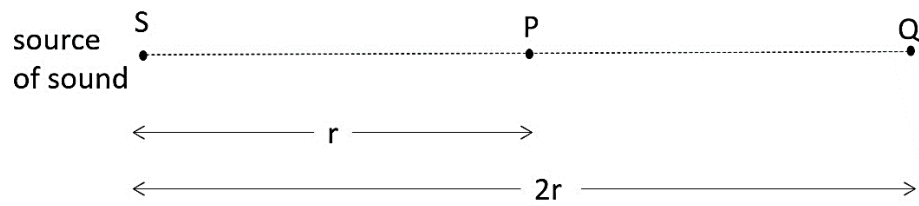


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A point source of sound is placed at point S.



The air molecules at P, a distance r from S, oscillate with an amplitude of $8.0\ \mu\text{m}$. Point Q is situated at a distance $2r$ from S.

What is the amplitude of oscillation of air molecules at point Q?

A

$1.4\ \mu\text{m}$

B

$2.0\ \mu\text{m}$

C

$2.8\ \mu\text{m}$

D

$4.0\ \mu\text{m}$