

- 5 A student uses a dog whistle to produce a high frequency sound wave that cannot be heard by humans.

(a) State the frequency range for human hearing.

(2)

(b) The student uses an oscilloscope to display the sound wave.

- (i) Name the other piece of apparatus the student would need in order to display the sound wave.

(1)

- (ii) Describe how the student should use the apparatus to determine the frequency of the sound.

(3)

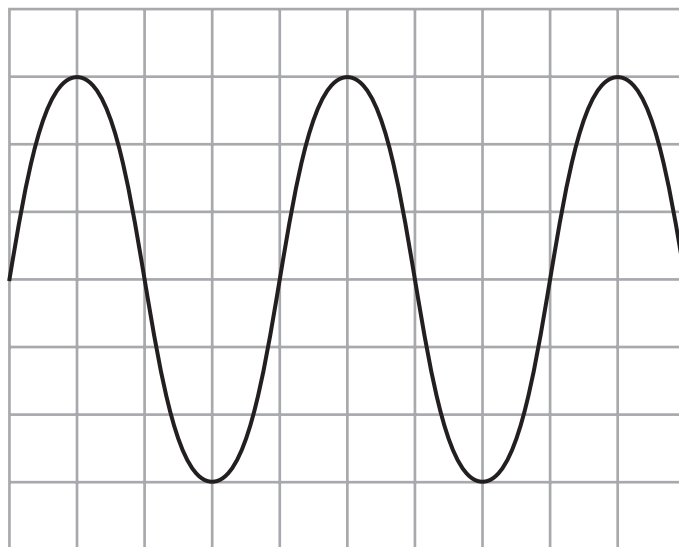
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(iii) The student obtains this trace on the oscilloscope.



On the grid, draw a trace of a quieter sound with double the frequency.

(2)

**(Total for Question 5 = 8 marks)**

