

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
AS GCE**

4771/01

**MATHEMATICS (MEI)
Decision Mathematics 1
PRINTED ANSWER BOOK**

WEDNESDAY 15 JUNE 2016: Morning

**DURATION: 1 hour 30 minutes
plus your additional time allowance**

MODIFIED ENLARGED

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|-------------------------------|--|------------------------------|--|
| Candidate forename | | Candidate surname | |
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| Centre number | | | | | | Candidate number | | | | |
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Candidates answer on this Printed Answer Book.

OCR SUPPLIED MATERIALS:

Question Paper 4771/01

OTHER MATERIALS REQUIRED:

**Scientific or graphical calculator
3 models for Question 3**

READ INSTRUCTIONS OVERLEAF



INSTRUCTIONS TO CANDIDATES

These instructions are the same on the Printed Answer Book and the Question Paper.

Write your name, centre number and candidate number in the spaces provided on the Printed Answer Book. Please write clearly and in capital letters.

WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED IN THE PRINTED ANSWER BOOK. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).

Use black ink. HB pencil may be used for graphs and diagrams only.

Read each question carefully. Make sure you know what you have to do before starting your answer.

Answer ALL the questions.

You are permitted to use a scientific or graphical calculator in this paper.

Final answers should be given to a degree of accuracy appropriate to the context.

INFORMATION FOR CANDIDATES

This information is the same on the Printed Answer Book and the Question Paper.

The number of marks is given in brackets [] at the end of each question or part question on the Question Paper.

You are advised that an answer may receive NO MARKS unless you show sufficient detail of the working to indicate that a correct method is being used.

The total number of marks for this paper is 72.

Any blank pages are indicated.

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| 1 (i) | |
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| 1 (ii) | |
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| 1 (iii) RANDOM DIGITS | |
| 1 6 4 | |
| 8 6 4 | |
| 8 7 4 | |
| 3 1 1 | |
| 5 3 2 | |
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| 1 (iv) |
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| 2 (i) |
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| 2 (iv) |
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3 (i)

Adjacency graph

front ●

● back

left ●

● right

●
base

Complement

front ●

● back

left ●

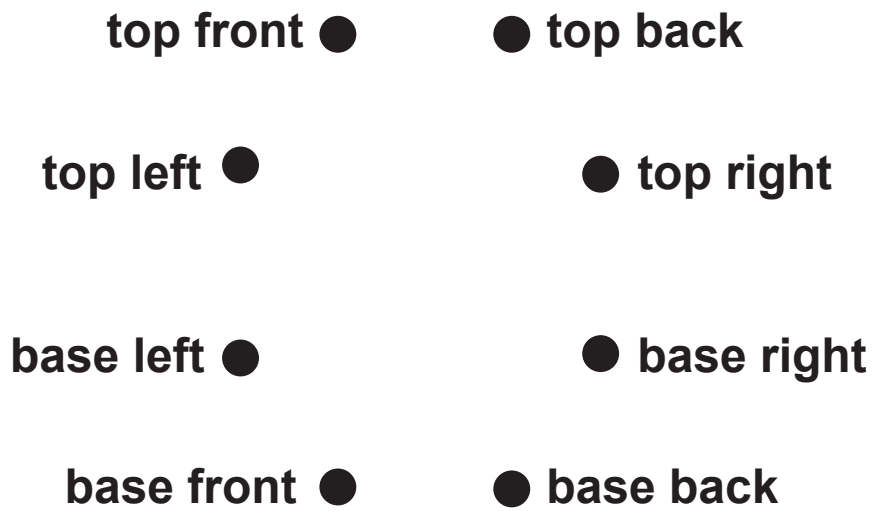
● right

●
base

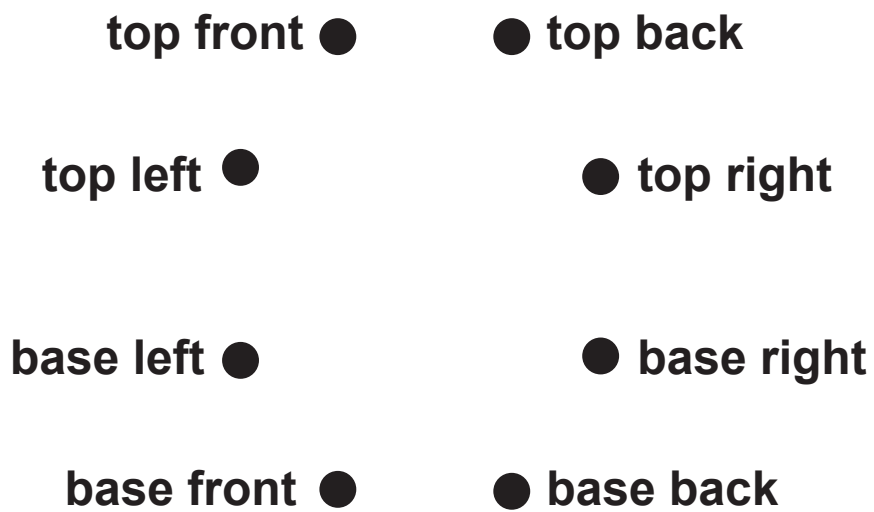
Minimum number of colours _____

3 (ii)(A)

Adjacency graph



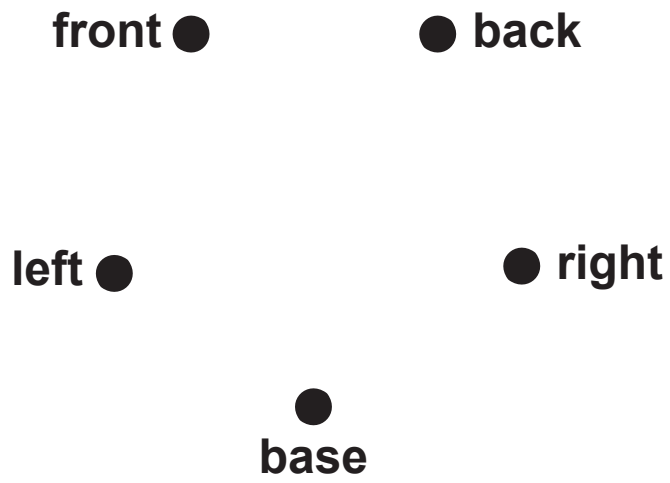
Complement



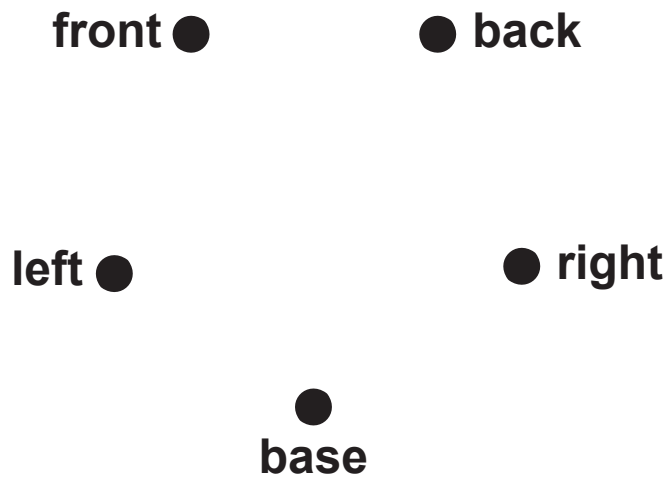
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| 3 (ii)(B) |
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SPARE TEMPLATE FOR 3 (i)

Adjacency graph

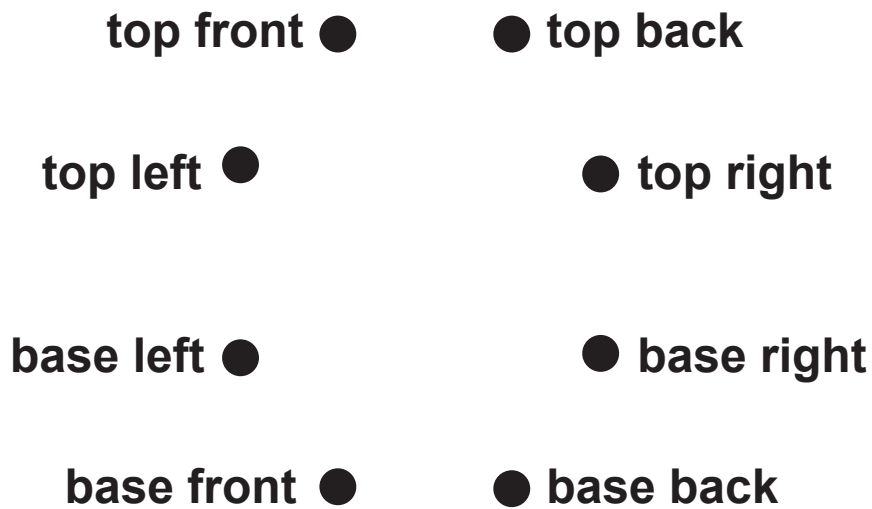


Complement

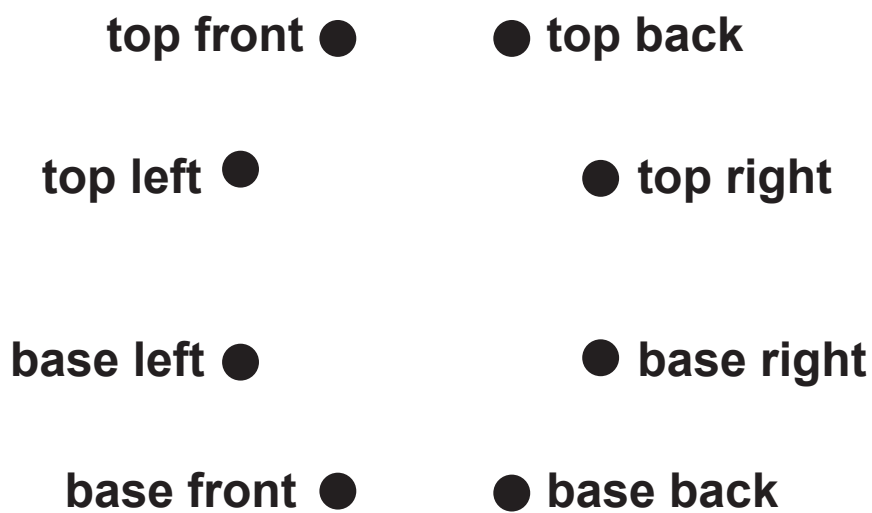


SPARE TEMPLATE FOR 3 (ii)(A)

Adjacency graph

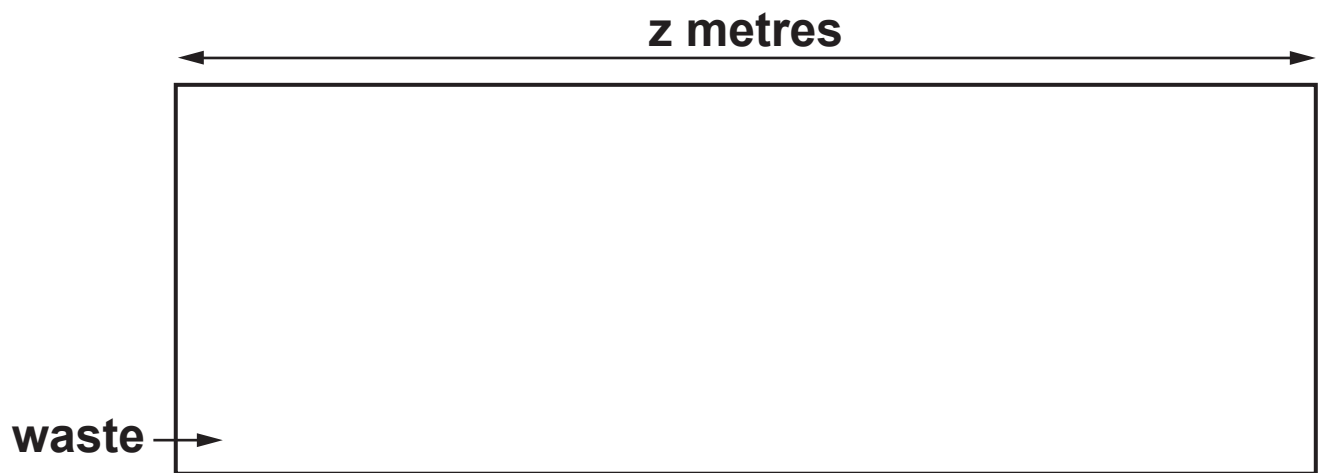


Complement



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4 (i)



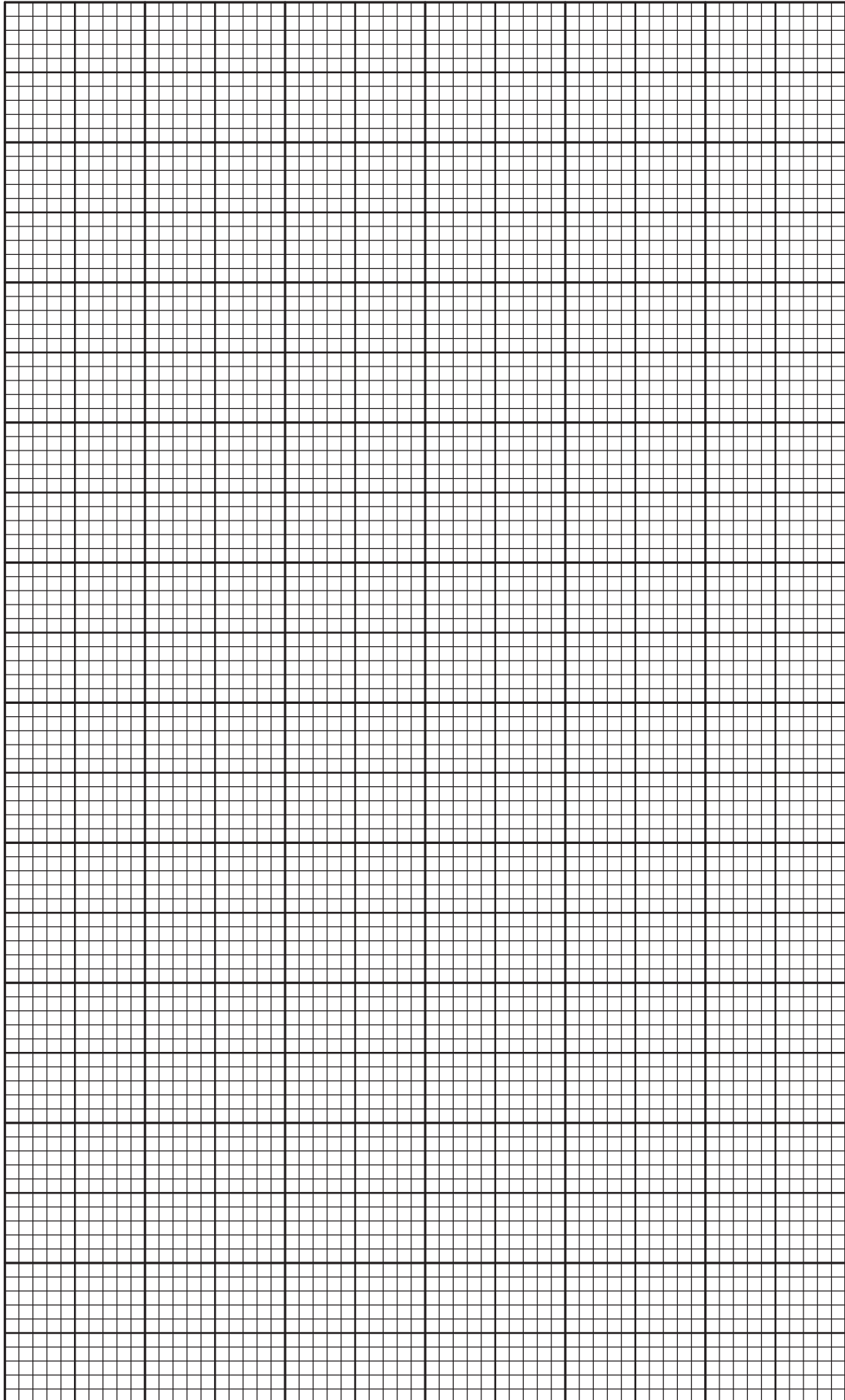
4 (ii)

4 (iii)

4 (iv)

4 (v)

4 (vi) A SPARE COPY OF THIS GRAPH CAN BE FOUND ON PAGE 25.



(ANSWER SPACE CONTINUED ON NEXT PAGE)

| 4 (vi) (CONTINUED) |
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5 (i)

| Activity | Duration (weeks) | Immediate predecessors |
|-----------------|-----------------------------|-----------------------------------|
| A | 1 | |
| B | 1 | |
| C | 1 | |
| D | 8 | |
| E | 6 | |
| F | 6 | |
| G | 6 | |
| H | 1 | |
| I | 2 | |
| J | 4 | |
| K | 2 | |

5 (ii) & (iii)

5 (iv)

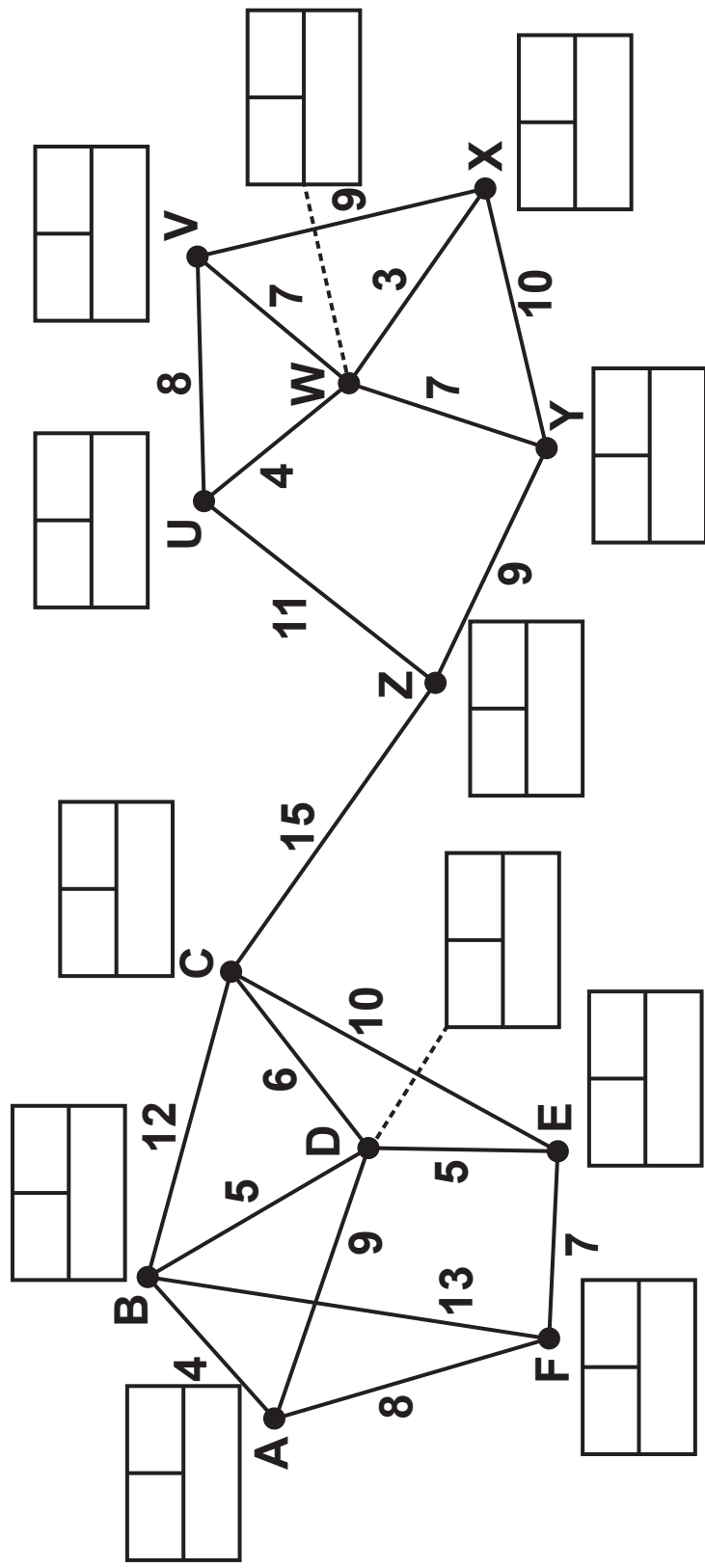
| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| Room 1 | | | | | | | | | | | | |
| Room 2 | | | | | | | | | | | | |
| Room 3 | | | | | | | | | | | | |
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SPARE FOR 5 (iv)

| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| Room 1 | | | | | | | | | | | | |
| Room 2 | | | | | | | | | | | | |
| Room 3 | | | | | | | | | | | | |
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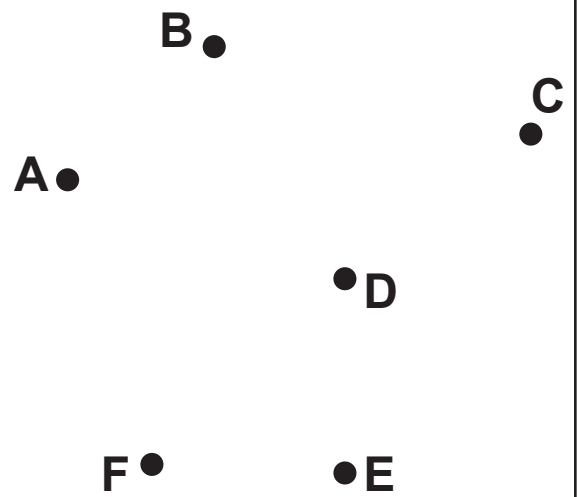
SPARE SPACE FOR 5 (ii) & (iii)

6 (a) (i)

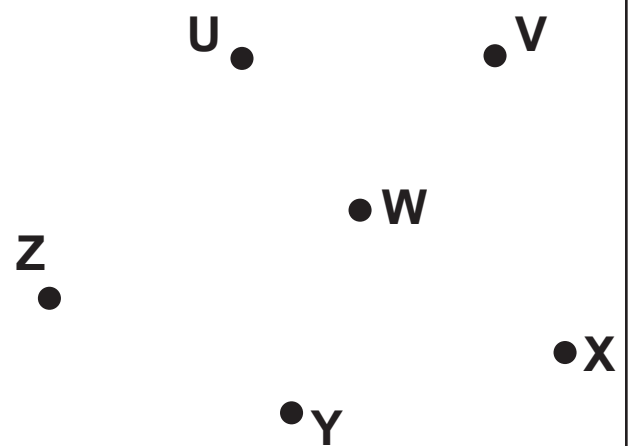


6 (a)(ii)

6 (b)(i)

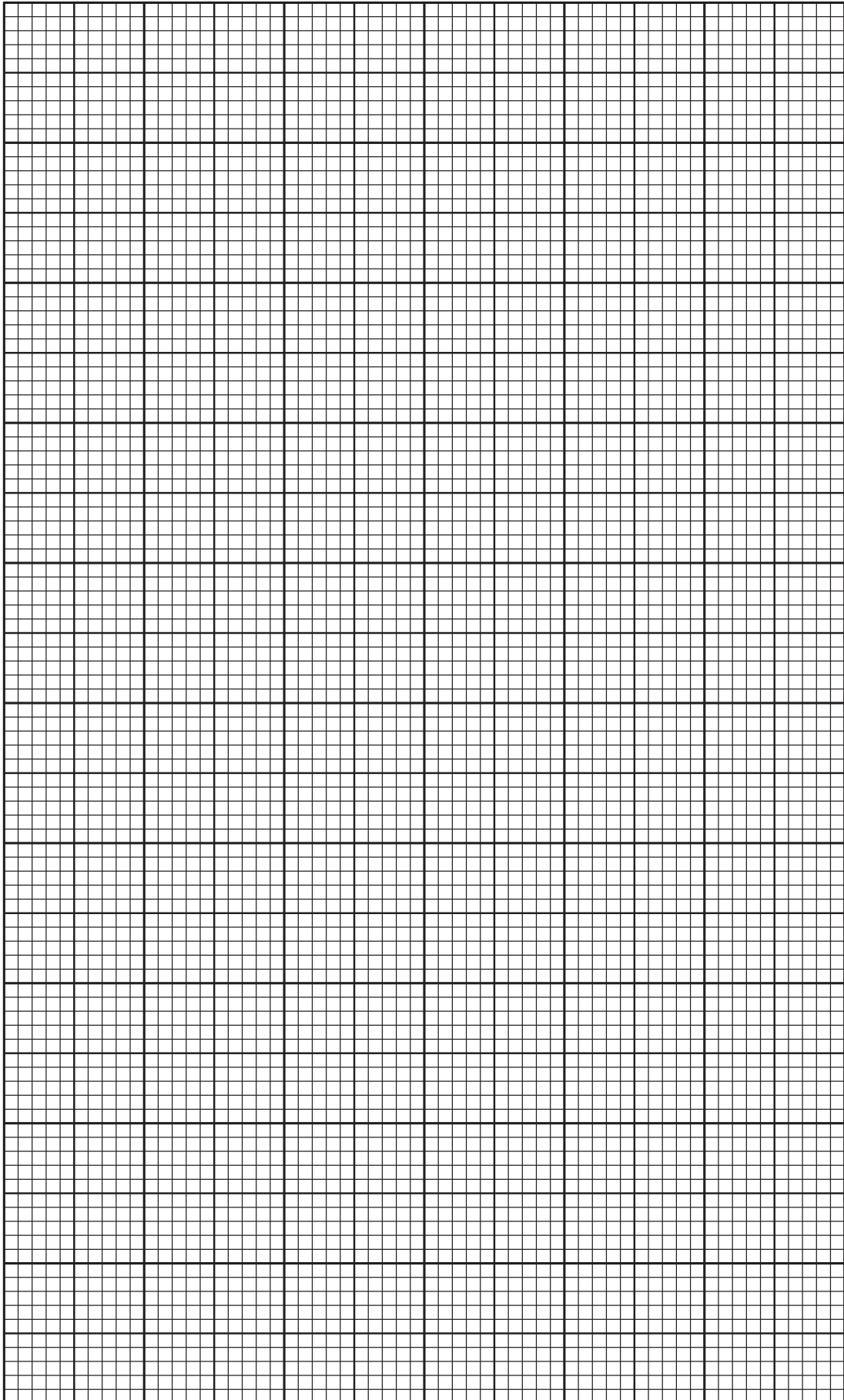


6 (b)(ii)



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| 6 (b)(iii) |
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4 (vi) SPARE COPY OF GRAPH FOR QUESTION 4(vi).



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