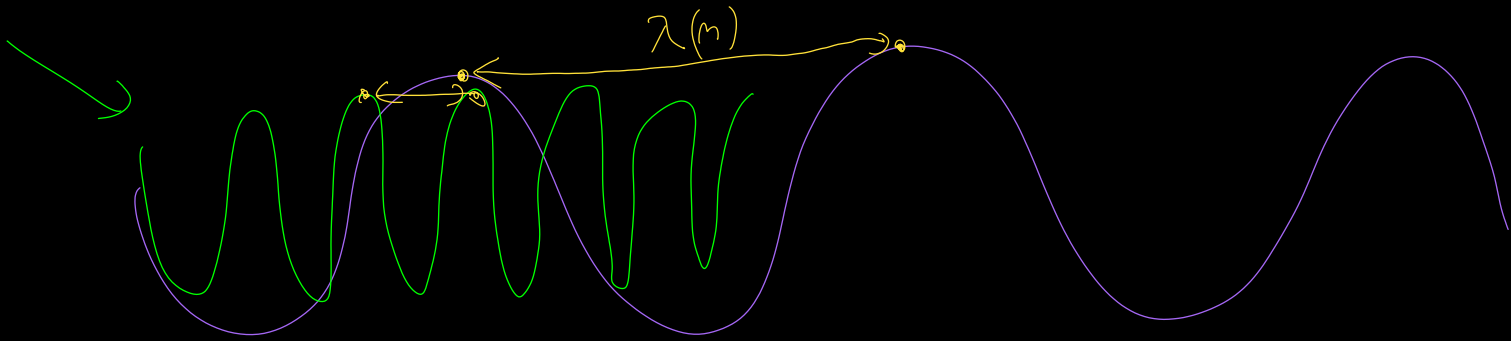


אורך גל של פוטון



~~$$\lambda \cdot \nu = v$$~~

$$\rightarrow \boxed{\lambda \cdot \nu = c}$$

$$c = 3 \cdot 10^8 \frac{m}{sec}$$

$$\nu = 5 \cdot 10^{17} Hz$$

$$\lambda = ?$$

$$\lambda \cdot \nu = c / \nu \rightarrow \lambda = \frac{c}{\nu} = \frac{3 \cdot 10^8 \frac{m}{sec}}{5 \cdot 10^{17} Hz}$$

$$Hz = \frac{1}{sec}$$

$$\lambda = \frac{3 \cdot 10^8 \frac{m}{\cancel{sec}}}{5 \cdot 10^{17} \frac{1}{\cancel{sec}}} = \boxed{6 \cdot 10^{-10} \cdot m}$$

$$\frac{\frac{m}{\cancel{sec}}}{\frac{1}{\cancel{sec}}} = \frac{m}{\cancel{sec}} \cdot \frac{1}{\cancel{sec}} = \frac{m}{\cancel{sec}} \cdot \frac{\cancel{sec}}{1}$$

$$1m = 10^{12} pm$$

$$\lambda = 6 \cdot 10^{-10} \cdot 10^{12} \cdot pm = \boxed{600 pm}$$