

Formulário

$$C = q/V_C \quad V_R = R \cdot i \quad i = \int \vec{j} \cdot d\vec{A} \quad \vec{j} = -ne\vec{v}_d$$

$$V_C(t) = \varepsilon e^{-t/RC} \quad V_R(t) = \varepsilon e^{-t/RC} \quad V_R(t) = -\varepsilon e^{-t/RC} \quad V_C(t) = \varepsilon(1 - e^{-t/RC})$$

$$P = V \cdot i \quad U_E = C \cdot V_C^2 / 2 \quad \vec{F} = q\vec{E} + q\vec{v} \times \vec{B} \quad d\vec{B} = \frac{\mu_0 i}{4\pi} \frac{d\vec{L} \times \hat{r}}{r^2}$$

$$d\vec{F} = i \cdot d\vec{L} \times \vec{B} \quad U_B = -\vec{\mu}_B \cdot \vec{B} \quad \vec{\tau}_B = \vec{\mu}_B \times \vec{B} \quad \vec{\mu}_B = i \cdot \vec{A} \quad \oint \vec{B} \cdot d\vec{L} = \mu_0 i_{\text{int}}$$

$$\int \frac{dx}{(a^2 + x^2)^{\frac{3}{2}}} = \frac{x}{a^2 \sqrt{a^2 + x^2}} \quad R_{\text{eq}} = R_1 + R_2 \quad \frac{1}{R_{\text{eq}}} = \frac{1}{R_1} + \frac{1}{R_2} \quad C_{\text{eq}} = C_1 + C_2 \quad \frac{1}{C_{\text{eq}}} = \frac{1}{C_1} + \frac{1}{C_2}$$

$$\text{Expansão polinomial: } \frac{1}{x^2 - a^2} = \frac{1}{x^2} \frac{1}{1 - \left(\frac{a}{x}\right)^2} = \frac{1}{x^2} \left[1 - \left(\frac{a}{x}\right)^2 + \left(\frac{a}{x}\right)^4 - \dots \right] \text{ para } (x > a)$$

$$\mu_0 = 4 \times 10^{-7} \text{ Tm/A}$$

$$e = 1,6 \times 10^{-19} \text{ C}$$

$$m_{\text{Próton}} = 1,67 \times 10^{-27} \text{ Kg}$$

$$m_e = 9,1 \times 10^{-31} \text{ Kg}$$