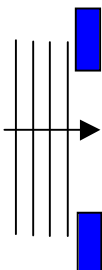


Support Worksheet – Topic 4, Worksheet 3

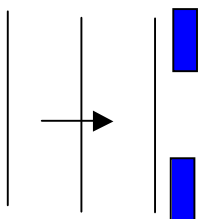
1 Complete the diagrams below.

a



[2]

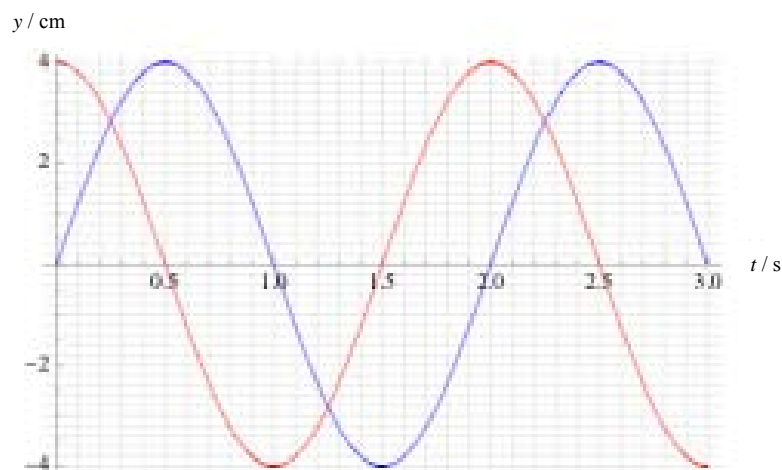
b



[2]

- 2 Describe what is meant by **wave interference**. [2]
- 3 Two coherent sources of sound emit identical waves of wavelength 0.20 m. The waves are observed at a point P whose distance from each of the sources is 3.12 m and 3.52 m. Explain what will be observed at P. [2]
- 4 Two coherent sources of sound emit identical waves of wavelength 0.20 m. The waves are observed at a point Q whose distance from each of the sources is 3.10 m and 3.40 m. Explain what will be observed at Q. [2]
- 5 Two coherent sources of sound emit identical waves. The waves arriving at a point R have a phase difference between them of π . Explain what will be observed at R. [1]

- 6 Two waves (shown in red and blue) arrive at the same point in space. The graphs show the variation of the displacement of each wave with time.



- a State the amplitude of the resulting wave. [1]
- b State one time at which the resulting displacement is zero. [1]