

Resonant Length	f (Hz)	λ (m)	L(m)	v (m/s) ($v=f\lambda$)	v(m/s) (using Temperature)

1. A tuning fork is struck and held over an open air column. The fourth resonant length is 30.0cm.
 - (a) What is the wavelength of the sound?
 - (b) If the temperature in the room is 21°C, what was the frequency of the tuning fork used by the students?
 2. A 310 Hz tuning fork is held over the mouth of an air column open at one end. If the speed of sound is 352 m/s, calculate the length of the air column which produces the second resonant sound.
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Note:

$$\% \text{ error} = \frac{\left| \begin{array}{c} \text{(average)} \\ \text{experimental value} - \text{actual value} \end{array} \right|}{\text{actual value}} \times 100\%$$

(v calculated using Temperature)