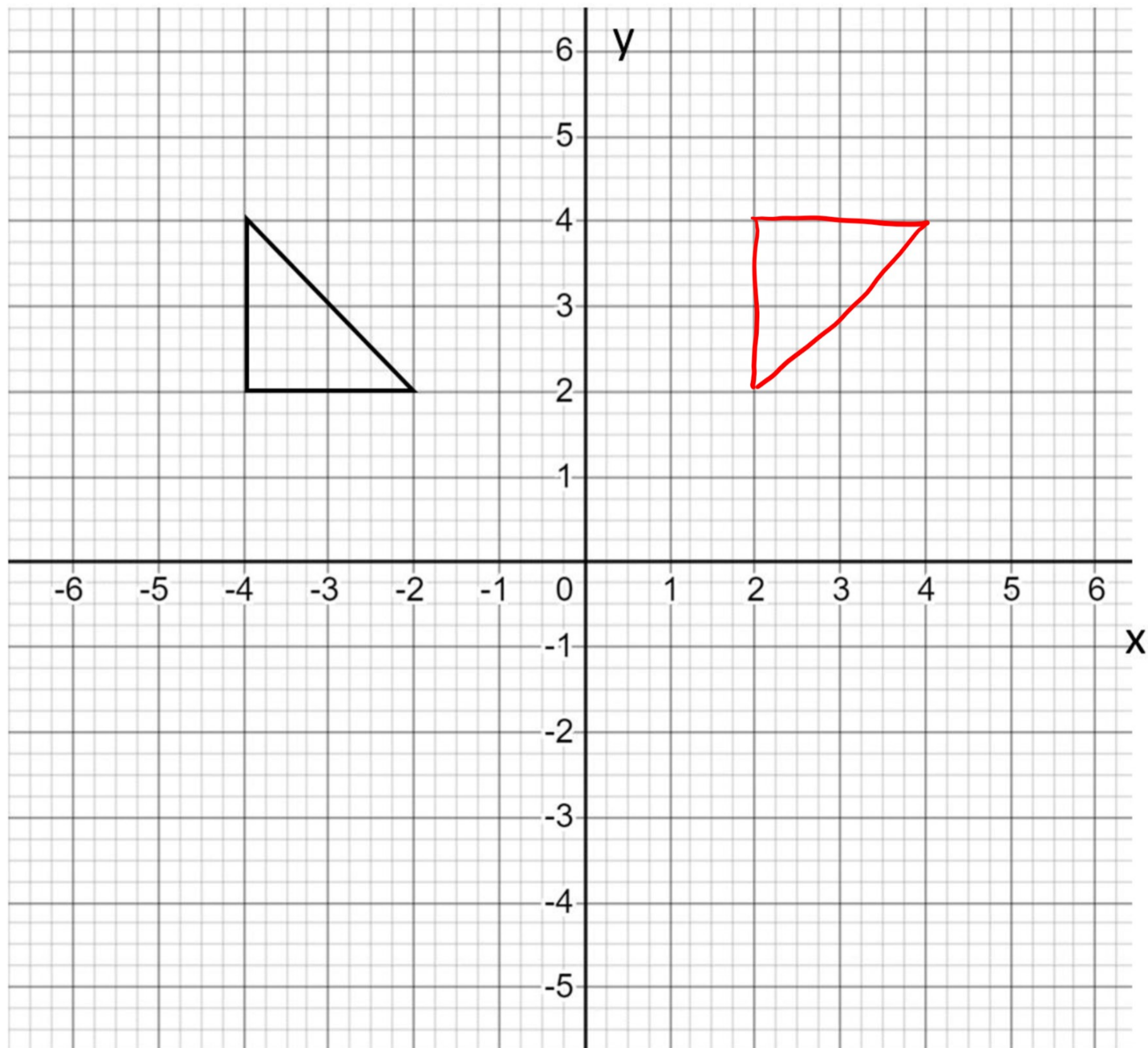


Rotations & Rotational Symmetry Exam Practice



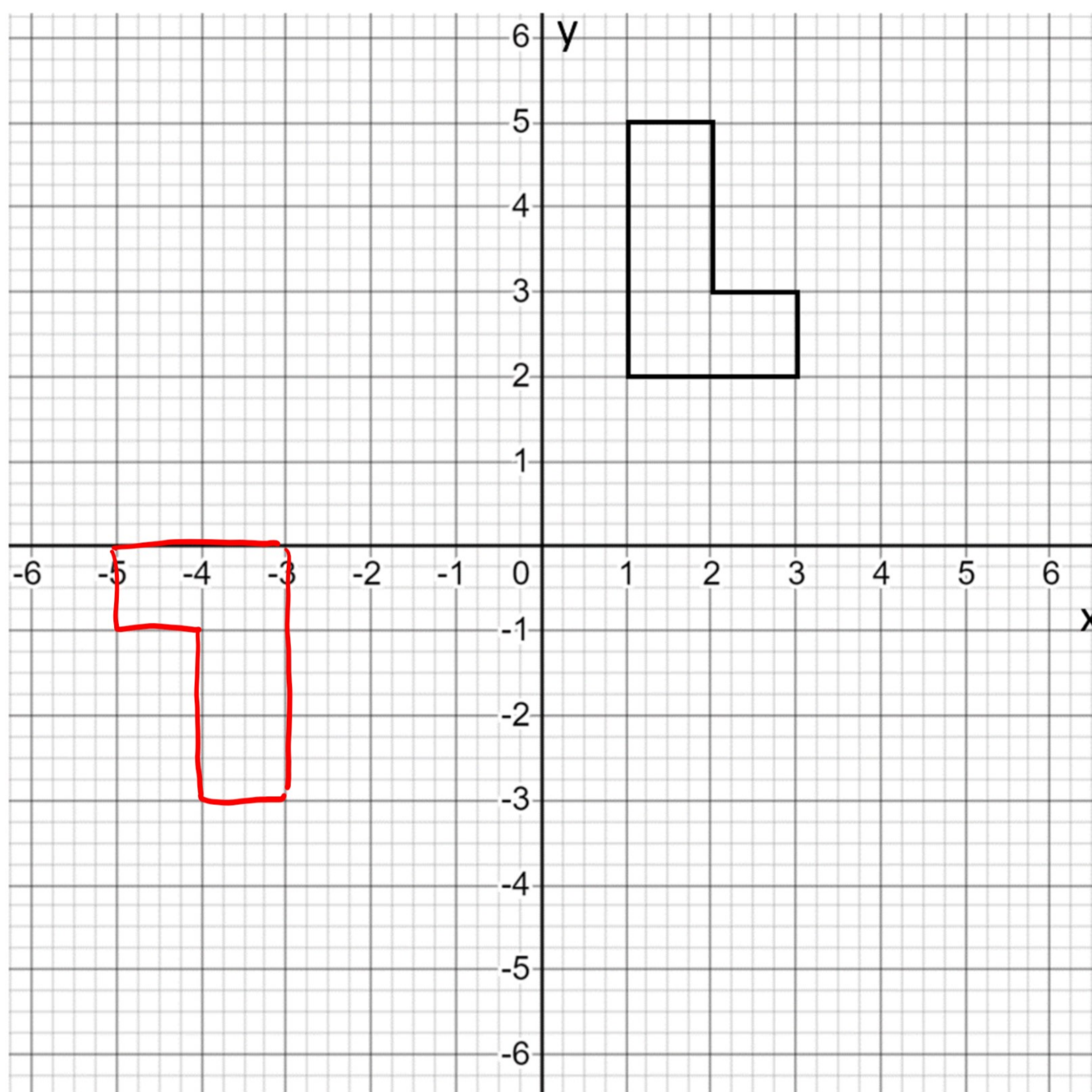
Q1. Rotate the shape below by 270° anti-clockwise about the point $(0,0)$.



Answer: _____
(2 marks)



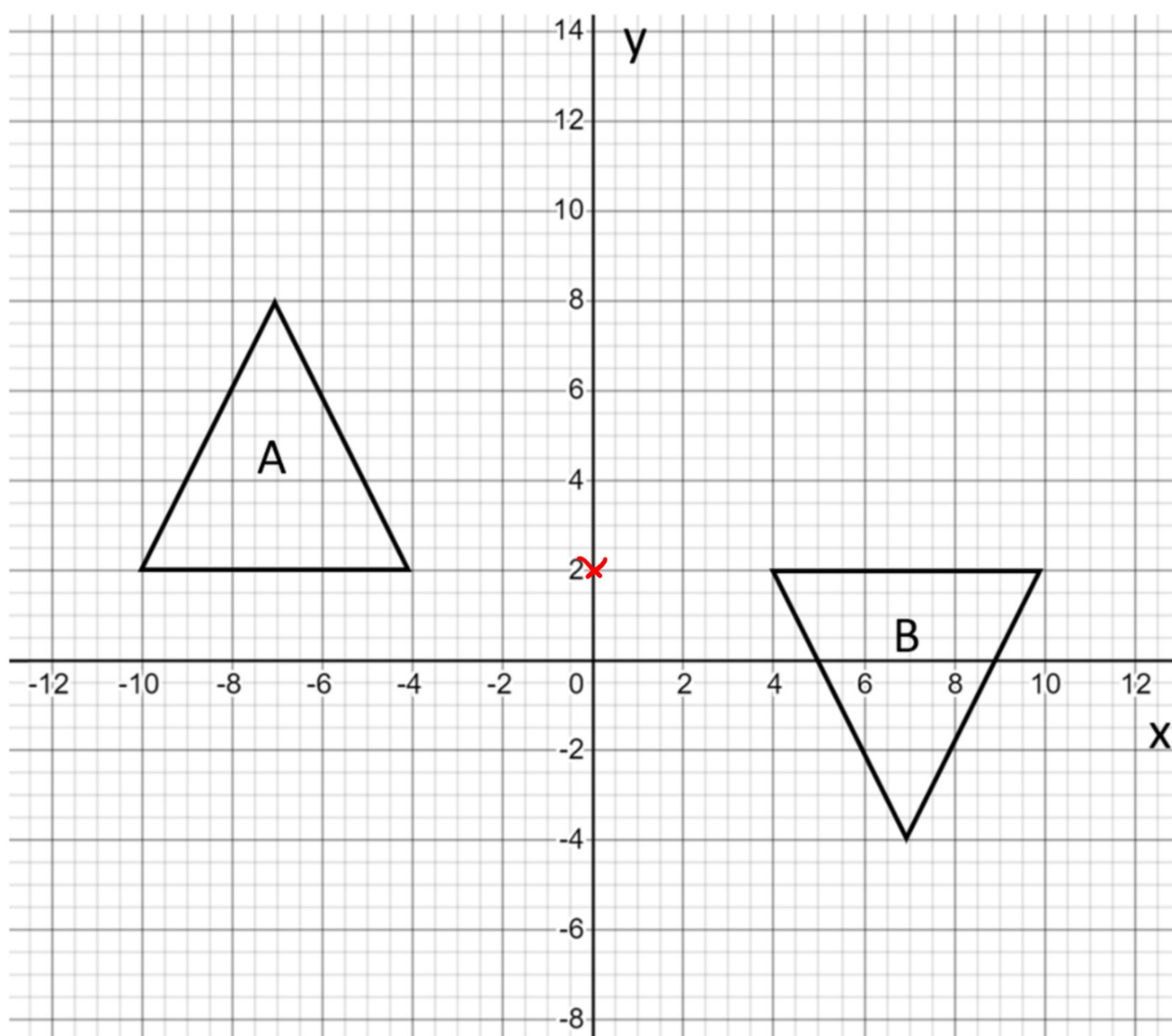
Q2. Rotate the shape below by 180° about the point $(-1,1)$



Answer: _____
(2 marks)



Q3. Describe fully the transformation which takes shape B to A.

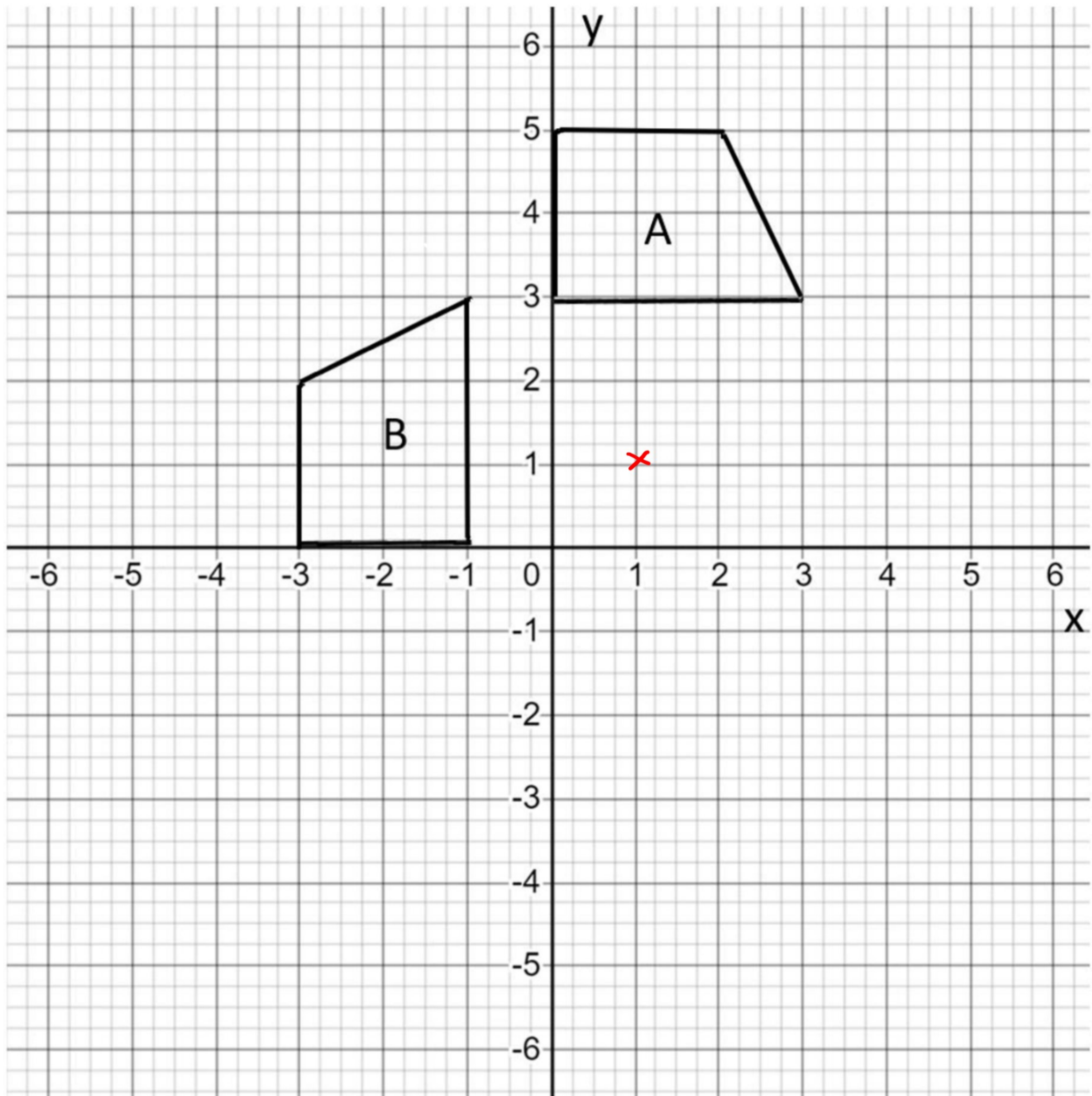


- Rotation
- Centre $(0, 2)$
- by 180°

Answer: Rot. centre $(0, 2)$ by 180°
(3 marks)



Q4. Describe fully the transformation which takes shape A to B.

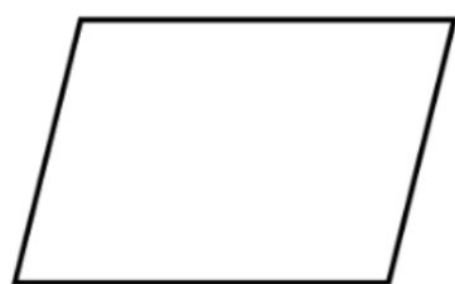


- Rotation
- Centre (1,1)
- by 90° anti-clockwise (or 270° clockwise)

Answer: Rotation, centre (1,1)
by 90° anti / 270° clock.
(3 marks)



Q5. State the order of rotational symmetry of the shape:



Explain briefly why you have chosen your answer.

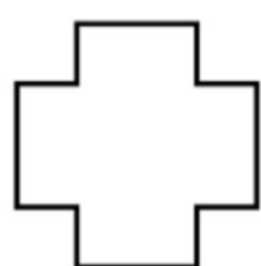
2 because the shape can be rotated into 2 positions where it looks the same during one full turn

Answer: 2.
(2 marks)

Q6. State the order of rotational symmetry of the following shapes:



1



4



1

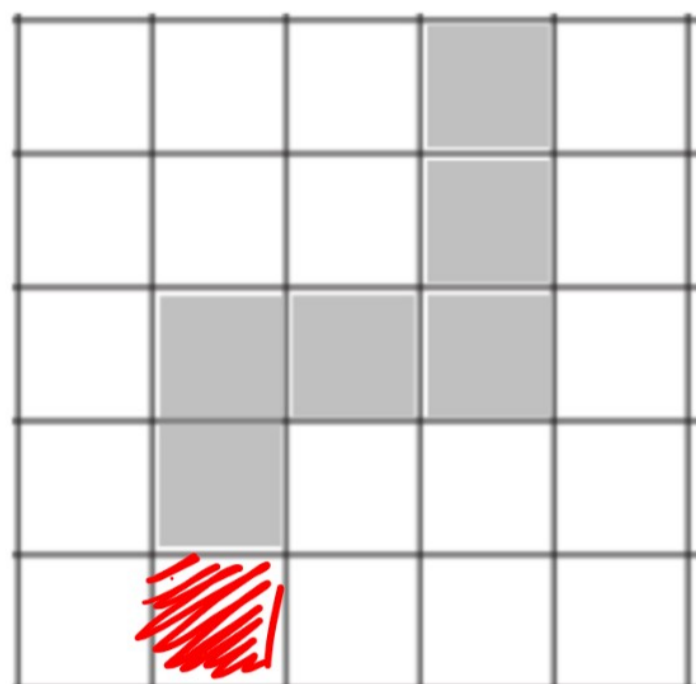


2

Answer: 1, 4, 1, 2
(3 marks)



Q7. Shade 1 extra box on the diagram below so that the shaded shape has order of rotational symmetry 2.



Answer: _____
(1 mark)

Q8. A regular polygon has 20 sides. Write down the order of rotational symmetry of the shape.

20

Answer: 20
(1 mark)



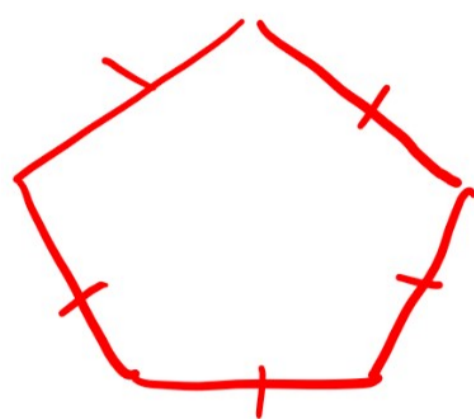
Q9. Complete the table below:

| Shape: | Trapezium | Rhombus | Kite | Rectangle |
|-------------------------------|-----------|---------|------|-----------|
| Order of rotational symmetry: | 1 | 2 | 1 | 2 |

Answer: 1, 2, 1, 2
(3 marks)



Q10. (i) Draw a shape with order of rotational symmetry equal to 5.



(regular pentagon, for example)

Answer: _____
(1 mark)

(ii) Draw a shape with order of rotational symmetry equal to 1.

eg -



$\frac{1}{2}$ are annulus

Answer: _____
(1 mark)