29 A health inspector is measuring the intensity of a sound. Near a loudspeaker, his meter records an intensity I. This corresponds to an amplitude A of the sound wave. At another position, the meter gives an intensity reading of $2I$.

What is the corresponding amplitude of the sound wave?

A $\dfrac{A}{\sqrt{2}}$ **B** $\sqrt{2}A$ **C** $2A$ **D** $4A$

Space for working