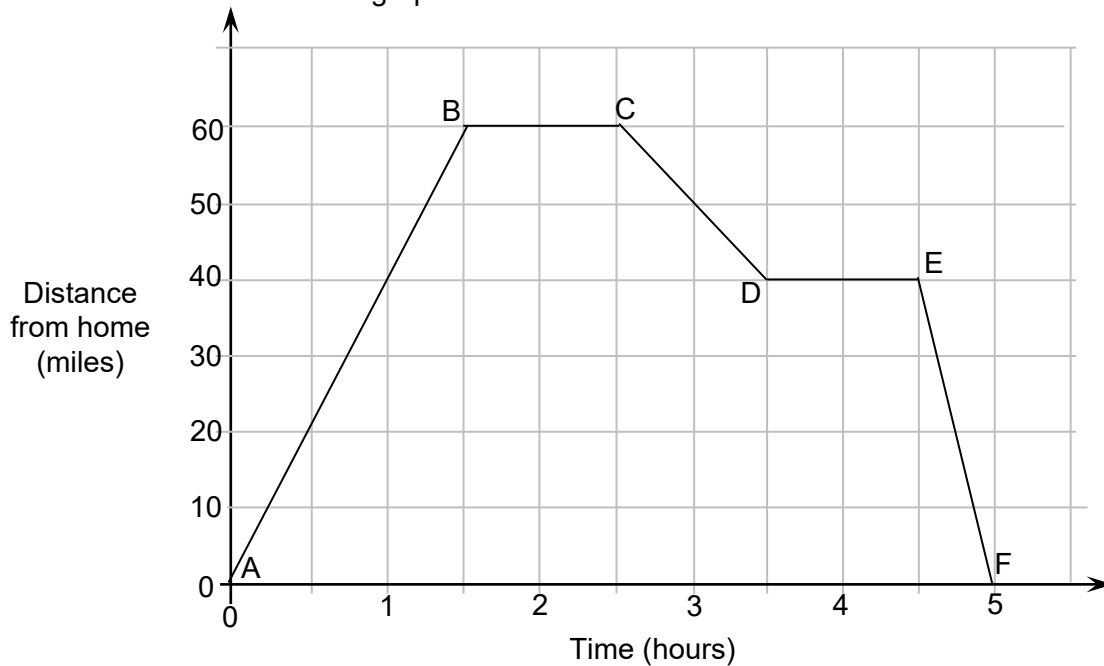


Topic Test 1 (20 minutes)

Pre-calculus and area under a curve - Higher

1 Here is a distance-time graph.



1 (a) Write down the speed between A and B.

[1 mark]

Answer _____ mph

1 (b) Work out the fastest speed travelled.

[1 mark]

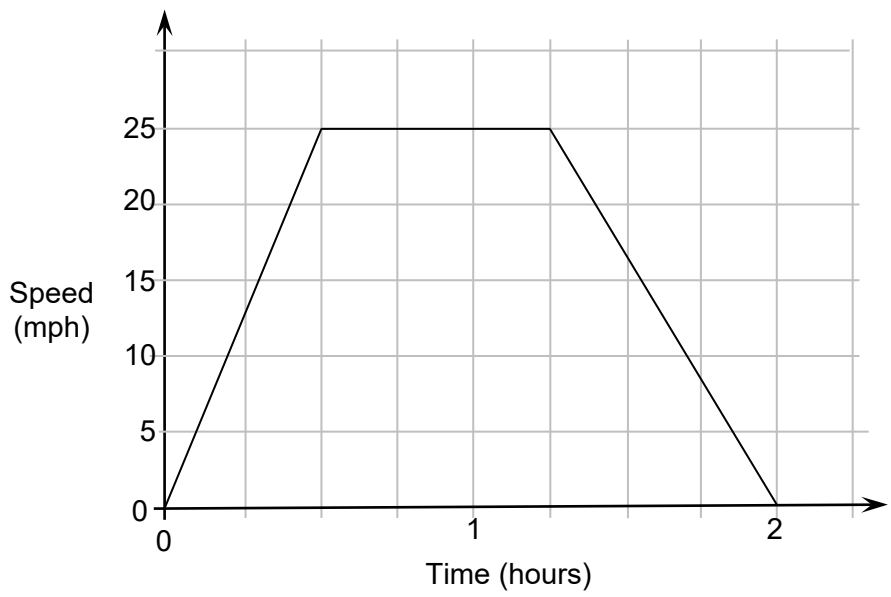
Answer _____ mph

1 (c) Work out the average speed of the whole journey.

[1 mark]

Answer _____ mph

2 The graph shows the speed-time graph for a cycle journey.

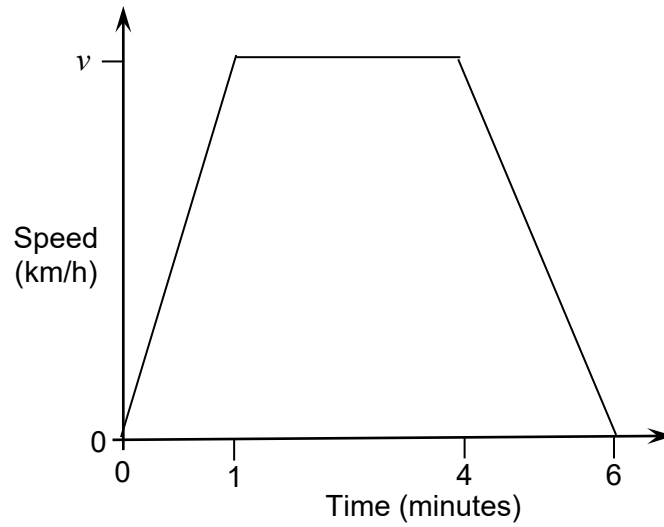


Work out the distance travelled.

[3 marks]

Answer _____ miles

3 The speed-time graph shows a train journey between stations.



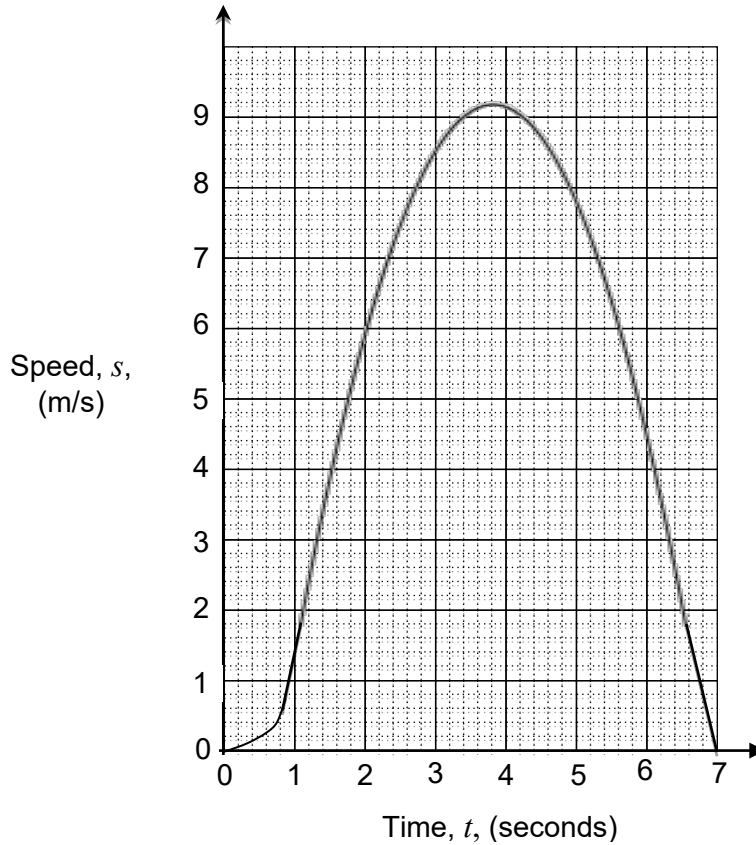
The distance between the stations is 7.5 kilometres.

Work out the value of v .

[4 marks]

Answer _____ km/h

4 Here is a speed-time graph of a firework from lighting to reaching a maximum height.



4 (a) After how many seconds does the firework reach its maximum height?

[1 mark]

Answer _____ seconds

4 (b) Calculate an estimate of the maximum height.

[3 marks]

Answer _____ m

4 (c) Write down the units of the gradient of any point on the graph.

[1 mark]

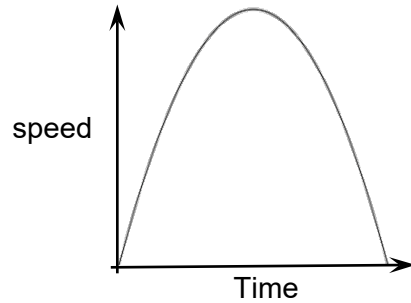
Answer _____

4 (d) Calculate an estimate of the gradient of the graph when $t = 3$

[3 marks]

Answer _____

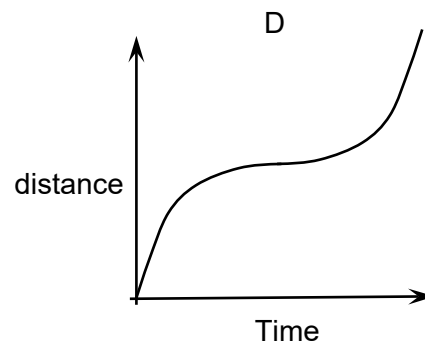
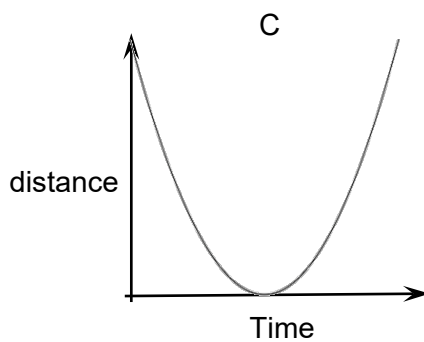
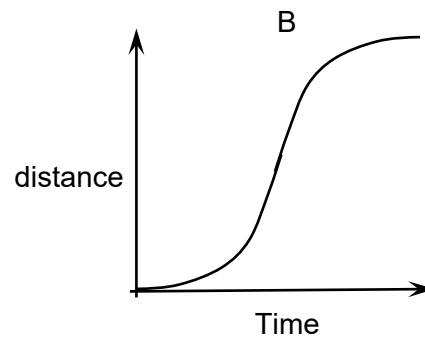
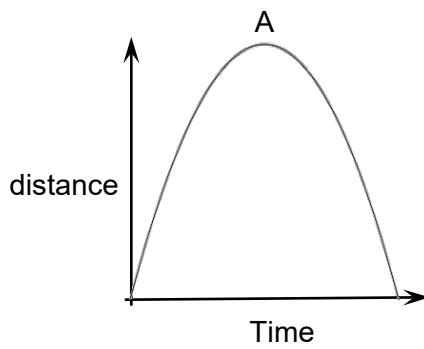
5 Here is a speed-time graph.



5 (a) Which of the following is the distance-time graph for the same journey?

Circle the correct letter.

[1 mark]



5 (b) Which of the following is the acceleration-time graph for the same journey?

Circle the correct letter.

[1 mark]

