Chemistry Wave Problems

1. What is the energy of a wave that has a wavelength of 8.5 meters?

2. What is the wavelength of a wave that has a frequency of 5.9 \times 10^{12} \text{Hz}?

3. What is the frequency of a wave that has 5.96 \times 10^{19} \text{J} of energy?

4. What is the frequency of light if the wavelength is 6.00 \times 10^{-7} \text{m}? What is the color of the light?

5. Which wave has a shorter wavelength; light with a frequency of 5.8 \times 10^{16} \text{Hz} or light that is red in color?

6. If light has a frequency of 8.25 \times 10^{16} \text{Hz}, what is its energy?

7. If a wave has an energy of 3.2 \times 10^{19} \text{J}, what is its frequency?

8. If the frequency of light increases, what will happen to the wavelength? To the energy?

9. If we know the frequency of light, what constant allows us to determine the wavelength? The energy?

10. How much wood could a woodchuck chuck if a woodchuck could chuck wood?