



Oxford Cambridge and RSA

Friday 14 June 2024 – Afternoon

A Level Further Mathematics B (MEI)

Y422/01 Statistics Major

Printed Answer Booklet

Time allowed: 2 hours 15 minutes



You must have:

- Question Paper Y422/01 (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)

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 page 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 **20** pages.

ADVICE

- Read each question carefully before you start your answer.

Section A (27 marks)

1(a)	
	$\text{Var}(X) =$

1(b)	
	Standard deviation =

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

3(a)	
3(b)	
3(c)	
3(d)	

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

Section B (93 marks)

5(a)	
5(b)	
5(c)(i)	
5(c)(ii)	

5(d)	

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

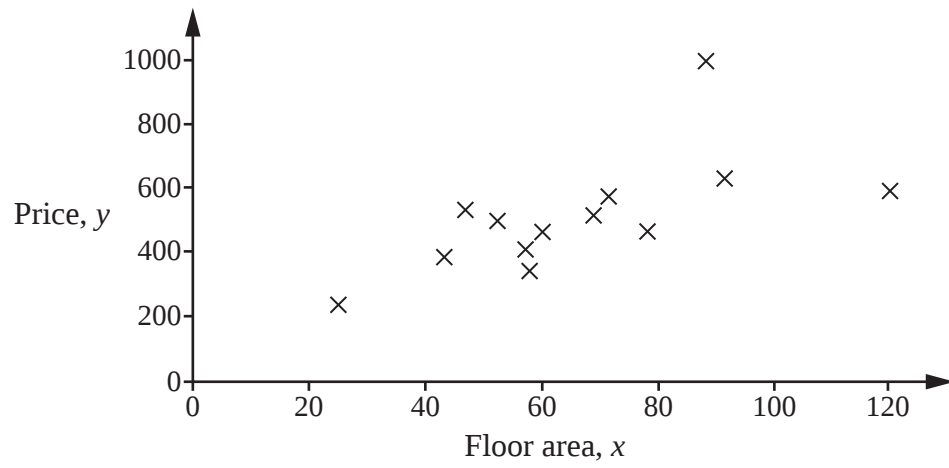
6(c)	(continued)

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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)

8(a)



8(b)

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

9(a)	Expected frequency		Bicycle		
			Road	Gravel	Electric
	Maximum speed	Less than 25 mph			12.95
		25 mph or greater			24.05
9(b)					
9(c)					
	(answer space continued on next page)				

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)	

