

Dane:

$$h = 4,14 * 10^{-15} eV * s$$

$$c = 3 * 10^8 \frac{m}{s}$$

$$\lambda = 1cm = 0,01m$$

$$E_f = \frac{hc}{\lambda}$$

$$E_f = \frac{4,14 * 10^{-15} eV * s * 3 * 10^8 \frac{m}{s}}{0,01m} = 1,242 * 10^{-4} eV$$

$$E_f = E_{n1} - E_{n2}$$

$$E_n = -\frac{A}{n^2}, \quad A = 13,6eV$$

$$E_f = \frac{A}{n_2^2} - \frac{A}{n_1^2}$$

$$\frac{E_f}{A} = \frac{n_1^2 - n_2^2}{n_1^2 n_2^2}$$

$$n_2 = n$$

$$n_1 = n + 1$$

$$\frac{E_f}{A} = \frac{1 - \left(\frac{1}{1+n}\right)^2}{n^2}$$