Waves – 2019 June

1. 0625/42/M/J/19/No.6

(a) Fig. 6.1 shows a water wave in a ripple tank.

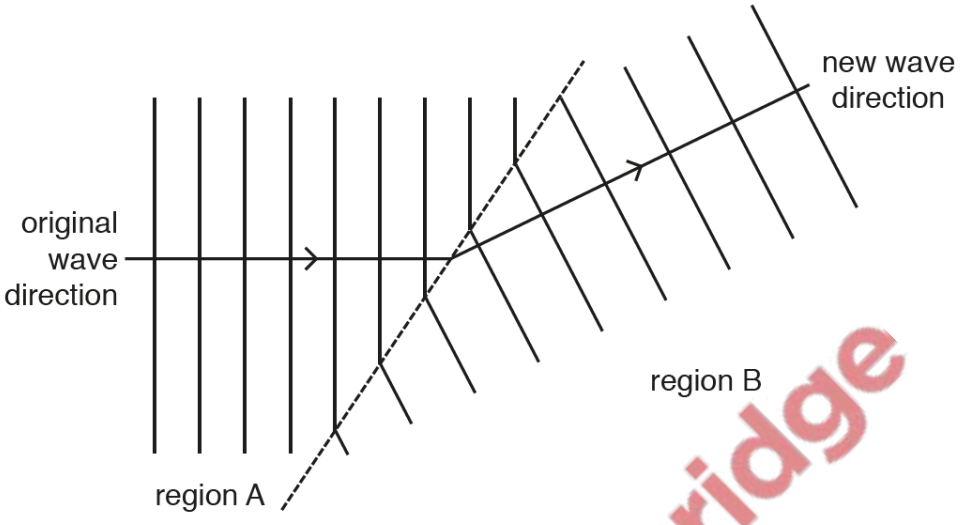


Fig. 6.1

(i) State the name of the process that occurs as the wave moves from region A to region B.

..... [1]

(ii) Suggest a cause for the change in direction of the wave.

..... [1]

(b) Fig. 6.2 shows a transverse wave.

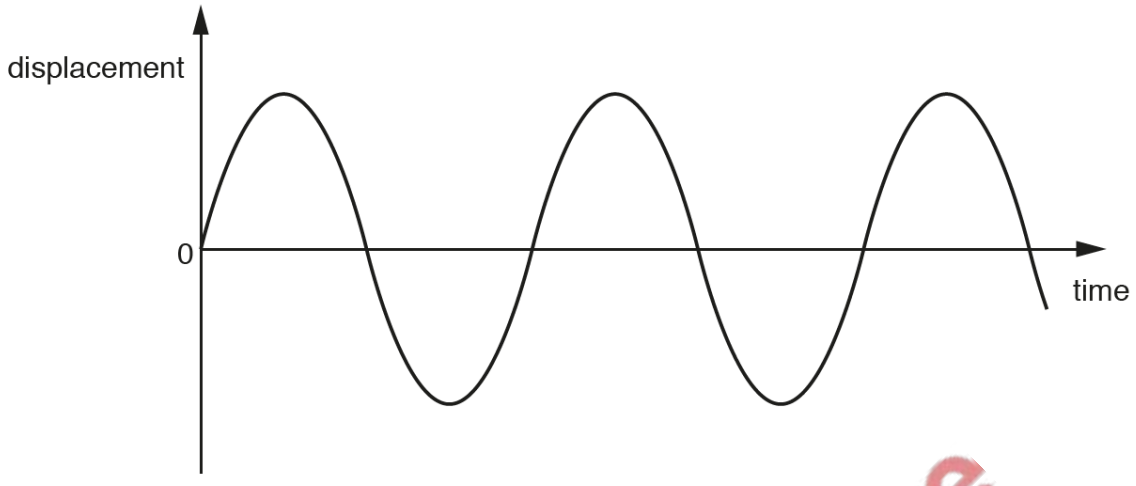


Fig. 6.2

On Fig. 6.2, draw a wave which has half the amplitude and a greater frequency than the wave shown. [2]

(c) A train travels along steel rails. A person waiting at a station hears the sound of the train through the rails before he hears the sound through the air.

(i) Explain why this happens.

.....

..... [1]

(ii) The speed of sound in the rails is 5800 m / s.

Calculate the wavelength of sound of frequency 1100 Hz travelling at this speed.

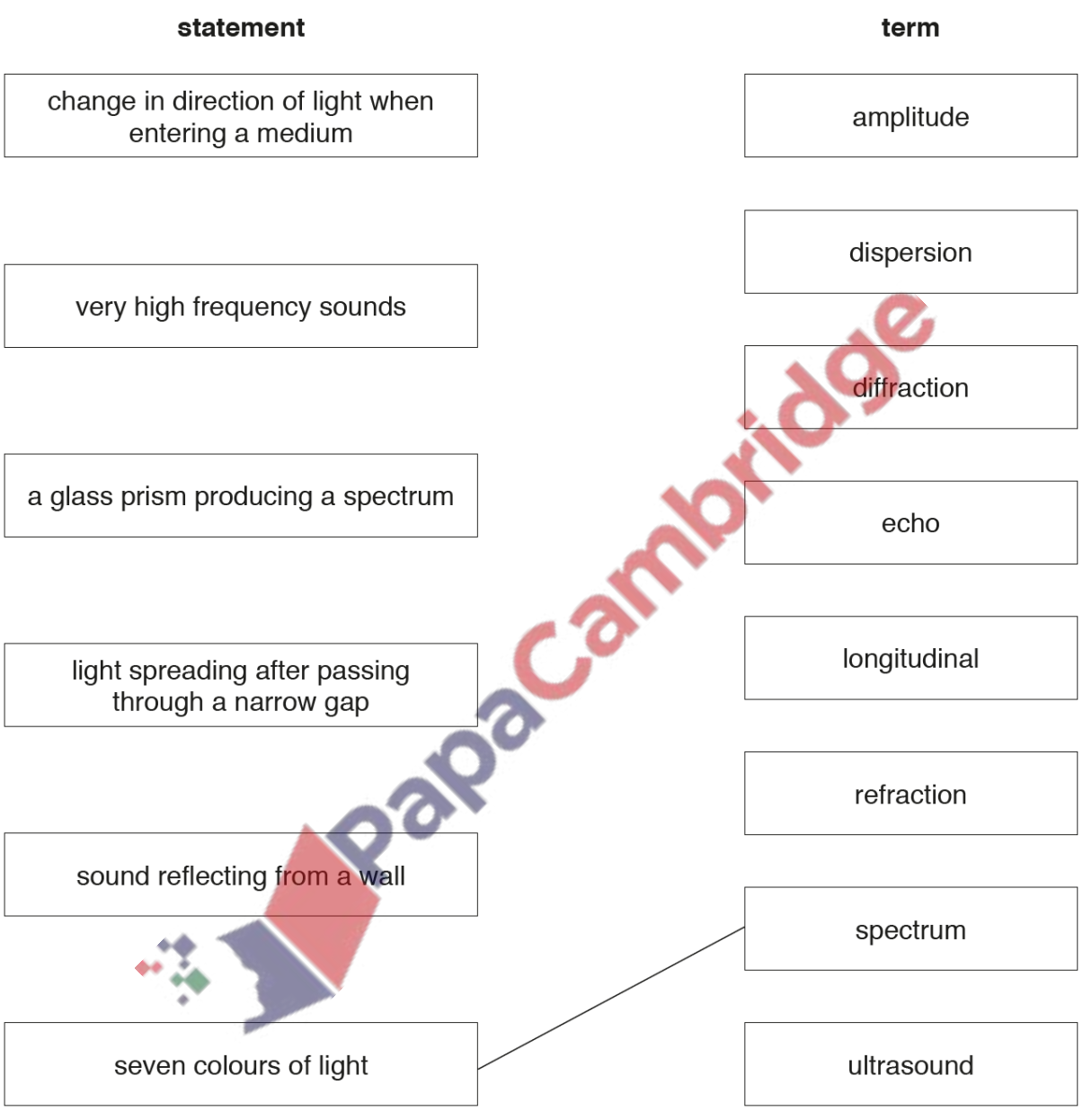
wavelength = ... [2]

[Total: 7]

2. 0625/32/F/M/19/No.7

Light and sound both travel as waves.

Draw a line from each statement to the correct term that describes it. One has been done for you.



[5]

[Total: 5]