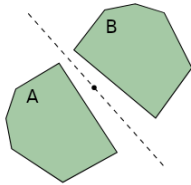




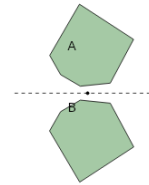
Perform rotations

- 1** Identify the transformation that changes shape A into shape B



A Rotation B Reflection C Translation

- 2** Is the transformation of shape A into shape B a Rotation?



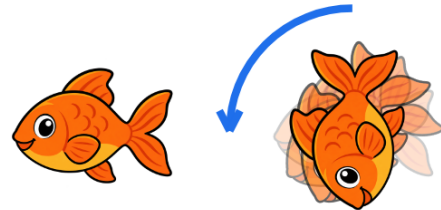
A Rotation B Not a Rotation

- 3** How far has the object turned?



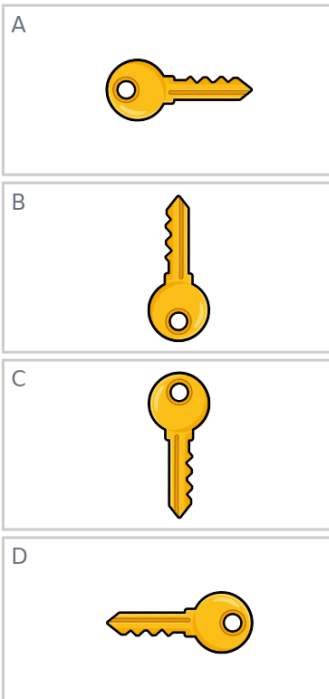
A Quarter turn B Full turn C Half turn

- 4** How far and which way has the object turned?

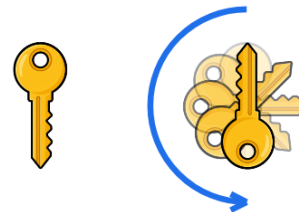


A Half turn clockwise B Full turn counter-clockwise C Full turn clockwise D Quarter turn counter-clockwise

- 5** Which picture shows the object after a quarter turn?

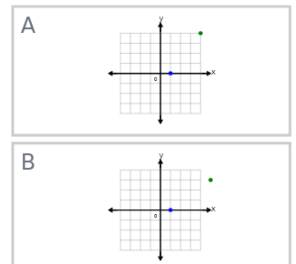
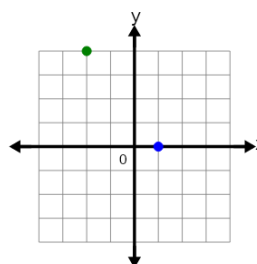


- 6** How far and which way has the object turned?



A Quarter turn clockwise B Half turn counter-clockwise C Half turn clockwise D Quarter turn counter-clockwise

- 7** Rotate this point by 90° clockwise about point (1,0)





Perform rotations

8

Which picture shows the object after a half turn?



A

B

C

D

9

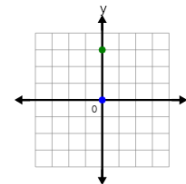
$(-1, 4)$

A $(-4, 3)$

B $(4, -3)$

10

Rotate this point by 180° counter-clockwise about the origin

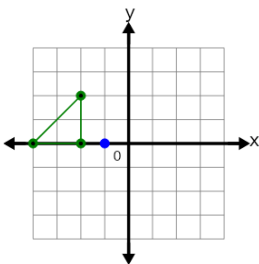


A $(0, -3)$

B $(3, -0)$

11

Rotate this shape by 180° clockwise about point $(-1, 0)$

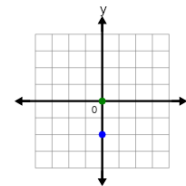


A

B

12

Rotate this point by 180° clockwise about point $(0, -2)$

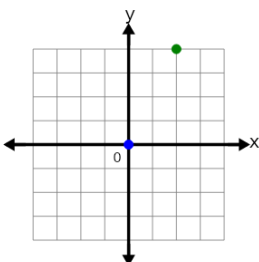


A $(0, -4)$

B $(-4, 0)$

13

Rotate this point by 90° clockwise about the origin

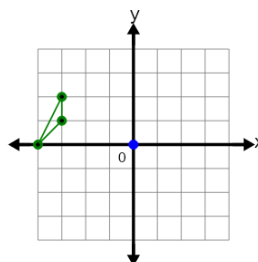


A

B

14

Rotate this shape by 90° counter-clockwise about the origin



A

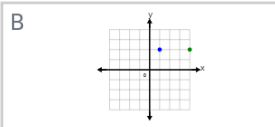
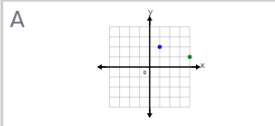
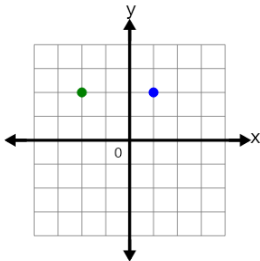
B



Perform rotations

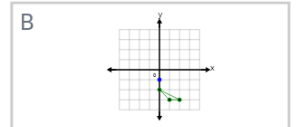
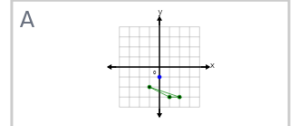
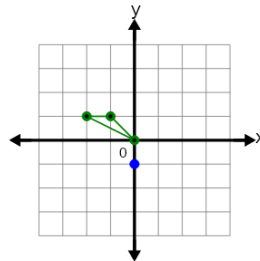
15

Rotate this point by 180° clockwise about point $(1,2)$



16

Rotate this shape by 180° clockwise about point $(0,-1)$



17

$(-2,1)$

