

$$\begin{aligned}
 C &= 3 \times 10^8 \text{ m/s} \\
 L &= 2.51 \times 10^{-10} \text{ m} \\
 h &= 4.136 \times 10^{-15} \text{ eV}\cdot\text{s} \\
 \hbar &= 4.136 \times 10^{-15} \text{ eV}\cdot\text{s}
 \end{aligned}$$

we get

$$E_0 = 5.97 \text{ eV}$$

$$\begin{aligned}
 \text{a) } E_4 - E_1 &= E_0(16-1) = 15E_0 = 89.7 \text{ eV} \\
 \text{b) } E_4 - E_3 &= E_0(16-9) = 7E_0 = 41.8 \text{ eV} \\
 E_4 - E_2 &= E_0(16-4) = 12E_0 = 71.7 \text{ eV}
 \end{aligned}$$