4. We use the fundamental relationship between velocity, frequency, and wavelength and divide each side of the equation by wavelength in order to obtain an expression for the frequency.

$$v = f\lambda$$

$$v / \lambda = (f\lambda) / \lambda = f$$

$$f = v / \lambda$$

$$f = (300 \text{ m} / \text{s}) / (0.5 \text{ m})$$

$$f = 600 \text{ Hz}$$