

PRACTICE PROBLEM:

What is the energy of a quantum of light with a frequency of 3.45×10^{16} Hz?

Answer:

$$\text{Recall: } \text{Hz} = \text{ }^1 / \text{sec}$$

$$E = h\nu$$

$$E = (6.626 \times 10^{-34} \text{ J} \cdot \text{sec}) \left(3.45 \times 10^{16} \frac{1}{\text{sec}} \right)$$

$$E = 2.29 \times 10^{-17} \text{ J}$$