



Oxford Cambridge and RSA

Wednesday 22 June 2022 – Afternoon

AS Level Further Mathematics B (MEI)

Y415/01 Mechanics b

Printed Answer Booklet

Time allowed: 1 hour 15 minutes



You must have:

- Question Paper Y415/01 (inside this document)
- the Formulae Booklet for Further Mathematics B (MEI)
- 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 **12** pages.

ADVICE

- Read each question carefully before you start your answer.

1(a)	
1(b)	
1(c)(i)	
1(c)(ii)	

2(a)**2(b)** $x =$ $\omega =$

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

3(b)	(continued)

3(c)	

4(a)	
4(b)(i)	
(answer space continued on next page)	

4(b)(i)	(continued)
4(b)(ii)	Increasing V
	Increasing ϕ

5(c)

Speed =

Coefficient of restitution =

5(d)

6(a)	
6(b)	<p>(answer space continued on next page)</p>

6(b)	(continued)

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

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