27 The table contains statements about stationary and progressive waves.

Which row is correct?

	stationary wave	progressive wave
A	all particles vibrate with the same amplitude	all particles vibrate with the same amplitude
B	energy is transferred along the wave	energy is transferred along the wave
C	particles in adjacent loops vibrate in antiphase	particles vibrate in phase with their immediate neighbours
D	particles one wavelength apart vibrate in phase	particles one wavelength apart vibrate in phase

28 Which electromagnetic wave would cause the most significant diffraction effect for an atomic lattice of spacing around 10^{-10} m?

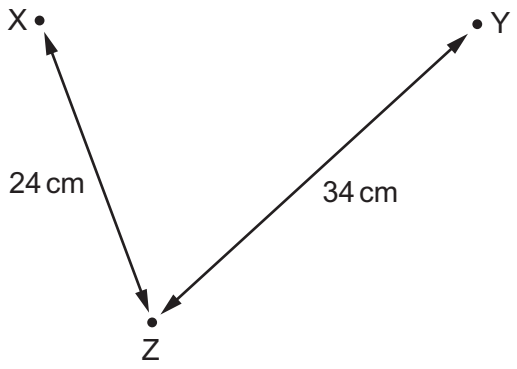
A infra-red

B microwave

C ultraviolet

D X-ray

29 Wave generators at points X and Y produce water waves of the same wavelength. At point Z, the waves from X have the same amplitude as the waves from Y. Distances XZ and YZ are as shown.



When the wave generators operate in phase, the amplitude of oscillation at Z is zero.

What could be the wavelength of the waves?

A 2 cm **B** 3 cm **C** 4 cm **D** 6 cm