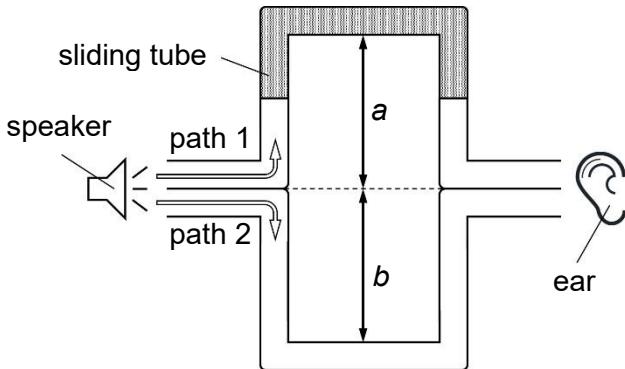


- 18 Sound energy produced by a speaker is divided equally when it enters into two paths through an arrangement of tubes as shown below.



The sound waves have wavelength λ and are detected by a listener's ear at the end of the paths. Initially, distances a and b are equal. The distance a can be increased by raising the sliding tube.

What is the increase in a when the ear first detects a minimum in the sound received?

- A 0.25λ B 0.5λ C λ D 2λ