1) The threshold wavelength for the photoelectric effect for silver is 262 nm. What is silver’s work function?

2) In Hydrogen, the Lyman α transition is between \( n = 2 \) and \( n = 1 \).

a) Find the wavelength of the photon emitted when an electron makes this transition.

b) In the model of the Hydrogen atom right, draw an arrow showing the electron transition that would cause the emission of the Lyman alpha photon calculated above.

c) Emission spectra look like (pick one)
   1) bright lines on a dark background
   2) dark lines on a colorful spectrum background