

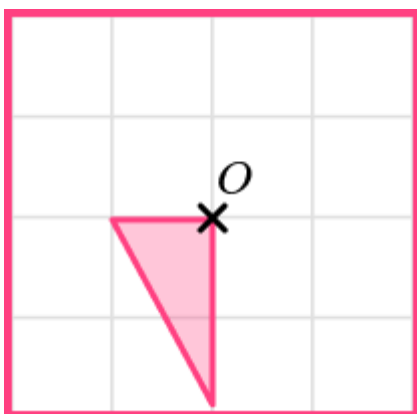
Rotation - Worksheet

Skill

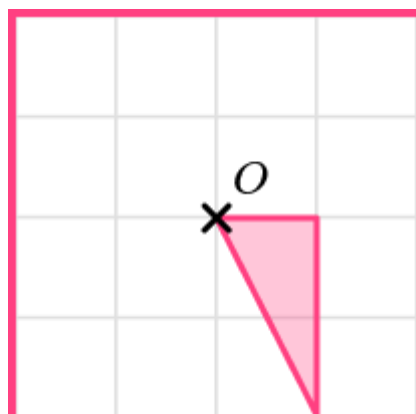
Group A - 180°

Rotate these shapes 180° about the point O.

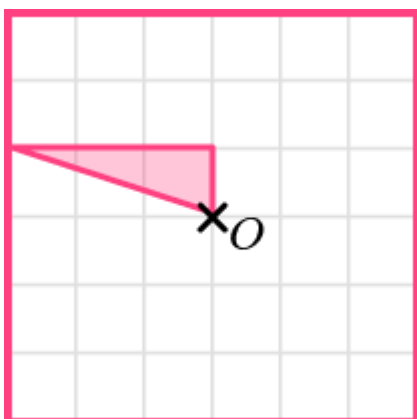
1)



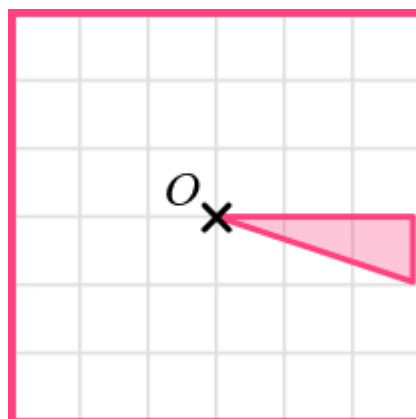
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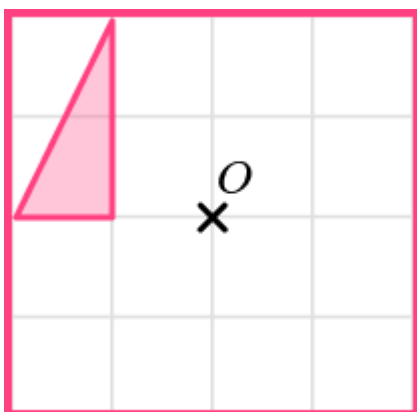
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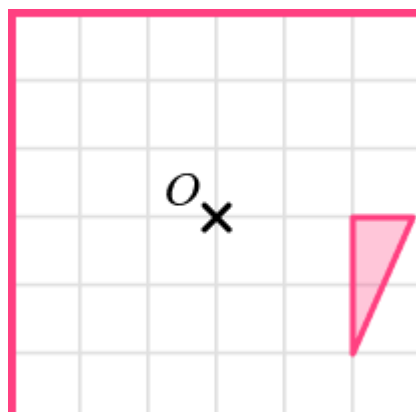
4)



5)



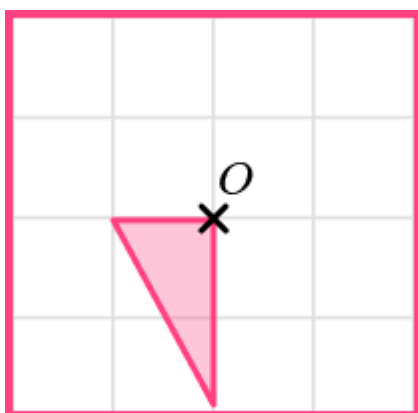
6)



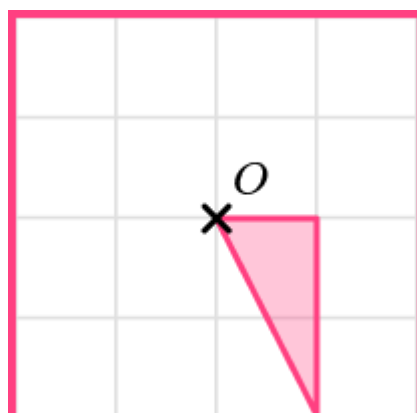
Group B - 90° clockwise

Rotate these shapes 90° clockwise about the point O.

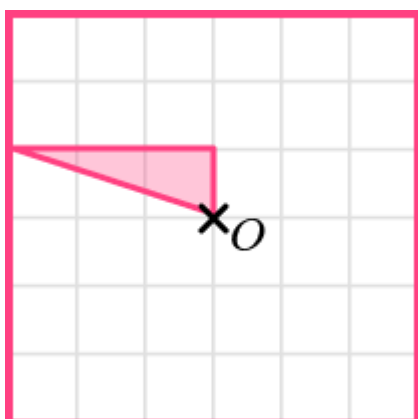
1)



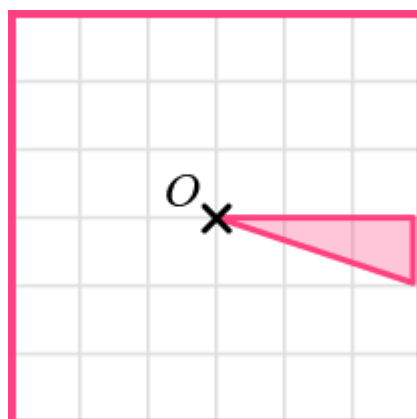
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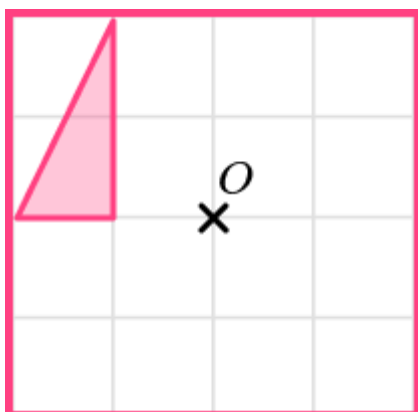
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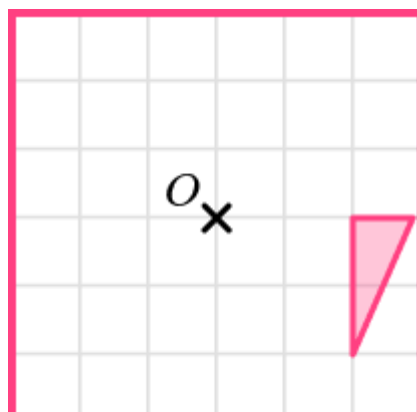
4)



5)



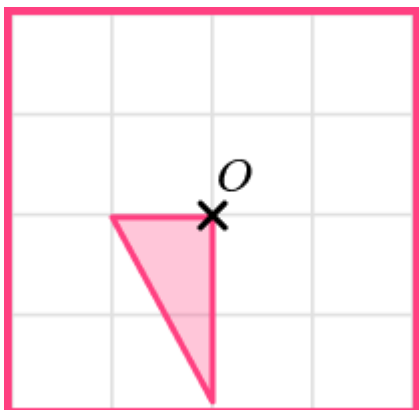
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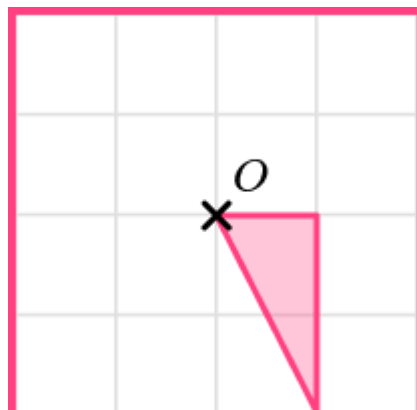
Group C - 90° anticlockwise

Rotate these shapes 90° anticlockwise about the point O.

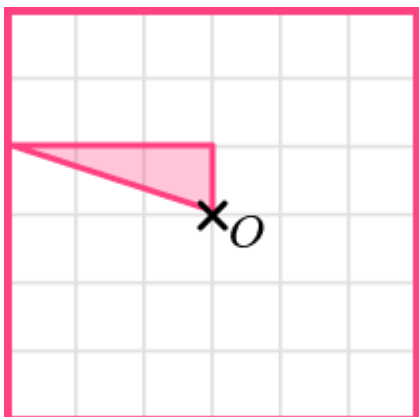
1)



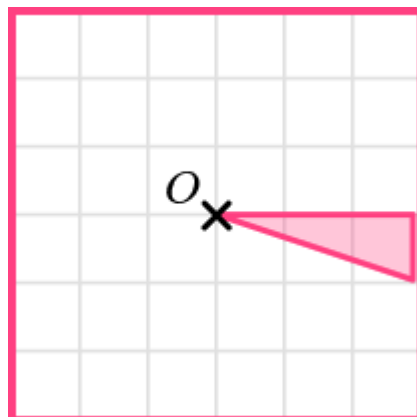
2)



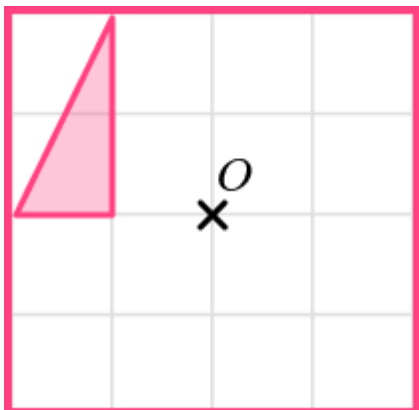
3)



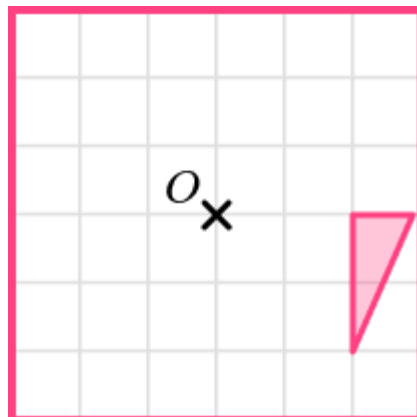
4)



5)



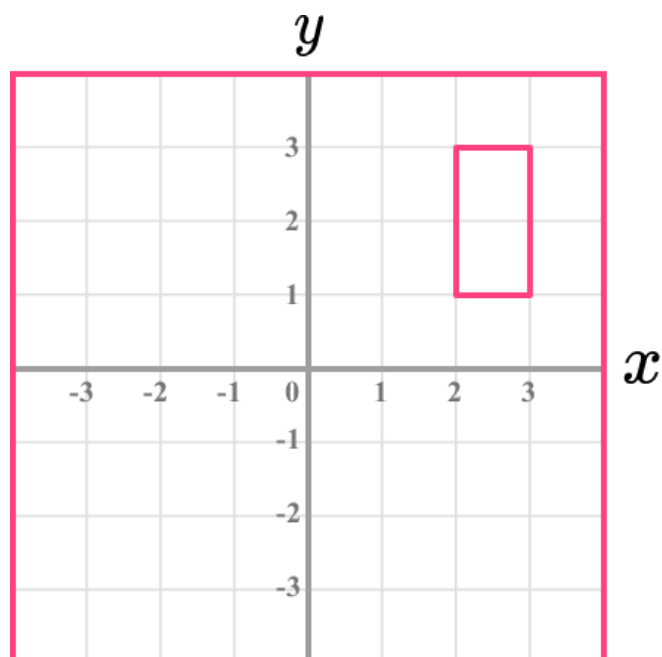
6)



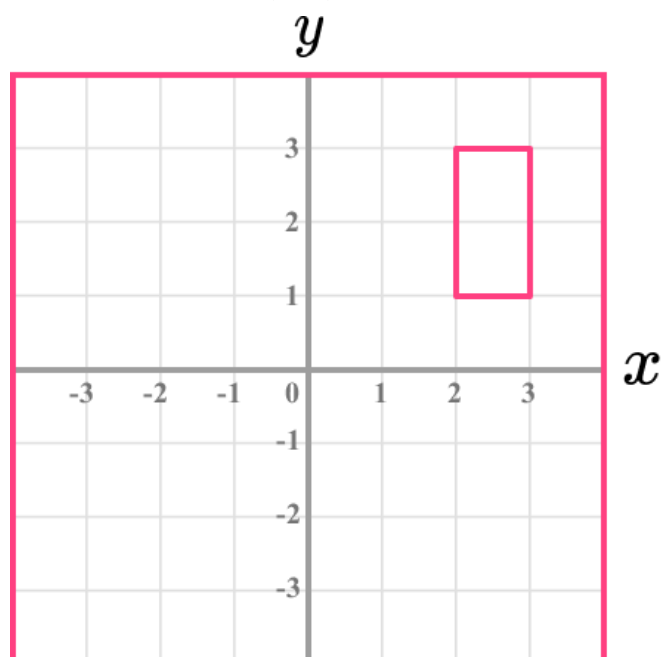
Rotations - Worksheet

Applied

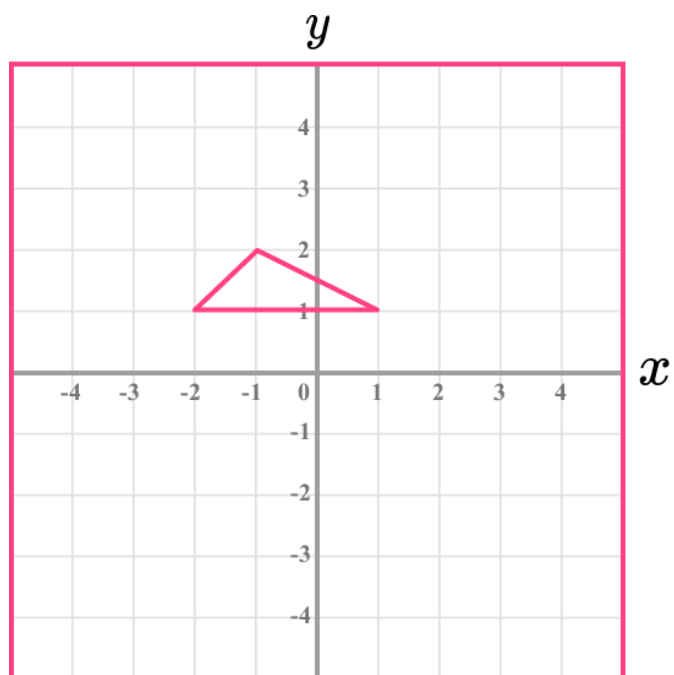
- 1) a) Rotate the shape 180° about the origin



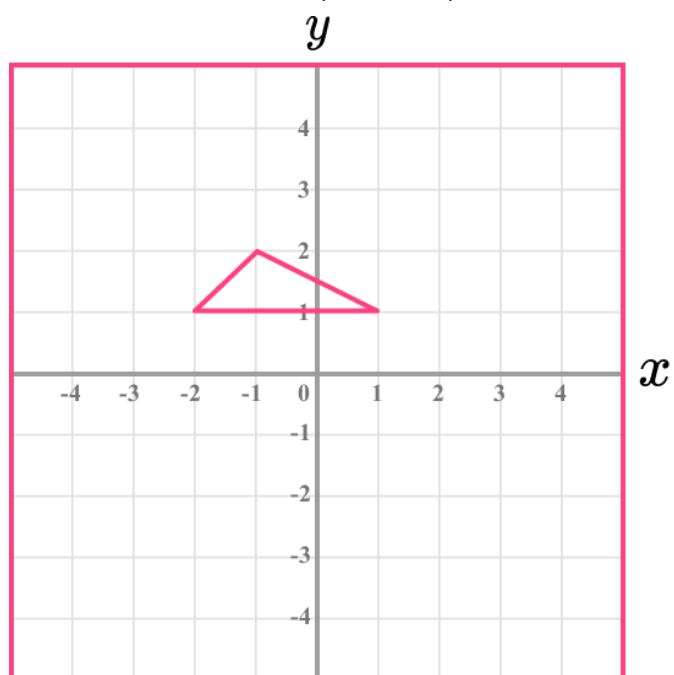
- b) Rotate the shape 90° clockwise about (1, 1)



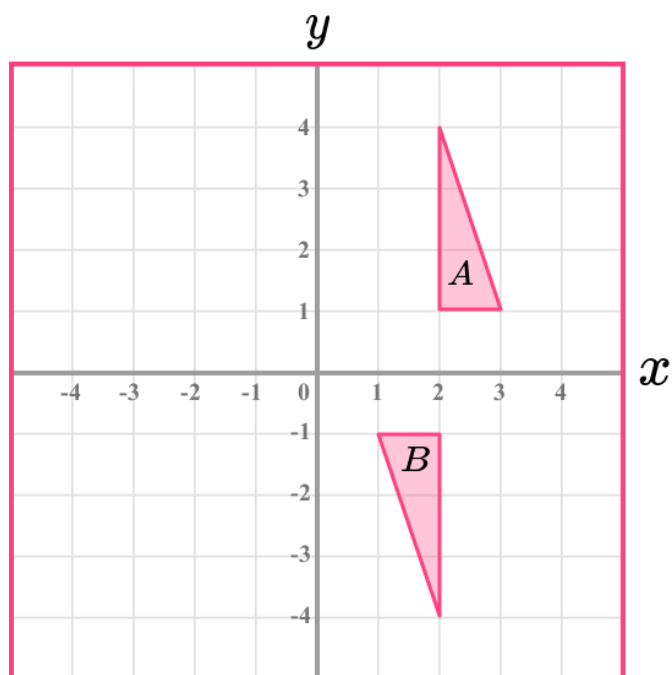
- 2) a) Rotate the shape 90° clockwise about $(-1, -1)$



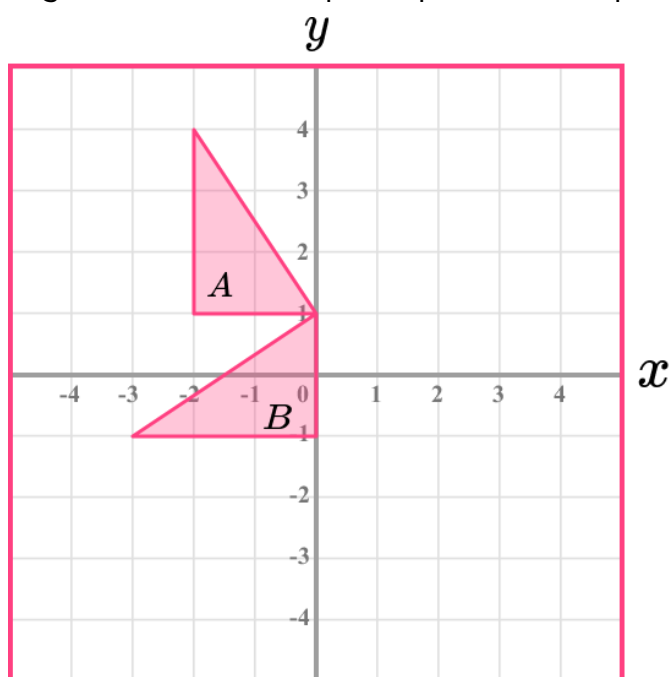
- b) Rotate the shape 90° anticlockwise about $(-1, -1)$



- 3) a) Describe fully the single rotation that maps shape *A* onto shape *B*

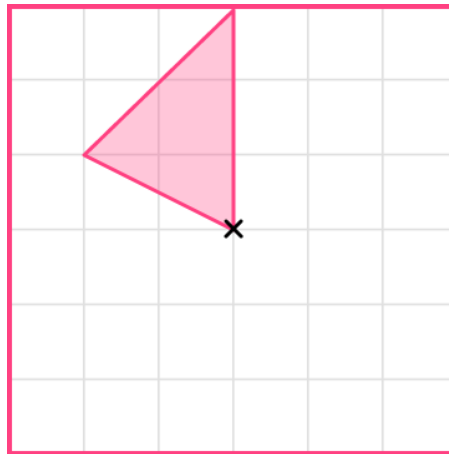


- b) Describe fully the single rotation that maps shape *A* onto shape *B*



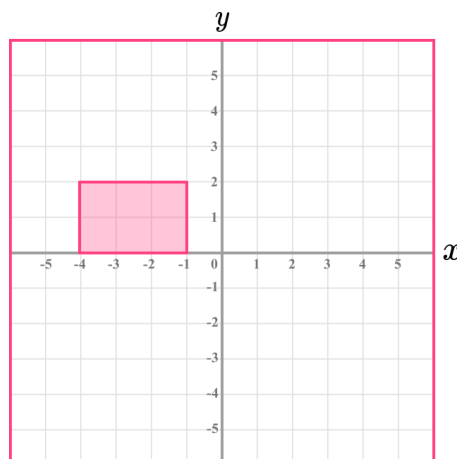
Rotations - Exam Questions

- 1) On the grid, rotate the triangle 180° clockwise about the point O .



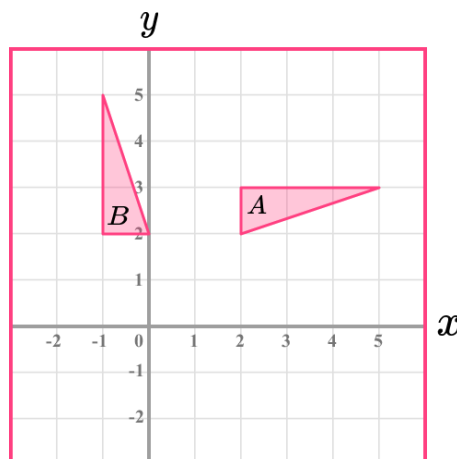
.....
(2 marks)

- 2) Rotate the rectangle 90° anticlockwise about $(0, 0)$



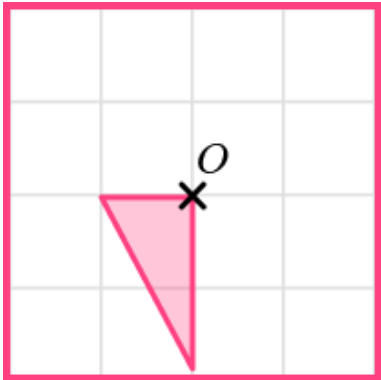
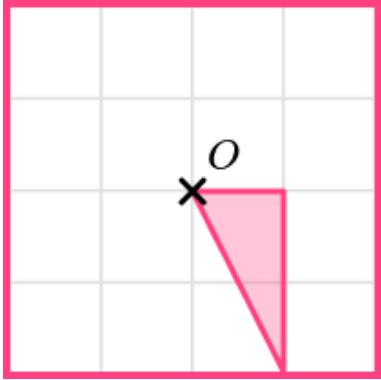
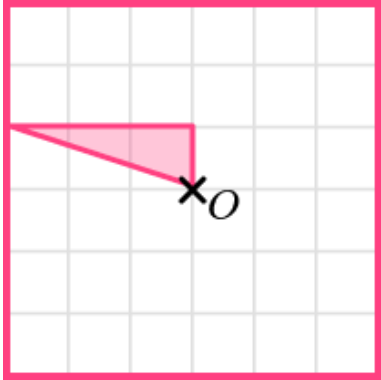
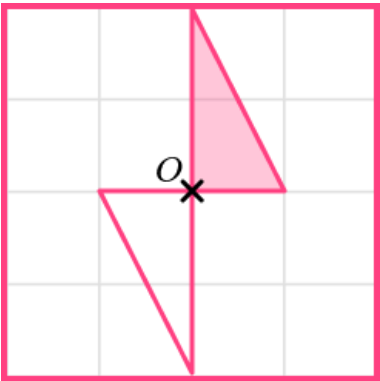
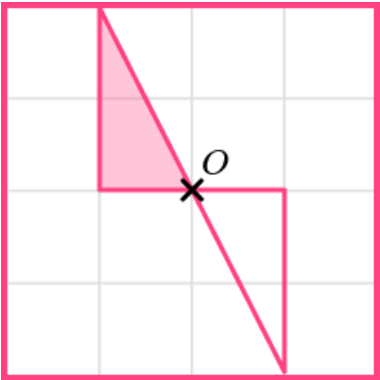
.....
(2 marks)

- 3) Describe fully the single transformation which maps shape **A** onto shape **B**.

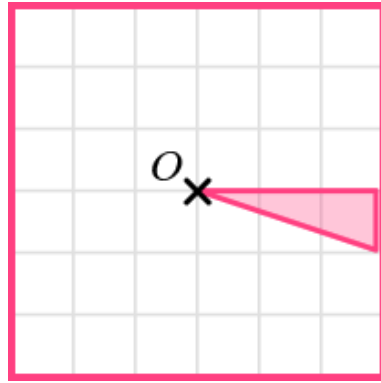


.....
(3 marks)

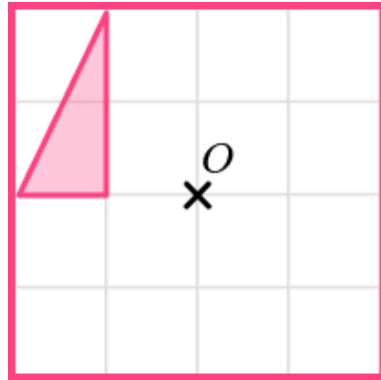
Rotations - Answers

	Question	Answer
Group A	Skill Questions	
	Rotate these shapes 180° about the point O. 1)  2)  3) 	1)  2) 

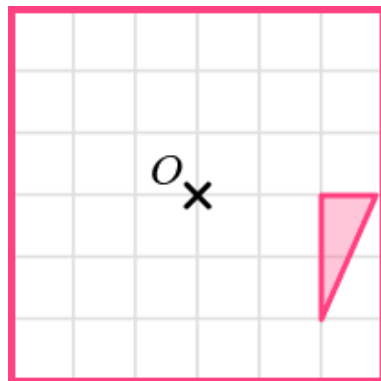
4)



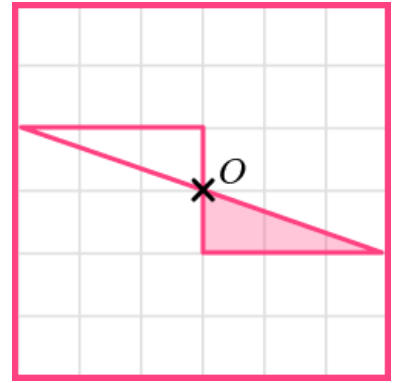
5)



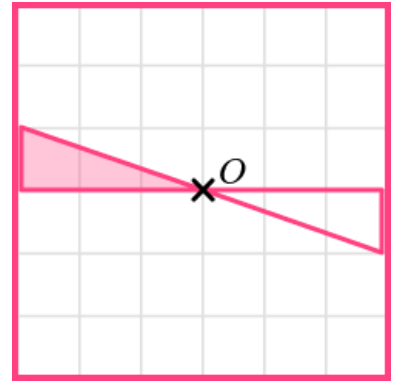
6)



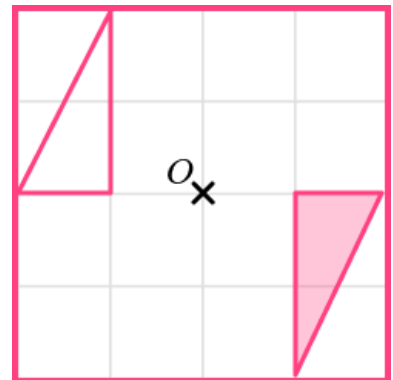
3)



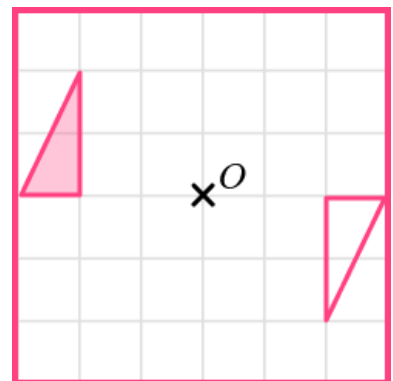
4)

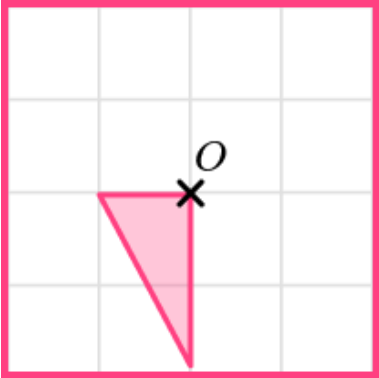
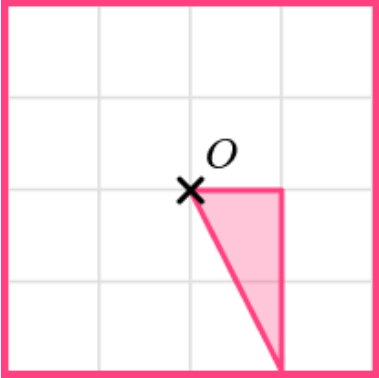
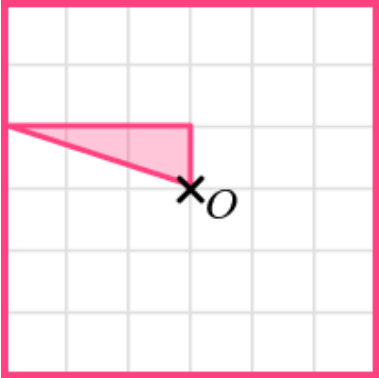
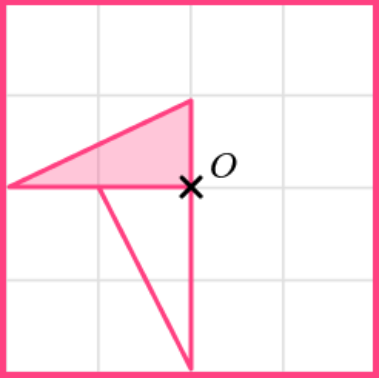
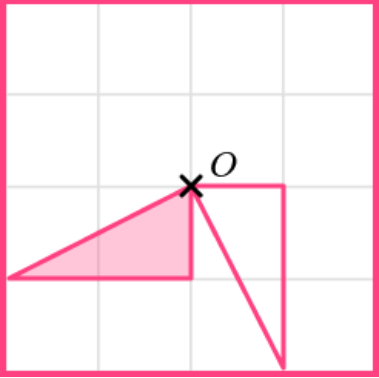
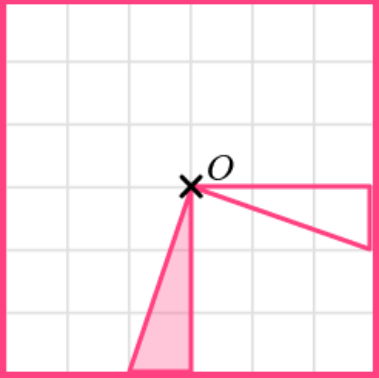


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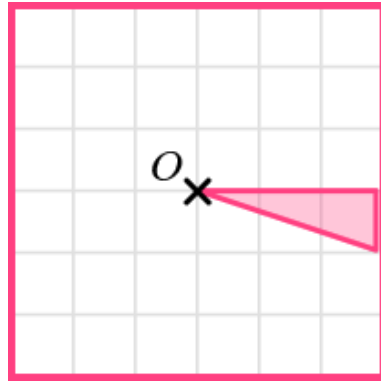


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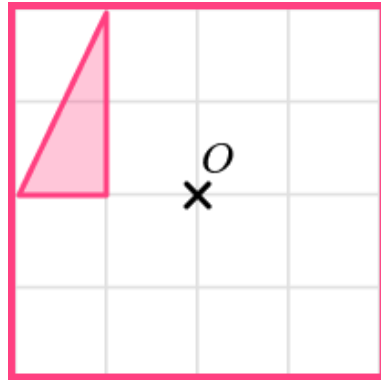


Group B	Rotate these shapes 90° clockwise about the point O. 1)  2)  3) 	1)  2)  3) 
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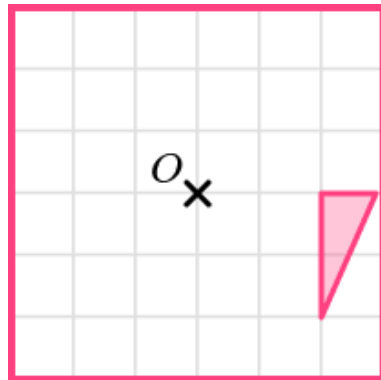
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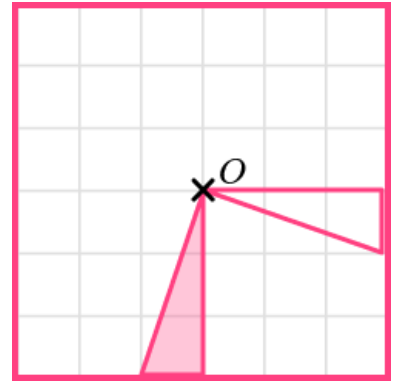
5)



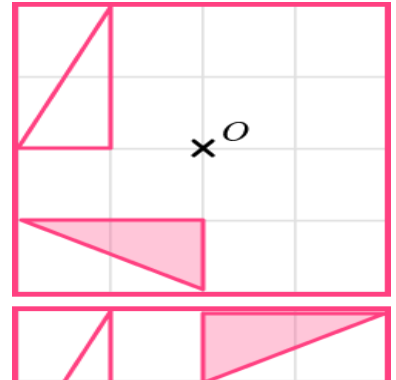
6)



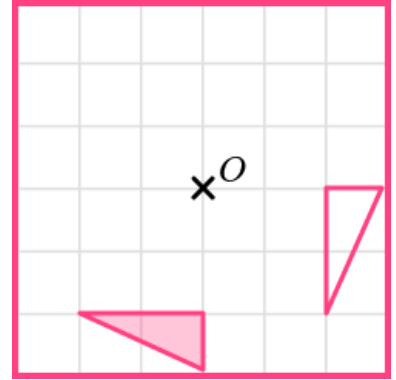
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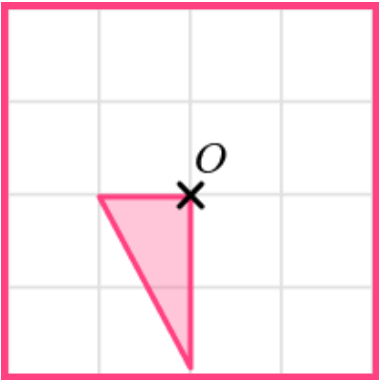
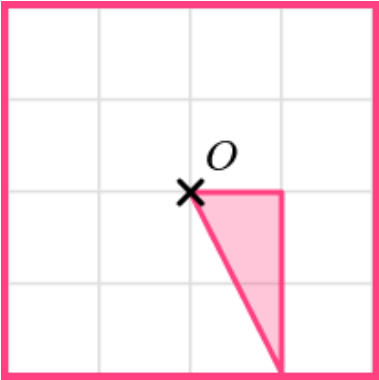
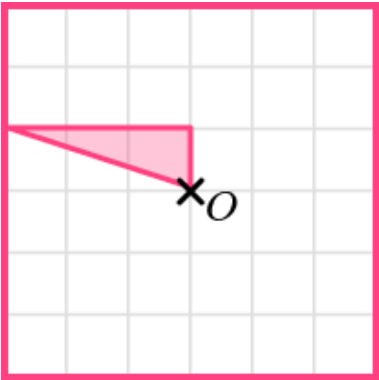
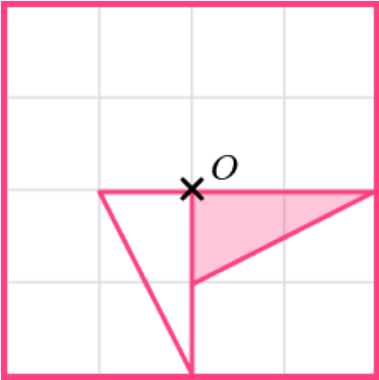
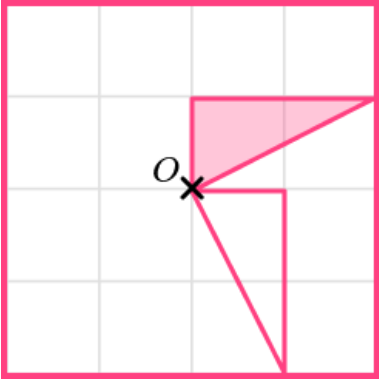
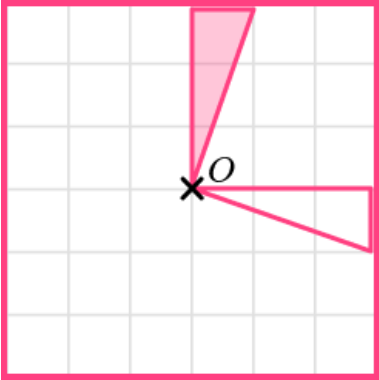


5)

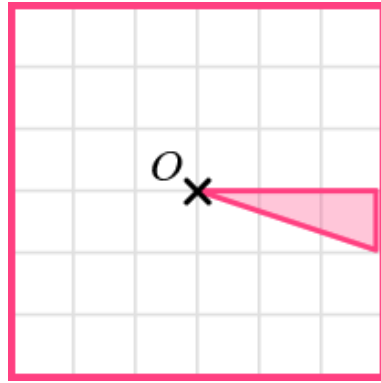


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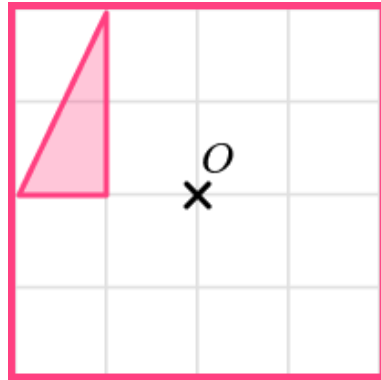


Group C	Rotate these shapes 90° anticlockwise about the point O. 1)  2)  3) 	1)  2)  3) 
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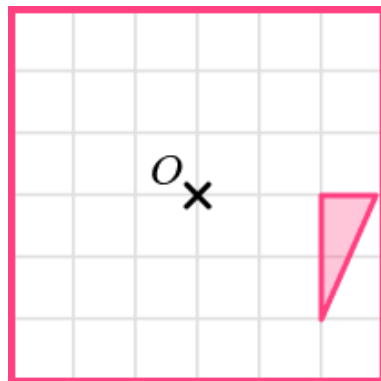
4)



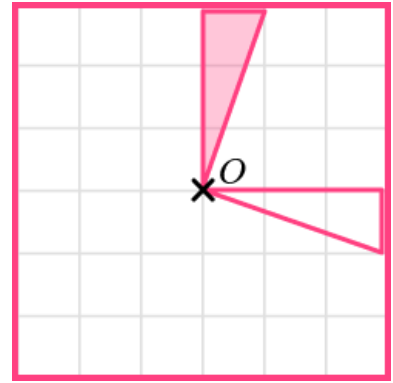
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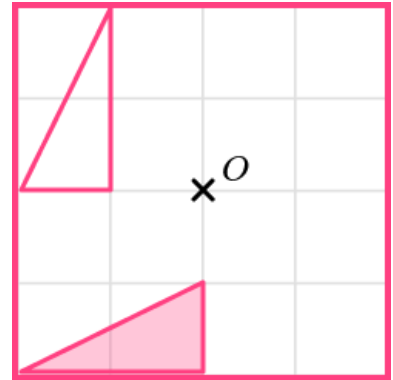
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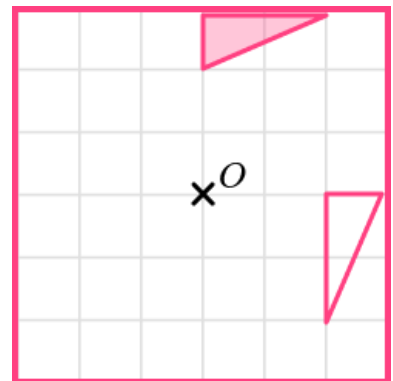
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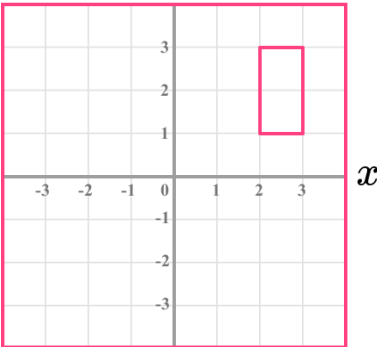
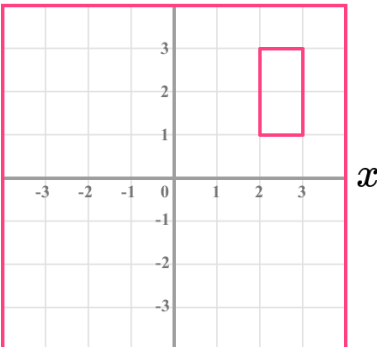
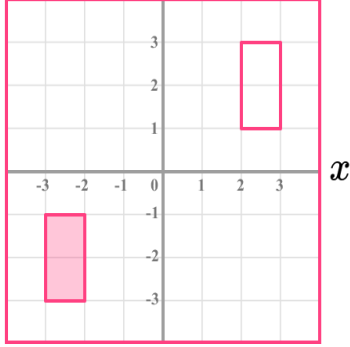
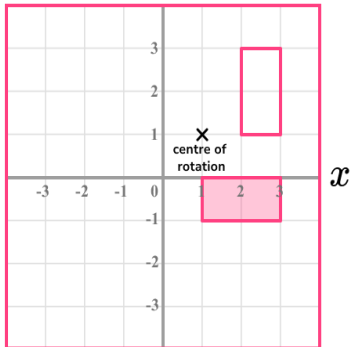
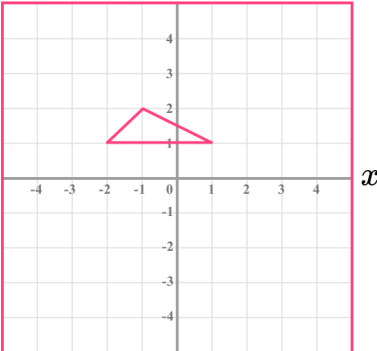
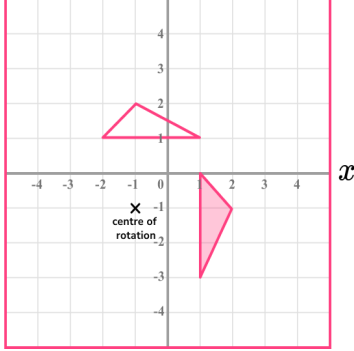
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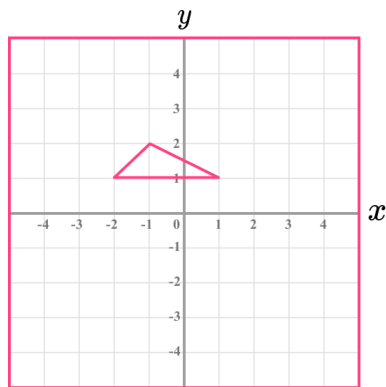
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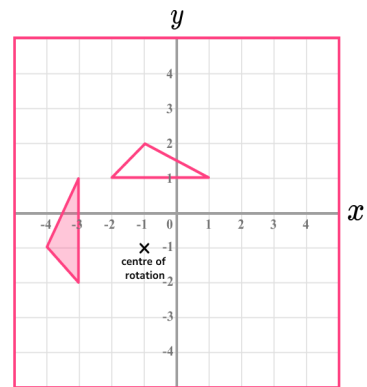
Rotations - Answers

	Question	Answer
	Applied Questions	
1)	a) Rotate the shape 180° about the origin  b) Rotate the shape 90° clockwise about (1, 1) 	a)  b) 
2)	a) Rotate the shape 90° clockwise about $(-1, -1)$ 	a) 

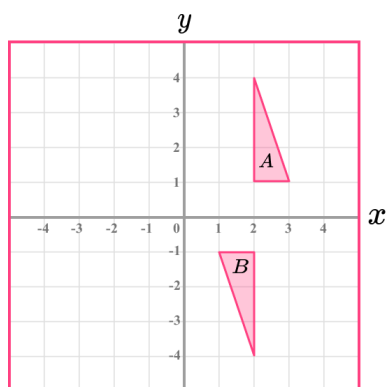
b) Rotate the shape 90° anticlockwise about $(-1, -1)$



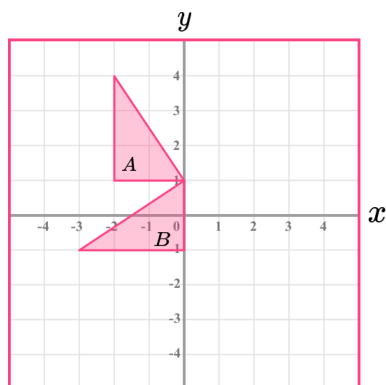
b)



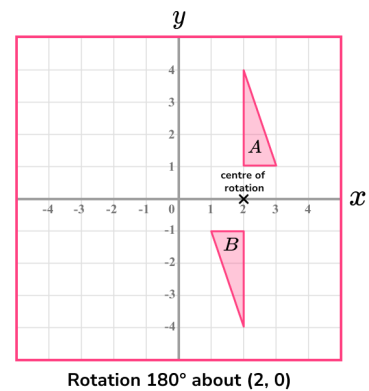
3) a) Describe fully the single rotation that maps shape A onto shape B



b) Describe fully the single rotation that maps shape A onto shape B



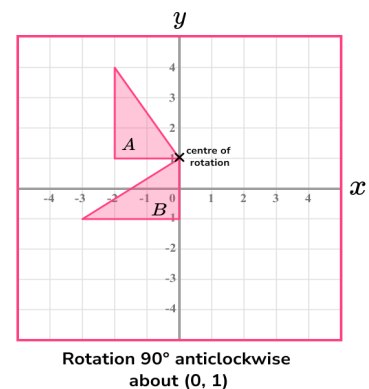
a)



Rotation 180° about $(2, 0)$

Rotation 180° about $(2, 0)$

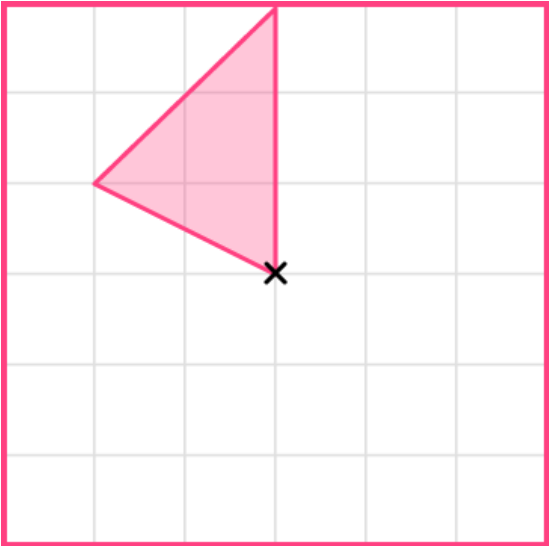
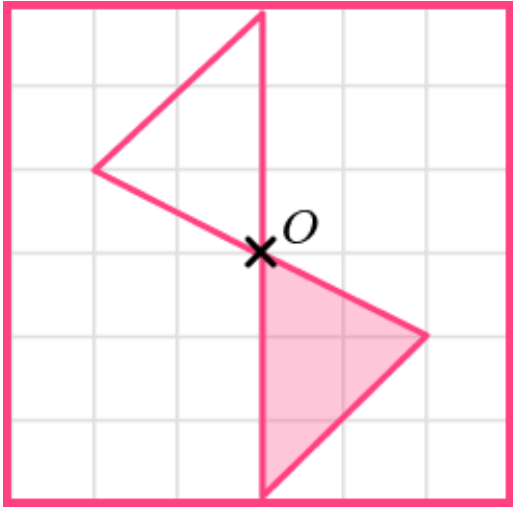
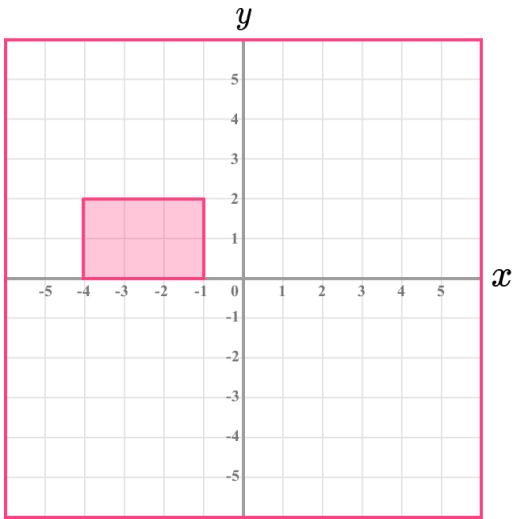
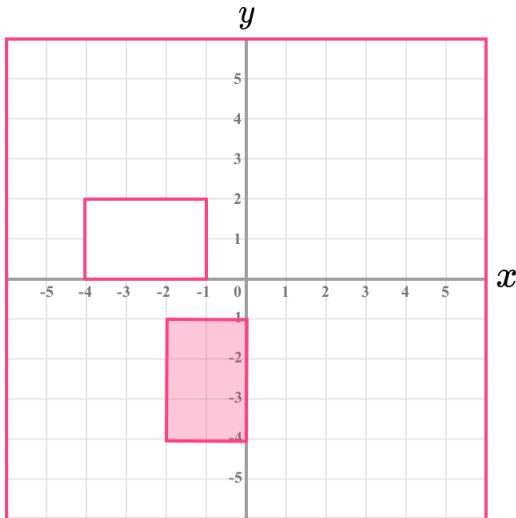
b)

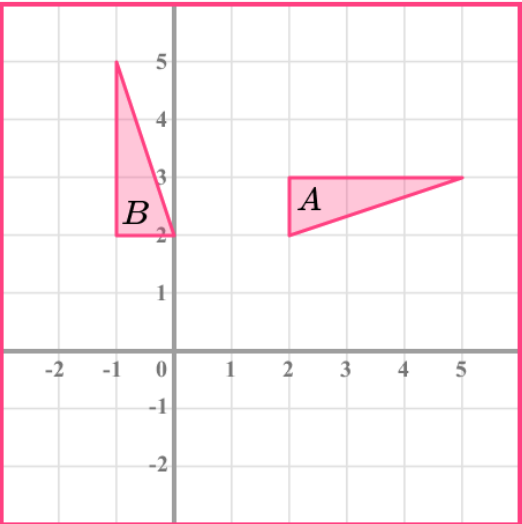


Rotation 90° anticlockwise about $(0, 1)$

Rotation 90° anticlockwise about $(0, 1)$

Rotations - Answers

	Question	Answer
	Exam Questions	
1)	On the grid, rotate the triangle 180° clockwise about the point O. 	(2)  Rotation 180° (1) Correct centre of rotation, so in the correct final position (1)
2)	Rotate the rectangle 90° anticlockwise about $(0, 0)$ 	(2)  Rotation 90° (1) Correct direction and centre, so in the correct final position (1)

3)	Describe fully the single transformation which maps shape A onto shape B. 	Rotation (1) 90° anticlockwise (1) About the point $(1, 1)$ (1)	(3)
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