



Wednesday 22 June 2022 – Afternoon

A Level Further Mathematics B (MEI)

Y434/01 Numerical Methods

Printed Answer Booklet

Time allowed: 1 hour 15 minutes

You must have:

- Question Paper Y434/01 (inside this document)
- the Formulae Booklet for Further Mathematics B (MFI)
- a scientific or graphical calculator



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 your final answers to a degree of accuracy that is appropriate to the context.

INFORMATION

• This document has 12 pages.

ADVICE

· Read each question carefully before you start your answer.

1(a)	
4.01	
1 (b)	
1(a)	
1(c)	

2(a)	
2(b)	
_(%)	
2(c)	
2(d)	

4

3(a)	
3(b)	
	$x_5 =$
2(-)	$x_6 =$
3(c)	
3(d)	
2(2)	
3(e)	

4 (a)	
4(b)	
4(c)(i)	
-(0)(-)	
4(c)(ii)	
4(0)(11)	
4 (d)	

5 (a)						
5 (b)						
		F	G	Н	I	
	3	3 n	M_n	T_n	S_{2n}	
	4	1	0.2436699	0.1479020		
		5 2	0.2306967			
5(c)						
5(0)						

6 (a)	

6(b)				
	r	x_r	difference	ratio
	0	0		
	1			
	3			
	4		-0.000192	
	5		-1.99×10^{-7}	0.00103
	6		-1.82×10^{-10}	0.000914
	0		-1.82×10^{-13}	0.000914
6(c)				
6(d)				
6(e)				

7(-)						
7(a)	t	M	ΔM	$\Delta^2 M$	$\Delta^3 M$	
	0	88.3				
	U	00.3				
	10	80.05				
	20	78.7				
	30	70.05				
	30	78.85				
7(b)						
7(0)						

7(c)							
7(d)	t	M	ΔM	$\Delta^2 M$	$\Delta^3 M$	$\Delta^4 M$	
	0	88.3					
	10	80.05					_
							_
	20	78.7					_
	30	78.85					
	40	70.7					_
	40	78.7					_
	50	80.05					
7(e)							
				(answe	r space cont	inued on ne	xt page)

7 (e)	(continued)
7 (f)	

12 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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