

# Thursday 20 June 2019 – Morning

# A Level Further Mathematics B (MEI)

Y434/01 Numerical Methods Printed Answer Booklet

### Time allowed: 1 hour 15 minutes



You must have:
Question Paper Y

Question Paper Y434/01 (inserted)Formulae Further Mathematics B (MEI)

#### You may use:

• 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

- The Question Paper will be found inside the Printed Answer Booklet.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer all the questions.
- Write your answer to each question in the space provided in the Printed Answer Booklet. If additional space is required, use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- 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.

#### **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> (a)	
<b>1(b)</b>	
1(c)	
1(d)	

<b>2(a)</b>	
2(b)	
2(c)	
<b>2</b> ( <b>d</b> )	
2(e)	
<b>2(f)</b>	

3(a)	n	У	Δ	$\varDelta^2$	$\Delta^3$	
	1	9				
	2	32				
		52				
	3	63				
	4	96				
	5	125				
<b>3(b)</b>						
-						
-						

<b>3(c)</b>	
<b>3(d)</b>	
<b>3(e)</b>	

4(b)
4(b)
4(0)
4(c)
4(d)

<b>4(e)</b>	
4(8)	
<b>4(f)</b>	
•(•)	
<b>4</b> (g)	
-(6)	

<b>5</b> (a)	
5(b)	
5(c)	
5(d)	
5(e)	
5(f)	
5(g)	

)   [		А	В	С	Simpsons	Difference	Ratio
	1	n	M <sub>n</sub>	T <sub>n</sub>	Shipsons		
	2	1	1.632527	1			
	3	2	1.641461	1.316263			
	4	4	1.623053	1.478862			
	5	8	1.610295	1.550957			
	6	16	1.604132	1.580626			
	7	32	1.601505	1.592379			

## 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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