

NIHANJE

$$s = s_0 \sin\left(\frac{2\pi}{t_0} t\right)$$

$$s = s_0 \sin(2\pi \cdot \nu \cdot t)$$

$$v = \omega \cdot s_0 \cos \omega \cdot t$$

$$a = -\omega^2 \cdot s_0 \cos \omega \cdot t$$

$$a = -\omega^2 \cdot s$$

$$v_0 = \omega s_0$$

$$a = \omega^2 s_0$$

$$\omega = 2\pi\nu$$

$$F = ma$$

$$-ks = ma$$

$$a = -\frac{k}{m} s$$

$$\omega^2 = \frac{k}{m}$$

$$a = -\omega^2 s$$

$$\left(\frac{2\pi}{t_0}\right)^2 = \frac{k}{m}$$

$$\frac{2\pi}{t_0} = \sqrt{\frac{k}{m}}$$

vzmetno nihalo

$$t_0 = 2\pi \sqrt{\frac{m}{k}}$$

$$W = W_k + W_{pr}$$

$$W_k = \frac{1}{2} m v^2$$

$$W_{pr} = \frac{1}{2} k s^2$$

$$W = \frac{1}{2} m v_0^2 = \frac{1}{2} k s_0^2$$

energija nihanja

$$s = \varphi \cdot l$$

$$\omega^2 = \frac{g}{l}$$

$$t_0 = 2\pi \sqrt{\frac{l}{g}}$$

nitno

VALOVANJE

$$\lambda = c \cdot t_0 = c \cdot \frac{1}{\nu}$$

$$c = \lambda \cdot \nu$$

$$\frac{\sin \alpha}{\sin \beta} = \frac{c_1}{c_2}$$

} lomni zakon (vodna gladina)

$$l = N \cdot \frac{\lambda}{2} \text{ stojече valovanje}$$

$$\nu_{N-1} = N \cdot \frac{c}{2 \cdot l}$$

OPTIKA

$$n_1 \sin \alpha = n_2 \sin \beta \text{ } \} \text{ lomni zakon}$$

$$n = \frac{c_0}{c}$$

$$\frac{1}{\varphi} = \frac{1}{a} + \frac{1}{b}$$

$$-\frac{1}{\varphi} = \frac{1}{a} - \frac{1}{b}$$

$$a = -\frac{g}{l} \cdot s$$