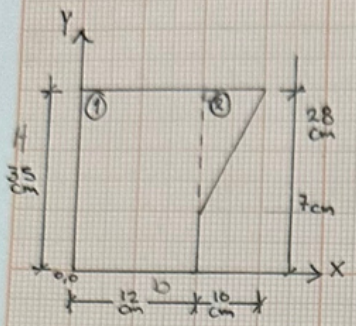
ESTÁTICA PARA LA ARQUITECTURA
ÁNGEL GABRIEL GRANADOS PÉREZ
2DO.PARCIAL
CENTROS DE GRAVEDAD
ARQ. PEDRO ALBERTO GARCIA LOPEZ
JUNIO 2023



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

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

$A1 = 12\,(35) = 420\,cm^2$

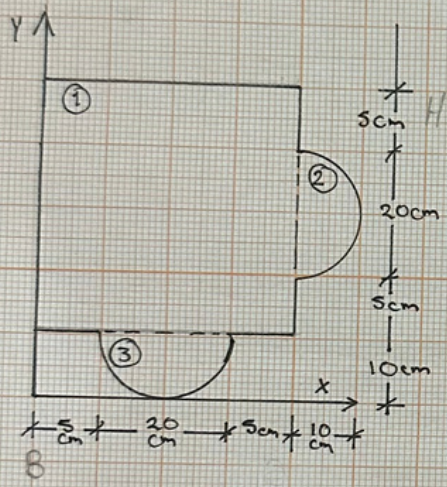
$C_{x2} = \frac{b}{3} = \frac{16}{3} = 3.33 + 12 = 15.33$

$C_{y2} = \frac{h}{3} = \frac{28cm}{3} = 9.33 * 2 = 18.66 + 7 = 25.66$

$A_2 = \frac{b \cdot h}{2} = 140cm^2$

$C_{x1} = \frac{[(6)\,420] + [(15.33)\,140]}{420+140} = 8.33\ Cx$

$C_{Y1} = \frac{[(420)\,17.5) + [(140)\,25.66]}{420+140} = 19.54cm\ CY$



8

$A1 = 900$

$C_{x1} = \frac{b}{2} = \frac{30}{2} = 15$

$C_{y1} = \frac{h}{2} = \frac{30}{2} = 15 + 10 = 25$

$C_{x2} = \frac{4r}{3\pi} = \frac{40}{3\pi} = 4.24 + 30 = 34.24$

$C_{Y2} = b/2 = 20/2 = 10 + 15 = 25$

$A_2 = 137.08$

$C_{x3} = \frac{4r}{3\pi} = \frac{40}{3\pi} = 4.24 + 5 = 9.24$

$C_{Y3} = h/2 = 10/2 = 5$

$A_3 = 157.08$

$C_{x2} = \frac{(15 \cdot 900) + (34 \cdot 157.08) + (9.24 \cdot 157.08)}{1214.16} = 16.7417$

$C_y = \frac{(25 \cdot 900) + (5 \cdot 157.08) + (9.24 \cdot 157.08)}{1214.16} = 22.4125$