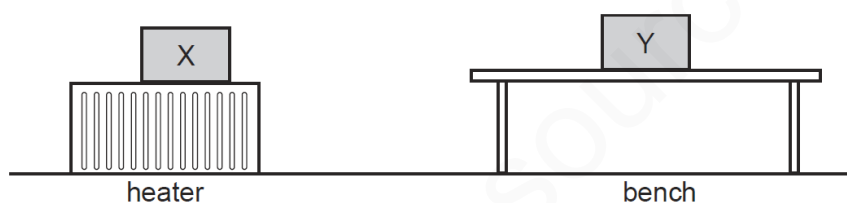


## AVERAGE SPEED-SET-1-QP

- 1 A tunnel has a length of 50 km. A car takes 20 min to travel between the two ends of the tunnel.
- What is the average speed of the car?
- A 2.5 km/h
  - B 16.6 km/h
  - C 150 km/h
  - D 1000 km/h

- 2 Two metal boxes containing air are standing in a room. Box X is on top of a heater. Box Y is on a bench. The boxes are left for a long time.

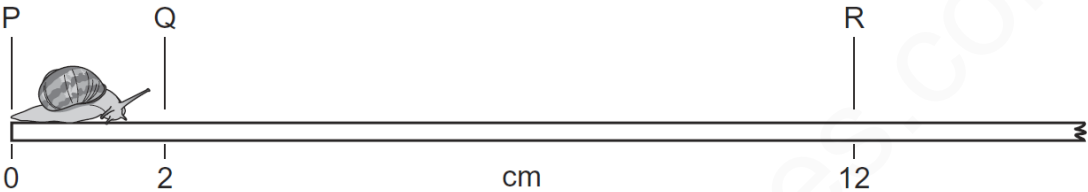


Which line in the table best describes the average speed of the molecules in the containers?

	box X	box Y
A	fast	zero
B	fast	slow
C	slow	fast
D	zero	fast

- 3 The circuit of a motor racing track is 3 km in length. In a race, a car goes 25 times round the circuit in 30 minutes.
- What is the average speed of the car?

- A 75 km/hour
- B 90 km/hour
- C 150 km/hour
- D 750 km/hour

4	<p>A car travels 100 km. The highest speed of the car is 90 km/h, and the lowest speed is 30 km/h. The journey takes two hours.</p> <p>What is the average speed for the journey?</p> <p><b>A</b> 30 km/h      <b>B</b> 50 km/h      <b>C</b> 60 km/h      <b>D</b> 90 km/h</p>
5	<p>A snail moves along a ruler. It takes 20 s to move from Q to R.</p>  <p>What is its average speed from Q to R?</p> <p><b>A</b> <math>\frac{12}{20}</math> cm/s</p> <p><b>B</b> <math>\frac{12-2}{20}</math> cm/s</p> <p><b>C</b> <math>\frac{20}{12}</math> cm/s</p> <p><b>D</b> <math>\frac{20}{12-2}</math> cm/s</p>
6	<p>In a race, a car travels 60 times around a 3.6 km track. This takes 2.4 hours.</p> <p>What is the average speed of the car?</p> <p><b>A</b> 1.5 km/h      <b>B</b> 90 km/h      <b>C</b> 144 km/h      <b>D</b> 216 km/h</p>

7

A car travels at various speeds during a short journey.

The table shows the distances travelled and the times taken during each of four stages P, Q, R and S.

stage	P	Q	R	S
distance travelled / km	1.8	3.6	2.7	2.7
time taken / minutes	2	2	4	3

During which two stages is the car travelling at the same average speed?

- A** P and Q      **B** P and S      **C** Q and R      **D** R and S

8

A car takes 15 minutes to travel along a road that is 20 km long.

What is the average speed of the car?

- A** 0.75 km/h      **B** 5.0 km/h      **C** 80 km/h      **D** 300 km/h

9

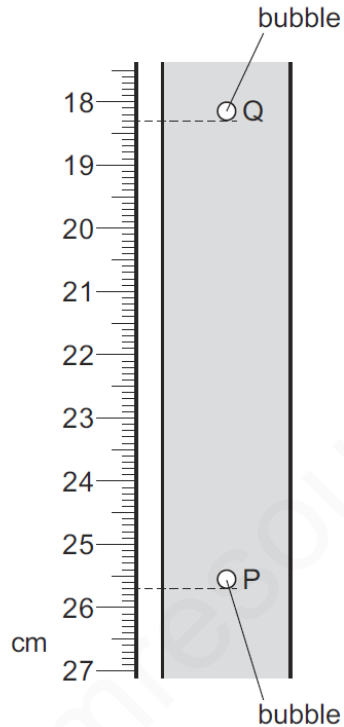
A car travels 100 km. The journey takes two hours. The highest speed of the car is 80 km/h, and the lowest speed is 40 km/h.

What is the average speed for the journey?

- A** 40 km/h      **B** 50 km/h      **C** 60 km/h      **D** 120 km/h

10

A student determines the average speed of a bubble rising through a liquid at constant speed. When the student starts the stopwatch the bubble is at position P. After 2.0 s the bubble is at position Q.



What is the speed of the bubble between P and Q?

- A** 3.2 cm/s      **B** 3.7 cm/s      **C** 6.4 cm/s      **D** 7.4 cm/s

11

A pendulum is swinging. Five students each measure the time it takes to swing through ten complete swings.

Three students measure the time as 17.2 s. Another student measures it as 16.9 s, and the fifth student measures it as 17.0 s.

What is the average period of the pendulum?

- A** 1.69 s      **B** 1.70 s      **C** 1.71 s      **D** 1.72 s