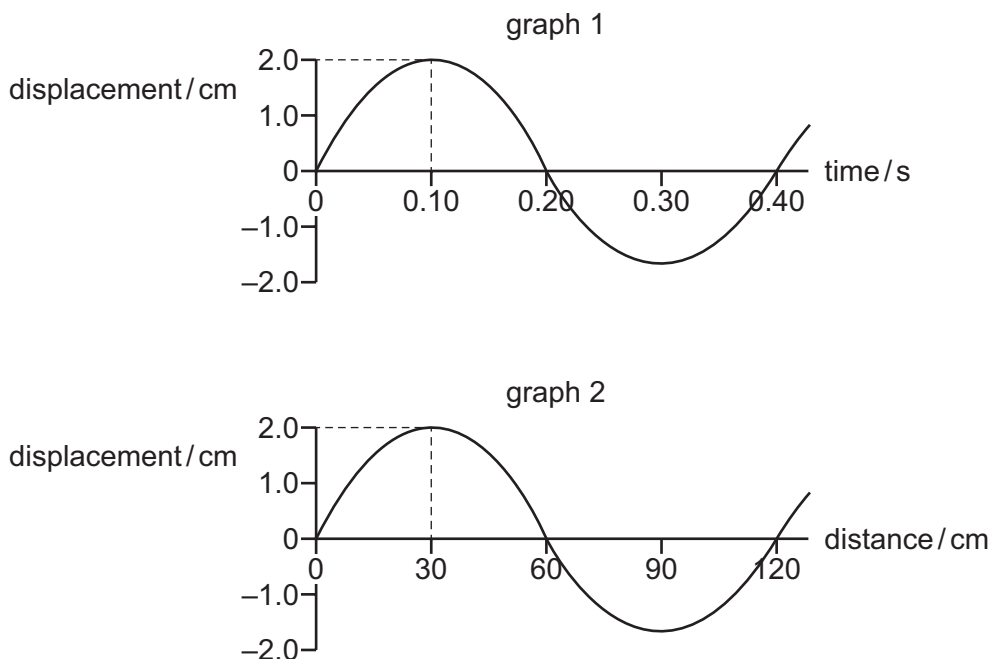


- 21** Graph 1 shows the variation with time of displacement at a fixed distance along a progressive wave.

Graph 2 represents the same wave and shows the variation with distance of displacement at an instant in time.



What is the speed of the wave?

- A** 5.0 cm s^{-1} **B** 48 cm s^{-1} **C** 150 cm s^{-1} **D** 300 cm s^{-1}
- 22** A vehicle moves with constant velocity along a road directly towards an observer. The observed frequency of the sound from the vehicle changes as the vehicle moves past the observer.

Which phenomenon explains the change in frequency?

- A** diffraction
B interference
C polarisation
D the Doppler effect

- 23** An electromagnetic wave has a wavelength of 2.1 cm in a vacuum.

Which region of the electromagnetic spectrum contains this wave?

- A** infrared
B microwave
C radio wave
D visible light