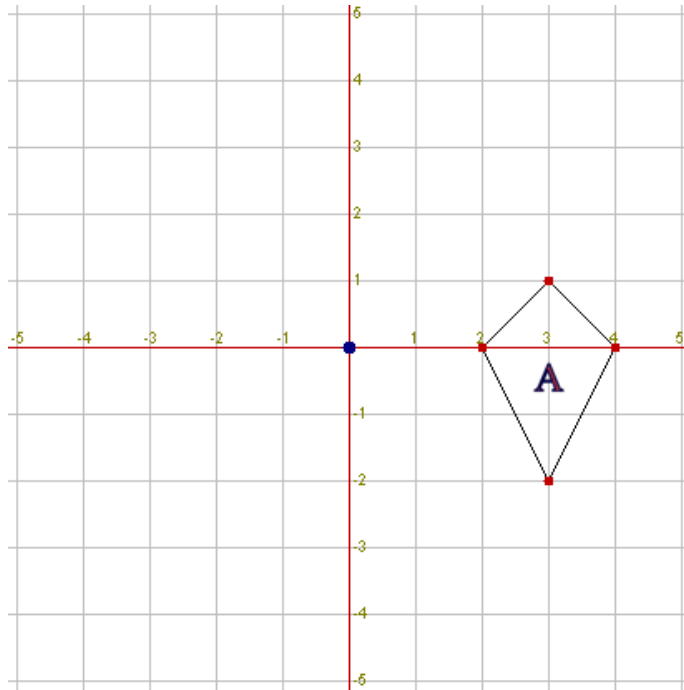


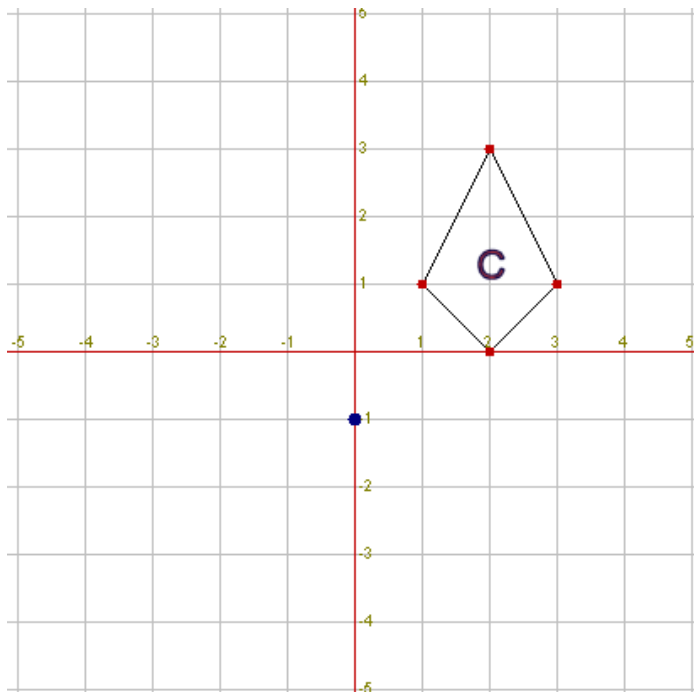
ROTATIONS WORKSHEET

Applet <http://www.waldomaths.com/Rotations1NLW.jsp>
Video <http://www.waldomaths.com/video/Rotate01/Rotate01.jsp>

- 1 a) Rotate shape A through 90° , anti-clockwise, about $(0,0)$. Label it B.

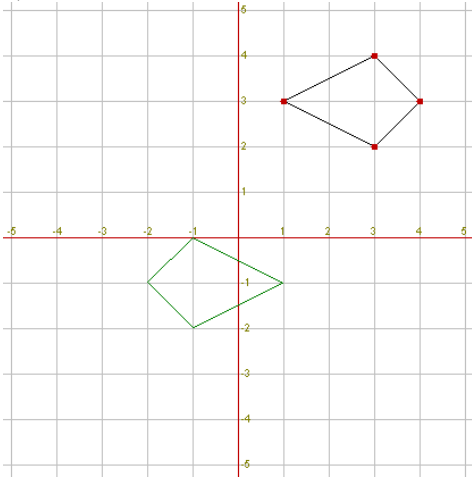


- 2 a) Rotate shape C through 180° , centre $(0,-1)$. Label it D.

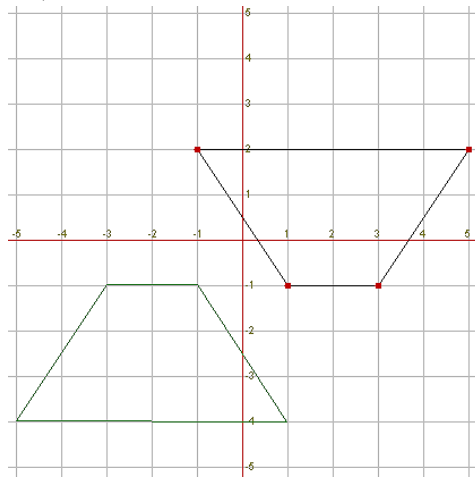


3 Find the coordinates of the centres of these 180° rotations.

a)

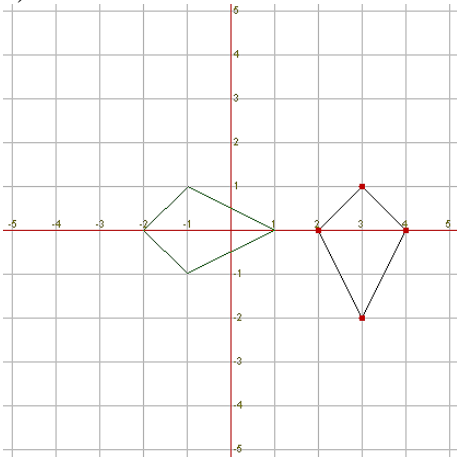


b)

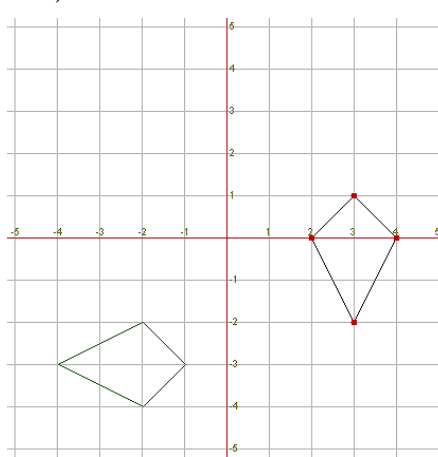


4 Find the coordinates of the centres of these 90° rotations.

a)

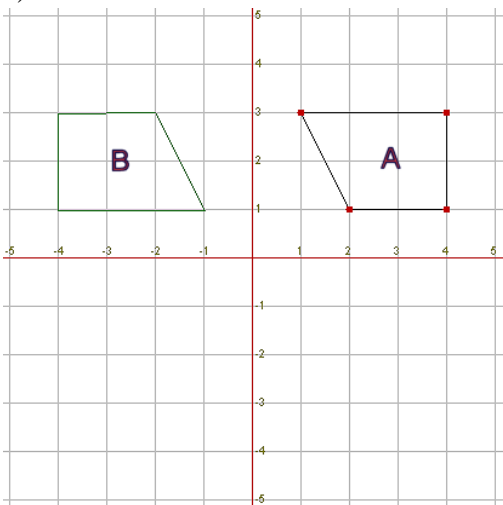


b)

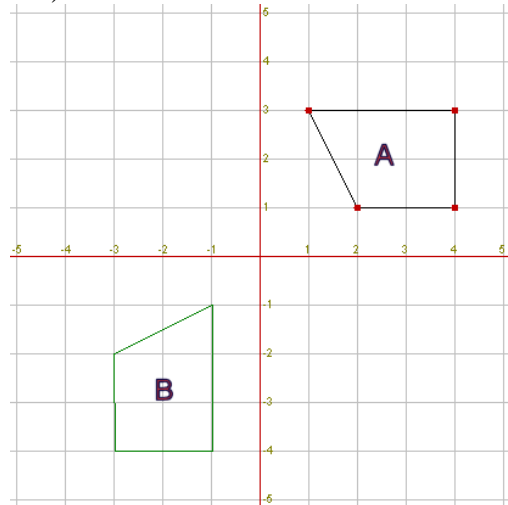


5 Describe **fully** these rotations. Each is from shape A to shape B.

a)

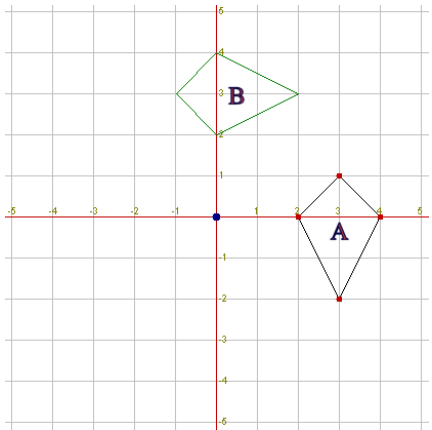


* b)

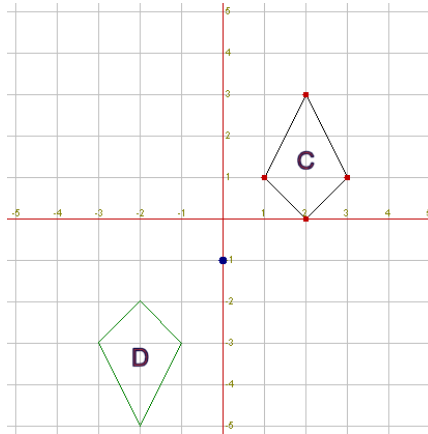


ANSWERS

1



2



3 a) (1, 1)

b) (0, -1)

4 a) (1, -2)

b) (-1, 1)

5 a) Rotation, 180° , centre (0, 2)

b) Rotation, 90° , clockwise, centre (-2, 2)

Notes

1 When you describe a rotation which is not 180° , you must say in which direction (clockwise or anticlockwise).

2 Always check rotation answer using a piece of tracing paper.

2 To find the centre of harder rotations, you have to find two perpendicular bisectors which intersect at the centre.

Challenge Draw the perpendicular bisectors of the lines AB and CD, and hence find the centre of this rotation. Then find the angle of rotation.

