**JOSE MIGUEL ALFARO PEREZ**

# CENTROS DE GRAVEDAD

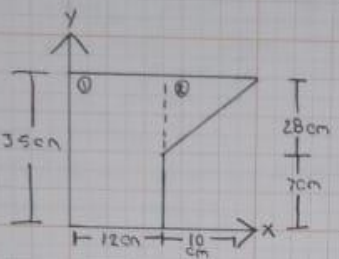
## PARCIAL 2

**ESTÁTICA PARA LA ARQUITECTURA**

**PEDRO ALBERTO GARCIA LOPEZ**

**ARQUITECTURA**

**CUATRIMESTRE**




① $\bar{x} = b/2 = 12\text{ cm}/2 = 6\text{ cm}$

$\bar{y} = 35/2 = 17.5\text{ cm}$

$A = 12 \cdot 35 = 420\text{ cm}^2$

$\frac{b \times h}{2}$

② $\bar{x} = b/3 = 10/3 = 3.33$

$A = \frac{10 \cdot 28}{2} = 140\text{ cm}^2$

$\bar{x} = 3.33 + 12 = 15.33$

$\bar{y} = h/3 = 28/3 = 9.33\text{ cm}$ (1/3)

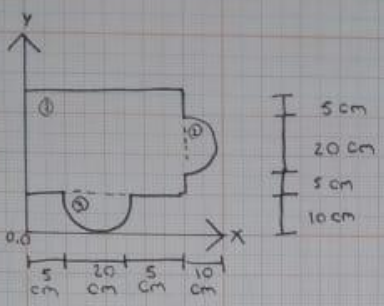
$\bar{y} = 9.33 \times 2 = 18.66\text{ cm} + 7 = 25.66\text{ cm}$

$$\bar{y}\,x = \frac{(420 \cdot 6) + (140\text{cm} \cdot 15.33\text{cm})}{(420 + 140)}$$

$\bar{x}x = 8.33\text{ cm}$

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

$\bar{y}y = 19.54\text{ cm}$




① $\bar{x} = b/2 = 30/2 = 15$ cm

$\bar{y} = h/2 = 30/2 = 15$ cm $+ 10 = 25$ cm

$A = 30 \cdot 30 = 900$ cm

$A = \frac{\pi \cdot r^2}{2}$

② $\bar{x}_2 = \frac{4R}{3\pi} = \frac{4 \cdot 10}{3 \cdot 3.1416} = 4.24$ cm $+ 3$

$\bar{x} = 34.24$ cm

$A = \frac{\pi \cdot 10^2}{2}$

$A = 157.08$

$\bar{y}_2 = h/2 = 20/2 = 10 + 10$ cm $= 25$ cm

$\bar{y} = \frac{(900 \cdot 15) + (157.08 \cdot 34.24) + (157.08 \cdot 15\text{ cm})}{(900 + 157.08 + 157.08)}$

$\bar{x} = 17.98$ cm

$\bar{y} = \frac{(900 \cdot 25) + (157.08 \cdot 25) + (157.08 \cdot 5.76)}{(900 + 157.08 + 157.08)}$

$\bar{y} = 22.51$ cm

③ $\bar{y} = \frac{4 \cdot R}{3 \cdot \pi}$

$\bar{y} = \frac{4 \cdot 10}{3 \cdot 3.1416} = 4.24$

$\bar{y}_3 = 10 - 4.24 = 5.76$ cm

$A = \frac{\pi \cdot r^2}{2}$

$A = \frac{3.1416 \cdot 100}{2} = 157.08$cm

$\bar{x}_3 = \frac{30}{2} = 10 + 5 = 15$ cm