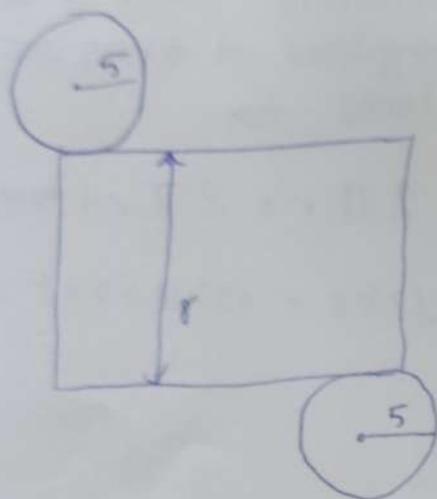


Soluciones PRE-EXAMEN

1.



Desarrollo plano



$$\text{Área bases} = \pi \cdot r^2 \cdot 2$$

$$\text{Área cara lateral} = 2\pi r \cdot h$$

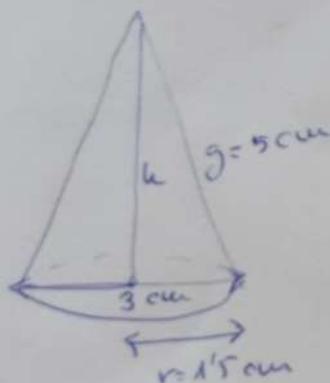
$$\text{Total} = 2\pi r^2 + 2\pi r \cdot h$$

$$2\pi \cdot 5^2 + 2\pi \cdot 5 \cdot 8 = 408.41 \text{ m}^2$$

Cada m² cuesta 6 £

$$408.41 \times 6 = 2450.46 \text{ £}$$

2.



$$\text{Vol. cono} = \frac{1}{3} \text{ Vol. cilindro}$$

$$\frac{1}{3} \pi r^2 \cdot h$$

$$\frac{1}{3} \pi \cdot 1.5^2 \cdot 4.77 \approx 11.24 \text{ cm}^3$$

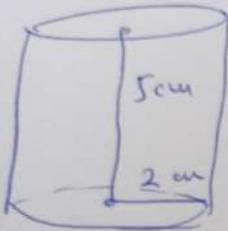
* Calculamos h

$$g^2 = 1.5^2 + h^2$$

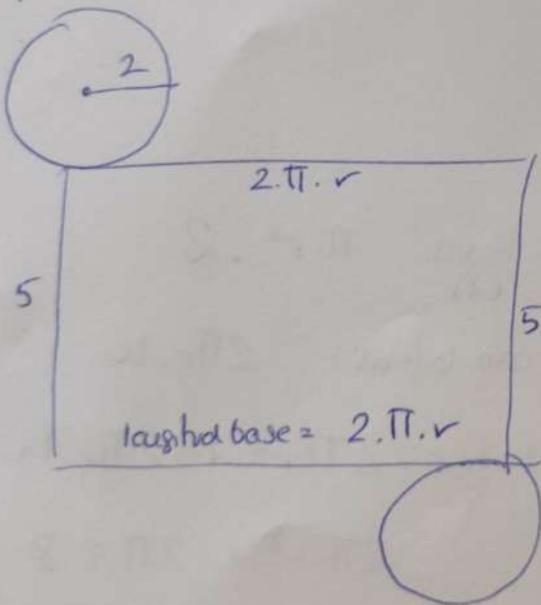
$$h = \sqrt{5^2 - 1.5^2}$$

$$h = 4.77 \text{ cm}$$

3-



DESARROLLO PLANO.

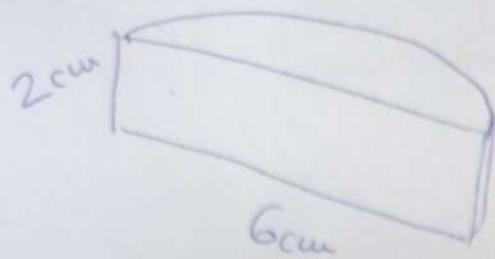


Perímetro: suma de las longitudes de todos sus lados. \Rightarrow

$$2 \cdot \pi \cdot r + 2 \cdot \pi \cdot r + 5 + 5 \Rightarrow$$

$$12'57 + 12'57 + 5 + 5 = 36'14 \text{ cm}$$

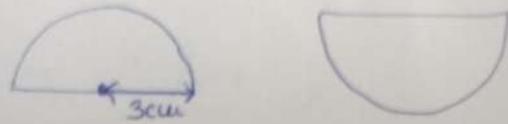
4.



→ SEMICILINDRO.

Área: Área bases
Área caras laterales.

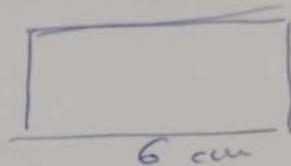
Bases = 2 semicírculos



$$\text{Área: } \pi \cdot 3^2 \Rightarrow 28'27 \text{ cm}^2$$

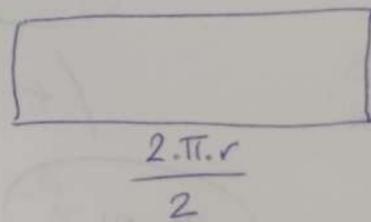
Área caras laterales

①



$$2 \text{ cm} = b \cdot a = 6 \cdot 2 = 12 \text{ cm}^2$$

②



$$2 \text{ cm} = \pi \cdot r \cdot a \Rightarrow 18'85 \text{ cm}^2$$

$$\text{Área total: } 28'27 + 12 + 18'85 = 59'12 \text{ cm}^2$$

$$\text{Volumen} \Rightarrow \frac{\text{Vol. cilindro}}{2} \Rightarrow \frac{\Delta_{\text{base}} \cdot h}{2} \Rightarrow \frac{\pi \cdot r^2 \cdot h}{2} \Rightarrow$$

$$\frac{\pi \cdot 3^2 \cdot 2}{2} = 28'27 \text{ cm}^3$$

5 - Cálculo de volumen.

a) V_{total} : Volumen semiesfera grande - Volumen semiesfera pequeña.

$$\frac{\frac{2}{3} \pi \cdot r_g^2 \cdot h}{2} - \frac{\frac{2}{3} \pi \cdot r_p^2 \cdot h}{2} \Rightarrow \left[\text{La altura es igual caso es } = a \cdot 2 \cdot r \right]$$

$$\frac{\frac{2}{3} \pi \cdot r_g^2 \cdot 2 \cdot r_g}{2} - \frac{\frac{2}{3} \pi \cdot r_p^2 \cdot 2 r_p}{2} \Rightarrow$$

$$\frac{\frac{4}{3} \pi \cdot 15^3}{2} - \frac{\frac{4}{3} \pi \cdot 9^3}{2} \Rightarrow$$

$$7068'58 - 1526'81 \Rightarrow 5541'77 \text{ cm}^3.$$

b) $V_{\text{total}} = V_{\text{cono}} + V_{\text{cilindro}}$.

$$\frac{1}{3} \cdot \pi \cdot r^2 \cdot h + \pi \cdot r^2 \cdot h$$

$$\frac{1}{3} \pi \cdot 11^2 \cdot 5'74 + \pi \cdot 15^2 \cdot 6$$

$$96'77 + 4241'15$$

$$4337'92 \text{ cm}^3$$

Calculamos
h del cono.

$$r^2 = h^2 + 4^2$$

$$r^2 - 4^2 = h^2$$

$$h = \sqrt{49 - 16}$$

$$h = 5'74$$