$$\vec{v} = \frac{d\vec{r}}{dt}$$

$$\vec{a} = \frac{d\vec{v}}{dt}$$

$$\vec{s}(t) = \vec{x}' + \vec{v}'(t - t') + \frac{1}{2}\vec{a}_0(t^2 - t'^2)$$

$$\vec{v} = \vec{v}' + \vec{a}_0(t - t')$$

$$s = \frac{v^2 - v'^2}{2a} = \bar{v} \cdot t$$

$$\vec{\omega} = \frac{d\vec{\varphi}}{dt}$$

$$\vec{\alpha} = \frac{d\vec{\omega}}{dt}$$

$$\vec{\varphi}(t) = \vec{\varphi}' + \vec{\omega}'(t - t') + \frac{1}{2}\vec{\alpha}(t^2 - t'^2)$$

$$\vec{\omega}(t) = \vec{\omega}' + \vec{\alpha}(t - t')$$

$$\Delta s = r \cdot \Delta\varphi$$

$$v = r \cdot \omega$$

$$a_t = r \cdot \alpha$$

$$a_r = v \cdot \omega = r \cdot \omega^2$$

$$\vec{a} = \vec{a}_t + \vec{a}_r$$

$$\vec{F} = m \cdot a$$

$$F = k \cdot \Delta x$$

$$\vec{F}_L = k_L \cdot F_\perp$$

$$\vec{F}_{TR} = k_{TR} \cdot F_\perp$$

$$F_D = F_g \cdot k_{TR} \cdot \sin\alpha$$

$$F_S = F_g \cdot k_{TR} \cdot \cos\alpha$$

$$\vec{F}_g = m \cdot \vec{g}$$

$$k_L = \mathrm{tg}\alpha_{max}$$

$$\vec{G} = m \cdot \vec{v}$$

$$\vec{G}(t) - \vec{G}' = \int_{t'}^{t} \vec{F}(t)dt$$

$$\vec{F}_C = \Phi_m(\vec{v}' - \vec{v}) = \frac{1}{2}CS\rho v^2$$

$$dA = \vec{F} \circ d\vec{s}$$

$$W_K = \frac{1}{2}m\vec{v}^2$$

$$P = \frac{dA}{dt} = F \cdot v = M \cdot \omega$$

$$A_g = -m \cdot \int_{z'}^{z} g(z)dz$$

$$W_p = m \cdot g \cdot h$$

$$F_g = \kappa\frac{m \cdot M}{r^2}$$

$$g(r) = \frac{\kappa \cdot M}{r^2}$$

$$W_{PR} = \frac{1}{2}kx^2$$

$$A_{ostale} = \Delta W_K + \Delta W_p + \Delta W_{PR}$$

$$\vec{G} = \sum_i m_i \cdot \vec{v}_i$$

$$\frac{d\vec{G}}{dt} = \sum_i F_{iZ}$$

$$\vec{G} - \vec{G}' = \int_{t'}^{t} \sum_i \vec{F}_{iZ}$$

$$\vec{r}^* = \frac{\sum_i m_i \cdot r_i}{\sum_i m_i}$$

$$x^* = \frac{\sum_i m_i \cdot x_i}{\sum_i m_i}$$

$$M \cdot \vec{a}^* = \sum_i \vec{F}_{iZ}$$

$$W_P - W_P' = M \cdot g \cdot (z^* - z'^*)$$

$$F_r = F_s \sin\alpha$$

$$M = r \cdot F_s \sin\alpha$$

$$M = J \cdot \varepsilon$$

$$J = \sum_i m_i r_i^2$$

$$J = \int_{\text{po telesu}} r^2 dm$$

$$J = J_S + md^2$$

telo/os	J
obroč	mr_0^2
obroč	$\frac{1}{2}mr_0^2$
palica	$\frac{1}{12}ml^2$
palica	$\frac{1}{3}ml^2$
valj	$\frac{1}{2}mr_0^2$
krogla	$\frac{3}{2}mr_0^2$

$$\Gamma_Z = J \cdot \omega$$

$$\Gamma_Z - \Gamma_Z' = \int_{t'}^{t} M_Z(t)dt$$

$$W_K = \frac{1}{2}M\vec{v}^{*2} + \frac{1}{2}J^*\omega^2$$

$$W_P = M \cdot g \cdot h^*$$

$$p = \frac{F_\perp}{S}$$

$$\frac{F}{S} = \frac{\Delta l}{l} \cdot E$$

$$\frac{F}{S} = \frac{\Delta l}{d} \cdot G$$

$$M = D \cdot \Delta\varphi$$

$$\sigma = \frac{F}{S}$$

$$\Delta l = \alpha \cdot l \cdot \Delta T$$

$$\Delta V = \beta \cdot V \cdot \Delta T$$

$$\beta = 3\alpha$$