

<u>Wavelength range (nm)</u>	<u>Part of the EM spectrum</u>	<u>*Wavelength (nm)</u>	<u>Color</u>
5×10^7 and longer	radio	650 – 700	red
5×10^5 to 5×10^7	microwave	590 – 650	orange
700 to 5×10^5	infrared (IR)	580 – 590	yellow
400 to 700	visible*	490 – 580	green
10 to 400	ultraviolet(uv)	420 – 490	blue
10 and below	gamma or x-ray	400 – 420	violet

2. For each problem, fill in the missing wavelength and frequency, and determine which part of the EM spectrum the wave belongs to. (If it is in the visible spectrum, also say what color it is). **Show work!**

a. EM radiation with a frequency of 4.76×10^{14} Hz

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

b. EM radiation with a wavelength of 2200 nm.

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

c. EM radiation with a frequency of 6.8×10^{16} Hz.

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

d. EM radiation with a wavelength of 242 nm.

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

e. EM radiation with a wavelength of 3.05 meters. (yes, meters!)

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

f. EM radiation with a frequency of 5.87×10^{14} Hz.

part of spectrum _____

$\lambda =$ _____ m

$\lambda =$ _____ nm

$\nu =$ _____

1a. *Notes on Electromagnetic Radiation!!!*

1b. *What's nu?*