



**GCSE**

**3300U10-1**

**TUESDAY, 23 MAY 2023 – MORNING**

**MATHEMATICS**

**UNIT 1: NON – CALCULATOR**

**FOUNDATION TIER**

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

**THE USE OF A CALCULATOR IS NOT PERMITTED IN THIS EXAMINATION**

**Surname:** \_\_\_\_\_

**First name(s):** \_\_\_\_\_

**Centre Number:** \_\_\_\_\_

**Candidate Number:** **0** \_\_\_\_\_

**For Examiner's use only**

<b>Question</b>	<b>Maximum Mark</b>	<b>Mark Awarded</b>
1.	5	
2.	2	
3.	2	
4.	4	
5.	2	
6.	6	
7.	2	
8.	2	
9.	2	
10.	5	
11.	3	
12.	2	
13.	4	
14.	2	
15.	3	
16.	3	
17.	3	
18.	5	
19.	6	
20.	2	
<b>Total</b>	<b>65</b>	

**(Turn over)**

**ADDITIONAL MATERIALS**

A ruler, a protractor and a pair of compasses may be required.

**ITEMS INCLUDED WITH QUESTION PAPER**

A separate Formula List.

A separate Diagram Booklet.

Model for Question 9.

Cut out shapes for Question 2 and Question 20.

**The Diagram Booklet MUST be handed in to the invigilators and sent for marking.**

**INSTRUCTIONS TO CANDIDATES**

Use black ink, black ball – point pen, black felt tip or your usual method.

Write your name, centre number and candidate number in the spaces on the front cover.

Answer ALL questions.

Write your answers in the spaces provided.

If you run out of space, use the additional page(s) at the back of the booklet.

Question numbers must be given for the work written on the additional page(s).

Take  $\pi$  as 3.14

**INFORMATION FOR CANDIDATES**

**You should give details of your method of solution when appropriate.**

**Unless stated, diagrams are not drawn to scale.**

**Scale drawing solutions will not be acceptable where you are asked to calculate.**

**The number of marks is given in brackets at the end of each question or part – question.**

**In question 6, the assessment will take into account the quality of your organisation, communication and accuracy in writing.**

1. (a) Write the number sixty thousand and forty – three in figures.

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[1 mark]

- (b) Write down the value of the 7 in the number 137 520

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[1 mark]

continued on the next page . . .

(Turn over)

**Question 1 continued**

**1. (c) Divide 504 by 8**

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**[1 mark]**

**(d) Subtract 394 from 800**

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**[1 mark]**

**continued on the next page . . .**

**(Turn over)**

**Question 1 continued****1. (e) Multiply 93 by 7**

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**[1 mark]****(Turn over)**

2. Look at the diagram for Question 2 in the separate Diagram Booklet. The diagram shows some shaded squares on a grid.

Shade the smallest number of squares needed to make  $AB$  a line of symmetry.

A set of cut out shapes are available for this question.

[2 marks]

3. (a) Look at the diagram for Question 3 (a) in the separate Diagram Booklet.

Measure and write down the size of angle  $y$ .

$y =$  \_\_\_\_\_<sup>o</sup>

[1 mark]

- (b) Look at the diagram for Question 3 (b) in the separate Diagram Booklet.

Draw a line through the point **C** that is perpendicular to **AB**.

[1 mark]

4. (a) Billy thinks of a number.  
Billy halves his number.  
His answer is **58**

What number did Billy think of?

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[1 mark]

- (b) Siân thinks of a different number.  
Siân squares her number.  
Her answer is **9**

What number did Siân think of?

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[1 mark]

continued on the next page . . .

(Turn over)

**Question 4 continued**

**4. (c) Calculate 40% of 120**

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**[2 marks]**

5. (a) Which of the following is equal to 0.5 kg ?

Circle the correct answer.

50 mg	500 g	500 mg	5 mg	50 g
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[1 mark]

- (b) Which of the following is equal to 700 cm ?

Circle the correct answer.

7 m	7 km	0.7 m	0.07 km	70 m
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[1 mark]

(Turn over)

**6. IN THIS QUESTION, YOU WILL BE ASSESSED ON THE QUALITY OF YOUR ORGANISATION, COMMUNICATION AND ACCURACY IN WRITING.**

**Look at the diagram for Question 6 in the separate Diagram Booklet. The diagram IS drawn accurately.**

**The diagram shows Rod A and Rod B.**

**Three of Rod A and four of Rod B are placed end to end in one straight line.**

**What is the total length of these rods?**

**You must show all your working.**

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**[4 marks + 2 marks OCW]**

7. **Catrin has a bag containing only apples, bananas and lemons.**

**She has 20 pieces of fruit altogether in her bag.**

**Catrin chooses one piece of fruit at random from her bag.**

**Look at the diagram for Question 7 in the separate Diagram Booklet.**

**The diagram shows a probability scale.**

**The probability that she chooses each type of fruit is shown on the probability scale, where**

- **A** represents apple
- **B** represents banana
- **L** represents lemon.

**How many apples does Catrin have in her bag?**

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**[2 marks]**

8. (a) The cost of one book is  $\pounds m$

What is the cost of 15 books in pounds (£) ?

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[1 mark]

(b) leuan has 20 oranges.

He gives away  $k$  oranges.

How many oranges does leuan have now?

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[1 mark]

(Turn over)

9. Ask for the model for Question 9.

The model IS made to scale.

The model represents a box.

The box is 5 cm long, 3 cm wide and  
4 cm high.

The box does NOT have a lid.

On the centimetre squared grid provided for  
Question 9 in the separate Diagram Booklet,  
complete an accurate net of the box.

The base has been drawn for you.

[2 marks]

10. Look at the diagram for Question 10 in the separate Diagram Booklet. The diagram is a coordinate grid. Each square on the grid represents a one centimetre square.

***ABCD*** is a rectangle.

***A*** is the point **(3, 4)**,

***B*** is the point **(−5, 4)**,

***C*** is the point **(−5, −2)** and

***D*** is the point **(3, −2)**

What is the perimeter of ***ABCD***?

You may use the square grid to help you.

Remember, each square on the grid represents a one centimetre square.

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Perimeter of *ABCD* = \_\_\_\_\_ cm

[5 marks]

11. Write  $\frac{2}{5}$ , 9% and 0.3 in ascending order.

You must show all your working.

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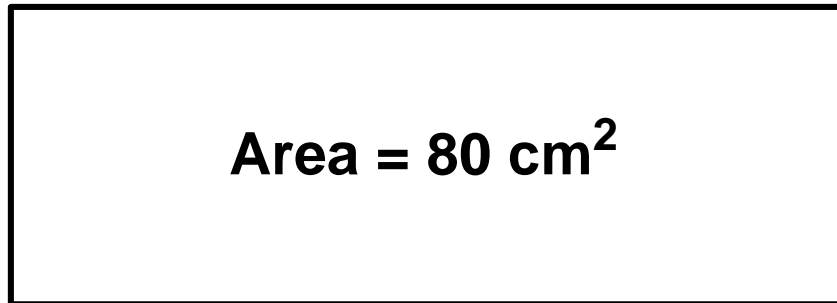
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\_\_\_\_\_                      \_\_\_\_\_                      \_\_\_\_\_  
Smallest value                       $\longrightarrow$                       Greatest value  
[3 marks]

(Turn over)

12. Look at the diagram below.

The diagram is NOT drawn to scale.



The area of this rectangle is  $80 \text{ cm}^2$

The length of the rectangle is **5** times its width.

Calculate the length and width of the rectangle.

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(Turn over)

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Length = \_\_\_\_\_ cm

Width = \_\_\_\_\_ cm

[2 marks]

13. (a) Solve the equation  $3x - 10 = 17$

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[2 marks]

(b) Simplify  $6f - 4g + 2f - 9g$

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[2 marks]

(Turn over)

14. (a) Which of the following is nearest in mass to 5 kg ?

Circle the correct answer.

7 lb	11 lb	15 lb	19 lb	23 lb
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[1 mark]

continued on the next page . . .

(Turn over)

## Question 14 continued

14. (b) Which of the following is nearest in volume to **100** litres?

Circle the correct answer.

100 pints	125 pints	150 pints
175 pints	200 pints	

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[1 mark]

(Turn over)

15. Rhian is  $n$  years old.

Samir is 7 years younger than Rhian.

Nigel is twice as old as Samir.

Write down an expression, in terms of  $n$ ,  
for Nigel's age.

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Nigel's age \_\_\_\_\_

[3 marks]

(Turn over)

16. The mean of four numbers is 7

(a) What is the total of the four numbers?

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[1 mark]

continued on the next page . . .

(Turn over)

## Question 16 continued

16. (b) Find a set of four numbers such that:

- their mean is 7
- their range is 6

Write your four numbers in the boxes below.

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[2 marks]

(Turn over)

17. Look at the diagram for Question 17 in the separate Diagram Booklet.

The diagram is NOT drawn to scale.

Find the size of each of the angles

$W$ ,  $X$  and  $y$ .

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$W =$  \_\_\_\_\_  $\circ$

$X =$  \_\_\_\_\_  $\circ$

$y =$  \_\_\_\_\_  $\circ$

[3 marks]

(Turn over)

18. Look at the diagram for Question 18 in the separate Diagram Booklet.

The diagram shows two FAIR spinners, SPINNER A and SPINNER B.

In a game, the numbers shown by the two pointers are added together.

In the diagram, the score gained would be  $2 + 3 = 5$

A winning score is 6 or more.

How many winning scores would you expect when the game is played 60 times?

You must show all your working.

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19. (a) Express 48 as a percentage of 400

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[2 marks]

continued on the next page . . .

(Turn over)

Question 19 continued

19. (b) Share £45 in the ratio 8 : 1

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£ \_\_\_\_\_ and

£ \_\_\_\_\_

[2 marks]

continued on the next page . . .

(Turn over)

## Question 19 continued

19. (c) Express  $1 - \frac{1}{2^3}$  as a single fraction in

the form  $\frac{a}{b}$ , where  $a$  and  $b$  are integers.

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Answer = \_\_\_\_\_

[2 marks]

(Turn over)

20. Look at the diagram for Question 20 in the separate Diagram Booklet. The diagram shows a shape on a coordinate grid.

Rotate the shape shown by  $90^\circ$  anticlockwise about the origin.

A cut out shape is available for this question.

[2 marks]

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**END OF PAPER**

**TOTAL 65 MARKS**

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**(Turn over)**







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to the invigilators and sent for marking.**

# **Diagram Booklet**

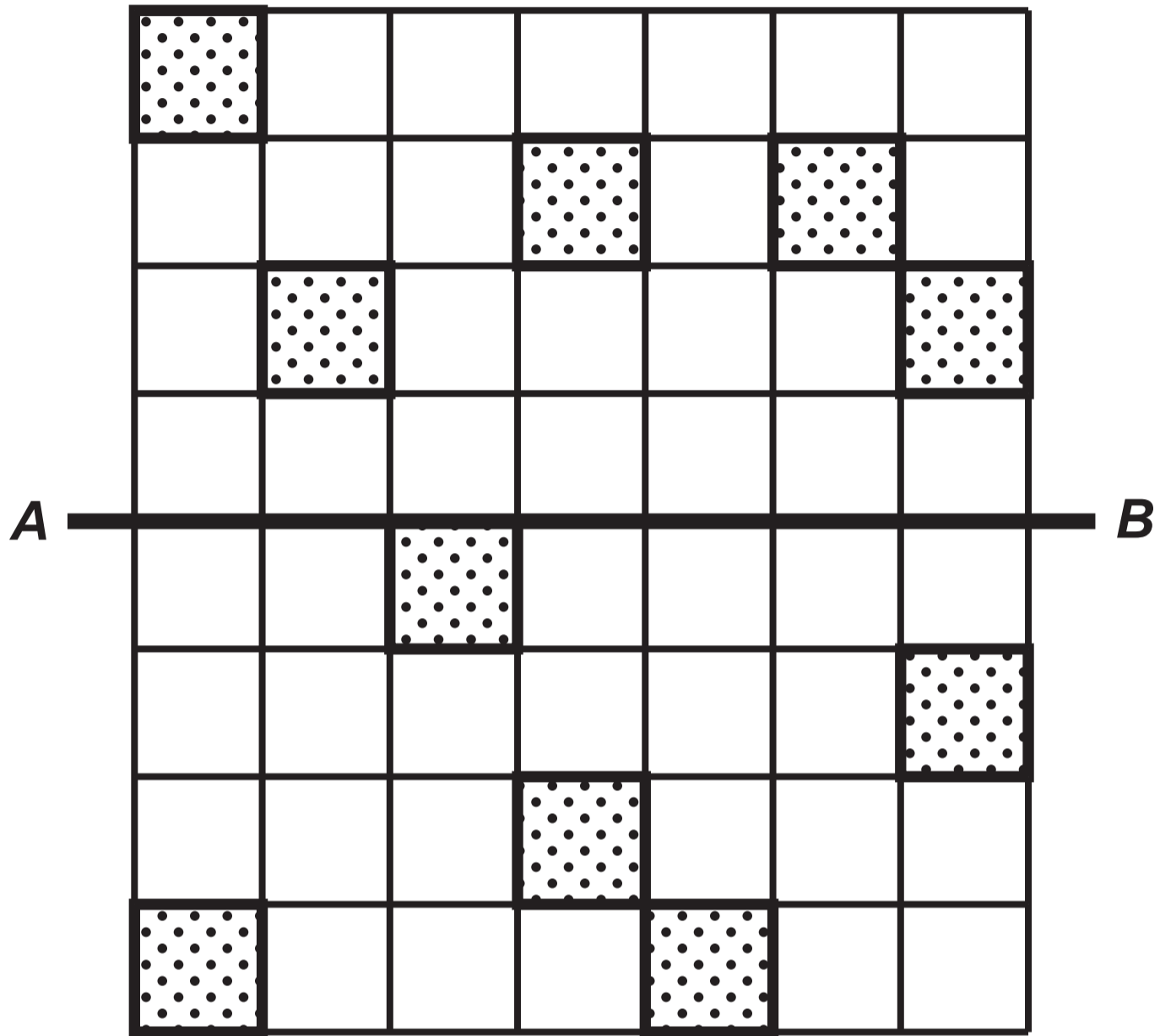
**Surname:** \_\_\_\_\_

**First name(s):** \_\_\_\_\_

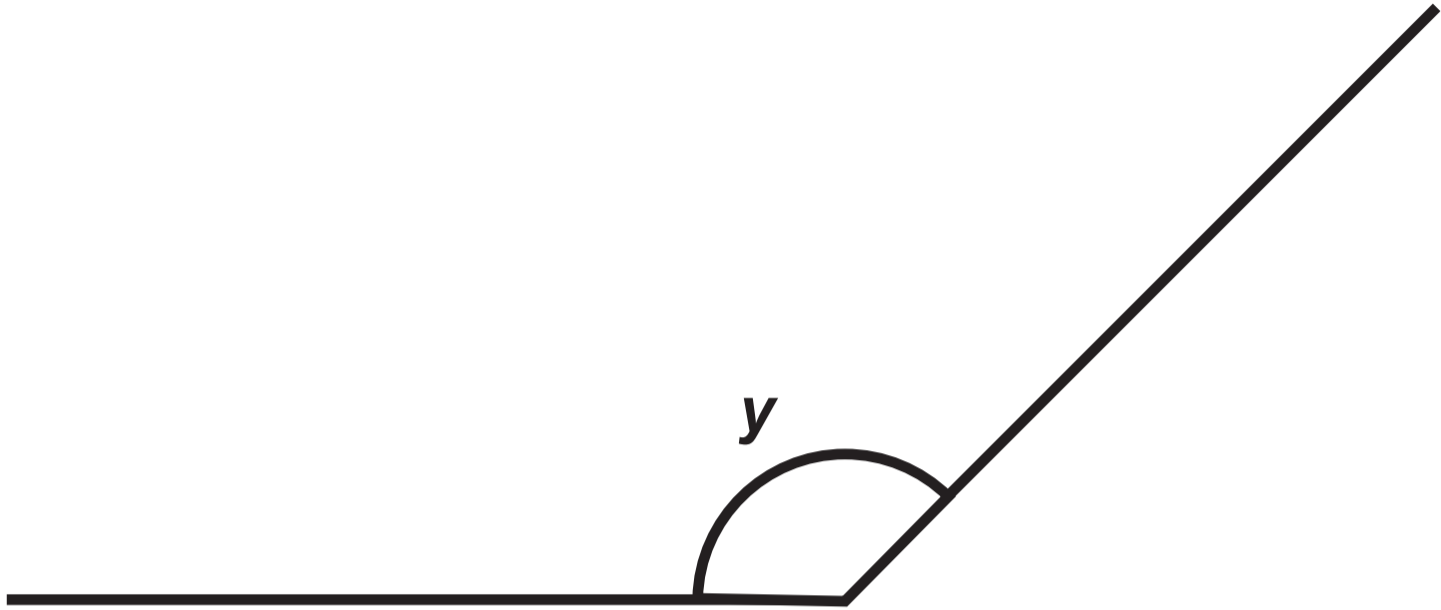
**Centre Number:** \_\_\_\_\_

**Candidate Number:** 0 \_\_\_\_\_

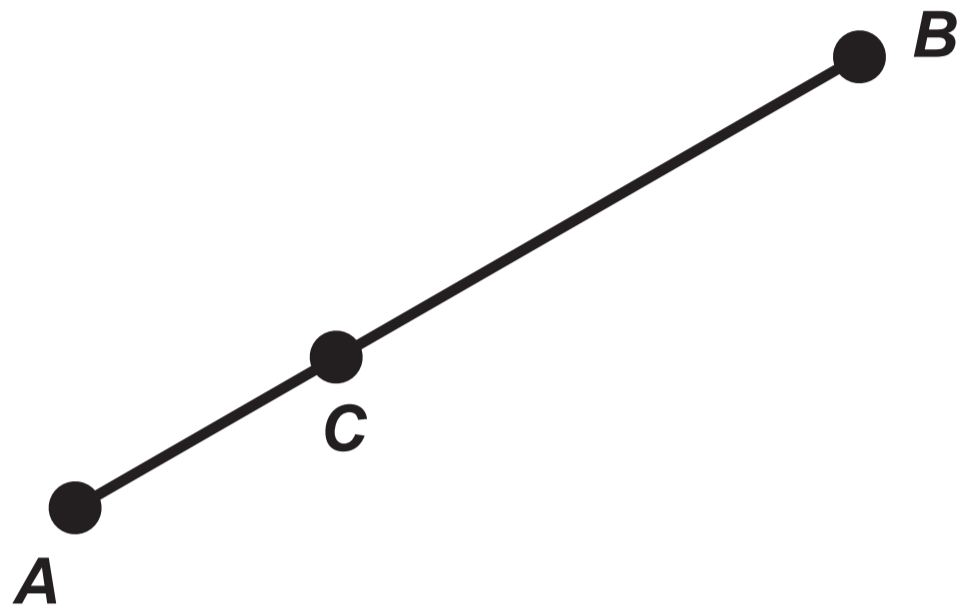
## Question 2



Question 3 (a)

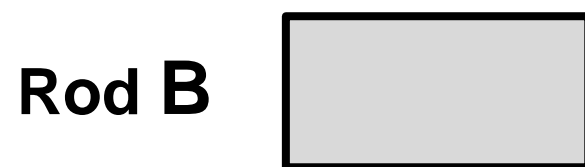


Question 3 (b)

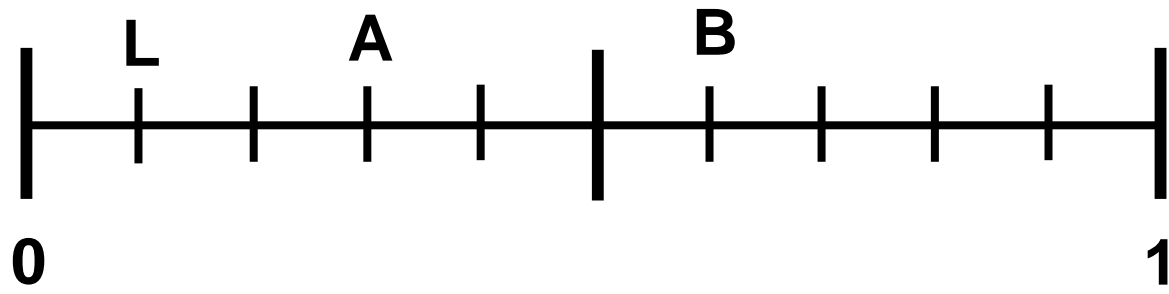


## Question 6

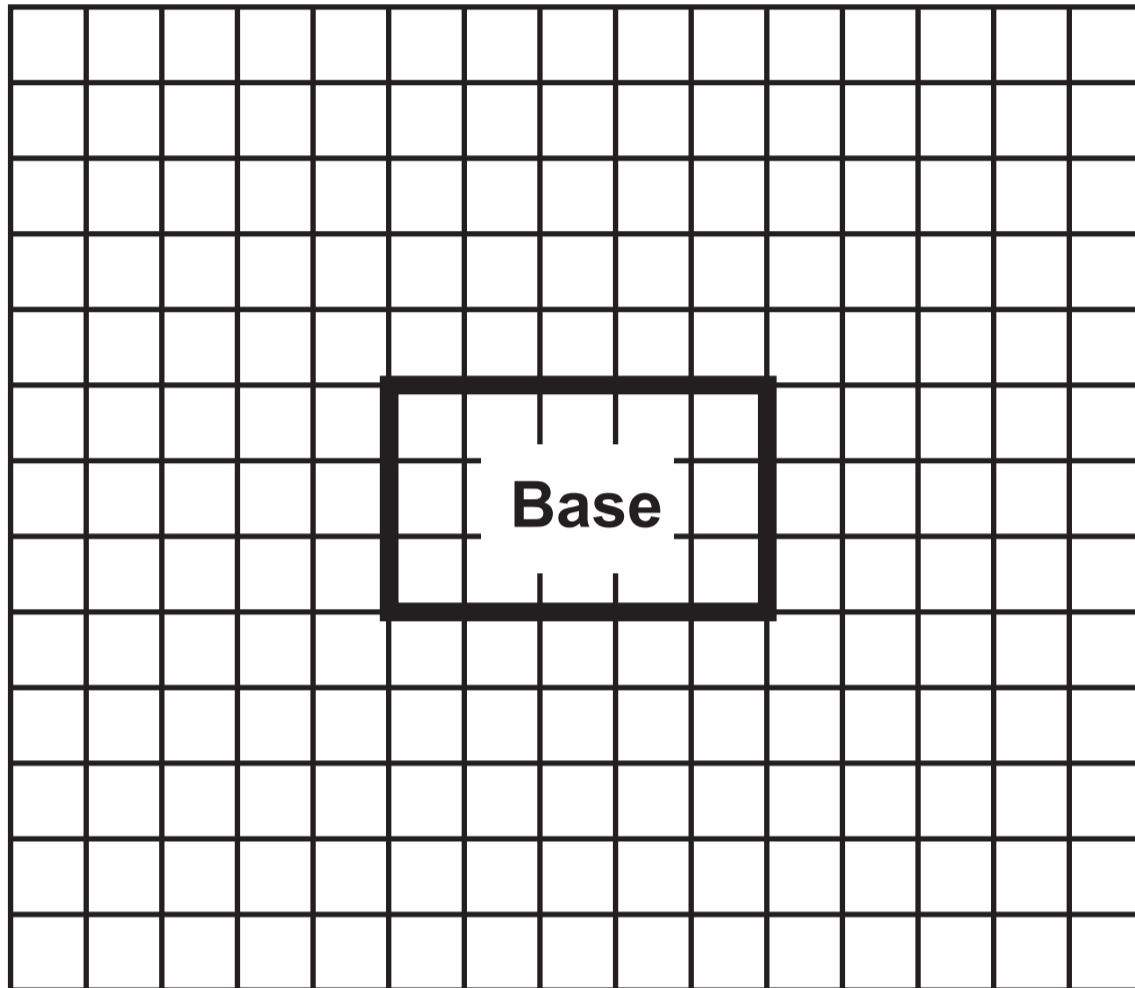
The diagram IS drawn accurately



## Question 7

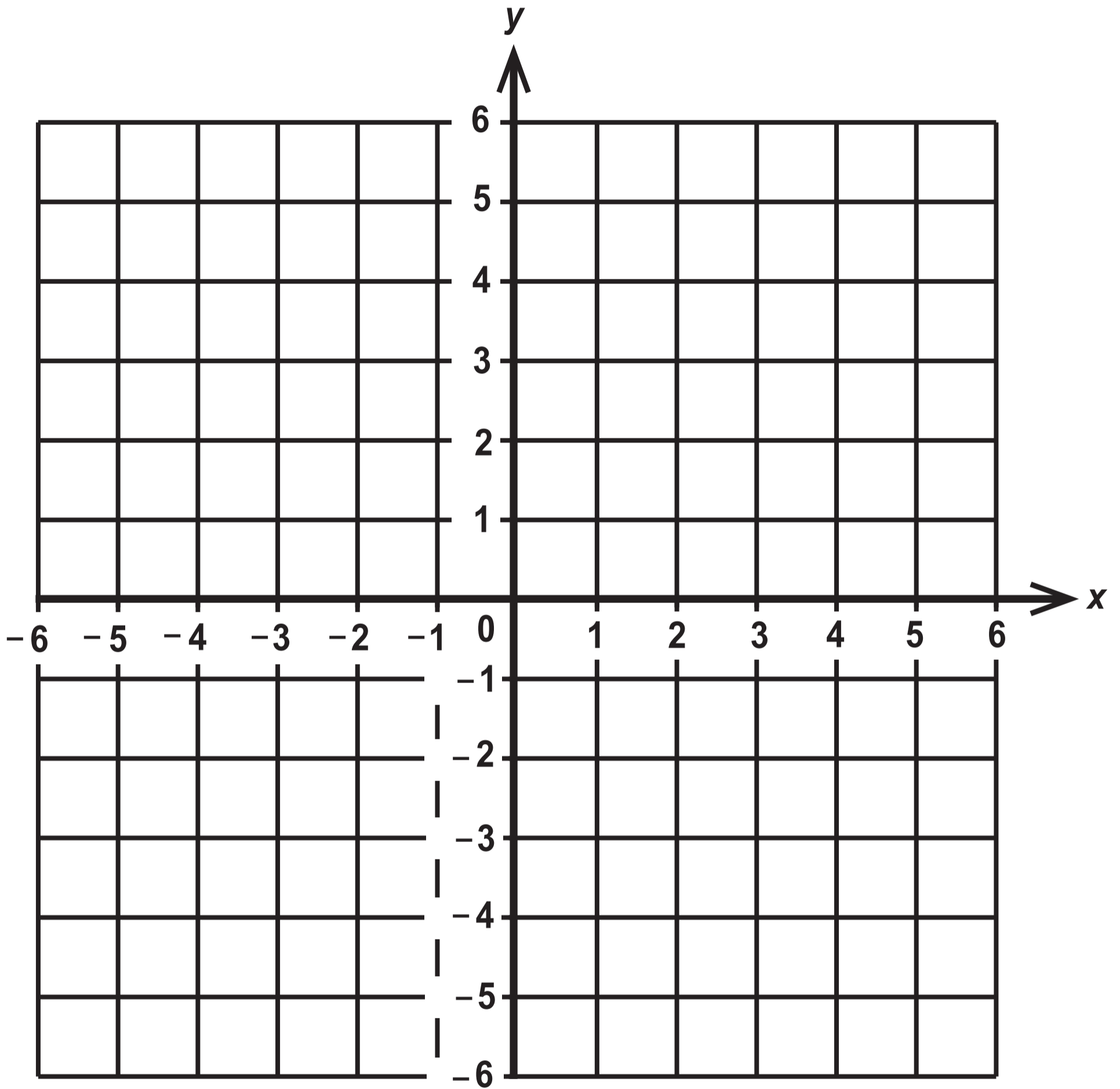


## Question 9



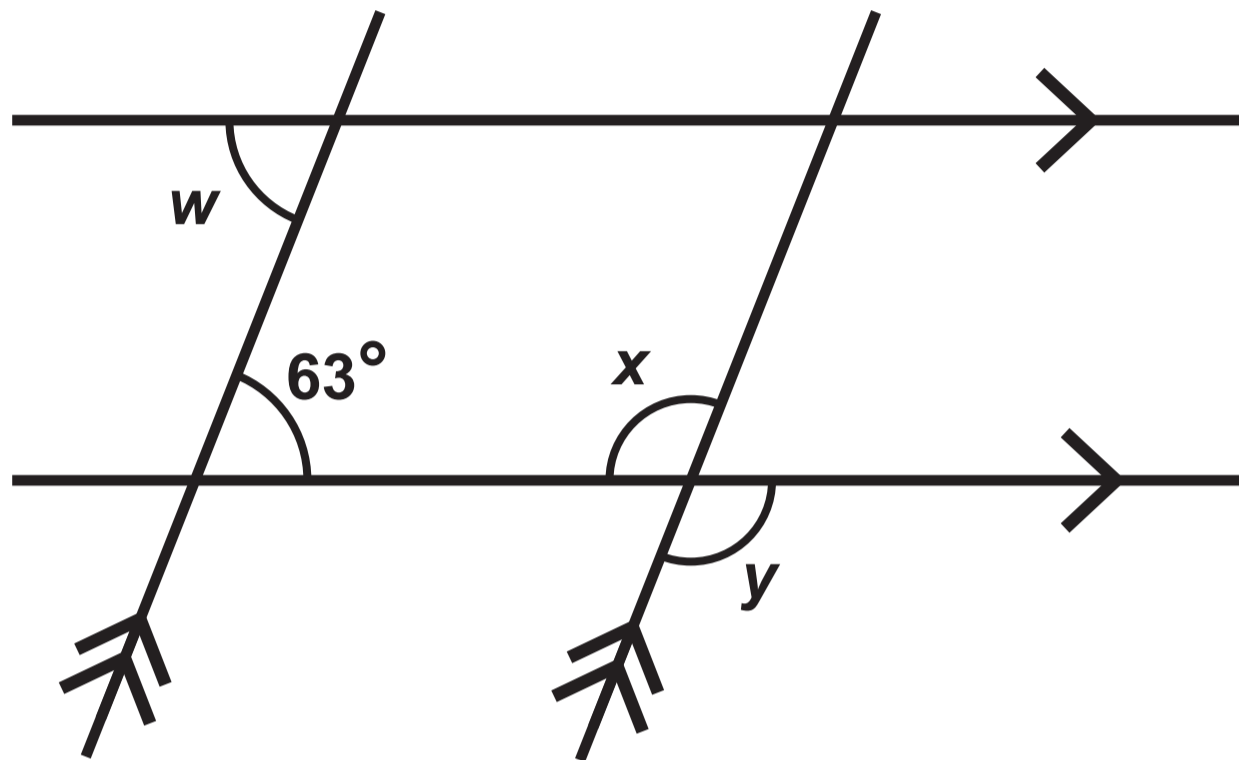
# Question 10

Each square on the grid represents a one centimetre square.



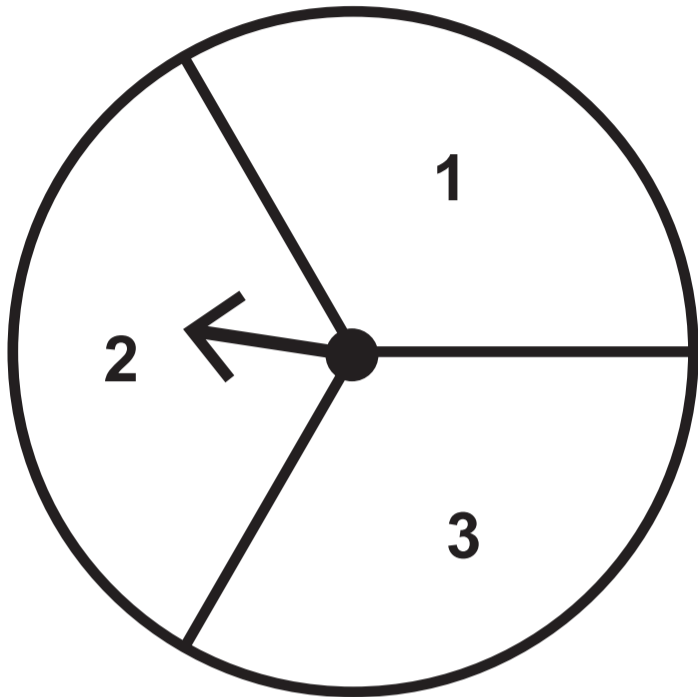
# Question 17

Diagram NOT drawn to scale

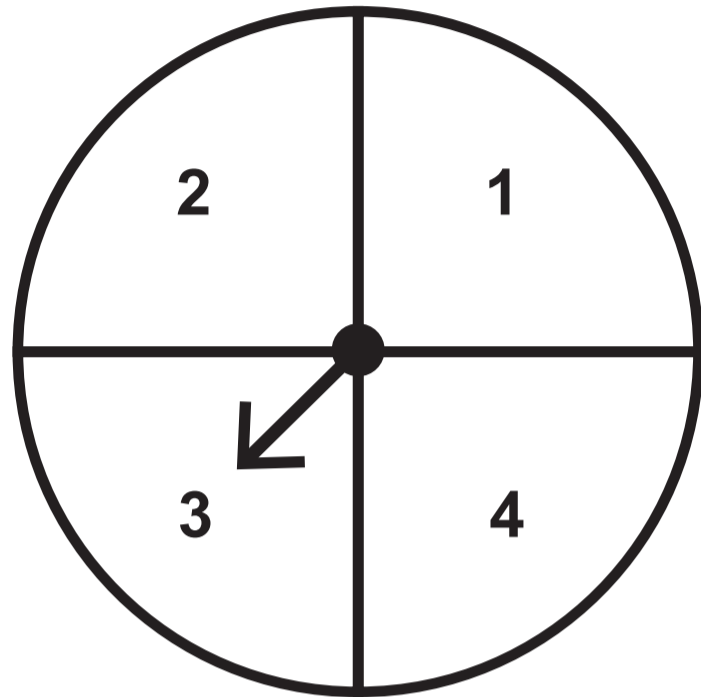


# Question 18

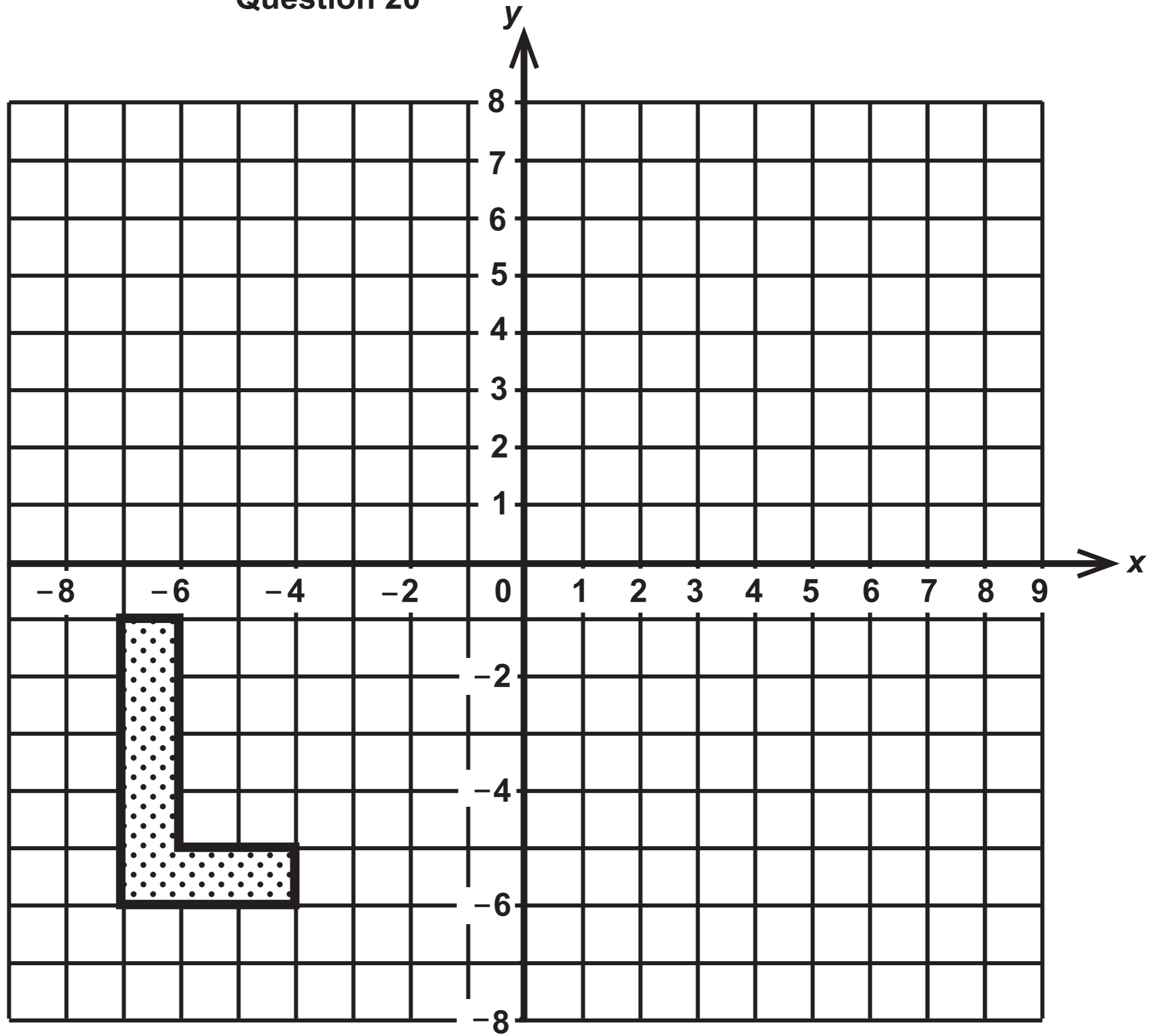
## SPINNER A



## SPINNER B



# Question 20



**GCSE  
MATHEMATICS  
and  
NUMERACY**



**FORMULA LIST  
FOUNDATION TIER  
GCSE**

**You must not write on these formula pages.**

**Anything you write on these formula pages will gain NO credit.**

## Formula List – Foundation Tier

Area of trapezium  $= \frac{1}{2} (a + b) h$

