Grade 8

Physics

Chapter 14

PROPERTIES OF WAVES

The Wave Equation

The speed of a wave (*v)* is related to the frequency (*f*) and
wavelength (λ) by the equation:

$$wave\ speed\ =\ frequency\ \times\ wavelength$$

$$v\ =\ f \times \lambda$$

ASSIGNMENT 1

Solve the following:

Q1: If 10 waves pass a point each second and their
wavelength is 30m, what is their speed?

Q2: light waves of frequency 6×10^{14} Hz have a
wavelength of 3.75×10^{-7}m in water. what is their speed
in water?

Q3: The speed of sound is 330 m/s .If it has a frequency
of 220 Hz, what is its wavelength?

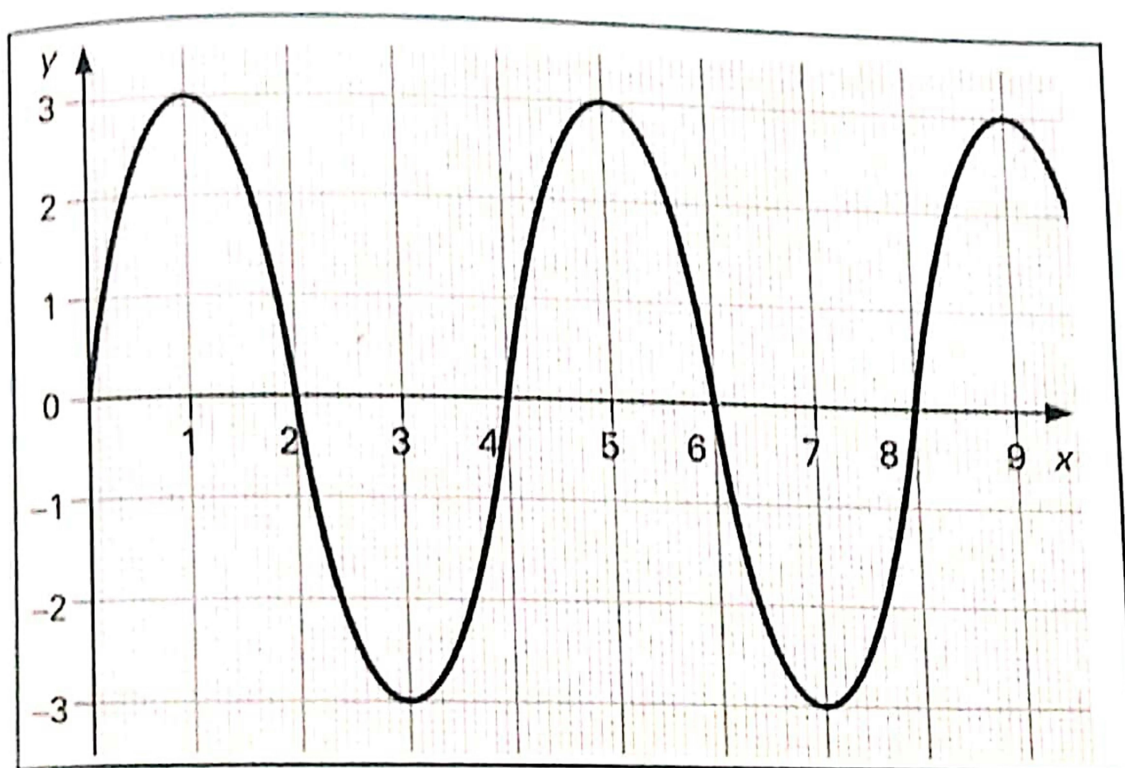**Q4:**

14.1 Look at the wave shown in Figure 14.15.

Figure 14.15 For Question **14.1**. The horizontal and vertical scales are in cm.

a What is its wavelength? [1]

b What is its amplitude? [1]

c If this wave is moving at a speed of 10 cm/s, what is its frequency? [3]