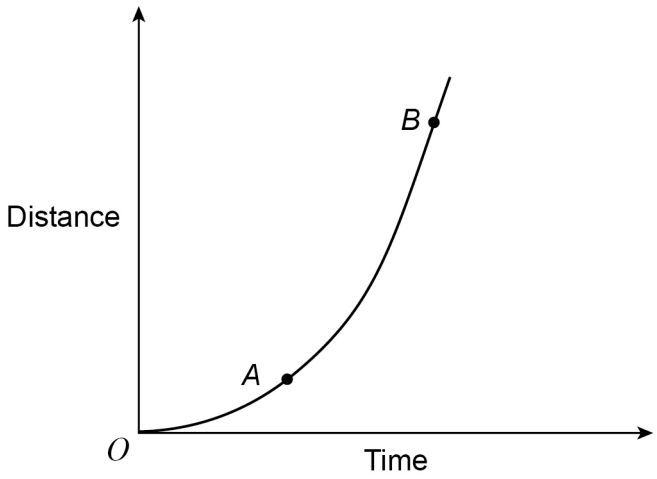
1 Here is a sketch of a distance-time graph.



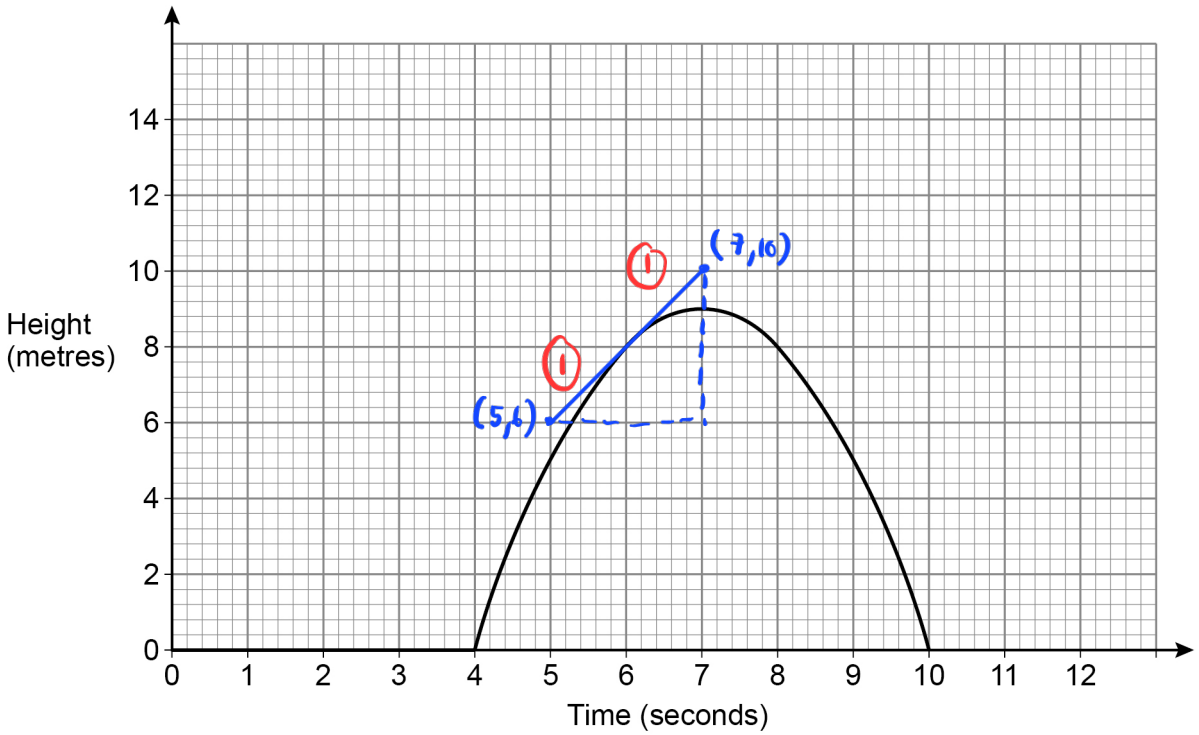
Which of these represents the average speed between *A* and *B*?

Tick **one** box.

[1 mark]

- ☐ The gradient of the tangent at *A*
- ☐ The gradient of the tangent at *B*
- ☑ The gradient of the chord from *A* to *B* (1)
- ☐ The gradient of the chord from *O* to *B*

2 The graph shows the height above ground of a toy rocket for 10 seconds.



2 (a) For how long is the rocket in the air?

Circle your answer.

[1 mark]

10 seconds 9 seconds 6 seconds 4 seconds

2 (b) Using the graph, estimate the speed of the rocket after 6 seconds.

State the units of your answer.

[3 marks]

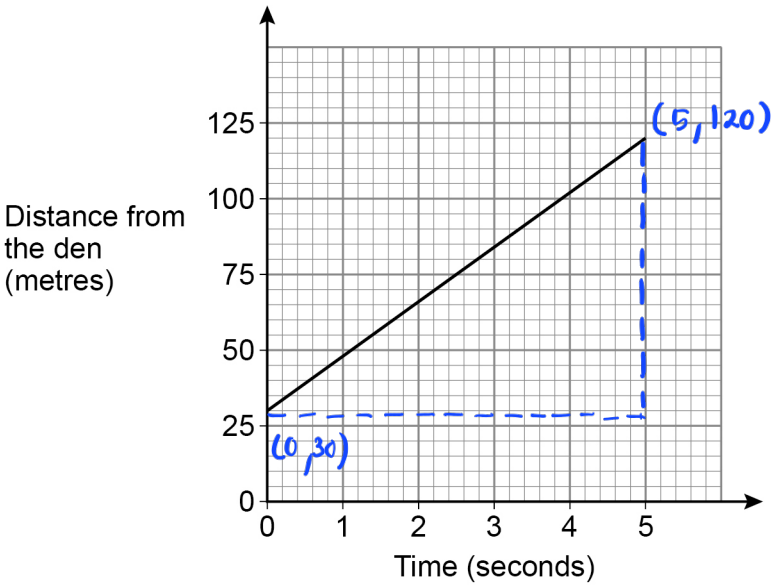
Speed : $\frac{\text{distance}}{\text{time}}$

$= \frac{10-6}{7-5} = \frac{4}{2} = 2\ m/s$

Answer 2 m/s (1)

3 A lion is sprinting in a straight line away from its den.

The graph shows the lion's distance from the den.



Work out the speed of the lion in metres per second.

[3 marks]

Speed = distance / time

= (120 − 30) / 5 ✓0

= 90 / 5 ✓0

= 18 ms^{-1} ✓0

Answer 18 m/s