

NOMBRE: ISAAC GABRIEL AGUILAR CANO

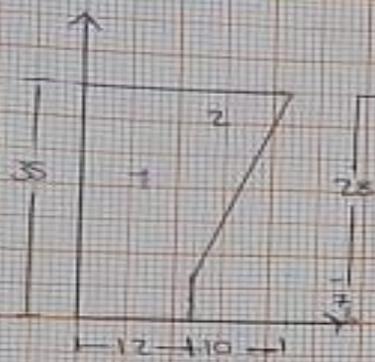
MATERIA: ESTÁTICA PARA LA ARQUITECTURA

ARQUITECTO: PEDRO ALBERTO GARCIA

3ER CUATRIMESTRE

CENTROS DE GRAVEDAD

ENTREGA: 11 DE JUNIO 2023



$$\textcircled{1} C_x = B/2 = 12\text{m}/2 = 6\text{m} \quad C_y = h/2 = 35\text{m}/2 = 17.5\text{m}$$

$$\text{Area: } b \cdot h \quad 12 \cdot 35 = 420\text{m}^2$$

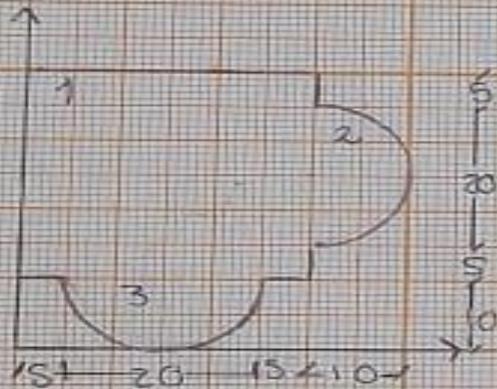
$$\textcircled{2} C_x = b/3 = 10/3 = (3.333) + 12 = 15.333$$

$$C_y = h/3 = 28/3 = (9.333 + 2) + 7 = 25.666$$

$$A = b \cdot h/2 = 10 \cdot 28/2 = 140\text{m}^2$$

$$C_x = \frac{(420\text{m}^2 \cdot 6\text{m}) + (140\text{m}^2 \cdot 15.333)}{420\text{m}^2 + 140\text{m}^2} = \frac{4666.666}{560} = 8.333$$

$$C_y = \frac{(17.5 \cdot 420\text{m}^2) + (25.666\text{m} \cdot 140\text{m}^2)}{420\text{m}^2 + 140\text{m}^2} = \frac{10943.24}{560} = 19.5415$$



$$\textcircled{1} C_x = 30/2 = 15\text{m} \quad C_y = 30/2 = 15 + 10\text{m} = 25\text{m}$$

$$A = b \cdot l = 30 \cdot 30 = 900\text{m}^2$$

$$\textcircled{2} C_x = 4R/3\pi = 4 \cdot 10 = 4.244 + 30 = 34.244$$

$$C_y = h/2 = 20/2 = 10 + 15 = 25$$

$$A = \pi \cdot r^2/2 = 157.08$$

$$\textcircled{3} C_x = 20/2 = 10 + 5 = 15$$

$$C_y = 4R/3\pi = -4.244 + 10 = 5.756$$

$$A = \pi \cdot r^2/2 = 157.08$$

$$C_x = \frac{(900 \cdot 15) + (34.244 \cdot 157.08) + (157.08 \cdot 15)}{157.08 + 157.08 + 900} = \frac{21235.24}{1214.16}$$

$$C_x = 17.4896$$

$$C_y = \frac{(900 \cdot 25) + (157.08 \cdot 25) + (5.756 \cdot 157.08)}{157.08 + 157.08 + 900} = \frac{27331.15}{1214.16}$$

$$C_y = 22.5103$$

