

- 23** The diagram illustrates the position of particles in a progressive sound wave at one instant in time.



The speed of the wave is  $v$ . P and Q are two points in the wave a distance  $L$  apart.

What is an expression for the frequency of the wave?

**A**  $\frac{v}{2L}$

**B**  $\frac{v}{L}$

**C**  $\frac{2v}{L}$

**D**  $\frac{L}{v}$