

Modified Enlarged 24pt
OXFORD CAMBRIDGE AND RSA EXAMINATIONS

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
plus your additional time allowance

YOU MUST HAVE:

**Question Paper Y433/01 (with
this document)**

**the Formulae Booklet for Further
Mathematics B (MEI)**

a scientific or graphical calculator

Please write clearly in black ink.

Centre number

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Candidate number

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First name(s)

Last name

READ INSTRUCTIONS OVERLEAF



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 pages 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.

ADVICE

Read each question carefully before you start your answer.

[illegible]

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)

(c)

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

[illegible]

[illegible]

4(a)

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P	x	y	z	s_1	s_2	s_3	RHS

4(c)

P	x	y	z	s_1	s_2	s_3	RHS

P	x	y	z	s_1	s_2	s_3	RHS

$k_1 =$ _____

$P =$ _____

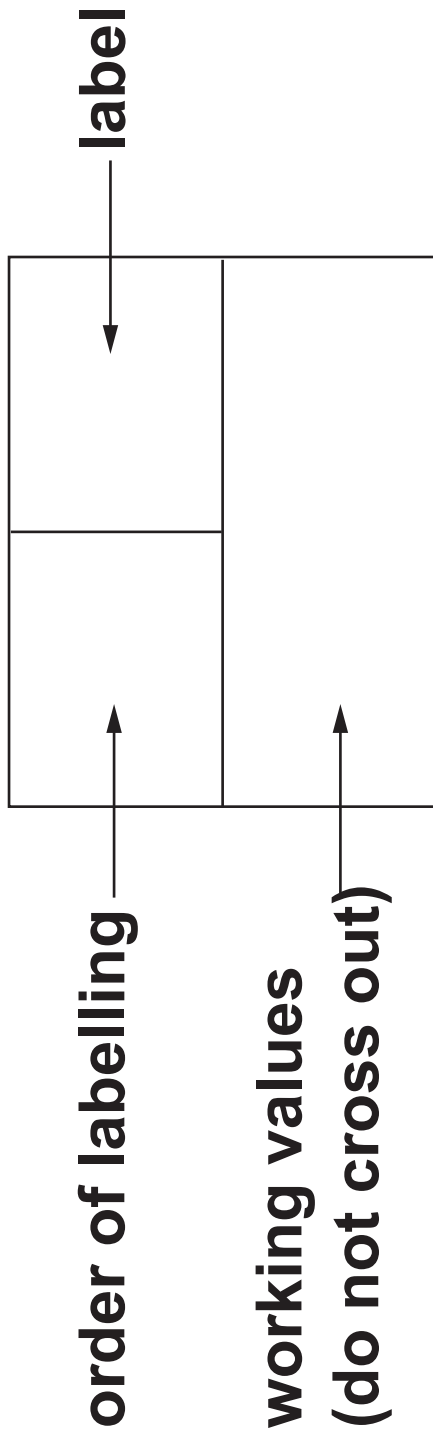
$x =$ _____

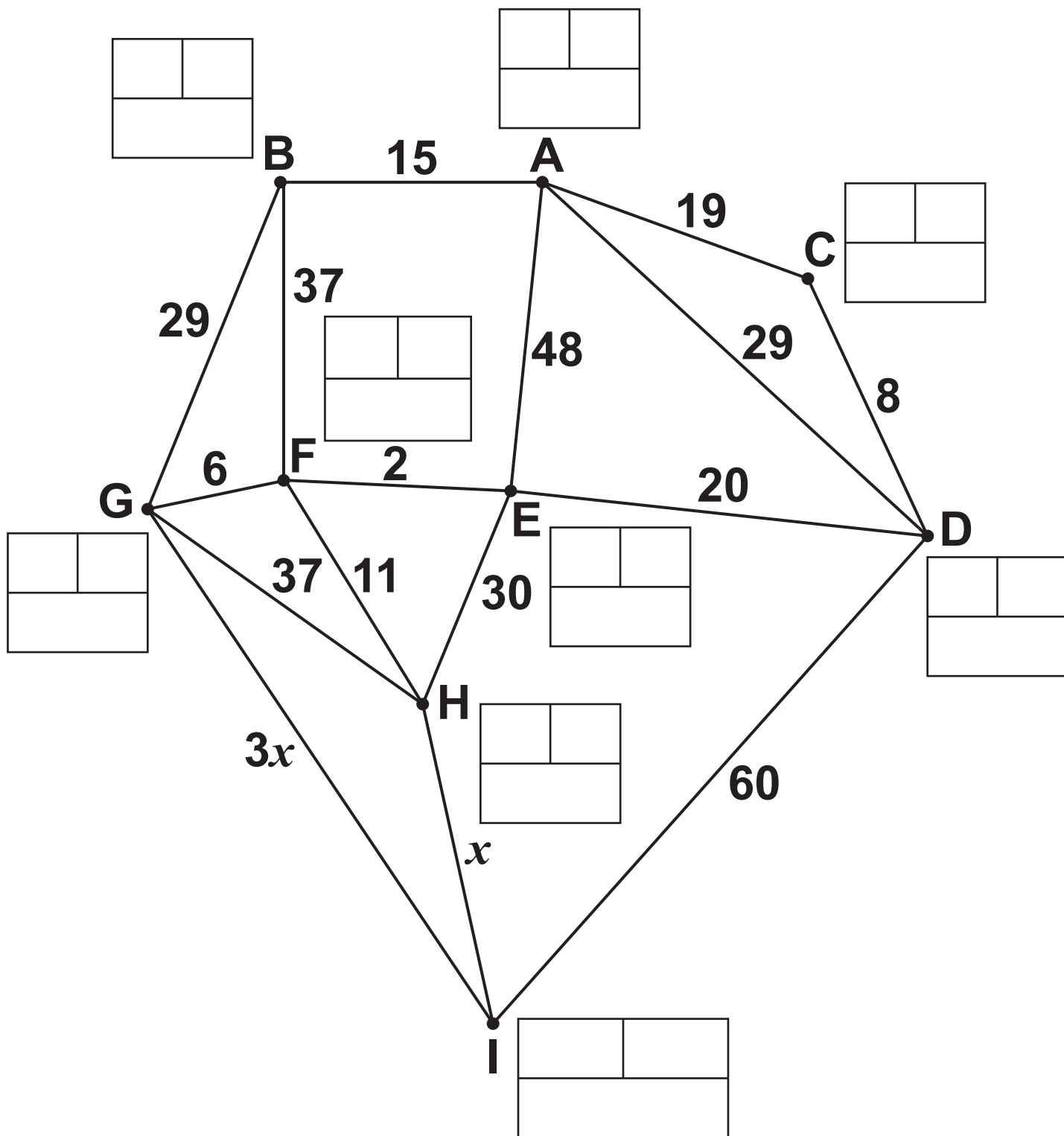
$y =$ _____

$z =$ _____

5(a)

Key:





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)

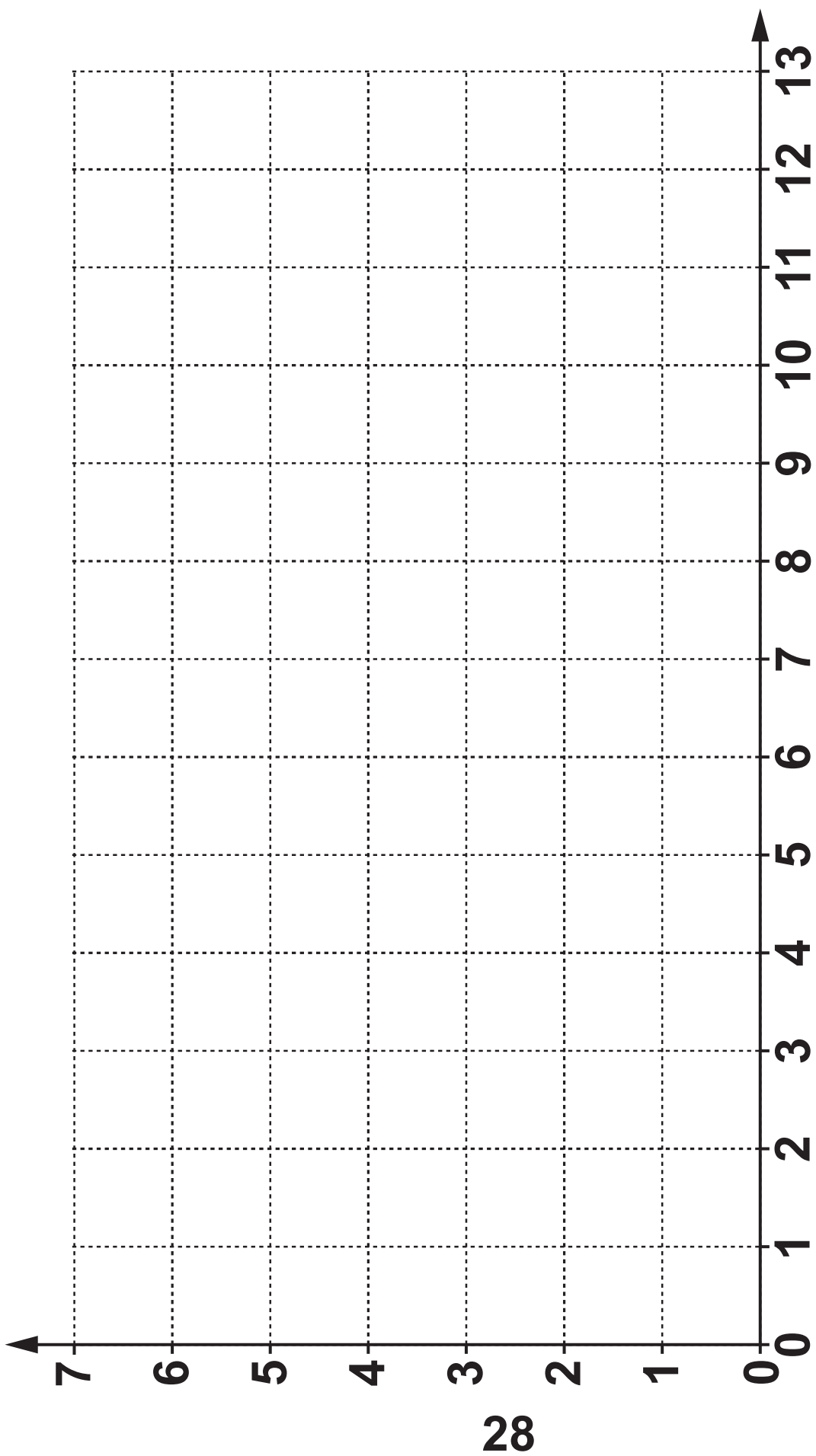
6(a)

6(b)

<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

6(c)

6(d)



Maximum value of $P =$ _____

$x =$ _____

$y =$ _____

$z =$ _____

EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.

[illegible]



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