

# Monday 19 October 2020 – Afternoon

## A Level Mathematics A

H240/03 Pure Mathematics and Mechanics

### Printed Answer Booklet

#### Time allowed: 2 hours



You must have:
Question Paper H240/03 (inside this document)
<ul> <li>a scientific or graphical calculator</li> </ul>



Please write clearly in black ink. Do not write in the barcodes.								
Centre number						Candidate number		
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 non-exact numerical answers correct to 3 significant figures unless a different degree of accuracy is specified in the question.
- The acceleration due to gravity is denoted by  $g \,\mathrm{m}\,\mathrm{s}^{-2}$ . When a numerical value is needed use g = 9.8 unless a different value is specified in the question.

#### INFORMATION

- The total mark for this paper is **100**.
- The marks for each question are shown in brackets [].
- This document has **16** pages.

#### ADVICE

· Read each question carefully before you start your answer.

### **Section A: Pure Mathematics**

1	
1	
2	
<b>3(a)</b>	
- ()	
3(h)	
3(b)	

3(d)
3(d)

<b>4(a)</b>	
4(b)	

4(c)	
<b>4(d)</b>	
5(9)	
5( <b>u</b> )	

5(b)	
5(c)	

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

6(b)	(continued)

**Section B: Mechanics** 

7(a)	
7(b)	

<b>8</b> (a)	
8(b)	
8(c)	
0(0)	

9(a)	
0(b)	
9(D)	
9(c)	

9(d)	
10(a)	

10(b)(i)	
10(b)(ii)	
10(0)(11)	
10(c)	
10(c)	
10(c)	
10(c)	

11(a)	
11(b)	
11(c)	

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1	5
I	3

11(c)	(continued)
11(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).



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