



Thursday 22 May 2014 – Morning

A2 GCE MATHEMATICS

4737/01 Decision Mathematics 2

PRINTED ANSWER BOOK

Candidates answer on this Printed Answer Book.

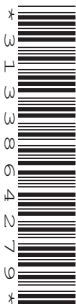
OCR supplied materials:

- Question Paper 4737/01 (inserted)
- List of Formulae (MF1)

Other materials required:

- Scientific or graphical calculator

Duration: 1 hour 30 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

These instructions are the same on the Printed Answer Book and the Question Paper.

- The Question Paper will be found inside the Printed Answer Book.
- Write your name, centre number and candidate number in the spaces provided on the Printed Answer Book. Please write clearly and in capital letters.
- **Write your answer to each question in the space provided in the Printed Answer Book.** Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- 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 or is clearly appropriate.

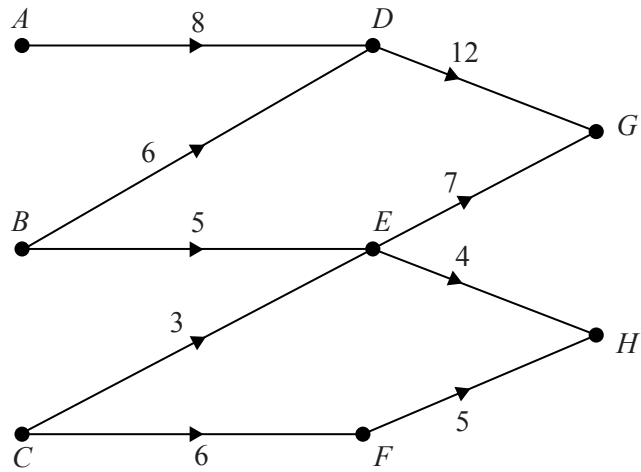
INFORMATION FOR CANDIDATES

This information is the same on the Printed Answer Book and the Question Paper.

- The number of marks is given in brackets [] at the end of each question or part question on the Question Paper.
- **You are reminded of the need for clear presentation in your answers.**
- The total number of marks for this paper is **72**.
- The Printed Answer Book consists of **12** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.

1 (i)	
	Adele has the
	Ezra has the
	Jonah has the
	Lily has the
	Molly has the
1 (ii)	
	Adele has the
	Ezra has the
	Jonah has the
	Lily has the
	Molly has the
	Noah has the
1 (iii)	

2 (i)

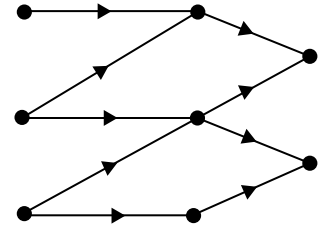


2 (ii) (a)

2 (ii) (b)

2 (ii) (c)

2 (iii)



2 (iv)

3(i)

	P	R	S	T	U
G	25	50	34	40	25
H	36	42	48	44	45
I	27	50	45	42	26
J	40	46	28	45	50
K	34	48	34	50	40

	P	R	S	T	U
G					
H					
I					
J					
K					

	P	R	S	T	U
G					
H					
I					
J					
K					

3(ii)

	P	R	S	T	U
G					
H					
I					
J					
K					

Gill should have

Harry should have

Ivy should have

James should have

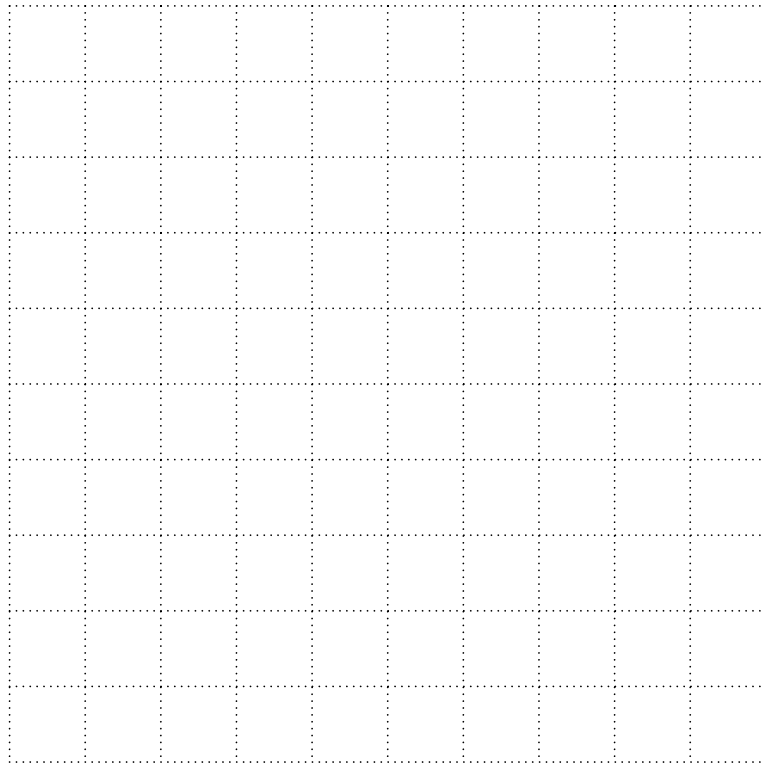
Kelly should have

4(i)																	
4(ii)																	
4(iii)	<table border="1"> <thead> <tr> <th></th> <th><i>Fire</i></th> <th><i>Ice</i></th> <th><i>Gale</i></th> </tr> </thead> <tbody> <tr> <th><i>Fire</i></th> <td>-3</td> <td>3</td> <td>-2</td> </tr> <tr> <th><i>Ice</i></th> <td>2</td> <td>-2</td> <td>0</td> </tr> <tr> <th><i>Gale</i></th> <td>1</td> <td>-3</td> <td>-1</td> </tr> </tbody> </table>		<i>Fire</i>	<i>Ice</i>	<i>Gale</i>	<i>Fire</i>	-3	3	-2	<i>Ice</i>	2	-2	0	<i>Gale</i>	1	-3	-1
		<i>Fire</i>	<i>Ice</i>	<i>Gale</i>													
	<i>Fire</i>	-3	3	-2													
	<i>Ice</i>	2	-2	0													
	<i>Gale</i>	1	-3	-1													
4(iv)																	

4(v)

	<i>Fire</i>	<i>Ice</i>	<i>Gale</i>
<i>Fire</i>			
<i>Ice</i>			

4(vi)



6(i)

Stage	State	Action	Working	Suboptimal maximin
3	0	0	6	6
	1	0	1	1
	2	0	3	3
2	0	0	$\min(3, 6) = 3$	3
	1	0	$\min(1, 6) = 1$	2
		1	$\min(1, 1) = 1$	
		2	$\min(2, 3) = 2$	
	2	2	$\min(1, 3) = 1$	1
1	0	0	$\min(3,) =$	
		1	$\min(4,) =$	
	1	1	$\min(3,) =$	
	2	1	$\min(3,) =$	
		2	$\min(1,) =$	
0	0	0	$\min(5,) =$	
		1	$\min(3,) =$	
		2	$\min(4,) =$	

6(ii)

6(iii)

<p>6 (iv)</p>	
<p>6 (v) (a)</p>	
<p>6 (v) (b)</p>	

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