



Oxford Cambridge and RSA

Tuesday 3 June 2025 – Afternoon

A Level Further Mathematics B (MEI)

Y433/01 Modelling with Algorithms

Printed Answer Booklet

Time allowed: 1 hour 15 minutes



You must have:

- Question Paper Y433/01 (inside this document)
- the Formulae Booklet for Further Mathematics B (MEI)
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided in the **Printed Answer Booklet**. If you need extra space use the lined page at the end of the Printed Answer Booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Where appropriate, your answer should be supported with working. Marks might be given for using a correct method, even if your answer is wrong.
- Give your final answers to a degree of accuracy that is appropriate to the context.

INFORMATION

- This document has **12** pages.

ADVICE

- Read each question carefully before you start your answer.

1(a)	
1(b)(i)	
1(b)(ii)	

2(a)

A	B	C	D	E
5	6	150		

Final output: _____

2(b)

3(a) and 3(b)(i)	
3(b)(ii)	
3(b)(iii)	

3(c)

	0	1	2	3	4	5	6	7	8	9	10	11
Worker 1												
Worker 2												
Worker 3												
Worker 4												

	11	12	13	14	15	16	17	18	19	20	21	22
Worker 1												
Worker 2												
Worker 3												
Worker 4												

3(d)

4(a)

4(b)

P	x	y	z	s_1	s_2	s_3	RHS

DO NOT WRITE IN THIS SPACE

4(c)

P	x	y	z	s_1	s_2	s_3	RHS

P	x	y	z	s_1	s_2	s_3	RHS

$k_1 =$ _____

$P =$ _____

$x =$ _____ $y =$ _____ $z =$ _____

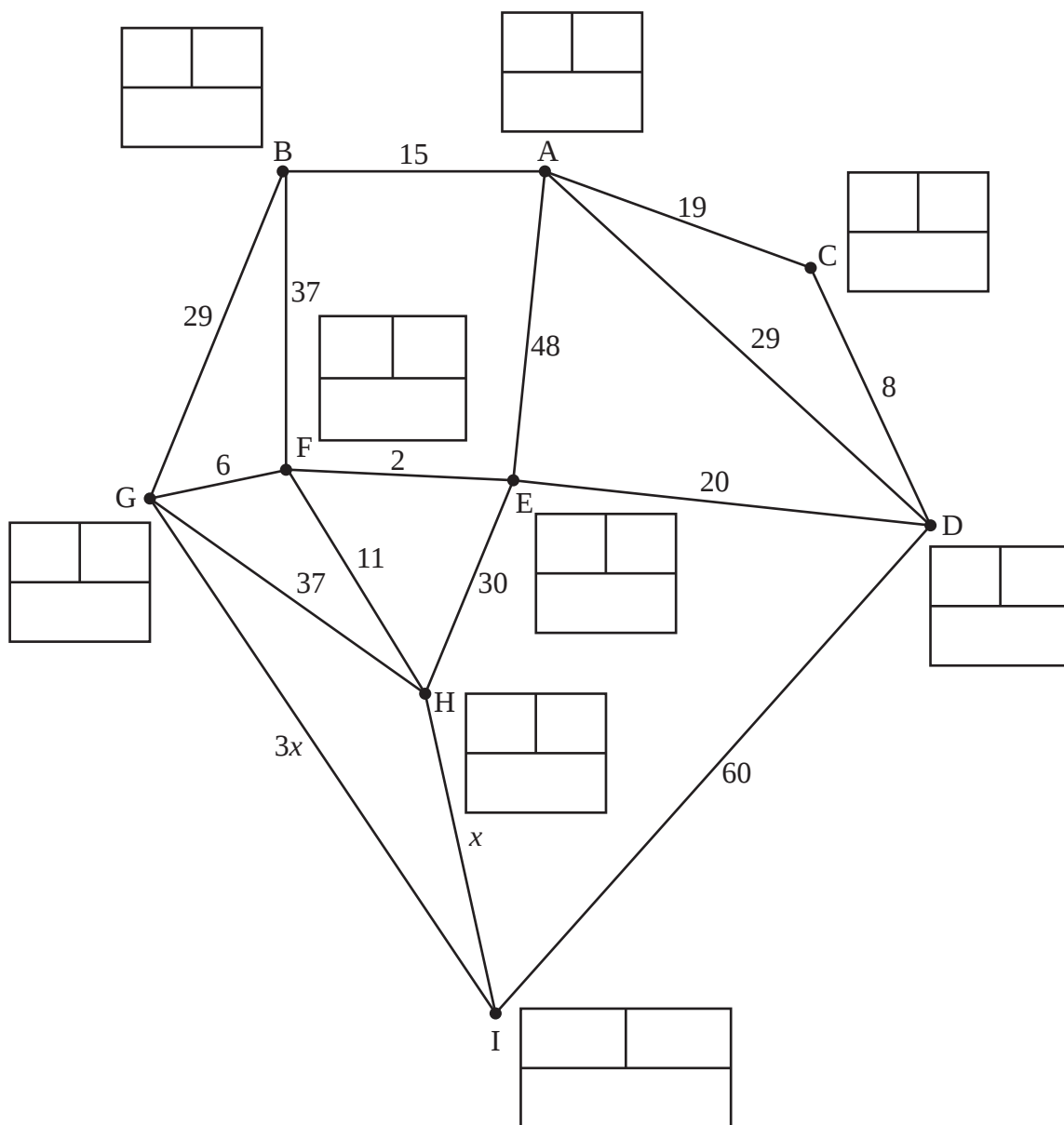
5(a)

Key:

order of labelling →

 ← label
working values (do not cross out) →

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First shortest path from A to I: _____ Length: _____

Second shortest path from A to I: _____ Length: _____

Third shortest path from A to I: _____ Length: _____

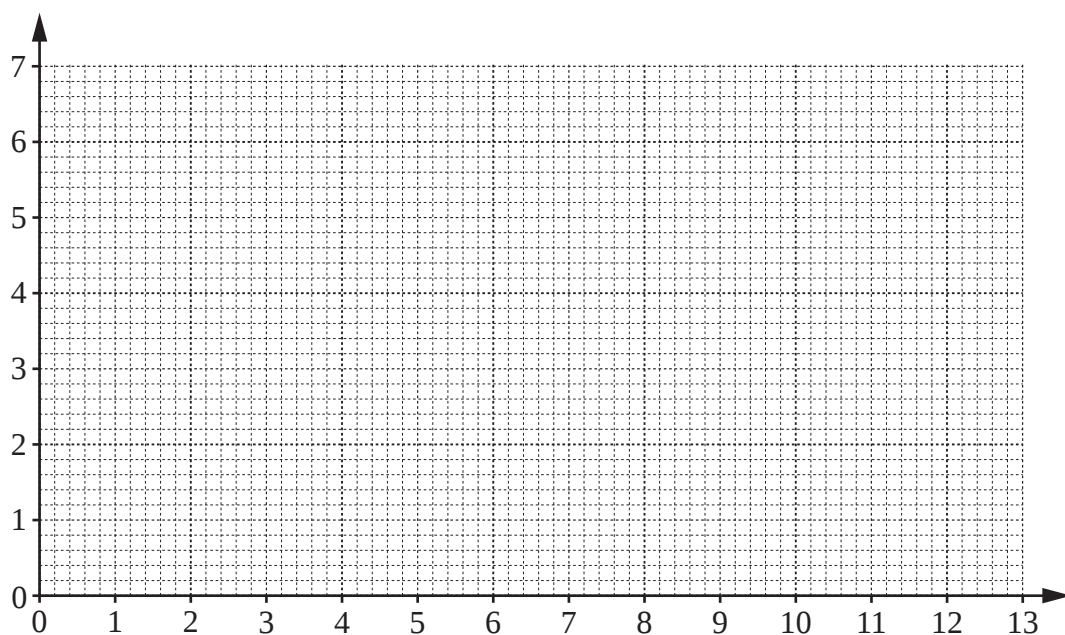
5(b)(i)	
5(b)(ii)	
5(c)	

6(a)		
6(b)		
6(c)		
6(d)		

<i>Q</i>	<i>P</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>s</i> ₁	<i>s</i> ₂	<i>s</i> ₃	<i>s</i> ₄	<i>a</i> ₁	<i>a</i> ₂	RHS

(answer space continued on next page)

6(d) (continued)



Maximum value of $P =$ _____

$x =$ _____ $y =$ _____ $z =$ _____

