Find the frequency of a sound wave moving in air at room temperature with a wavelength of 0.667 m.

The speed of sound in air at room temperature:

$$c_s = 340 m/s$$

So, the frequency of a sound wave:

$$f = \frac{c_s}{\lambda}$$

$$f = \frac{340 m/s}{0.667 m} = 509.7 Hz$$

Answer: $f = 509.7 Hz$