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APPUNTI FACILI PER TUTTI



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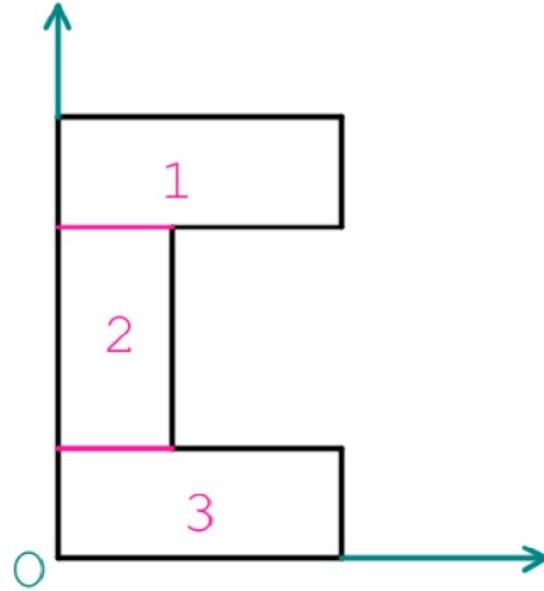
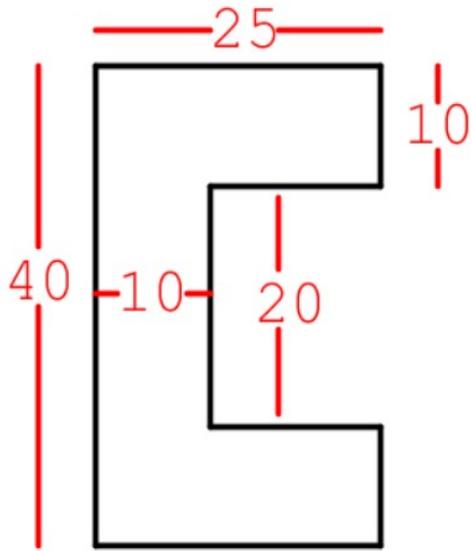
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Baricentro di figure generiche

BARICENTRO DI FIGURE GENERICHE



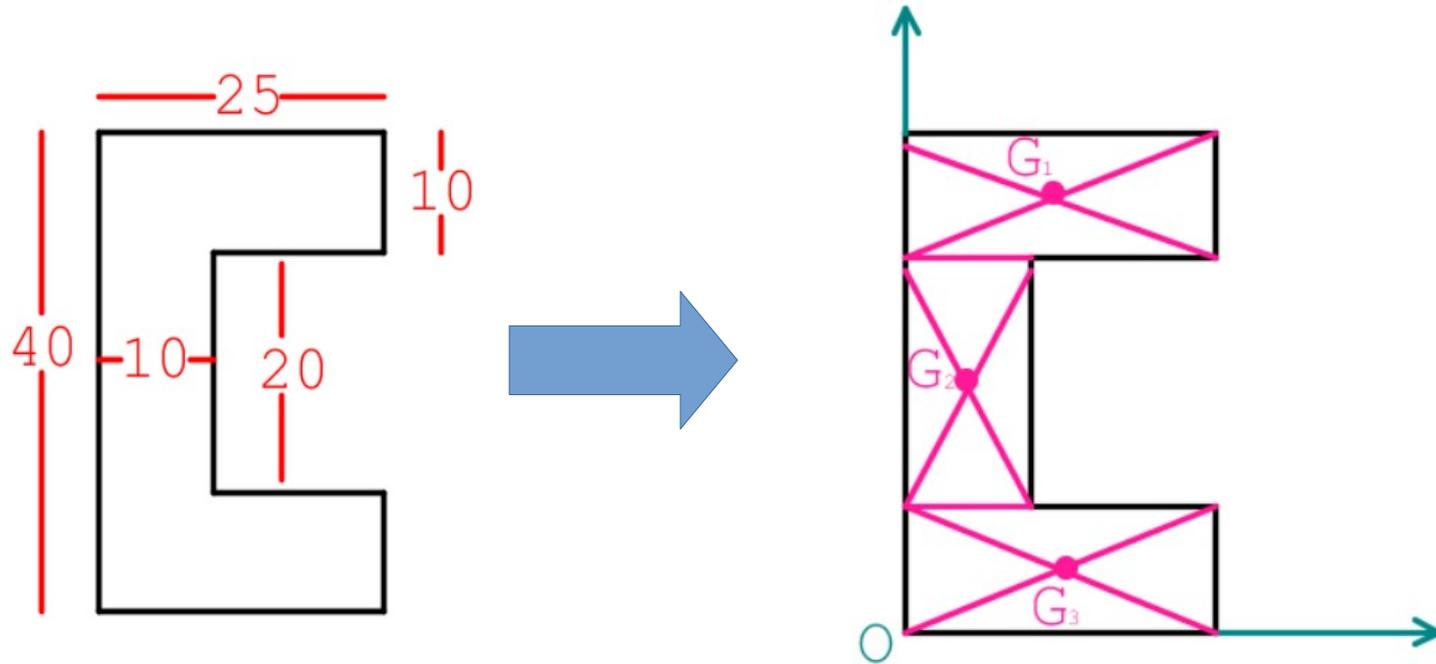
$$A_1 = 25 \cdot 10 = 250 \text{ mm}^2$$

$$A_2 = 20 \cdot 10 = 200 \text{ mm}^2$$

$$A_3 = 25 \cdot 10 = 250 \text{ mm}^2$$

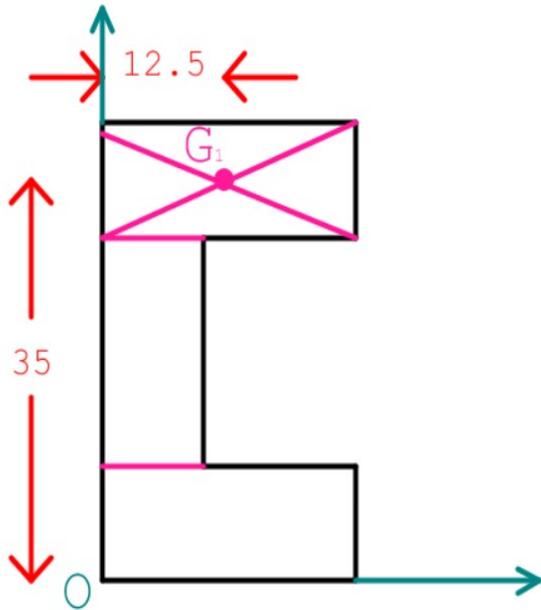
BARICENTRO DI FIGURE GENERICHE

SUDDIVISIONE IN FIGURE "NOTE"

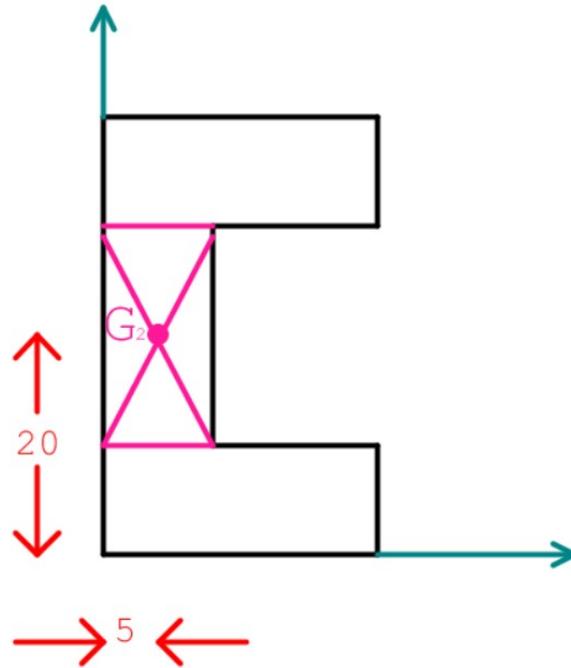


BARICENTRO DI FIGURE GENERICHE

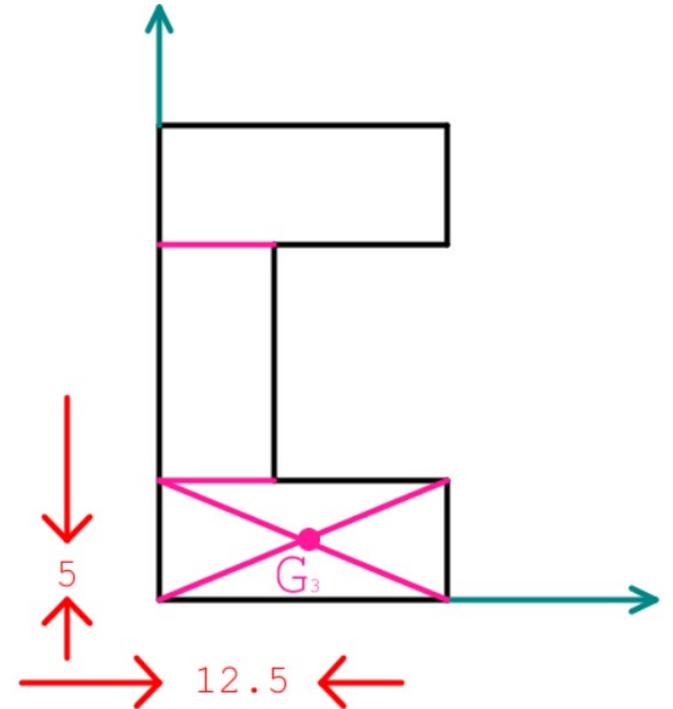
BARICENTRI DELLE FIGURE "NOTE"



$$G_1 = (12.5; 35)$$



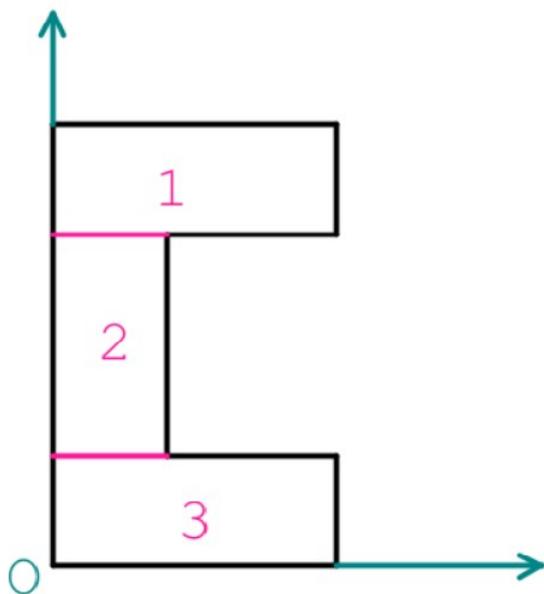
$$G_2 = (5; 20)$$



$$G_3 = (12.5; 5)$$

BARICENTRO DI FIGURE GENERICHE

CALCOLO DEL BARICENTRO DELLA FIGURA



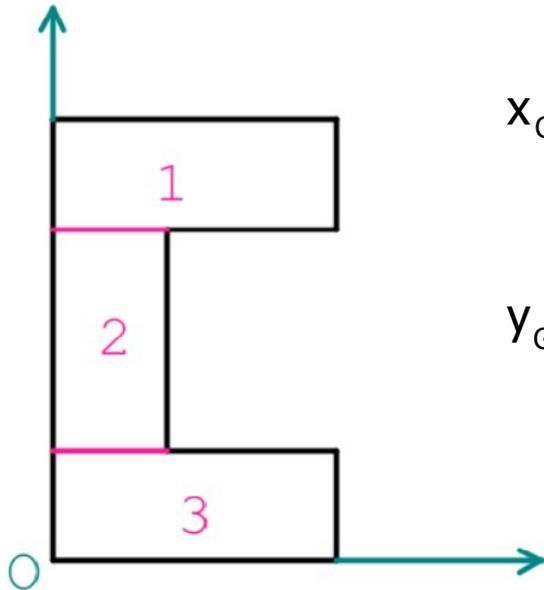
$$x_G = \frac{S_y}{\Sigma A}$$

$$y_G = \frac{S_x}{\Sigma A}$$

$S_x, S_y \rightarrow$ MOMENTI STATICI DELLE FIGURE ELEMENTARI RISPETTO AGLI ASSI y ED x

BARICENTRO DI FIGURE GENERICHE

CALCOLO DEL BARICENTRO DELLA FIGURA



$$x_G = \frac{S_y}{\Sigma A} = \frac{A_1 \cdot x_{G1} + A_2 \cdot x_{G2} + A_3 \cdot x_{G3}}{A_1 + A_2 + A_3} = \frac{250 \cdot 12.5 + 200 \cdot 5 + 250 \cdot 12.5}{700} = 10.35$$

$$y_G = \frac{S_x}{\Sigma A} = \frac{A_1 \cdot y_{G1} + A_2 \cdot y_{G2} + A_3 \cdot y_{G3}}{A_1 + A_2 + A_3} = \frac{250 \cdot 35 + 200 \cdot 20 + 250 \cdot 5}{700} = 20$$

$$A_1 = 25 \cdot 10 = 250 \text{ mm}^2$$

$$G_1 = (12.5; 35)$$

$$A_2 = 20 \cdot 10 = 200 \text{ mm}^2$$

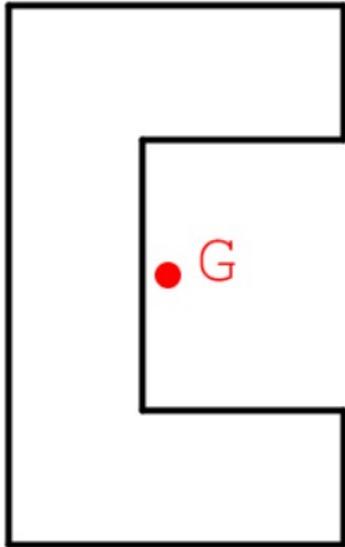
$$G_2 = (5; 20)$$

$$A_3 = 25 \cdot 10 = 250 \text{ mm}^2$$

$$G_3 = (12.5; 5)$$

BARICENTRO DI FIGURE GENERICHE

CALCOLO DEL BARICENTRO DELLA FIGURA

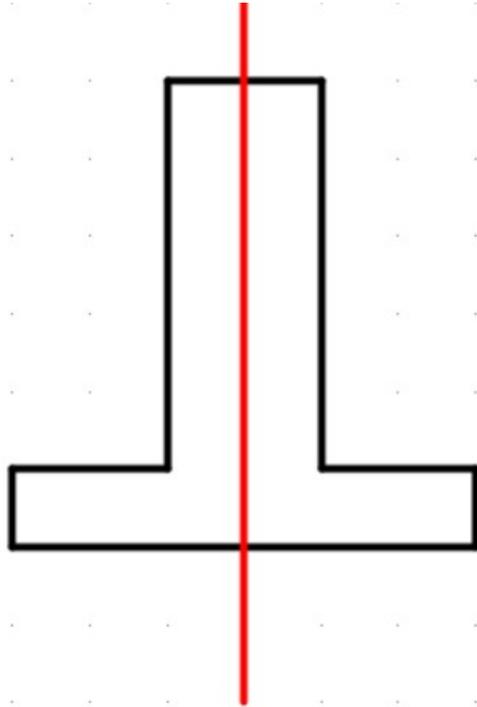


$$x_G = 10.35$$

$$y_G = 20$$

La figura ha una simmetria, pertanto ci aspettavamo $y_G = 20$, cioè la metà dell'altezza

BARICENTRO DI FIGURE GENERICHE



Le simmetrie sono amiche!

Possiamo subito dire che x_G si troverà sull'asse verticale che identifica la simmetria dell'oggetto

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