Skill Practice 15

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bohr Problems

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_\_

1. Define the terms “ground state” and “excited state”.
2. What is the wavelength of light that has a frequency of 4.22 x 1015 Hz?
3. What is the energy of light that has a frequency of 1.30 x 1014 Hz?

1. A certain atom has a green spectrum line of about 540 nm. What is the difference in energy between the two energy levels responsible for producing the line?
2. The wavelength of a certain beam of light was 3.52x10-7m.
   1. Find the frequency of this light.
   2. Calculate how much energy this light has.
3. What is the frequency and wavelength of light that has energy of 5.09 x 10-19 J?