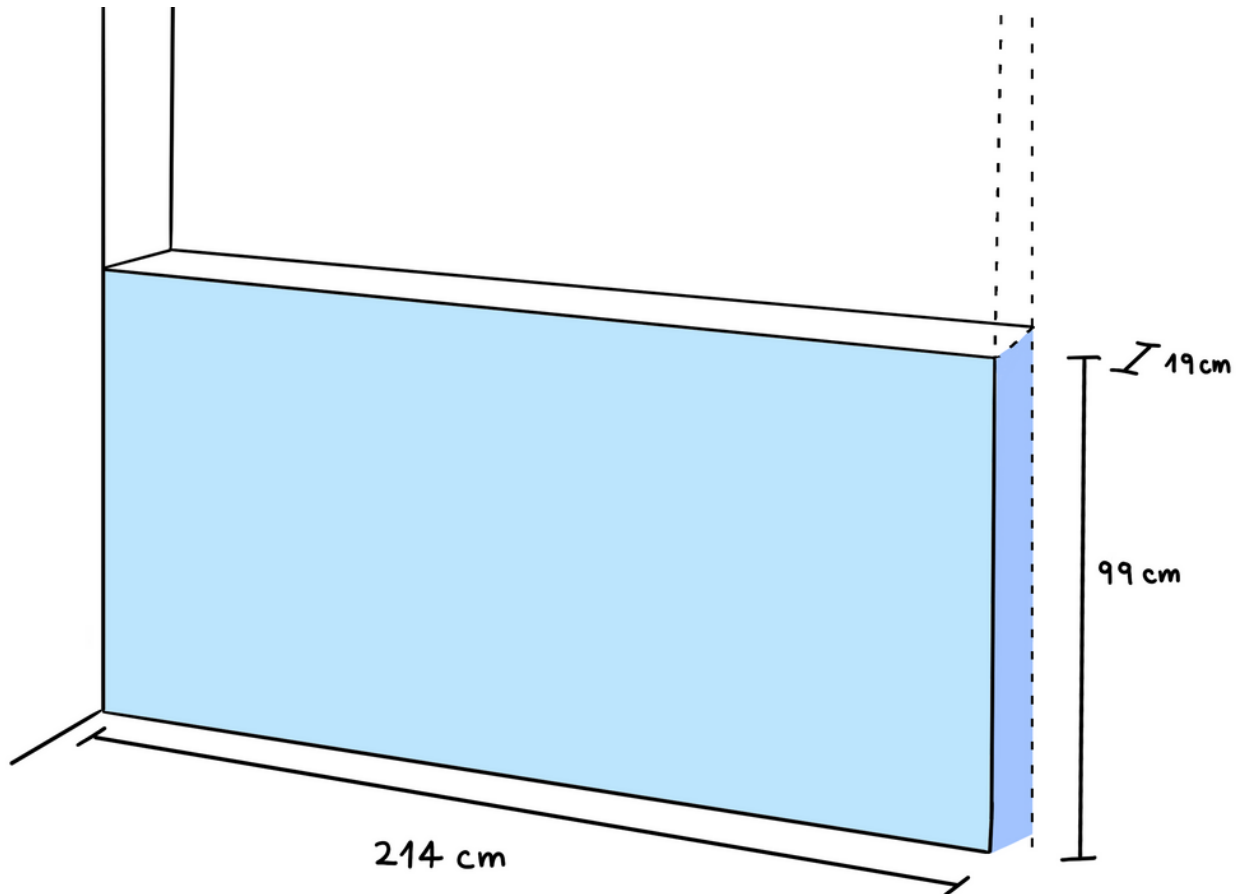


# Encargo 5

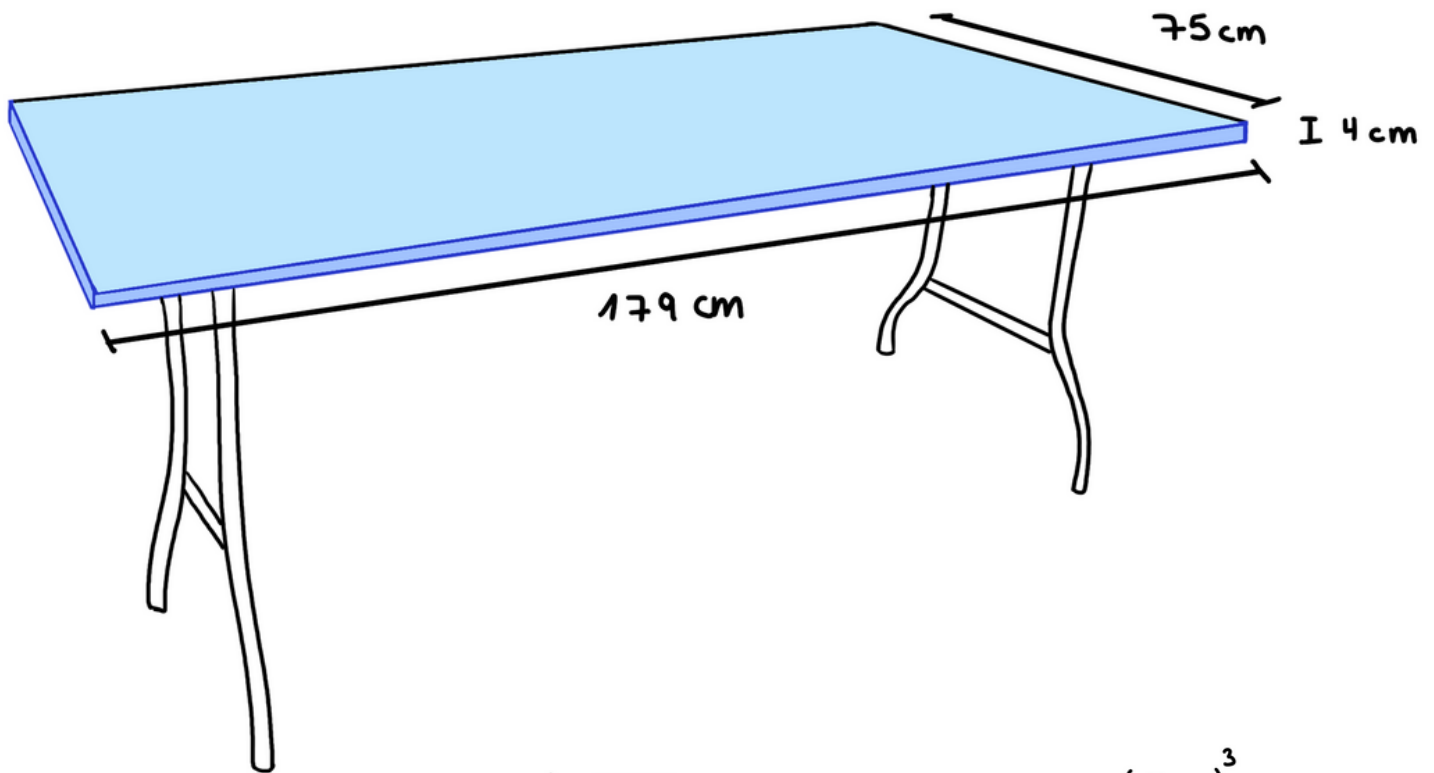
## A) Escala Edificio: Balcón



$$\begin{aligned} 1) \quad & \rightarrow I_1 = \frac{19 \text{ cm} \cdot (99 \text{ cm})^3}{12} \\ & = \frac{19 \text{ cm} \cdot 970.299 \text{ cm}}{12} \\ & = 9.217.840,5 \text{ cm}^4 \end{aligned}$$

$$\begin{aligned} 2) \quad & \rightarrow I_2 = \frac{214 \text{ cm} \cdot (99 \text{ cm})^3}{12} \\ & = \frac{214 \text{ cm} \cdot 970.299 \text{ cm}}{12} \\ & = 17.303.665,5 \text{ cm}^4 \end{aligned}$$

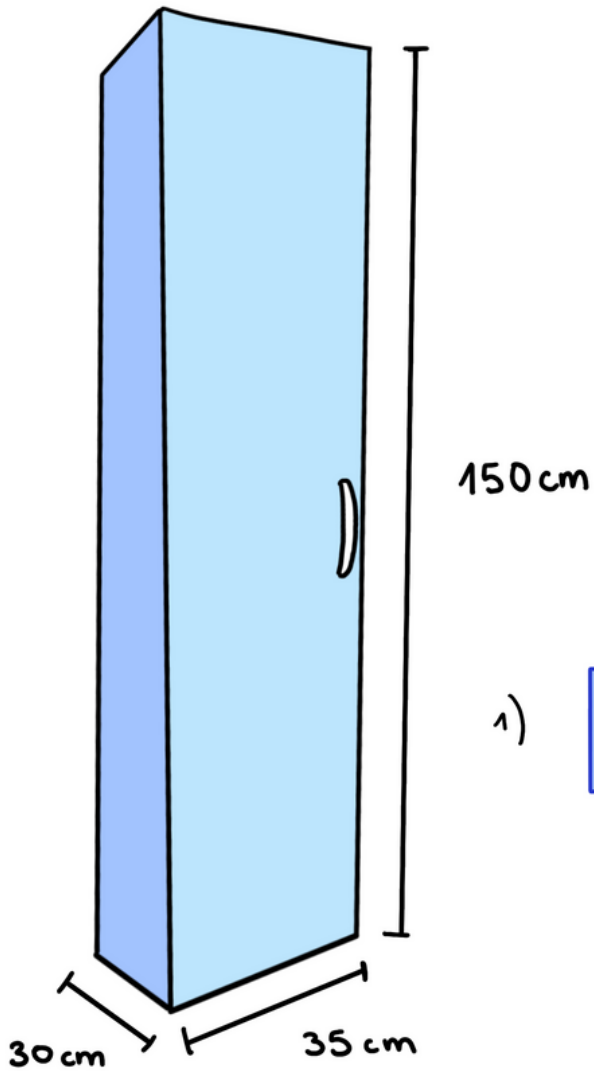
## B) Escala mueble: Mesa




$$\begin{aligned} 1) \quad \text{[Cross-section]} &\longrightarrow I_1 = \frac{179 \text{ cm} \cdot (4 \text{ cm})^3}{12} \\ &= \frac{179 \text{ cm} \cdot 64 \text{ cm}}{12} \\ &= 952 \text{ cm}^4 // \end{aligned}$$


$$\begin{aligned} 2) \quad \text{[Top view]} &\longrightarrow I_2 = \frac{75 \text{ cm} \cdot (179 \text{ cm})^3}{12} \\ &= \frac{75 \text{ cm} \cdot 5.735.339 \text{ cm}}{12} \\ &= 35.845.868,75 \text{ cm}^4 // \end{aligned}$$

B) Escala a elección:



1)   $\rightarrow I_1 = \frac{30 \text{ cm} \cdot (150 \text{ cm})^3}{12}$

$$= \frac{30 \text{ cm} \cdot 3.375.000 \text{ cm}^3}{12}$$
$$= 101.250.000 \text{ cm}^4 //$$

2)   $\rightarrow I_2 = \frac{150 \text{ cm} \cdot (35 \text{ cm})^3}{12}$

$$= \frac{150 \text{ cm} \cdot 42.875 \text{ cm}^3}{12}$$
$$= 535.937,5 \text{ cm}^4 //$$