



Oxford Cambridge and RSA

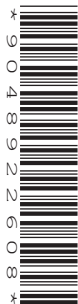
# Wednesday 22 June 2022 – Afternoon

## 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)

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Last name

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### 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.

<b>1(a)</b>	
<b>1(b)</b>	
<b>1(c)(i)</b>	
<b>1(c)(ii)</b>	





<b>3(b)</b>	<b>(continued)</b>

<b>3(c)</b>	



<b>4(b)(i)</b>	<b>(continued)</b>
<b>4(b)(ii)</b>	Increasing $V$
	Increasing $\phi$









<b>6(b)</b>	<b>(continued)</b>

