

# Friday 14 June 2024 - Afternoon

## A Level Further Mathematics B (MEI)

Y422/01 Statistics Major

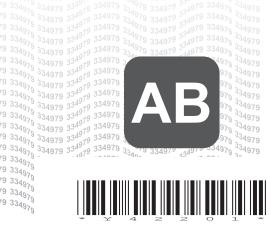
Printed Answer Booklet

Time allowed: 2 hours 15 minutes 378 334979 33

• Question Paper Y422/01 (inside this document)

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- the Formulae Booklet for Further Mathematics B
- · a scientific or graphical calculator



Please write clearly in black ink. <b>Do not write in the barcodes.</b>							
Centre number					Candidate number		
First name(s)							
Last name							

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#### **INSTRUCTIONS**

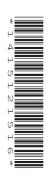
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided in the Printed Answer Booklet. If you need extra space use the lined page at the end of the Printed Answer Booklet. The guestion numbers must be clearly shown.
- Answer 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 20 pages.

#### **ADVICE**

· Read each question carefully before you start your answer.



# Section A (27 marks)

1(a)	
	E(X) =
	Var(X) =
1(b)	
	Mean =
	Standard deviation =

2(a)	
2(b)(i)	
2(b)(ii)	
2(c)	
1	

3(a)	
3(b)	
2()	
3(c)	
3(d)	
3(u)	

4(a)	
4(b)	
4(c)	

# Section B (93 marks)

5(a)	
5(b)	
<b>E</b> (a)(i)	
5(c)(i)	
5(c)(ii)	

5(d)	

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6(a)	
(0)	
6(b)	
((a)	
6(c)	
	(answer space continued on next page)

6(c)	(continued)

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7(a)	
	Estimate of the population mean =
	Estimate of the population standard deviation =
7(b)	
7(c)	

7(d)	
7(e)	
7(e)	

8(a)	Price, y  400-  200-  200-  200-  200-  200-  400-  20
	0 20 40 60 80 100 120 Floor area, x
8(b)	

8(c)		
8(d)		
8(e)		

9(a)		Bicycle			
	Expect	ed frequency	Road	Gravel	Electric
	Maximum	Less than 25 mph			12.95
	speed	25 mph or greater			24.05
9(b)					
)(b)					
9(c)					

9(c)	(continued)
9(d)	Road bicycle:
	Gravel bicycle:
	Electric bicycle:

10(a)	
10(b)	
10(c)	
10(d)	

11(a)	
	For $n$ even, the probability =
	For $n$ odd, the probability =
11(b)	
11(c)	

12(a)	
	(answer space continued on next page)

12(a)	(continued)
12(b)	

### EXTRA ANSWER SPACE

If you need extra space use this lined page. You must write the question numbers clearly in the margin.



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