

Write your name here

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Pearson Edexcel
International
Advanced Level

Centre Number

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Candidate Number

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Decision Mathematics D1

Advanced/Advanced Subsidiary

Wednesday 22 January 2014 – Morning
Time: 1 hour 30 minutes

Paper Reference
WDM01/01

Answer Book

Do not return the question paper with the answer book.

Total Marks

| |
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Turn over ►

P43013A

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Question 1 continued

Lined area for writing the answer to Question 1.

(Total 8 marks)

Q1



2.

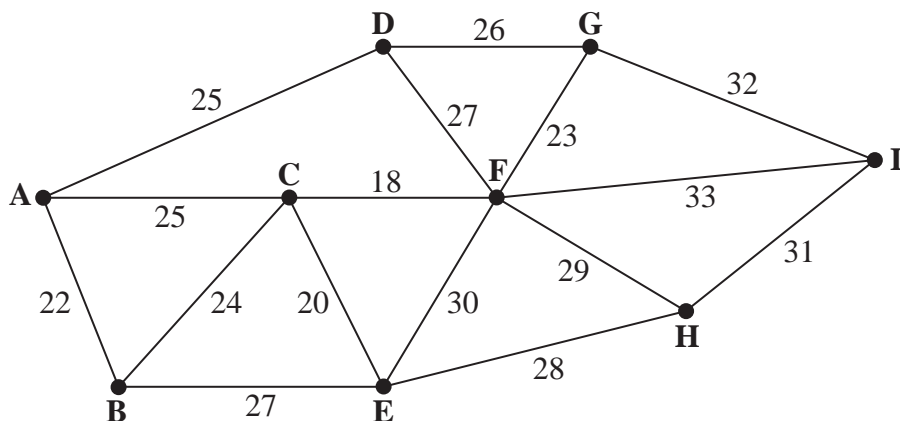


Figure 1

(a)

(b) Minimum cost: £ _____



Question 2 continued

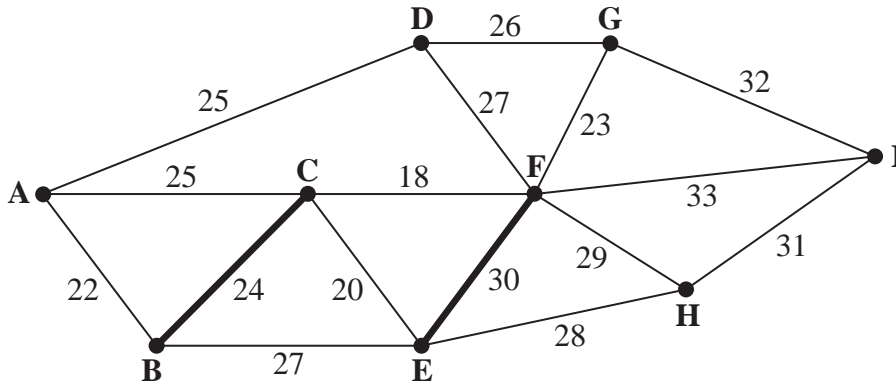


Diagram 1

(c) (i)

(c) (ii)

(d) New minimum cost: £ _____

(Total 10 marks)

Q2

| | |
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| | |
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Question 3 continued

| | | | |
|------------|-----------|------------|-----------|
| B ● | ●1 | B ● | ●1 |
| C ● | ●2 | C ● | ●2 |
| H ● | ●3 | H ● | ●3 |
| K ● | ●4 | K ● | ●4 |
| S ● | ●5 | S ● | ●5 |
| T ● | ●6 | T ● | ●6 |

(Total 8 marks)

Q3



4.

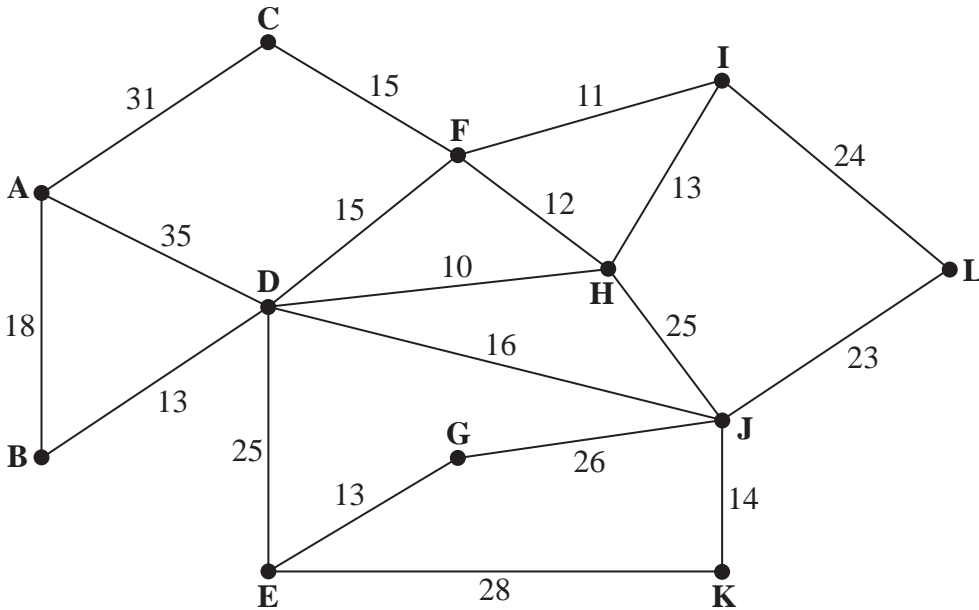


Figure 4

[The total weight of the network is 367 metres]



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Question 4 continued

[Lined area for writing answers]

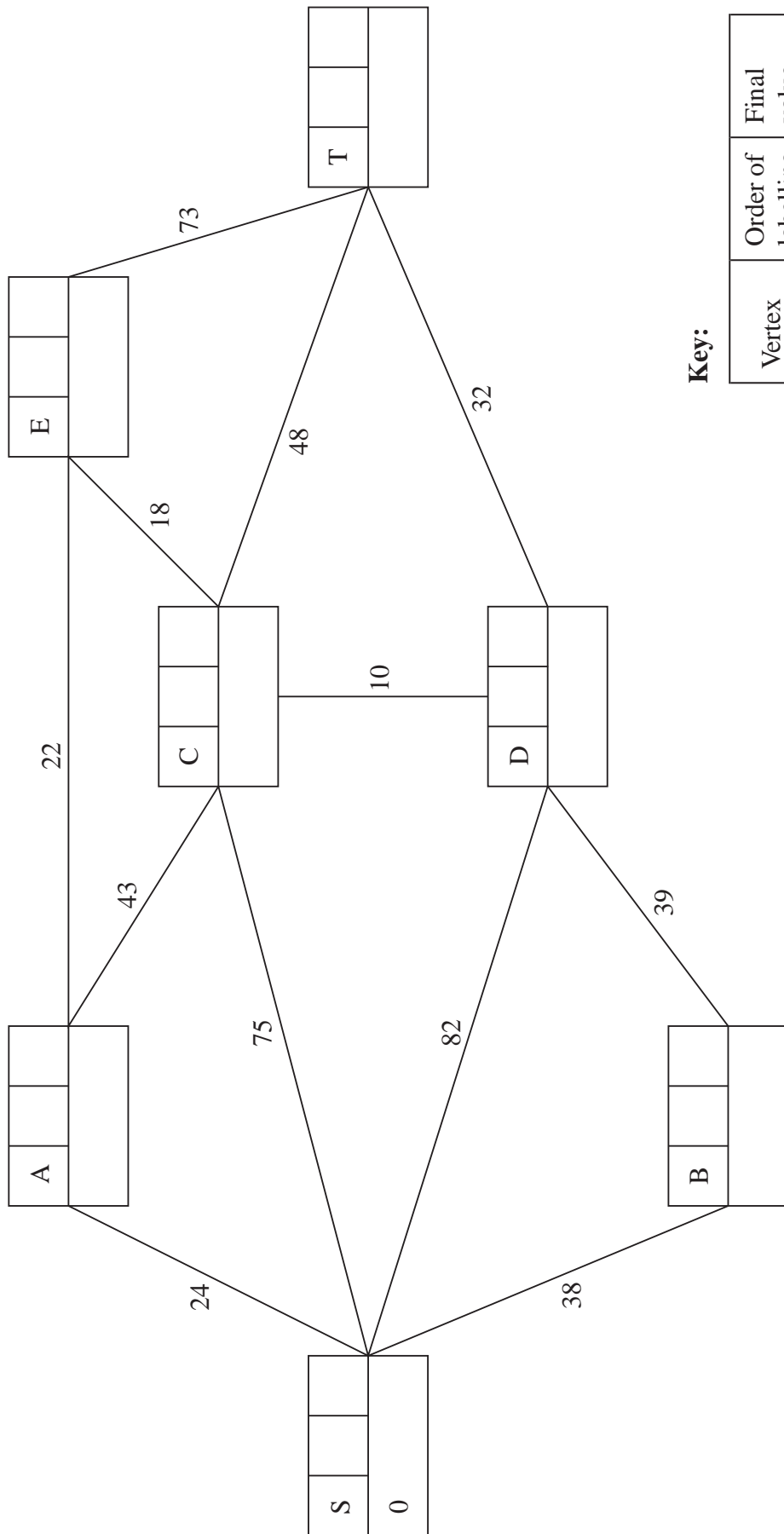
(Total 8 marks)

Q4



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5. (a)



Key:

| Vertex | Order of labelling | Final value |
|----------------|--------------------|-------------|
| Working values | | |



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Question 5 continued

Shortest route from S to T: _____

Length of shortest route from S to T: _____

(b)

First shortest route from S to T excluding arc CE: _____

Second shortest route from S to T excluding arc CE: _____

Length of shortest route from S to T excluding arc CE: _____

(Total 9 marks)

Q5



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6.

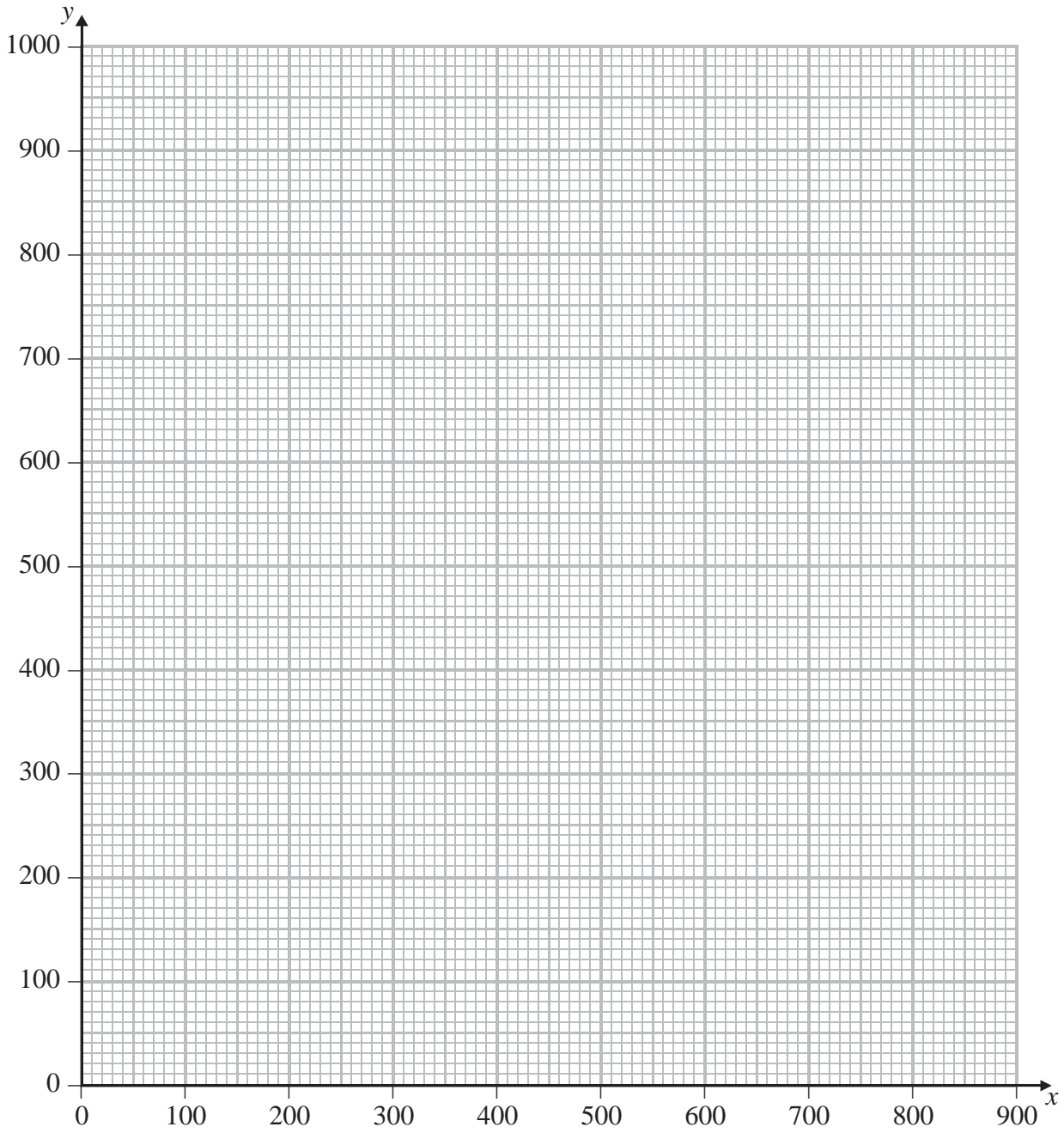


Diagram 1



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Question 6 continued

Lined writing area for the answer to Question 6.

Q6

(Total 12 marks)

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7. (a)

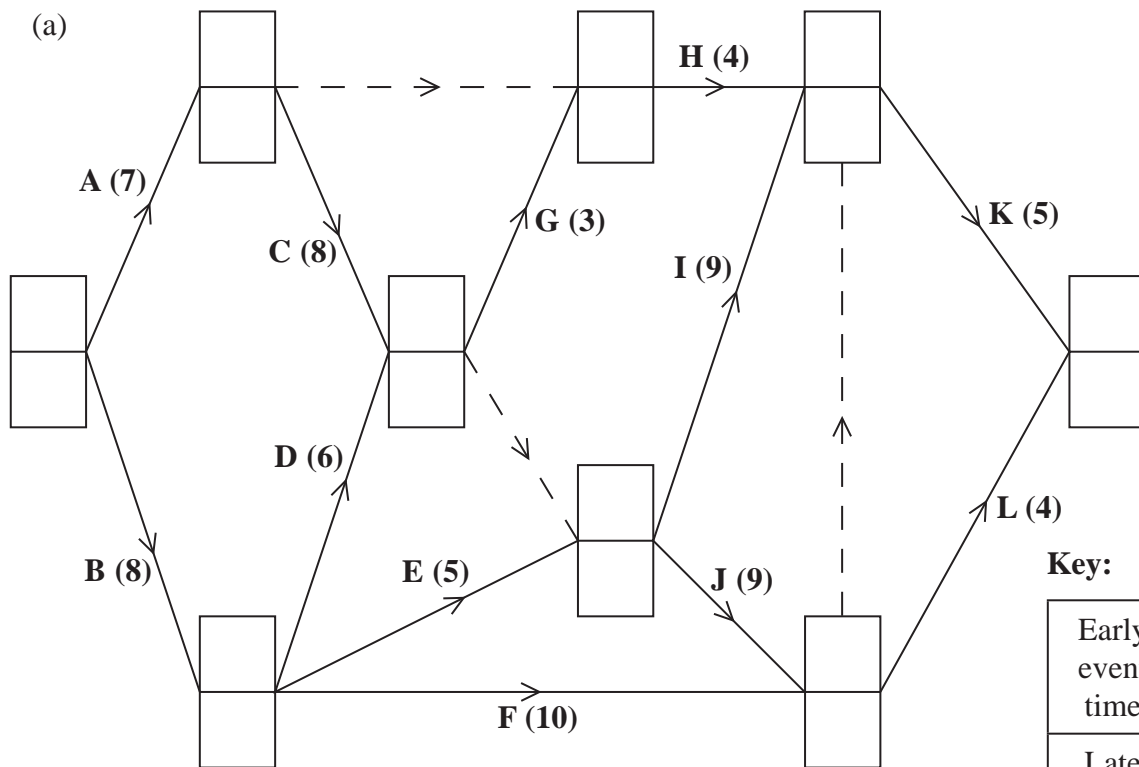


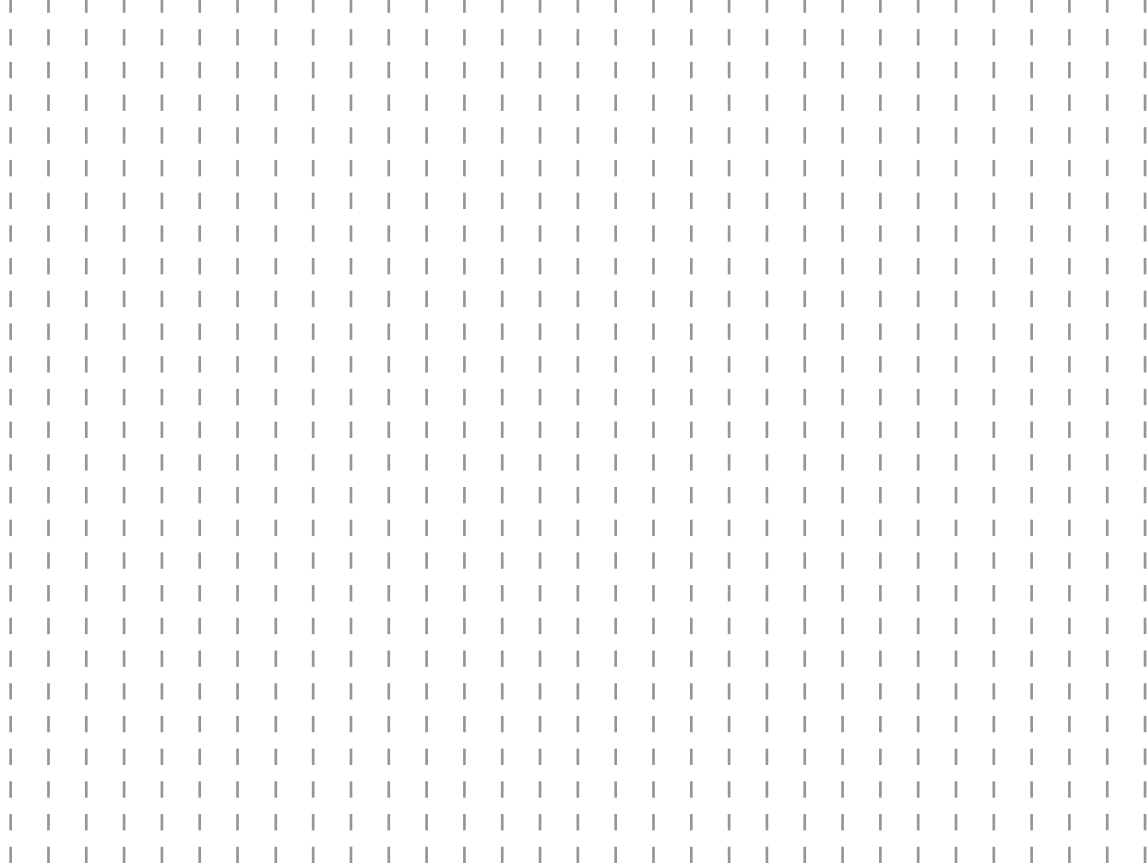
Diagram 1

Key:

| |
|------------------|
| Early event time |
| Late event time |

(b)

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30



Grid 1

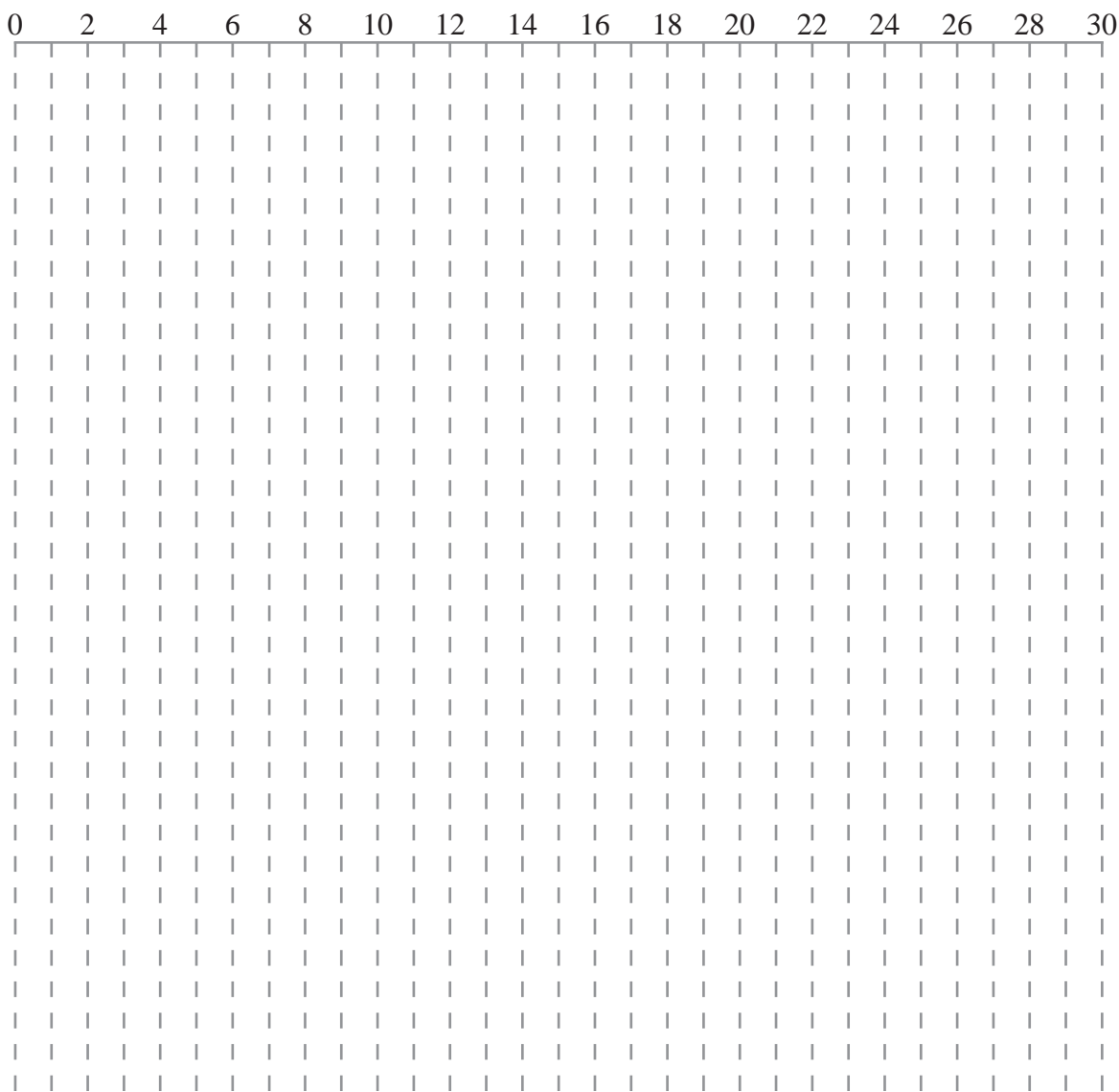


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Question 7 continued

(c)

(d)



Grid 2

(Total 14 marks)

Q7

| | |
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| | |
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8.

Lined area for student response, consisting of numerous horizontal lines.

Q8

(Total 6 marks)

TOTAL FOR PAPER: 75 MARKS

END

