Egyenesvonalú mozgások:

$$\Delta x = x_2 - x_1 \qquad v_a = \frac{(\Delta x)}{(\Delta t)} = \frac{(x_2 - x_1)}{(t_2 - t_1)} \qquad a_a = \frac{(\Delta v)}{(\Delta t)} = \frac{(v_2 - v_1)}{(t_2 - t_1)}$$

$$v = v_0 + at \qquad x = x_0 + v_0 t + \frac{1}{2} a t^2 \qquad v^2 = v_0^2 + 2\mathrm{a}(x - x_0)$$

$$v_{átl} = \frac{(v_0 + v)}{2} \qquad x = x_0 + v_{átl} t$$

Körmozgások:

$$a_{cp} = \frac{v^2}{r} \qquad v = \frac{(2\pi r)}{T} \qquad a = \sqrt{a_t^2 + a_{cp}^2} \qquad \phi = arc\,tg \frac{a_{cp}}{a_t}$$

Newton-féle mozgástörvények:

$$\boldsymbol{F} = m\,\boldsymbol{a} \qquad \boldsymbol{p} = m\,\boldsymbol{v} \qquad F = G\frac{m_1 m_2}{r^2} \qquad G = mg \qquad a = \left(\frac{M - m}{M + m}\right) g \qquad T = mg\left(\frac{M - m}{M + m} + 1\right) = \frac{2\mathrm{mMg}}{M + m}$$

Munka, Energia, Teljesítmény:

$$W = Fs \qquad W = (F\cos\Theta)\,s \qquad W = \frac{mgl}{2} \qquad F_r = -kx \qquad W_r = -\frac{1}{2} k x^2 \; W_k = \frac{1}{2} k x^2$$

$$K = \frac{1}{2} m v^2 \qquad mgh = \frac{1}{2} m v^2 \qquad v = \sqrt{2\mathrm{gh}} \qquad U_r = \frac{1}{2} k x^2 \qquad P = Fv \qquad P = \frac{\Delta W}{\Delta t}$$

Tömegközéppont:

$$x_{TKP} = \frac{\sum m_k x_k}{\sum m_k} \qquad r_{TKP} = \frac{m_1 r_1 + m_2 r_2}{m_1 + m_2} \qquad \sum m_k v_k = \boldsymbol{P} = M v_{TKP} \qquad a_{TKP} = \frac{\sum m_k a_k}{M}$$

Forgatónyomaték:

$$M = rF\sin\Theta \qquad x_{SP} = \frac{\sum x_i w_i}{w_i}$$

Merev test forgó mozgásának kinematikája:

$$\Theta \equiv \frac{s}{r} \qquad \omega_{átl} = \frac{\Delta\Theta}{\Delta t} \qquad \alpha = \frac{\Delta\omega}{\Delta t} \qquad v = r\omega \qquad a_t = r\alpha \qquad a_{cp} = r\omega^2 \qquad \omega = \omega_0 + \alpha t$$

$$\Theta = \Theta_0 + \omega_0 t + \frac{1}{2}\alpha t^2 \qquad \omega^2 = \omega_0^2 + 2\alpha(\Theta - \Theta_0) \qquad L = \Theta\omega \qquad E_r = \frac{1}{2}\Theta\omega^2$$