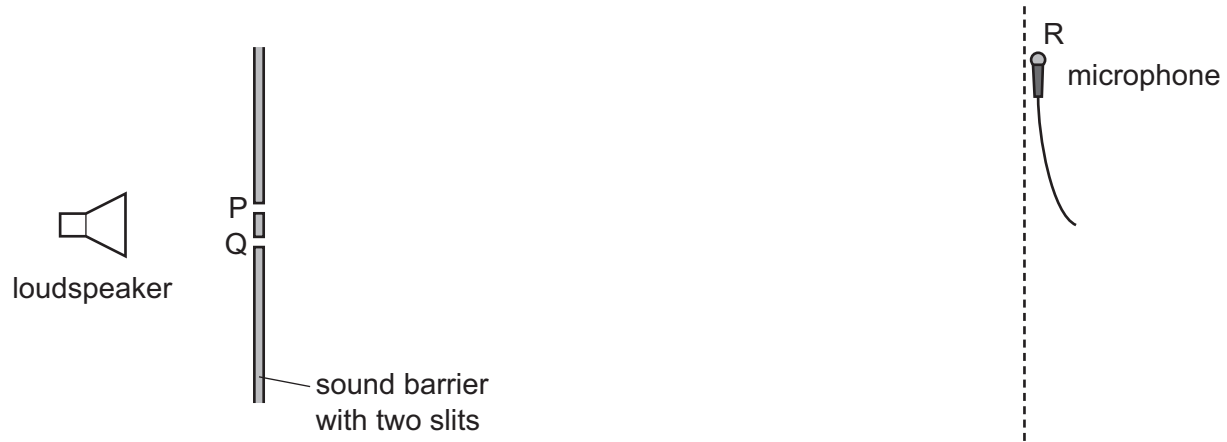**27** Sound waves of wavelength λ are emitted by a loudspeaker and pass through two slits P and Q. Two sound waves from the slits meet at R.

What is the condition for an intensity maximum (loud sound) to be detected by a microphone at R?

A The amplitudes of the two waves at R must be the same.

B The distance PQ must be smaller than the wavelength λ.

C The two waves from the slits must have travelled the same distance to R.

D The two waves must be in phase at R.