

A Level Further Mathematics A Y544 Discrete Mathematics

Printed Answer Booklet

Version 2

Date – Morning/Afternoon

Time allowed: 1 hour 30 minutes

You must have:

- Question Paper Y544 (inserted)
- Formulae A Level Further Mathematics A

You may use:

- a scientific or graphical calculator



First name

Last name

Centre
number

Candidate
number

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.
- Complete the boxes provided on the Printed Answer Booklet with your name, centre number and candidate number.
- Answer **all** the questions.
- **Write your answer to each question in the space provided in the Printed Answer Booklet.** Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Do **not** write in the bar codes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Give non-exact numerical answers correct to 3 significant figures unless a different degree of accuracy is specified in the question.
- The acceleration due to gravity is denoted by $g \text{ m s}^{-2}$. Unless otherwise instructed, when a numerical value is needed, use $g = 9.8$

INFORMATION

- **You are reminded of the need for clear presentation in your answers.**
- The Printed Answer Booklet consists of **12** pages. The Question Paper consists of **8** pages.

1(i)

1(ii)

	A	B	C	D	E
A	-	12	8	6	4
B	12	-	10	8	10
C	8	10	-	13	10
D	6	8	13	-	10
E	4	10	10	10	-

1 (iii)	
1(iv)(a)	
1(iv)(b)	
1(v)	

	A	B	C	D	E
A	-	12	8	6	4
B	12	-	10	8	10
C	8	10	-	13	10
D	6	8	13	-	10
E	4	10	10	10	-
F	2	11	9	7	5

3(i)	
3(ii)	
3(ii)(a)	
3(ii)(b)	

3(iv)	
3(v)	

4(i)	Player <i>B</i>					
		Strategy <i>X</i>	Strategy <i>Y</i>	Strategy <i>Z</i>	row min	maxi min
	Strategy <i>P</i>	4	5	-4		
	Strategy <i>Q</i>	3	-1	2		
	Strategy <i>R</i>	4	0	2		
	col max					
mini max						
4(ii)						
4(iii)						
4(iv)						

4(v)	Player <i>B</i>						
		Strategy <i>X</i>	Strategy <i>Y</i>	Strategy <i>Z</i>	row min	maxi min	
	Player <i>A</i>	Strategy <i>P</i>					
		Strategy <i>Q</i>					
		Strategy <i>R</i>					
		col max					
		mini max					
5(i)							
5(ii)							
5(iii)							

5(iv)(a)	
5(iv)(b)	
5(v)	
5(vi)	
6(i)	

6(ii)	
6(iii)	
6(iv)	

6(v)	
6(vi)	

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