

**ADVANCED SUBSIDIARY GCE
MATHEMATICS (MEI)**

Decision Mathematics 1

PRINTED ANSWER BOOK

THURSDAY 12 JUNE 2008

4771/01

Morning

Time: 1 hour 30 minutes



Candidate
Forename

Candidate
Surname

Centre
Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

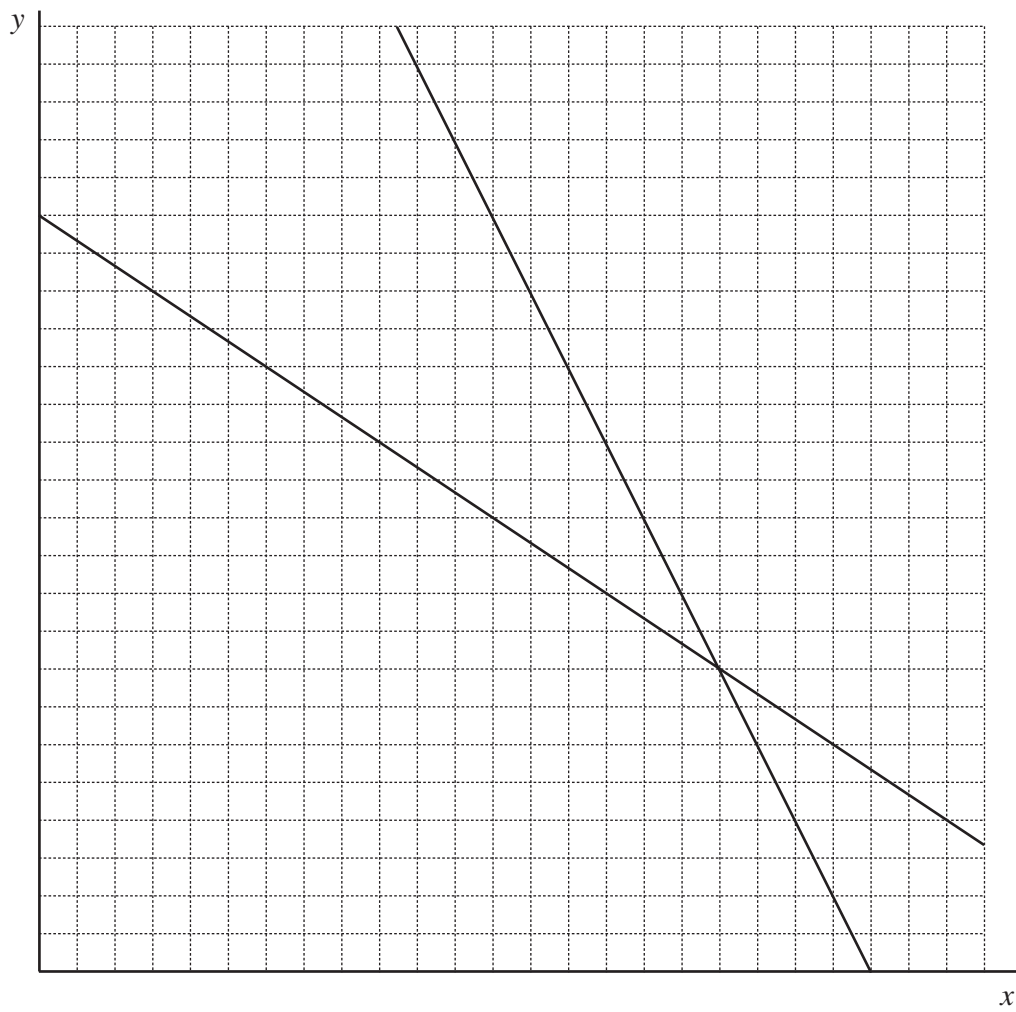
- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Write your answers in the spaces provided on the printed answer book. If extra paper is required use a 4 page answer booklet making sure that you label your work clearly.

FOR EXAMINER'S USE

Qu.	Mark
1	
2	
3	
4	
5	
6	
TOTAL	

This document consists of **7** printed pages and **1** blank page.

1



Optimal point:

Optimal value:

- 2 (i) (Do the repeated step 3s all on one line of the table.)

List	X	Y
5, 14, 153, 6, 24, 2, 14, 15		

Answer =

Number of comparisons:

(ii)

List	X	Y
5, 14, 153, 6, 24, 2, 14		

Answer =

Number of comparisons:

(iii)

(iv)

3 (i)

(ii)

(iii)

(iv)

4 (i)

(ii)

(iii) & (iv)

Simulation number	Cars arriving after Joe –										Time to bus leaving (mins)	Catches plane?
	time interval					number of passengers						
1	3	2	2	1	1	2	2	2	3	1	6	yes
2	3	1	2	2	1	4	1	2	5	1		
3	5	1	2	2	2	1	3	4	2	2		
4	4	6	3	2	4	1	1	2	2	3		
5	5	1	4	1	3	2	5	4	2	2		
6	4	4	4	2	5	3	1	4	1	4		
7	4	1	4	2	3	1	5	4	1	3		
8	2	2	2	2	2	4	3	5	1	2		
9	1	1	1	1	1	1	1	1	1	2		
10												

Random numbers for simulation number 10:

For time intervals – 31 45 36 22 10 48

For the number of passengers – 65 97 47 90 82 07

(v)

5 (a) (i)

(ii)

(b) (i)

(ii)

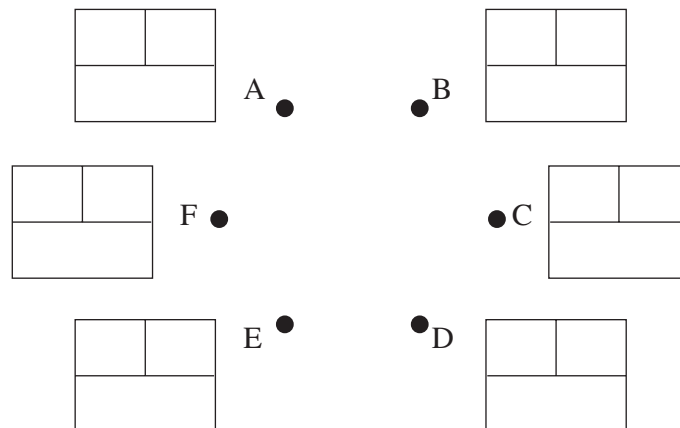
6 (i)

Order of inclusion	1					
	A	B	C	D	E	F
A	–	10	7	–	9	5
B	10	–	–	1	–	4
C	7	–	–	–	3	–
D	–	1	–	–	2	–
E	9	–	3	2	–	–
F	5	4	–	–	–	–

Arcs:

Length:

(ii) & (iii)



Arcs:

Length:

(iv)