



Alumno: Jarib Jahziel Hernández Toledo

Licenciatura: Arquitectura

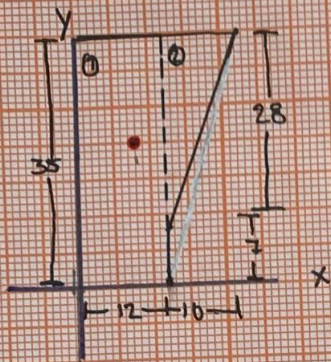
Cuatrimestre: 3

Materia: Estática para la arquitectura

Profesor: García López Pedro Alberto

Actividad: **CENTROS DE GRAVEDAD**

Fecha: 11/06/2023



$$\textcircled{1} C_{x1} = \frac{b}{2} = \frac{12}{2} = 6$$

$$C_{y1} = \frac{h}{2} = \frac{35}{2} = 17.5$$

$$A_1 = 420$$

$$\textcircled{2} C_{x2} = \frac{b}{3} = \frac{28}{3} = 9.33, 35 - 9.33 = 25.66$$

$$C_{y2} = \frac{h}{3} = \frac{10}{3} = 3.33 + 12 = 15.33$$

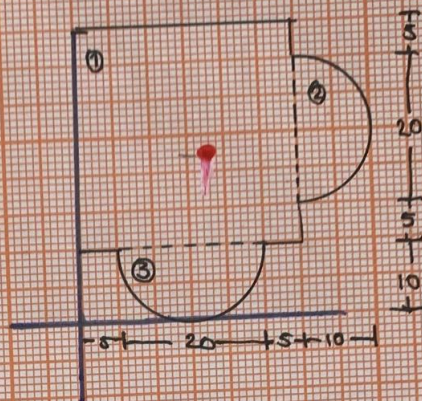
$$A_2 = 140$$

$$\text{Centroide } x = \frac{(6 \cdot 420) + (15.33 \cdot 140)}{420 + 140}$$

$$= 8.33 \text{ cm}$$

$$\text{Centroide } y = \frac{(17.5 \cdot 420) + (25.66 \cdot 140)}{420 + 140}$$

$$= 19.54 \text{ cm}$$



$$\textcircled{1} C_{x1} = \frac{b}{2} = \frac{30}{2} = 15, C_{y1} = \frac{h}{2} = \frac{30}{2} = 15 + 10 = 25$$

$$A_1 = 900$$

$$\textcircled{2} C_{x2} = \frac{4R}{3\pi} = \frac{40}{9.42} = 4.24 + 30 = 34.24$$

$$C_{y2} = \frac{b}{2} = \frac{20}{2} = 10 + 15 = 25$$

$$A_2 = 157.07$$

$$\textcircled{3} C_{x3} = \frac{b}{2} = \frac{20}{2} = 10 + 5 = 15$$

$$C_{y3} = \frac{4R}{3\pi} = \frac{40}{9.42} = 4.24, 10 - 4.24$$

$$A_3 = 157.07$$

$$= 5.75$$

$$\text{Centroide } x = \frac{(15 \cdot 900) + (34.24 \cdot 157.07) + (15 \cdot 157.07)}{(900 + 157.07 + 157.07)}$$

$$= 17.48 \text{ cm}$$

$$\text{Centroide } y = \frac{(25 \cdot 900) + (25 \cdot 157.07) + (5.75 \cdot 157.07)}{(900 + 157.07 + 157.07)}$$

$$= 22.50 \text{ cm}$$