

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$v^2 = v_0^2 + 2a(x - x_0)$$

$$x = x_0 + \frac{v_0 + v}{2} \cdot t$$

$$a_r = \frac{v_t^2}{r}$$

$$F_g = \frac{Gm_1m_2}{r^2}$$

$$v_{orb} = \sqrt{\frac{GM}{r}}$$

$$\vec{A} \cdot \vec{B} = AB \cos \theta_{AB} = A_x B_x + A_y B_y + A_z B_z$$

$$U_{\acute{e}l} = \frac{1}{2} kx^2$$

$$W = \vec{F} \cdot \Delta \vec{r}$$

$$\vec{F}_{\acute{e}l} = -kx\vec{i}$$

$$\vec{J} = \Delta \vec{p} = \vec{F} \cdot \Delta t$$

$$\vec{r}_{CM} = \frac{\sum m_i \vec{r}_i}{M}$$

$$v_2 - v_1 = -(u_2 - u_1)$$

$$\Delta s = \Delta \theta r$$

$$v_t = \omega r$$

$$a_t = \alpha r$$

$$a_r = \omega^2 r$$

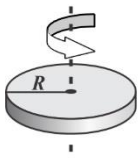
$$I = \sum m_i r_i^2$$

$$K_{rot} = \frac{1}{2} I_O \omega^2$$

$$I = I_{CM} + Md^2$$

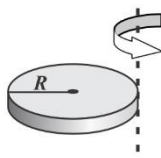
$$\tau = \pm r F \sin \theta$$

Disque ou cylindre plein



$$I = \frac{1}{2} MR^2$$

Disque ou cylindre plein



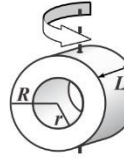
$$I = \frac{3}{2} MR^2$$

Disque plein



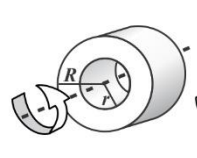
$$I = \frac{1}{12} MR^2$$

Cylindre troué



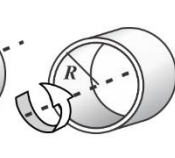
$$I = \frac{1}{12} M(3R^2 + 3r^2 + L^2)$$

Cylindre troué



$$I = \frac{1}{2} M(R^2 + r^2)$$

Anneau ou cylindre creux



$$I = MR^2$$

Patatoïde creux



$$I = \text{ça dépend}$$