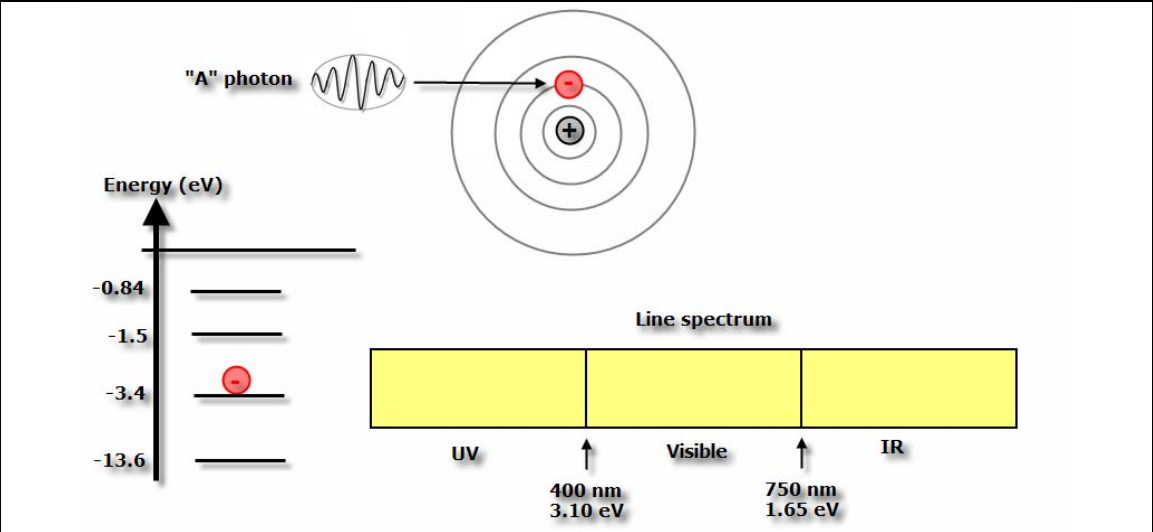


**Bohr's atomic theory: True-False questions**

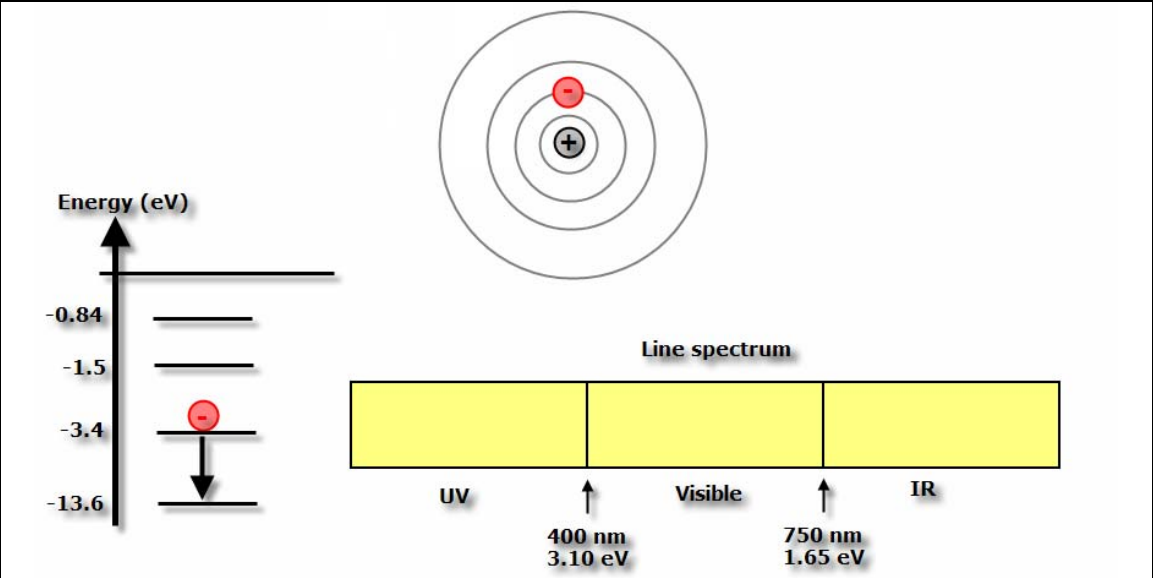
**TRANSFORMATION: The hydrogen atom absorbs a photon that carries an energy of 3.5 eV**



Determine if these expressions are true  or false :

- "To absorb energy" means that the electron emits a photon
- The electron goes out of the atom
- The electron jumps to the ground state

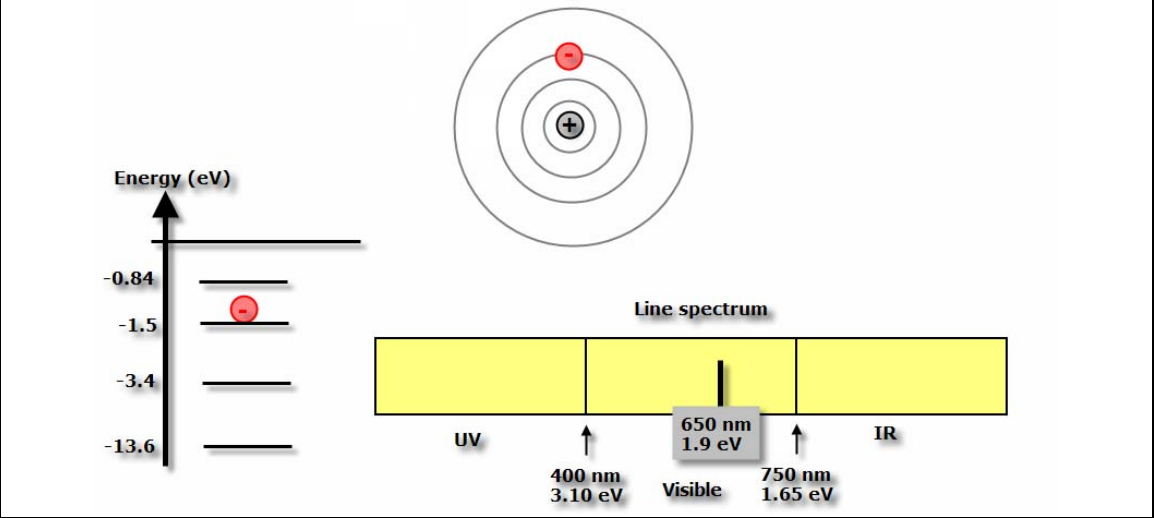
**TRANSFORMATION: The electron jumps to the ground state**



Determine if these expressions are true  or false :

- The electron emits a photon that carries an energy of 10.2 eV
- The electron emits an UV photon

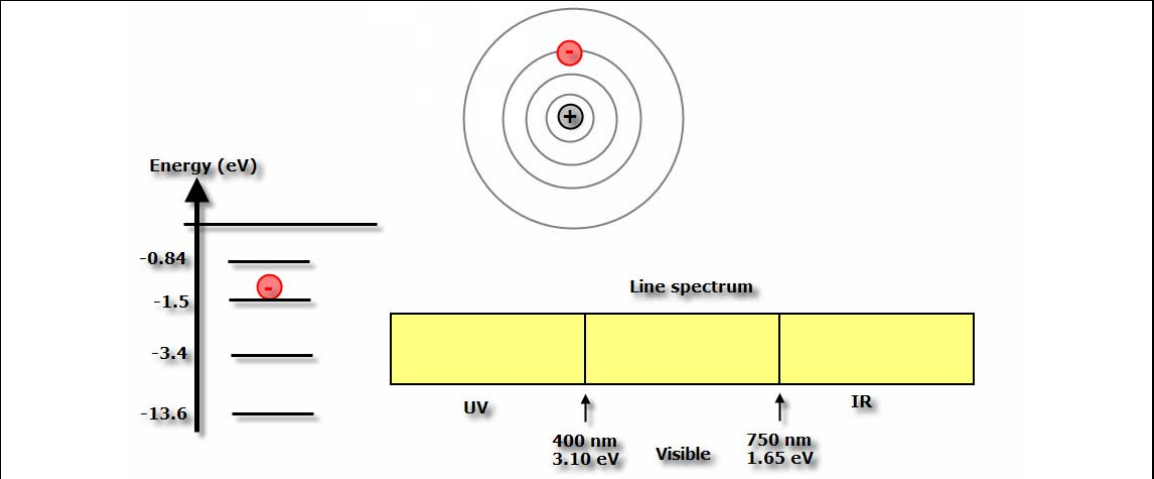
**TRANSFORMATION:** The electron emits the photon given in the line spectrum



Determine if these expressions are true  or false :

- The electron jumps to an outer orbit
- The electron jumps to the  $n=2$  orbit
- The electron jumps to the ground state

**TRANSFORMATION:** We have millions of atoms in which the electrons are placed at  $n=3$ .



Determine if these expressions are true  or false :

- They have a natural tendency to jump to their ground state
- All of them will perform identical jumps
- All of them will form three lines in the line spectrum: two in the UV region and one in the visible region
- They will form a line in the IR region