

**TSSM**<sup>TM</sup>  
Creating VCE Success

# Exam Practice Guide

**Unit 2**

**Physics**

**Examination 2**

**Key Features:**

- ✓ 287 original examination style questions on all examinable topics.
- ✓ Full solutions and a marking guide to all questions.
- ✓ Written by VCE assessors who mark the real examinations.
- ✓ Excellent resource for examination practice.

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***Helping VCE students be the best they can be.***

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**AREA OF STUDY 1: Motion****Key knowledge 1: Concepts used to model motion**

Figure 1 shows a simplified sketch of the velocity-time graph for a small radio-controlled car (mass = 3kg).

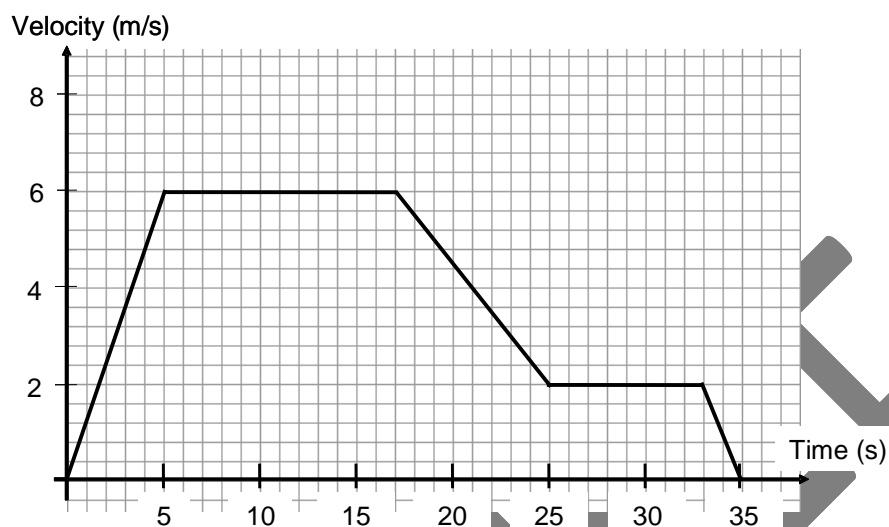


Figure 1

**Question 1**

Determine the magnitude of the acceleration of the car at  $t = 20\text{s}$ .

2 marks

**Question 2**

Calculate the distance covered by the car over the first 25 seconds.

2 marks

**Question 3**

Calculate the average speed of the car over the first 25 seconds.

2 marks

**Question 4**

Determine the net force acting on the car at  $t = 3$  seconds.

	N
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2 marks

**Figure 2** shows a velocity-time graph for two cars. At time  $t = 0$  seconds, both vehicles are at the same position, but Vehicle A is moving and Vehicle B is stationary.

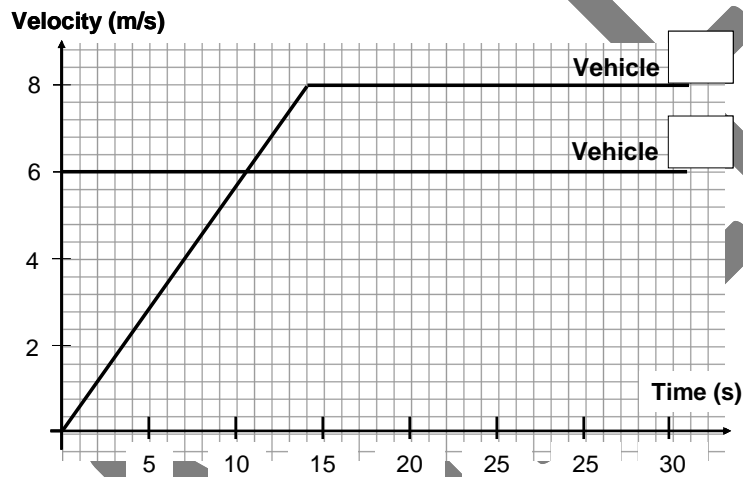


Figure 2

**Question 5**

Using the information provided, label the graphs as Vehicle A or Vehicle B

1 mark

**Question 6**

Determine the acceleration of Vehicle B during the first five seconds.

	$\text{ms}^{-2}$
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2 marks