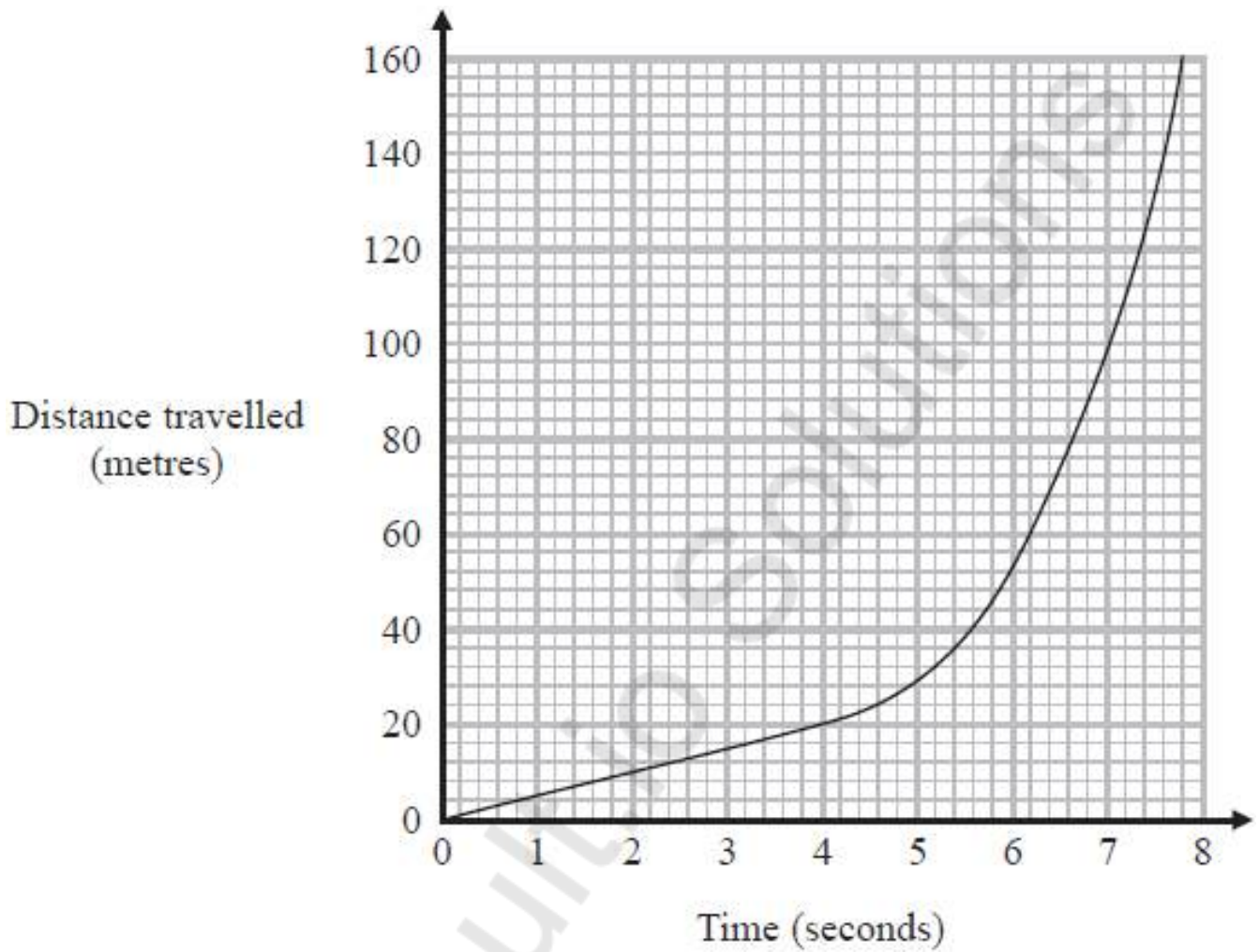


Questions

Q1.

The distance-time graph shows information about part of a car journey.



Use the graph to estimate the speed of the car at time 5 seconds.

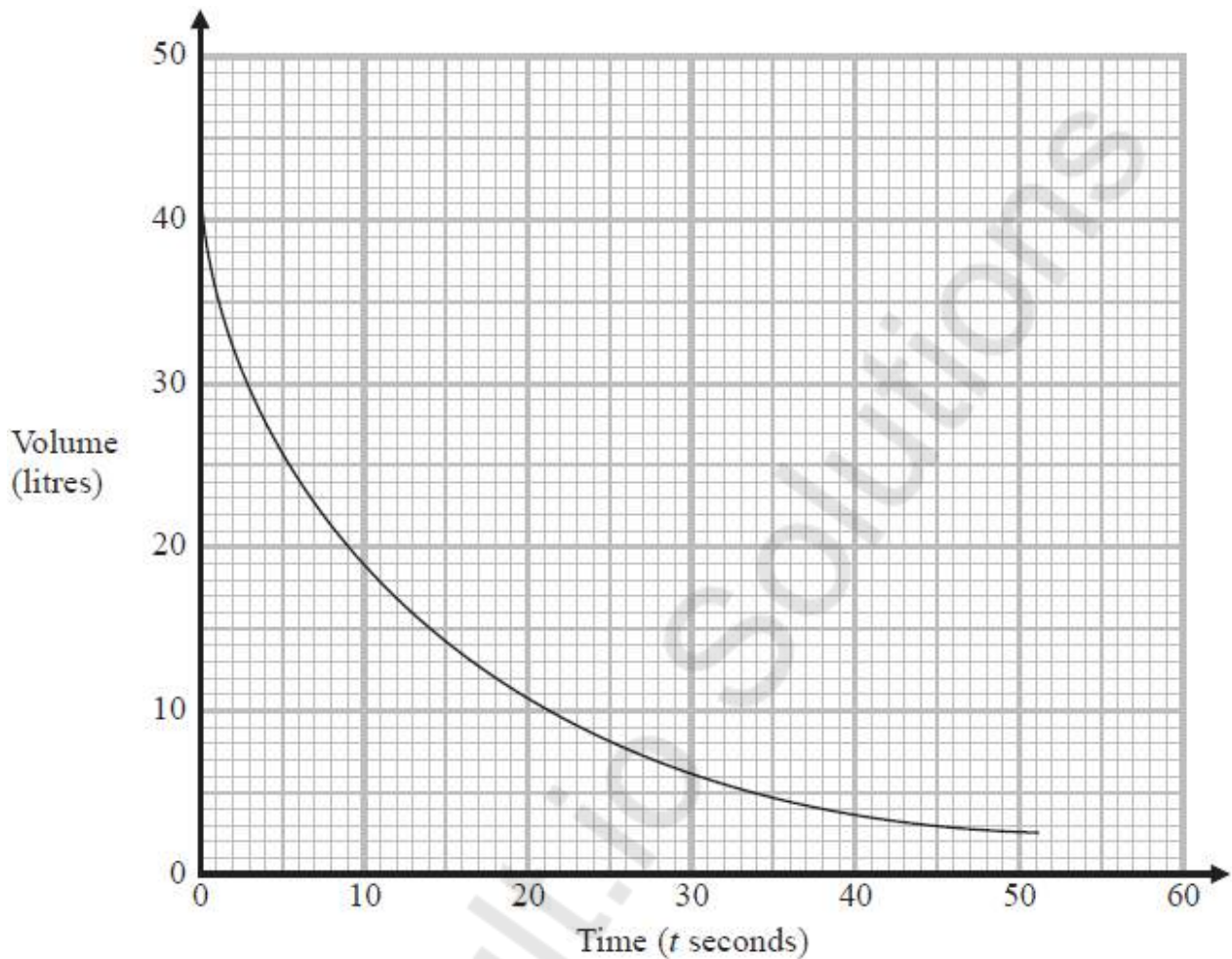
..... m/s

(Total for question = 3 marks)

(Q14 1MA1/2H, June 2018)

Q2.

The graph gives the volume of water, in litres, in a container at time t seconds after the water started to flow out of the container.



Using the graph, work out an estimate for the rate at which the water is flowing out of the container when $t = 12$
You must show your working.

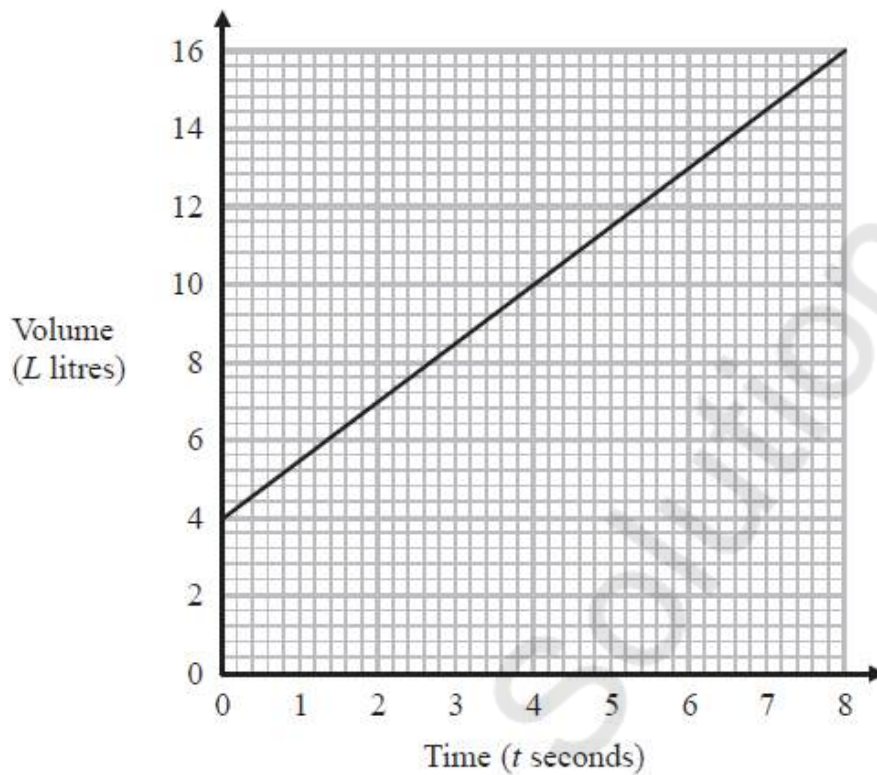
..... litres per second

(Total for question = 3 marks)

(Q15 1MA1/3H, Nov 2021)

Q3.

The graph shows the volume of liquid (L litres) in a container at time t seconds.



(a) Find the gradient of the graph.

.....
(2)

(b) Explain what this gradient represents.

.....
.....
(1)

The graph intersects the volume axis at $L = 4$

(c) Explain what this intercept represents.

.....
.....
(1)

(Total for question = 4 marks)

(Q12 1MA1/3H, June 2018)

Q4.

A water tank is empty.

Anil needs to fill the tank with 2400 litres of water.

Company **A** supplies water at a rate of 8 litres in 1 minute 40 seconds.

Company **B** supplies water at a rate of 2.2 gallons per minute.

1 gallon = 4.54 litres

Company **A** would take more time to fill the tank than Company **B** would take to fill the tank.

How much more time?

Give your answer in minutes correct to the nearest minute.

Mathvault.io Solutions

..... minutes

(Total for question = 4 marks)

Q5.

Liquid **A** and liquid **B** are mixed to make liquid **C**.

Liquid **A** has a density of 70 kg/m^3

Liquid **A** has a mass of 1400 kg

Liquid **B** has a density of 280 kg/m^3

Liquid **B** has a volume of 30 m^3

Work out the density of liquid **C**.

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..... kg/m^3

(Total for question = 3 marks)

(Q13 1MA1/1H, Nov 2020)