Do not write outside the box

1 Waves can be either transverse or longitudinal.

1 (a) (i) Describe the difference between longitudinal waves and transverse waves. **[3 marks]**

……

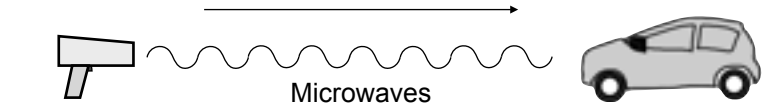
……

……

……

……

1 (a) (ii) A speed gun is used to measure the speed of a moving car. The gun emits microwaves which are reflected off the car. Data about the microwaves are used to calculate the speed of the car.



Speed gun

The wavelength of the microwaves = 0.0125 m

Speed of microwaves = 300 000 000 m/s

Calculate the frequency of the microwaves.

Use the correct equation from the equation sheet.

Give the correct units. **[2 marks]**

……

……

Frequency = ……

1 (b) Calculate the wavelength of a radio wave travelling at 300 000 000 m/s and has frequency of 200 kHz.

Use the correct equation from the equation sheet to help you. **[2 marks]**

……

……

Wavelength = …… m

(Total 7 marks)

End