

Write your name here

Surname	Other names
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**Pearson Edexcel**  
**Level 3 GCE**

Centre Number

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Candidate Number

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# Further Mathematics

**Advanced**

**Further Mathematics Option 1**

**Paper 3: Decision Mathematics 1**

**Further Mathematics Option 2**

**Paper 4: Decision Mathematics 1**

Sample Assessment Material for first teaching September 2017

Paper Reference

**9FM0/3D**

**9FM0/4D**

## Answer Book

Do not return the question paper with the answer book.

Total Marks

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Turn over ►

S54443A

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Pearson

1.

DO NOT WRITE IN THIS AREA

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DO NOT WRITE IN THIS AREA

Question 1 continued

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Lined writing area for the answer to Question 1.

**(Total for Question 1 is 4 marks)**

2.

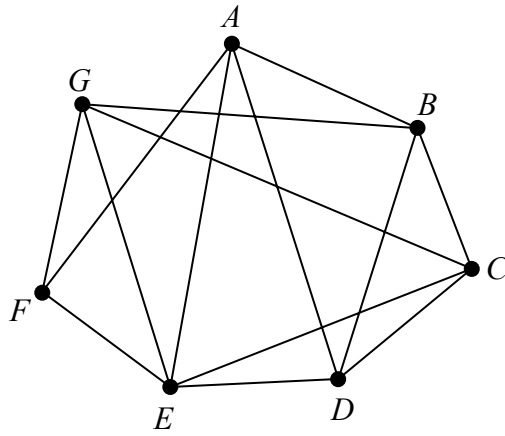


Figure 1

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



3.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

	A	B	C	D	E	F	G
A	–	17	24	16	21	18	41
B	17	–	35	25	30	31	$x$
C	24	35	–	28	20	35	32
D	16	25	28	–	29	19	45
E	21	30	20	29	–	22	35
F	18	31	35	19	22	–	37
G	41	$x$	32	45	35	37	–

## Question 3 continued

	A	B	C	D	E	F	G
A	–	17	24	16	21	18	41
B	17	–	35	25	30	31	$x$
C	24	35	–	28	20	35	32
D	16	25	28	–	29	19	45
E	21	30	20	29	–	22	35
F	18	31	35	19	22	–	37
G	41	$x$	32	45	35	37	–

(Total for Question 3 is 11 marks)

4.

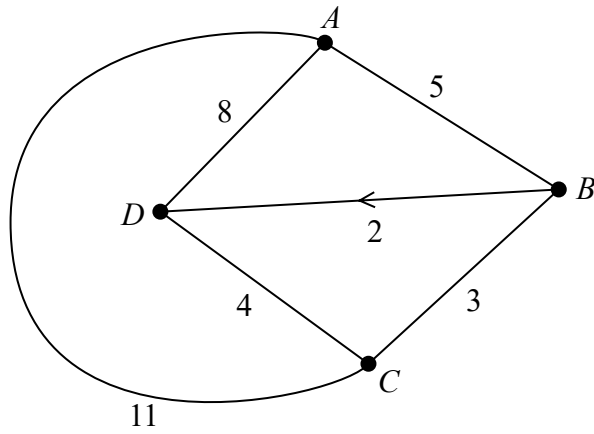


Figure 3

DO NOT WRITE IN THIS AREA

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(b)

	A	B	C	D
A	–	5	11	8
B	5	–	3	2
C	11	3	–	4
D	8	$\infty$	4	–

	A	B	C	D
A	A	B	C	D
B	A	B	C	D
C	A	B	C	D
D	A	B	C	D

	A	B	C	D
A				
B				
C				
D				

	A	B	C	D
A				
B				
C				
D				

	A	B	C	D
A				
B				
C				
D				

	A	B	C	D
A				
B				
C				
D				





5.

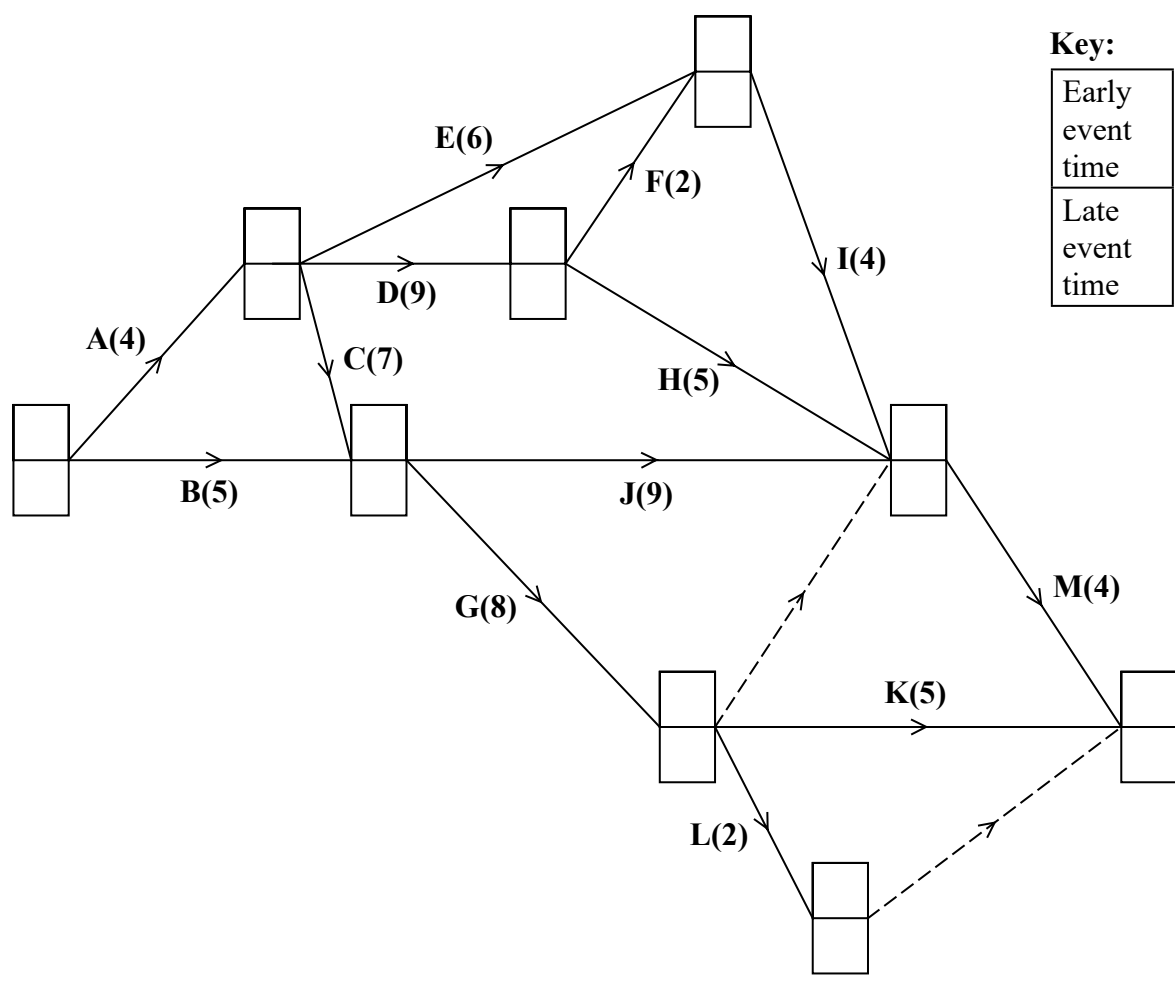
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6.



**Diagram 1**

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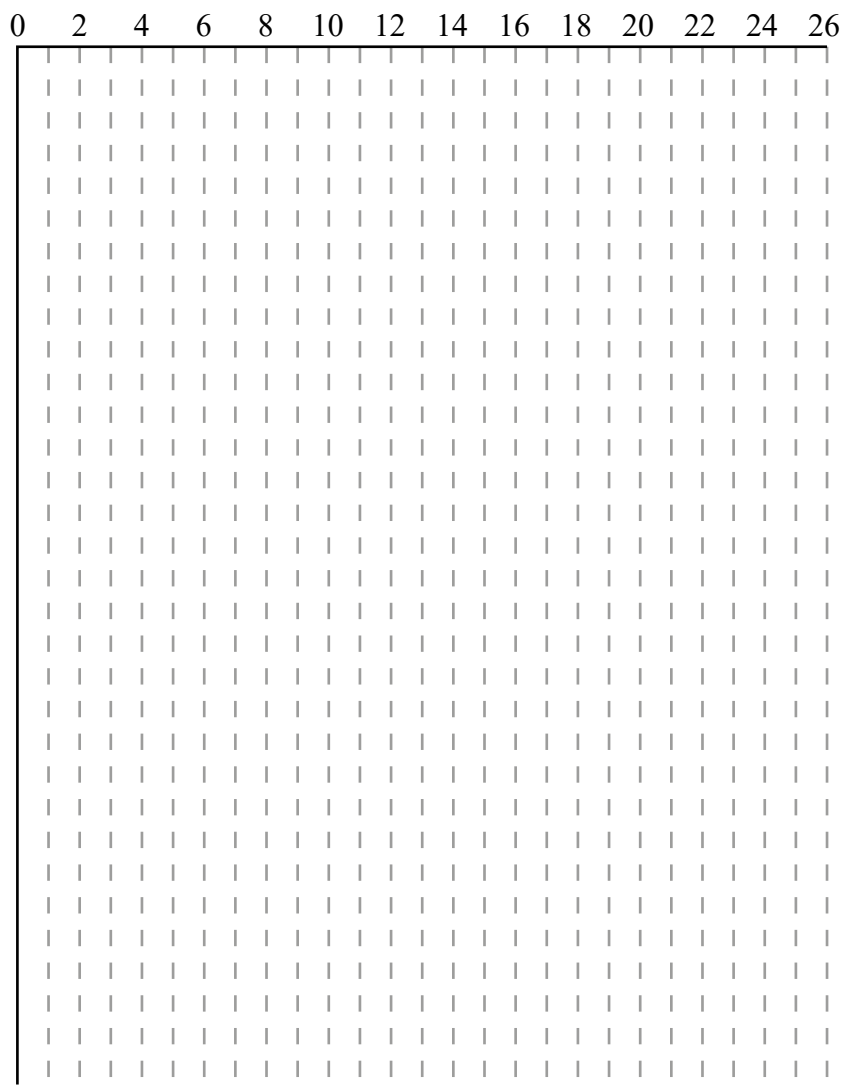
DO NOT WRITE IN THIS AREA

Question 6 continued

DO NOT WRITE IN THIS AREA

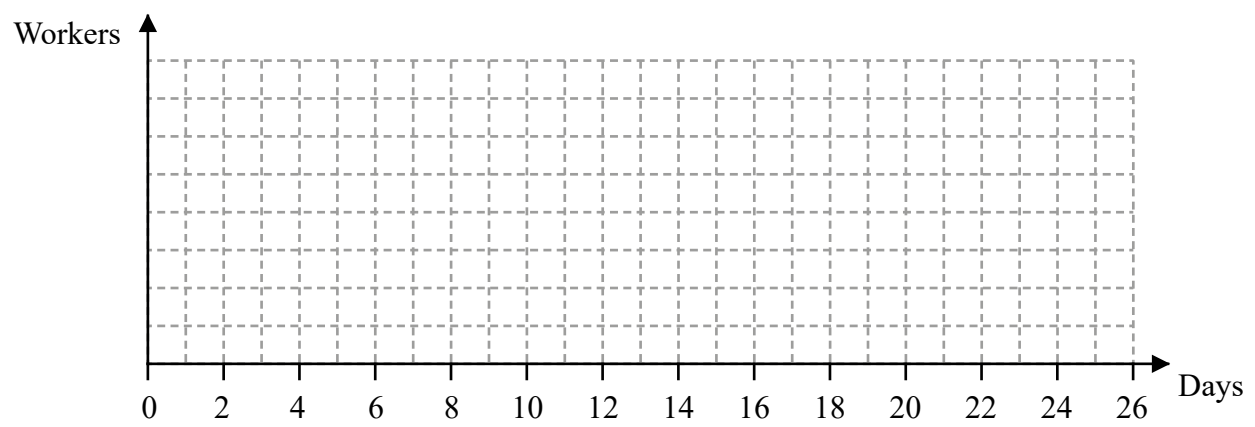
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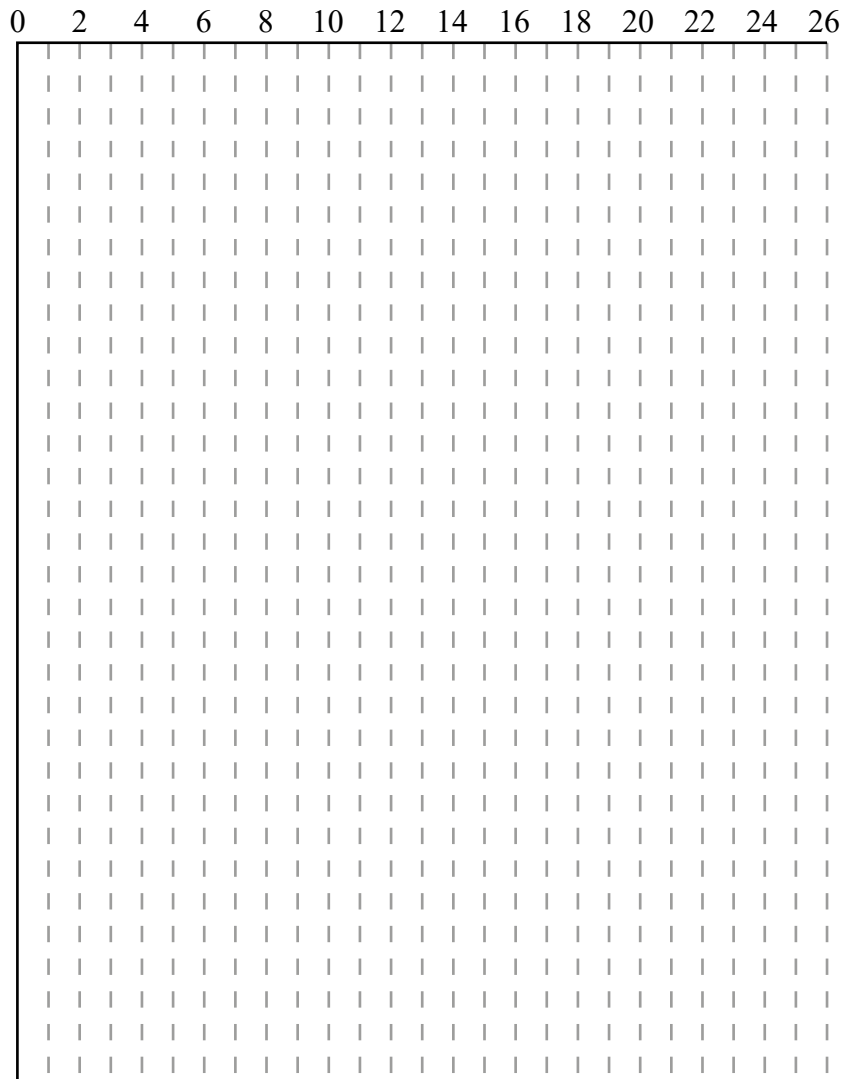
Grid 1

(There is a spare grid on the next page)



Grid 2

**Question 6 continued**



**Copy of Grid 1**

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**(Total for Question 6 is 12 marks)**

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7.

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b.v.	$x$	$y$	$z$	$s_1$	$s_2$	$s_3$	$t_1$	Value
$s_1$	0	2	1	1	0	2	-2	19
$s_2$	0	4	0	0	1	1	-1	12
$x$	1	0	0	0	0	-1	1	3
$P$	0	-2	-2	0	0	-3	$3 + M$	9

b.v.	$x$	$y$	$z$	$s_1$	$s_2$	$s_3$	$t_1$	Value	Row Ops
$P$									

b.v.	$x$	$y$	$z$	$s_1$	$s_2$	$s_3$	$t_1$	Value	Row Ops
$P$									

**Question 7 continued**

b.v.	$x$	$y$	$z$	$s_1$	$s_2$	$s_3$	$t_1$	Value	Row Ops
$P$									

b.v.	$x$	$y$	$z$	$s_1$	$s_2$	$s_3$	$t_1$	Value	Row Ops
$P$									

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**(Total for Question 7 is 12 marks)**

**TOTAL FOR PAPER IS 75 MARKS**

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