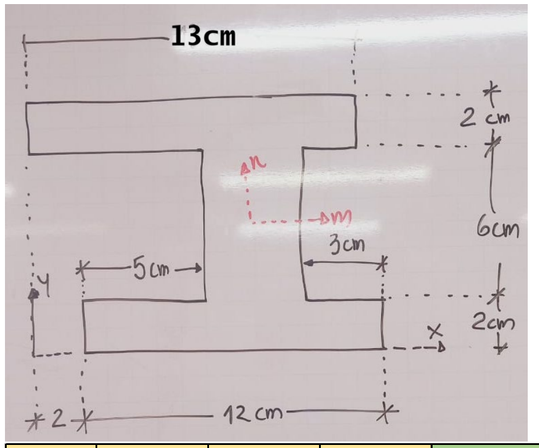
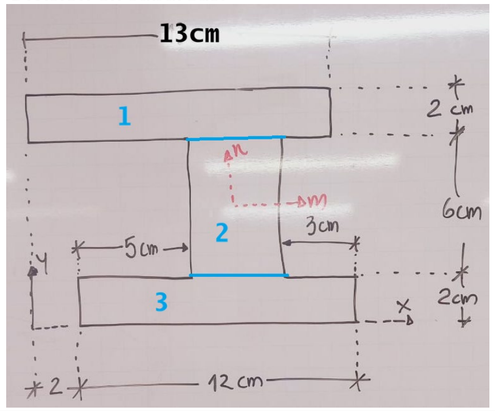


División en subáreas:



#2: [Xcg := 7.797297297, Ycg := 5.108108108]

Inercia respecto al centroide general:

#3: $Imn1 := \int_{-Xcg}^{-Xcg+13} \int_{8-Ycg}^{8-Ycg+2} x \cdot y \, dy \, dx$

#4: Imn1 := −131.2724616

#5: $Imn2 := \int_{7-Xcg}^{7-Xcg+4} \int_{2-Ycg}^{2-Ycg+6} x \cdot y \, dy \, dx$

#6: Imn2 := −3.120525931

#7: $Imn3 := \int_{2-Xcg}^{2-Xcg+12} \int_{-Ycg}^{-Ycg+2} x \cdot y \, dy \, dx$

#8: Imn3 := −19.98539079

Subárea #	Lx (cm)	Ly (cm)	A (cm2)	Centroide		A*Xcg (cm3)	A*Ycg (cm3)	Inercias centroidales individuales			Inercia respecto al centroide general			Inercias respecto a los ejes X e Y		
				Xcg (cm) individual	Ycg (cm) individual			Ix cg (cm4)	Iy cg (cm4)	I XcgYcg individual (cm4)	Im respecto al cg total (cm4)	In respecto al cg total (cm4)	I.mn cg total (cm4)	Ix	Iy	Ixy
1	13.00	2.00	26.00	6.50	9.00	169.00	234.00	8.67	366.17	0.00	402.48	409.92	-131.27	2 114.67	1 464.67	1 521.00
2	4.00	6.00	24.00	9.00	5.00	216.00	120.00	72.00	32.00	0.00	72.28	66.72	-3.12	672.00	1 976.00	1 080.00
3	12.00	2.00	24.00	8.00	1.00	192.00	24.00	8.00	288.00	0.00	413.04	288.99	-19.99	32.00	1 824.00	192.00
Toda la figura:			**74.00**	**7.797**	**5.108**	577.00	378.00				**888**	**766**	**-154**	**2 819**	**5 265**	**2 793**
													Por sumatoria ∑:	**2 819**	**5 265**	**2 793**

$$\left[IMaxMin = \frac{Ix + Iy}{2} \pm \sqrt{\left(\left(\frac{Ix - Iy}{2}\right)^2 + Ixy^2\right)} \right]$$

$$\left[IxpypMaxMin = \pm \sqrt{\left(\left(\frac{Ix - Iy}{2}\right)^2 + Ixy^2\right)} \right]$$

$$TAN(2 \cdot \theta mx) = \frac{2 \cdot Ixy}{Iy - Ix}$$

Toda la figura:	Inercias principales por rotación de ejes centroidales (cm4):	
	Imax:	992.74
	Imin:	660.69
	θ MáxMín (rad):	0.5970
	θ MáxMín (grados):	34.2056
	Im rotada:	992.74
	In rotada:	660.69

$$\left[Ixp = \frac{Ix - Iy}{2} \cdot COS(2 \cdot \theta) - Ixy \cdot SIN(2 \cdot \theta) + \frac{Ix + Iy}{2} \right]$$

$$Iyp = \frac{Iy - Ix}{2} \cdot COS(2 \cdot \theta) + Ixy \cdot SIN(2 \cdot \theta) + \frac{Ix + Iy}{2}$$

$$Ixpyp = Ixy \cdot COS(2 \cdot \theta) + \frac{Ix - Iy}{2} \cdot SIN(2 \cdot \theta) \right]$$

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