

GCSE Physics B (Twenty First Century Science)
J259/01 Breadth in Physics (Foundation Tier)

Question Set 36

1

Amaya and Li measure the speed of sound in air:

- Amaya stands 30 m away from Li;
- Amaya claps her hands;
- Li starts a timer when he sees the clap;
- Li stops the timer when he hears the sound.

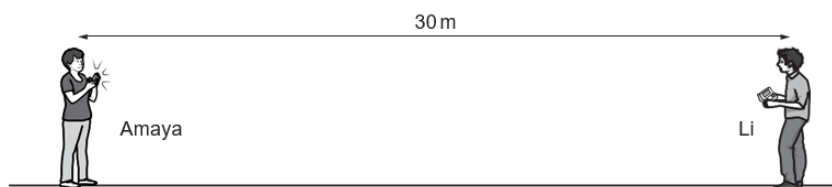


Table 9.1 shows their results.

Attempt	Time (s)	Calculated speed (m/s)
1	0.32	94
2	0.44	68
3	0.37	81
4	0.49	61
5	0.40	

Table 9.1

(a) Calculate the speed of sound for Attempt 5.

Use the equation: speed = distance ÷ time

Speed = m/s

[2]

(b) The expected value for the speed of sound in air is about 300 m/s.

(i) State why the data in Table 9.1 is inaccurate.

[1]

(ii) State why the data in Table 9.1 is imprecise.

[1]

(c) (i) Describe one improvement to the method.

[1]

(ii) State how your improvement in (c)(i) will produce better data.

[1]

Total Marks for Question Set 36: 6

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