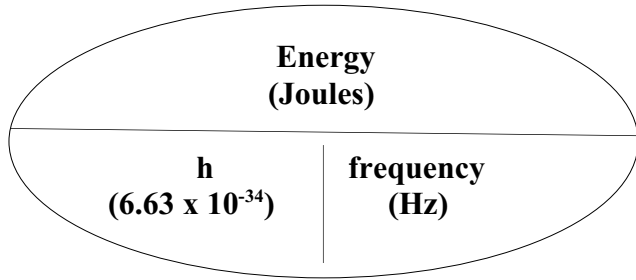


Energy / Frequency / Wavelength



Planck's Constant (h) = $6.63 \times 10^{-34} \text{ J} \cdot \text{s}$

Energy (J) = h x Frequency

Energy = $\frac{h \times c}{\text{wavelength}}$

1. Calculate the energy of a photon of radiation with a frequency of $5.45 \times 10^{14} \text{ Hz}$.

2. What is the energy of light whose wavelength is $7.65 \times 10^{-8} \text{ m}$?

3. Rank the electromagnetic spectrum from shortest wavelength (1) to longest (7):

<i>Visible</i>	<i>Infrared</i>	<i>Microwave</i>	<i>Radio</i>	<i>Gamma</i>	<i>Ultraviolet</i>	<i>X-ray</i>
_____	_____	_____	_____	_____	_____	_____

4. Rank the electromagnetic spectrum from lowest frequency (1) to highest (7):

<i>Visible</i>	<i>Infrared</i>	<i>Microwave</i>	<i>Radio</i>	<i>Gamma</i>	<i>Ultraviolet</i>	<i>X-ray</i>
_____	_____	_____	_____	_____	_____	_____

5. Rank the electromagnetic spectrum from lowest energy (1) to highest (7):

<i>Visible</i>	<i>Infrared</i>	<i>Microwave</i>	<i>Radio</i>	<i>Gamma</i>	<i>Ultraviolet</i>	<i>X-ray</i>
_____	_____	_____	_____	_____	_____	_____

Is the relationship between frequency and wavelength **directly** or **inversely proportional**?

Is the relationship between frequency and energy **directly** or **inversely proportional**?