

Tuesday 20 May 2025 – Afternoon

AS Level Further Mathematics B (MEI)

Y412/01 Statistics A

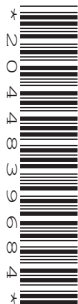
Printed Answer Booklet

Time allowed: 1 hour 15 minutes



You must have:

- Question Paper Y412/01 (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

--	--	--	--	--	--

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)	Reason 1:
	Reason 2:
1(b)	
2(a)	
2(b)	
2(c)	
2(d)	

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

4(a)	Reason 1:
	Reason 2:
4(b)	

DO NOT WRITE IN THIS SPACE

5(a)	
5(b)	
5(c)	

6(a)(i)	
6(a)(ii)	
6(a)(iii)	
6(b)	
6(c)	
6(d)	

BLANK PAGE

DO NOT WRITE ON THIS PAGE

7(a)	Advantage:												
7(b)													
7(c)													
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Expected frequency</th> <th style="padding: 5px;">Short Stay</th> <th style="padding: 5px;">Medium Stay</th> <th style="padding: 5px;">Long Stay</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Hospital A</td> <td style="text-align: center; padding: 5px;">12.116</td> <td style="padding: 5px;"> </td> <td style="padding: 5px;"> </td> </tr> <tr> <td style="padding: 5px;">Hospital B</td> <td style="padding: 5px;"> </td> <td style="padding: 5px;"> </td> <td style="text-align: center; padding: 5px;">37.464</td> </tr> </tbody> </table>		Expected frequency	Short Stay	Medium Stay	Long Stay	Hospital A	12.116			Hospital B			37.464
Expected frequency	Short Stay	Medium Stay	Long Stay										
Hospital A	12.116												
Hospital B			37.464										

7(d)	<table border="1"><thead><tr><th>Chi-squared contribution</th><th>Short Stay</th><th>Medium Stay</th><th>Long Stay</th></tr></thead><tbody><tr><td>Hospital A</td><td></td><td></td><td></td></tr><tr><td>Hospital B</td><td>0.3751</td><td></td><td>0.1717</td></tr></tbody></table>	Chi-squared contribution	Short Stay	Medium Stay	Long Stay	Hospital A				Hospital B	0.3751		0.1717
	Chi-squared contribution	Short Stay	Medium Stay	Long Stay									
	Hospital A												
	Hospital B	0.3751		0.1717									
7(e)													
7(f)													

