

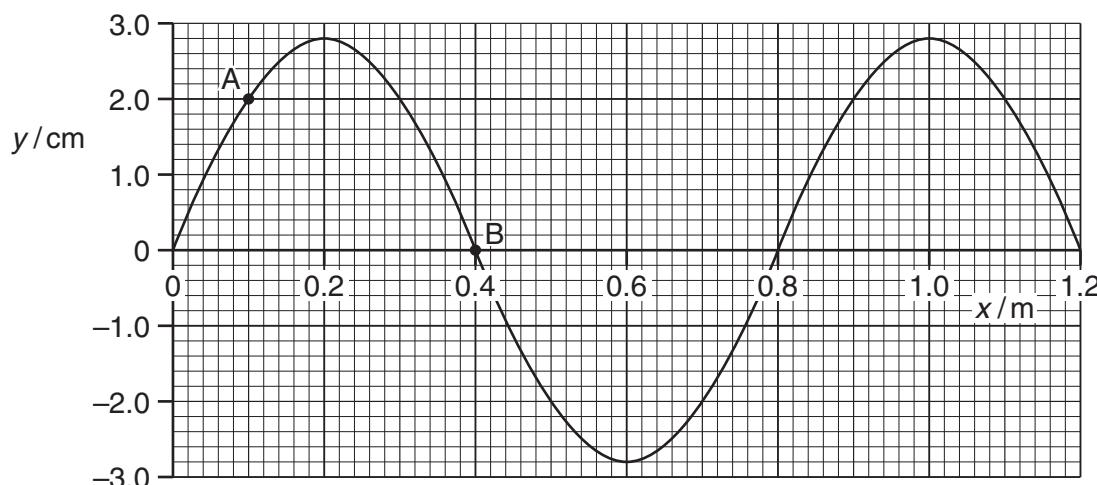
- 5 (a) By reference to vibrations of the points on a wave and to its direction of energy transfer, distinguish between transverse waves and longitudinal waves.

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 .....  
 .....  
 .....  
 ..... [2]

- (b) Describe what is meant by a *polarised* wave.

.....  
 .....  
 ..... [2]

- (c) The variation with distance  $x$  of the displacement  $y$  of a transverse wave is shown in Fig. 5.1.



**Fig. 5.1**

- (i) Use Fig. 5.1 to determine

1. the amplitude of the wave,

amplitude = ..... cm [1]

2. the phase difference between the points labelled A and B.

phase difference = ..... [2]

- (ii) Determine the amplitude of a wave with twice the intensity of that shown in Fig. 5.1.

amplitude = ..... cm [1]