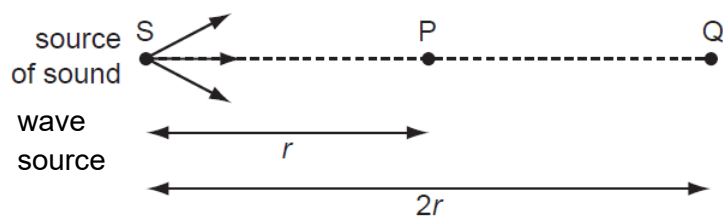


- 16** The intensity I of a sound at a point P is inversely proportional to the square of the distance r of P from the source of the sound.



At point Q, distance $2r$ from source S, air molecules oscillate with amplitude $6.0\ \mu\text{m}$. Point P is at distance r from S.

What is the amplitude of oscillation of air molecules at P?

- A** $0.75\ \mu\text{m}$
- B** $1.5\ \mu\text{m}$
- C** $3.0\ \mu\text{m}$
- D** $12.0\ \mu\text{m}$

