Answer on Question 73149, Physics, Other

Question:

A turning fork makes 256 vibrations per second in air. When the velocity of sound is $330\ m/s$, what is the wavelength of the tone?

Solution:

We can find the wavelength of the tone from the wave speed formula:

$$v = f\lambda,$$

here, $v = 330\ m/s$ is the velocity of sound, $f = 256\ Hz$ is the frequency of the tone, λ is the wavelength of the tone.

Then, from the formula, we can calculate the wavelength of the tone:

$$\lambda = \frac{v}{f} = \frac{330\ m/s}{256\ Hz} = 1.29\ m.$$

Answer:

$\lambda = 1.29\ m.$