

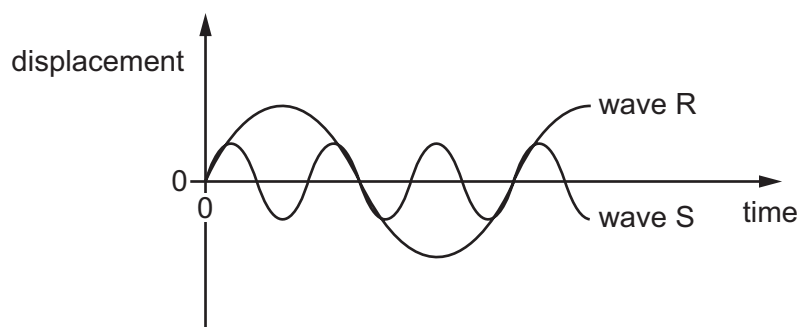
22 What is the relationship between the amplitude of a wave and its intensity?

- A** amplitude \propto intensity
- B** amplitude \propto (intensity)²
- C** amplitude $\propto \sqrt{\text{intensity}}$
- D** (amplitude)² $\propto \sqrt{\text{intensity}}$

23 Which statement about light waves and sound waves is correct?

- A** Both light waves and sound waves show the Doppler effect.
- B** Light waves can be diffracted but sound waves cannot be diffracted.
- C** Sound waves are transverse waves and light waves are longitudinal waves.
- D** Sound waves can travel in a vacuum but light waves cannot travel in a vacuum.

24 The diagram shows two waves R and S.



Wave R has an amplitude of 8 cm and a period of 30 ms.

What are the amplitude and the period of wave S?

	amplitude / cm	period / ms
A	2	10
B	2	90
C	4	10
D	4	90