



**Thursday 31 May 2012 – Morning**

**AS GCE MATHEMATICS (MEI)**

**4771 Decision Mathematics 1**

**PRINTED ANSWER BOOK**



Candidates answer on this Printed Answer Book.

**OCR supplied materials:**

- Question Paper 4771 (inserted)
- MEI Examination Formulae and Tables (MF2)

**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 in the centre of 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.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- You are permitted to use a graphical calculator in this paper.
- Final answers should be given to a degree of accuracy appropriate to the context.

**INFORMATION FOR CANDIDATES**

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

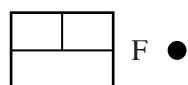
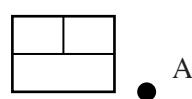
- The number of marks is given in brackets [ ] at the end of each question or part question on the Question Paper.
- You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is being used.
- The total number of marks for this paper is **72**.
- The Printed Answer Book consists of **12** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.

**BLANK PAGE**

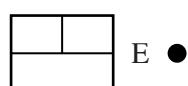
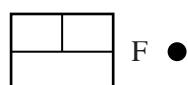
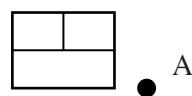
**PLEASE DO NOT WRITE ON THIS PAGE**

Section A (24 marks)

1 (i)  
& (ii)



Spare copy of diagram for 1(i)



2 (i)	A	L	R	B	$f(L)$	$f(R)$
2 (ii)						
2 (iii)						
2 (iv)						
2 (v)						
2 (vi)						
2 (vii)						
2 (viii)						
2 (ix)						
2 (x)						

3 (i)	<p style="text-align: center;"><math>X\bullet</math>                    <math>\bullet Y</math>                    <math>X\bullet</math>                    <math>\bullet Y</math></p> <p style="text-align: center;"><math>\bullet Z</math>                    <math>\bullet Z</math></p> <p style="text-align: center;">‘is a subset of’                    ‘shares at least one element with’</p>
3 (ii)	

**PLEASE DO NOT WRITE IN THIS SPACE**

## Section B (48 marks)

**4 (i)**

**4 (ii)**

A large grid of graph paper, consisting of 20 vertical columns and 20 horizontal rows, enclosed in a thin black border. The grid is intended for plotting data points or drawing graphs.

**A spare copy of this graph paper can be found on page 12.**

4 (iii)	
4 (iv)	

**PLEASE DO NOT WRITE IN THIS SPACE**

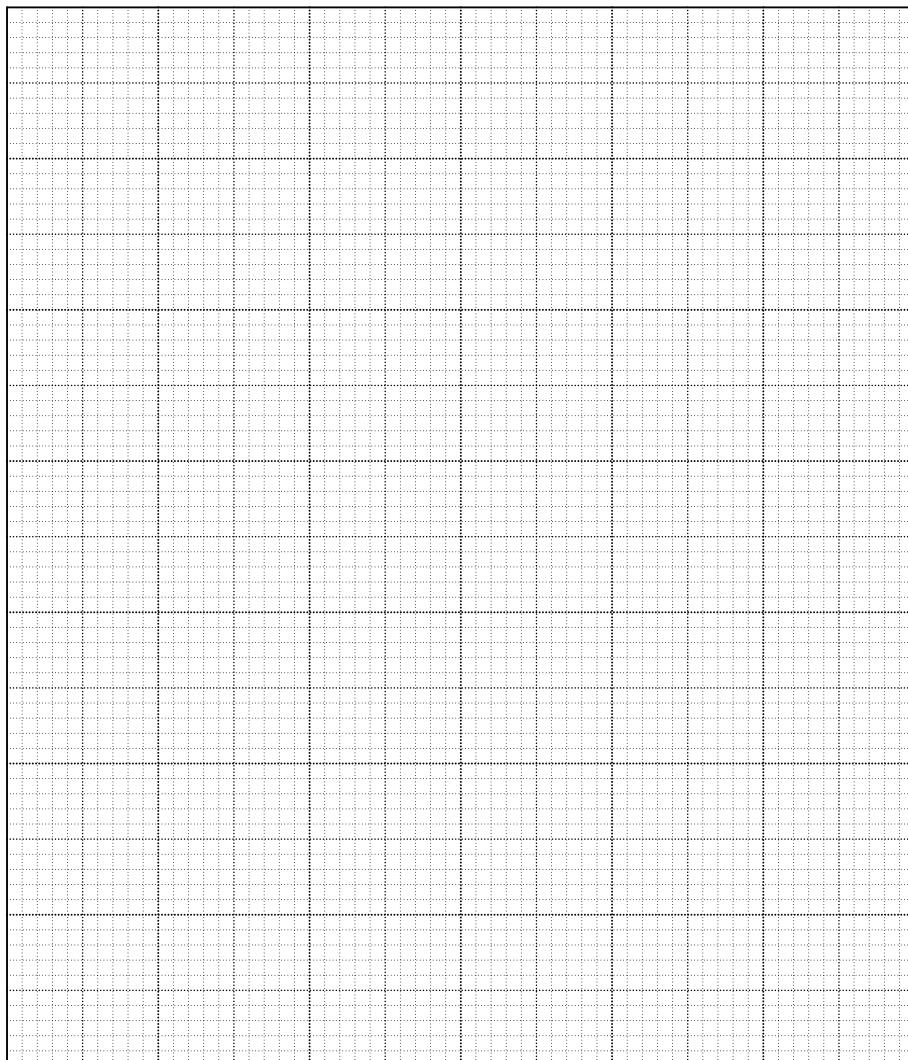
5 (i)	
5 (ii)	
5 (iii)	Random digits: 5, 9, 4, 0, 8, 1, 9, 3, 0, 5
5 (iv)	Random digits for run 2: 0, 1, 3, 7, 5, 9, 9, 8, 7, 3
	Random digits for run 3: 9, 8, 4, 4, 2, 7, 7, 4, 1, 9

**(answer space continued on next page)**



6 (i) & (ii)	

6 (iii)	
6 (iv)	
6 (v)	
6 (vi)	

**Spare copy of graph paper for question 4(ii)**

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