3. According to Planck and Einstein the energy of a photon is given by

$$E = h f$$

Dividing both sides of the equation by h gives an expression for frequency as

$$f = E / h$$

$$f = (5.0 \times 10^{-19} \text{ J}) / (6.626 \times 10^{-34} \text{ J s})$$

$$f = 7.55 \times 10^{14} \text{ Hz}$$