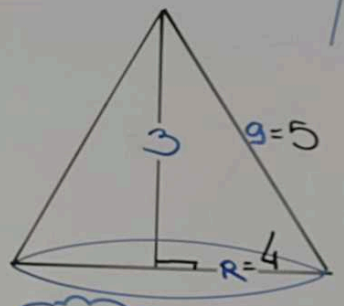
$V = 36\sqrt{2}$



$(3\sqrt{3})^2 = h^2 + 3^2$

$3\sqrt{2} = h$

30



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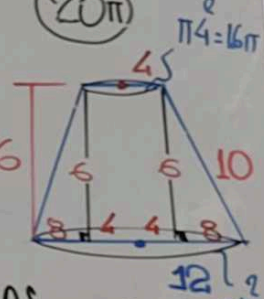
$\left(\frac{2\pi R + 2\pi r}{2}\right) g$

$\pi g(R+r)$

$AS_L = \pi \cdot g$

$\pi(4)5$

20π



$AS_L = \pi g(R+r)$ πR^2 144π

$AS_L = \pi 10(12+4)$

160π

144π

16π

320π

ROBUSTUS: A

NO RAYAR :(OK)