

**24** Polarisation is associated with certain waves.

Which waves **cannot** be polarised?

- A** radio waves from a transmitter
- B** sound waves from a moving source
- C** ultraviolet rays from the Sun
- D** X-rays from an X-ray emitter

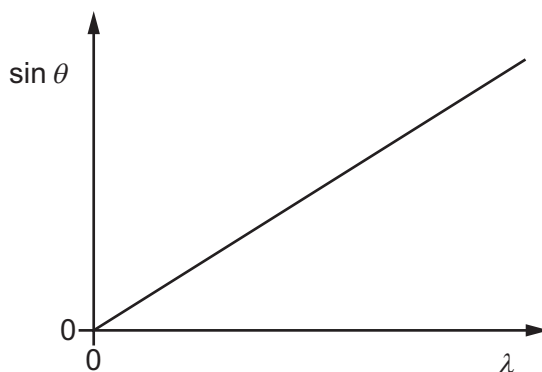
**25** A guitar string is plucked.

Which statement describes the resulting waves?

- A** Longitudinal waves on the string cause longitudinal waves in the air.
- B** Longitudinal waves on the string cause transverse waves in the air.
- C** Transverse waves on the string cause longitudinal waves in the air.
- D** Transverse waves on the string cause transverse waves in the air.

**26** A diffraction grating with  $N$  lines per metre is used to diffract light of various wavelengths  $\lambda$ .

The graph shows the relation between the diffraction angle  $\theta$  and  $\lambda$  for different wavelengths in the  $n^{\text{th}}$  order interference pattern.



What is the gradient of the graph?

- A**  $Nn$
- B**  $\frac{N}{n}$
- C**  $\frac{n}{N}$
- D**  $\frac{1}{Nn}$

**27** A stationary sound wave is formed in the air column inside a tube that is open at both ends.

The stationary wave has three nodes.

How many antinodes does it have?

- A** 1
- B** 2
- C** 3
- D** 4