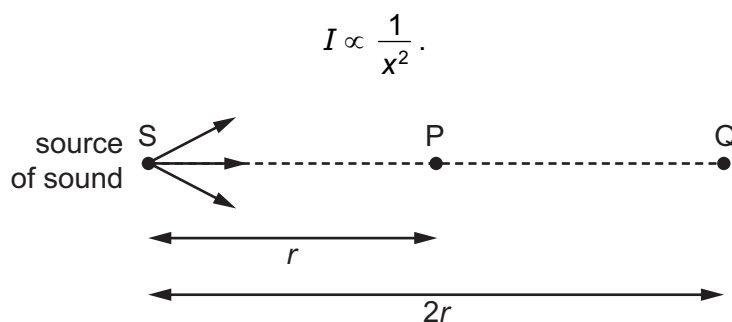


- 25** The intensity I of sound is inversely proportional to the square of the distance x from the source of the sound. This can be represented as

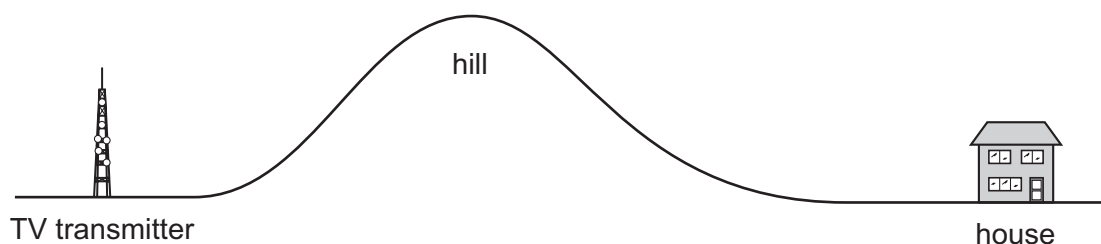


Air molecules at point P, a distance r from the source S, oscillate with amplitude $8.0\ \mu\text{m}$.

Point Q is situated a distance $2r$ from S.

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

- A** $1.4\ \mu\text{m}$ **B** $2.0\ \mu\text{m}$ **C** $2.8\ \mu\text{m}$ **D** $4.0\ \mu\text{m}$
- 26** A hill separates a television (TV) transmitter from a house. The transmitter cannot be seen from the house. However, the house has good TV reception.



By which wave effect at the hill could the TV signal reach the house?

- A** coherence
B diffraction
C interference
D reflection