$$\nu_{kn} = \frac{E_k - E_n}{h} = R\left(\frac{1}{n^2} - \frac{1}{k^2}\right),\ k > n, \tag{1}$$

$$\frac{1}{\lambda_{kn}} = R'\left(\frac{1}{n^2} - \frac{1}{k^2}\right) \tag{2}$$

$$E_n = -E_0\frac{Z^2}{2n^2} = -\frac{hR}{n^2}Z^2 \tag{3}$$

$$E = h\nu = h\frac{c}{\lambda}. \tag{4}$$

$$\lambda_k = \frac{c}{\nu_k} = \frac{hc}{eU} = \frac{1,239\cdot 10^{-9}\text{m}}{U}. \quad (U - [kV]) \tag{5}$$

$$\nu = R(Z-\sigma)^2\left(\frac{1}{n^2} - \frac{1}{m^2}\right); \tag{6}$$

$$\Delta E = \Delta m c^2 \tag{7}$$

$$E_r = 931,5\left[Zm_H + (A-Z)m_n - m_a\right]; \tag{8}$$

$$N = N_0 e^{-\lambda t}, \tag{9}$$

$$N = N_0 2^{-t/T}. \tag{10}$$

$$\tau = \frac{1}{\lambda} = \frac{T}{\ln 2} = 1,44T; \tag{11}$$

$$T = \tau \ln 2 = 0,693\tau; \tag{12}$$

$$\lambda = \frac{1}{\tau} = \frac{\ln 2}{T} = \frac{0,693}{T}. \tag{13}$$

$$1\ \text{Rd} = 10^6\text{Bq} = 10^6 s^{-1}. \tag{14}$$

$$1\ \text{Ci} = 3,7\cdot 10^{10}\text{Bq} = 37000\ \text{Rd} = 3,7\cdot 10^{10} s^{-1}. \tag{15}$$

$$Q_\alpha = E_\alpha + E_{br} = \frac{M_{pirm}}{M_{antr}}E_\alpha; \tag{16}$$

$$I = I_0\exp(-\mu x); \tag{17}$$

1 rentgenas $= 8,4\cdot 10^{-3}$ J/kg = 0,0084 J/kg.
1 radas = 1 rad = 0,01 J/kg = 0,01 Gr.