

**21** A progressive sound wave is a means of transferring energy.

A progressive sound wave of constant frequency is generated in air. The intensity of energy transfer is directly proportional to another of the wave parameters.

Which of the following is correct?

**A**  $\text{intensity} \propto (\text{amplitude})^2$

**B**  $\text{intensity} \propto (\text{periodic time})^2$

**C**  $\text{intensity} \propto (\text{speed})^2$

**D**  $\text{intensity} \propto (\text{wavelength})^2$