



Oxford Cambridge and RSA

Thursday 16 May 2024 – Afternoon

AS Level Mathematics B (MEI)

H630/01 Pure Mathematics and Mechanics

Printed Answer Booklet

Time allowed: 1 hour 30 minutes



You must have:

- Question Paper H630/01 (inside this document)
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided in the **Printed Answer Booklet**. If you need extra space use the lined pages at the end of the Printed Answer Booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Where appropriate, your answer should be supported with working. Marks might be given for using a correct method, even if your answer is wrong.
- Give your final answers to a degree of accuracy that is appropriate to the context.
- The acceleration due to gravity is denoted by $g \text{ m s}^{-2}$. When a numerical value is needed use $g = 9.8$ unless a different value is specified in the question.

INFORMATION

- This document has **16** pages.

ADVICE

- Read each question carefully before you start your answer.

2

1	
2	

3

3

4

[illegible]

5(b)

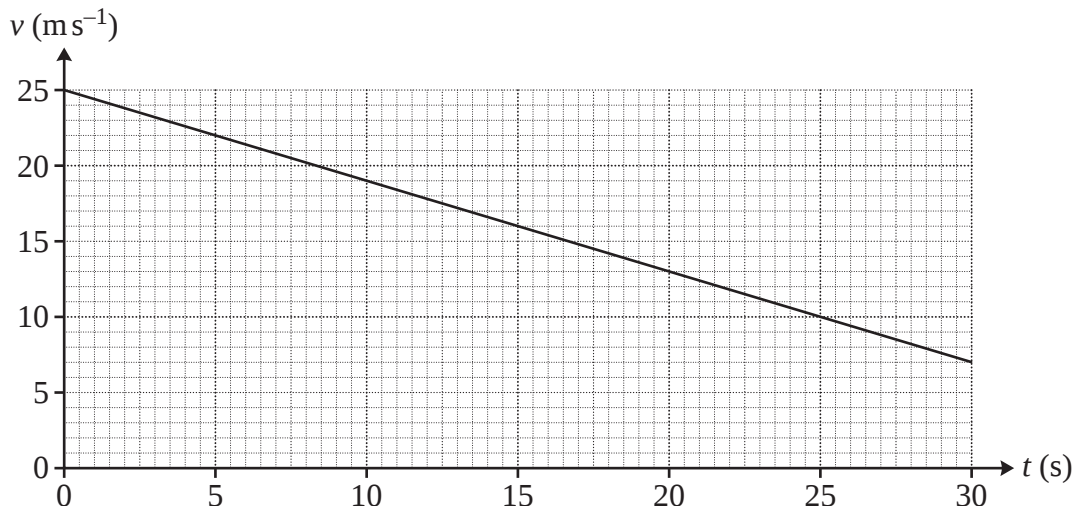
6(a)

6(b)	
	$b =$
$c =$	
6(c)	

7(a)	
7(b)	
7(c)	

8(a)	
8(b)	
	(answer space continued on next page)

8(b)	(continued)	
	9(a)	
9(b)		

9(c)	 <table border="1"><caption>Data points for the velocity-time graph in 9(c)</caption><thead><tr><th>t (s)</th><th>v (m s⁻¹)</th></tr></thead><tbody><tr><td>0</td><td>25</td></tr><tr><td>5</td><td>22</td></tr><tr><td>10</td><td>19</td></tr><tr><td>15</td><td>16</td></tr><tr><td>20</td><td>13</td></tr><tr><td>25</td><td>10</td></tr><tr><td>30</td><td>7.5</td></tr></tbody></table>	t (s)	v (m s ⁻¹)	0	25	5	22	10	19	15	16	20	13	25	10	30	7.5
t (s)	v (m s ⁻¹)																
0	25																
5	22																
10	19																
15	16																
20	13																
25	10																
30	7.5																
9(d)																	
9(e)																	
10(a)																	

10(b)(i)	
10(b)(ii)	
10(c)	
10(d)	

11(a)	
	$k =$
	$n =$
	11(b)

12(a)	
12(b)	

[illegible]

EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.



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