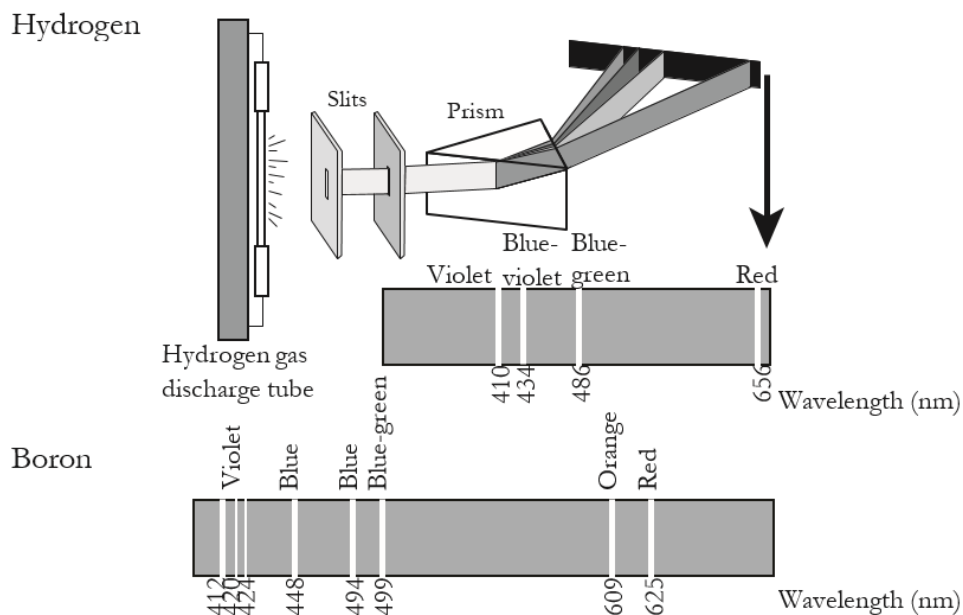


1: Up and Atom
HW 1: Emission Spectra

Name:

Class:

Date:



- List the spectral lines for hydrogen gas by color and corresponding wavelength.
- The spectral lines for boron were produced using the same method as hydrogen. List three of the colors and corresponding wavelengths for boron's spectral lines as its light passes through a prism.
- Consider the hydrogen spectrum.
 - Which color of light corresponds to the shortest wavelength?
 - Which color of light corresponds to the longest wavelength?
 - Which color of light has the most energy?
 - Which color of light has the least energy?

4. Does a gas discharge tube filled with boron emit the same wavelengths of light as a tube filled with hydrogen? Use evidence from the picture to support your answer.

5. "The spectral lines for atoms are like fingerprints for humans." How do the spectral lines for hydrogen and boron support this statement?