UDS

Mi Universidad

Ejercicios

Nombre del Alumno: Iber Emanuel Vazquez Arguello

Nombre del tema:

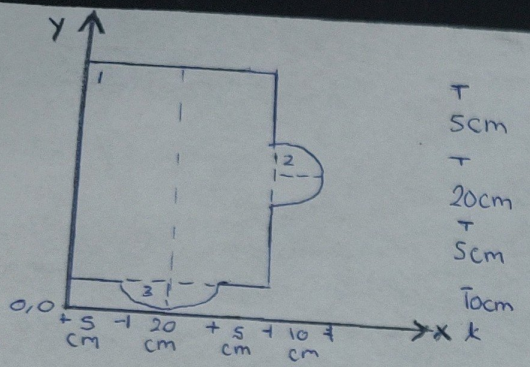
Parcial: 2do

Nombre de la Materia: Estática para la arquitectura

Nombre del profesor: Pedro Alberto García López

Nombre de la Licenciatura : arquitectura

Cuatrimestre: 3ro



$Cx1 = b/2 = 30/2 = 15\ cm$

$Cy1 = h/2 = 30/2 = 15cm + 10cm = 25\ cm$

$A1 = 30\ cm \cdot 30cm = 900\ cm^2$

$Cx2 = \frac{4R}{3\pi} = \frac{4(10)}{9.4248} = 4.2441 + 30cm = 34.244\ cm$

$Cy2 = h/2 \quad 20/2 = 10cm + 15cm = 25\ cm$

$A2 = \frac{\pi \cdot (10)^2}{2} = 157.08\ cm^2$

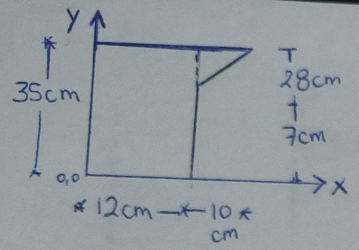
$Cx3 = 20/2 = 10 + 5 = 15cm$

$Cy3 = 10 - 4.244 = 5.756\ cm^2$

$A3 = 157.08\ cm^2$

$$Cx = \frac{(900\ cm^2 \cdot 15cm) + (157.08cm^2 \cdot 25cm) + (157.08\ cm^2 \cdot 15cm)}{(1214.16)} = 17.48cm$$

$$Cy = \frac{(900cm^2 \cdot 25cm) + (157.08cm^2 \cdot 25\ cm) + 15.756cm}{(1214.16)} = 22.50\ cm$$



$C_{x1} = b/2 = \frac{12}{2} = 6\,cm$

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

$A_1 = b \times h = 12 \cdot 35\,cm = 420\,cm^2$

$C_{x2} = b/3 \quad \frac{10}{3} = 3.33\,cm + 12 = 15.33\,cm$

$C_{y2} = h/3 \quad \frac{28}{3} = 9.33\,cm \cdot 2 = 18.66\,cm + 7 = 25.66\,cm$

$A_2 = \frac{b \cdot h}{2} = \frac{10 \times 28}{2} = 140\,cm^2$

$$C_x = \frac{(420\,cm^2 \cdot 6\,cm) + (140\,cm^2 \cdot 15.33\,cm)}{(560\,cm^2)} = 8.33\,cm$$

$$C_y = \frac{(420\,cm^2 \cdot 17.5\,cm) + (140\,cm^2 \cdot 25.66\,cm)}{(560\,cm^2)} = 19.54\,cm$$