

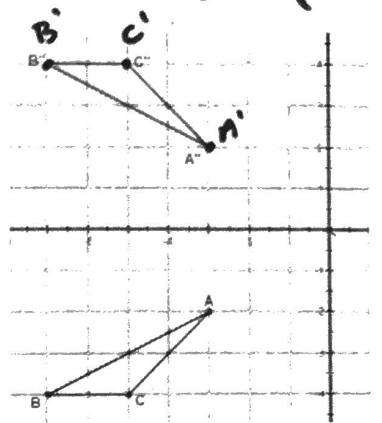
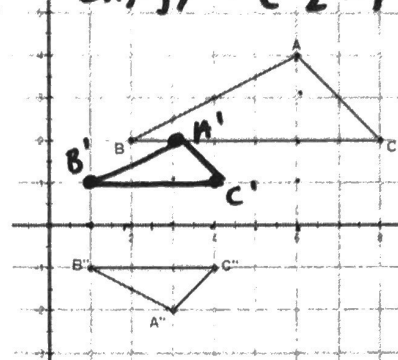
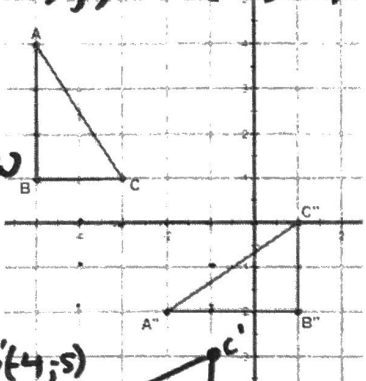
* Save translations for last.

Directions: Describe the sequence of transformations. Then, write the rule for the sequence.

$$(x, y) \rightarrow (-y+2, x+3)$$

$$(x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$$

$$(x, y) \rightarrow (x, -y)$$



① 90° ccw rotate

$$(x, y) \rightarrow (-y, x)$$

$$A(-5, 4) \rightarrow (4, 5)$$

$$B(-5, 1) \rightarrow (-1, 5)$$

$$C(-3, 1) \rightarrow (-1, 5)$$

② Translate rt 2 & up 3. $(x, y) \rightarrow (x+2, y+3)$

① Dilate by SF $\frac{1}{2}$

② Reflect over x-axis.

① Reflect over x-axis. $(x, y) \rightarrow (x, -y)$

② Rotate 360° $(x, y) \rightarrow (x, y)$

Directions: Describe the sequence of transformations using the given rules.

4) $(x, y) \rightarrow (x, -y) \rightarrow (-y, x)$

5) $(x, y) \rightarrow (-y, x) \rightarrow (-y, x-2)$

6) $(x, y) \rightarrow (x, 3y) \rightarrow (3y, x)$

① Reflection over x-axis

② Reflect over $y=x$

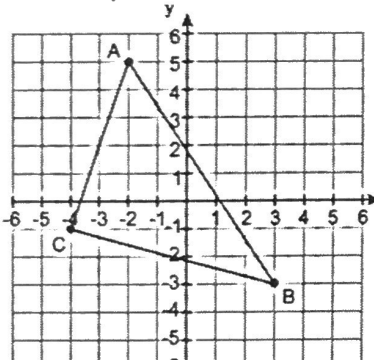
① 90° ccw / 270° cw

② Translate down 2

① Vertical stretch SF of 3.

② Reflection over $y=x$

Directions: Describe how to map the image onto itself using the given number of transformations.



7) One Transformation

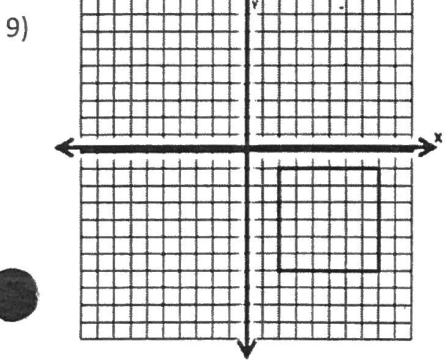
Ex: Rotate 360°

Ex: Dilation by SF of 1

8) Two Transformations

Ex: translate up 2 & then down two

Directions: Identify four possible rotations that will map the regular polygon onto itself.



$$\frac{360^\circ}{4} = 90^\circ$$

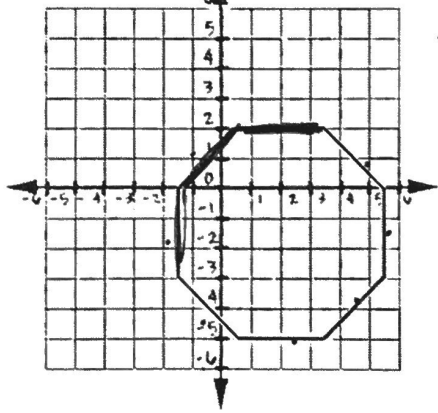
$$180^\circ$$

$$270^\circ$$

$$360^\circ$$

$$450^\circ$$

10)



$$\frac{360}{8} = 45^\circ$$

$$90^\circ$$

$$135^\circ$$

$$180^\circ$$

$$225^\circ$$

$$270^\circ$$