



Oxford Cambridge and RSA

Accredited

# AS Level Further Mathematics B (MEI)

## Y411 Mechanics a

Printed Answer Booklet

### Date – Morning/Afternoon

Time allowed: 1 hour 15 minutes

#### OCR supplied materials:

- Printed Answer Booklet
- Formulae Further Mathematics B (MEI)

#### You must have:

- Printed Answer Booklet
- Formulae Further Mathematics B (MEI)
- Scientific or graphical calculator



First name	
------------	--

Last name	
-----------	--

Centre number					
------------------	--	--	--	--	--

Candidate number				
---------------------	--	--	--	--

#### INSTRUCTIONS

- Use black ink. HB pencil may be used for graphs and diagrams only.
- Complete the boxes provided on the Printed Answer Booklet with your name, centre number and candidate number.
- Answer **all** the questions.
- **Write your answer to each question in the space provided in the Printed Answer Booklet.**
- Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Do **not** write in the bar codes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Final answers should be given to a degree of accuracy appropriate to the context.
- The acceleration due to gravity is denoted by  $g \text{ m s}^{-2}$ . Unless otherwise instructed, when a numerical value is needed, use  $g = 9.8$ .

#### INFORMATION

- You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is used. You should communicate your method with correct reasoning.
- The Printed Answer Booklet consists of **12** pages. The Question Paper consists of **8** pages.

<b>1</b>	
<b>2</b>	

<b>3 (i)</b>	

<b>3 (ii)</b>	

<b>3 (iii)</b> <i>(A)</i>	
<b>3 (iii)</b> <i>(B)</i>	
<b>4 (i)</b>	

<b>4 (ii)</b>	
	<b>4 (iii)</b>

<b>5 (i)</b>	
<b>5 (ii)</b>	

<b>5 (iii)</b>	

**DO NOT WRITE IN THIS SPACE**

<b>6 (i)</b>	
<b>6 (ii)</b>	
<b>6 (iii)</b>	
<b>(answer space continues on next page)</b>	



<b>6 (iii)</b> (continued)	
<b>6 (iv)</b> (A)	
<b>6 (iv)</b> (B)	

<b>7 (i)</b>	
<b>7 (ii)</b>	

<b>7 (iii)</b>	
<b>7 (iv)</b>	
<b>7 (v)</b>	

**DO NOT WRITE IN THIS SPACE**

Copyright Information:

OCR is committed to seeking permission to reproduce all third-party content that it uses in the assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge