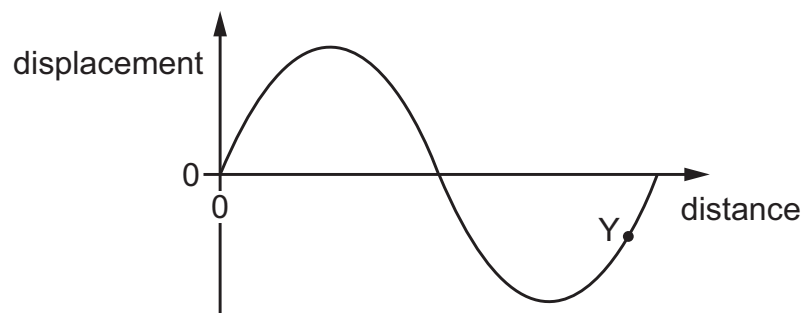


24 Which row is correct for sound waves?

	can travel in a vacuum	can be polarised	can diffract through a gap
A	no	no	yes
B	yes	no	no
C	no	yes	no
D	no	yes	yes

25 A source emits a progressive sound wave in the horizontal direction. The wave travels away from the source in a direction towards the right.

The graph shows the variation of the displacement of the particles from their equilibrium positions with distance from the source at a particular instant in time. Displacements to the right of the equilibrium positions are shown as positive.



Position Y represents the displacement of a particle in the sound wave at a particular distance from the source at this instant.

Which statement about the motion of this particle is correct?

- A** The particle is moving away from the source.
- B** The particle is moving towards the source.
- C** The particle is moving upwards.
- D** The particle is moving downwards.

24 Which row describes a progressive longitudinal wave?

	transfers energy in a direction parallel to the oscillations	requires a medium to travel through	always travels at the same speed
A	false	false	true
B	false	true	true
C	true	false	false
D	true	true	false

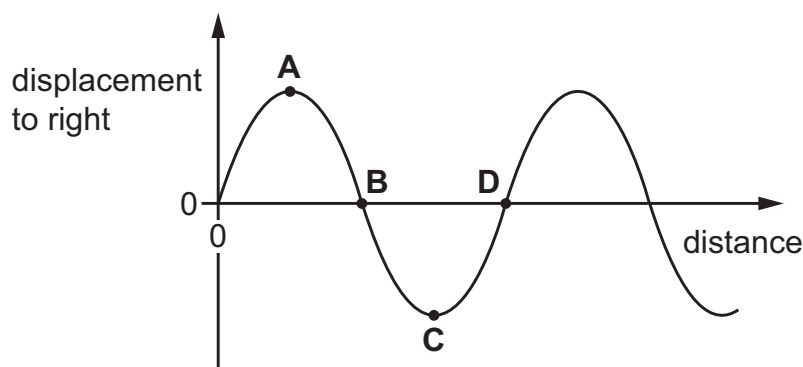
25 Which statement about longitudinal and transverse wave motion for a progressive wave is correct?

- A** All transverse and longitudinal waves require a medium for propagation.
- B** All transverse waves travel at the same speed, but longitudinal waves can travel at different speeds.
- C** In both transverse waves and longitudinal waves, a particle with zero displacement has a maximum speed.
- D** In a longitudinal wave there is a net movement of particles in the direction of travel of the wave, but there is no net movement of particles in a transverse wave.

25 A sound wave travels from the left to the right.

The graph shows the variation of the displacement to the right of particles in the sound wave with distance, at one instant.

Which letter represents the centre of a compression?

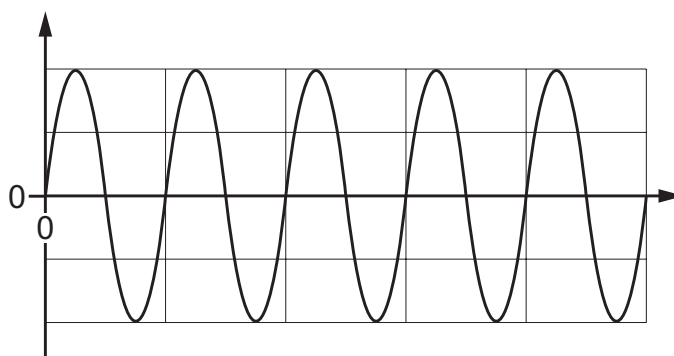


28 Which statement compares the behaviour of transverse and longitudinal waves?

- A** Only longitudinal waves can be diffracted.
- B** Only longitudinal waves can travel in free space.
- C** Only transverse waves can be coherent.
- D** Only transverse waves can be polarised.

21 A progressive longitudinal wave is travelling horizontally from left to right.

A graphical representation of the wave at one instant in time is shown.



Which row could give the correct labels for the x-axis and y-axis of this graph?

	x-axis	y-axis
A	distance	displacement of particles to the right
B	distance	displacement of particles upwards
C	time	displacement of particles to the right
D	time	displacement of particles upwards