Answer on Question 68183, Physics, Other

Question:

What is the wavelength of a sound wave with a frequency of $200\ Hz$?

Solution:

We can find the wavelength of a sound wave from the wave speed formula:

$$v = f\lambda,$$

here, $v = 340\ m/s$ is the speed of the sound in the air, f is the frequency and λ is the wavelength.

Then, we get:

$$\lambda = \frac{v}{f} = \frac{340\ \frac{m}{s}}{200\ Hz} = 1.7\ m.$$

Answer:

$\lambda = 1.7\ m.$