Light and the Electromagnetic Spectrum

What is the frequency and energy of a green laser pointer that is emitting light at 532 nm?

A microwave operates with a frequency of 6.00 x 1010 Hz. Calculate the wavelength and energy of the radiation emitted by this microwave.

When an electron falls from n=5 to n=1 in a hydrogen atom, what is the change in energy that occurs? What wavelength of radiation would be observed?

An electron weighs 9.11 x 10-31 kg. If it is moving at 700.0 km per sec, what is it’s wavelength?

Which of the following has the highest energy?

A) radio waves

B) infrared radiation

C) green light

D) gamma rays

Which color of visible light has the shortest wavelength?

A) Yellow

B) Blue

C) Green

D) Red

As the wavelength increases the

A) frequency decrease and the energy decreases

B) frequency increases and the energy increases

C) frequency decreases and energy increases

D) frequency increases and energy decreases

Which of the following transitions in a Bohr Hydrogen atom would emit the shortest wavelength of light?

A) n=3🡪 n=2

B) n= 2🡪 n=4

C) n=5 🡪 n=1

D) n=3 🡪 n=1