

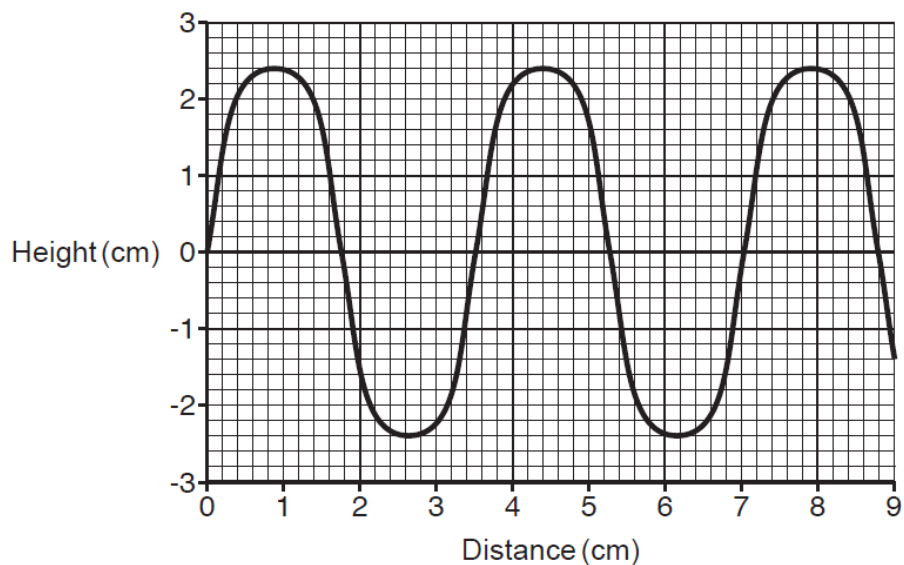
GCSE Physics A (Gateway)

J249/02 Physics A P5-P8 and P9 (Foundation Tier)

Question Set 1

1

Look at the diagram of a water wave.



(a) (i) What is the **wavelength** of this wave?

[1]

(ii) What is the **amplitude** of this wave?

[1]

(iii) The wavelength of the wave is changed to 25 cm. Two waves are produced each second.

Use the equation: Wave speed = Frequency \times Wavelength

Calculate the speed of the wave.

[2]

(b) Water waves are transverse and sound waves are longitudinal.

(i) Describe how water particles move in a **transverse** water wave..

[1]

(ii) Describe how water particles move in a **longitudinal** water wave..

[1]

(c) Look at the diagram of the electromagnetic spectrum.

Radio	Microwave	Infra-red	Visible light	Ultra-violet	X-rays	Gamma-rays
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(i) Name a wave that has a longer wavelength than red light.

[1]

(ii) Name a wave that has a higher frequency than violet light.

[1]

(iii) State two **uses** of gamma-rays.

[2]

Total Marks for Question Set 1: 10

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