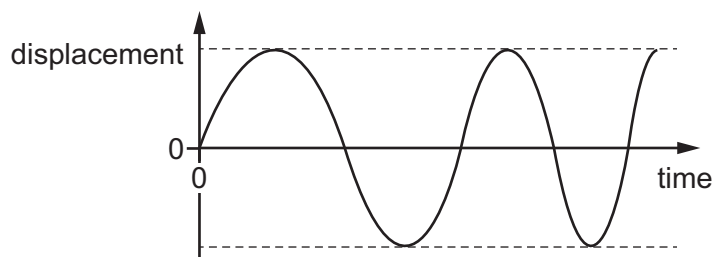
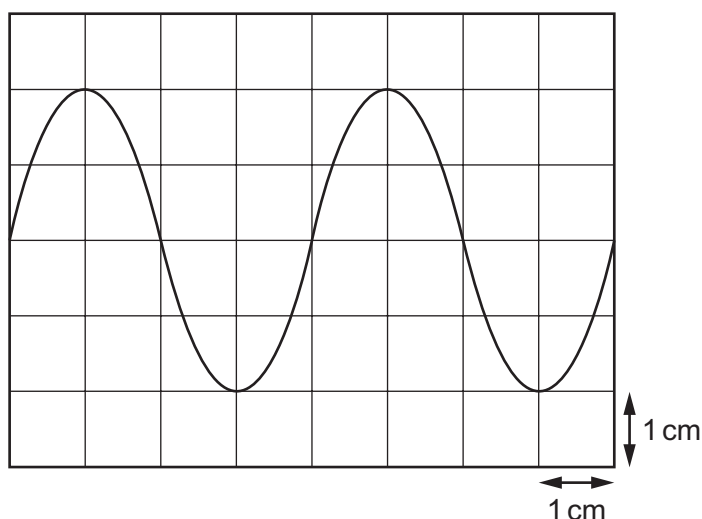


- 23 The displacement–time graph for an air particle in the path of a sound wave is shown.



Which property of the sound wave must be increasing?

- A amplitude
  - B frequency
  - C period
  - D speed
- 24 A sound wave is displayed on the screen of a cathode-ray oscilloscope (CRO) as shown.



The time-base of the CRO is set at  $2.5 \text{ ms cm}^{-1}$ .

What is the frequency of the sound wave?

- A 50 Hz
  - B 100 Hz
  - C 200 Hz
  - D 400 Hz
- 25 The horn of a train emits sound of frequency  $f_1$ . While the horn is sounding, the train moves directly towards a stationary person. The speed of the train is  $0.20v$ , where  $v$  is the speed of sound.

The frequency of the sound heard by the person is  $f_2$ .

What is the ratio  $\frac{f_1}{f_2}$ ?

- A  $\frac{0.80}{1}$
- B  $\frac{1}{1.2}$
- C  $\frac{1.2}{1}$
- D  $\frac{1}{0.80}$