

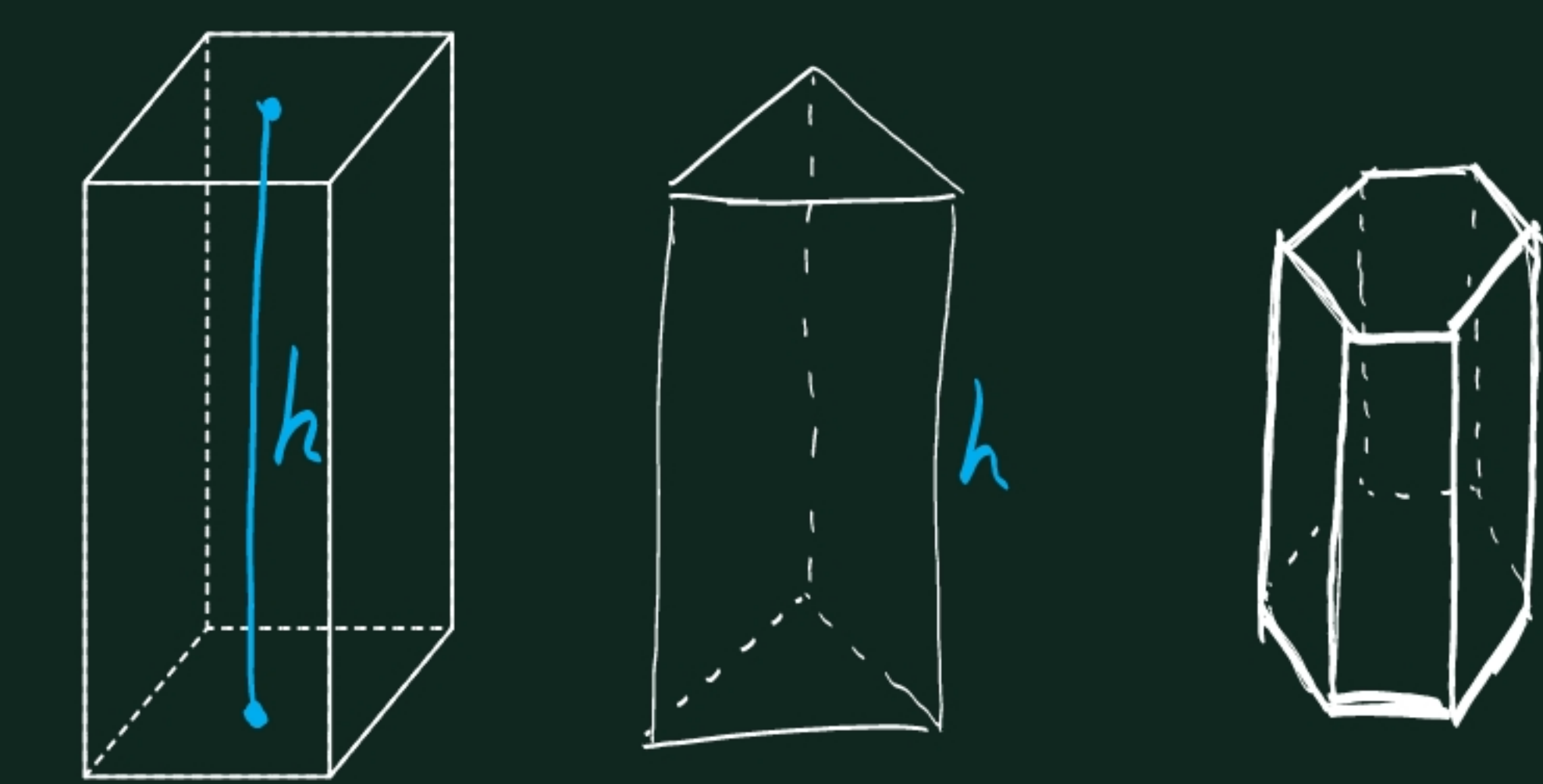
TEMA 10 - CUERPOS GEOMÉTRICOS (P.187)

Poliedros: figura tridimensional con caras planas.

Poliedros regulares: sus caras son polígonos regulares e iguales.

Prismas:

Tiene dos caras iguales y paralelas (bases). Las bases están unidas por otras caras iguales que son paralelogramos.



Prismas Rectos



Prismas Oblicuos

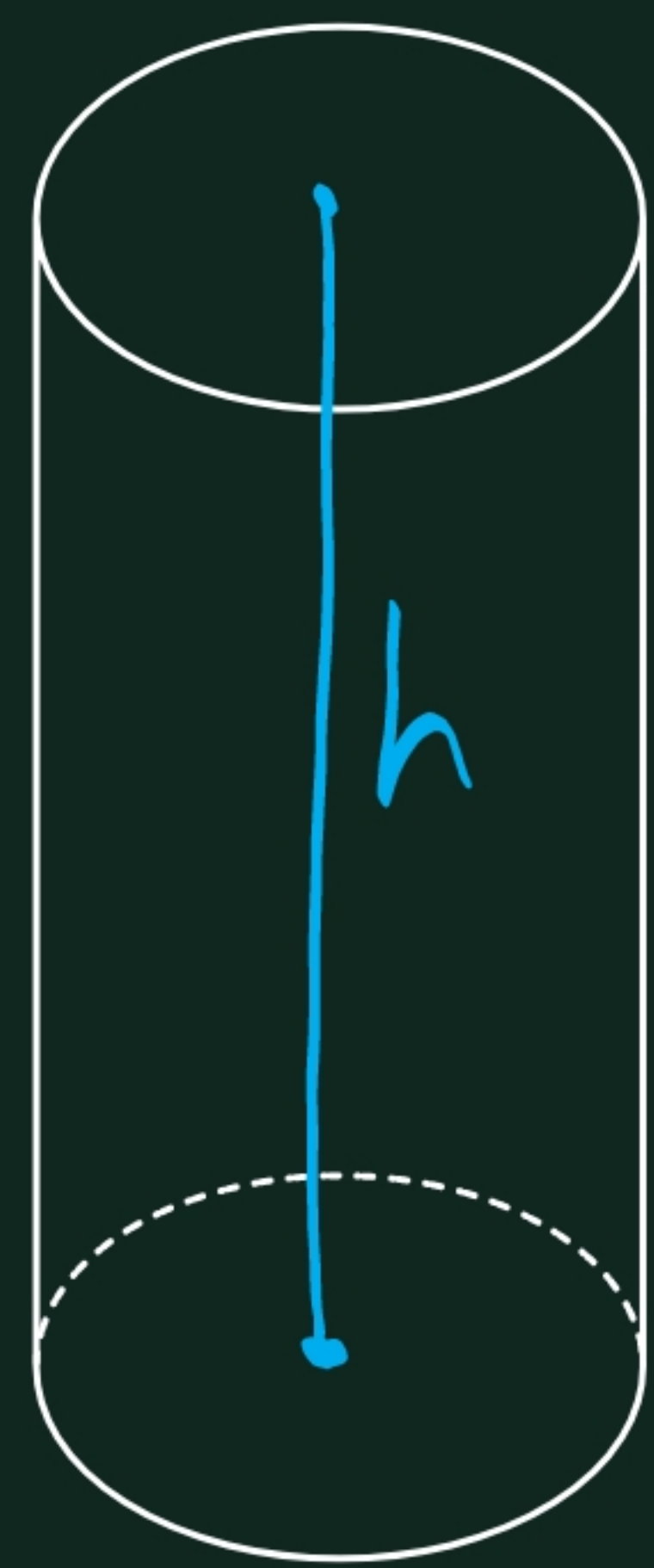
$$A_T = 2 \cdot A_b + n \cdot A_L$$

$$n = n \equiv \text{lados}$$

$$V = A_b \cdot h$$

Cilindro:

Es un prisma con bases circulares.

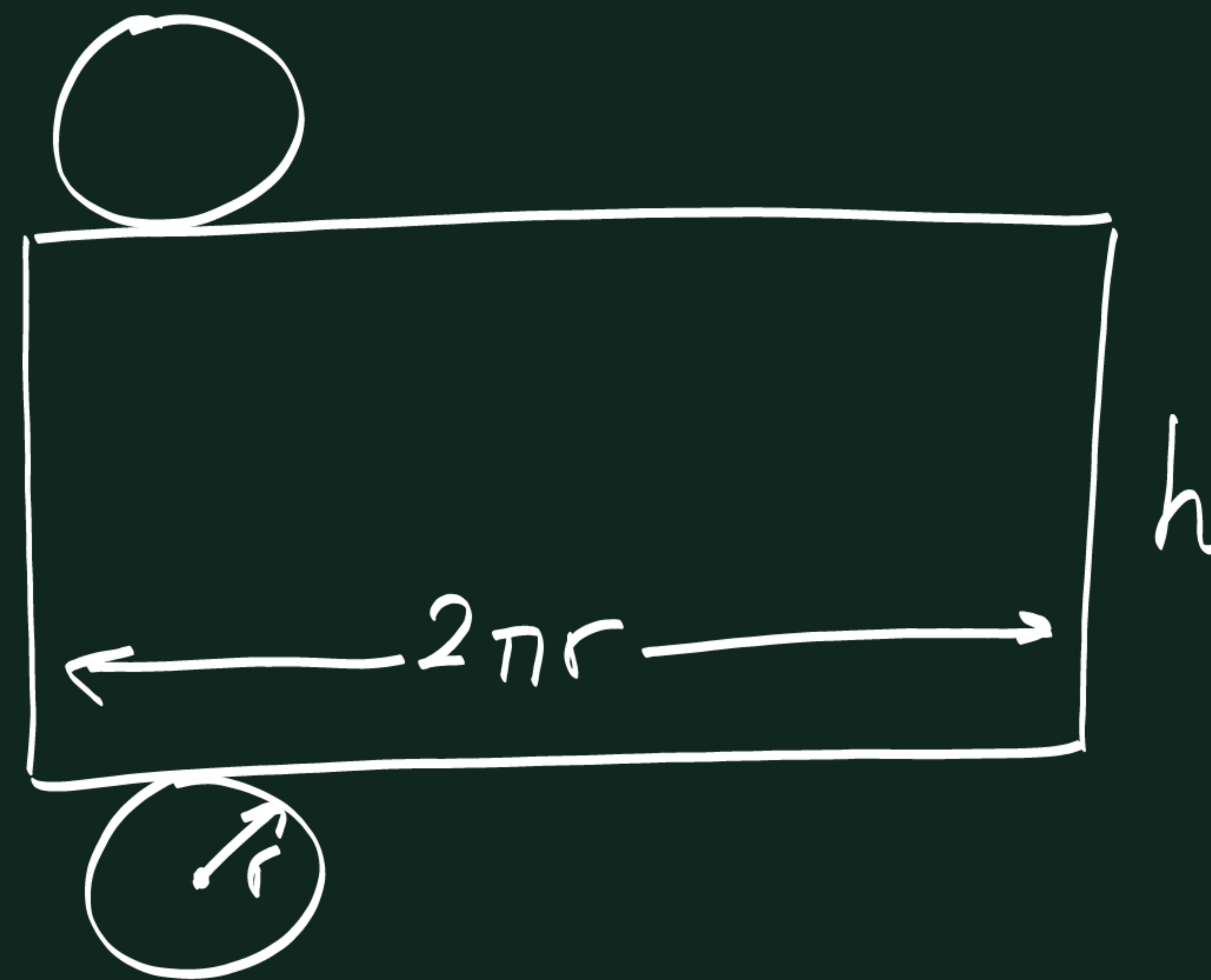


$$A_T = 2 \cdot A_b + A_L$$

$$A_b = \pi \cdot r^2$$

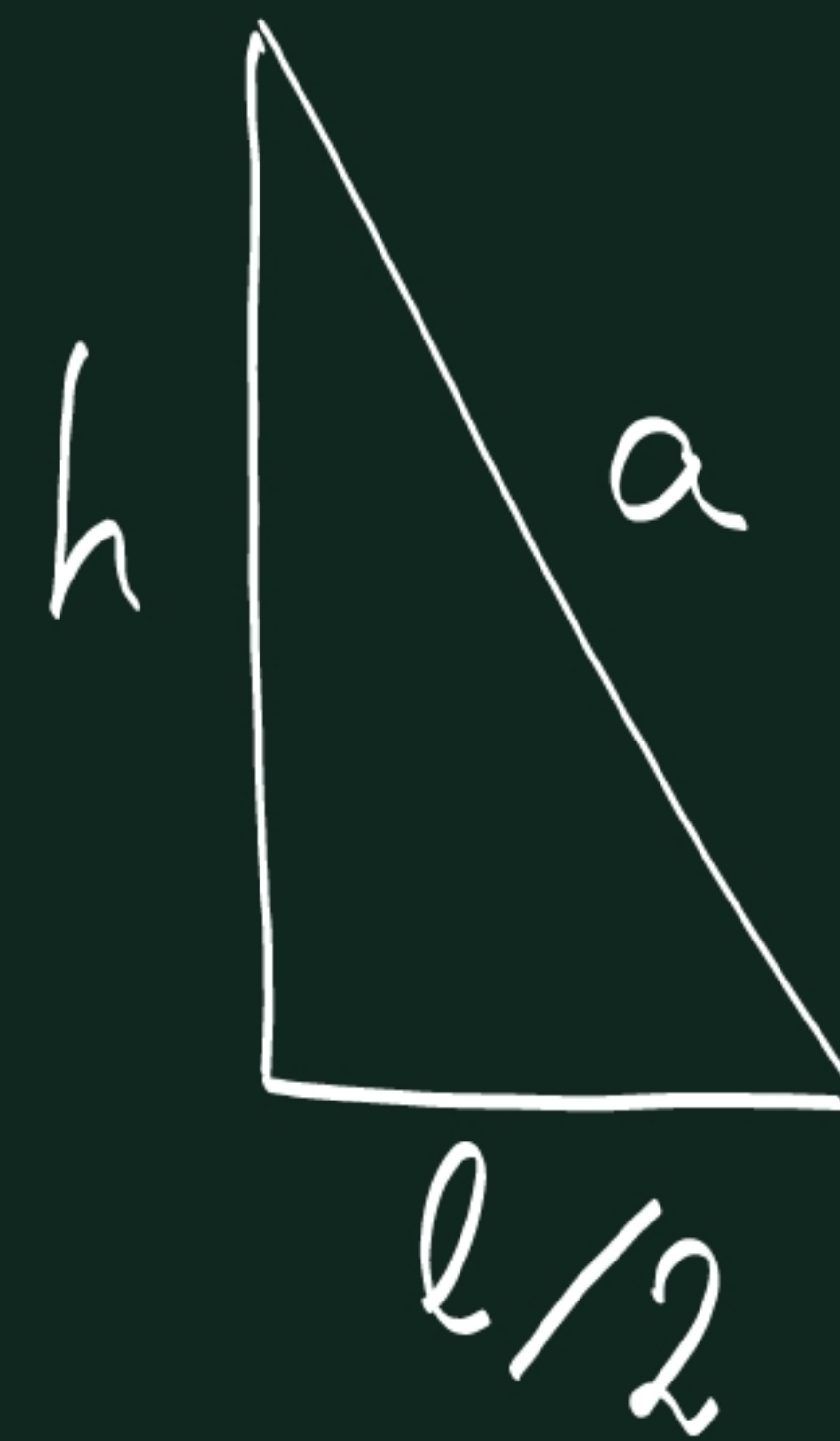
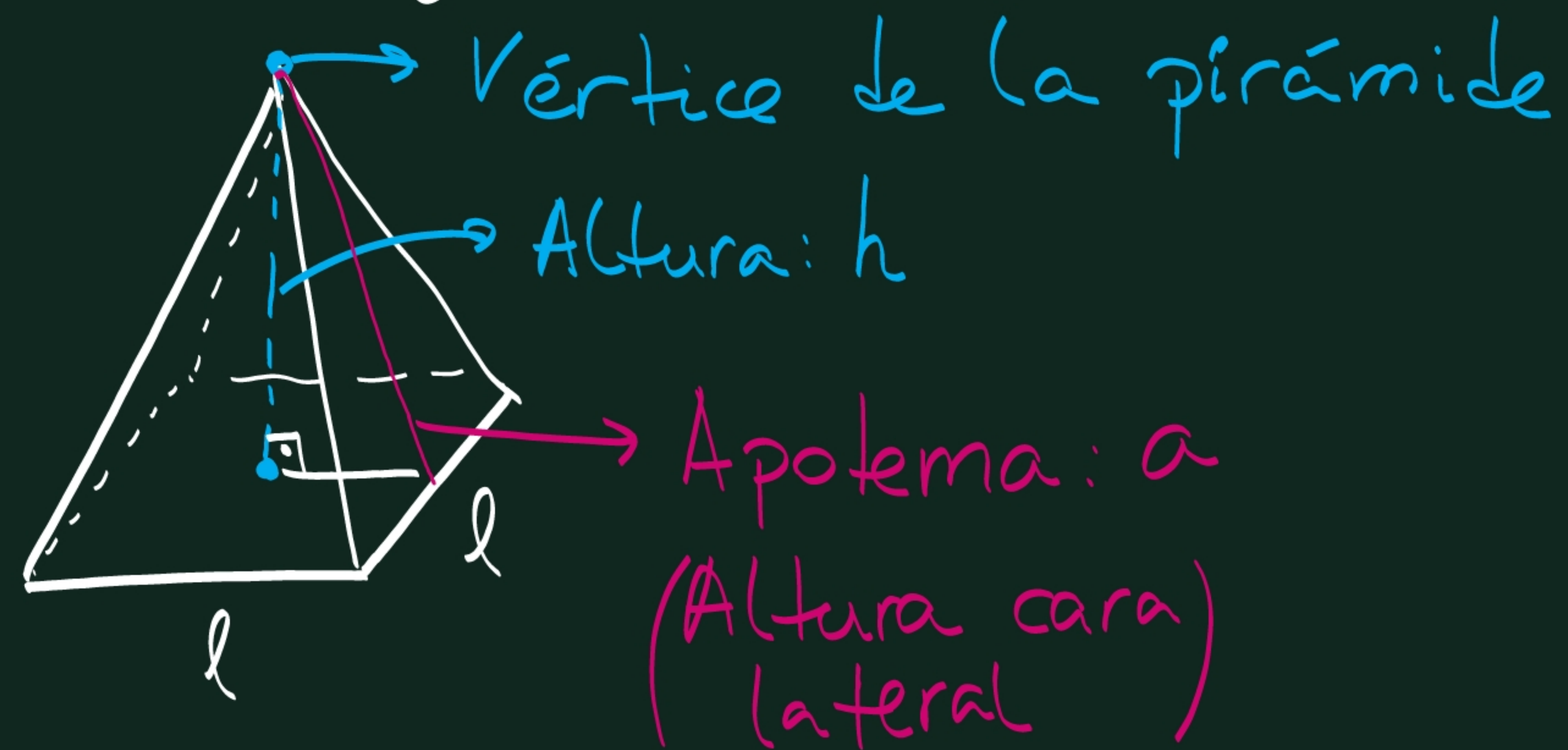
$$A_L = 2\pi \cdot r \cdot h$$

$$V = A_b \cdot h$$



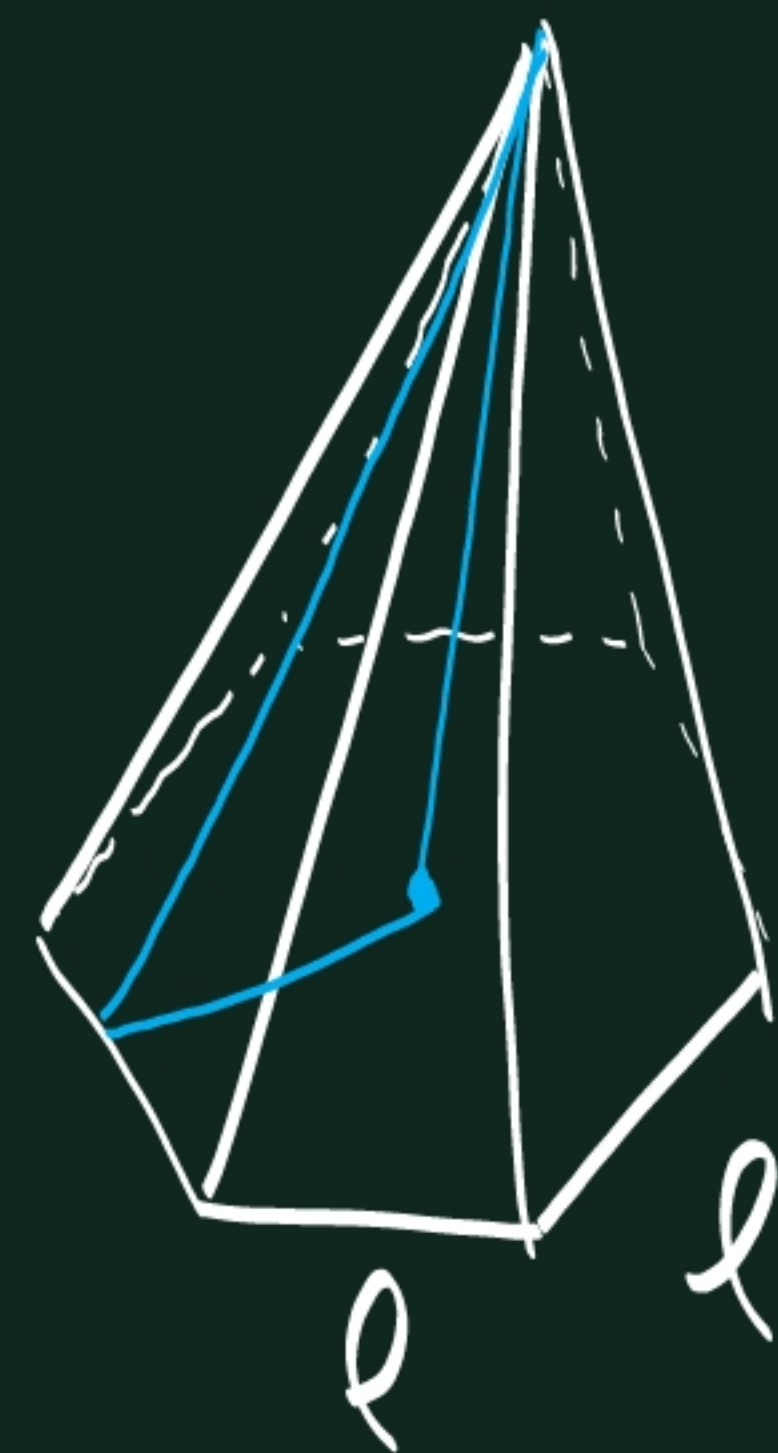
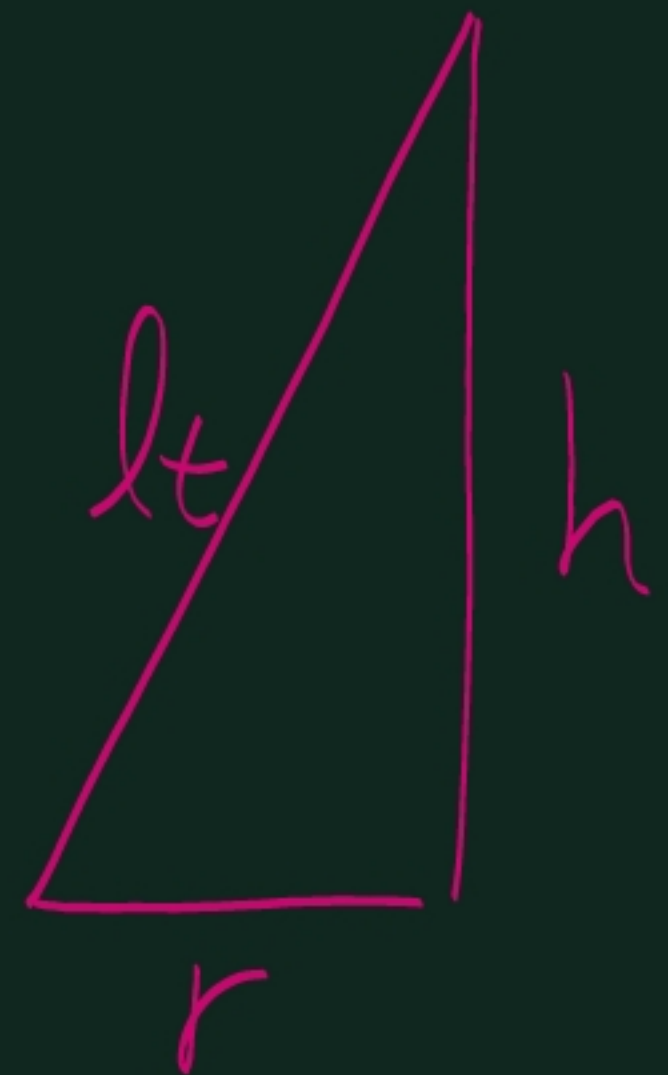
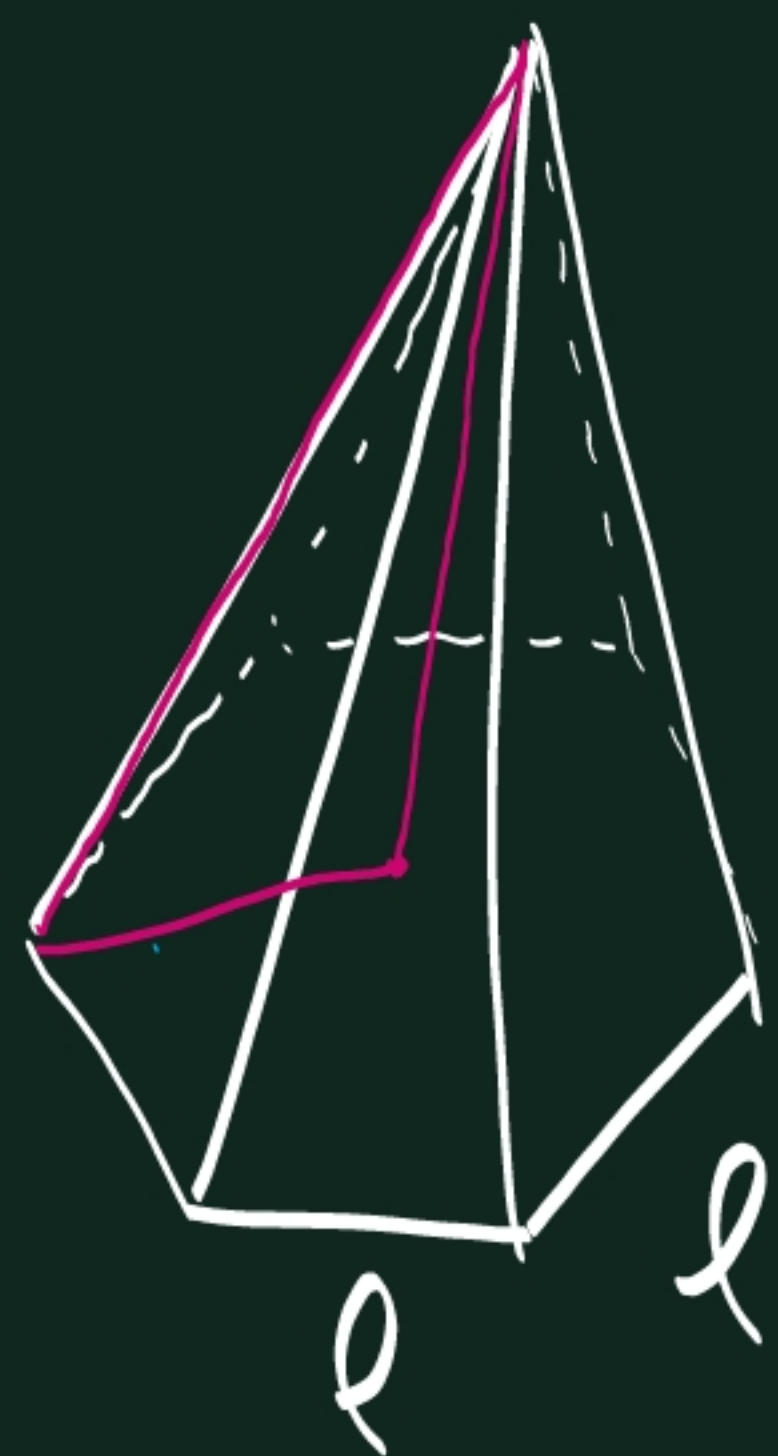
Pirámides:

Tenemos una base de la que salen caras triangulares, las cuales comparten un vértice.



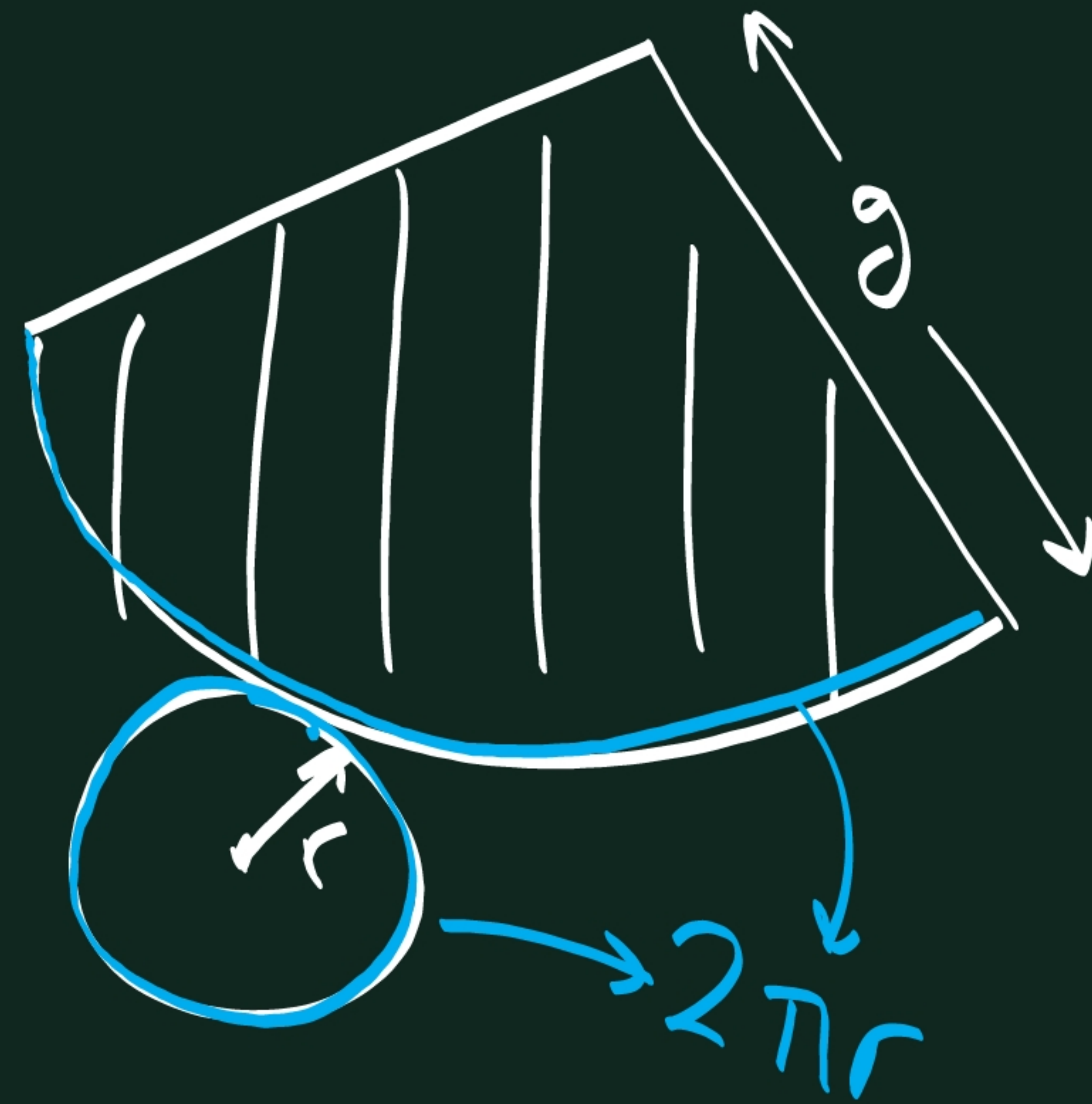
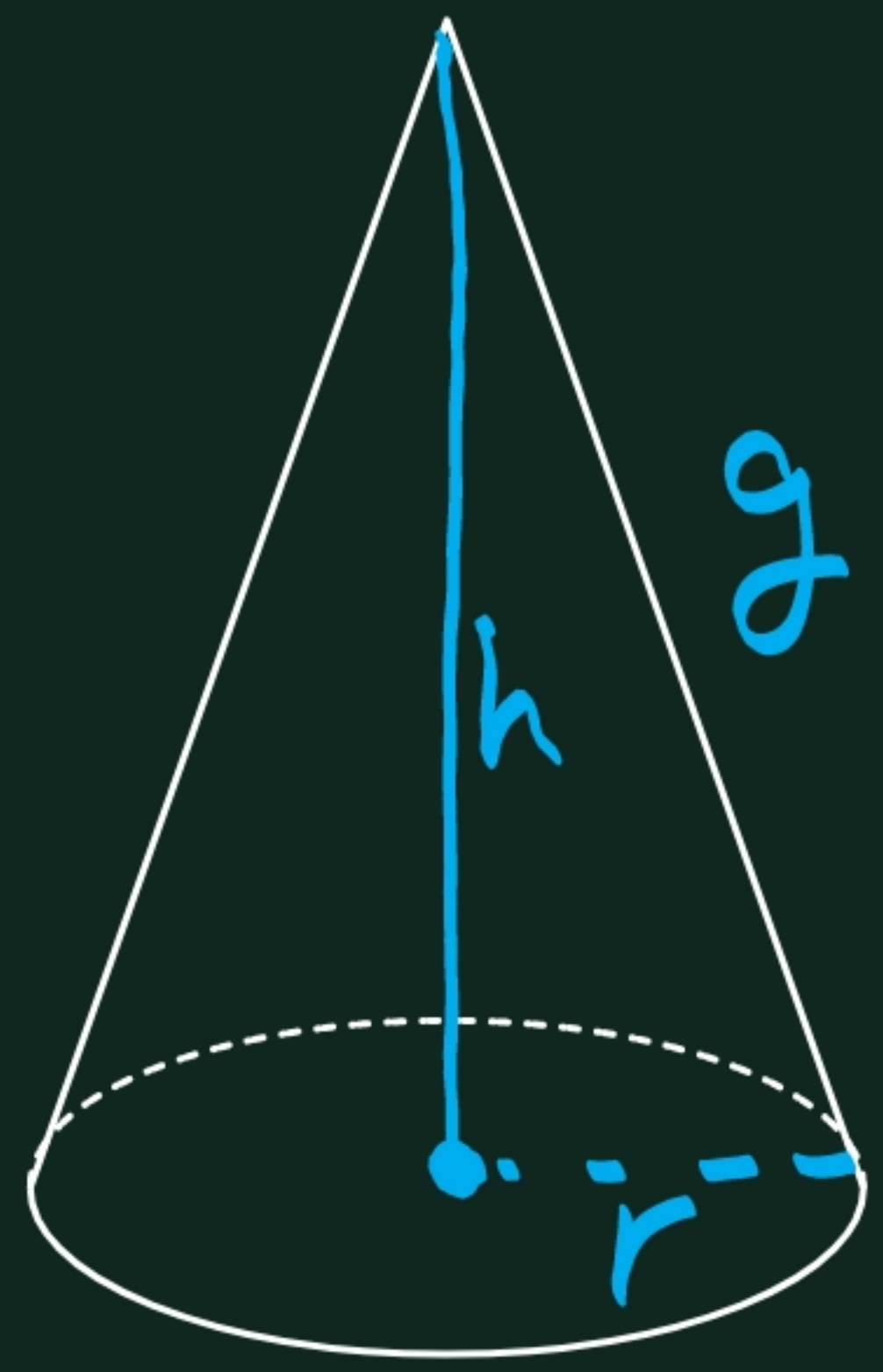
$$A_T = A_b + n \cdot A_L$$

$$V = \frac{1}{3} A_b \cdot h = \frac{A_b \cdot h}{3}$$



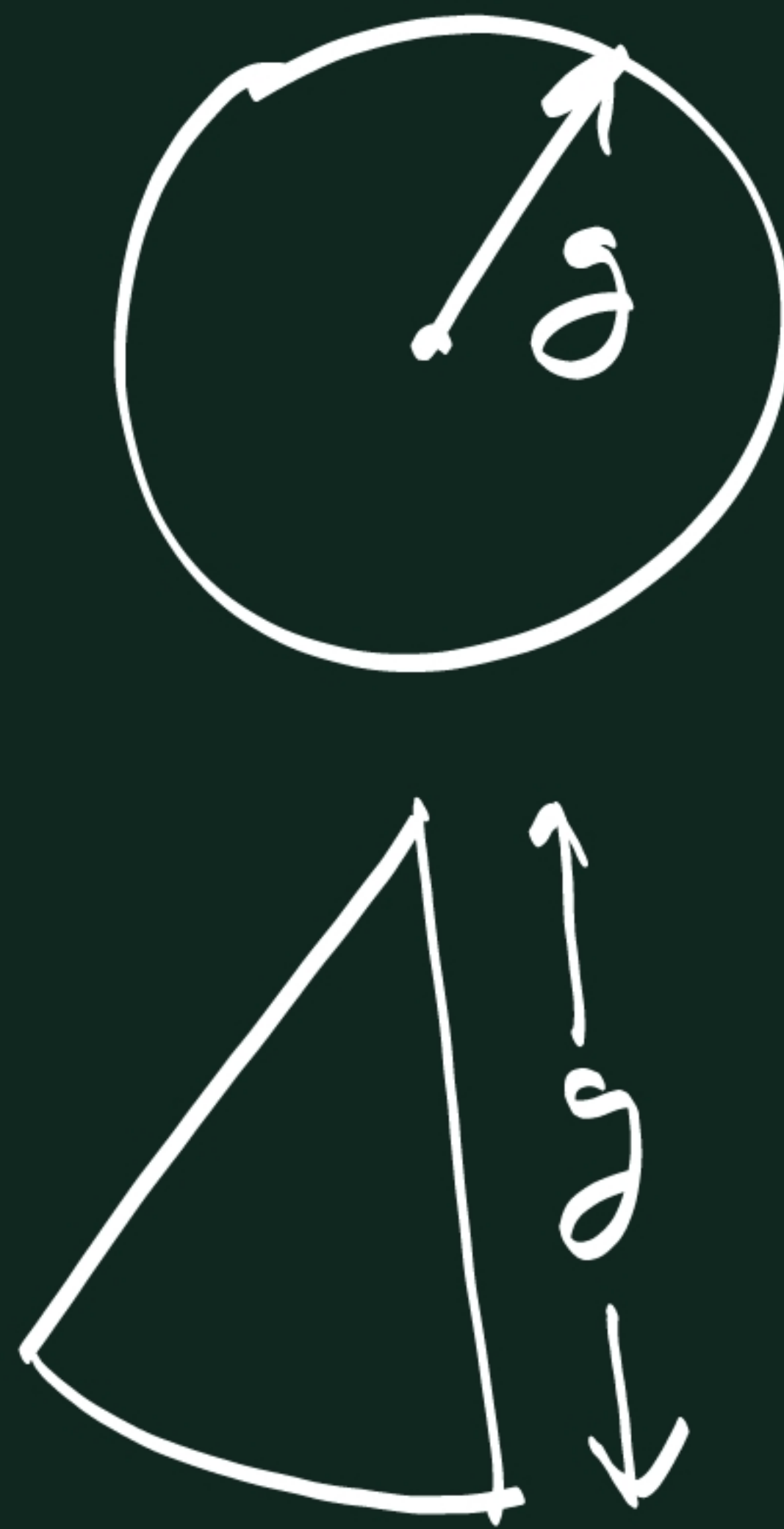
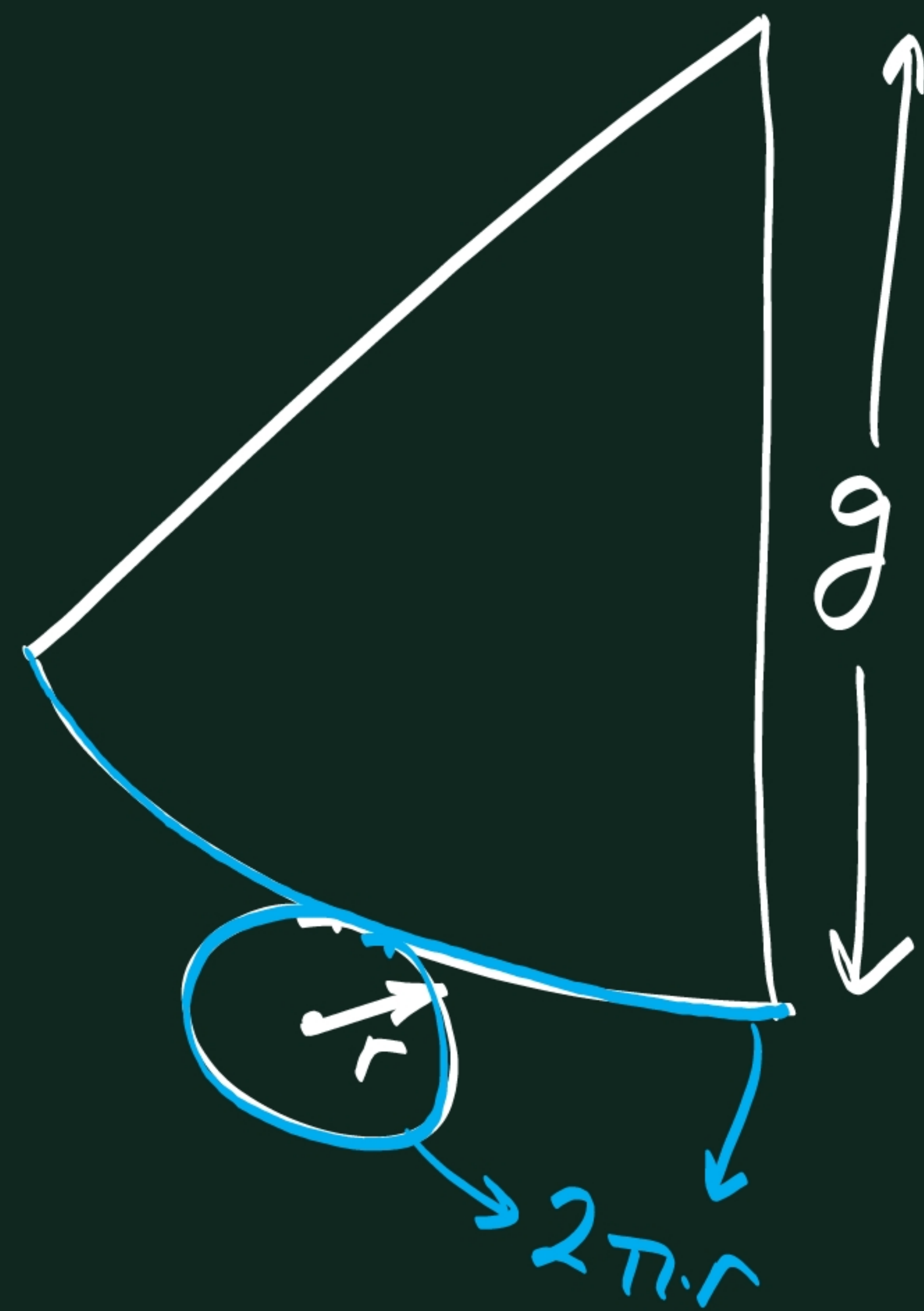
Conos:

Es una pirámide con la base circular.



$$\left. \begin{array}{l} A_b = \pi r^2 \\ A_L = \pi g \cdot r \end{array} \right\} A_T = \pi r^2 + \pi g \cdot r$$

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



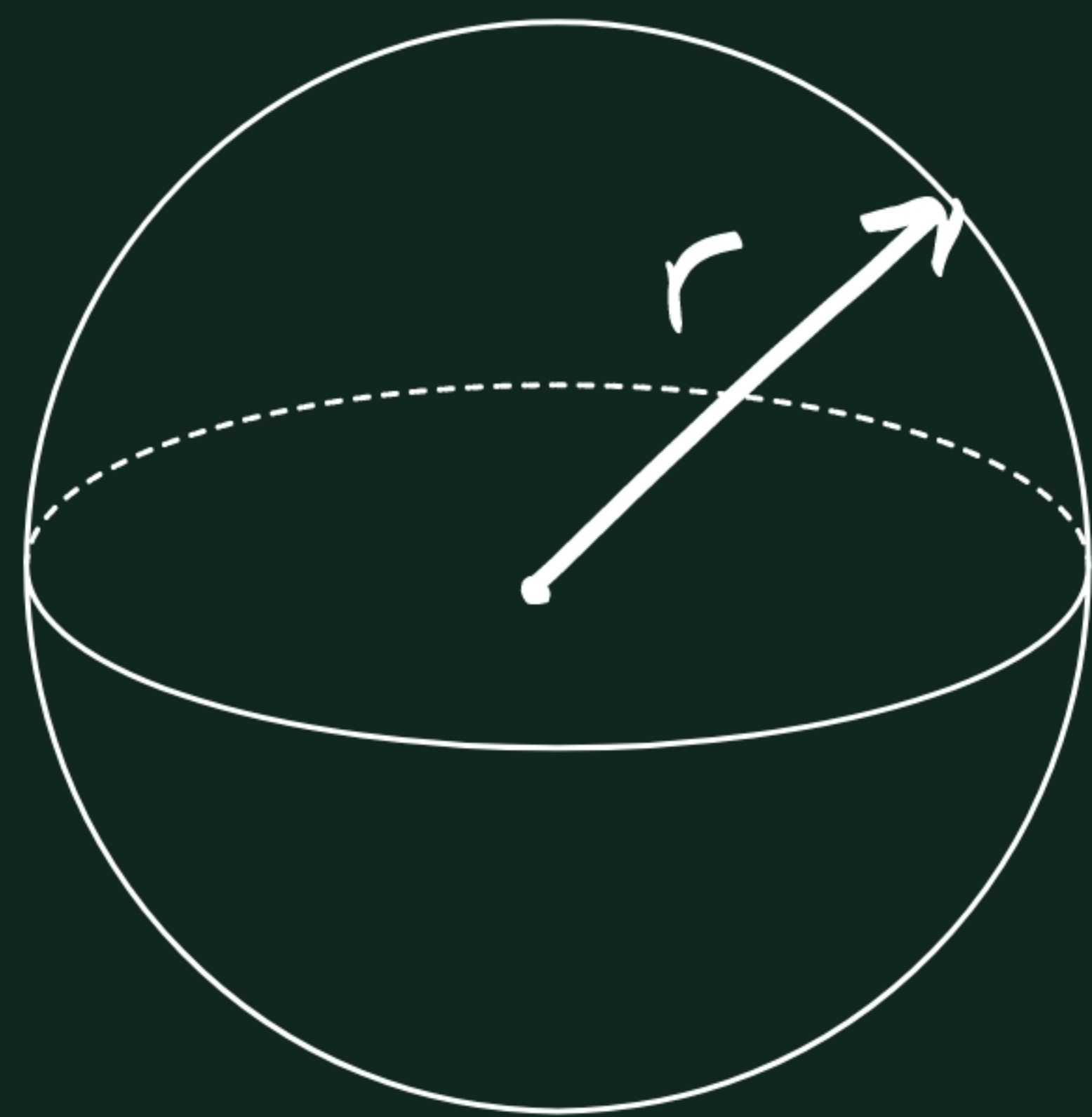
$$A = \pi g^2 \quad L = 2\pi g \quad \alpha = \cancel{360^\circ}$$

$$A = ? \quad L = 2\pi r \quad \alpha = ?$$

PD

$$A_s = \pi g^2 \cdot \frac{\cancel{2\pi r}}{\cancel{2\pi g}} = \pi \cdot g \cdot r$$

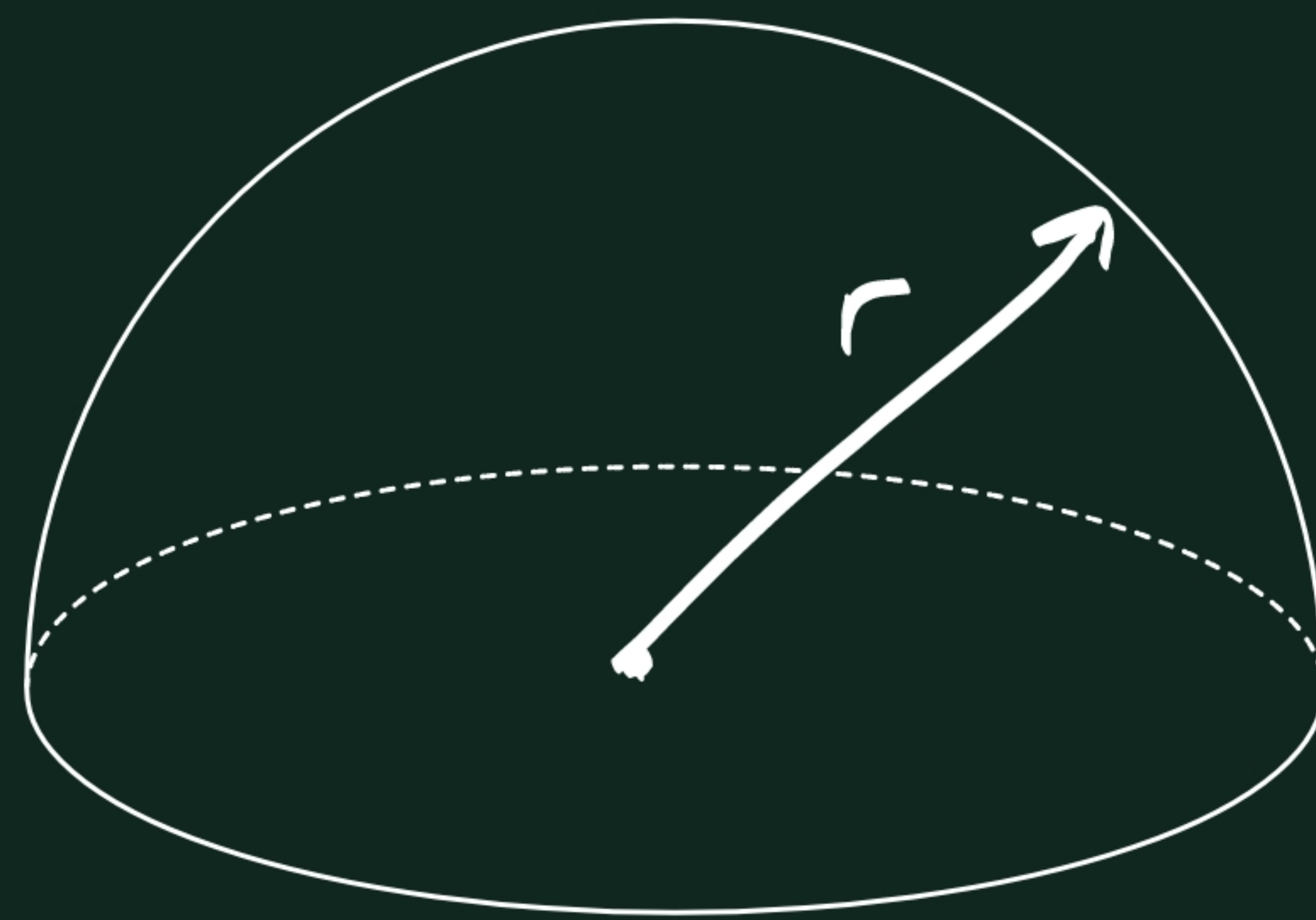
Esfera:



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

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

Semiesfera:

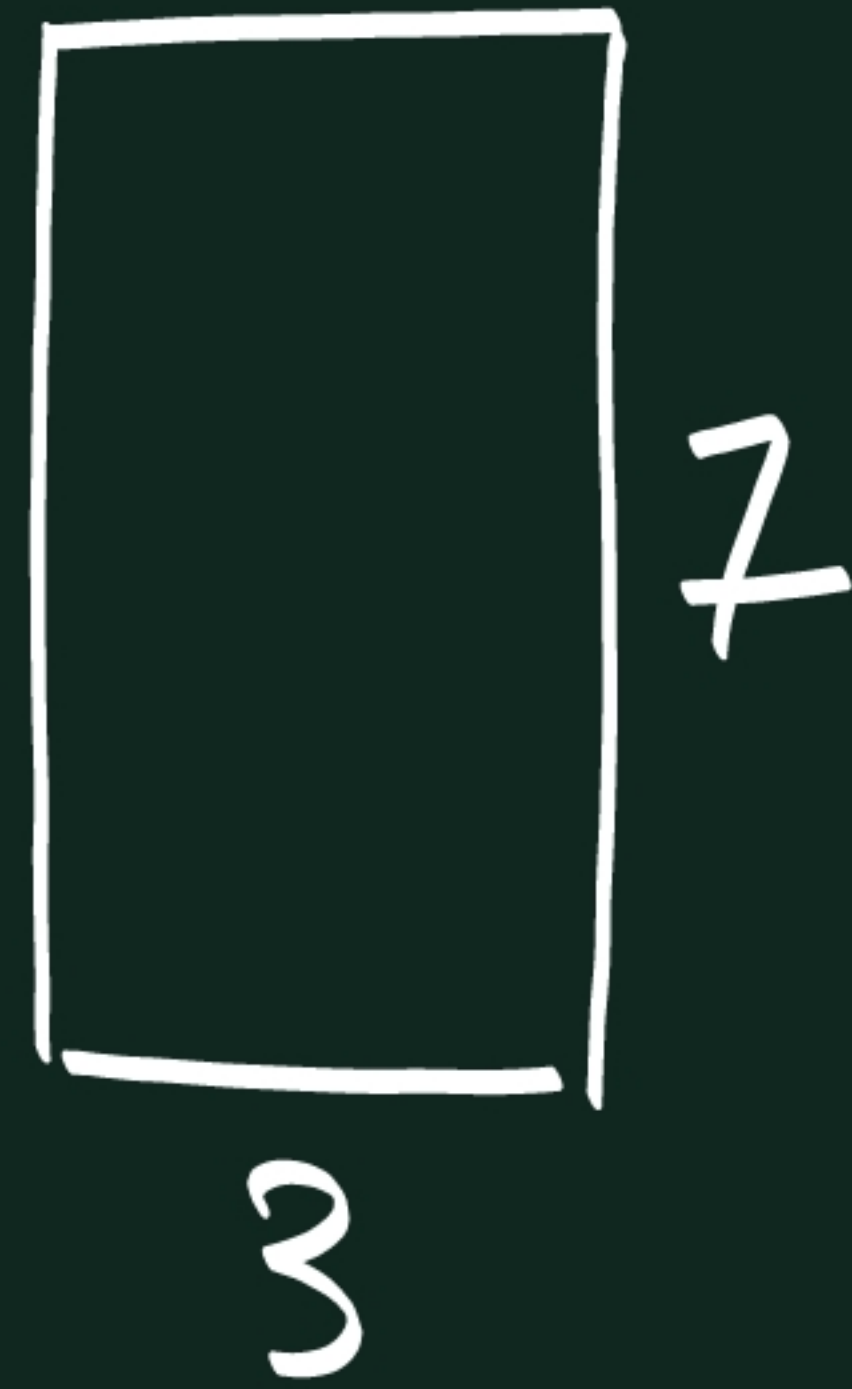
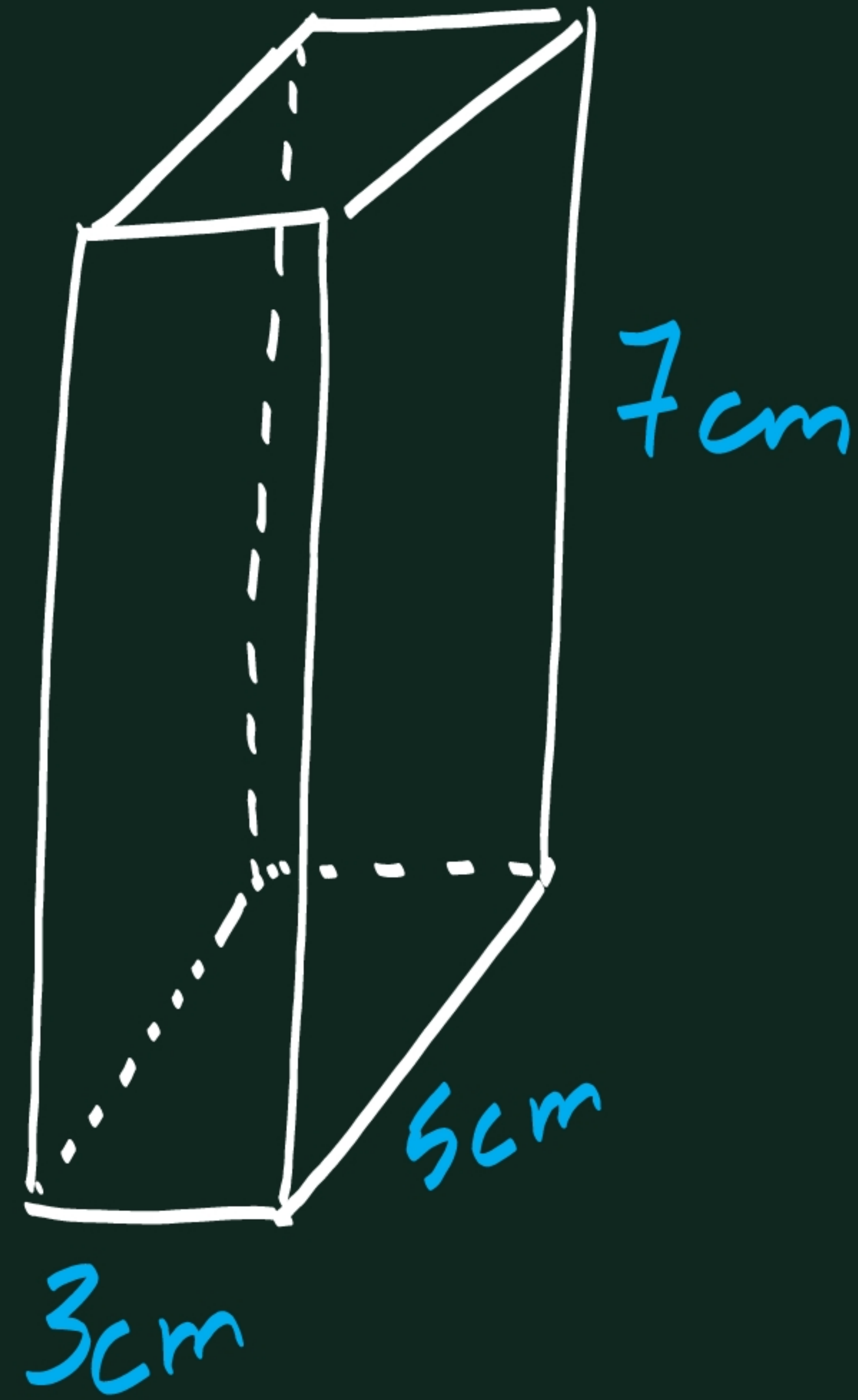


$$A = \overbrace{2\pi r^2}^{A_{\text{curva}}} + \overbrace{\pi r^2}^{A_b} = 3\pi r^2$$

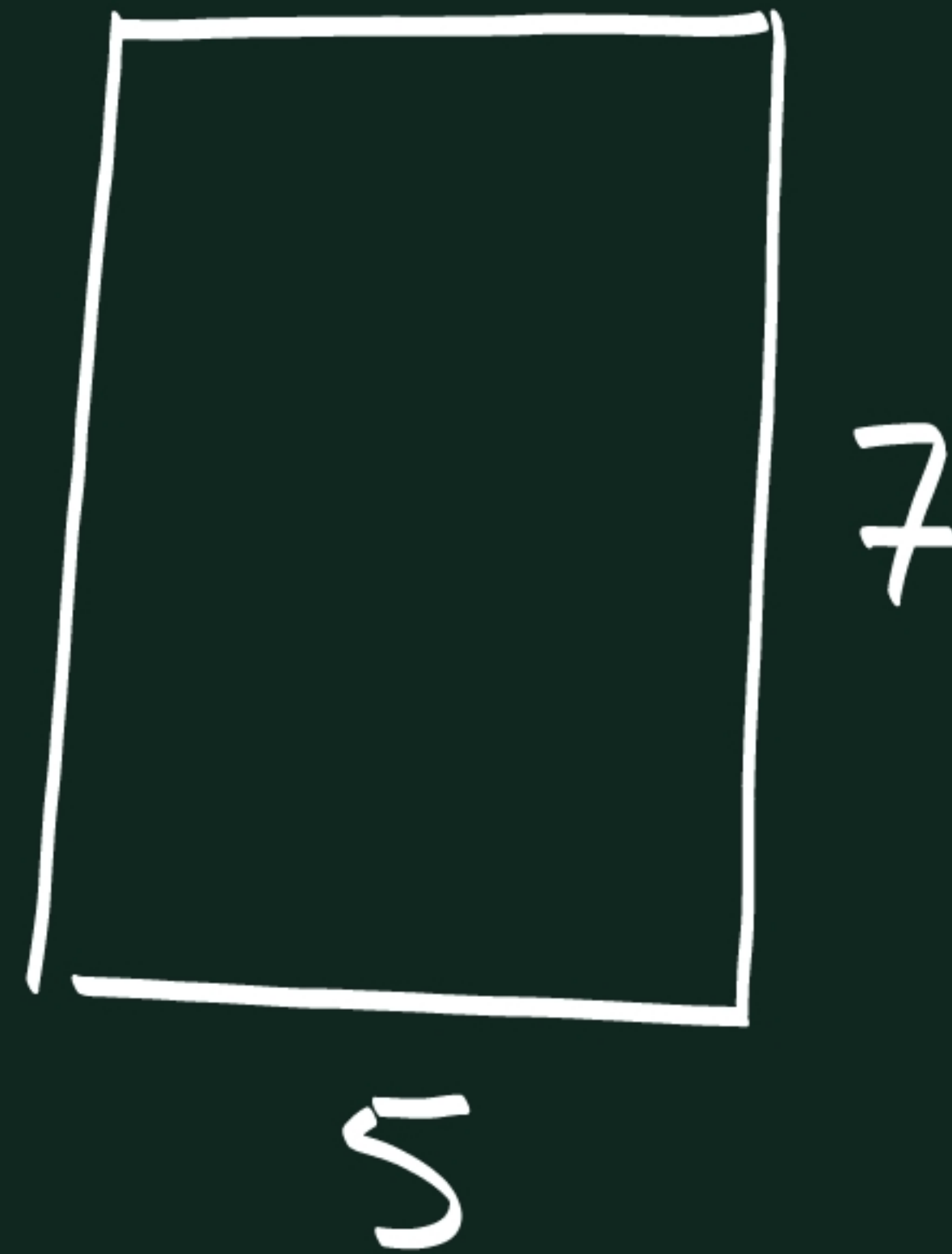
$$V = \frac{2}{3}\pi r^3$$

P. 189, Ej 5 y 6 / P. 191, Ej 10 y 11 (Área y Volumen)

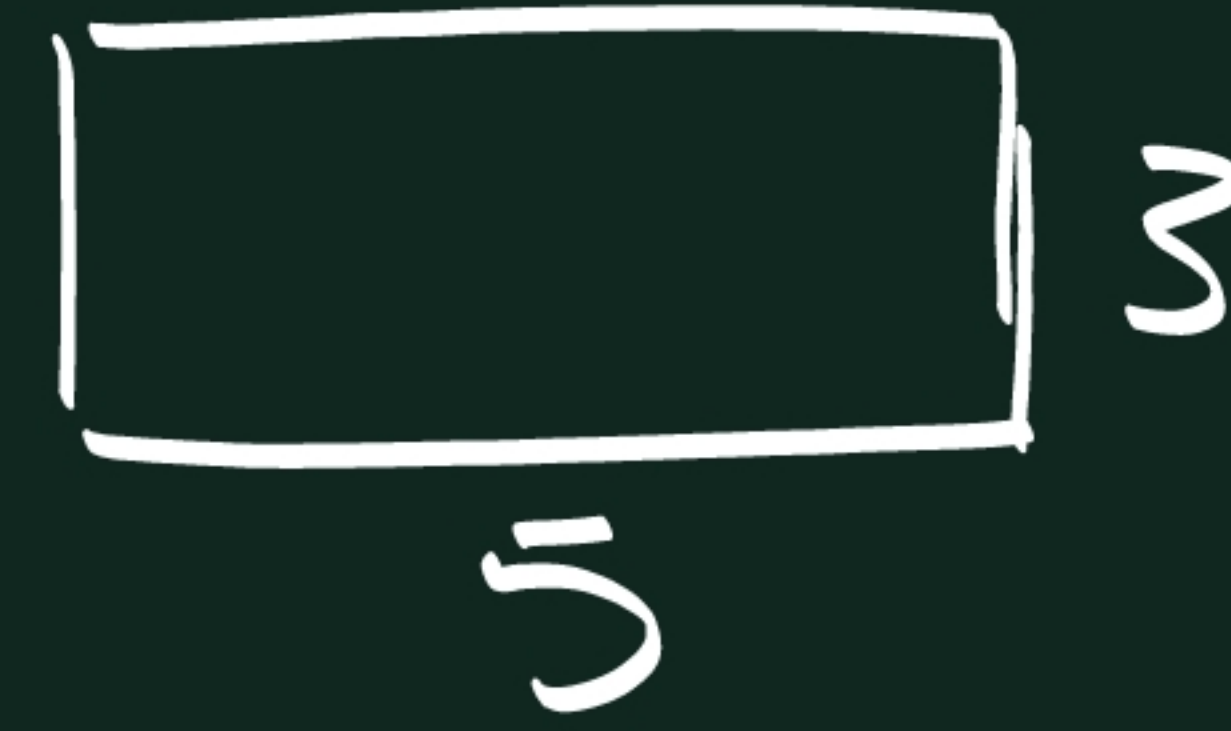
5



$$A = 21 \text{ cm}^2$$



$$A = 35 \text{ cm}^2$$

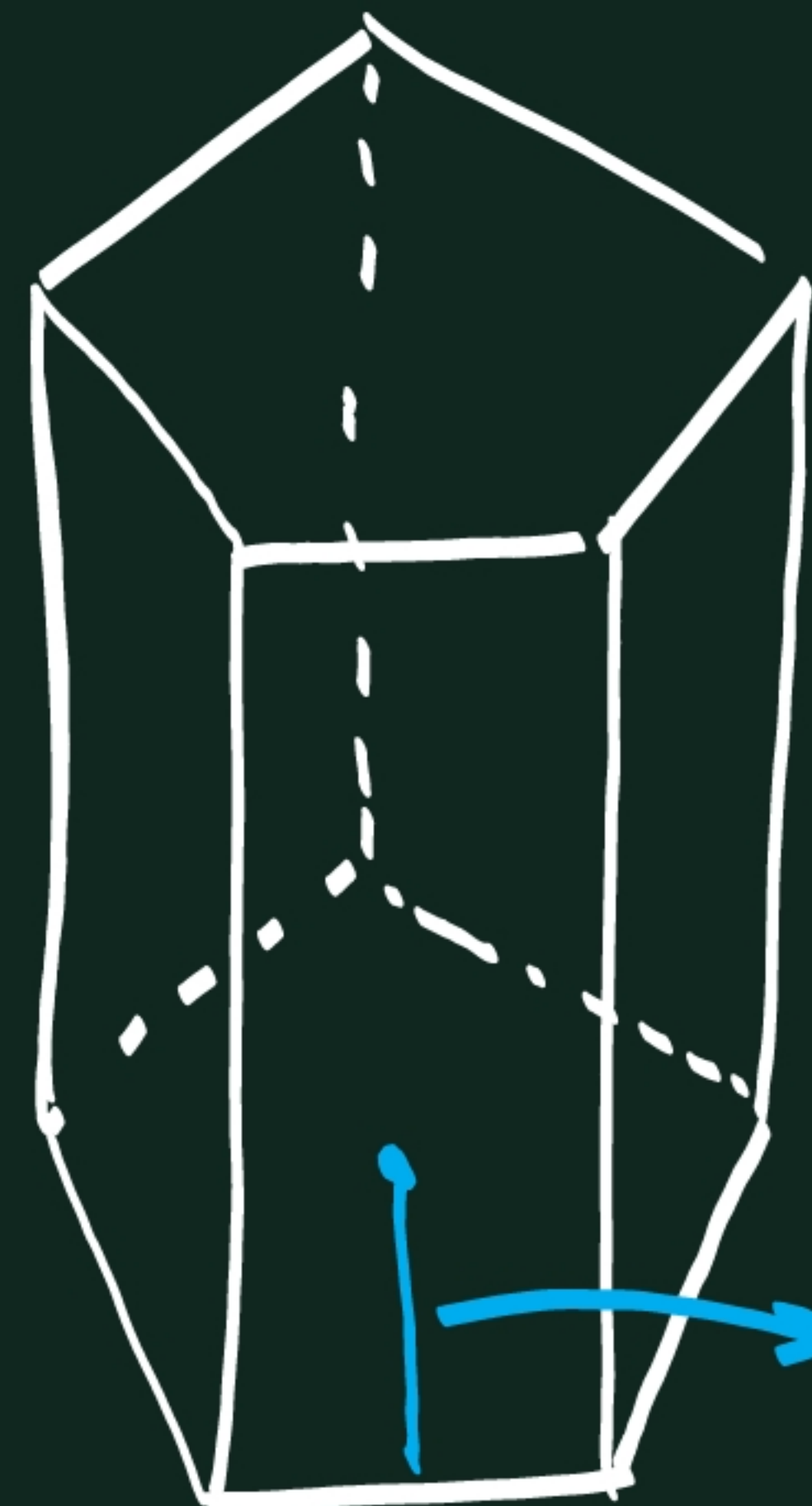


$$A = 15 \text{ cm}^2$$

$$A_T = 2 \cdot (21 + 35 + 15) = 142 \text{ cm}^2$$

$$V = 3 \cdot 5 \cdot 7 = 105 \text{ cm}^3$$

⑥



$$A_T = 18,44 \text{ cm}^2$$

$$h = ?$$

$$A = 2 \cdot A_b + 5 \cdot A_L$$

$$A_b = \frac{b \cdot a}{2} \cdot n = \frac{P \cdot a}{2} = \frac{5 \cdot 0,69}{2} = 1,73 \text{ cm}^2$$

$$A_L =$$