1   Here is a graph.

Write down what the gradient of the line represents.

[1 mark]

_____

_____

2   A plumber uses a graph of the line $C = 30h + 20$ to work out the charge, £C for a job that takes h hours.

2 (a)   Write down the gradient of the graph.

[1 mark]

Answer _____

2 (b)   Write down what the gradient of the line represents.

[1 mark]

_____

_____

3 Road signs indicate the gradient of a road as a percentage.

The percentage is worked out as the $\dfrac{\text{Vertical distance}}{\text{Horizontal distance}} \times 100$

3 (a) What gradient is shown on this sign?
Give your answer as a fraction in its lowest terms.

[1 mark]

Answer _____

3 (b) Fill in the percentage figure on this sign for a gradient of $\dfrac{1}{7}$
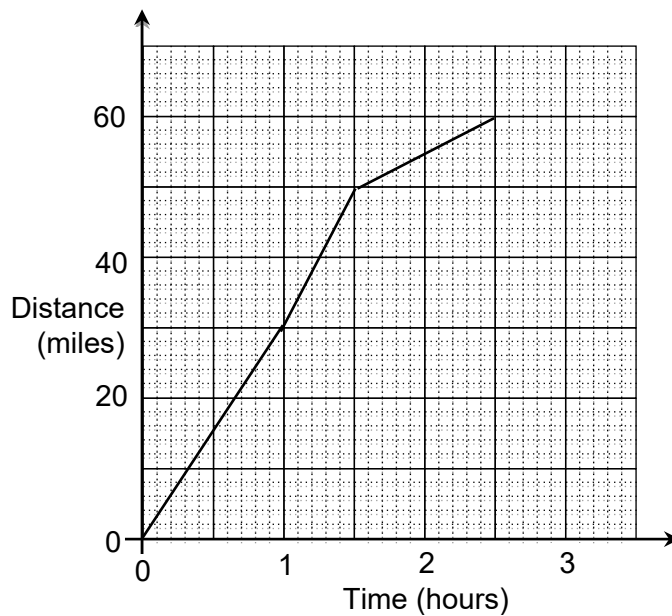
[1 mark]

3 (c) Baldwin Street, in Dunedin, New Zealand, is the world's steepest residential street.
The steepest part rises vertically by 80 feet and has a percentage figure of 35%

Calculate the horizontal distance.

[2 marks]

Answer _____ feet

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4 Here is a distance-time graph.

4 (a) During what times does the graph show the fastest speed?

[1 mark]

Answer _____

4 (b) Work out the average speed of the whole journey.

[2 marks]

_____

Answer _____ mph

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5 Here is a curve.
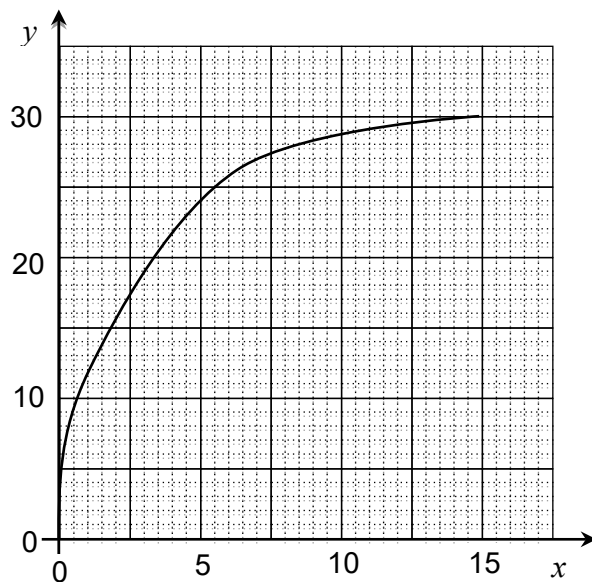
5 (a) Work out the average rate of change of y with respect to x between $x = 0$ and $x = 5$
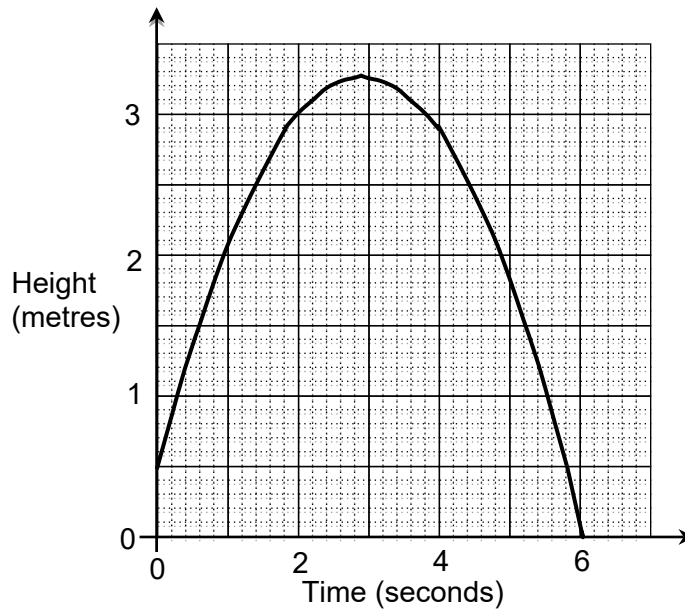
[2 marks]

Answer _____

5 (b) Work out the gradient of the curve when $x = 7.5$

[3 marks]

Answer _____

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6 The graph shows the path of a ball thrown from a height of $\frac{1}{2}$ metre.

6 (a) Work out the speed of the ball when $t = 2$ seconds.
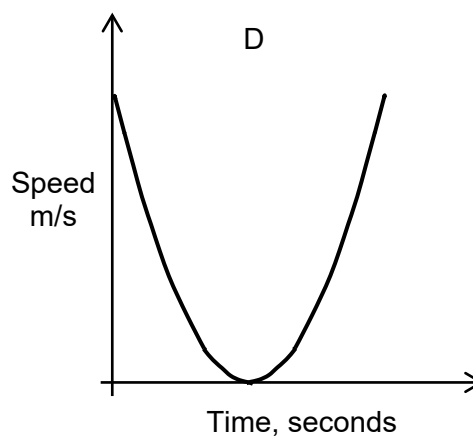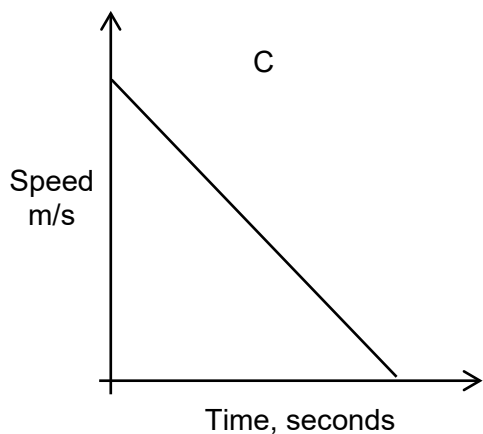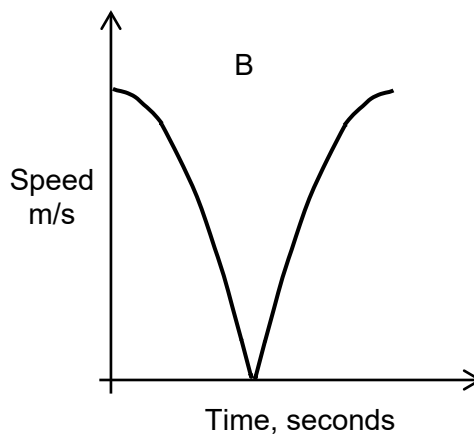
[2 marks]

Answer _____ m/s
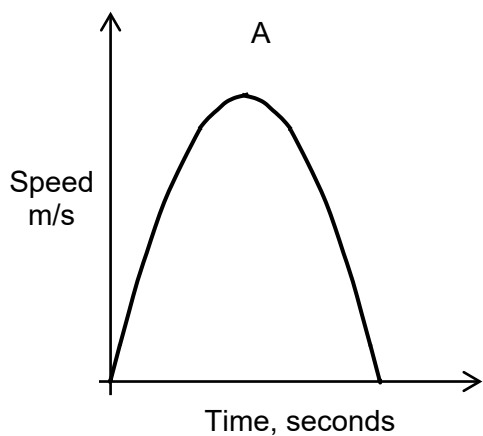
6 (b) After how many seconds did the ball reach its maximum height?

[1 mark]

Answer _____ seconds

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6 (c) Which sketch graph shows the speed of the ball?
Circle the correct letter.

[1 mark]

A

Speed
m/s

Time, seconds

B

Speed
m/s

Time, seconds

C

Speed
m/s

Time, seconds

D

Speed
m/s

Time, seconds

6 (d) Write down the units of the gradient of the graphs in part (c).

[1 mark]

Answer _____

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