

Thursday 31 May 2012 – Morning

AS GCE MATHEMATICS (MEI)

4771 Decision Mathematics 1

PRINTED ANSWER BOOK

Candidates answer on this Printed Answer Book.

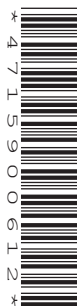
OCR supplied materials:

- 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	
Centre number		Candidate number	

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

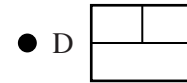
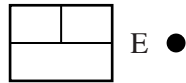
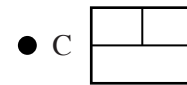
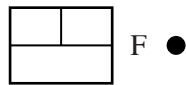
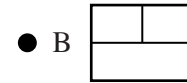
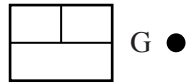
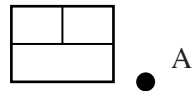
This information is the same on the Printed Answer Book and the Question Paper.

- 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.

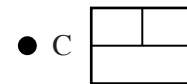
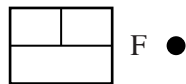
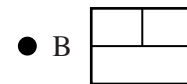
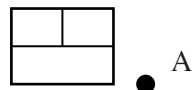
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Section A (24 marks)

1 (i)
& (ii)

Spare copy of diagram for 1(i)



[illegible]

3 (i)

 $X \bullet$ $\bullet Y$ $X \bullet$ $\bullet Y$ $\bullet Z$

'is a subset of'

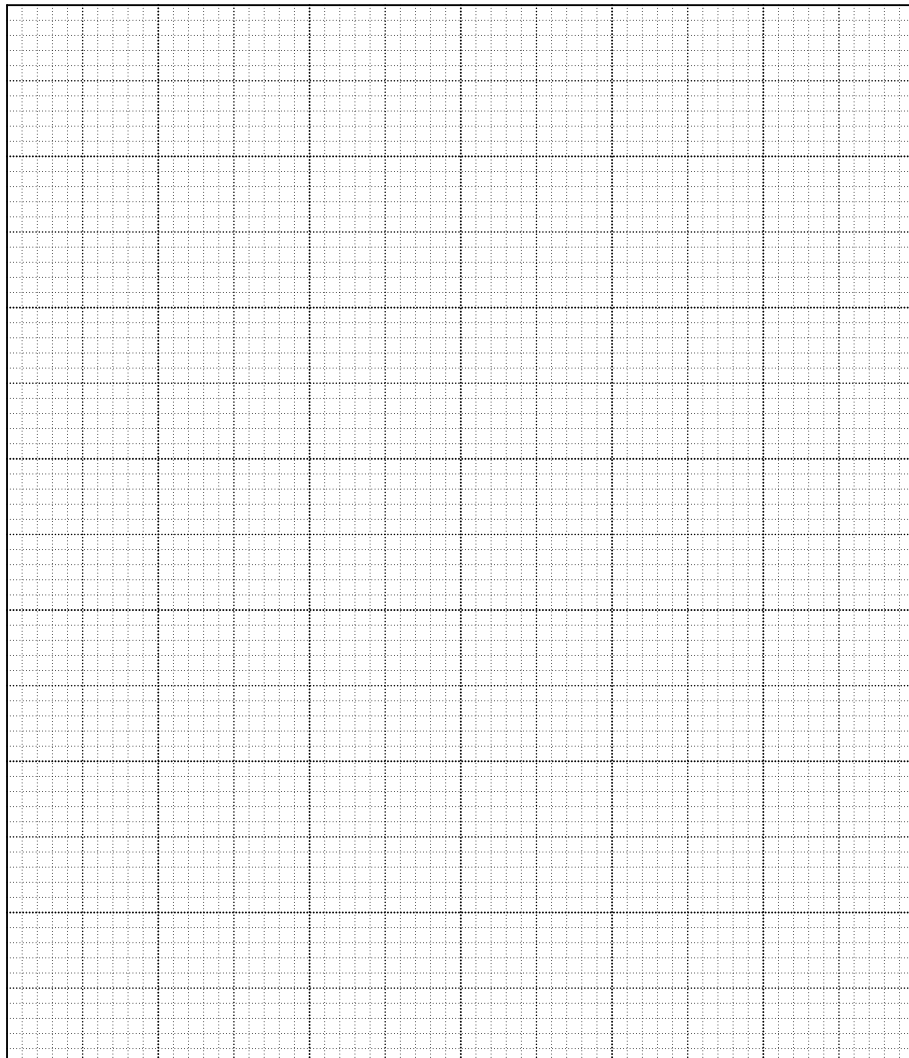
 $\bullet Z$

'shares at least one element with'

3 (ii)

PLEASE DO NOT WRITE IN THIS SPACE

Section B (48 marks)**4 (i)**

4 (ii)

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

4 (iii)	
4 (iv)	

PLEASE DO NOT WRITE IN THIS SPACE

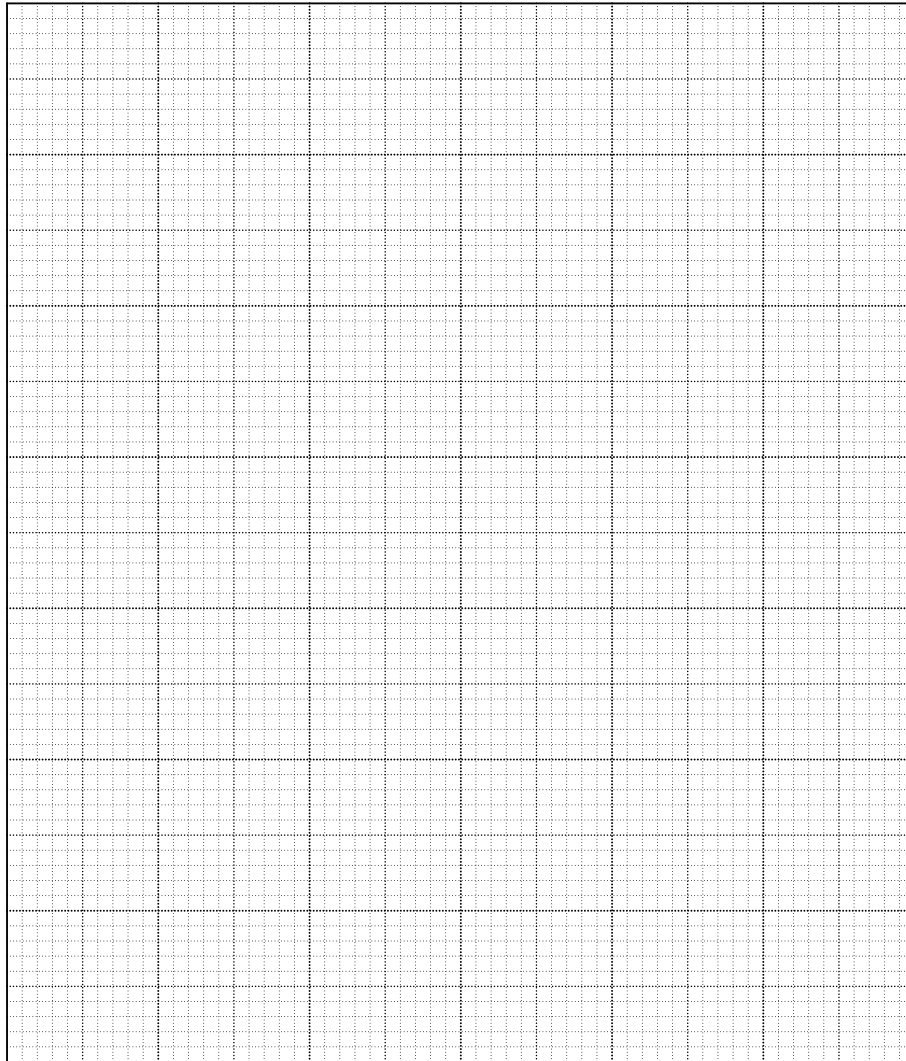
5 (i)	
5 (ii)	
5 (iii)	Random digits: 5, 9, 4, 0, 8, 1, 9, 3, 0, 5
5 (iv)	Random digits for run 2: 0, 1, 3, 7, 5, 9, 9, 8, 7, 3
	Random digits for run 3: 9, 8, 4, 4, 2, 7, 7, 4, 1, 9
	(answer space continued on next page)

5 (iv)	(continued)
	Random digits for run 4: 9, 0, 5, 1, 6, 9, 6, 0, 6, 5
	Random digits for run 5: 0, 9, 1, 8, 8, 9, 0, 6, 5, 5
5 (v)	

**6 (i)
& (ii)**

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

Spare copy of graph paper for question 4(ii)



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