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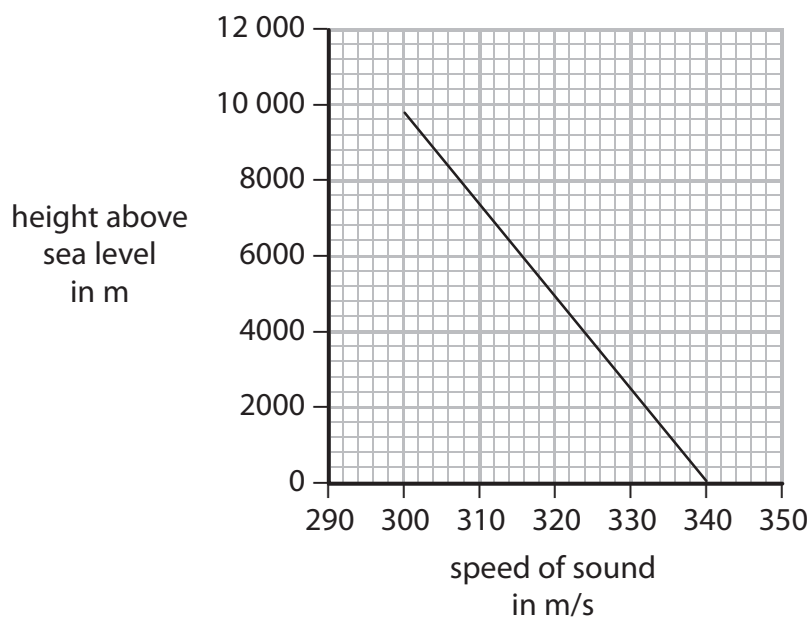
(b)

(5)

[illegible]

- (c) The speed of sound in air is different for different heights above sea level.

The graph shows how the speed of sound varies with height.



- (i) Use the graph to estimate the speed of sound in air 6000 m above sea level.

(1)

Speed = ..... m/s

- (ii) Describe the pattern shown by the graph.

(2)

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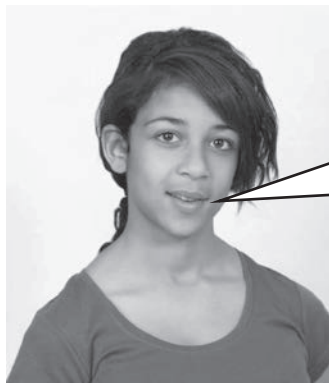
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(iii) Some aeroplanes can travel faster than the speed of sound.

When an aeroplane travels faster than the speed of sound it causes a shock wave.  
People on the ground hear this shock wave as a sonic boom.

A student says



It is easier for an aeroplane to make a sonic boom when it travels higher up.

Do you agree with the student?

Explain why.

(2)

(Total for Question 9 = 11 marks)

