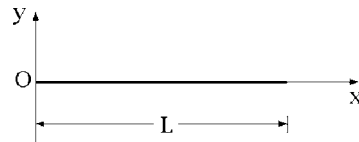


## MATRICI D'INERZIA NOTEVOLI

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- **Asta rettilinea omogenea**

$$mL^2 \begin{pmatrix} 0 & 0 & 0 \\ 0 & 1/3 & 0 \\ 0 & 0 & 1/3 \end{pmatrix}$$

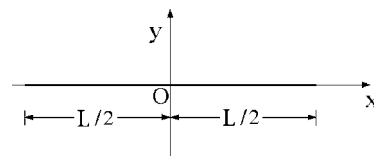


massa  $m$ , lunghezza  $L$

---

- **Asta rettilinea omogenea (terna centrale)**

$$mL^2 \begin{pmatrix} 0 & 0 & 0 \\ 0 & 1/12 & 0 \\ 0 & 0 & 1/12 \end{pmatrix}$$

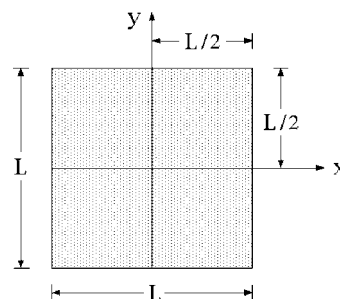


massa  $m$ , lunghezza  $L$

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- **Lamina quadrata omogenea**

$$mL^2 \begin{pmatrix} 1/12 & 0 & 0 \\ 0 & 1/12 & 0 \\ 0 & 0 & 1/6 \end{pmatrix}$$

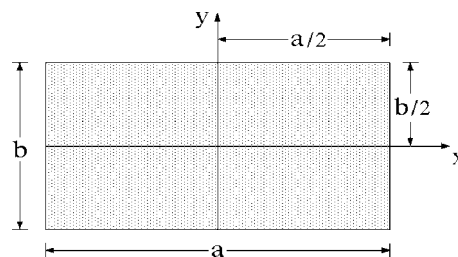


massa  $m$ , lato di lunghezza  $L$

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- **Lamina rettangolare omogenea**

$$m \begin{pmatrix} b^2/12 & 0 & 0 \\ 0 & a^2/12 & 0 \\ 0 & 0 & (a^2 + b^2)/12 \end{pmatrix}$$



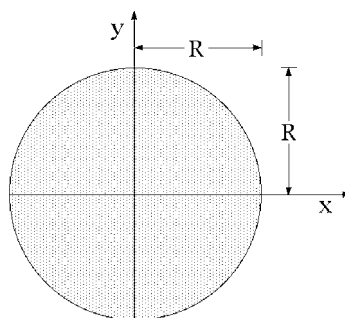
massa  $m$ , lati di lunghezza  $a$  e  $b$ ,  
rispettivamente paralleli agli assi  $Ox$  e  $Oy$

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• **Lamina circolare omogenea (disco omogeneo)**

$$mR^2 \begin{pmatrix} 1/4 & 0 & 0 \\ 0 & 1/4 & 0 \\ 0 & 0 & 1/2 \end{pmatrix}$$

massa  $m$ , raggio  $R$

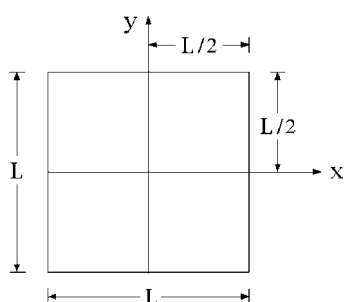



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• **Telaio quadrato omogeneo**

$$mL^2 \begin{pmatrix} 1/6 & 0 & 0 \\ 0 & 1/6 & 0 \\ 0 & 0 & 1/3 \end{pmatrix}$$

massa  $m$ , lato di lunghezza  $L$

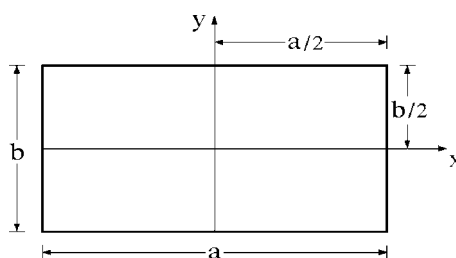



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• **Telaio rettangolare omogeneo**

$$\frac{m}{12(a+b)} \begin{pmatrix} b^3 + 3ab^2 & 0 & 0 \\ 0 & a^3 + 3a^2b & 0 \\ 0 & 0 & (a+b)^3 \end{pmatrix}$$

massa  $m$ , lati di lunghezza  $a$  e  $b$ ,  
rispettivamente paralleli agli assi  $Ox$  e  $Oy$




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• **Telaio circolare omogeneo**

$$mR^2 \begin{pmatrix} 1/2 & 0 & 0 \\ 0 & 1/2 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

massa  $m$ , raggio  $R$

