

# Monday 23 May 2022 – Afternoon

## AS Level Further Mathematics B (MEI)

Y411/01 Mechanics a

Printed Answer Booklet

Time allowed: 1 hour 15 minutes



**You must have:**

- Question Paper Y411/01 (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  $g \text{ ms}^{-2}$ . 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)

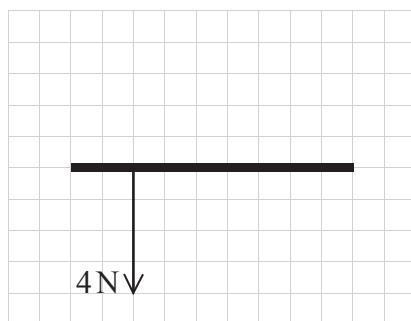


Fig. 1.1

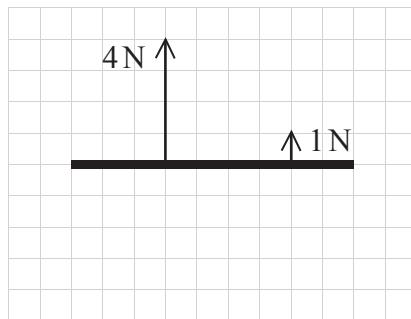


Fig. 1.2

1(b)(i)

1(b)(ii)

2(a)

2(b)	
2(c)	

3(a)	
3(b)	
3(c)	

3(d)	
4(a)	
4(b)	

4(c)	
4(d)	
5(a)	

<b>5(b)</b>	
<b>5(c)</b>	

6(a)	
6(b)	

6(c)	
6(d)	

7(a)(i)	
7(a)(ii)	
7(b)	

7(c)	
7(d)	

## 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).