

- 15** A point source of sound emits energy equally in all directions at a constant rate and a detector placed 2.0 m from the source measures an intensity of 3.0 W m^{-2} . The amplitude of the wave at the source is then doubled.

What intensity would the detector measure if it is now placed at a distance 4.0 m from the source?

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|----------------------------------|----------------------------------|
| A 3.0 W m^{-2} | B 1.5 W m^{-2} |
| C 0.75 W m^{-2} | D 0.38 W m^{-2} |

