MOMENTO di INERZIA FIGURA PIANA

$$I_x = \sum A_i y_i^2 \quad [m^4]$$

$$I_x > 0$$

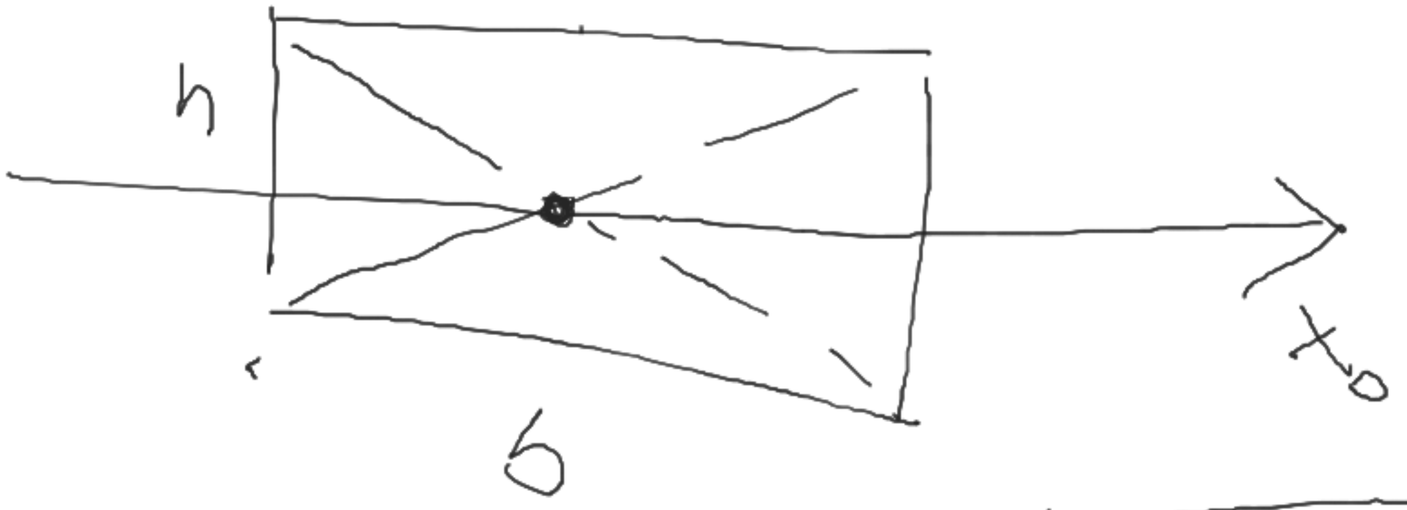
SOMMATORIA

SOMMATORIA

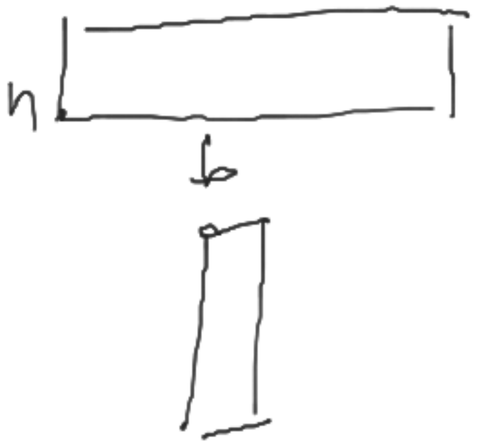
$$I_r = \sum_{i=1}^{n} A_i \cdot y_i^2 = A_1 y_1^2 + A_2 \cdot y_2^2 + A_3 y_3^2 + \dots + A_n y_n^2$$

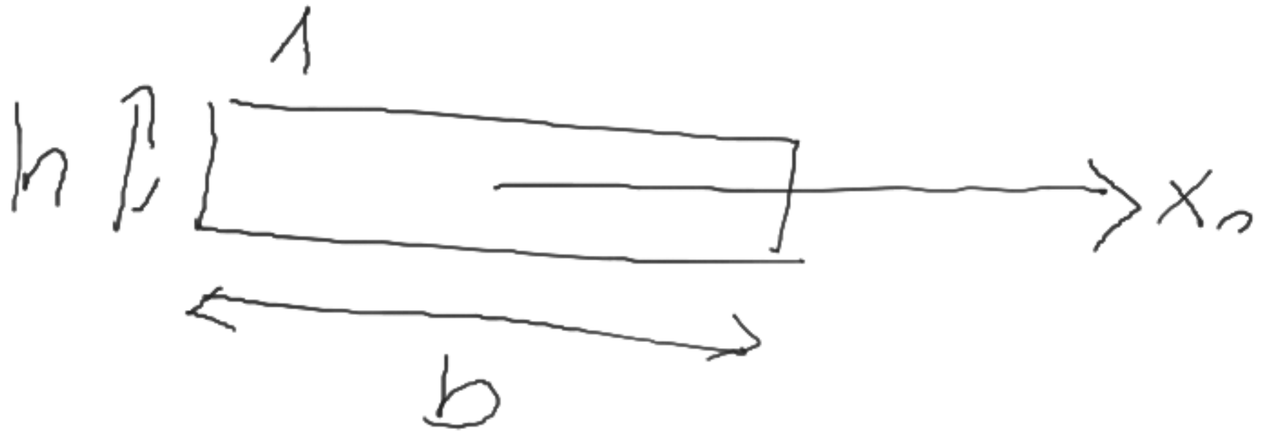
RETTANGOLO

INERZIA rispetto ai suoi assi baricentrici

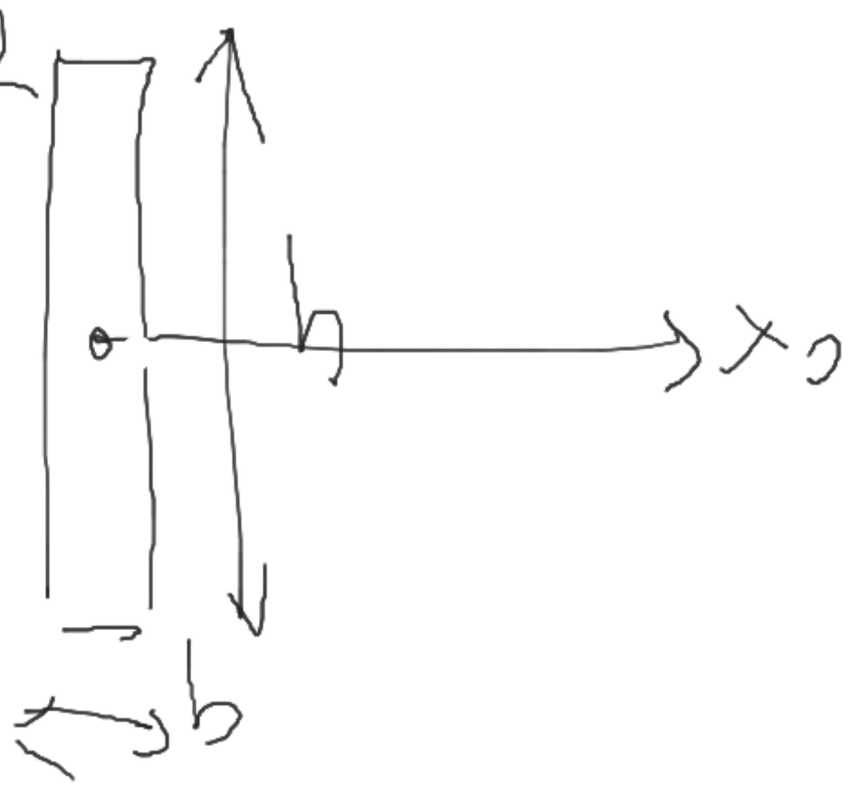


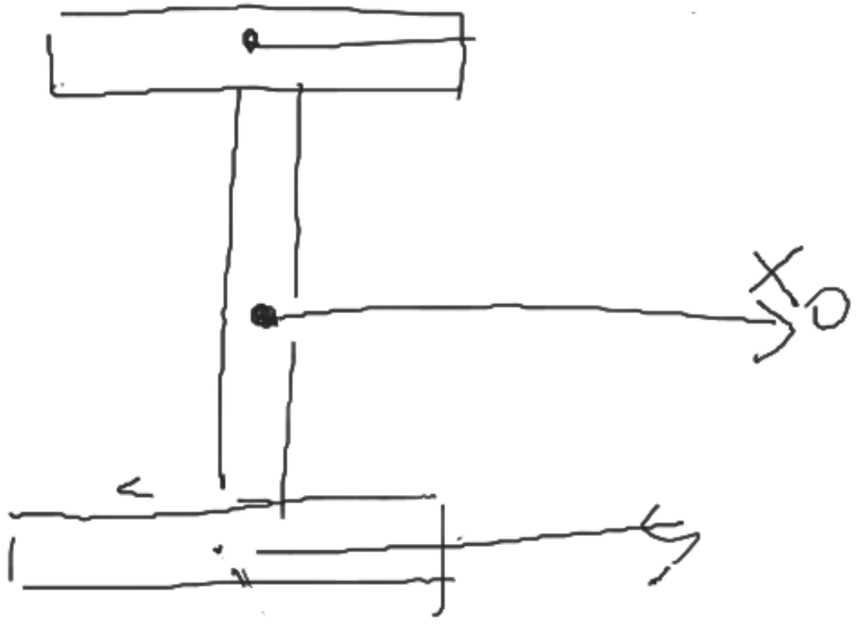
$$I_{x_0} = \frac{bh^3}{12}$$





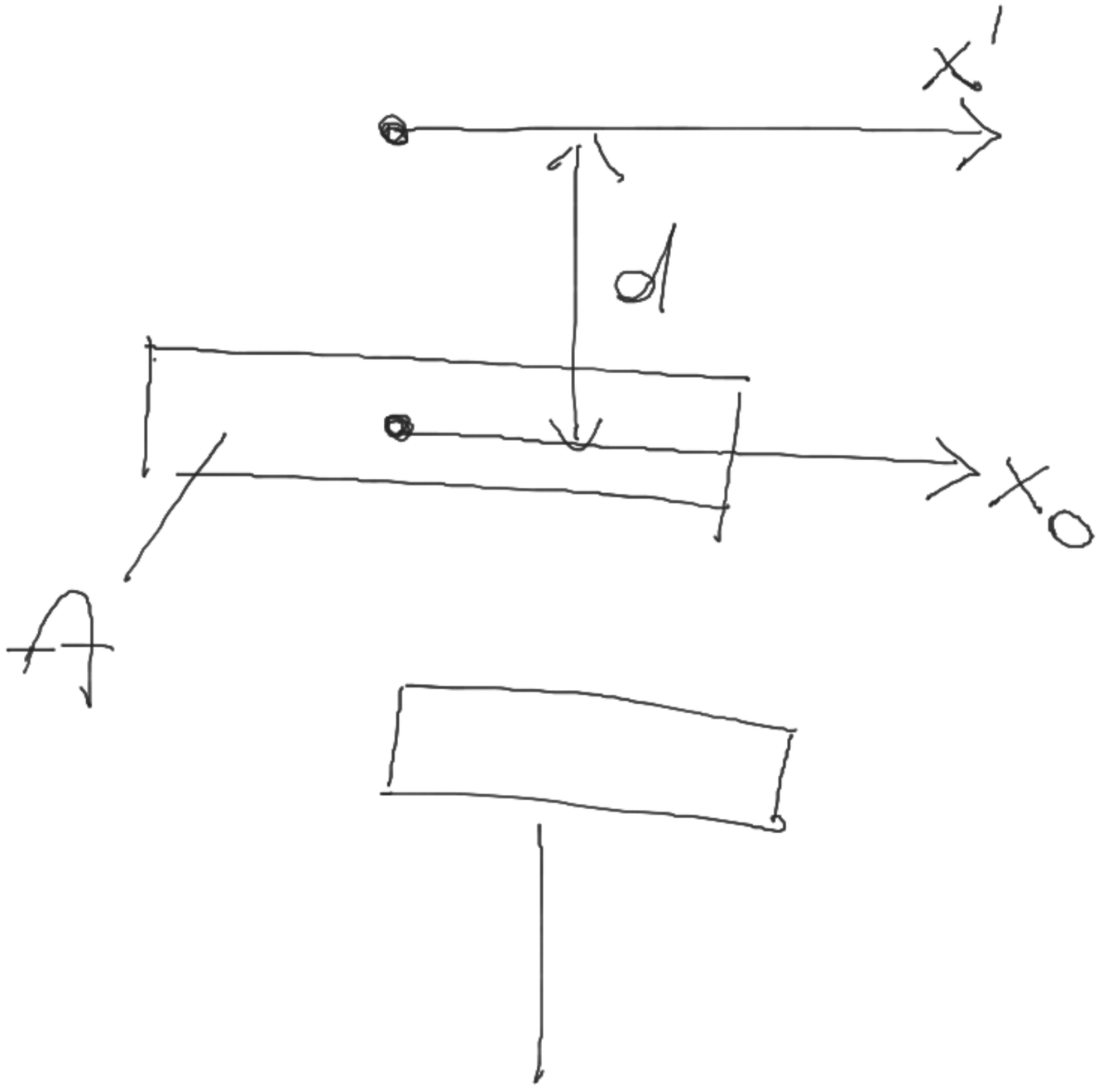
$$\int_{x_o}^{1} = \frac{bh^3}{12}$$





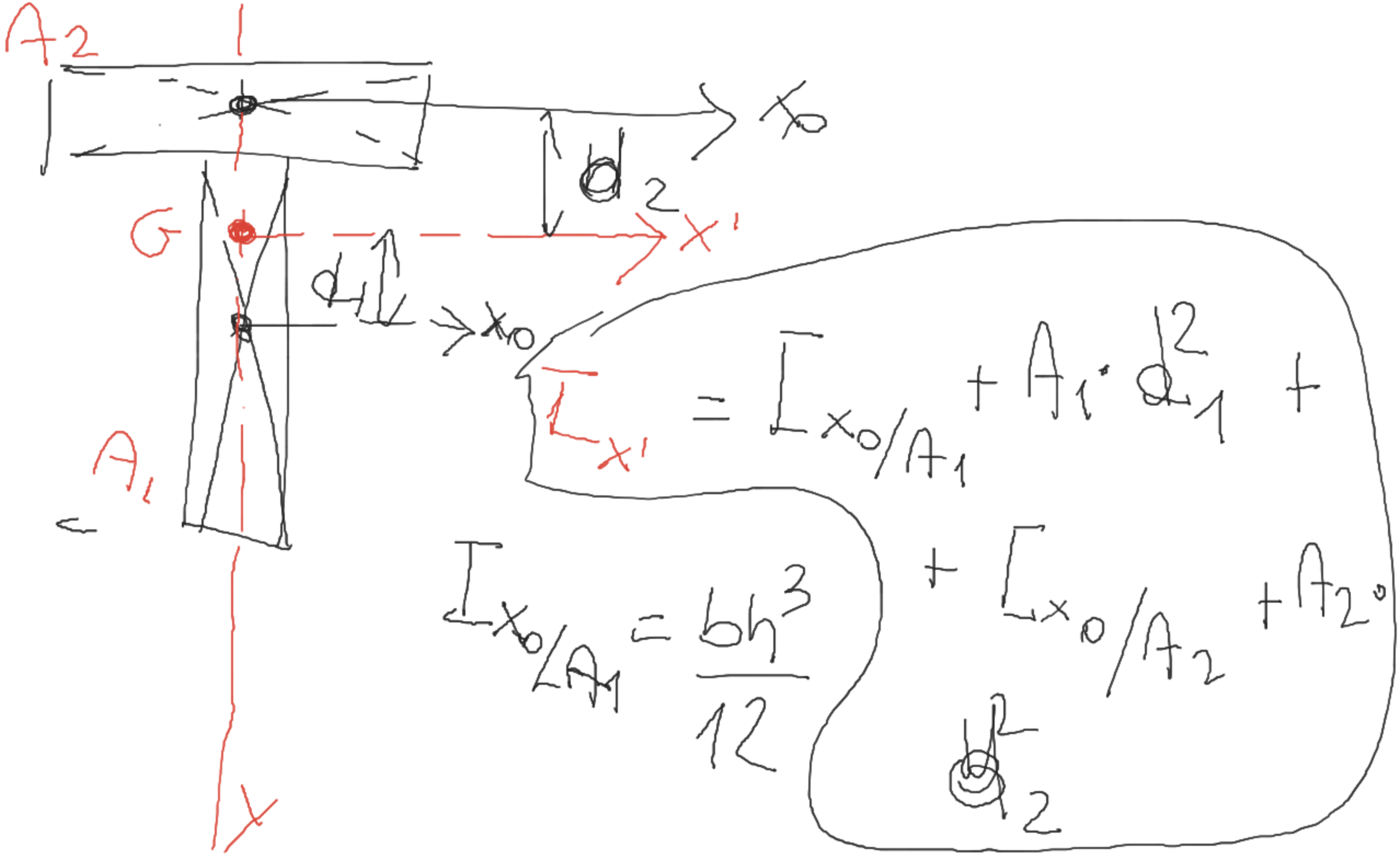
TEOREMA DEL TRASPORTO (HUYGENS)

Il momento d'inerzia rispetto ad una seconda retta x' si ottiene: $I_{x'} = I_{x_0} + Ad^2$

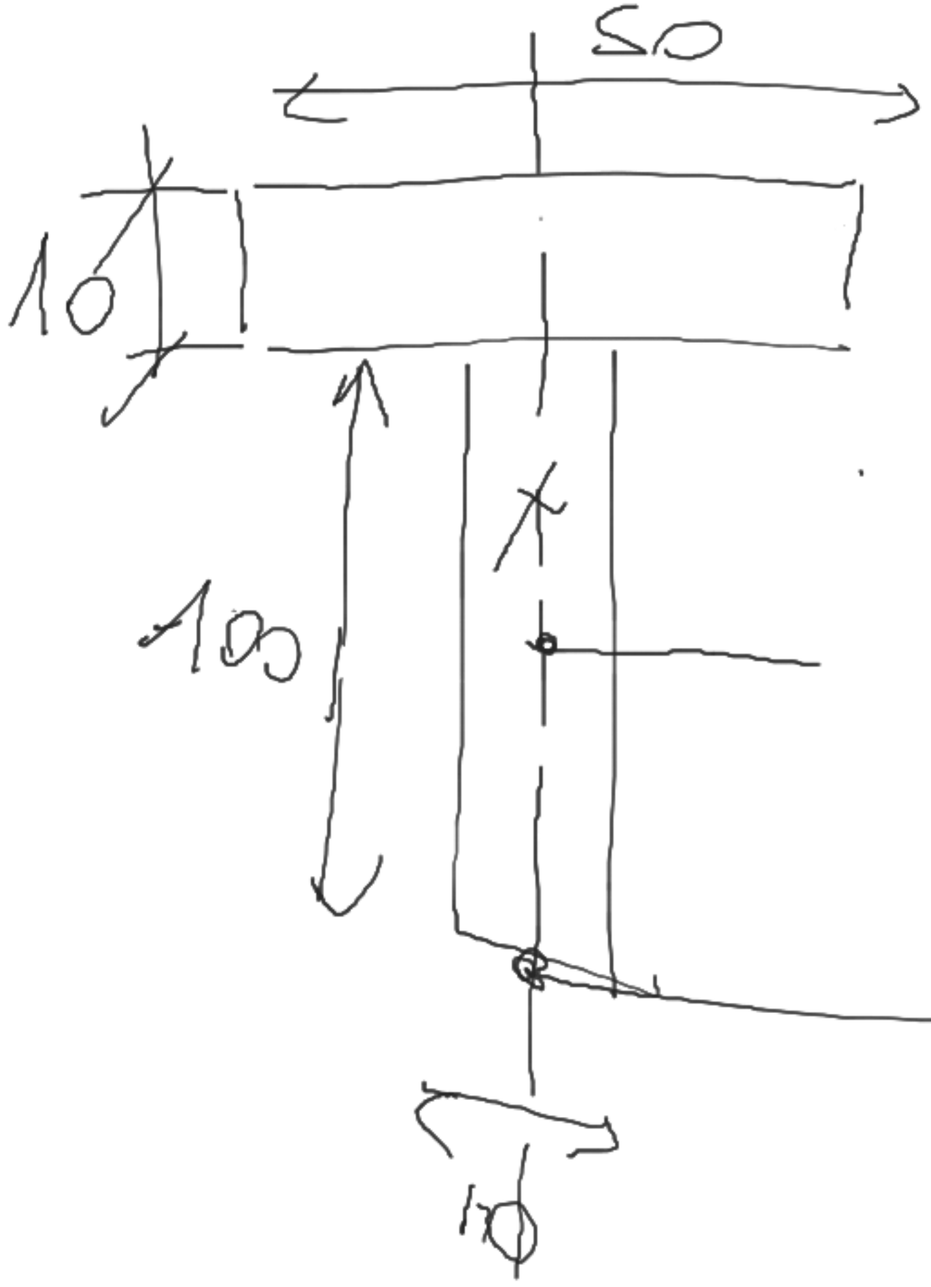


$$I_{x_0} = \frac{bh^3}{12}$$

$$I_{x'} = I_{x_0} + A d^2$$


A2
1
x0
d2
G
x'
d1
x0
A1
y
$I_{x'} = I_{x_0/A_1} + A_1 \cdot d_1^2 + I_{x_0/A_2} + A_2 \cdot d_2^2$
$I_{x_0/A_1} = \frac{bh^3}{12}$

CALCOLARE IL BARICENTRO



A	Area	Y_G	S_x
A_1	1000	50	$A_1 \cdot Y_{G_1}$
A_2	300	-105	$A_2 \cdot Y_{G_2}$

$A_1 + A_2$

ΣS_x

$Y_G = \frac{\Sigma S_x}{\quad}$