ELEKTRIKA

$$I = \frac{e}{t}$$

$$F = \frac{e_1 e_2}{4\pi\varepsilon_0 r^2}$$

$$\vec{F} = e\vec{E}$$

$$U = \vec{E}\cdot\vec{s} = \frac{A_e}{e}$$

$$\sigma_e = \frac{e}{S}$$

$$E = \frac{\sigma_e}{2\varepsilon_0}$$

$$e = C\,U$$

$$C = \frac{\varepsilon_0 S}{l}$$

$$W_e = \frac{C\,U^2}{2}$$

$$w_e = \frac{W_e}{V}$$

$$w_e = \frac{\varepsilon_0 E^2}{2}$$

$$U = RI$$

$$R = \frac{\zeta\, l}{S}$$

$$P = U\,I$$

MAGNETIZEM

$$\vec{F} = I\,\vec{l}\times\vec{B}$$

$$F = I\,l\,B\sin\alpha$$

$$\vec{F} = e\,\vec{v}\times\vec{B}$$

$$B = \frac{\mu_0 I}{2\,\pi\,r}$$

$$B = \frac{\mu_0 N I}{l}$$

$$M = N\,I\,S\,B\sin\alpha$$

$$\Phi = \vec{B}\cdot\vec{S} = B\,S\cos\alpha$$

$$U_\mathrm{i} = l v B$$

$$U_\mathrm{i} = \omega\,S\,B\sin\omega t$$

$$U_\mathrm{i} = \frac{\Delta\Phi}{\Delta t}$$

$$L = \frac{\Phi}{I}$$

$$L = \frac{\mu_0 N^2 S}{l}$$

$$W_\mathrm{m} = \frac{L\,I^2}{2}$$

$$w_\mathrm{m} = \frac{B^2}{2\mu_0}$$

NIHALA IN VALOVANJE

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

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

$$t_0 = 2\pi\sqrt{LC}$$

$$c = \lambda\nu$$

$$\sin\alpha = \frac{N\lambda}{d}$$

$$j = \frac{P}{S}$$

$$E_0 = c\,B_0$$

$$j = \frac{1}{2}\varepsilon_0 {E_0}^2 c$$

$$j' = j\cos\alpha$$

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

$$\frac{\sin\alpha}{\sin\beta} = \frac{c_1}{c_2} = \frac{n_2}{n_1}$$

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

$$\nu = \nu_0\left(1 \pm \frac{v}{c}\right)$$

$$\nu = \frac{\nu_0}{1 \mp \frac{v}{c}}$$

TOPLOTA

$$n = \frac{m}{M}$$

$$pV = nRT$$

$$\Delta l = \alpha\, l\,\Delta T$$

$$\Delta V = \beta\, V\,\Delta T$$

$$A + Q = \Delta W$$

$$Q = c\,m\,\Delta T$$

$$Q = q\,m$$

$$W_0 = \frac{3}{2}kT$$

$$P = \lambda\, S\frac{\Delta T}{\Delta l}$$

$$j = \sigma T^4$$

RELATIVNOST

$$\gamma = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$W = \gamma m_0 c^2$$

$$G = \gamma m_0 v$$

$$W_\mathrm{kin} = (\gamma - 1) m_0 c^2$$

MODERNA FIZIKA

$$W_\mathrm{f} = h\nu$$

$$W_\mathrm{f} = A_\mathrm{i} + W_\mathrm{k}$$

$$W_\mathrm{f} = \Delta W_\mathrm{n}$$

$$\lambda_\mathrm{min} = \frac{h\,c}{e\,U}$$

$$\Delta W = \Delta m\, c^2$$

$$N = N_0\, 2^{-t/\tau} = N_0 e^{-\lambda t}$$

$$A = N\frac{\ln 2}{\tau}$$