

GCSE Mathematics

F

Transformations

Foundation | Grades 2-5

Total Marks	Time	Questions
48	48 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

© Teachably. This resource may not be copied or distributed without permission.

Want help from an expert maths tutor?

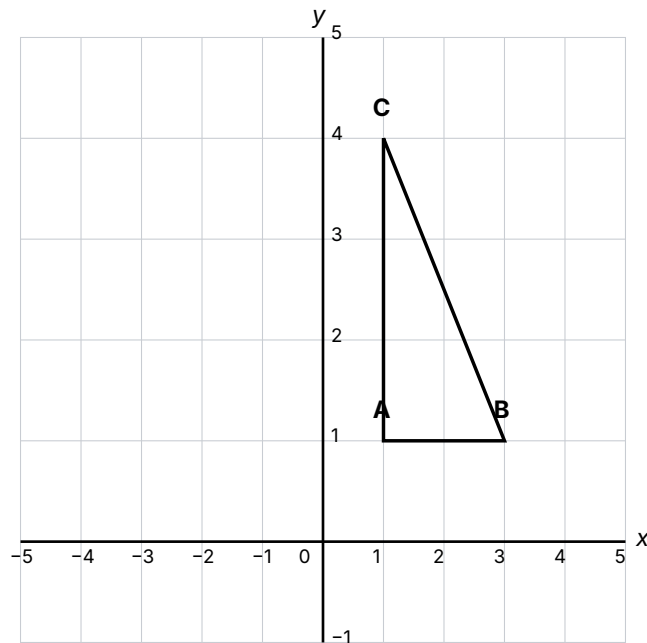
Book a free GCSE Maths consultation with our team at Teachably. Visit teachably.co.uk/book-call to get started.

Edexcel-style questions**Q1** 

Grade 2

Edexcel style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 4)$. Reflect triangle A in the y -axis. Find the coordinates of the image.



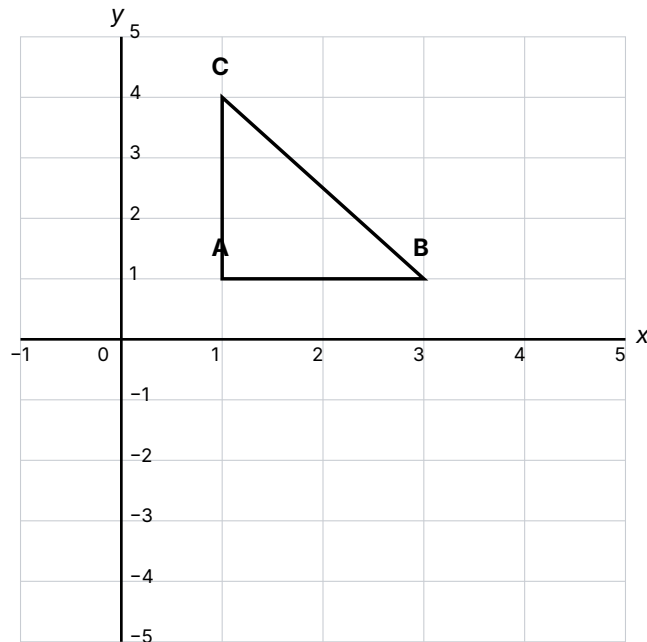
Answer _____

Q2

Grade 3

Edexcel style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 4)$. Rotate triangle A 90° clockwise about the origin. Find the coordinates of the image.



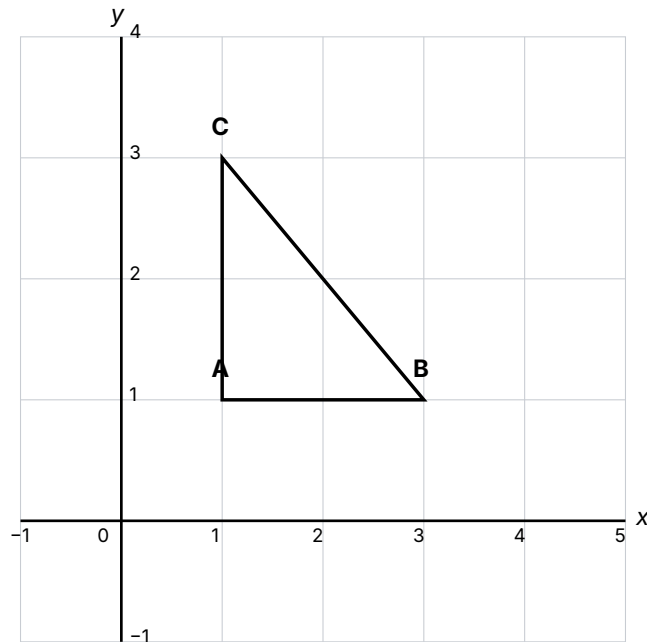
Answer _____

Q3

Grade 3

Edexcel style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 3)$. Translate triangle A by the vector $(3, 2)$. Find the coordinates of the image.



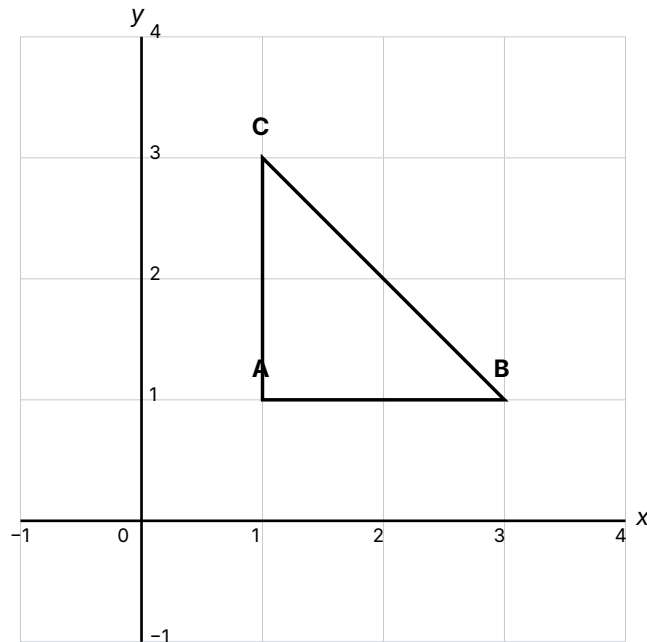
Answer _____

Q4

Grade 4

Edexcel style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 3)$. Enlarge triangle A by scale factor 2, centre the origin. Find the coordinates of the image.



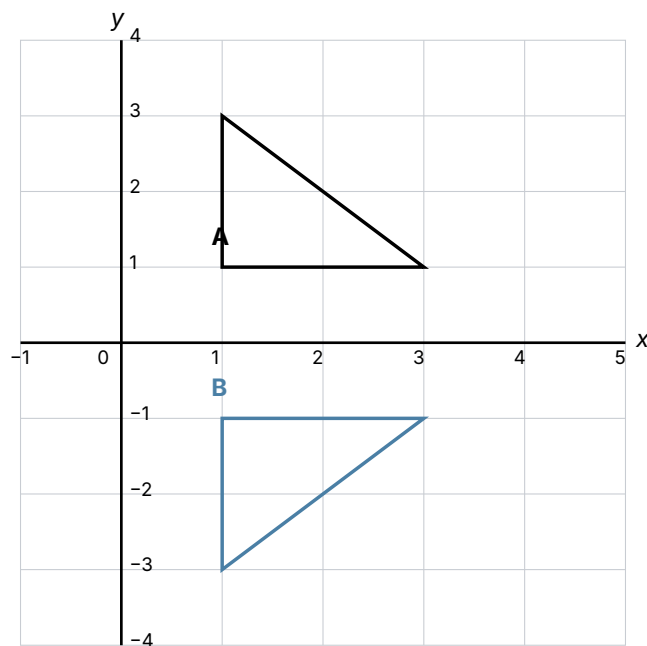
Answer _____

Q5

Grade 5

Edexcel style

Describe fully the single transformation that maps triangle A onto triangle B.



Answer _____

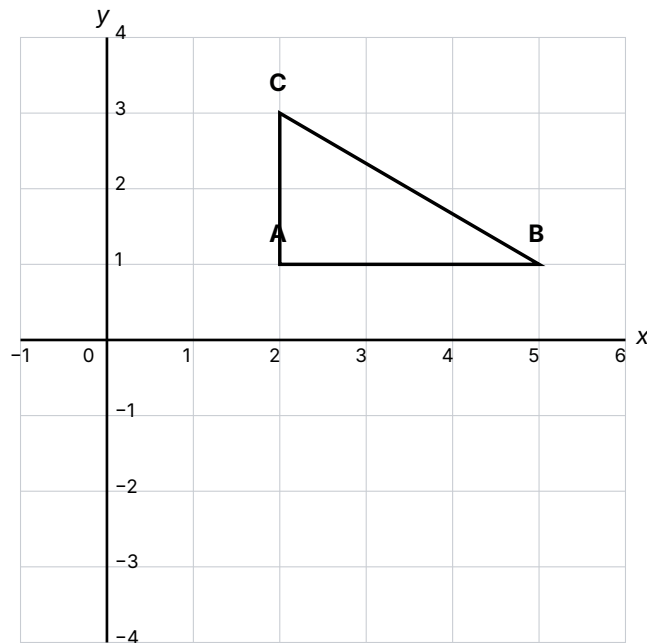
AQA-style questions

Q6

Grade 2

AQA style

Triangle A has vertices $(2, 1)$, $(5, 1)$, $(2, 3)$. Reflect triangle A in the x -axis. Find the coordinates of the image.



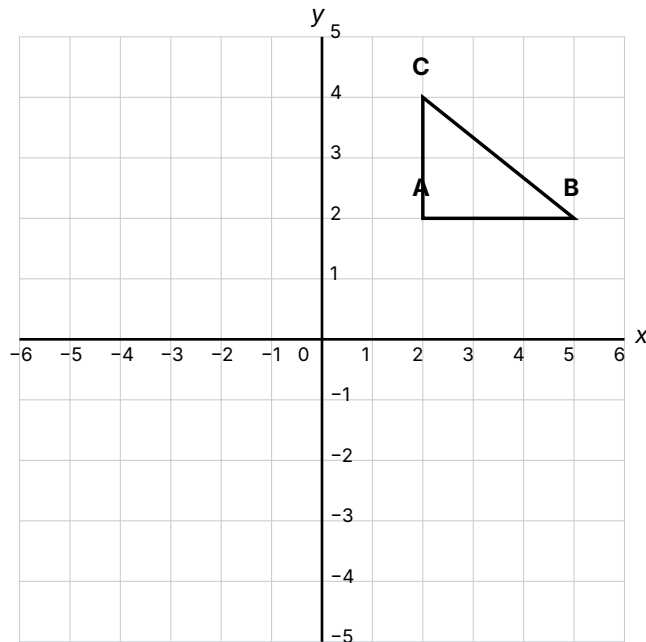
Answer _____

Q7

Grade 3

AQA style

Triangle A has vertices $(2, 2)$, $(5, 2)$, $(2, 4)$. Rotate triangle A 180° about the origin. Find the coordinates of the image.



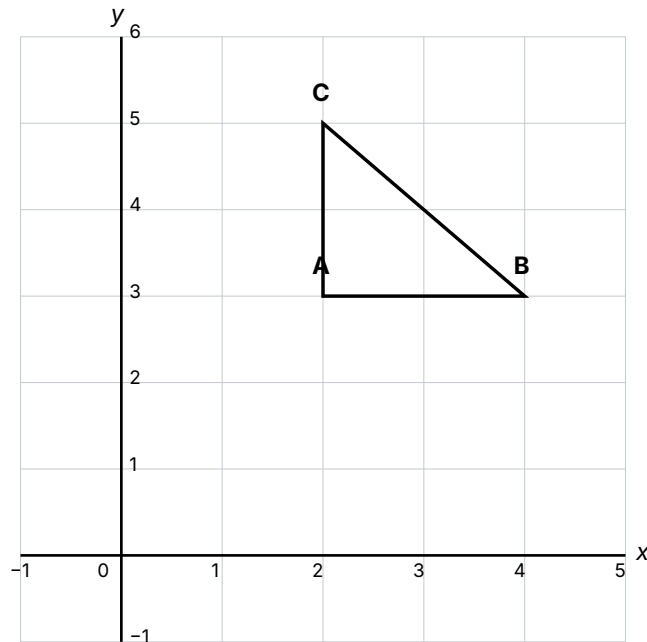
Answer _____

Q8

Grade 3

AQA style

Triangle A has vertices $(2, 3)$, $(4, 3)$, $(2, 5)$. Translate triangle A by the vector $(-3, 1)$. Find the coordinates of the image.



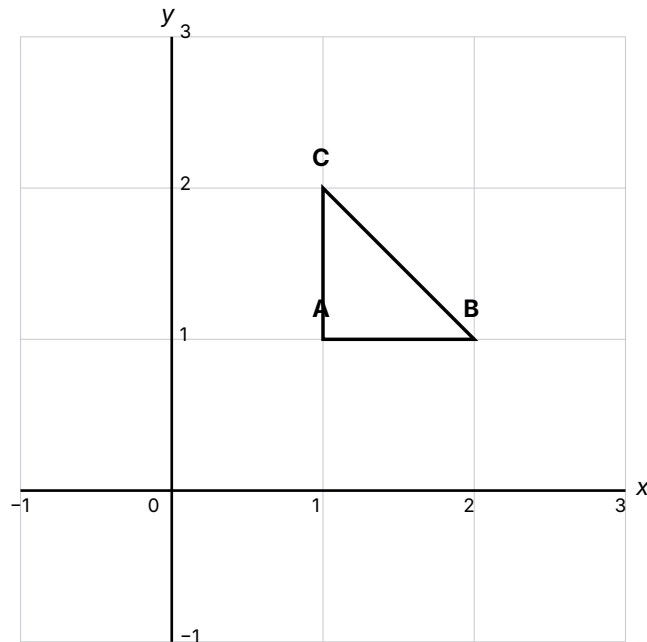
Answer _____

Q9

Grade 4

AQA style

Triangle A has vertices $(1, 1)$, $(2, 1)$, $(1, 2)$. Enlarge triangle A by scale factor 3, centre the origin. Find the coordinates of the image.



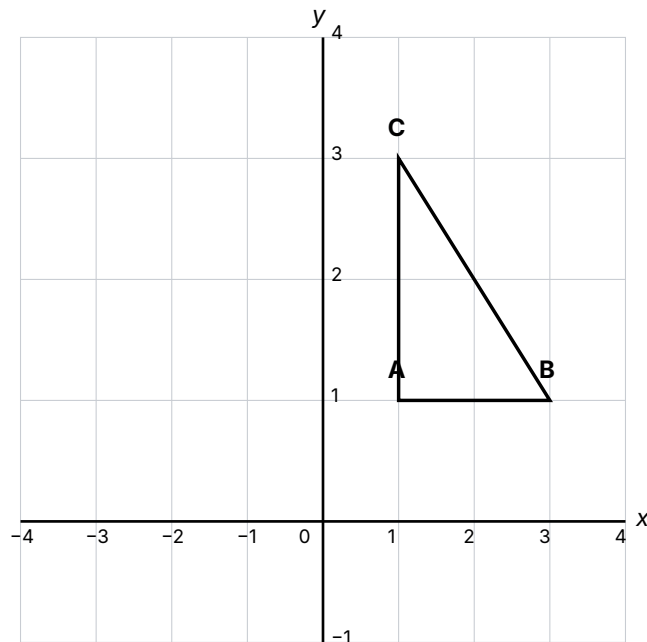
Answer _____

Q10

Grade 5

AQA style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 3)$. Triangle A is first reflected in the y -axis to give triangle B. Triangle B is then translated by the vector $(0, -4)$ to give triangle C. Find the coordinates of triangle C.



Answer _____

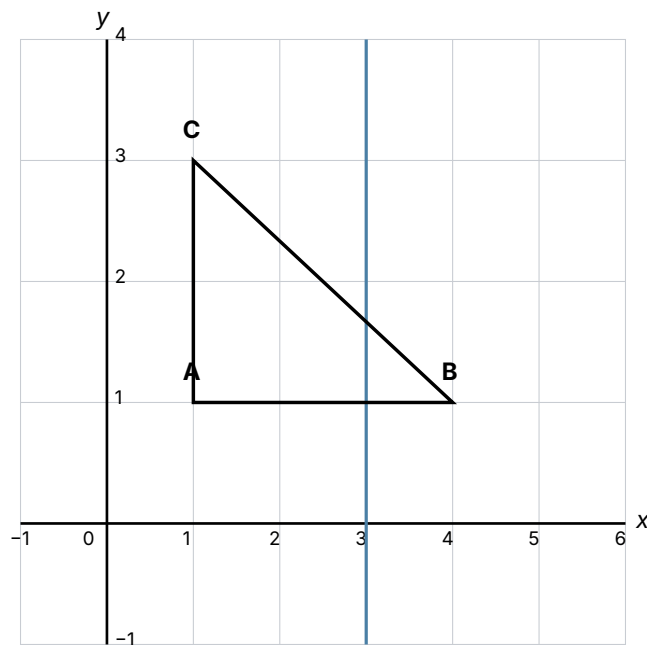
OCR-style questions

Q11 

Grade 3

OCR style

Triangle A has vertices $(1, 1)$, $(4, 1)$, $(1, 3)$. Reflect triangle A in the line $x = 3$. Find the coordinates of the image.



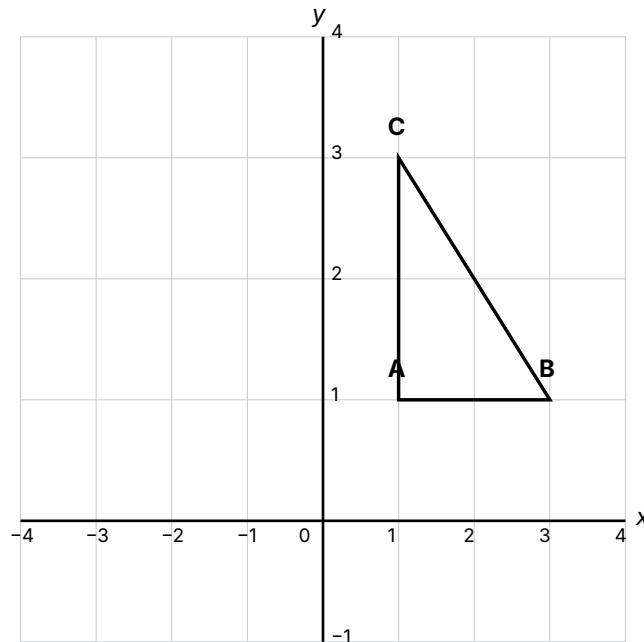
Answer _____

Q12

Grade 3

OCR style

Triangle A has vertices $(1, 1)$, $(3, 1)$, $(1, 3)$. Rotate triangle A 90° anticlockwise about the origin. Find the coordinates of the image.



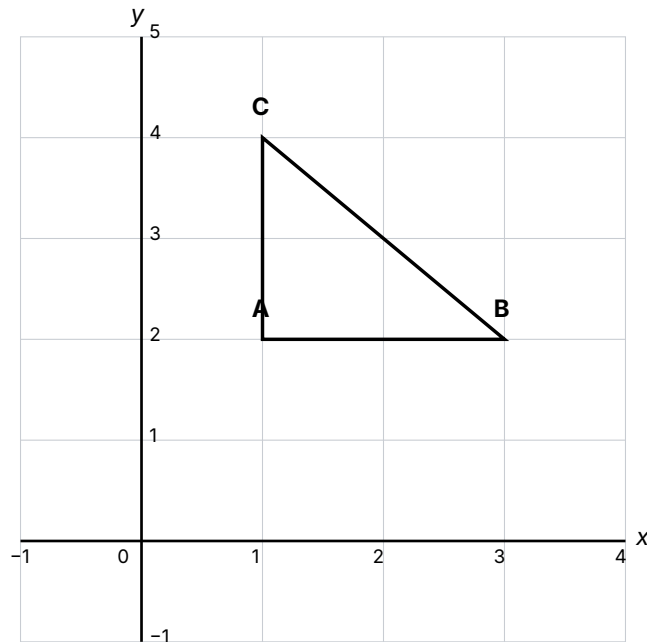
Answer _____

Q13

Grade 3

OCR style

Triangle A has vertices $(1, 2)$, $(3, 2)$, $(1, 4)$. Translate triangle A by the vector $(2, -4)$. Find the coordinates of the image.



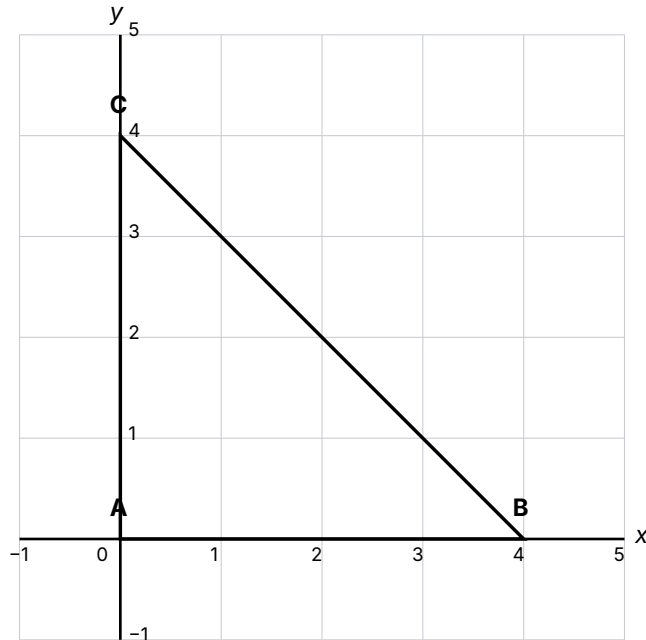
Answer _____

Q14

Grade 5

OCR style

Triangle A has vertices $(0, 0)$, $(4, 0)$, $(0, 4)$. Enlarge triangle A by scale factor $\frac{1}{2}$, centre the origin. Find the coordinates of the image.



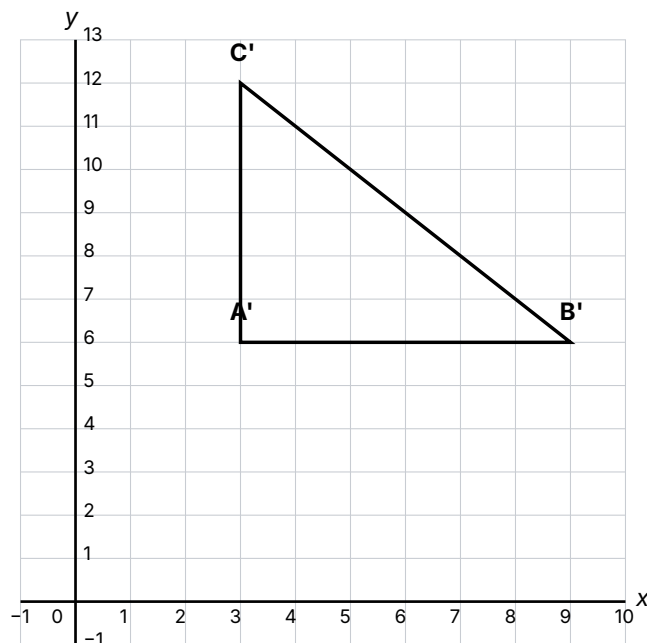
Answer _____

Q15

Grade 5

OCR style

Triangle B is the image of triangle A after an enlargement with scale factor 3, centre the origin. Triangle B has vertices (3, 6), (9, 6), (3, 12). Find the coordinates of triangle A.



Answer _____

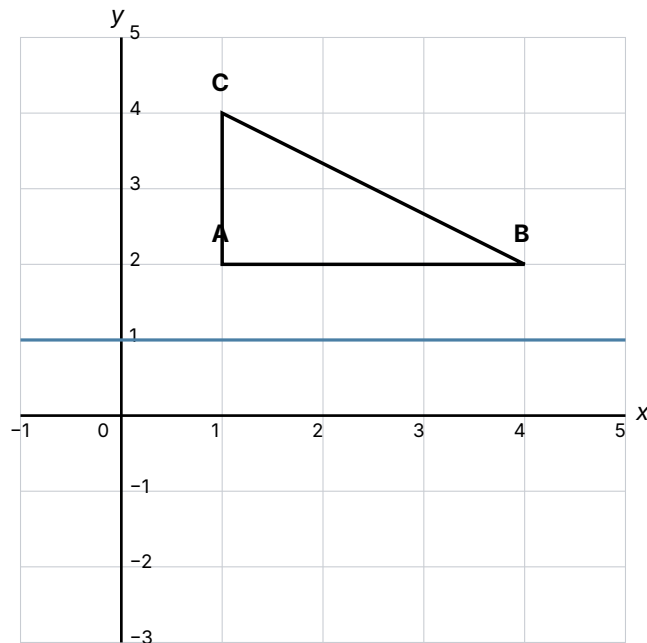
Teachably-style questions

Q16

Grade 3

Teachably style

Triangle A has vertices $(1, 2)$, $(4, 2)$, $(1, 4)$. Reflect triangle A in the line $y = 1$. Find the coordinates of the image.



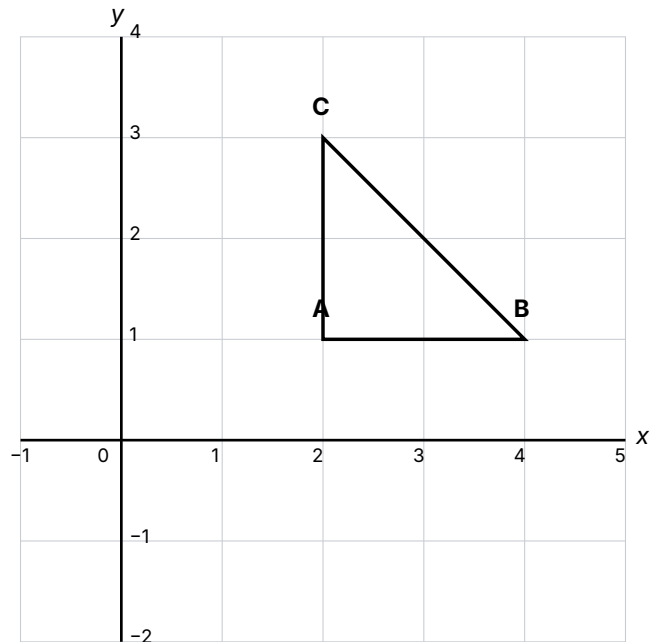
Answer _____

Q17

Grade 4

Teachably style

Triangle A has vertices $(2, 1)$, $(4, 1)$, $(2, 3)$. Rotate triangle A 90° clockwise about the point $(2, 1)$. Find the coordinates of the image.



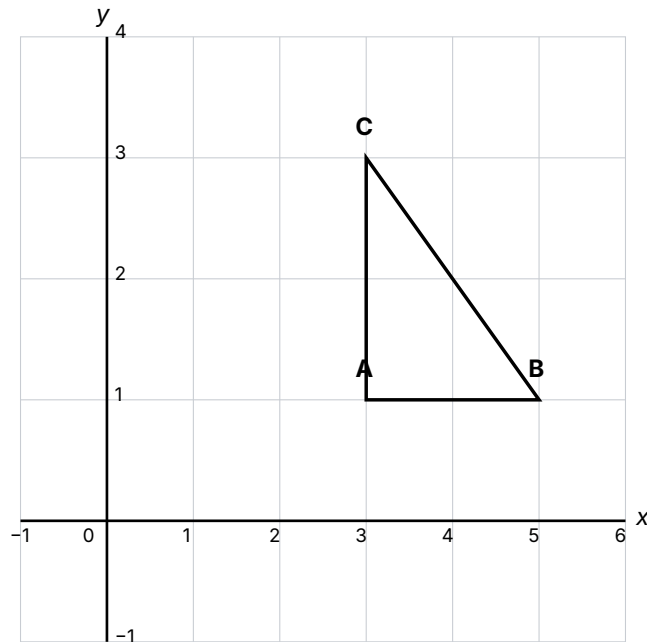
Answer _____

Q18

Grade 3

Teachably style

Triangle A has vertices $(3, 1)$, $(5, 1)$, $(3, 3)$. Translate triangle A by the vector $(-4, -3)$. Find the coordinates of the image.



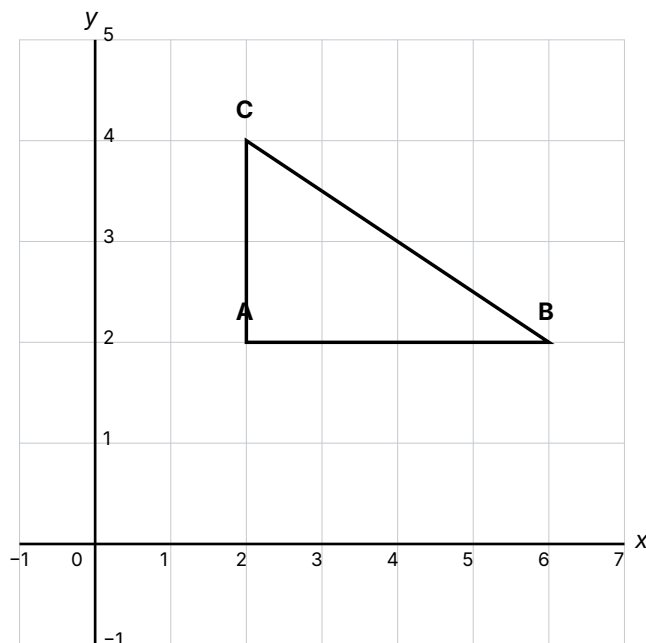
Answer _____

Q19

Grade 5

Teachably style

Triangle A has vertices $(2, 2)$, $(6, 2)$, $(2, 4)$. Enlarge triangle A by scale factor 2, centre $(2, 2)$. Find the coordinates of the image.



Answer _____

Q20

Grade 5

Teachably style

A shape is first reflected in the x-axis, then reflected in the y-axis. Describe the single transformation that has the same overall effect.

Answer _____

teachably

[3 marks]

END OF PAPER**Want help from an expert maths tutor?**

Book a free GCSE Maths consultation with our team at Teachably. Visit teachably.co.uk/book-call to get started.