

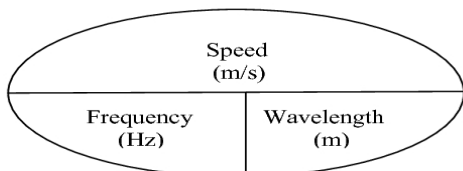
Speed / Frequency / Wavelength

Equation: Speed of all Electromagnetic Spectrum Waves (c) = 3.0×10^8 m/s

Speed (m/s) = Frequency x Wavelength

Frequency (Hz) = Speed ÷ Wavelength

Wavelength (m) = Speed ÷ Frequency



1. Violet light has a wavelength of 4.10×10^{-12} m. What is the frequency?

2. Green light has a frequency of 6.01×10^{14} Hz. What is the wavelength?

3. What is the wavelength (in meters) of the electromagnetic carrier wave transmitted by The Sports Fan radio station at a frequency of 640 kHz?(Hint: convert kHz into Hz by multiplying by 10^3 .)

4. Calculate the wavelength of radiation with a frequency of 8.0×10^{14} Hz.

_____ m/s

9. A wave's velocity is 90 m/sec with a frequency of 6 Hz. What is it's

Givens: λ = _____ m f = _____ Hz v = _____

Equation: _____

_____ m/s

10. A wave has a wavelength of 20 m and a velocity of 50 m/s. Find it's

Givens: λ = _____ m f = _____ Hz v_s = _____

Equation: _____