Formulário 3 Física Geral 3:

$W = \vec{F} \cdot \vec{d}$ $\vec{F}_B = q\vec{v} \times \vec{B}$ $F_c = \frac{mv^2}{r}$ $f = \frac{qB}{2\pi m}$ $\vec{F}_B = i\vec{L} \times \vec{B}$ $\vec{F}_B = i\int_a^b d\vec{L} \times \vec{B}$

$\tau = (NiA)Bsen\theta$ $\vec{\mu} = NiA$ $\vec{\tau} = \vec{\mu} \times \vec{B}$ $U = -\vec{\mu} \cdot \vec{B}$ $d\vec{B} = \frac{\mu_0}{4\pi}\frac{i\, d\vec{s} \times \vec{r}}{r^3}$

$\mu_0 = 4\pi \times 10^{-7}\ \mathrm{T \cdot m/A}$ $F_{ba} = \frac{\mu_0 i_a i_b L}{2\pi d}$ $\oint \vec{B} \cdot d\vec{s} = \mu_0 i_{enc}$ $B = \mu_0 in$ $B = \frac{\mu_0 iN}{2\pi}\frac{1}{r}$

$\Phi_B = \int \vec{B} \cdot d\vec{A}$ $\varepsilon = -N\frac{d\Phi_B}{dt}$ $P = Fv$ $V_f - V_i = -\int_i^f \vec{E} \cdot d\vec{s}$ $V = \frac{1}{4\pi\varepsilon_0}\frac{q}{r}$ $dV = \frac{1}{4\pi\varepsilon_0}\frac{dq}{r}$

$i = \frac{dq}{dt}$ $i = \int \vec{J} \cdot d\vec{A}$ $R = \frac{V}{i}$ $P = Vi$ $P = \frac{dU}{dt}$ $F = \frac{1}{4\pi\varepsilon_0}\frac{q_1 q_2}{r^2}$ $E = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2}$ $dE = \frac{1}{4\pi\varepsilon_0}\frac{dq}{r^2}$

$\rho = \frac{q}{V}$ $\sigma = \frac{q}{A}$ $\lambda = \frac{q}{l}$ $K = \frac{mv^2}{2}$ $\vec{F} = q_0\vec{E}$ $\varepsilon_0 = 8.85 \times 10^{-12}\ \mathrm{C^2/Nm^2}$ $f = 10^{-15}$

$m_p = 1.67 \times 10^{-27}$ kg $m_e = 9.11 \times 10^{-31}$ kg $e = 1.60 \times 10^{-19}$ C $g = 9.81\ \mathrm{m/s^2}$ $\mu = 10^{-6}$

$n = 10^{-9}$ $p = 10^{-12}$

$\int \frac{dx}{(x^2 + a^2)^{3/2}} = \frac{x}{a^2\sqrt{x^2 + a^2}}$ $\int \frac{x^2 dx}{(x^2 + a^2)^{3/2}} = \frac{-x}{\sqrt{x^2 + a^2}} + \ln(x + \sqrt{x^2 + a^2}$