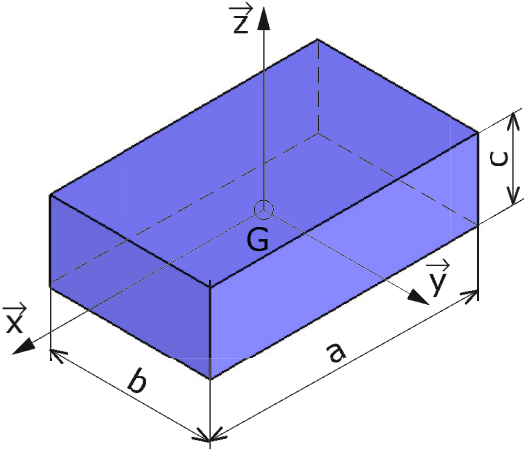
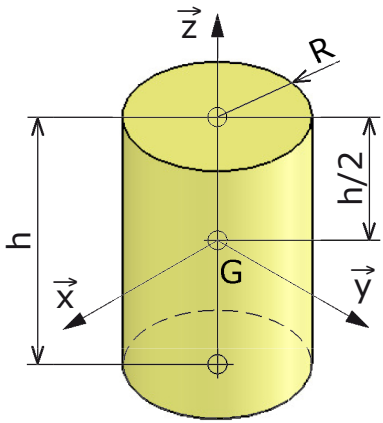
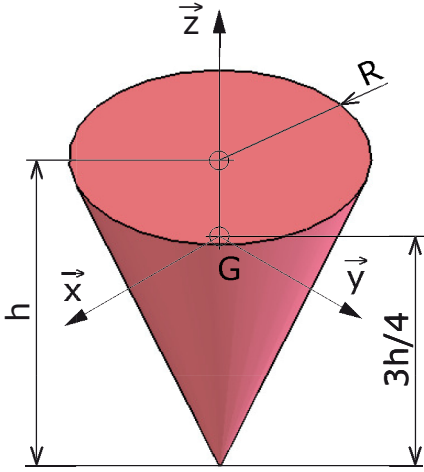
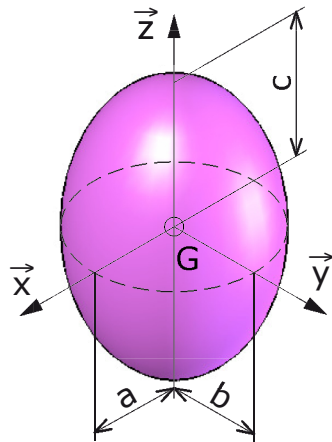


Matrices d'inertie de solides usuels

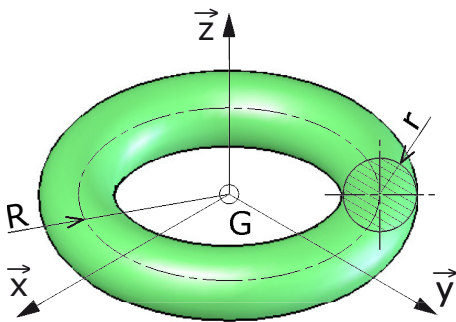
m est la masse du solide

	Parallélépipède $\mathcal{I}(G, S) = \begin{bmatrix} \frac{m}{12}(b^2 + c^2) & 0 & 0 \\ 0 & \frac{m}{12}(a^2 + c^2) & 0 \\ 0 & 0 & \frac{m}{12}(a^2 + b^2) \end{bmatrix}_B$
	Cylindre de révolution $\mathcal{I}(G, S) = \begin{bmatrix} m\left(\frac{R^2}{4} + \frac{h^2}{12}\right) & 0 & 0 \\ 0 & m\left(\frac{R^2}{4} + \frac{h^2}{12}\right) & 0 \\ 0 & 0 & m\frac{R^2}{2} \end{bmatrix}_B$
	Cône de révolution $\mathcal{I}(G, S) = \begin{bmatrix} \frac{3}{20}m\left(R^2 + \frac{h^2}{4}\right) & 0 & 0 \\ 0 & \frac{3}{20}m\left(R^2 + \frac{h^2}{4}\right) & 0 \\ 0 & 0 & \frac{3}{10}mR^2 \end{bmatrix}_B$



Ellipsoïde

$$\mathcal{I}(G, S) = \begin{bmatrix} \frac{m}{5}(b^2 + c^2) & 0 & 0 \\ 0 & \frac{m}{5}(a^2 + c^2) & 0 \\ 0 & 0 & \frac{m}{5}(a^2 + b^2) \end{bmatrix}_B$$



Tore

$$\mathcal{I}(G, S) = \begin{bmatrix} m\left(\frac{R^2}{2} + \frac{5r^2}{8}\right) & 0 & 0 \\ 0 & m\left(\frac{R^2}{2} + \frac{5r^2}{8}\right) & 0 \\ 0 & 0 & m\left(R^2 + \frac{3r^2}{4}\right) \end{bmatrix}_B$$