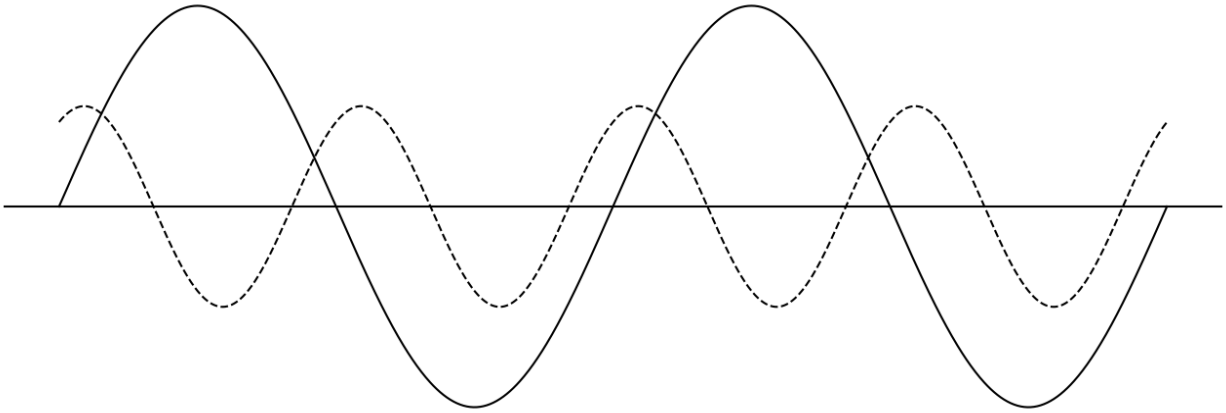
Name: _____

Light Waves



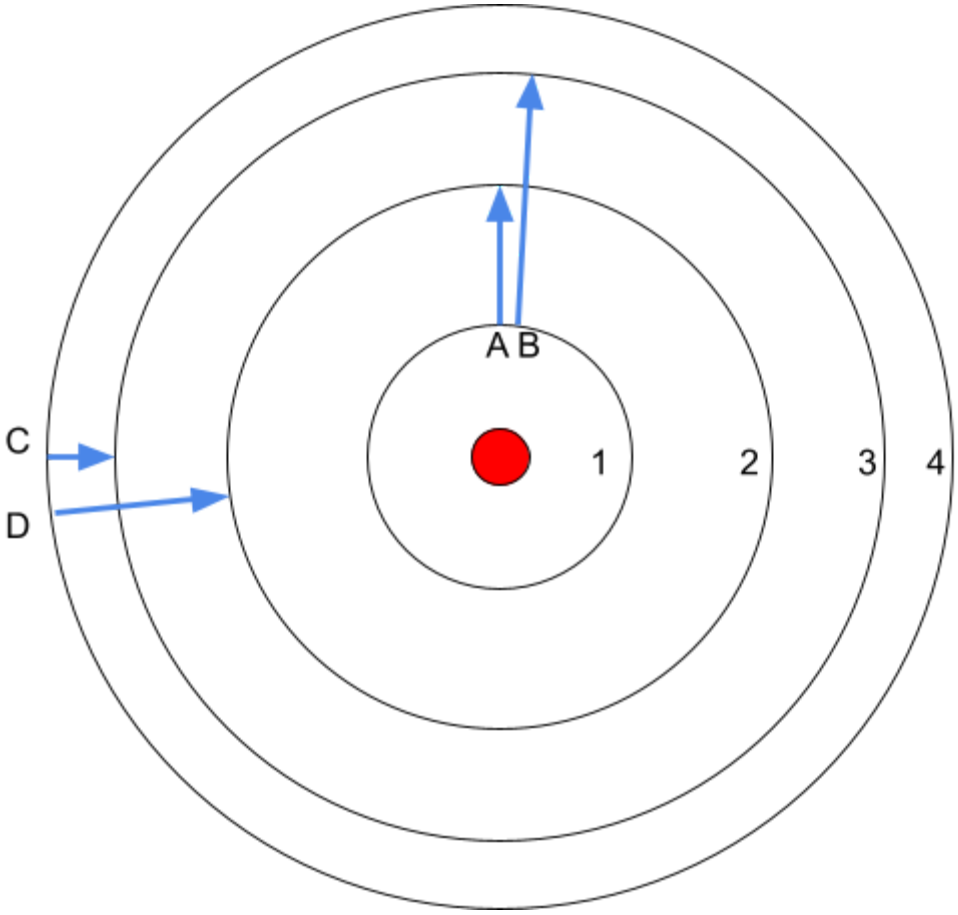
1) For one of the waves in the above diagram of a light wave, label the amplitude and the wavelength.

2) Draw an arrow indicating the direction that these light waves could be travelling

3) Which of the waves has a higher frequency? Amplitude? Wavelength? Speed? Energy?

4) If I told you that one of these waves was an infrared light wave and one was an microwave light wave, which one would be which? Why?

Name: _____



5) In the diagram of atomic energy levels above, which transitions (represented by arrows) would result in emission of a photon and which would result in absorption of a photon? Why?

6) Of A & B, which corresponds to a higher energy photon? Which corresponds to a higher wavelength photon? What about C & D?

7) If I told you that one of these transitions corresponded to an ultraviolet photon, two were visible photons, and one was an infrared photon, which would you say is which? Why?