



Oxford Cambridge and RSA

**Thursday 25 May 2023 – Afternoon**

**A Level Further Mathematics B (MEI)**

**Y420/01 Core Pure**

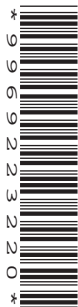
**Printed Answer Booklet**

**Time allowed: 2 hours 40 minutes**



**You must have:**

- Question Paper Y420/01 (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.

**INFORMATION**

- This document has **24** pages.

**ADVICE**

- Read each question carefully before you start your answer.

**Section A (40 marks)**

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



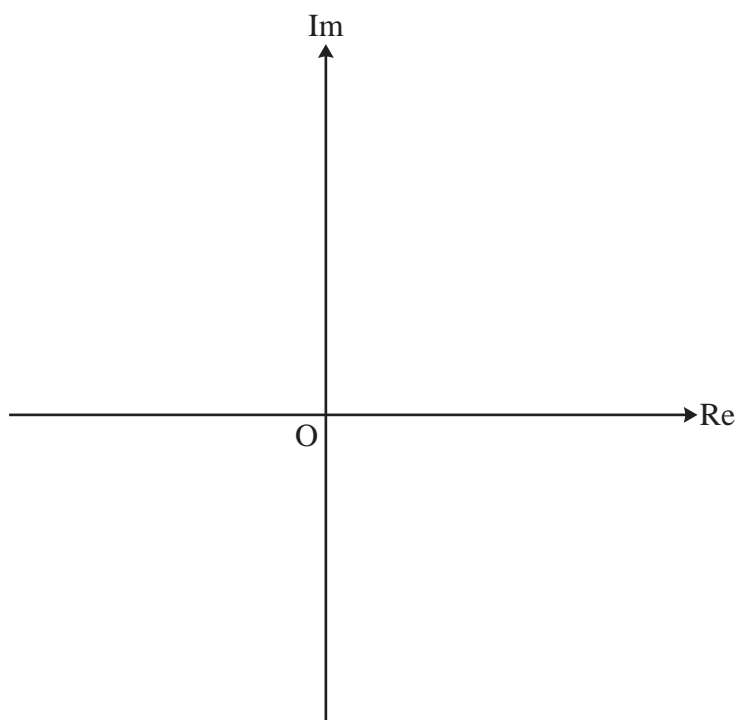
<b>3(a)</b>	
<b>3(b)</b>	

<b>4(a)(i)</b>	
	$f'(x) =$
	$f''(x) =$
<b>4(a)(ii)</b>	
<b>4(b)</b>	

6

5(a)


5(b)



<b>6(a)</b>	
<b>6(b)(i)</b>	
<b>6(b)(ii)</b>	
<b>6(c)</b>	
<b>6(d)</b>	

**Section B** (104 marks)

<b>7(a)</b>	
	Values of $r$ and $\theta$ at point A:
	Values of $r$ and $\theta$ at point B:
Values of $r$ and $\theta$ at point C:	
<b>7(b)</b>	





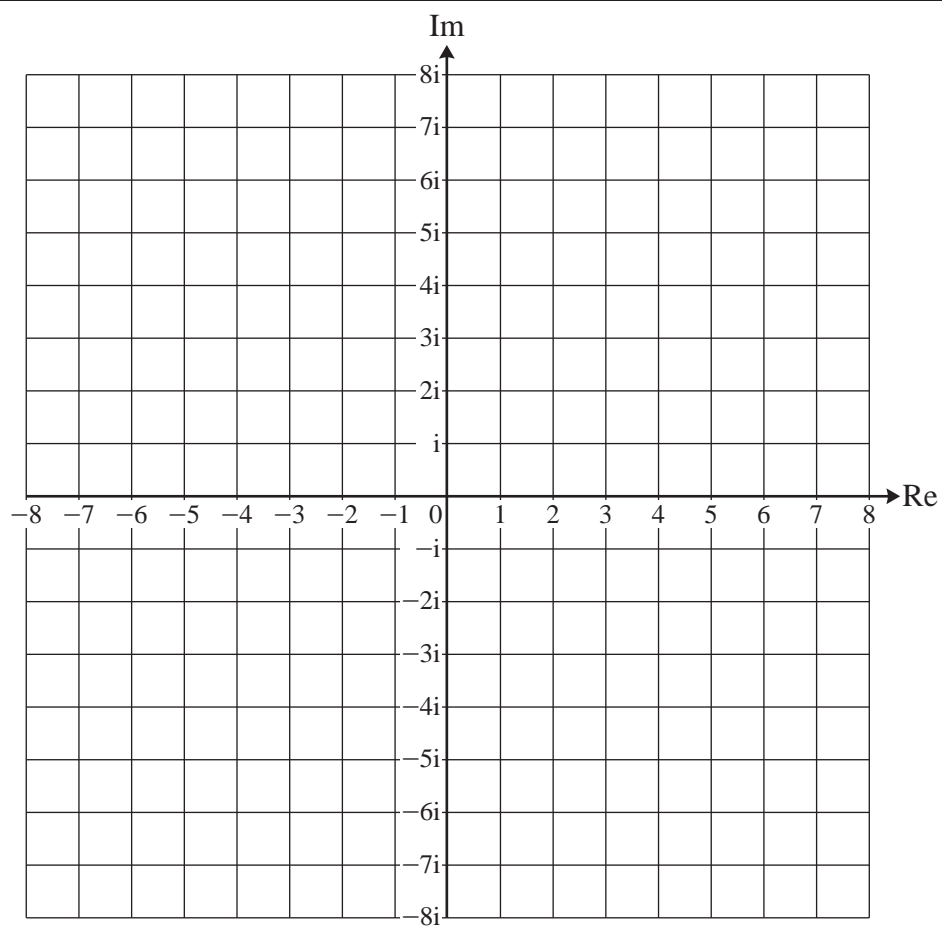
9	

<b>10(a)</b>	
<b>10(b)</b>	

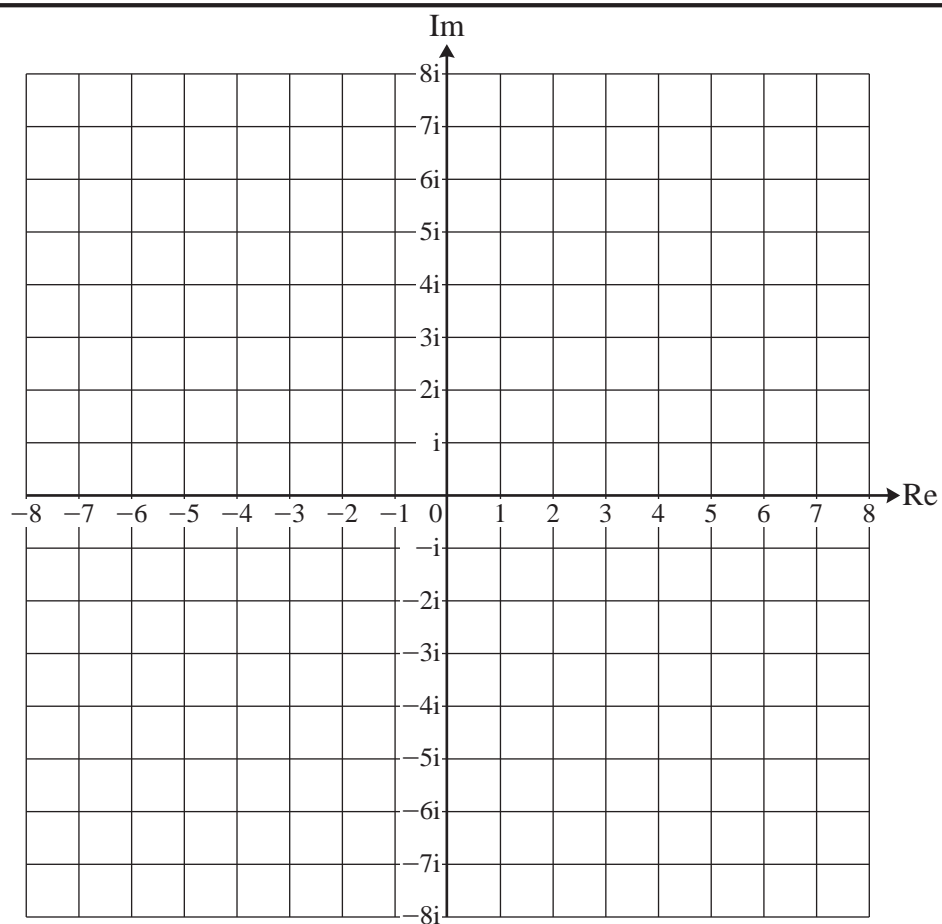




13(a)(i)



13(a)(ii)





<b>14(a)</b>	



<b>14(b)</b>	

15	



<b>17(a)(i)</b>	
<b>17(a)(ii)</b>	

<b>17(b)(i)</b>	
<b>17(b)(ii)</b>	
<b>17(c)(i)</b>	

<b>17(c)(ii)</b>	
<b>17(c)(iii)</b>	
<b>17(d)(i)</b>	
<b>17(d)(ii)</b>	



